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Introduction

Digital Signage is comprised of screen that is installed in public spaces and it provides the ability to remote manage these screens over the LAN, WAN, VPN or across the WE advertise. Digital Signage, narrowcasting, retail TV, captive audience network are all scary BIG words designed to make a simple technology expansive and seem more complex that. With MediaSignage you can get up and running in no time. You open your account on the mediaCLOUD and it's all FREE.

Digital Signage is all about content presentation that replaces static signs. The content is dynamic and can be changed from a central location through a web interface. Digital Signage offers superior return on investment compared to traditional printed signs. Digital Signage doesn’t have to be expensive, complicated or hard to integrate.

Major benefits of digital signs over traditional static signs are that the content can be changed without effort, animations can be shown, the signs can adapt to the context and audience, and even be interactive (also known as Kiosk).

Digital signage advertising is a form of out-of-home advertising in which content and messages are displayed on digital signs, typically with the goal of delivering targeted messages to specific locations at specific times. Digital Signage offers superior return on investment compared to traditional printed signs. Digital Signage doesn't have to be expensive, complicated or hard to integrate.

Like most things in life, information is everything (well information and good software that is). And this is where MediaSignage comes in; we give you amazing, real life solutions to help you get up and running in no time. Whether you are a Digital Signage end user, Digital Signage integrator or content creator, we are here to help you out; we provide a robust set of tools designed to get the job done and display your content to your entire captive audience.

Until MediaSignage came along, Digital Signage was very expansive. Companies charge thousands of dollars for leasing, licensing or purchasing Digital Signage software and hardware. The SignageStudio is a FREE application based on an open source Apache standard which allows you to manage your signage presentation anywhere. It runs inside browsers and across operating systems via the SignageStudio Web and Desktop versions.

The SignageStudio Desktop and Web versions are almost identical, however the SignageStudio Desktop version is an install application and so it does operate a bit faster and recommended for long-term usage. Both the SignageStudio Web and Desktop versions are FREE.

The SignagePlayer Web version allows you to run your signage presentation inside a web browser and in most operating system including Windows (all versions), Mac and Linux. It is intended mostly for previewing or for linking to your signage presentation from within a web site (embedded SignagePlayer web version).

The SignagePlayer Desktop and Mobile versions are designed for long playbacks on a dedicated Digital Signage computer. You can remote control the SignagePlayer Desktop version via the SignageStudio. The SignagePlayer Desktop version is as fast as it meets the minimum hardware requirements. We recommend a 2.7GHz Dual Core 2 Intel proc for the SignagePlayer Desktop version. This includes any **PC using any **OS (Mac, Linux, Windows).

Use any PC / device that you feel is best to match your presentation requirements. Remember that heavier presentation which includes lots of HD content and moving animation should also take a look at our recommended the device, the mediaBOX.

Many people are unaware of how to physically install and build a Digital Signage network. Once again, this is a simple easy process. You can get a wall mount for your any LCD / LED / screen and mount it at the location. Used to connect between the PC and the screen you can put the PC up to 50ft away without any loss of signal. You can also get an HDMI to Cat-5 converter and extend beyond 50ft. The PC running the SignageStudio Desktop version needs to be connected to the LCD / LED screen as well as to the internet. All content management is done through the SignageStudio. The SignagePlayer will cache no interruption will be evident to your audience.

MediaSignage makes Digital Signage easy, affordable and available to everyone. So you no longer have any excuses to put your Digital Signage project on hold. The software is a snap and installation is a breeze. So what are you waiting for, get into Digital Signage and get your message out there!

Industry overview

FUNDAMENTALS

Digital Signage may sound like a complicated solution that many shy away from. Things like high prices, complexity and technical skills prevent many from adopting Digital Sig
Digital Signage began to gain popularity with the introduction of FREE Digital Signage from MediaSignage. Digital Signage has been around for many years (about 20 or so) as a old style television sets to the lack of popularity with Digital signage. MediaSignage began providing the 1st all FREE software as a service cloud solution for digital out of home Digital Signage software application needs to have a few ingredients for it to be successful. These ingredients include simplicity and flexibility, the ability for anyone to have access presentation and remote manage Signage Players.

The SignageStudio fundamentals include:

- Screen Division Control
- Channel Assignment
- Resource and Media management
- Support for common media formats (HTML, flash, images, video, live TV)
- Timeline management including sequencing and scheduling
- Campaign management
- Station management

The fundamental features cover the overall requirements needed to deliver a reliable and engaging Digital Signage presentation. Throughout history, there have been many people who have interacted and interact with information. We are in the midst of one such advance - the development and acceptance of digital signage. By combining the capability panel display technologies, digital signage is becoming more prevalent and a main stream solution. The basic premise is that there are three phases of evolution within technic and competitors and customers. Once identified, the characteristics of each phase set expectations and provide direction to people looking to implement a digital signage with acceptance of new mass communications technologies, three phases become apparent:

- Phase 1: focus on infrastructure
- Phase 2: focus on content
- Phase 3: focus on context

Understanding which phase a new technology is in provides a framework for considering realistic expectations, which strategies to consider and when to begin adoption. So the industry had to work out how to maximize the potential of the internet.

Once the infrastructure was embedded and coverage was universal, the industry entered phase 2 of its evolution. People now had the ability to communicate instantly, but it's infrastructure build-out. Content became the driver for phase 2, as the industry now needed people to use the infrastructure in order to continue growing. Users became concerned about the amount of information being sent and how to process it. As a result, the industry started focusing on the amount of data being transmitted and how to make it more useful. This is the phase that digital signage is currently in.

Another example of this three-phased evolution is the rise of the internet industry. When the National Science Foundation created network access points for commercial companies a few short years, telecommunications firms had created a backbone for national and regional internet service providers (ISPs) to connect. Dial up connections were soon replaced by high speed networks and routers evolved to form. With the introduction of Web 2.0, Flash and HTML5, phase 3 of this evolution changed information to an information delivery mechanism based on the viewer, not the author. The web now had context and adoption accelerated dramatically spawning new compari beneficiary of this transformation was Google, whose search engine provided contextual search and its by-product, personal relevance to information. Web 2.0 created a rich environment for the internet industry to focus less on bandwidth and more on content. Of course, the accompanying hype potential of the internet was seemingly unlimited, it took more than just a website to create a business. However, the context focus remained strong as the survivors began to take control. After several years of maturing, the internet became a huge content and data cloud but was in danger of becoming too amorphous.

The web of old was a compilation of static screens with little relation to the people viewing them. The advent of Web 2.0, Flash and HTML5, phase 3 of this evolution changed information to an information delivery mechanism based on the viewer, not the author. The web now had context and adoption accelerated dramatically spawning new competitor beneficiary of this transformation was Google, whose search engine provided contextual search and its by-product, personal relevance to information. Web 2.0 created a rich environment for the internet industry to focus less on bandwidth and more on content. Of course, the accompanying hype potential of the internet was seemingly unlimited, it took more than just a website to create a business. However, the context focus remained strong as the survivors began to take control. After several years of maturing, the internet became a huge content and data cloud but was in danger of becoming too amorphous.

A NEW PHASE FOR DIGITAL SIGNAGE

In each of these recent examples, one can see that communications media have followed a similar evolution from focusing on infrastructure through content to context. It is an example of the recent mass communications media, and use as it a guide for better implementations and strategy. Although the use of video screens for consumer-facing info actual digital signage industry has a long history that goes back to stock exchanges, call center queues and other less public uses. The early driver for the industry was hard digital signage. The big players were the display manufacturers, and the barriers to entry were physical limitations of size, graphical performance, readability, reliability and price. Readily available, market growth was boosted by minimizing these previous barriers. Sales were made on the promise of what might become available from the content side, as consumer-facing locations.

Many networks targeted advertisers with the promise of a fourth screen to access specific demographic groups. Forward-thinking companies started embracing the cost adva etc. and consumers began to appreciate and expect it because the supply of original content was minimal, many sites began filling their displays with content from other media information was inappropriate; a digital signage message must be more concise than a 30 second television spot. Many early digital signage networks were stuck in the same have content on a screen does not mean that anyone has to look at it.

In order to make the content more inviting, many sites began augmenting their content by tapping into customized feeds from data providers for news and weather information to the viewer but was still a very broad stroke and did not engage specific viewers with targeted messages. Some network operators tried to develop multiple channels to segreg known as “day parting”) and location but this is still very course segmentation.

The problem with phase 2 strategies is that they presume that people will watch what you push out regardless of relevance to them. Like the unidentified phone calls of Telephony's phase 2, if too much information is irrelevant the call's content had some context to it. Caller ID let users know if a call was important or frivolous and put personal relevance around the content that the medium was p machines and voice mail also provide context for the call's content, allowing users to gain control over the event, which is the final step in the evolution of technology to mass machines and voice mail also provide context for the call's content, allowing users to gain control over the event, which is the final step in the evolution of technology to mass machines and voice mail also provide context for the call's content, allowing users to gain control over the event, which is the final step in the evolution of technology to mass machines and voice mail also provide context for the call's content, allowing users to gain control over the event, which is the final step in the evolution of technology to mass machines and voice mail also provide context for the call's content, allowing users to gain control over the event, which is the final step in the evolution of technology to mass machines and voice mail also provide context for the call's content, allowing users to gain control over the event, which is the final step in the evolution of technology to mass machines and voice mail also provide context for the call's content, allowing users to gain control over the event, which is the final step in the evolution of technology to mass machines and voice mail also provide context for the call's content, allowing users to gain control over the event, which is the final step in the evolution of technology to mass.
A successful phase 3 implementation realizes that the content (format, emphasis and graphics) is enhanced by the context (data) to optimize the installation’s usefulness. With recognition and other contextual data to dynamically change messages to suit a particular audience. The resultant dynamic playlist is created for a momentary audience and information. Most facial recognition installations today, use the information they gather to measure audience demographics for general content scheduling, they don’t integrate with POS to allow users to capture relevant product data, customer interactions and other events that impact the marketplace environment. The feedback loop created from a content ROI from direct and indirect sources. As previously seen, the transition from content to context is a natural phase in industrial evolution, so any company looking to upgrade their displays should consider the use of live data such as headline news, weather forecasts or market updates to help make your displays engaging and interesting.

DEFINING DIGITAL SIGNAGE

Digital signage has become the most widely accepted term for the concept of showing targeted content on public screens, but you will see many other phrases such as out-of-home networks, digital networks, electronic signs, digital signage systems and more. Bright, bold digital displays seem to be everywhere these days, and for newcomers to the market, there are a lot of questions. While digital signage has new concept to many. In this article, you’ll get an introduction to the fundamentals of digital signage and the key components to create a complete working solution.

EFFECTIVENESS

Several case studies and white papers on the digital signage industry document the accomplishments of this medium in specific market verticals. In broad terms, the study viewer to remember a message. The study found that, in 1967, it only took three impressions, while in 2003, it took 117. Can we imagine what the results would be today with other forms of social media? The point is that information is everywhere, so the previous method of a “shotgun” marketing approach isn’t as effective, while digital signage provides a way to deliver targeted content to a specific audience.

CONTENT

With proper signage, you can eliminate questions and keep everyone informed, thus saving time. Broadcasting alerts. In the event of an emergency or catastrophic event at a shopping mall or college campus, the use of displays can save lives. Creating the “wow” factor. For some lobbies, coffee shops and retail branches, the use of digital signage is just to make a statement and get people to say “Wow.”

Components of Digital Signage

CONTENT

If you don’t have relevant content, your message will be lost. The content doesn’t have to be complex – sometimes the simplest messages are the most effective. When planning your signage network need to think past the here-and-now of the installation and envision what improvements and efficiencies can be come from putting intelligence into the equation.

DISPLAY HARDWARE

Because sales of flat screen TVs in the consumer market have grown, the costs for commercial screens had dropped in price drastically over the last three years. For public display that is right for your environment. There are numerous specialized screens for interactivity, 3D, high-ambient conditions and for tiling into video walls. All screens are not created equal, so know your requirements, especially if you are planning a system to support live data such as headline news, weather forecasts or market updates.

MOUNTS AND ENCLOSURES

The best mounts are the ones you don’t see. With planning and the use of a proper mount, you can make sure your display fits in aesthetically with the surroundings. You also want viewers to use the digital signage system as a tool to help you make a statement and get people to say “Wow.”

MEDIA PLAYERS

Computer, PC, engine or media player - whatever you want to call it, this device is central to the success of your network. Many low-cost options have flooded the market in the last few years. While digital signage has become the most widely accepted term for the concept of showing targeted content on public screens, you will see many other phrases such as out-of-home networks, digital networks, electronic signs, digital signage systems and more. Bright, bold digital displays seem to be everywhere these days, and for newcomers to the market, there are a lot of questions. While digital signage has new concept to many. In this article, you’ll get an introduction to the fundamentals of digital signage and the key components to create a complete working solution.

CABLES AND CONNECTIVITY

Whether you place the media player behind the screen or in a server room, you still need to connect everything together. Don’t wait until you are unpacking the boxes to figure out how to connect the various components. Plan your cable runs in advance and make sure you have enough slack to adjust for future changes.
1. Understand Your Audience

For several years, the stressed term of the moment was "content is king"; today, it's been proven time and time again that in fact relevance is king, and that without relevance, people (viewers) will see little value in any form of communication presented to them and will turn the page, flip the channel or in the case of digital signage, simply look away.

Engage the viewer

Whether you are developing a digital signage network for a client or on your own behalf, there really is only one person that takes precedence above all others. That is - of course - the viewer.

For several years, the stressed term of the moment was "content is king"; today, it's been proven time and time again that in fact relevance is king, and that without relevance communication presented to them and will turn the page, flip the channel or in the case of digital signage, simply look away.

To ensure the best chance of success with digital signage, there are five fundamental points worth considering before developing a digital signage network:

1. Understand Your Audience
Do you research on who shops or visits a particular venue, and when and how often they visit. Does the type of audience change throughout the day or week, and how frequently does your data to build up a profile of who your viewers are likely to be. These profiles will guide you when you're deciding what type of content is required at what times or in which part precisely target viewers with specific, relevant messages.

2. Know the Viewing Environment

It is imperative to conduct an audit of the physical environment where your digital signage network will be installed in relation to how it influences the manner in which people bear on any potential design of the network screens and screen placement and the content (form and function). Ask simple questions such as whether the venue lends itself to the audience habits. For example, there may be areas within a venue that enable a viewer to watch a screen for a longer period of time (i.e., in a waiting area) than perhaps the relationship between the screen and the viewer in any physical space that relates to ability to see versus proximity (and clarity).

3. Design Relevant, Timely and Appropriate Content

Knowing who your viewers will be, what their interests and needs are, and how often they may watch your network will help develop the approach you or your client takes regarding signage mediums means that, unlike posters and other venue-based communications, digital signage can be highly reactive to a company's needs or change according to the valuable component to the marketing opportunity. For example, if you are promoting retail products and services, can you use the screen network to feature particular offers that season that makes the promotion relevant to the viewer (i.e., if it's raining outside, push umbrellas)?

Taking the concept of time one stage further, if you were on your lunch break and saw an offer on an in-store screen that said "buy me within the next 10 minutes and save 2! you don't buy me in 10 minutes, you can buy me in the following 30 minutes but with only 10 percent off," would you be more tempted to buy the product in the first 10 minutes viewer value and be used as an enticing call to action.

In addition, the digital signage network should always provide helpful and useful information to the viewer to assist him or her in making better decisions. Inform viewers about provide them with "coming soon" information to ensure they visit your client's location rather than a competitor's. A digital signage network also can help viewers understand!

Entertain viewers where and when it is appropriate to do so. Digital signage networks have a commercial role to play but just like commercial television, if the content isn’t interesting, they are unlikely to inject humor either in the content itself or in the way it is presented. It also is important to know when to keep content or how it's presented serious. Make sure that what information there is, is where it is appropriate to do so. If you are promoting retail products and services, can you use the screen network to feature particular offers based on the time of day, the day of the week or the season that makes the promotion relevant to the viewer (i.e., if it's raining outside, push umbrellas)?

4. Make It Easy for Viewers to View

For digital signage to work at its most basic level, as many viewers as possible must be able to see the digital screens and the content on those screens without making any effort to see the screens and content, the harder your network has to try to engage them, and the more likely you are to lose viewers. The best outcome for any physical deployment is to ensure that all screens and the content provide them with "Easy viewing" as they are highly engaged.

- 100 percent direct line of sight from maximum to minimum viewing distance
- 100 percent at eye-level (level relative to distance; does not involve "head turning")
- 100 percent direct line of sight from maximum to minimum viewing distance

Do not forget that the physical size of a screen used should be based on a mix of the above points balanced against budget.

Consider choosing a screen that offers the right level of image quality for its use. Screens closer to the shoppers' field of vision may require higher-quality screens than those where viewing opportunity and the intrinsic limitation of human eyesight (Do you really need a high-definition screen if viewers are 20m+ away from it?). However, high-definition screen quality is part of the overall proposition e.g., selling high-definition televisions monitors so choose the format most appropriate to the needs of the viewer or the customer.

5. Delivering a Measurable Return for the Viewer

Viewers are phenomenally media savvy. They are active users of digital communications and trade digitally every day (They create Web sites, they blog, they text, they email, consequently the growing trend is for the audience to be more critical of what is presented to them). There are many different ways networks measure commercial return, be they spend in the venue, facilitating repeat visits or engaging enough viewers to attract advertising spend to name a few. This is all of course pointless if the network does not pro

- "Don't make it hard for me to watch you"
- "When I do watch you, show me something relevant to me"
- "Save me money"
- "Save me time, and don't waste my time"
- "Help me make better decisions"
- "Tell me something new, innovative and interesting"
- "Give me ideas"

If you build your network to cater to these needs, you are likely to create viewer value, which in turn will generate all of the positive numbers required to validate almost all bus networks.

Screens and Divisions
Screens are at the core of the SignageStudio. The SignageStudio uses Screens to define and represent the width, height and resolution of each of the type of screens used in your physical digital signage network. Each screen can be thought of as a Template since it can be used throughout all campaigns within a single login account. Each screen will also be setup with one or more screen divisions (also known as zones). Inside these screen divisions, channels will later be assigned. Channels represent a sequential list of content like videos, scenes and animation.

**CREATING A NEW SCREEN**

When you open the SignageStudio Screens and Divisions, you will see on the left side a Navigation Menu with several buttons. The first one is named Screens. If you click on this module.

To create a Screen you use the Screen Wizard, click on the plus (+) sign on the left side of the application, a new window will open and you may begin creating your Screen configuration.
Next we will define the Screen Resolution. The Screen Resolution needs to match the same resolution of your final output device. If you want the presentation to be viewed on you’ll need to set your screen resolution at 1280 x 720. This case applies to all sizes; SignageStudio supports full HD of 1920 x 1080 resolution and higher.

You may set the Screen Resolution in this window either by using the dropdown menu, which contains preconfigured standard sizes, or you can manually set the width and height fields respectively.

After you set the resolution of your screen, you can name it. The Screen Resolution and the name of your screen can be changed at any point. You may also choose to assign a Folder field. After you set the Screen Resolution and the name, you can set the Orientation of your Screen and the Access Key.

Continue by clicking Next and you’ll be presented with a dialog of “Generate Screen Divisions (recommended)?” and a check box next to it. The checkbox is checked by default.

After you click the Finish button, a new Screen is created below the Navigation menu, along with the name of your Screen.

SCREEN RESOLUTION

When creating a new screen configuration, remember to set the correct resolution of your screen templates so it’s the same resolution as your physical output device.

Let’s say for example, that you create two Screens inside the SignageStudio. One has a 1280 x 720 resolution and the other is full HD 1920 x 1080.

You can create two different presentations on two separate screens. The resolution of your screens playing these presentations should be equal to the resolution of your Screen configuration:

- If you have a screen with a resolution of 1280 x 720, and the presentation was built using a Screen configuration that is smaller or larger than what was specified, you may experience skewed content, unless the ratio of width x height is the same, in which case skewing may not be evident but the content may shrink or stretch.
- If you modify the resolution of the Screen configuration after you’ve completed building your content, your media files may not maintain their original position.

After you’ve created the Screen and before you start building the Screen Divisions, you can perform the additional tasks of:

- Resize the Screen by clicking the resize button from the left side of the application
- Drag the handles or margins of the Screen with your mouse
- Modify the Width and Height fields
- Change the name of the Screen
- Assign a new folder to the Screen
- Adjust the orientation
- Adjust the Access Keys

SCREENS AND CAMPAIGNS

Screens are used within one or many Campaigns. We’ll discuss the Campaigns in another chapter, but essentially, a Campaign is a place where all your presentation components will come together.

After you create a Screen, it can be used by any number of Campaigns. And so if you want the same settings in different campaigns, you don’t need to rebuild it from the scratch. We will discuss Campaigns in another chapter.

In the left side of the application, just below the Navigation menu, you will find additional settings for Screens. These include:

- Add
- Duplicate
- Resize
- Delete
DUPLICATING A SCREEN

On the left side of the SignageStudio (just below the Navigation menu), you will find the duplicate icon. Select your screen and click the Duplicate icon, a dialog message will ask if you are sure you want to duplicate the Screen. If you click YES, a new Screen will be created with the same properties as the original screen.

DELETING A SCREEN

On the left side of the SignageStudio, just below the Navigation menu, if you select the Screen using your mouse (left click), you can click on the DELETE icon to remove the Screen associated with an existing campaign.

SCREEN DIVISIONS

Screens are constructed of individual Screen Divisions. A Screen Division as the name suggests, is a division, or a part of the Screen. To build a presentation, you’ll use one or several Screen Divisions.

CREATING A SCREEN DIVISION

After you’ve created your Screen, the wizard automatically created Screen Divisions for you if the check box “Generate Screen Divisions” was marked. You create a Screen Division by left clicking the plus (+) sign located in the Screen Divisions panel. You can also add a new Screen Division by clicking inside the screen editor, holding the mouse button down and dragging the mouse in positive coordinates.

ARRANGING AND RESIZING

Each rectangular shape you create with your mouse is a part of the Screen Division. You must pay attention to the shape of your Screen Divisions, because it must match the presentation. For example, if you have an image with the width of 300 and the height of 150, you’ll need to create a Screen Division of the same width x height.

When you draw multiple screen division on your Screen, you’ll find a useful small icon located on the upper left side which is called Magnetic Alignment. If you click on the icon, every shape you draw inside your Screen will intersect with other divisions while showing you colored guides. The guides, which are horizontal and vertical lines, will help you be more precise in creating your Screen Divisions and prevent you from accidentally overlapping one division with another.

After you draw a division with your mouse, you can edit precise values. You do this by entering the values in the designated fields located on the right side of the Screens module.

RENAMING SCREEN DIVISIONS

You can rename the Screen Divisions at any time under screen divisions. To rename a Screen Division you first select it and next edit the name under the properties panel.

POSITIONING SCREEN DIVISIONS

Placing screen divisions on your Screen is a key step in building your Signage presentation. The Position of divisions inside the SignageStudio Screen will determine the position of your resources (media, text, RSS news). Choosing the right size and position is vital in order to prevent skewing, stretching and shrinking of resources thus maximizing the definition of the content.

Remember that each screen division is a place holder for the presentation’s content.

THE ORDER OF DIVISIONS

Screen divisions can be placed at different levels of the display list. This will determine each division’s height in relation to other divisions. If you look at the Screen Divisions panel, it will show a tree widget, stacked one on top of the other. The first division on the list is always going to be the lowest on the screen. This means that any other screen division will hide it if they intersect with one another.

You can keep track of the order of your divisions by looking at the right side of the SignageStudio at the Division properties panel. Each number in the Order field represents the layering position of that particular Region in relation to others. Number 0 is normally the background; or the lowest division that all other screen divisions lay on top of.

You may change the layering order of each division using your mouse. Drag a division and drop it above or below other layered screen divisions to change the order of the display list.

If you draw two divisions on your Screen, and you want one of the divisions to be the Background and the second one a video, the Screen Division for the Background needs to have number 0 in the stacking order list and the Screen Division for the video region would need to set as 1; therefore 1 will be seen on top of 0. Change the order of the two, and the Background will be on top of the video.

BACKGROUNDS AND MASKS
A Background is usually the lowest division of a Screen. It will be viewed when the presentation plays on your output device, behind all the other components of your presentation. Mask making the other divisions layered below it.

To create a mask follows these steps:

1. Create the Background outside the SignageStudio (using Photoshop for example). You'll need to draw some cavities (holes) in your image. These empty spaces will be filled in layers (divisions) below the mask. Use transparent png files or Adobe Flash swf files to create transparent cavities.
2. Save your file/background with transparency enabled. You'll take for example, a simple PNG image and turn it into a mask.
3. Upload the file using the Resources > file upload.

The mask will be on top of all the other screen divisions, so other components will show through the cavities. Masks can be used to enhance the appearance of the presentation created is important, if you have a certain division and create another on top of it, the one beneath will not be visible unless transparent content is used on the above layer.

MULTI SCREEN

A multiscreen is configuration where a single screen is actually made up of multiple physical displays which are arranged one next to the other, or one on top of the other. To set up a multi-screen configuration, you need to follow these steps:

1. The monitors are daisy chained to one another or to a single PC with multiple video cards. When the presentation is played back, the content will span all monitors. When you need to attention to the resolution in the corresponding setting.
2. Each Screen Division can have a maximum of 4096 x 4096 pixels using the default canvas system. If a combined multiscreen width or height has a total resolution greater than 4096 x 4096 pixels, the application will use the windowing system.
3. If you know your multiscreen setup has a higher resolution that is greater than 4096 x 4096 pixels, you should design the presentation without transparency and layering as the system does not support this type of configuration.

SETTING UP A MULTI MONITOR CONFIGURATION

The SignageStudio will work with as many screens as your video card supports. The only requirement is that the size of a single Screen Division does not exceed 4096 x 4096 pixels. You can however connect as many displays as you like.

Right click a Windows desktop and choose to open display properties to view the number of displays connected and current resolution.

In the above example we connected one screen to a computer with a resolution of 1680 x 1050 pixels and a second screen with a resolution of 1280 x 800 pixels. First, create a single Screen Division occupying the space of our two displays. This means any media played in this Screen Division will bleed onto the second display.

For the Height, one screen has 1050 pixels and the other 800 pixels. We need to select the larger value of the two: 1050.

Ideally you'll want to use screens that have the same resolution. We used screens with different sizes to demonstrate that the system can also support this type of configuration. As we demonstrated earlier, the total width of the output of our screens is 1680 pixels (for the first display) plus 1280 pixels (for the second display), which means a total width property field of the first Screen Division we created.

For the Height, one screen has 1050 pixels and the other 800 pixels. We need to select the larger value of the two: 1050.

Ideally you'll want to use screens that have the same resolution. We used screens with different sizes to demonstrate that the system can also support this type of configuration.
IMPORTANT: When working with a multiscreen configuration, you should always have the Windows taskbar set as the primary display at 0 coordinates on the x/y axes. This configuration must be on the right side to your primary display (the one with your taskbar). If you set two screen divisions, one with the Width of 1680 pixels for the first screen your taskbar on the first screen (the one that corresponds to the left Screen).

Having the taskbar on the screen located on the right side will return negative values which is an invalid configuration.

The prior section covered using a single screen division that span multiple screens; next, let’s add additional screen divisions. We will add one Screen division to the right screen. The A Screen Division from the image below will play on both screens while the B division will only span the smaller screen.

SCREEN ORIENTATION

Screen Orientation is the vertical or horizontal positioning of a screen. By default, the screen orientation is set to horizontal but you may change it under the orientation settings.

You must also change the settings related to orientation on the physical SignagePlayer PC. In the control panel > display properties there should be an option called Rotate Display orientation of the display to Portrait or Landscape.
Once changed, set the corresponding width and height values in the Screen Properties panel to match.

**ACCESS KEYS**

Access keys will determine what a user can and can't do within the SignageStudio. Access Keys are defined by values from 0 to 9 and are assigned by an Enterprise level admin. Review Access Keys chapter for more information.

**Files and Resources**

**WORKING WITH RESOURCES**

Resources are files you use to build your SignageStudio presentation. There are two categories of resources:

- **Internal Resources**
  - The internal resources are files copied to the MediaSignage servers. These files will stream down from the server and get locally cached at the player side. If the player loses interruption in playback.

- **External Resources**
  - The external resources are files residing at external repositories, like a web server. You can link to these external files and use the files to build your SignageStudio presentation.

The main difference between the external and internal files is the internal resources take advantage of our caching system; which means; whenever these resources are played they are downloaded and cached in SignagePlayer. If the connection to the server is interrupted, the internal resources will continue and play.

The external resources are not downloaded onto the MediaSignage server; therefore they are not cached. However, in some circumstances it is easier to work and swap external resources.

MediaSignage officially supports all of the Flash Media formats which include Video Formats:

- Flash video FLV (H.263)
- MPEG-4 (H.264)
- MOV
- MP4V
- 3GP
- AAC (HE, LC)
- SWF

We HIGHLY recommend you use FLV (Flash Video) with H.264 encoding as it supports hardware acceleration and will run on the GPU (not CPU) and give the best performance.

- **Animation**: SWF

Flash CS can produce SWFs. SWFs are vector based and are rendered on the CPU, thus they are highly CPU intensive, especially when running high res.

- **Images**: JPEG, PNG, JPEG, GIF
- **Sound**: MP3

However, you should note, due to the hundreds of different encoders available today, it is possible some of your files may not run properly. For this reason, we recommend your media files to standard format including FLV, PNG or SWF. This eliminates any encoder / decoder issues you may experience. You can read our conversion format document here.

- **PowerPoint presentations** (ppt)

Microsoft PowerPoint Viewer is also supported, but it does have some limitations as it requires full screen and licensing from Microsoft.PowerPoint does come with some limitations, if you use it in a screen division smaller than full screen, the ppt may get cropped starting at x 0 y 0 to the total width and height of the screen division. So in order to achieve proper PowerPoint playback, you'll need to create screen's width and height.

**FILE CONVERSION**

We recommend you use a PPT > SWF convertor (PowerPoint to Flash converter).

You can also download a free file conversion utility at: [FreeMake file convertor](#)

You can also checkout the PowerPoint video tutorial here: [Go to MediaSignage](#)
RESOURCE PANEL AND PROPERTIES

The resource panel is where you upload and organize your files inside. This panel can be viewed by left clicking the "Resources" button from the main Navigation menu.

![Resource Panel](Image)

After you click on the "Resources" button from the main Navigation menu, you'll see the Resource's panel located by default on the right side. It contains several icons.

- The first icon is the upload button.

If you left click on the upload icon, you will be presented with a dropdown menu with four options for uploading your files.

![Upload Options](Image)

- The first option to upload files is "From local"

This option allows you to upload supported file formats from your computer to the server. If you choose this option, a new dialog box opens, and you'll need to select a file from the search window will only display certain types of files (depending on your selection). Also you can choose the "All files" option to show all.

You can select multiple files by holding down the Control key (or Command on Mac). After you have selected your files, click "Open."

After you've selected the files and clicked "Open," you'll see the selected files in the Resource's panel, along with some of their properties. We will cover the resource properties.

To begin the upload process of your selected files onto the server, you'll need to choose FILE --- > SAVE (upload) from the main Menu, located on the upper left corner of the SignageStudio.

- The second option to upload files is from URL (i.e.: across the web).

This option allows you to upload files from a web address. If you choose this option the URL selector dialog box will appear.

![URL Selector](Image)

You'll see two fields in the URL selector window. The first field is named "URL." In this field you enter the name of the source of the file you want to upload.

The advantage of using this option is resources are downloaded to the server from the location entered. These files will take advantage of the caching system; that is if the connection between the SignagePlayer and the server is lost.

The second field of the URL selector window is "Name." Use this field to enter a name for the resource you are uploading to the server.

You also have the options to PREVIEW the file before uploading, click OK or CANCEL. If you choose OK, you'll need to SAVE (upload) the file first.

- The third option is for uploading files is "From shared". This option will allow you to choose files from the MediaSignage library; made public by other users. These files include:

![Shared Options](Image)
Choose any file and press OK. Next click File > save (upload) to begin the upload process.

- The third icon in the main menu of the Resource’s panel is the “VIEWS” button.

You also have the option to CANCEL the operation by clicking the Cancel button.

- The fourth upload option is “From flicker”.

This option allows you to use images from Go to Flicker in your presentation.

In the search field located on the upper left corner of the window, enter a description. In this example we entered the word “Sunset” in the search field.
- The second icon in the main menu of the Resource's panel, next to the "ADD" button is the "DELETE" button.

If you select a resource from the list and click on the "Delete" button a new dialog box will appear asking for deletion confirmation.
If you choose YES, that Resource will be permanently deleted from the server.

- The third icon in the main menu of the Resource’s panel is the "VIEWS" button.

This button allows you to choose between two options for viewing / displaying your uploaded resources. If you click on the "VIEWS" button you have the option to choose either the Details view or the Thumbnails view. The Details view shows the name and certain properties for the resources. The Thumbnails view shows the icons or thumbnails of the uploaded resources.

The fourth icon in the main menu of the Resource’s panel is the "Columns" button.

This button is located next to the "VIEWS" button and will allow you to show or hide columns of certain file properties. If you click on the "Columns" button you’ll see a dropdown menu containing several options.

NOTE: Every resource property listed with a check mark next to it represents a column. You can check and uncheck the columns.

For example, we have a resource for which the Resource’s panel will display two columns: Name and the File Type.

If we use the "Columns" button we can also add the Width and the Height.

If you click on any Resource Property the resources list located below will be sorted according to your selection. You’ll notice a small arrow that appears on the property name.

You can click again on that property and the sorting order will reverse. For example, if you choose to sort the resources by Name, you can click once on "Name" and the resources will be sorted in an ascending order; click once more for a descending order.

The Resources search box is useful to help search for a file using its name or a partial string. The search box is located on the upper side of the Resource’s panel.

PREVIEW PANEL

After you uploaded the files you can preview them using the Preview panel located at the right side of the Resource’s panel. To preview a resource you’ll need to left click on its name. The Preview panel has three options to allow control over the preview. These options are PLAY, STOP, and CAPTURE.

The first icon is the Play button.

The Play button allows playing of your video files or animations content, followed by the Stop button.

If you click on the Stop button, the video file or animation will stop playing. The third icon is the Capture button.

Capture allows you to create thumbnails or small icons of resources; which are useful when working with timelines. Timelines will be covered in the Campaign chapter. When you click on the Capture icon a new window called the Icon Creator will appear.
You will see a blue square with several handles as margins. You can move the square with your mouse and change its size before you click OK. The area inside the square will be captured and a small thumbnail will be created.

You also have the option to cancel and exit the item creator window.

Internal resources are the files uploaded to the server which include:

- Local
- URL
- Shared
- Flickr

These resources take advantage of the SignagePlayer caching system.

External resources on the other hand are files that reside outside the MediaSignage server farm and are linked to the SignageStudio and SignagePlayer. An external resource may well as HTML web pages and other types of media.

Internal or external resources can be used in a **Scene** or directly on a **Timeline**. We will explain more about Scenes and Timelines later on.

RESOURCES PROPERTIES PANEL

The **Resource properties panel** is located on the right side of the application, next to the Resource preview window.

Use the "Name" field to change the name of a resource.

You do this simply by deleting the old name and entering a new one.

FOLDERS AND FILTERS

-The second field of the Resource properties panel is the "Folder" field.

Folders are used to filter a specified list of items. In this field you can enter a new folder name and the system will create a *New Folder*. Also, it will make a reference of the subfolder name "slash" delimited; just like a file system in a PC.

You can also assign one or more Resources to a Subfolder. To create a Subfolder, first select the resource in the Resource's panel. Next enter a "forward slash" on the keyboard/" after the Folder's name and add a name to the Subfolder. If we wanted to add a Resource to a subfolder named "Pictures," that will reside under the "Backgrounds" folder we've created, we will select the Resource and Subfolder named "Pictures" will be created below the "Backgrounds" folder.
You can delete one or more Resources at anytime from a Folder or Subfolder. To do so, first you SELECT the Resource, DELETE the name of the Folder or Subfolder in the All Resources assigned to a particular Folder will be listed under the "All" folder, which is the default Folder.

The filtering system uses folders to keep track of your files and enables the user to be more organized, especially when working with hundreds or even thousands of files. You can use the Search option to search for a file under a certain Folder or Subfolder. To do so, select the Folder or Subfolder where you want to search and enter a string search for your file only in the folder / subfolder you've selected.

If you want to add more resources to an existing Folder or Subfolder, copy the entire file path from a Resource already in that folder and paste it in the "Folder" field of the new Resources you can create.

You can Use folders with:
- Screens
- Campaigns
- Stations
- Scenes
- Incoming and Outgoing Ads

Managing Folders and Filters is an efficient way to keep things organized while working with SignageStudio.

Managing the Filters:

Type: png

The fourth and the fifth fields describe the resolution of the selected file with respect to the Width and Height.

Width: 320
Height: 240

The next field displays the duration of video files. Duration is only recorded for certain video formats including FLV and MP4 formats that are encoded with H.264.

Total Time: 30
Total bytes: 118259

Access keys determine what privileges a user has with regards to certain areas of the SignageStudio; we cover it in another chapter.

Next we will cover the "Trust content" and "flex module" options.

The "Trust content" option will be visible in the Resource properties panel when you select a swf file.

Swf resources are flash based files that can communicate with external web servers to pull live data feeds. If you check the "Trust content" checkbox, a small dialog box appears on the screen, informing you you've allowed the selected swf file to access external domains.

The "Flex module" refers to swf file created with Adobe Flash builder / Adobe Flex. This will allow for a Flex Module to be uploaded and work as a native resource within both the SignagePlayer and SignageStudio.

PREPARING RESOURCES

In an earlier Chapter we covered Screens and Screen Divisions. We mentioned that Screen divisions are used to define the areas on the screen where a resource or component will play.

-Verify that the dimensions of the file you want to use match exactly the width and the height of the screen division the resource will reside in.

For example, if we want to create an image of 2560 pixels and a Height of 1600 pixels; we need to create a matching W x H screen division.

Looking at the referenced image, you can see that a screen division was created with a Width of 600 and Height of 800 pixels.
Because the Width x Height do not match our original image and the proportion of Width to height is not the same either, we will experience distorted and pixilated content. Th Screen Division, make sure to modify the W x H of the original image to match that of the screen division’s W x H.

Occasionally, you’ll find that resources look fine even if the resource and screen division do not match in size, especially when the original file and the Screen division have a similar aspect ratio.

You can use an Image or Video editing application to modify a resource's width or height.

In our example we used Photoshop to modify properties of our image. After we inserted the image in Photoshop, we chose Image --> Image Size from the top menu and we er Note: Constrain proportions checkbox must be unchecked to modify the Width and the Height independently.

As you can see, the image is skewed and doesn't look good with the new size.

We choose EDIT --> UNDO from the main menu to undo the changes we've made to the image.

Next we will crop the image so it fits the size of the Screen Division. The disadvantage of using the crop tool is that certain parts of the original image will be lost.

To crop an image you use the crop tool located on the Photoshop tools panel, which is by default on the left side of the application.

After you clicked on the crop tool icon, you may insert the Width and Height values in the corresponding fields above.

Next mark a region of the image with the crop tool selected. Enter the values of 600 and 800 for width and height respectively.

Hit ENTER on your keyboard to complete the crop process.
Now the image size matches the size of the Screen Division. It will be viewed properly when the presentation is played back. Upload the image on the server and use it in your resources to build a presentation in another Chapter.

- You should also be aware of the file size when preparing a resource for uploading to the server. In Photoshop, use the Rectangular Marquee tool to draw a selection of 400 x 300 pixels. Position the selection as you wish and hit the DELETE key on your keyboard. This will create a hole in the image.

Save the file using the png extension. Upload the image and use it in your presentation as a Mask. Through the empty area you will be able to see the lower Screen Divisions. Always try to use smaller size files, as the upload process takes less time, and also your files will occupy less space on your media player. If you use Video files, try different encoding options to reduce total file size, but at the same time maintain a good quality video playback.

- Verify the transparency if using transparent png or swf files

The transparency feature in respect to Resources has an important role in building your presentation. The most common use of these files is in regards to backgrounds and masks. A background is the layer or the Screen Division that resides below all the other Screen Divisions, and it has the "Order" number in the layering or stacking with a value of "0." Masks on the other hand are used to hide certain parts of the Screen, and through the mask other Screen Divisions are viewed, making them visible thanks to the magic of transparency.

You can use many preloaded files with transparency available from the MediaSignage library. You can access these files using the UPLOAD option "From shared" as discussed earlier in this chapter. Be sure to check out the Background and Masks category for more examples.

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**Scenes**

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**THE SCENE EDITOR**

The Scene Editor is a key element of the SignageStudio. It is used to enrich your SignageStudio presentation by allowing you to use multiple components (resources and dynamic data feeds) and combine them into a single scene, so they can be embedded into a single Screen Division.

You can access the Scene Editor from the main Navigation menu located on the left side of the SignageStudio.

Select the Scene Editor tab.

- **Tip**: You can always hover with your mouse over an icon for a quick tooltip

Click on the plus icon to Add / Create a new Scene. The default name is "New Scene" and will appear in the Scene’s panel.

Before the new scene was created, the rest of the icons were disabled because their action depended on the existence of a scene.

If you left click on the above icon, you will be able to duplicate or "make a copy of" an existing scene.

Choose YES, and a duplicate Scene will be created in the panel; a Scene with the same components and settings as the original Scene. Click NO, to CANCEL the operation.

To delete a scene click on the "x" button.
If you choose YES, the selected Scene will be DELETED. Click NO to CANCEL the operation.

Tip: Remember like any other action, the DELETE action cannot be undone. If you think you've made a mistake and you did not SAVE the changes yet, EXIT the application. last save point.

The “Import Scene” allows you to browse pre-made Scenes.

Select a Scene from a collection of Scenes available through the MediaSignage library.
On the left side you'll see different folders containing several types of Scenes you can import into your project. The Scenes are pre-built, you can use them as they are or you can modify their content. In the middle of the window you will see the **Preview area**. Select a file from the folder

At the top of the Preview area you'll notice a **playback control Menu**.

- The STOP button will stop a playback scene.
- The FAST REWIND button will set the playback to jump to the beginning of the file.
- The **REWIND** button will rewind the playback one frame.
- The PAUSE button will PAUSE the playback of the selected Scene.
- The PLAY button will begin playing in the Scene.
- The FORWARD button will move the playback forward one frame.

- If you END icon the playback will jump to the last frame.

- Playback offset time

- This is the playback slider. Use it to scroll back and forth within the scene's timeline.

Tip: You'll find these playback controls on every Preview window across multiple areas of the SignageStudio. You can use them in the same manner to control the preview pla.

IMPORTED SCENES

As we stated above, the Imported Scene will allow you to take advantage of prebuilt Scenes which are sorted in different folders. These folders include:

- GENERIC (SWF prebuilt files, usually used for Scene backgrounds) - SDK (Software Development Kit, SWF examples)- WEATHER (Prebuilt Weather Scenes)- STOCK (Prebuilt Stock Scenes)- CATALOG (Catalog component Scenes)- MENU BOARD (Premade Menu Scenes) - DIRECTORY (SWF Listings, Directories) - CLOCKS (Prebuilt SWF Clocks)

RENAMEING A SCENE

You can rename a Scene at any time by clicking on its name in the Scene's panel. The default name will become editable and you can enter a new string.

SCENE PROPERTIES

The properties panel contains different settings you can make to a Scene or to a Component including its width and height. Later in this Chapter, we'll discuss the Scene Components. However, the settings you apply to a scene will also affect all the components added to the scene. Therefore, if you'd like to make custom settings for each component you add, you need to modify the properties in the properties panel of the specific component, instead of choosing to apply the settings to the entire scene.

Each time you select a Scene in the Scene panel, you'll be able to apply certain settings to the Scene. You can do this in the Properties panel, located by default on the right

The Scene properties panel has four categories for its settings:

- LAYOUT- SCENE- CONFIG- COMMON

You can access these by selecting specific tabs.

LAYOUT PROPERTIES

When you access the layout properties of a Scene, you'll be able to choose the layout for a Scene. These settings can be broken into two categories:

Static vs Dynamic.

This option refers to the behavior of a Scene when it starts playing in a timeline.

STATIC LAYOUT

When the "Static" layout is enabled,

It means no animation of any kind is applied to the layout of a Scene when played back. There can be motion inside the Scene (like a video file or a SWF for example), but the

The settings you can apply to the Static layout of a Scene are the Rotation property, the size and the position of a Scene.
The rotation property has a slider that is used to change the Rotation of the entire scene. Drag the slider with your mouse and the Scene will rotate.

Under the rotation settings you can change settings for the Width and the Height of a Scene, as well as for the x and y position of a scene in respect to the Screen Division as.

If you want a Scene to be aligned perfectly to the x and y axes of the Screen Division assigned to it, you should always leave the x and y values at 0. You can modify any defa

**Important:** remember to use a Width and Height values that will match the size of the Screen Division the scene will be assigned to.

We will elaborate more on Components later on in this Chapter, but as a quick example, to see the rotation property working we will add a "Label" component to a Scene. Usir inside the Main preview window.

![Rotation Property](image)

The rotation property has the default value of 0 degrees. If we drag the rotation slider to the right you’ll notice a tooltip showing you the selected degrees.

After you release the mouse you’ll notice the scene is now rotated with all components in it.

**DYNAMIC LAYOUT**

When the Dynamic Layout is enabled, you will be able to add animation to the Scene.

If you choose to enable the dynamic option, additional settings will be exposed in the properties panel. Let's go over these settings.
POINT NUMBERS

Below the Static and Dynamic options is the "point number" field.

The Point Number is an indicator referring to the position of a scene in regards to the settings applied to its dynamics. Point number "1" indicates the initial position of the Scene, and point number "2" indicates the final position of a Scene, after the Dynamics (animation) has ended. Between point number 1 (the initial position), and point number 2 (the final position), certain parameters can be controlled. These parameters allow you to add motion to the appearance of a scene when played back. The main settings applied to a Dynamics of a scene are in respect to the Rotation, and animation.

The Rotation works almost the same as described above as in the Static section. The difference is that in the Dynamic layout, Rotation actual motion, and not Static position. Point 2. This is also the case of the Width and Height values as well as x and y coordinates.

The Easing options are effects applied to the Dynamic layout of a Scene and they define the transition algorithm from point 1 to point 2. You can only use the effects if you are using the left and right arrows.

DELAY FIELD

The "Delay" field

is used if a user needs to delay the timing until the Dynamic settings (Rotation and Size) kick in.

DURATION FIELD

The "Duration" field

is used to define the duration in milliseconds of the motion.

Tip: if you want a scene to spin around (rotate) for a longer period of time before it comes to a stop; enter a higher value in the "Delay" field.

DYNAMIC LAYOUT EXAMPLE

Step 1: Select a Scene from the Scene panel.

Step 2: At point number 1, drag the Rotation handle to the right until the tooltip shows 180 degrees, and set the values to 200 for the Width and 200 for the Height.

Step 3: Using the right arrow, switch to point number 2.

Step 4: Enter the value 5000 in the Duration field.

Step 5: Enter the value 5 in the Delay field.

Step 6: Choose the Easing option "out back cubic."

Step 7: Set the value 500 for the Width and 500 for the Height of the scene.

Step 8: Click on the PLAY button to see the result and notice the dynamics of the Scene; how it will rotate and change its size over time.

SCENE TAB

The scene tab allows you to modify the default duration of a Scene when it is inserted onto a Timeline. You can change the default duration of a scene by entering the new time values in the corresponding fields. The first field stands for hours, the next is for minutes and the last field is used to set the timing in seconds.

Tip: The duration of a scene can be managed directly in the Timeline. It is not mandatory to change the duration from the Scene tab.
CONFIGURATION TAB

When you click the configuration tab

you will be presented with the scene property panel, you'll be able to assign a folder for the selected scene; enter the name of the folder in the "Folder" field.

A new folder will be created containing the selected scene.

- Tip: You can read more on folders and subfolders in the chapter of File and Resource management.

Also in the configuration Tab, you are able to see what Access key has been assign to you by the administrator.

COMMON TAB

When you click the Common tab

in the scene property panel, you will gain access to additional scene specific properties.

APPEARANCE

When you select the "Appearance" Tab under the Common section, you will be able to set transparency (Alpha) of the selected scene and also set a blending mode.

STATIC APPEARANCE

Under the Static appearance tab you can set the Alpha of a scene; control the Alpha value using the slider.

Example of different settings of Alpha applied to a Scene with a brown background.
BLENDING MODES

Blending modes control how a Scene blends with or interacts with other Scenes or Components beneath it. Blending modes in the SignageStudio work in a similar way as blur Photoshop. The way layers interact with other layers in the stack is determined by the blending mode of the upper layer. By default the layer’s mode is set to Normal, which causes the picture content on the upper layer to obscure the picture parts beneath, but SignageStudio has many other ways to control how these pixels interact. The different options, called blend modes, provide a variety of ways to control the mixing, blending, and general interaction of the layer content.

There are thirteen different blending modes to choose from in the SignageStudio. The default state for blending modes is “Normal” as we mentioned above and selecting it means no blending mode is applied to the selected Scene.

Let's see some examples of using blending modes. To see the effect of a blending mode we need to have at least two layers, positioned one on top of the other.

Tip: Blending modes can also be applied to any component as well as to a scene.

For our example the first layer is a colored background and the second one is an image. The upper layer is the image and beneath it is the background. In the image below we did not use any blending modes.

Next, let's select the Static appearance for the image and see how different blending modes affect the pixels of the image.

DYNAMIC APPEARANCE

You can choose a Dynamic appearance and be able to set different blending modes for point number 1 and point number 2, which means as the Scene / Component / Resource from one blending mode to another.

In the same time, you can also set different values for the alpha channel of the selected layer, at point number 1 and point number 2.

Let's use the same layers and make the following settings for the next example.

and make the following settings for the next example.

Step 1: Select the imageStep 2: Set the appearance to dynamic
Step 3: At point number 1, drag the slider for the alpha channel to center.

**BORDER**

If you click on the "Border Tab" you access the area where you can apply different settings to the border of a scene. The Border option is off by default, and if you prefer your scene to have a border around its margins, you can choose between a Static border and a Dynamic border.

**STATIC BORDERS**

When you select the Static border option you are able to apply three different settings to the border of your scene.

**CHANGING THE COLOR OF BORDERS**

The first setting you see when you select the static border option is the COLOR of the border. The default color is Red, but if you click your mouse on the color, a color picker will appear and it will allow you to choose a different color.

If you move the mouse pointer over the colors you can look at a small color preview in the left corner of the color picker. To choose a color for the border you can either click hexadecimal value in the field located next to the color preview area.

**BORDER THICKNESS**

The second option you'll see after selecting the Static border option, right below the color picker, is the Thickness settings of a border. You can increase or decrease the thickness value either by entering a number on the specified field or choose one pixel at a time by using the small UP and DOWN arrows.

Example:

**RADIUS BORDERS**

The next option is to change the radius of a border, which means you can make its corners more or less rounded. The same principle, as in the case of a scene border, applies to any random component to exemplify the Radius of its borders.

**DYNAMIC BORDERS**

If you select Dynamic border after clicking on the border tab, you have the same options as discussed earlier in this chapter (referencing the Layout of a Scene). You can add motion to the appearance of a border; make it rotate a few times before it becomes static, you can add an easing effect, set the delay and the duration. In addition to the above options, when you choose to apply settings to a dynamic border, you may also select different colors, different thicknesses, and different radius value.
Tip: As an example, you can set the color to Red at point number 1; enter the value 4 for the thickness and 25 for radius. Navigate to point number 2 using the right arrow, and 0 for radius. Click PLAY. You'll notice the border color will gradually switch from Red to Blue and the thickness and radius values will change.

BACKGROUND

If you click on the "Background Tab"

You'll be able to apply certain settings. These settings will affect the background of the selected Scene. By default, the Background is turned off. You can however select the:

- Static

and then you have two choices, you can choose either a simple background or you can choose a Gradient background.

SIMPLE BACKGROUND

After you select the Simple background option you can apply two settings to the background.

1. Background color.

You can change the Background color by clicking the default color and then use the color picker to choose a different color.

2. Background alpha

The other setting you may apply when selecting a simple background is the Background alpha option.

This option allows you to set a desired level of opacity for the background. Drag the slider to the left to set a different level of opacity.

LEVELS OF BACKGROUND OPACITY

GRADIENT BACKGROUND

The gradient effect is used for backgrounds and has several settings that you may choose from to change or enhance the look and feel of the background.

GRADIENT MAP

When you click ONCE with your mouse on the gradient map, a small square/handle will appear.

If you double click the handle, you'll see a color picker and you can use it to set a color point.
The color you choose will affect the area located between the selected handle and other handles from the gradient map. You can add as many handles as you want and try different color variations. As an example, let's click once on the right side of the gradient map and again around the middle. Double click the left side handle and choose a blue color.

Now, let's add a third handle and choose the yellow color.

Each color handle you create on a gradient map may be used to control the area the color covers, and also the opacity of the color in the gradient map. To control these options, UP and DOWN over the gradient map.

Let's use for the next example to create a gradient map with two handles. One handle controls the yellow color on the gradient map and the other the blue color.

COLORS IN THE GRADIENT MAP

To control how much a color is spread on a gradient map, drag the handle controlling the color to the left or right. You'll notice the color will bleed with the other color. Drag the blue color handle to the right.

Compare the previews of the Background before and after.

OPACITY OF A COLOR IN THE GRADIENT MAP

To control the opacity of a color in the gradient map, use your mouse to drag the handle that controls the color either UP or DOWN. If you drag the color handle UP, the opacity level will fall, making the color more transparent. If you drag the handle DOWN, the opacity level will rise until the color has no transparency.

Tip: We recommend you experiment working with color handles and combine different color gradients.

OTHER GRADIENT OPTIONS

Below the gradient map you'll find additional gradient tools.

COLOR GRADIENT PRESETS

The first icon is used to load a gradient map from a set of presets. Each time you click on this icon a new gradient map will load.
COLOR PICKER

The **color picker** is another option you can use to choose a gradient color. The first option we mentioned above is opening the color picker by double-clicking on a color hand by clicking ONCE with your mouse and selecting the color picker icon to OPEN it. The color you choose will apply to the area controlled by the selected handle.

REMOVING A COLOR FROM THE GRADIENT MAP

This option is used to delete a color from the gradient map. You remove a color from the gradient map by deleting the handle that controls it. To remove a handle / color, first DELETE icon.

CLEARING ALL GRADIENT COLORS FROM THE GRADIENT MAP

Selecting the CLEAR icon will reset all gradient colors and remove all map handles.

RADIAL GRADIENTS

The **Radial icons** are used to create different radial types of gradient. The default gradient type has horizontal alignment. The radial options allow you to change to position of right, reverse or around the center of the Background.

Examples of using the radial options for creating different types of gradient alignment:

![Using the LEFT radial feature](image)

![Using the RIGHT radial feature](image)

SPREAD OPTION

Next to the **Radial gradient options** is the **Spread icon**.

If you click on the Spread icon, all the colors form a gradient map will spread equally along the gradient map so every color will cover an equal amount of space.

**Example of using the Spread option**:

Before using the Spread option:

![Before Spread](image)

After using the spread option:

![After Spread](image)

Notice the distance between handles is equal after the **Spread option** was used.

ROTATING THE GRADIENT COLORS

Another option related to the gradient map and the gradient colors is the ability to rotate the gradient by affecting its angle or its x and y offsets values.

In order use the gradient rotation function, first you need to select what properties you want the rotation to affect. You do this by selecting the **Angle**, the **x offset** or the **y offset**

Next, rotate the gradient using the **Rotation Slider**.

Drag the slider to the right, add colors on the gradient, and look at the preview area. These are examples of using the **gradient rotation option**. We recommend you try out different background gradient.
GLOW EFFECT

Next in the Common section of the Properties panel is the Glow effect. The Glow effect is used to add a glowing stroke around the margins of a selected scene or component. It will modify the selected scene or component.

Before you start customizing the glow effect, choose static or a dynamic appearance.

STATIC GLOW

First let's use the Static option. After selecting the Static option you can apply different settings to the Glow effect. These settings are the blur, the strength, the alpha and the color of the glow.

BLUR

You can increase or decrease the blurriness of the glow effect on the x and y axes either by entering a value in the corresponding fields or by using the small UP and DOWN arrows.

STRENGTH

Increase or decrease the strength of the blur effect applied either by entering a value in the corresponding field or by using the small UP and DOWN arrows.

ALPHA

The Alpha option is used to increase or decrease the opacity / transparency of the Glow effect. This can be achieved either by entering a value in the corresponding field or by using the small UP and DOWN arrows.

GLOW COLOR

Choosing a color for the Glow effect can be done in the same manner as with any other color property in the SignageStudio. Select the default color and choose a color from the color picker or enter a hexadecimal value in the corresponding field.

Example of a glow effect applied to a Label component. The initial text was white and after applying the Glow effect a glowing stroke appeared around the text.

DYNAMIC GLOW

Another option you have when working with the Glow effect is the Dynamic appearance of the Glow. If you select Dynamic,
Besides these options you can also control the properties of the glow effect and make them animate.

You can choose to use the color red as the initial color of the glow effect and yellow for the second color. The glow will gradually change from red to yellow as the selected component begins to play. Additionally, you can set an easing effect. Click on the PLAY button from the preview area to see the result.

BLUR EFFECT

Use the Blur effect to control the blurriness of a Scene or a component. You can choose to set the blur level on the x and y axes. Set the blur level by entering a value in the corresponding fields.

| blur X | 10 |
| blur Y | 10 |

The appearance of the blur effect can also be either Static or Dynamic. When choosing the static option, you apply a static blur to the selected scene or component. If you choose an easing effect as described above, related to other properties, but in this case you control the blurriness of a component over time (animated).

Let’s use for example an image as a background and you apply a Dynamic Blur effect to it. For point number 1 we set a blurriness level of 15 pixels on the x and y axes, and a

![Image 1](image1.png)

Point Number 1

For point number 2 we set the blurriness level at 0 pixels.

![Image 2](image2.png)

Point Number 2

In this case, the blurriness level will decrease gradually over time, from point 1 to point 2. We recommend you experiment with the blur effects and combine the available settings with the easing effects.

SHADOW EFFECT

Below the Blur effects, next to the Common section of the properties panel is the Shadow effect. This effect is used to apply a shadow to a scene or a component. As in other cases of using effects, you can choose to apply a static shadow or a dynamic shadow effect.

STATIC SHADOW

If you choose the static shadow effect, you can change different settings. We discussed earlier in this chapter how to modify most of these settings like the blur, strength, alpha, and the color. Besides these settings, when using the shadow effect, you can also add new values to the angle of the shadow and the distance with regards to the selected scene or component.

| blur X | 10 |
| blur Y | 10 |
| Strength | 10 |
| Alpha | 1 |
| Color |

ANGLE AND DISTANCE

The Angle of a shadow can be modified by entering a new value in the corresponding field, or one pixel at a time using the UP and DOWN arrows.

| angle |

The distance of a shadow represents how close or far the shadow is to itself in relation to scene or the component it has been applied to.

| distance |

If you enter a higher value in the corresponding field, the shadow will spread further away from the object. In the following example, we used the settings from the left image to

![Image 3](image3.png)

Now, let’s change the angle and increase the distance of the shadow. See the difference between the two examples.

![Image 4](image4.png)
DYNAMIC SHADOW EFFECT

As in the case of other effects and properties discussed earlier in this chapter, the dynamic option is also available for the shadow effect. If you select dynamic after you clicked on the shadow tab, you have several settings you can apply to create a dynamic shadow instead of a static one.

The difference is that the settings are controlling the dynamics of certain properties of the shadow effect. You can set different values for all the properties of the shadow effect at point number 1 and point number 2; the values will animate.

MAIN VIEWING AREA

Located by default in the center of the application's interface, the Main viewing area is where you work with different components you'll add to the scene.

Earlier in this Chapter, we discussed controllers located at the top of the preview window (in the case of an imported Scene). The same buttons you'll see at the top of the main viewing area is also available for scenes. The size of the main viewing area is the same size of the Scene. If you have a larger Scene that exceeds the visibility in the main area, a scrollbar will appear at the bottom of the area and you can drag the slider to the left or right to scroll through the scene's content.

TOOL BOX

The Toolbox panel is located by default on the left side of the main viewing area of the Scene.

When you click on the Toolbox tab, you'll have direct access to Resources and Components. To access the Components panel, simply click on the Components tab in the Toolbox panel.

To build a Scene you can use any Resource as well as components. To use a resource or a component in your scene, simply drag it from the toolbox main viewing area. First select the resource or component and with your mouse, drag and drop it to the main viewing area.

OUTLINE PANEL

The Outline panel is located by next to the toolbox panel, on the left side of the main viewing area. You'll use the outline panel to set the layering order of the items you use in components.

In the following example we added five resources to a Scene.

To change the layering order, meaning to arrange certain resources above or beneath other resources, we need to use the UP and DOWN arrows of the outline panel.

Select the name of the resource or component and click on the UP or DOWN arrow to position it above or below other items.
Remember the layering order of items added in a scene will affect certain aspects like transparency. The first item in the outline panel is the resource placed beneath everyth resources lay on top of it.

DELETING AN ITEM

There are several ways to delete items.

1. Select the Item and click the delete icon in the outline panel

2. Select the Item and press delete on your keyboard

3. Right click on an item in the main viewing area and choose Delete

In all cases you'll be presented with a dialog box asking to confirm your action.

Campaigns

INTRO TO THE CAMPAIGN

The campaign is a global configuration which holds your entire digital signage presentation. Having the ability to configure multiple campaigns allows you to easily switch your assigning a single campaign to a single player and easily switching between campaigns).

A campaign in its most basic format is a sequential list of timelines. A timeline is comprised a screen template with each screen division holding a single channel. A channel ho and components can each be set to its own playback length.

And so a campaign is the place where timelines are sequenced to playback a list of components and resources that are placed inside channels which are bound to specific sc will explain it all.
CAMPAIGNS AND TIMELINES

A Campaign can have an unlimited number of Timelines played sequentially; one timeline after the other on your output screen. In a campaign, you can also decide which timeline will play before or after the other ones, and you'll be able to accomplish this using the sequences section of the campaign. In the Campaign area you'll be able to use timelines to manage your presentations.

Each campaign you create can have a different name. It can be assigned to a specific folder, which is useful, especially when you have a large network with hundreds or even thousands of campaigns.

CAMPAIGNS AND STATIONS

A Campaign is what is assigned to a Physical station out in the field. Each Station represents the Computer where you have installed and configured a SignagePlayer. A Station is directly connected to an output Screen.

You can add an unlimited number of campaigns in the SignageStudio. Each campaign will be able to manage an unlimited number of timelines.

You can decide which Campaign will be connected to one or several stations, and you can always switch between the campaigns assigned to a particular Station.

CAMPAIGN SCHEDULER

There are two ways to manage how timelines are played back in campaigns. The first one is the Sequences we discussed earlier. You'll use the sequence mode to set the timelines order list; play sequentially one after the other.

The second mode is the Scheduler. The scheduler allows you to schedule the date and time when you want a certain timeline to playback within a campaign that is assigned to any number of remote stations.

The Scheduler option allows you to have complete control over the timing of your presentation.

KIOSK MODE
In the Campaign section you can also decide whether your presentation will run in KIOSK mode. Kiosk mode allows you to use touch screen displays and allow users to interact with the signage presentations.

We'll discuss more about enabling the Kiosk mode and other Kiosk related topics like the Kiosk builder in another Chapter.

CAMPAIGN - USER INTERFACE

To access the campaign section, you select the campaign tab in the main navigation menu.

After you click on the campaign tab, you'll have access to all the panels and directories within the campaign. In the Campaign you can add, delete, and duplicate a campaign. You can create subfolders if you like. You can change the name of the Campaign and add Timelines to it.

CAMPAIGNS PANEL

On the left side panel you'll be able to view all your created Campaigns. You'll access the Timelines built in a Campaign by selecting the Campaign with your mouse. If you assign different folders and subfolders to your Campaigns, this is where you'll see the folders and subfolders listed.

In the Campaign Section, you'll see the Timeline located in the center of the user interface. Here you will drag and edit your Resources, Components, and Scenes and assign them to different Channels to build your presentation.

TIMELINES PANEL

In the Timelines panel, you can add, rename, delete, or duplicate Timelines. In this directory you'll see listed all Timelines created.

THE TOOLBOX

When you access the Campaign Section you'll also be able to use the Toolbox. It contains Resources, Components, and Scenes. You can also access from the Toolbox, the Screen Divisions you created, and you can assign more than one Screen Division to a Timeline.
THE OUTPUTS AREA

Another work area in the Campaign Section is the Outputs. The output is the Configuration of your Screen. It matches the layout of the Screen Divisions you created in the Screens Section of the SignageStudio.

In the Outputs area you'll drop and assign Channels to embed in your Screen Divisions. Here you'll also be able to preview the Presentation; either using the SignagePlayer's Web or Desktop version.

The output allows you to create a variation of a timeline for different resolution screens or, if you wanted to run a slightly modified version of a timeline. For example, you have two stations, one in Los Angeles and one in New York.

You want both to play the same campaign (thus same timelines). However, you wish to have the Weather component be unique for each of the 2 locations. With multi output you can have identical timelines for both locations, while keeping a single channel (in this case Weather component) unique per location. This will reduce the amount of work needed to create a new presentation per location.

You can add or delete outputs. You can have an unlimited number of outputs in a Campaign, and also more importantly, you can switch between different Outputs inside a campaign.

PROPERTIES PANEL

When you select a Campaign or a Timeline, a Resource or a Component, or any other element in the Campaign Section, you can access its properties panel on the right side of the interface.

Campaigns are an essential part of any SignageStudio presentation. Managing a Campaign properly helps you build your network and have complete control over your Station (and the content they display for your viewers).

CAMPAIGNS - TIMELINES AND CHANNELS

A Campaign consists of any number of Timelines. A Timeline can have any number of Channels and Outputs. In the previous Chapter we discussed a Campaign representing what is assigned to a Station. A Station is the computer where you have installed the SignagePlayer Desktop version.

You can build any number of Campaigns and assign one campaign to one remote station. You can also choose to Play one Campaign for a certain period of time and switch to another campaign.
Before you begin building your first Campaign, you should check to make sure you've completed the following steps; as it is necessary to prepare your presentation before you start building your Campaigns. We'll explain later in this Chapter all the steps of creating a presentation and define a Campaign for it. For now, make sure you don’t skip one of these steps before starting to build a Campaign.

- 1. Check if you imported all the necessary files in the resources directory and assigned folders to them for organization
- 2. You defined one or more Screens, set the desired resolution, and draw the Screen Divisions in the Screens section of the SignageStudio
- 3. Check the position and size of your Screen Divisions
- 4. Check the layering order of your Screen Divisions
- 5. Check the Orientation of your Screens
- 6. Check if you properly set the width and height for any scene you may want to include in your presentation;

To access the Campaign section of the SignageStudio you select the Campaign tab from the main Navigation menu.

**BUILDING A CAMPAIGN**

Start building your first Campaign by following the Campaign wizard.

**THE CAMPAIGN WIZARD**

Click on the ADD icon located in the Campaign's panel.

A new dialog window appears on your Screen.

The Campaign wizard will allow you to build a Campaign by going through several steps. As you can see in the left side of the wizard, there are four sections:

- 1. Campaign
- 2. Output
- 3. Timeline
- 4. Screen Divisions
You can navigate to a different sections of the wizard directly by clicking on its name, or you can use the Next and Previous buttons.

Step 1: Set a name for your Campaign.

Step 2: Assign a new or existing folder or subfolder for the Campaign. You can assign a folder by entering the name/path of the folder in the “Folder” field. You can leave this folder / subfolder.

Step 3: Next you can choose to set the Campaign mode. You can set the mode either to Sequence or Scheduler. The default mode is the Sequence mode. It will set the Timelines to play one after the other in a sequential order; while the Scheduler mode will allow you to set the Timelines

Step 4: Check the access key provided by the network administrator.

Step 5: Click the Next button

Step 6: Choose a Screen from the Screens dropdown list.

In this dropdown list you can select a Screen you've created in the Screens section of the SignageStudio.

In the next illustration, we created two Screens: My new Screen 1 and my new Screen 2.

We will choose the Screen named “My new Screen 1” from the Screen’s dropdown list.

Step 7: Next let's set a new name for the Output. A Campaign can have more than one Output. You can add additional Outputs at any point.

Step 8: Click the Next button

Step 9: Set the name for the Timeline in the “Name” field.
Step 10: Also in the Timeline Section of the Campaign wizard you can set the duration of the Timeline. The default duration is 00:1:00 minute. You can set the duration of the corresponding fields (hours, minutes, and seconds), or by using the UP and DOWN arrows keys.

After you've created a Campaign, you can change the duration of a Timeline.

Step 11: Click the Next button to access the Screen divisions section of the Campaign Wizard. In this section you'll choose a default Screen Division for the Timeline. You can add multiple Screen Divisions to a Timeline after you've created the Campaign. For our example, we created in the Screens section three different Screen Divisions.

Click the Finish button to complete the Campaign Wizard or Cancel to abort all settings.

Congratulations, you just created a new Campaign, not so hard after all. In the Campaign's panel, check on the left side of the user interface and search for the Campaign you just created. In the next illustration we have a folder containing two Campaigns and the New Campaign we've just created.

After you've created the New Campaign, several components of the Campaign were automatically created.
- 1. The Timeline containing the Screen Division for the Output.

- 2. The Output containing the viewers or regions you drew in the Screen's section; each Output different
- 3. Channels appeared on the Timeline. Each Channel has a different color corresponding to the colors of the regions in the Output section.

In the Campaign’s panel, besides the option to ADD a new Campaign, you can also duplicate or DELETE a Campaign.

**DUPLECTATING A CAMPAIGN**

If you wish to duplicate a Campaign you’ll have to select it, and then click on the duplicate icon located next to the Add icon in the Campaigns panel.

After you click on the Duplicate icon, a dialog box appears on your screen. You have the option to choose YES, and duplicate the Campaign, or to choose NO and CANCEL the operation.

If you click on YES, a new Campaign will be listed in the Campaigns panel. It will have the same settings as the duplicated one. It will be an exact copy of the Campaign you chose to duplicate.

**DELETING A CAMPAIGN**

If you want to delete a Campaign, you need to click on the DELETE icon, located next to the Duplicate icon in the Campaigns panel.

If you click on the Delete icon, a dialog box will appear on your screen. You have the option to choose YES and DELETE the selected Campaign, or choose NO to CANCEL the operation.

You can access the Add, Duplicate or Delete options by right clicking on the name of an existing campaign in the Campaign panel, then choose the desired option.

**THE PROPERTIES PANEL OF A CAMPAIGN**

You can access the Properties panel of a Campaign by selecting the Campaign name in the Campaigns panel. The Properties panel of a campaign is located on the right side.
The Properties panel of a Campaign has two tabs which include Campaign and Kiosk.

**CAMPAIGN SECTION OF THE PROPERTIES PANEL**

In the Campaign section of the Properties panel you can apply different settings to a Campaign. These settings include:

- 1. Changing the name of the Campaign
- 2. Assigning a folder or subfolder to a Campaign
- 3. Selecting the Mode of a Campaign to either Sequence or Schedule
- 4. Verify the access key

**CHANGING THE NAME OF A CAMPAIGN**

To change the name of a Campaign you enter the new name of the Campaign in the "Name" field of the Properties panel.

**ASSIGNING A FOLDER OR A SUBFOLDER TO A CAMPAIGN**

If you didn't assign a folder or a subfolder using the Campaign wizard when you created the Campaign, than you'll be able to do so in the Folder field of the properties panel of a Campaign.

Enter the name of the folder in the field. You can also assign a subfolder to a Campaign by using the "/" key on your keyboard.

**CAMPAIGN MODE**

You can change the mode of a Campaign by selecting either Sequence or Scheduler.

The Sequencer is essentially a simple and effective way to serially set the playlist order of all the timelines. This is accomplished by using a drag and drop operation.

The Scheduler allows you to set your timelines to play at any day and at any time. Use the scheduler to set the exact start and stop times. A graphical user interface is used to resolve conflicts.

You can always switch between the two modes directly from the Properties panel of a Campaign.

**ACCESS KEYS**

You can view what access keys have been assigned to you by the network administrator. However, only an administrator can modify the access key value through the Enterprise studio.

**KIOSK SECTION OF THE PROPERTIES PANEL**

You may enable the Kiosk mode for a Campaign from the Kiosk section of the Properties panel. The Kiosk mode allows you to interact with your Presentation using your mouse, keyboard, or finger gestures using a touch screen.

In the Kiosk section of the properties panel of a Campaign, you have several options, like enabling the Kiosk, setting up the Escape / exit key and more.

**TIMELINES**

After you access the Campaign Section of the SignageStudio, you will gain access to the Timelines Section. The other subsection is Sequences.
We will talk more about Sequences later in this Chapter, but for now we will cover what are Timelines and how we can use them to build a SignageStudio presentation.

THE TIMELINES

A timeline is a visual representation of the sequential play list of your media resources. A collection of all your timelines make up the final output of your digital signage presentation.

A Timeline is the place where you set and add channels. Channels contain all your media content (resources, scenes, and components), and where you’ll define when content starts and ends. Channels are a visual playlist that you place the content within.

Timelines are an important element of a Campaign and you can create any number of Timelines and any number of channels within a single timelines.

THE TIMELINE PANEL

After you added a New Campaign to your presentation using the Campaign wizard, you will see that a Timeline was automatically created for you. You can choose to add additional Timelines.

You’ll see all the Timelines you created listed in the Timelines panel. You can access their properties by selecting each timeline.

ADDING A NEW TIMELINE TO A CAMPAIGN

To add a new Timeline to a Campaign, click on the Add icon from the Timeline panel.

After you click on the Add button, you will gain access the Timeline wizard.
To add a new Timeline to a Campaign, you’ll have to go through several steps in the Timeline wizard. The Timeline wizard has two sections: "Timeline” and "Screen Divisions.”

**Step 1:** In the **Timeline Section** of the wizard, create a name for the new Timeline. Enter the new name in the "Name" field. Remember you can always change the name of a Timeline any time after you’ve create it.

**Step 2:** Set the Duration of the Timeline. You can change the duration of a Timeline any time after you’ve create it.

**Step 3:** Click on the Next button and choose a Screen Division. You can select the same Screen Division you chose for the previous Timeline(s) or a different one.

Click Finish to create the new Timeline.

After you’ve created a new Timeline, it will appear in the Timelines panel.

Besides adding a new Timeline, you can also Duplicate and Delete a Timeline from the Timeline’s panel.

**DUPLICATING A TIMELINE**

If you want to duplicate a certain Timeline, you select it and click on the duplicate icon located next to the Add icon in the Timeline panel.

After you clicked on the Duplicate icon, a new dialog box appears on your Screen.
You can choose YES and duplicate the selected Timeline, or you can choose NO to CANCEL the operation.

If you choose YES, a new Timeline will be listed in the Timelines panel. It will have the same settings as the duplicated one.

DELETING A TIMELINE

If you would like to delete a Timeline, you'll click on the Delete icon located next to the Duplicate icon in the Timelines panel.
After you click on the Delete icon, a new dialog box appears on your Screen.

You'll have the option to choose YES and permanently DELETE the selected Timeline, or you can choose NO and CANCEL the operation.
You can also access the ADD and the DELETE options by right clicking on the name of a Timeline within the Timelines panel.

THE PROPERTIES PANEL OF A TIMELINE

Whenever you select a Timeline from the Timelines panel, you'll be able to access its Properties panel. In the properties panel you can change the name of the Timeline and

CHANGING THE NAME OF A TIMELINE

To change the name of a Timeline you enter the new name in the "Name" field of the Properties panel.

CHANGING THE DURATION OF A TIMELINE

After you've created a Timeline, you can change its duration at the timeline using the "Duration" option in its Properties panel. Enter the numerical values in the corresponding fields (hours, minutes, and seconds), or use the small UP and DOWN arrow keys.

THE TIMELINE SECTION

The Timeline Section is a key component of the SignageStudio. You'll use a Timeline to set up your entire Presentation. In a Timeline you will:

- Drag your Scenes, Components, or Resources
- Define which Component will play in your Presentation
- How long it will play in your Presentation- Where it will play in your Presentation

TIMELINE SECTION - OVERVIEW

After you created a Campaign, a new Timeline was automatically created. The Timeline is located by default in the middle of the user interface next to the main Navigation me
A Timeline is comprised of several tools including:
- 1. Toolbar
- 2. Output
- 3. Channels
- 4. Time Markers
- 5. Scale Feature

**THE TIMELINE TOOLBAR**

In the top left area of the Timeline section, you'll see a toolbar containing several icons.

**THE ADD ICON**

The Add icon

is used to ADD Channels to a Timeline. Channels allow you to embed resources within them and then assign them to Screen Divisions. A region or division of a Screen can have the same Channel to multiple Screen Divisions if you wish to have the same content play multiple times.

The "Add channel" icon allows you to add either a Local Channel or a Common Channel to the Timeline. We will cover common channels later and explain the difference between local and common Channels.

**THE DUPLICATE ICON**

The Duplicate channel icon

is used to duplicate a certain Channel. To duplicate a Channel, you must select it and then click on the Duplicate Channel icon.

After you click on the Duplicate Channel icon, a dialog box appears on your Screen.

You can choose YES to duplicate the Channel or NO to CANCEL the operation. If you click YES, a new identical channel appears in the Timeline.

**THE DELETE ICON**

The Delete icon

is used to DELETE Channels from a Timeline, and any Output template Component, Resource, or Scene you previously added to the Timeline.

To delete something from a Timeline you select it and click on the Delete icon. After you've clicked on the Delete icon, a dialog box appears on your Screen.

You can click YES to delete the selected component, or click NO the cancel the operation.

**THE REMOVE SPACING ICON**

The Remove Spacing icon

is used to remove the spacing between the Resources, Components, or Scenes added to a particular Channel. You can manually drag a component added to a Timeline user will do the same thing (and will save time).
In the following example, we added three Components to a Timeline.

To remove the spacing between the components we added to the Timeline, you must click either on the Channel's name, or on any of the Components residing in the respective button.

As you can see from our example, after we clicked on the Remove Spacing icon all the Components from the respective channel aligned one next to the other, leaving no spa

THE EDIT PLAYER ICON

You'll use the Edit Player icon to access the Properties panel of a particular Component, Resource, or Scene you previously added to a Timeline. As an alternative to the use of the Edit Player option, you properties panel to apply different settings to it.

THE OUTPUT AREA

The Output of a Campaign includes:

- Timeline area
- Main Output area

THE TIMELINE AREA OF THE OUTPUT

The Timeline area of the Output is located at the top of the Timeline. It represents the Template containing the Screen Divisions you assigned to the respective Output. Each it.

The Output area of the Timeline includes:- 1. Output Name
- 2. Output Preview area

The Output name is located in the left side of the Timeline above the Channel names.

The Output preview area shows you a small graphic representation of the Template and the Screen Divisions assigned to the Output. Whenever you assign a particular Char the corresponding section of the Preview area.

If you didn't assign any Channels to the Output, the output would look hollow:

If you drag a Chanel into the Main Output area, the color of the respective channel fills the section of the template in the Preview. This way, you'll easily know which parts of yi

ADDING MORE TEMPLATES TO THE SAME OUTPUT

You can add additional screen division templates to add more diversity to your Signage Presentation; thus allowing you to change the screen division if your presentation in n
Step 2: Open the Toolbox panel and click on the Screen Divisions tab.

Step 3: Choose a Screen Division you previously built and drag it to the Timeline; next to the existing one. Now, you’ll have two Templates on the same output Section.

Having the configuration from our example, the Screen Division 1 will play first on your Station, and after 30 seconds the Screen Division 3 will take over.

THE MAIN OUTPUT AREA OF A CAMPAIGN

The main output area of a Campaign is the place where you’ll assign Channels to a certain Output Screen, and also the place where you can Preview any Resource, Compom

Here you can add more Outputs to a Campaign delete outputs, preview outputs; among other things.

THE TIMELINE CHANNELS

Channels allow you to embed resources within them and assign them to Screen Divisions in the Main Output area. A Screen Division can have only one Channel assign to it, Divisions templates.

There are two types of Channels:

- Local Channels
- Common Channels

LOCAL CHANNELS

When you create a new Campaign, the system will automatically create a local Channel for every division of the screen. The Channels have a predefined color and you can has four viewers which we previously drew in the Screen’s section of the SignageStudio.
The four Channels from our example have the default names of: CH0, CH1, CH2, and CH3.

Let's add some Components to the first Channel, which is CH0. We will add the Media RSS Component, the Label Component, and the Clock Component. Drag the Components from the Components panel into the Timeline, on the first Channel which is CH0.

ASSIGNING A CHANNEL TO A REGION FROM THE SCREEN DIVISION

To assign a particular Channel to a region or viewer in your Screen Division:

- 1. Drag the Channel from the Timeline.

- 2. Drop the Channel into a region of the Output, where you'll embed the content added to the Channel in the Timeline.

As for our example, all the Components added to the blue local Channel (CH0), will be embedded in the region located in the top right side of the Screen Division. Three more Channels to each region.

ADDING A NEW CHANNEL TO THE TIMELINE

To add a new Channel to the Timeline you need to click on the Add icon.
After you've added a new Channel to the Timeline, you can add Resources, Components, or entire Scenes to it, you can assign the Channel to a particular division of your Screen, and you can apply settings to it.

DUPLICATING A CHANNEL

To duplicate a Channel you select it and click the duplicate button from the Timeline's Toolbar.

After you click on the Duplicate button, a dialog box appears, click YES to duplicate the selected Channel.

A new identical Channel is created on the Timeline. It includes the same Resources, Components, or Scenes you added to the previous one.

DELETING A CHANNEL

If you want to delete a Channel from the Timeline, you select the Channel and click on the Delete icon from the Timelines Toolbar. After you've clicked on the Delete button a dialog box appears, click YES to permanently delete the selected Channel.

THE PROPERTIES PANEL OF A CHANNEL

To access the Properties panel of a certain Channel, first select it in the Timeline.

The Properties panel of a Channel is located by at the lower right section of the user interface.

CHANGING THE NAME OF A CHANNEL

To change the Name of a Channel, select the Channel in the Timeline and then type the new name for it in the "Name" field of the Properties panel.

CHANGING THE COLOR MARK ASSIGNED TO A CHANNEL

Every Channel, either created with a new Campaign or added later to a Timeline, has a certain color assigned to it. This color is important as it will help you visualize the different Channels assigned to a Screen Division.

You can change the color of a Channel using the Color picker from the Properties panel. You can either enter a value in the hexadecimal field or choose a color manually.

THE RANDOM ORDER OPTION

The Random Order option is located below the Color picker in the Properties panel of a Channel.
If the Random Order option is unchecked, all the Resources, Components or Scenes added to the selected Channel will play sequentially, one after the other, in the exact order you set within the Timeline.

If the Random Order option is checked, then all the Resources, Components, or Scenes added to the selected Channel will play randomly, making the presentation seem more unique.

THE REPEAT TO FIT OPTION

You’ll use the Repeat to fit option when you want the first Component added to a Channel to play after the last one.

Example 1: We have three Resources added to a Channel, and the last one is a video file set to play in a continuous loop. With this configuration, when the video file ends, the system will automatically play it again in a loop. If you click on the first Resource from the Timeline and enable the Repeat to fit option, the system will play the first Resource right after the video file ends.

Example 2: Let’s add two External Video Components to the Timeline and leave some distance between them.

If the Repeat to fit option is disabled, the gap between these files will remain and the second video will begin to play only after the gap and only for the length we previously set.

If the Repeat to fit option is enabled, both video files will play until completion, looping one after the other within the length of the Timeline.

THE RESPECT CONTENT LENGTH OPTION

The Respect Content Length option works only on videos and video related components like Media RSS. By default, it’s enabled. Which means the system respects whatever length you set the video to play, within the Timeline.

Example: If you set a video file to start playing for about 10 seconds on the Timeline and leave the Respect Content Length option enabled, the system respects it regardless of how long the video is.

However, if you uncheck the Respect Content Length option, the system no longer respects the length of the Component you set on the Timeline. In this case, even if you shortened the Component length on the timeline, it will still play the video to completion.

This feature comes to shine with Media RSS, because you don’t always know the exact length of a video with an MRSS feed, or how many videos will play in the RSS feed. By disabling the Respect Content Length option, all the videos related to the Media RSS will play to completion within the given length of the Timeline.

COMMON CHANNELS

Common Channels allow you to reduce your management time by allowing you to reuse Channels over several Timelines within a single Campaign. We’ll talk about different aspects and how to configure Common Channels.

ADDING A NEW COMMON CHANNEL

To add a Common Channel to the Timeline, click on the Add icon from the toolbar and choose Common.

A new Channel is added to the Timeline, but notice it has a small hand over the Channel indicator. This indicates the Channel is a Common Channel.

To demonstrate what the Common Channel is, we will add two more Timelines to the Campaign. Now, you have three Timelines added to the same Campaign.

Switch to the second and third Timeline and notice that each Timeline of the Campaign has the same Common Channel you added, thus all timelines have access to the same content.
To use the Common Channel, you’ll assign it like any other local channel to a certain region or viewer of your Screen Division. The real power of a Common Channel is the Channel, but have it propagate to all the Timelines.

One thing not very obvious with Common Channels is that Common Channels have their own length, independent of the Timeline they reside in. For example, right now we have Timeline 2 which has a total length of 2:00 minutes, and Timeline 3 which has a total length of 3: minutes.

So what is the total length of our Common Channel?

On our Timeline 1, which has a total length of 1:00 minute, we have a Media RSS Component added to a Local Channel and two other Components added to a Common Channel.

If you try to drag the Media RSS Component outside the length of the Timeline, you’ll not be able to do so, because local Channels are limited to the boundary of the Timeline. However, if you try to increase the length of a Resource, Component or Scene added to a Common Channel, you’ll notice no limitations by the boundaries of the Timeline, because the Channel is Common.

Common Channels are useful especially when you have multiple Timelines that are almost identical. They run the same content and the same Channels. You only want one or two different Channels. You can use your Common Channel throughout your Timelines so everything will be almost identical. You will use the local Channel only for the places you are going to have different content which does not appear in the rest of the Timeline.

So local Channels and the content you add to them will be limited to the Timeline they reside in, and the Common Channels will play the Content added to them throughout all Timelines.

THE TIME MARKERS

Time markers (also known as Time Scale) are guides set to help you position Resources, Components, or Scenes on the Timeline.

Time markers are located at the top of the Timeline. They have vertical lines to illustrate the measurement related to the duration of a Timeline in seconds and minutes.

The shorter vertical lines represent seconds and the longer ones represent minute indicators.

THE SCALE FEATURE

To have a clear view of the entire Timeline, especially when you are working with longer Timelines, you’ll use the Scale feature.

The Scale feature is located at the top right side of the Timeline and allow you to zoom in or out from the Timeline.
To demonstrate how the Scale feature works, set the length of one of the timelines to 2:00 minutes.

You might not see the entire Timeline, depending on the size of your monitor. In this case, you'll need to use the scroll bar located beneath the Timeline and drag the slider to the right (so you can also see the end of the Timeline).

To save time and have a complete visual control over the entire Timeline, you'll need to drag the Scale slider to the right and zoom out from the Timeline.

The Timeline section has decreased in size allowing you to have more control over the timing of your Timeline.

THE OUTPUTS OF A CAMPAIGN

We discussed Outputs briefly earlier. In this section we'll better understand how to use them and how to apply different settings to Outputs.

CONFIGURING THE OUTPUT

An Output is a representation of a Screen Division created in the Screen's section of the SignageStudio. The Output allows you to assign Channels in the different areas of a Screen Division.

MAIN OUTPUT AREA

The main Output area is located below the Timeline section.
The output area is used to assign Channels and embed your content. In the image above, we added four different local Channels to the Output.

OUTPUT TOOLBAR

ADDING AN OUTPUT

You can add a new Output and use it in the same Timeline along with other Outputs. If you add additional outputs to a Timeline, after you've built your Campaign and assign one of the multiple Outputs you would like the Station to bind to for a particular Campaign.

To add a new Output to a Campaign, you select the first icon of the toolbar, which is the Add button.

After you click on the Output icon and on Output, a new window appears on your screen. This is the Output Wizard that guides you through the process of adding a new Output.

Step 1: Attach a Screen to the newly created Output.

After you open the new Output Wizard, you select a Screen, which attaches to the respective Output. You'll select a Screen from the Screen dropdown list.

Step 2: Enter a name for the Output.

To assign a name for the new Output, type the name in the Name field.

Step 3: Finish.

To exit the wizard and finish creating a new Output, click on the FINISH button.

After you've completed the Output Wizard, you'll notice a new Output was created in the Output area. You'll also notice a new Output channel appeared on the Timeline, beneath the other existing Outputs.

The new Output channel from the Timeline has no template assigned to it like the existing Output.

ASSIGN A SCREEN DIVISION TEMPLATE TO AN OUTPUT

After you create a new Output, you assign a Screen Division to the particular Output. You may assign one or more Screen Division Templates to the same Output channel.

To assign a new Screen Division Template to an Output, you follow three simple steps:
- 1. Open the Toolbox panel and select the Screen Divisions tab.
- 2. Drag and drop a Screen Division onto the Timeline.
- 3. Adjust the length of the Screen Division

To assign certain Channels to the Output, you need to first select the channel on the Timeline and then drag the Channels into the corresponding regions of the Screen Division.

**DELETING AN OUTPUT**

You have the option to click YES and delete the Campaign Screen (which is the Output), or choose NO and cancel the operation.

Deleting an Output from the main Output area results in the loss of all your configuration and settings you made on the Timeline regarding a particular Output screen.

**PREVIEW IN EXTERNAL BROWSER OPTION**

You can preview any Output Screen anytime by select it, located next to the Delete icon in the Main Outputs area toolbar. To preview an Output configuration, first select the Output from the main output area and then click on the Preview in External Browser icon.

After you click on the preview icon, your default browser immediately opens and the SignagePlayer web version plays the Signage Presentation associated to the Output screen.

As an alternative, you can also right click on the Output viewing area and click on the Open Player option.

The SignagePlayer Web version loads the content inside a web browser. The content played can be accessed virtually from any computer. That said; the SignagePlayer Desktop version standalone application which needs to be installed on the Station/Computer connected to your Screen.

**SIGNAGEPLAYER OPTIONS**

The last icon from the toolbar located in the main Outputs area is the SignagePlayer icon.

- SignagePlayer Web version
- SignagePlayer Embedded version
After clicking on the SignagePlayer icon,

if you choose the SignagePlayer option, you'll see a new window appear

In this window you'll see the preview URL for the Presentation associated with the selected Output Screen. You can copy this URL to your clipboard and send it to others so they can preview the presentation on their PC; inside any web browser.

You can copy the Preview URL in two ways:
- 1. Click on the Copy to clipboard button
- 2. Select the Text and then click on Ctrl (Cmd) + C on your keyboard.

You can close the window by clicking on the CLOSE button.

SIGNAGEPLAYER EMBEDDED OPTION

After clicking on the SignagePlayer icon, if you choose the SignagePlayer Embedded option,

A snippet with the Embedded HTML code of your Signage SignagePlayer Embedded version can be copied and pasted to an HTML page.

You can copy the Embedded HTML code in two ways:
- 1. Click on the Copy to clipboard button.
- 2. Select the Text and click on Ctrl (Cmd) + C on your keyboard.

You can close the window by clicking on the CLOSE button.

OUTPUTS AREA AND ZOOM

The zoom feature allows you to have a clear view of the main Outputs area. To zoom in or out from the Outputs area, you use the drop down list containing the zoom percentages.

In the above illustration, the zoom option is set to 25%, which means the Outputs area was scaled down by 75%.
PROPERTIES PANEL OF AN OUTPUT SCREEN

If you select an Output screen from the main Outputs area, you'll access its Properties panel.

The properties panel of an Output screen is located by on the right side of the application’s user interface. You have two fields in the Output properties panel:

- 1. Screen Field
- 2. Name field

THE SCREEN FIELD

In the Screen field you'll see the name of the Screen you'll choose for the selected Output.

THE NAME FIELD

You can use the Name field to change the name of the selected Output screen. You can change the name of an Output screen at any time by typing the new name in the Name field.

TOOLBOX

The Toolbox panel is located next to the Timelines panel. From the Toolbox panel, you can access the Resources directory, the Components directory, the Scenes directory, Screen Division directory and more.

You can drag a Resource, Component, or a Scene directly to the Timeline and assign it to a particular Channel. You may also use the Screen Divisions tab to access Screen channels on the Timeline. After you drag a Screen Division to an Output channel you can double click on it to access its properties panel.
In the Properties panel of a Timeline Screen Division, you can control two properties:

- Offset Time
- Duration

The two options are available in the properties panel of any Player added to a Timeline. If you select any Resource, Component or Scene added to the Timeline, you’ll also access these properties.

OFFSET TIME

Using the Offset Time option, you can set a delay for a starting point of a particular item added to the Timeline. You can control the exact time in hours, minutes, and seconds enter numerical values in the corresponding fields, or you may also use the UP and DOWN arrows keys.

You’ll notice while you’re dragging the item on the timeline, the Offset changes accordingly.

In our example, all the Resources, Components, and Scenes added to the Timeline played normally; except the Video file which will start playing after a delay of 10:00 seconds.

DURATION

The second option in the Properties panel is the Duration.

You can change the duration of any item you added to a Timeline, either using the Duration feature or using your mouse and dragging the item to the left or right to increase its length.

PLAYER PROPERTIES PANEL

Each time you add a Component, Resource, or Scene to a Timeline, the System will interpret it as a player; a player which will play the content within it.

By selecting a Player, no matter if it’s a video, a picture, a Weather Component and so on; you’ll access its properties panel. The Properties Panel of a Player contains the options for a particular timeline item.

By enabling the Kiosk inputs, you let the system know the selected Resource may be accessed by a Kiosk machine and users can interact with it.

DIRECT ACCESS TO RESOURCES

When you click on the Resources tab from the Toolbox in the Campaign section, you have access to all the options related to Resources (as in other Sections of the Signage Resources, and search for a particular resource using the search feature and more.

ADDITIONAL OPTIONS WITHIN THE TIMELINE

- THE RIGHT CLICK / CONTEXT MENU

After you’ve added something to the Timeline, either a Component, Resource, Scene, or Screen Division Template, you can right click your mouse on it the item and access the context menu by right clicking on an empty area of the Timeline.

The menu contains the following options:

- 1. Copy
- 2. Paste
- 3. Delete
- 4. Add Local Channel
- 5. Add Common Channel
- 6. Edit Player
If you right click on an Output, the Copy, Paste and Delete options are not available from the right click menu.

In the case of Channels and Screen Division Templates, the Copy and Paste options are not available.

COPY / PASTE FUNCTIONS

To save valuable time, if you want to use the same Resource, Component, or Scene you already added to a Channel with other Channels, you can COPY the item from a Channel and PASTE it to another Channel.

DELETE OPTION

You can use the DELETE option from the right click menu as an alternative to other Deleting procedure we’ve covered, which is done by selecting the item you want to delete and pressing the DELETE key on your keyboard.

ADD LOCAL CHANNEL / COMMON CHANNEL

Instead of using the ADD icon, to add a local or common Channel to a Timeline, you can choose to right click on an empty area (as an alternative, or an item from the Timeline), and choose to add either a local or a common Channel to the Timeline.

EDIT TIMELINE ITEMS

If you want to edit the Properties of a certain item you added to a Timeline, you can use the Edit player option from the right click menu.

Additionally, you can also click on the Edit icon, or double click the respective item to edit its properties in the Properties panel.

A Timeline consists of one or more local or common Channels you'll use to build your Campaign. You assign Channels to an Output Screen, each Channel to a certain region. These are the basic principles of building a Campaign, but to keep things organized you need to pay attention to certain details.

OVERLAPPING ITEMS

When you add multiple items to a Channel, you must avoid overlapping them. When you grab one of the sides of a certain item and drag it to the left or right to control its length, make sure you don’t accidentally cross over other items on the Timeline.

For example, let's add two items to a single Channel, one External Video Component and one Picture.

Both our items cover the full length of the Timeline. If we want the External video to play for a longer period we must drag its right end, but this way, we'll overlap the picture.

To avoid this, either you increase the length of the Timeline, or you shorten the length of the picture so both items can play correctly on the same Channel. You can also click on the “Remove spacing” to align items on a channel.

Continuing with the same example from the above section, let's assume we want to shorten the length of the External Video Component.

If we drag the end of the External Video Component to the left, it shortens its length, but it will leave an empty area between the two items. In this case, either you add a third item to the channel between the two existing ones, or you drag the picture item to the left and fill the empty area. Always make sure not to leave empty spaces between items added to the Timeline.

CHECK TIME MARKERS

When you add different items on a Timeline always check the Time markers (time scale) so it will assist you in setting and positioning the content at the right place on the Timeline.

VIDEO FILES AND THE TIMELINE

As we discussed earlier in this Chapter, Timelines are used as a host for your Resources, Components, Scenes, and bind into Screen Templates where channels are assigned.

When you’re adding items on a certain Channel, you can set their length and change properties. You can add multiple items to the same channel. Those items can play sequentially or randomly inside your Campaign.

Having a diversity of items added to the same Timeline also require some attention as for the type of items you are using, therefore, you need to make sure when you build your Campaign you don’t create any conflicts between the items you add to the Timeline.

For example, if you add a Video resource to a Channel and another Video file to a different Channel, you’ll have a sound conflict, since both files play the sound associated with one video file will interfere with the sound associated with the other video file.

To avoid this kind of sound conflict, you must adjust some of the properties of one of the video files, like setting the volume to mute for one of the two video files.

PROPERTIES PANEL OF VIDEO FILES

When you access the Properties panel of a Video file, you can click on the VIDEO tab.
and apply additional settings to the selected video file.

### MAINTAIN ASPECT RATIO

If the maintain Aspect ratio is set to off, a video will occupy and fill the entire screen division; of course this may result in skewed content if the video’s dimensions do not match keep the videos ratio of width to height, but may result in an added black stripes around the videos content box.

![Maintain Aspect Ratio](image)

### AUTO REWIND

The auto rewind option is only available in the case of Video files.

![Auto Rewind](image)

If you enable the Auto rewind option, when the Video file completes playing on the Timeline, it will automatically rewind and play again in a loop (within the length of the respective Timeline).

Enabling the Repeat to fit option for the Channel wherein the respective video file resides, overrides the auto rewind option and the video file will not loop.

### VOLUME OF A VIDEO FILE

In the properties panel of a Video file is the ability to control the sound of the video file. To increase or decrease the sound of a video file, you’ll use the Volume slider.

To control the volume of the video file, drag the slider. Having the volume slider at 0 will mute the selected video file.

![Volume Slider](image)

### BACKGROUND ALPHA

You can control the visibility of the Background associated with the selected Video file by using the Background Alpha option. Use the slider to control the Background Alpha value. Only videos produced and compiled with a background Alpha value of 0 can be set transparent.

![Background Alpha](image)

### SEQUENCES AND THE SCHEDULER

In the Campaign section of the SignageStudio you can set a Campaign mode to either Sequence or Schedule.

#### SEQUENCES

The sequencer is essentially a simple and effective way to serially set the play list order of all the timelines. This is done using simple drag and drop operation.

If you select a particular Campaign and go to its properties panel, you can set its mode to Sequence.

Sequencing is a Timeline playlist order you can use to control which Timeline plays and in what order. To demonstrate how the Sequencer works, we need to add a few Timelines to a Campaign.

Let’s add three Timelines to our campaign. Each Timeline can be configured differently, can have a different length (which is the duration of playtime), different resources, and can be configured at a different screen resolution.

Next, to control the Sequencing order, select the Campaign mode to Sequence, and then click on the Sequences tab, located under the Campaigns and Timelines tabs in the main Navigation menu.
When you click on the Sequences Tab,

you’ll gain access the Sequences section of the SignageStudio.

The Sequences section contains three panels:
- 1. Toolbox Panel
- 2. Sequences Panel
- 3. Properties Panel

TOOLBOX PANEL

In this Toolbox panel, you’ll see a list of all the Timelines you’ve created.

SEQUENCES PANEL

The Sequences panel represents the playlist of your Timelines. To control the order of Timelines, you need to select a Timeline from the Toolbox panel, then drag and drop it one by one to the playlist.

In our configuration, the playing order of the Timelines will be as follows:
- Timeline 1 (which plays on the Output Screen)
- Timeline 2
- Timeline 3

If you want to change this configuration, for example, you want Timeline 3 to be the first Timeline to play followed by the other Timelines; you must click on the Timeline 3, and

SEQUENCES PANEL

The Sequences panel has three columns:
- Index
- Repeat
- Timeline

INDEX

The Index directory contains numerical values for each Timeline added to the Playlist.
Timelines with lower values play before Timelines with higher values. Value 0 represents the first Timeline to play on your Output Screen; value 1 represents the next one and so on. You can organize your Timelines better after you’ve dragged them into the Playlist.

**REPEAT**

After you set the order the Timelines play in, you can choose to repeat one or several Timelines before the other starts playing.

The default numerical value for the Repeat feature is 1, meaning a Timeline plays once and then the next Timeline starts playing. You can change this value in the Properties panel of a Sequence.

**SEQUENCE PROPERTIES PANEL**

If you select a Timeline in the Sequences panel, you can access the Properties panel of the Sequence.

The Properties panel contains three fields:
- Index
- Timeline
- Repeat

These fields correspond to the columns located in the Sequences panel. The Index and the Timeline fields are non-editable fields. You can use them to check the index order of the Timelines.

**REPEAT FIELD**

To set the repeat value for a certain Timeline you enter the corresponding number in the Repeat field of the Properties panel.

If you want Timeline 1 to repeat playing for three times and Timeline 2 and Timeline 3 follows in the playing order.

First, you select Timeline 1 and change the repeat value from the default 1 to 3.

After you’ve typed the value 3 in the Repeat field of the Properties panel, you’ll notice in the repeat column of the Sequences panel, the repeat number corresponding to the Timeline 1 has been updated accordingly.

In this case, the first Timeline in the playing order will be Timeline 1, which will play three Times before Timeline 2, and then Timeline 3 will follow.

**ADDING TIMELINES TO PLAYLIST**

In the example below we used three Timelines and set the index order to Timeline 1, then Timeline 2, and Timeline 3 in the playlist.
Having this configuration, after Timeline 3 finishes playing, Timeline 1 will start playing, Timeline 2, and Timeline 3; again and so on in a continuous loop.

Now, let's assume you would like to configure the playlist to look like this:

Timeline 1
Timeline 2
Timeline 3
Timeline 2
Timeline 1
Timeline 3

You only have three Timelines added to the playlist now. You can only change the order of these Timelines. To configure this example, you need to drag the same Timelines each Timeline.

If we have three Timelines in the Toolbox and add Timeline 1 to the playlist, but not the other two, only Timeline 1 will play on your output screen. Thus it is important you rem

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### DELETING A TIMELINE FROM THE SEQUENCER PLAYLIST

You have two options if you want to delete a Timeline from the sequencer playlist.

- 1. Select the Timeline and then click on the DELETE icon.

- 2. Right click on the Timeline and choose DELETE.

After you choose Delete, a dialog box appears on your Screen.

Click on YES to DELETE the selected Timeline from the playlist, or click on NO to CANCEL the operation.

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### THE SCHEDULER

The Scheduler allows you to set your timelines to play any day and play anytime. Use the scheduler to set the exact start and stop times. A graphical user interface is used to conflicts.

The Scheduler allows you to build a programming guide for your Digital Signage Presentation. You can use a Scheduler instead of using the Sequencer. You must choose be

The Sequencer is simpler than the Scheduler. It allows you to play your Timelines one after the other in a sequential order.

The Scheduler is more flexible as it allows you:

- Flexibility of playing each Timeline only once
- Playing each Timeline on a repeat daily scheduler
- Playing each Timeline on a repeat weekly basis
- Set priorities on the Timelines to resolve schedule conflicts

To use the Scheduler instead of the Sequencer, you change the mode of a Campaign. Click on the Campaign and set the mode to Scheduler.
After you set the Campaign mode to Scheduler, you'll notice under the Campaign tab in the main Navigation menu, the Sequences tab has been replaced by the Schedules tab.

If you click on the Schedules tab, you'll access the Scheduler user interface.

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**SCHEDULER USER INTERFACE**

The Scheduler user interface contains the following sections:

- 1. Schedule Area
- 2. Toolbox Panel
- 3. Rules Area
- 4. Properties Panel

**SCHEDULE**

The Schedule area is where you define the days you want your Timelines to play. It has two sections:

- Calendar
- Schedule Playing Area

**THE CALENDAR**

The calendar is a useful tool which will help you organize your scheduler. Before we demonstrate how to use the calendar, let's take a look at its user interface.
ZOOM OPTION

At the top left of the Calendar user interface is the zoom option.

You’ll use this option to zoom in and out from the Schedule playing area, which is located on the right side of the Calendar.

DATE NAVIGATION

To navigate day-by-day in the Calendar, use the single arrow icons.

Click on the left single arrow to navigate backwards one day, or click the right single arrow to navigate forward one day.

To navigate week-by-week, use the double arrow icons.

Click on the left double arrow to navigate one week backward, or click the right double arrow to navigate forward one week.

When you open the Scheduler, you’ll notice the calendar is set to the current date.

By holding down the control key, you can select additional days. You can set days anytime within the month, and you can set date ranges. Hold the CTRL key and use your mouse to click the days you’d like your presentation to play. As you select more days, you’ll notice they’re added to the Schedule.
You can also hold the shift key on your keyboard, click on the first day of the month, for example, and on the last day of the month to select the whole month.

This is a convenient way for you to select particular days within a month, and to have a good graphical view of what's happening within a specific month.

Another neat feature in the calendar is the ability to set a particular pattern when selecting days. Let's demonstrate this feature by selecting four days within the first week of the month and use your mouse to select four days.

If you want to keep this selection, move it one day ahead with the selection, click on the right single arrow from the daily navigation, and you'll notice the whole selection move one day forward.

The pattern is still consistent. It's jumping one day, but it's moving forward. You can click on the left single arrow to see the pattern is still persistent, but it moves one day back.

This is a useful feature which also allows you to keep the same pattern of random selected days. For example, hold down the CTRL key on your keyboard and select a few random days.

Now navigate one day forward or backward using the single arrow key. You'll notice the pattern is still persistent.

You can also use the weekly navigation buttons to navigate one week ahead, or one week backward, and still keep the selected pattern.

Using the pattern feature, you can set up elaborate schedulers and use this mechanism to move back-and-forth to view a particular pattern.

SCHEDULE PLAYING SECTION

The Schedule Playing section (located next to the Calendar user interface), is where you'll drag your Timelines and set them to play at specific times within the days you selected in the calendar.

In the next illustration, we've selected from the calendar the 25th day of month. Therefore, this day is automatically added to the playing schedule.

If we want to zoom out on the schedule, drag the zoom slider all the way to the left and use the scroll bar to navigate to different hours.
If you want Timeline 1, for example, to play on this particular day, the 25th, starting at 9:00 AM, drag it from the Toolbox and drop it on the Schedule playing section. Position 1

TOOLBOX

The Toolbox contains a directory list of your Timelines. To add a Timeline to the Schedule, you must drag it from the Toolbox to the Schedule playing section.

RULES

Whenever you add a Timeline to the Schedule playing section, you create a Rule. You can see a directory of all your Timelines in the Rules panel, located next to the Toolbox:

The Rules section has two columns:

- Name
- Timeline

The default name of a Rule is Pattern.

TIMELINE

In the Timeline column, you’ll see a directory of all the Timelines added to the Schedule playing section.

DELETING A RULE

If you wish to delete a Rule, first you select it and then you can either click on the DELETE icon,

or right click on any rule listed and choose DELETE.

SCHEDULER PROPERTIES PANEL

If you click on any Timeline from the Rules panel, you’ll gain access to the Scheduler properties panel (located by default on the bottom right side of the user interface).

ENABLING A RULE
After you set up a rule, you can decide to temporarily DISABLE it or ENABLE it. This is a useful feature, as it allows you to control the schedule playing of a Timeline without the need to delete and recreate a rule each time you want to remove it from playing in a particular time.

To enable / disable a selected Timeline, use the enabled checkbox.

RENAMING RULE

The default name of a rule is pattern, but you can change it anytime. To change the name of a pattern type the new name in the name field from the properties panel.

PRIORITIZING RULES

If you have multiple Timelines playing on the same day and in the same interval of time, you can use the priority feature to prioritize one Timeline over another.

Let's assume you have Timeline 1 and Timeline 2 playing at almost the same time, on the same day, overlapping each other.

In this case, you'll want to choose which Timeline will play prior to the other. We'll use the priority feature to set different priority levels for the two Timelines.

We will set, for example, the priority level for Timeline 1 to: high

And for Timeline 2, we'll set the priority level to: low

In case you have 3 or more Timelines overlapping, you may also choose the medium priority option.

When you select a Timeline and choose a certain priority level, you'll notice in the schedule playing section the color and the size of the Timeline graphical interpretation is changing as follows:

If you select a Timeline and change its priority level to high, its graphical representation will change its color to a light orange and its size will decrease.

If you select a Timeline and change its priority level to medium, its graphical representation will change its color to a light green and its size will be bigger than in the case of the high priority level.

If you select a Timeline and change its priority level to low, its graphical representation will change its color to a light blue and its size will be bigger than in the case of both high and medium priority levels.

Having different colors and sizes for your Timelines will help you better organize your priority levels in your schedule and avoid schedule conflicts.

DURATION OF A RULE

The default duration of a rule is 1:00 minute. To control the duration of a rule you have two options:

- 1. Use the default duration of 1:00 minute
- 2. Set a custom duration

To set a custom duration for a particular Timeline, first you must select it in the Rules panel and then enable the custom duration option in the properties panel.

After you enable the custom duration option, you can do the following:

- 1. Set the new duration in the designated fields. You can either type numerical values for the hours, minutes and seconds, or you can use the small UP and DOWN arrows.

- 2. Drag the sides of the Timeline to the either LEFT or RIGHT to control its length.
REPEAT RULES

If you select a Timeline in the Rules panel directory, you can choose from three different repeat options.

- 1. Repeat Once
- 2. Repeat Daily
- 3. Repeat Weekly

The repeat once option allows you to set a particular Timeline to play only once, at a specific date and time. You can set the date by clicking on the default date and using the calendar.

In the above illustration, the Timeline we selected will start playing on 10/01/2011 at 08:28:58 hours, and after its duration ends, it will stop playing because we set it to play only once.

The repeat daily option allows you to set a Timeline to start playing daily, at a certain time and between specific two specified dates.

Let's say for example we want to play the selected Timeline throughout the whole week, from Monday to Sunday, starting 10/01/2011 and set the start hour to be 08:25:58.

With this settings applied, the selected Timeline will play every day starting with the specified time, until the weekends.

The repeat weekly option will allow you to set a Timeline to play on certain days between two specified dates, starting with a defined time.

Let's assume we want to play the selected Timeline on every Monday, Wednesday, and Friday, starting with 10/31/2011 and ending with 12/31/2011, beginning with 08:25:58.

To demonstrate the features of the Scheduler, we'll set up an example where we'll add a few Timelines to the Scheduler and program them so they will play on our output screen.

SETTING UP A SCHEDULER - EXAMPLE

For this example, we have created one Campaign and added three Timelines to the Campaign. We changed the Campaign mode to Schedule, and we are ready to customize

Step 1: In the Calendar user interface, click on the 1st day of the month, hold down the Shift key on your keyboard, and click on the last day of the month. This operation will select the entire month.

You'll notice all the selected days are now associated with the Schedule playing section.

Step 2: Drag Timeline 1 to the Schedule playing section and position it to start playing at 8:30 AM.

Step 3: Drag Timeline 2 to the Schedule playing section and position it at 8:45 AM mark.
Step 4: Drag Timeline 3 to the Schedule playing section and position it so will start playing at 9:00 AM.

By now, you should have three Timelines added to the Schedule playing section. The first Timeline will start playing at 8:30 AM, the second at 8:45 AM and the third one at 9:

Step 5: Select Timeline 1 from the Rules panel and let's apply some settings to it in the Scheduler properties panel.

Step 6: Make sure the Timeline it's enabled and type a new name in the name box.

Step 7: Set the duration of the Rule to 3 minutes.

Step 8: Set the Repeat option to weekly.

Step 9: Set the starting time at 8:00 AM.

Step 10: Set the start date to be 12/01/2011 and the ending date to be 01/05/2012.

Step 11: Set the rule to play only on Sundays, Mondays, Fridays, and Saturdays of the selected period.

With the above settings, we have configured a Timeline to play at certain Times, on certain days and to start at a predefined hour.

BUILDING YOUR FIRST CAMPAIGN

By now you should be comfortable with importing resources, creating Screens, building Scenes and using Components, and adding items to the Timelines using local and common Channels and building Campaigns.

In this section we'll build a new Campaign from scratch, and in the same time we'll recap all the Chapters we have discussed up to now in this book.

In the following example, we will cover the following steps necessary to create a Campaign from scratch.

- 1. Defining the general layout, the Background and masks of the presentation
- 2. Importing resources to the server and organize them into folders
- 3. Creating Screens and drawing screen divisions
- 4. Building a Scene and using some Components
- 5. Creating a new Campaign
- 6. Adding items to the timeline and manage them
- 7. Adding another Output the Campaign
- 8. Adding another Output Screen Template to the Timeline
- 9. Using multiple Timelines, local Channels and common Channels
- 10. Applying different settings to items added to a Timeline
- 11. Managing multiple Campaigns
- 12. Previewing the final Presentation

EXAMPLE - BUILDING A CAMPAIGN FROM SCRATCH

Step 1: In this first step, we need to define the layout of our signage presentation; how it will look, what the design will be and where we'll place our resources on the screen. Y programs to create a Background from scratch, or you can use a prebuilt mask from the Media Signage shared library. We'll use this for the main layout masks we import from

Step 2: You know how the general layout of your presentation will look. Now it's time to import files in the resource library. First, we will import the Masks.

Click on the Resources tab from the main navigation menu and choose Add from shared.

Select two premade mask from the library and click OK.
Next, we'll add a few pictures to the Resource library and assign a folder named Pics for all the imported files.

Now we have all the pictures in their special folder. We need to create thumbnails for each picture.

We've imported 8 pictures for our example and named them from Picture 1 to Picture 8.

At this point, we have imported two Masks and 8 pictures for the Presentation. The next step is to create Screens and setup the Screen Divisions.

Step 3: Click on the Screens tab from the main navigation menu. Create a new Screen using the Screen wizard, set the resolution to 192 x 1080 pixels, and name it First Pres
Now, take a look at the first imported mask and notice it has 5 transparent areas. You need to draw a region for every empty spot on the mask. We’ll name the regions from 1.

For the mask, draw a full screen region which will be on top of all the other regions/viewers.

Creating Screen Divisions that will be used with masks can be difficult sometimes, but if you pay attention to the exact position and size of the transparent areas from your mask, you should have no problems.

For example, if the empty area number 1 from your mask is 1920 x 100 pixels wide, the corresponding region/viewer for the Screen Division should have the same size. Also, the x and y positions should be the same.

After you finished the configuration for the first mask, analyze the second mask and define divisions for this mask as well. You’ll have four regions, three for the empty areas and one for the mask itself.

Now, create a third Screen Division and draw only one region which will have 1920 x 1080 pixels.
Step 4: At this point, we have configured one Screen and three Screen Divisions. We will now use some Components and build a Scene.

First, let's click on the Scene editor tab so you can access the Scenes area of the application. We create a new Scene which has the same width and height with region 2, for pixels. Depending on the mask you choose and the design of your layout, the numbers might be different.

Choose a color gradient background for the Scene and add three weather items.

Apply the following settings to the first weather item:

Apply the following settings to the second weather item:

Apply the following settings to the third weather item:
Add the Clock Component to the scene and use the following settings:

Feel free to experiment and try different settings for the components and for the scene.

We created a simple Scene for this example, containing three Weather items and one Clock Component.

Now we will create a second Scene using a prebuilt Stock component. Simply click in the import Scene icon and import from the Shared library a Stock simple Scene.

Step 5: Now that we have our Screen, the Screen Divisions are set and we even created a Scene, it's time to build a new Campaign.

Click on the Campaign tab to access the Campaign area and use the Campaign wizard to create a new Campaign and use the following settings.
Step 6: Remember we've created three Screen Divisions. For the first Timeline of this Campaign, we used the Screen Division 1 as the Output template.

As you can see, when we created the new Campaign, channels were automatically assigned to each region of the Screen Division. To keep things organized, we will rename the Channels, delete one of the Channels and add a Common channel instead.
Now we have in our example six Channels:

- Mask
- RSS News
- Media RSS
- Pictures
- Label-Stock

Next, we will add items to these Channels and customize them.

**MASK**

On the Mask Channel, we'll add the Mask 1 we've imported from the shared library. After you drag the Mask to the Timeline from the Resources directory, increase the length.

**RSS NEWS**

On the RSS News Channel, drag the RSS News Component and increase its length so it matches the Timeline.

We customized the RSS News Component so it'll scroll vertically and show world news related feeds.

**MEDIA RSS**

On the Media RSS Channel, drag the Media RSS/Podcast Component and increase its length so it matches the Timeline.

Double click the Media RSS Component and apply the following settings to it:
We have now a Media, RSS Component on the corresponding Channel on the Timeline.

PICTURES

On the Pictures Common Channel, drag Pictures 1 to 6 that were imported in the Resource directory and set the duration of each picture at 10 seconds. The Timeline has a total length of 60 seconds.

After you set the duration of each picture to be 10 seconds long, use the remove spacing feature to arrange the pictures on the Timeline.

At this point we set the pictures to play sequentially on the Timeline. Each picture will play for 10 seconds.

LABEL

The next empty Channel is named Label. Drag the Label Component on this Channel and increase its length so it matches the Timeline.

Double click the Label Component and apply the following settings to it:
Now we a customized Label component added to the timeline.

STOCK

The fifth and the last Channel of this first Timeline, is named Stock. Drag the Stock player Component to the Timeline and increase its length so it matches the Timeline.

Double click the Stock player Component and drag the Simple Stock Scene into the Scene field.

At this point, we added all the items we wanted to the corresponding Channels and we managed to configure our first Timeline.

ADD A SECOND OUTPUT TO CAMPAIGN

Next, we will add a second Output to the Campaign. Use the Output wizard to define a new Output.

You'll notice a new Output appeared on the Timeline.

Drag the Screen Division 3 to this new Output Channel.

Next you must assign a Channel to this Output. We will choose the Media RSS Channel which will play in full Screen on this Output, because we only have one region in the S
Now we have one Timeline and two Outputs in our first Campaign. We will move a step forward in our example and create a second Timeline, add some items to it, and customize as you want within a Campaign.

CREATE A SECOND TIMELINE

Use the Timeline wizard to add a new Timeline to the Campaign and make the following settings:

The Screen Division 2 we will use for this second Timeline has four regions, one for the Mask 2, and the other three for the items we'll add to the Channels. We will first rename...
Now, as in the case of the first Timeline of our Campaign, we’ll add items to this Timeline and customize them. This Timeline has the following Channels:

- Mask
- RSS News
- Weather
- Pictures

**MASK**

On the Mask Channel, we will add the Mask 2 we’ve imported from the shared library. After you drag the Mask to the Timeline from the Resources directory, increase the length of the resource so it matches the length of the Timeline.

**RSS NEWS**

On the RSS News Channel, drag the RSS News Component and increase its length so it matches the Timeline.

Apply the following settings to the RSS news component:

**WEATHER**

On the Weather Channel, drag the Weather player and increase its length so it matches the Timeline. Now, customize the player.
Drag the weather scene we created earlier into the Scene field, and choose a location.

**PICTURES**

Assign the Pictures common Channel to the bottom right region of the Screen Division. With this operation we've configured the four Channels of the Second Timeline.

As you can see, the Output 2 Channel of this second Timeline is empty. We will leave it like this for our example, but feel free to add any Screen Division you want.

At this point, you can preview the Campaign in an external browser. If you configured the Timelines correctly and draw the regions of the Screen Divisions according to the dimensions of the Masks, the two Timelines created for this example should look approximately like this:
Components

ABOUT COMPONENTS

The SignageStudio uses Components to help you build a powerful signage presentation to enhance your viewer’s experience. You can use most of the Components directly or can add multiple Components to a Timeline or to a Scene.

LABEL COMPONENT

You’ll use the Label Component to add text to your Signage presentation. To add a Label component in a Scene, use your mouse to drag and drop it inside the Main viewing area.

After you’ve dropped the Label Component in the Main viewing area, you’ll be able to modify it and apply setting to it.

Tip: When you use a Component inside a Scene, most of the settings are available only through the properties panel, but you can modify the position and the size of a Component click and hold your mouse and position it inside the Scene. To modify the size of a Component directly in the Main viewing a click on the Component to select it.

PROPERTIES PANEL FOR THE LABEL COMPONENT

If you select a Label component after you dropped it into the Main viewing area, you’ll be able to apply different settings and effects to it using the properties panel located on has three tabs: Layout, Common and Label.

LAYOUT

If you select a label component and you click on the Layout Tab you have the option to choose either for a Static layout or a Dynamic one. This section is similar to the Layout

STATIC LAYOUT

You can set different values for the rotation, position, as well as the size of the Label component.

Another key feature is the Constrains section, located below in the Static Layout section.
After you select a Label component or any other item for that matter and drop it to a scene, you can anchor it so it will maintain its position even when the scene is resize (i.e., Using constrains you can anchor a component inside a Scene by selecting the anchor points.

DYNAMIC LAYOUT

Just like in the case of a Scene Layout or any other Component’s layout, in this Section you can set different values for Rotation, Size, and Position of the Label component.

THE COMMON SECTION

After you select a Label component in a Scene and click on the Common tab, you access:

- Appearance
- Border
- Background
- Glow
- Blur
- Shadow

LABEL TAB

If you select a Label component in a Scene and click on the Label tab in the properties panel you will be able to edit the text of the Label component.

In the upper area you can type the Text that you want to appear on the Scene.

You can type any number of characters, but when typing always keep in mind the size of the Label. You may need to increase the size of the label component to show all the text you typed above.

In the lower area of the Label section in the properties panel you’ll find settings you can use to format the text you typed above.

FONT FACES

The SignageStudio includes hundreds of dynamically loaded font faces. To use a certain font face you select the text in the type area and use the font selector. You can also use the scrollbar located on the right side of the font selector and to navigate to other font faces.

FONT SIZE

To control the size of the text you use in a Label component, you can either enter a value in the designated field or use one of the preset values from the drop down list.
FONT EFFECTS

In the Label section of the properties panel, choose the selected text and set the Bold, italic and underline. Select the text and use your mouse to click on the desired option.

Examples:

Bold

Italic

Underline

FONT COLOR

To change the text color you use the color picker. It works like any other color picker in the SignageStudio. To change the color of a text, first you select the text. Next, click or font color. Here are some examples of different text colors:

TEXT ALIGNMENT

To change the alignment of text you use the alignment options.

- Align text to the right
- Align text to the left
- Align text to center
- Justify

Select the text and click on the specified icon:

BULLETS

Additional to text formatting, you can also choose to add bullets at the beginning of text row. To add a bullet you select the text and click on the "Add bullet" icon:

EXTERNAL SWF / IMAGE COMPONENT

The external swf/image component is a powerful feature that enables you to link a certain swf file or an image that resides on the web (outside the MediaSignage server farm) it to the scene, select it and load its Properties panel.

In the properties panel, the first two sections, Layout and Common, contain the same settings as any other Component.

LINK IMAGE / SWF RESOURCE

Here you insert the designated URL web address of the file you link to the external swf/image. Press enter after the URL to preview it in the main viewing area of the Scene.

EXTERNAL VIDEO COMPONENT

The external video component works in a similar manner as the external swf/image component. It enables you to link a video file that resides on the web, to your SignageStudio presentation. To use this Component in a Scene, you drag it to the scene using, select it and access its properties panel.

LINK VIDEO RESOURCE

Here you must insert in the designated URL field the complete web address/path of the video file you need to link to the external video component. After you typed the complete root of the file you'll be able to preview it in the main viewing area of the Scene.
HTML COMPONENT

The HTML component is one of the most versatile components in the SignageStudio. This component allows you to embed in your presentation anything viewed in a web browser and other content.

You can also use the HTML component as a mini SDK (software development kit) where you can make different settings to an application or swf file that can be accessed through the HTML component in a Scene. You first drag and drop it into the scene's main viewing area, select it and load up the properties panel.

After you click on the HTML tab, you’ll see two fields. The first one is the URL field and the second is the configuration field.

Any content can be accessed using the web address from the URL field, which will be displayed in the main viewing area of the Scene.

CROPPING AN HTML WEBPAGE

If you want to show a certain part of a Web page in a scene while masking other areas of a page, follow these steps:

Step 1: Enter the location of the page in the URL field. We will use for our example the Yahoo weather forecast. On the Yahoo weather page we search for examples for Tel Aviv and copy and paste the URL address in the URL field.

the actual weather forecast is not in the main view so we first need to change the X and Y position of the HTML component.

Step 2: Having a Scene with a default weight and Height of 400 X 400 pixels, enter 0 in the X field and -400 in the Y field of the HTML component.

Note: These values are relative and refer to this example. Using other Web pages may require entering different values.

Step 3: Increase the size of the Scene in weight and height and position the HTML component properly using the handles.

Step 4: Anchor the HTML Component in the Scene so it will remain in this exact position when played.

Step 5: Make sure that the Screen Division you want this scene to be assigned to matches the size of the Scene.

THE CONFIGURATION FIELD
Under the URL field is the Configuration field, enter the path of a remote web page you will use to configure your component. Any content can be accessed using the web address from the Configuration field.

### REFRESHING A WEB LOCATION

Next to the URL and Configuration fields is a small button you can use to REFRESH the address you entered in the respective field.

### RSS NEWS COMPONENT

The RSS, stands for Really Simple Syndication. The RSS News component is used to display RSS feeds in the SignageStudio. To use the RSS News component in a Scene you must first drag and drop it into the Scene, select it and load up its properties panel.

### RSS DIRECTION

After you’ve dropped an RSS News component into a Scene, notice the default direction of the RSS is Vertical, which means the RSS news is scrolling upwards.

Using the RSS News direction option, you can change the RSS direction from vertical to horizontal making the RSS to scroll horizontally instead of vertically.

### TEXT DIRECTION

The Text direction can also be changed from the default Left to Right into Right to Left. This feature is useful when using RSS News feeds using a certain Right to Left written language.

### SCROLLING SPEED

You can control the Scrolling speed of the RSS News component using the speed field.

### TITLE FONT

The RSS News component contains two sections of text: Titles and the Description. Title Font represents the section where you apply different settings to the RSS news feeds.

### FONT STYLE

To change the Font of the RSS Title, you need to select the font from the fonts list.

### FONT SIZE

To increase or decrease the size of the Font used in the Title of the RSS, enter a value in the assigned field or use the UP and DOWN arrow keys.

### FONT COLOR

To change the Font color of the RSS Titles, use the color picker form the Title font section.

### TEXT EFFECTS

You can choose to make the text of the RSS Titles Bold, Italic or Underline if the selected font supports it. In the Description Font section, you’ll have access to the same settings as in the Title Font section described above. The only difference is the settings you make in this section instead of the RSS Titles.
RSS NEWS SOURCE

To function, the RSS News Component needs to have a source from which it will grab the news feeds. This can be a preset news category, a custom URL address, or a Custom RSS feed created manually by the user.

RSS NEWS PRESETS

SignageStudio has many preset news categories you can choose from. Choose a news category from the drop down list:

When you choose a news category, notice the URL field under the presets dropdown list shows the web address related to that specific RSS feed.

RSS CUSTOM URL

If you click on the RSS presets dropdown list, you can choose [Custom URL].

Enter a URL address in the field to load your own RSS content.

EMBEDDED RSS

If you click on the RSS presets dropdown list, you will notice [Embedded RSS]. This option allows you to create a Custom Embedded RSS by writing text in the Title and Description sections:

Use the + and - icons to add or delete message entries.

In the following example we clicked on the + sign once and wrote text in Title and Description sections. We also changed font settings for the Title as well as for the Description:

To delete an embedded custom RSS feed you select it and press the DELETE button.

There is no restriction as to how many entries you can have. However, keep in mind that if your scroll is set to horizontal, the Description data will not appear in the presentation; only vertical scroll supports it.

MINIMUM REFRESH

Min Refresh option sets the period of time between RSS polls to the source aggregator. You can set the Minimum Refresh either by entering a value in the designated field or by using the UP and DOWN arrow keys.

Tip: If you decide to use an embedded custom RSS, you've written the text for it, and afterwards you change your mind and choose a different RSS source, note the Text you need to write it again. You can copy and paste the RSS component to an unused timeline for "backup".

MEDIA RSS / PODCAST

The Media RSS / PODCAST component is used to embed RSS media feeds and podcasts into your presentation. To use the Media RSS / PODCAST component in a Scene, open its properties panel.
Just like the RSS news component, here you can select the source of the RSS feed from a dropdown list of preset feeds or you can choose the [Custom] option and enter the location of the xml file manually.

Choose a source for the RSS feed, notice in the Main viewing area of the Scene how immediately the RSS video begins to load and the media starts playing.

The Media / Podcast RSS feeds are actually short videos which will play sequentially and update often by the aggregator. MRSS video list plays in random to give off a more unique playback experience.

The Media files being are downloaded and cached in the SignagePlayer Desktop version, if the connection between the server and the player will be interrupted, the feed will continue to play; and updated as soon as the connection is restored.

**MAINTAIN ASPECT RATIO**

The Maintain Aspect Ratio option allows you to maintain the width and height ratio of media files. Here are some examples of the Maintain Aspect Ratio option when disabled.

**CUSTOM RSS ITEM**

The Custom RSS Item Component is a more complex version of the RSS news component. This Component allows you to have custom control of all the sections of the RSS.

For example, if you want to build a scene and position the Title of the RSS on the left corner of the Scene, the Description of the RSS on the Right corner of the Scene and the Resource/image of the RSS someplace else on the Scene, and also mix in custom animation and transitions, you can only accomplish this using the Custom RSS Item component. To use the Custom RSS Item component in a Scene, you first drag and drop it into the main viewing area of the Scene, select it and load up its properties panel.

If you click the Item tab, you'll select the item you want this section of the RSS to represent. Choose from the dropdown list Title, Description or Resource from the properties panel.

If you choose Title for example, the Custom RSS Item component you dropped into the Scene will be the Title of the RSS. Description will correspond to the Description of the RSS and the Resource will be the Image displayed in the RSS feed.

After selecting an Item, you have several options to format the Text in the Properties panel. We discussed these options earlier so you should be familiar with the settings. You can set the font face, the font size, the font color and apply font effects.

The Custom RSS Item Component is created only within a Scene and that Scene need to be added to a Scene player in the Timeline. It cannot be added directly to a timeline.

**USE A CUSTOM RSS ITEM COMPONENT - BY EXAMPLE**

Step 1: Create a new Scene and name it Custom RSS. Set the Background color Blue.

Step 2: Add a new Custom RSS Item Component to the Scene and select the "Title" Item in the Field dropdown list from the properties panel.

Change the font to Arial Black, the font size to 25, the font color to a dark yellow and underline it. After this, position the Item at the top left corner of the Scene.

Step 3: With the Custom RSS Item component selected, click on the Layout tab in the properties panel, choose Dynamic, and set the x value to -150 at Point number 1 and 0 at Point number 2. You can also choose an Easing option.
Step 4: Add another Custom RSS Item to the Scene. Select the "Description" item this time in the Field dropdown list in the properties panel.

Change the font to Arial, the font size to 20 and the font color to White. Next, position the Item in the middle of the Scene.

Step 5: With the Custom RSS Item component selected (Description), click on the Layout tab in the properties panel, choose Dynamic, and set the y value -400 at Point number 1 and leave the default value at Point number 2. You can also choose an Easing option.

Step 6: Add another Custom RSS Item to the Scene. Select the "Resource" item this time in the Field dropdown list in the properties panel.

Position the Resource Item at the top right corner of the Scene.

Tip: Always remember to Anchor every component in the Scene so it will preserve its position when played in a Timeline.

Step 7: With this Custom RSS Item component selected (Resource), click on the Layout tab in the properties panel, choose Dynamic, and set the Rotation at 360 degrees (drag the Rotation slider to the right end) 1. Leave the default values at Point number 2. You can also choose an Easing option.

Step 8: Click on the Screens Tab in the main Navigation menu and draw a new Screen Division. Name it Custom RSS Screen. Make sure the size of the Screen Division match the size of the Scene with the Custom RSS Item in it.

Tip: Always remember to SAVE the project when you make changes to your presentation.

Step 9: Click on the Campaign tab in the main Navigation menu. We will discuss more on Campaigns in another Chapter, but to demonstrate how to use the Custom RSS Item Component, we need to place it on to a Timeline using a Custom RSS Player.
To accomplish this, after you clicked the Campaign tab in the main Navigation menu, click the plus sign (+) in the Left panel to add a new Campaign.

The new Campaign wizard will appear. We will discuss more about this wizard in another Chapter, but for now click NEXT in the first window.

Choose "Custom RSS Screen" from the dropdown Screens list and click Finish.

Now you have a Timeline with a single Chanel (CH0) which is the Screen Division you created earlier. We will talk more about channels in another Chapter.

Step 10: To link the Scene which has the Custom RSS items to this Chanel in the Timeline, you select the Toolbox tab, located below the Timeline and access the Component Components panel in the Scene section, with a few exceptions.

Now drag and drop the Custom RSS Player on the Timeline, next to the Chanel (CH0).

Step 11: Double click the Custom RSS Player from the Timeline.

You can now access its Proprieties panel, select the RSS tab.

Here you can drop the Scene you've just created. First, click on the Scenes tab in the Toolbox. Drag and drop the Custom RSS Scene we created earlier in the Scene field of

Step 12: Click on the PLAY button of the Outputs viewing area to preview the Custom RSS.

Step 13: You can apply different settings after you dropped a Weather Scene into the Weather Player.

- You can set the Interval, which represents the time which will pass until a new feed is displayed.

- You can select [Custom URL] from the RSS dropdown list and manually type a web address.

- You can select [Embedded RSS] from the RSS dropdown list and manually type Titles and Descriptions for a Custom RSS, as explained earlier in this Chapter, like in the case of the RSS News Component.

- You can select a different preset RSS source from the dropdown list.
You can set the Refresh rate of the RSS feeds.

THE WEATHER ITEM COMPONENT
With the SignageStudio you either use prebuilt Weather Scenes or can build your own with the Weather Item.

IMPORTING AN EXISTING WEATHER SCENE
If you click on the Import Scene icon from the Scenes panel, you will be able to search for a pre-made Scene in the MediaSignage library. Click OK to import the Scene.

BUILDING A NEW WEATHER SCENE
In the Scene editor Section of the SignageStudio you can select from the Components panel the Weather Item Component. The Weather Item Component has a different implementation compared to the Custom RSS Item Component, but works in a similar manner. You first need to create a Scene, add the Weather items, and customize them, and then use that Scene with a Player in a Timeline.

To use the Weather Item Component in a Scene, you first drag and drop it into the main viewing area of the Scene. Drag the component and select it to load up its properties.

The first setting of the Weather section is the Forecast. With the Weather item selected here, you can choose the day the Weather item will predict the weather.

The next section is the Field. With the Weather Item selected here, you can choose what the selected item represents. It can be:
- The name of the Day
- The Condition
- High and Low Temperatures
- The Temperature in Degrees
- An image illustration of the weather forecast

Next, you apply formatting settings to the text of a selected item. Except for the Image, for all the other fields you can set a Font face, a Font color, a Font size and apply text effects like the Underline option.

If you select "Image" from the Field dropdown list, you can select a Weather style for the Image.

BUILDING A NEW WEATHER SCENE - EXAMPLE
Step 1: Create a Scene and name it Weather Scene. Change the Background color to a light Grey or any other color. Drag and drop a Weather item into the Main viewing area.

Step 2: With the Weather item selected, click on the Weather tab in the Properties panel and make the following settings:
- Select Current for the Forecast
- Select Day Name for the Field
- Select Arial Black for the Font Style

www.digitalsignage.com/docs/html/MediaSignage_docs.html
Step 3: Add another Weather Item Component. Place the new item beneath the previous one in the Main viewing area of the Scene. With the new Weather item selected, click the following settings:

- Select Current for the Forecast
- Select Temperature for the Field
- Select Arial for the Font style
- Enter a Font size of 27 pixels
- Choose for the Font color White

Step 4: Add another Weather Item Component. Place the new item beneath the other two in the Main viewing area of the Scene. With the new Weather item selected, click on the following settings:

- Select Current for the Forecast
- Select Image for the Field
- Choose Animated Style 2 for the Weather Style

Tip: When you position a resource or a component in a Scene, you’ll notice some green guides appear. Use the guides as a reference so you can correctly align and position the item.

Step 5: Anchor all the items in the Scene and click on the Campaign tab in the Main Navigation menu. From the Toolbox, click on the Components tab. Drag and drop the Weather Player (from our previous example). If you created a new Campaign, just drop it anywhere on the Timeline. Double click the Weather player to access its Properties panel.

Step 6: We will discuss more on the Player and the Common properties in another Chapter, but for now, click on the Weather tab to continue with our example.

Here you can drop the Weather Scene you’ve just created. First, click on the Scene’s tab in the Toolbox. Similar to the way we completed the Custom RSS example, drag and drop the Weather Scene in the Scene field of the Properties panel.

Step 7: Next, choose a Temperature unit and a Location. The Location may be either in the USA in which case you need to provide a Zip code for the area you wish to display the weather for or International, in which case you need to provide a City. We will choose for our example Fahrenheit, USA and 90220 Zip codes. This should be the result in the Outputs viewing area:

---

**STOCK ITEM COMPONENT**

The Stock item component works in a similar manner as the Weather and the Custom RSS Components, to use it you first need to build a Scene, add Stock items to the Scene and then use the Stock Player to play the Scene on a Timeline.

To use the Stock Component in a SignageStudio presentation you have two choices:

1. You import a pre-existing Scene from the Media Signage library. To do this, you need to click on the Import Scene icon located in the Scenes panel on the left side of the application’s interface.

After you click on this icon, you need to open the Stock Folder from the library and choose one of the available prebuilt Scenes. Click OK to import the Scene. We will discuss how to DELETE Stock items.
2. Create a new Scene and add Stock Components to a new Scene and customize them.

**USING THE STOCK ITEM COMPONENT - EXAMPLE**

After you have imported a pre-existing Stock Scene you can customize the Stock Components in it. This also applies to the case when you prefer to create a new Scene from scratch and add Stock Components to it.

To customize a certain Stock Component you select it so you can access its properties panel. You can use the Layout and Common sections to apply different settings or you can use the last tab, which is the Stock tab.

**THE STOCK FIELD**

To define the field represented by the selected Component, you need to select one from the dropdown list of the Stock Field.

Examples of stock fields:

<table>
<thead>
<tr>
<th>Stock Field:</th>
<th>Last trade</th>
<th>Symbol</th>
<th>Trade date</th>
</tr>
</thead>
</table>

**ADDITIONAL SETTINGS**

Since the Stock Fields are actually text fields that display different information, you can also use the available formatting options to customize the text.

The formatting settings are:
- Font Style
- Font Size
- Font Color
- Font Effects (underline)
- Negative Color (for values with minus -)

In the following example we will customize a pre-existing Stock Scene and then we will add this Scene to a Timeline using the Stock player. This process is similar the Weather Scene example as we discussed earlier.

**Step 1:** Import a pre-existing Stock Scene by clicking on the Import Scene icon and choose the Stock ticker template from the Stock folder.

**Step 2:** Apply different colors to the Stock items. You can also select an item and assign a different stock field. For this example, we will keep the default fields of the pre-existing scene.

**Step 3:** Click on the Campaign tab in the main navigation menu and open the Components panel from the Toolbox. Drag and drop the Stock player on the Timeline. You can place it anywhere on the timeline.

**Step 4:** Double click the Stock player you just added on the timeline and you will access its properties panel. Click on the Stock tab to access the settings of the Stock component.

**Step 5:** To insert a Stock Scene on a Timeline, you need to add it to the Stock player. To do this, you drag and drop the Scene from the Toolbox into the "Scene" field.

You’ll see, instantly, in the Outputs viewing area a preview of the Stock Scene. Click the PLAY button to preview the Scene.

**Step 6:** You can now set the scrolling direction to horizontal or vertical and the scrolling speed.

**Step 7:** In the symbols list you can ADD or DELETE the Stock symbols which will be displayed.
WEBCAM COMPONENT

The Webcam Component is used to insert a playback device into the SignageStudio presentation. This can be any USB Web camera.

To use a Webcam component into a Scene, you need to drag and drop it from the components panel into the Main viewing area of the Scene.

You can add multiple Webcam components to a Scene and apply different settings to them. After you add a Webcam Component, you select it to access its properties panel.

When you load its properties, you’ll be able to define an input number. An input number represents a playback device connected to the computer.

If you have multiple playback devices connected to the computer, you need to select different input numbers for each Webcam component added to the Scene or directly on the Timeline.

WEBCAM COMPONENT - EXAMPLE

After you customized and positioned the four Webcam Components in a Scene you need to assign different inputs numbers for each component.

Select each Webcam component in the Scene and assign a different input number in the properties panel.

This way, the system will play the data simultaneously as it receives it from each individual Web Cam.

Note that the Web Cam needs to be connected to the computer that is running the SignagePlayer Desktop version and not to the PC running SignageStudio.

THE GRID/CHART COMPONENT

The Grid/Chart Component can be used to create various Grids and Charts so you can use in your Presentation. Note that current release is preliminary and additional enhancements are on the road map.

To use the Grid/Chart Component in a Scene, you need to drag and drop it into the Main viewing area of the Scene.

The first field in the Chart section of the properties panel is the Chart Type.

Here you may select different types of Charts which will illustrate the data you entered in the sections below the Chart type field.

The following are the types of chart/grid you can choose from:

More types of chart/grid you may choose from:

GRID/CHART DATA SECTION

In the Data sections you set values which will get applied to the Grid/Chart Component.
The Data section is split into two categories:
- Columns
- Data

COLUMNs

In the **columns area** you'll enter the columns of the Grid / Chart component and you can name them accordingly.

A Grid / Chart component may have an unlimited number of Columns.

You can also choose to insert or delete columns. You can insert a new Column either above or below an existing column. You'll accomplish this by using the two assigned icons.

If you want to delete a Column you need to SELECT it and click on the DELETE icon.

GRID / CHART DATA

In the **Data Section** you can set values for the Column you inserted. The illustration of the Grid / Chart will update according to these values.

You can insert a new Data field either above or below an existing one by using the insert icons.

If you want to delete certain rows of values you need to SELECT it and click on the DELETE icon.

Another option you have available in the Data section is the Edit CSV feature. This feature allows editing of the data table manually.

SERIES

When you click on the Series Tab you will have the Option to add more fields to the Grid / Chart. The Series section is split in two categories:
- Display Text
- Y Field

DISPLAY TEXT

In the **Display Text** section you can type a new name or a description of the illustration. The default name is **Series**.

Y FIELD

In the **y field** you'll define a new category, a new field which will assign to a new Series. This field corresponds to the Columns field we discussed earlier.

In the Series Section, you can insert new Sections either above or below an existing one using the two assigned icons. You may also choose to delete a field using the DELETE icon.

A Grid / Chart component may have an unlimited number of Series.

USING A GRID / CHART COMPONENT IN A SCENE - EXAMPLE

In the following example we demonstrate how to **create and customize a Line Chart in a new Scene**.

Step 1: Create a new Scene and name it: **Line Chart**.

Change the Background of the Scene into a dark Blue or any other color or gradient.

Step 2: Drag and drop the Grid / Chart component into the Main viewing area of the Scene and increase the size of the Component so it matches the size of the Scene.

Step 3: Select the Grid/ Chart Component and click on the Chart tab in the properties panel. In the Data Section, change the name of the C1 Column to Example 1 and the na
You'll notice as you change the names in the Columns section, the names of the columns in the Data section will also change.

Step 4: Click on the Series Tab. In the Display Text area, change the name of the Series 1 to Data 1, and the name of the C1 Y field into Example 1.

Step 5: Click on the insert below icon and add a new Series.

Enter in the Display Text area "Data 2" and also in the Y Field type "Example 2."

Notice in the Scene, Data 1 and Data 2 series appeared.

Next, we enter some values for these fields to build and further customize the Component.

Step 6: At this point our Grid / Chart Component do not show any illustration because we did not entered any values for the new created Series. To so, you need to click on the Example 2 columns.

Remember you can add as many fields as you want in the Data field. Each field inserted will represent a value for the line trajectory in the Grid / Chart Component.

In the first field of Example 1 Column in the Data Section enter the value 10. In the second field enter the value 15 and in the third one enter the value 2.

Notice how three different points appeared on the Example 1 line of the Data 1. Each point or position of the Graph line corresponds with the value you entered in the data section.

Step 7: In the first field of Example 2 Column in the Data Section enter the value 7. In the second field enter the value 10 and in the third one enter the value 4.

Notice how the graph line of Data 2 appeared in the Scene with three different point positions. Each point of the Graph line corresponds with the value you entered in the data section.

* Tip: We recommend you try different options and features of the Grid / Chart Component to fully understand how to use it in your SignageStudio Presentations.

THE CLOCK COMPONENT

You can use the Clock Component to show the time and / or the current date in a presentation. You can choose between:

- Creating a New Scene
- Adding the Clock Component
- Choose to Import a Preexisting Clock Scene from the Media Signage Library

IMPORT A PREEXISTING CLOCK SCENE
To import a preexisting Clock scene, you need to click on the Import Scene icon located on top of the Scene's panel.

From the MediaSignage library open the Clock folder and choose one of the prebuilt Clock Scenes and click OK to import the Scene.

After you imported the Clock Scene you have several options to customize the Scene.

WORKING WITH A PREEXISTING CLOCK SCENE

A preexisting Clock Scene contains SWF Components built outside the SignageStudio. When you import a Clock Scene, notice the corresponding SWF files appear in the Resources panel.

There are several options you can customize:

1. You can change the background of the Clock Scene.

2. You can change the Layout and other common properties.

3. You can select on the SWF tab in the properties panel and apply different settings to the SWF file.

Under the SWF tab, you can set maintain aspect ratio as well as the clock and the offset according to the GMT.

THE TYPE

The type of the Clock is a value which corresponds to a different style or graphics for the clock. Setting this value to a different number will be the same as importing a different clock Scene.

For example the scene we just imported has the type value of 14.

Let's enter different values in the Type field and see the results.

As you can see, there are various clock designs you can choose from.

THE OFFSET

The offset field allows you to change the time as it's been displayed by the clock. To set the clocks to display a different hour, enter a different value in the Offset field.

CREATING A NEW CLOCK SCENE
You can also build a new Clock Scene from scratch, besides the option to import a pre-existing clock scene.

To use the Clock component in a new Scene you drag and drop it from the Components panel into the main viewing area of a new Scene.

After you dragged the Clock Component you may select it to access its properties panel.

**FORMATTING THE TEXT OF THE CLOCK COMPONENT**

You have the option to set the Font style, the Font size, the Font color and also to apply a text effects (underline).

**CUSTOMIZING THE DATE / TIME DISPLAY**

After you add a Clock Component to a Scene you can choose what information that particular clock will display. You can set the Clock to show one of the following:

1. **Date**

   When you select the Date option, the Clock Component shows only the current date.

2. **Time**

   When you select the Time option, the Clock Component shows only the current time.

3. **Time / Date**

   When you select the Time / Date option, the Clock Component shows the current time and the current date.
When you select the Time / Date option, the Clock Component shows the current time and the current date.

When you select the Custom option, you can customize the information the Clock Component displays.

To customize what the Clock Component will display, you enter the information in the Format field, based on the explanation table located below the Format field.

CREATING AND CUSTOMIZING A NEW CLOCK SCENE - EXAMPLE

Step 1: Create a new scene and name it Clock Scene. Drag and drop a Clock Component to the Scene and set the background color of the Scene to a dark blue or any other color.

Step 2: Select the Clock Component and click on the Clock tab in the properties panel. Set the Font style to Arial Black, the Font size to 50 pixels and the Font color to yellow.

Step 3: Add a second Clock Component to the Scene. Select the Clock Component and click on the Clock tab. Choose the Font style Broadway, set the Font size to 40 pixels and enable the Date option for this Clock Component.

Step 4: Add a third Clock Component to the Scene. Select the component and click on the Clock tab in the properties panel. Choose the Font Arial, set the Font size to 40 pixels and enable the Date option for this Clock Component.

Enter in the Format field the following data:

**Tip:** We recommend you try different settings available for the Clock component so you may use the full features of this Component in your presentations.

CATALOG ITEM COMPONENT

The Catalog Component is an advanced feature of the SignageStudio. It allows you to go through a sequential number of items or products.

Because this is an advanced feature of the software, if you’re just getting started with the SignageStudio, you first need to understand how the software works. After you are comfortable working with the software, you should be able to take advantage of the Catalog component.

To use the Catalog Component you drag and drop the Catalog items directly into a Scene, customize it and use the respective Scene on the timeline, binding it to the Catalog Player.

We will discuss more on the Catalog Component in the “Catalog” Chapter.

EXTERNAL APPLICATION / CAPTURE COMPONENT

In this section we will cover the External Application component. The Component allows you to run a binary file, an external application into a particular Screen Division. If you want to run a Firefox, a Point of Sale or even a VLC media player inside a Screen Division, the external application component will allow you to do this.

The External Application component is an advanced feature. For most users you can accomplish most objectives with native components, including the video players, the swf players, RSS / Video podcast and others. However, if you do need to integrate additional capabilities you can use the External Application to achieve that.

In this introductory part of the External Application Component we will cover the basics of using the external components, later in this Chapter we will be focusing on demonstrating their functionality.

Let’s create a new campaign.
Now choose any Screen from the dropdown Screens list and click FINISH.

Now you have a Timeline with a single Chanel (CH0). We will discuss more on Timelines and Channels in another Chapter.

In the Campaign section, under the Toolbox, open the Components panel. Drag and drop the ExtApp/Capture Component to the Timeline.

Double click the ExtApp/Capture component from the Timeline to access its properties panel, select the ExtApp tab. You can now configure the ExtApp Component.

THE EXTERNAL APP OPTION LIST

The SignageStudio has several predefined application settings which are commonly used with the Ext App.

Select the Custom option from the ExtApp dropdown list.

After you selected the Custom option, you will manually enter data in the "app name" and "command line" fields located below.

APP NAME FIELD

In the app name field you enter the full execution path of the binary file which is the application you installed on the SignagePlayer PC. You must enter the full exact path to execute the application.

For example, if you want to run the Firefox browser, you first need to install the Firefox.exe on the computer which has the SignagePlayer running on it, and enter the full path.

If you are not using Microsoft Windows, you are will need to enter a different path as per the OS of the SignagePlayer is running on.

COMMAND LINE

The Command line field is where you write certain arguments you want to pass to the application you'll execute. Arguments are specific commands controlling certain settings.

For example, if you want the Firefox browser to open cnn.com web page, you'll enter in the "Command line" field the following argument: cnn.com

Next, we will configure several commonly used applications to demonstrate the advanced features of the ExtApp / Capture Component.

CAPTURE / LIVE HDD / MEDIATV

Now we are going to review the installation of the SignagePlayer with a Capture device (also known as the mediaTV). The Capture Card will allow you to connect full High Defini

This input can be an S-VIDEO, a Composite, a Component, and HDMI and will allow you to connect any device to a specified Screen Division.

This means you can take any type of device, like a Cable Box or Satellite Box (such as dish network or Direct TV, or even Security Cameras or Streaming Server). You can ta we support. You can show in a specified Screen Division any type of live video HD format.

First, we will cover how to configure the SignageStudio with the Capture card support. Afterwards, we will cover the Windows Operating System showing you how to install the be the physical connection of the Capture device / mediaTV.

SIGNAGESTUDIO SETUP FOR CAPTURE

www.digitalsignage.com/docs/html/MediaSignage_docs.html
The first thing you should do is decide in what type of Screen Division you want to play the Live TV. We will use a Full Screen for our Screen Division example.

After you set the type of Screen Division you want to use, you go to Campaign, SET a new Campaign, and ADD the ExtApp / Capture Component to the Timeline. Let's add a button on the upper left corner of the Timeline.

Any type of resource or Component which will be inserted into a Common channel will play continuously throughout all the Timelines.

Next, drag the Common channel on the Output Screen Division of your choice, drag and drop the ExtApp / Capture Component onto the Common Channel.

Double click the ExtApp / Capture component to access its properties panel and select from the dropdown list of the ExtApp fields the Aver MediaCenter HD options.

Everything is preconfigured for you. You don't need to manually type any data; however, you do need to check the Aver Media file path from the SignageStudio, making sure it matches the path on your SignagePlayer PC.

INSTALLING THE CAPTURE CARD DRIVER

For the next step, let's configure the Windows Aver to support the Live capture. To do this, you need to log into the Windows platform at the Computer which has the SignagePlayer desktop version running with HD capture card. Note: you can order the mediaTV device from the MediaSignage website.

We support the Aver Media Device for the Capture Card and you need to visit the official website located at www.avermedia-usa.com and search for the Aver TV capture Device.
If you do have a small factor player and you cannot put the PCI inside because maybe you don’t have enough empty slots or no extra room, we do have our own PCI express version of this Card. Therefore, if you are interested in getting the external version, please check this link for more information: Go to MediaSignage.

After you’ve downloaded the driver you need to install it by going through the standard installation process. After you've downloaded the driver you need to install it by going through the standard installation process.

After the installation click on the TV icon and select the source: Composite, S-Video, Component or HDMI.

One thing to know about the HDMI is, most providers streaming HDMI over the cable or satellites (dish network or direct TV) also transmit an additional protocol called HDCP. This prevents you from using a Capture device with HDMI. If you use one of these providers and they do use the HDCP protocol, it will result in a HDCP error. If you see the HDCP error, go ahead and revert to Component instead of HDMI.

After you selected the Source you can check to see if everything else is working properly according to the Aver Media installation manual.

CONNECTING THE CAPTURE DEVICE

In this Section we will cover how to connect the source feed which can be a DVD player, a Camera, a tablet, Satellite TV, and so forth to the capture card device.

The capture device has two connections: One is a Dongle Input and the other is the HDMI Input. If you are using the HDMI, you need to connect the device directly to the HDMI input. If you are going to use a Dongle you are going through Component, S-Video or Composite. So the Video input source will connect either through the Dongle or the HDMI input to the Capture device. The capture device is connected to the motherboard via PCI and you can connect any type of Screen to the motherboard.

Unlike the case of the video source, whereby you transmit though the HDMI, the sound has separate cables you’ll use.
You need to connect the green connection from the back of the motherboard from the back of the PC; use the green connection and connect the RC Audio to the TV. So the Audio will actually come over the RCA left right Stereo cable.

For the Audio in, you need to connect the Left Right cable from the input device (DVD player for example) to the pink connection input at the back of the PC.

The benefit of this type of audio configurations is that if the capture device is not used on a particular timeline, the audio will get muted (in addition to hiding the video input.

You’ll also want to make sure the audio back port or the input port (which in our case is the pink port), is enabled. To check this under Windows, you need to go to the Control Panel and under Sounds --> Advanced make sure the Rear Pink In is not muted.

If you followed the installation correctly you’ll have a great high quality image with no interlacing.

**FIREFOX AND THE EXTERNAL APPLICATION**

MediaSignage supports the latest version of WebKit; the open source standard for HTML decoding, as a native HTML component that can be dragged directly onto the timeline. Or you may want to use Firefox (for example if you want to take advantage of a Firefox native plugin). Firefox as an external application allows you to run the Firefox browser inside a Screen Division.

The first thing you must do is to install the Mozilla Firefox browser on the computer which will have the Signage Player installed.

Next you configure a Campaign and add to the Timeline the Ext / App component. To execute the Firefox application you need to type the exact path of the .exe file. Under Windows, the default path will be:

```
C:\Program Files (x86)\Mozilla Firefox\firefox.exe
```

The next step is to go to the SignagePlayer Desktop version and apply settings to the Firefox web browser. Our goal is to have a clean window of the browser, without any but do this you first need to install a plug-in called Hide menu bar. You can download this plug-in from this location:

Go to Mozilla plugin site

After you've downloaded and installed the Hide Menu plug you need to restart Firefox and start changing some settings.

1. Click on the View tab and then uncheck the Status bar.

2. Click on the View tab --> Toolbars and uncheck the Menu Toolbar. At this point the Menu Toolbar is gone so you need to click on the Alt key to access it.

3. Click again on the View tab --> Toolbars and uncheck the Navigation toolbar and the Bookmarks Toolbar.

At this point we have a clean window, without any panels or toolbars.

4. The next thing you want to do is to configure the Firefox browser so it will not use the Tab system (so there’s no extra tabs on top, and also because you must apply some settings to have any messages on startup.

You must press on the ALT key on your keyboard once again, go to view and check the menu toolbar temporarily. Now, go ahead and type about: config in the search field of...
After you access the back settings area of the Firefox browser, you check the settings from the next snapshot to make sure the configuration matches what you have on your setup. Having these settings assures you the browser will not prompt you with any dialogs.

Next, go to the main toolbar and uncheck all these checkboxes:

Now disable the Navigation toolbar. You are done with configuring the Mozilla Firefox browser (running in a particular Screen Division you assigned for it). When the browser runs, toolbars comp

**USING THE VLC APPLICATION WITH THE EXTERNAL APPLICATION**

In this section we will review the Video Lan or VLC external application and how it can be used in your presentation; along with the ExtApp component.

VLC is a very flexible open source application used for playing audio-video files. It supports many types of Video formats like .avi / .mov / .mpeg / and many other formats. Using the VLC you can play content directly form a DVD, you can use the VLC server to stream content and much more.

Let’s explore how to use VLC both on the Windows platform. We will cover different Command line arguments you can pass to the VLC application (so you can interact with it)

The first thing you must do is install the VLC application on the computer which runs your SignagePlayer.

The official website of the VLC application is here: [Go to Videolan](http://www.videolan.org)

After you have installed the VLC application on the Windows SignagePlayer PC, go ahead and create a new Campaign and add the Ext/App Component to the Timeline.

Enter the path to the application in the `app name` field.

Regarding arguments, you can use thousands of different arguments and parameters which you can pass to VLC. In this [Go to Videolan](http://www.videolan.org) you can find most command lines you could use.

We will cover a couple of arguments as an example. Visit the VLC web page so see what other parameters are available.
RUNNING A DVD PLAYER WITH THE VLC APPLICATION

The first thing we will cover is running a DVD player with the VLC application. If you have a DVD inserted in your DVD drive and want to play the DVD in a particular Screen Division.

In the command line of the VLC application, type the following:

```
ExApp
app name
command line
```

These arguments will allow you to use the DVD player as the primary source of the DVD.

The "dummy-quiet" will allow you to run the VLC without any buttons or any chrome. A clean window will be embedded into a Screen Division. You don't want to see any buttons or any chrome. An argument will allow you to do.

The "dvdsimple:id" argument will open up the DVD drive, which is the DVD player you are going to use to play the media file. It will automatically start playing the DVD. You can use through many other arguments you can use.

If you want to use the VLC application to play a file located in a different place on your computer, you must replace the "dvdsimple:id: argument with the file path of the respective

For next example let's play an .avi which is not natively supported.

```
command line
```

In this example, the movie.avi video file will play as soon as the VLC external application loads. The video file must reside in the exact location you entered in the command line.

Another powerful feature is the ability to play a resource from the Resource's panel directly in the VLC player. This means you will not have to copy a file to the remote SignageStudio, and it will be copied to the remote SignagePlayer and passed as an argument to VLC.

To play a resource with the VLC player, you drag the Resource right after the "-i dummy-quiet" argument. The system will use a macro to identify and play this particular file with the VLC.

As you can see, just under the command line field there is a text line saying: Drop resource file here.

```
command line
```

This means you can drag and drop a Resource from the Resources directory directly in the command line field and play the file automatically with the application you are going to use.

The macros will tell the VLC application to open up and play the respective file located in the Resources directory.

Another useful command line argument is this: "$ -mouse-hide-timeout 1"

```
command line
```

The "mouse hide" argument will force the mouse cursor to disappear within 1 millisecond. This is a useful command since in a Digital Signage presentation you don't want the mouse cursor to be present.

RUNNING THE VLC AS A SERVER

Here are some more command line arguments useful with the VLC application. These arguments will allow you to use the VLC application as a server.

Let's assume at your business you have 10 Signage players and you want to Stream DVD content to all of the players. You don't have to install the DVD player on every single device or every single player. What you can do is install a single server and run VLC as a server to stream down the content.

In the command line arguments listed above, we have on the server side the dedicated machine running the server within your business. You'll run vlc.exe, which is the executable, the "dvdsimple" argument we discussed earlier, and a few other command line arguments like:

```
Server DVD
vlc.exe dvdsimple:/id: -yv -Ir --tile 12
```

```
VLC Client
```

Let's assume at your business you have 10 Signage players and you want to Stream DVD content to all of the players. You don't have to install the DVD player on every single device or every single player. What you can do is install a single server and run VLC as a server to stream down the content.

In the command line arguments listed above, we have on the server side the dedicated machine running the server within your business. You'll run vlc.exe, which is the executable, and a few other command arguments like:

```
size="640x480"
```

```
vcodec=h264
```

```
192.168.1.80:8080
```

```
The IP address and the Port of the actual server
```

```
which is the address that clients are going to listen
```

```
to when connecting to the server.
```

You'll need to replace this address with the IP address and the access port of your Signage player or Windows platform.

For the SignageStudio, you will run the VLC client and set the same IP address as the server. Then set to deinterlace mode and set the aspect ratio.
POWERPOINT AS AN EXTERNAL APPLICATION

In this section we are going to demonstrate how you can use PowerPoint with the External Application, so you can embed a PowerPoint presentation inside a Screen Division. Download and install the PowerPoint viewer on the computer which runs the Signage Player. Afterwards you create a Campaign and add the ExtApp to the Timeline.

You can download the PowerPoint viewer for free at this web address: Go to Microsoft
Or here Go to Signage
After you've downloaded and installed the PowerPoint viewer, you enter the entire path to the application in the "app name" field of the External application Component.

You can type it manually or if you use the default installation path. You can select the PowerPoint Viewer option from the dropdown list of the ExtApp field:

For the Command line, you can enter: /A/S

The "/A" argument is telling the PowerPoint viewer to automatically slide from one slide to another.
The "/S" argument will tell to skip the splash screen when first loads.
Next we're going to configure the PowerPoint Presentation so the slides will automatically switch from one slide to the next and will automatically loop. All this can be configure from where you run them in the Signage Presentation.

We used PowerPoint 2007 for this example.
In the PowerPoint application you set up the slide show so it will have the following settings:

Next, select all the slides and check the "automatically after" option from the Animation menu. Choose timing in seconds, which will represent the period between slides.

In our example, each slide will show for 5 seconds before moving to the next slide. And when the last slide is reached, it's going to go back and play the first one. Save the set Import the .ppt file as a Resource and then drag and drop it in the command line field of the ExtApp / Capture Component (after the other arguments you entered).

Note that .pptx are not supported so save your PowerPoint slides as .ppt

This will tell the PowerPoint Viewer application to play the file located in the Resources directory and show it in your presentation embedded in the Screen Division you assign.

To play the slides at the native size you must use the ExtApp Component in Full Screen, or if you want a different size to match a certain Screen Division, you'll need to resize
The PowerPoint component also supports macros just like the VLC component. To use it, upload a ppt file just like any other file onto the resources library. Continue or drag viewer under its properties panel (same as we've done with the VLC). This process will allow you play .ppt files without having to copy each PowerPoint file to any of your rem...

If you are going to use the ExtApp Component with the PowerPoint Viewer application, you might experience some clipping, and you might find it difficult to follow all the steps external application. There is a better way to get a .ppt or .pptx file into our system, convert it to a native .swf file.

You can find many PowerPoint converters online, but one easier to use is called Flashpoint PowerPoint to Flash Converter. You can buy it from this website: Go to Flashdemo

This Converter will install as a plug-in to your PowerPoint application and will convert all your .ppt or .pptx files into pure vector based SWF files. These can be natively import.

Once installed, it will be very easy to follow some easy steps to convert a PowerPoint file to a SWF file.

CONVERTING A .PPT OR .PPTX FILE TO SWF USING FLASHPOINT CONVERTER
Either choose to use the PowerPoint Viewer with the ExtApp Component, or convert the PowerPoint presentation to SWF. The SignageStudio will support embedding your PowerPoint presentation.

Station Management

REMOTE PLAYER MANAGEMENT

After you've finished building a Campaign you are ready to assign it to a remote SignagePlayer.

We provide several types of SignagePlayers:

- SignagePlayer Desktop version
- SignagePlayer Web version
- SignagePlayer Embedded version
- SignagePlayer Mobile version

The SignagePlayers are developed using an open source framework called FLEX which is available through the publicly available Apache repository. The SignagePlayers run on HTML5, Adobe AIR, Adobe Flash, JavaScript, C++ and Java.
SIGNAGEPLAYER - DESKTOP VERSION

The SignagePlayer Desktop version is our dedicated player, designed to run on a dedicated computer and always connected to one or more physical screens. The SignagePlayer Desktop version is remotely managed from the SignageStudio. Some of the remote commands include live snapshot, play, stop, push new updates, and software revision control. The SignagePlayer Desktop version is a highly optimized media player.

The mediaBOX, which is the MediaSignage recommended media player device, ships with the SignagePlayer Desktop version pre-installed on it and ready to be registered to your own MediaSignage account.

SIGNAGEPLAYER - WEB AND EMBEDDED VERSIONS

The SignagePlayer Web and Embedded versions are lighter versions of the Player. They don't have remote control capability and they are used to preview the presentation, share the presentation with others, or to embed it on to your own website.

Regardless of which version of the player / operating system you are using, when you make a change to your presentation, whenever you decide to push the update; that change will propagate to all Players. MediaSignage uses the "build once and run everywhere" ideology.

For the Web and Embedded Players, the only requirement is you that you need to have Adobe Flash installed.

SIGNAGEPLAYER - MOBILE VERSION

The SignagePlayer mobile version is similar to the SignagePlayer Desktop version. It was designed as a dedicated playback player that can run with or without internet connectivity with full remote control capabilities. The SignagePlayer mobile version is supported on both Apple iOS as well as Android devices.

STATIONS AREA

To access and control each remote Desktop / Mobile player you have installed, you need to click on the Stations tab from the main navigation menu.

From the Stations you'll control all dedicated players (Desktop and Mobile).

INSTALLING THE DESKTOP PLAYER

To play a Signage presentation using the Desktop Player, you download it and install it on the same computer directly connected to your Output Screen(s).

Download the SignagePlayer Desktop version and follow the installation wizard to install it.

You can also install Adobe AIR runtime manually; however it is part of the Get Started install process.

Installing the SignagePlayer Desktop app includes:
- Adobe AIR runtime
- Desktop Player
- SignageController

When the Desktop Player comes up you will be prompted to register with the same Username and Password as you've used to create your free account; which is the same as you use to log in to the SignageStudio.

Next, click on the Register button and you will gain access to the SignagePlayer settings.

The SignageController is a watchdog application that monitors the health of the SignagePlayer. Its core responsibility is to restart the SignagePlayer and to monitor its working performance.

The SignageController is added to the startup folder and will auto-start upon OS load; it is the SignageController that kick starts the SignagePlayer Desktop version after the OS is loaded. To see the SignageController user interface, click on the "eye" button on the SignagePlayer Desktop toolbar. We will cover the SignageController in more details in a section below.

Always make sure the SignageController is connected and running in the background.

To test that the SignageController is working properly, close the SignagePlayer Desktop version; the SignageController internal socket will disconnect and it will re-launch the SignagePlayer.

Login to the SignageStudio with your login credentials and select the Station navigation tab, select a campaign and a Screen from the designated dropdown lists. For this example, we will set the Station name to

In the next Screen choose the Station mode. There are two available Station modes:

- Test Station Mode
- Real Station Mode

The Test Station Mode: will keep current applications and allow for open windows when testing the SignagePlayer. The test mode is a none aggressive playback mode that will allow to easily switch back to your OS desktop.

Real Station Mode: will force close on all running applications and hide balloon-coo-u messages including hiding the Taskbar. This mode is recommended for dedicated SignagePlayer use.
SIGNAGE CONTROLLER

As mentioned previously, the SignageController is utility installed on the computer running the SignagePlayer Desktop version. It gets installed in your startup folder. This utility provides enhanced functionality.

The SignageController ensures the SignagePlayer Desktop version is always running; that it is healthy and has enough working memory. It will also enable you to remotely manage the player, set up power saving, reboot conditions, run live snapshots, and more.

The SignageController will automatically start when you first restart your computer. It resides in the Startup folder, but you can also start it manually by accessing the startup file located in the startup folder.

Once started, it will minimize itself running as a background process. When the SignageController is working, the SignagePlayer status will change to connected.

SIGNAGEPLAYER - USER INTERFACE

The Controller button opens the SignageController log information.

START

The start button allows you to start the player after it has stopped.

STOP

The stop button allows you to stop the player after it has started.

PING

You can ping the Server to validate server connection.

SNEAKER NET

The import button is used to import SignagePlayer data generated by the SignageStudio. This feature is used for Offline updating of the SignagePlayer presentation.

SETTING

Use the setting button to access the SignagePlayer configuration.
The window contains two tabs:
- General
- Screen

**GENERAL TAB**

Under the `general` tab, you'll find two options:
- 1. Auto Start at Login
- 2. Balloon tips (apply after reboot)

If you enable the *Auto Start at Login* option, the player will start playing automatically after you Log into your computer.

If you disable the *Balloon tips* option, the player will remove any OS alert or popup messages which may interfere with the presentation.

**SIGNAGEPLAYER - LINUX INSTALL**

Ubuntu is a version of Linux, and it's a freely distributed Operating System. It is popular as it saves the license fees associated with the purchase of an Operating System. If you want to download Ubuntu, you can visit the Ubuntu official website: [Go to UBUNTU](#)

Ubuntu is an advanced Operating System and not as user friendly as the Windows Operating System. If you aren’t too technical you may want to stick with the Microsoft Windows Operating System.

The Linux player has several disadvantages over Windows as it does not support Video hardware acceleration and does not support Live TV / mediaTV. Thus we recommend:

First thing you must do is install the Adobe AIR Runtime (if you don’t have it already). You can download it from its official website: [Go to Adobe](#)

For our example we'll save the file to the default directory (which is the Desktop), we'll open an application terminal.

Take the file downloaded (an executable file), and run the installation process.
At this point, you can download and install the SignagePlayer Desktop version from our website. Get Started

We'll use our default /opt directory for the installation of the SignagePlayer.

After you've installed both Adobe AIR runtime and the SignagePlayer, change the directory in the application terminal.

Notice we have a file named install.sh.

This is an executable file, but it's not marked as executable in the first stage. We're going to change it using the CHMOD command. Remember to perform the command as root.

The install.sh has turned green as it is now an executable file. Next we run this as executable; also remember to run it as root.

The script is prompting us if it's ok to remove the "password prompting". This is important as it will prevent the OS from waiting on confirmation key every time it loads.

Next provide a valid OS user name, as it will automatically login after OS reboot.

Next enter YES to "Would you like to auto start the SignagePlayer at boot up?"

Next, we are prompted if to remove the Gnome panel. Choose YES for a clean window desktop.

Complete by entering YES to reboot the PC and apply changes.

Next we're going to set our Ubuntu machine to automatically LOGIN without prompting us for any USERNAME or PASSWORD.

Depending on your configuration, you can go to System - > Administration - > Login window, and set the system automatically login without prompting for any username or pa
Now click on the Security tab and enable the Automatic Login option.

Under the dropdown menu you should see the user you've created.

You can also allow local system administration. It is not mandatory, but it will make things easier to manage at the level of the OS.

Close the window to save the changes.

After rebooting, you'll be prompted to agree with the Adobe AIR runtime license agreement. This is a onetime action.

Enter your login credentials, choose a Campaign and a Screen, and select the Register button. This is also a onetime operation and will link the SignagePlayer to a particular account. If you are an Enterprise user, remember to provide an "End user" account info and NOT your enterprise credentials.

After you've registered the Station, you can click PLAY. The Signage Presentation will begin playing.

ADVANCED SETTINGS - UBUNTU LINUX

RESTORING THE GNOME TASK MANAGER

After the installation is complete, you'll not be able to see the Gnome taskbar on the Desktop. To restore it follow these steps.

Step 1:
Right click on an empty area of your screen and choose Create Launcher.

Step 2:
In the next window, choose the following settings and click OK.
Step 3:

Open the xterm terminal from the Desktop.

Step 4:

What happened to the gnome panel? It actually cd (changed directory) to /usr/bin and its name was changed to gnome-panel.old

To bring it back you use the mv command and change its name back to gnome-panel. Remember to do this from root. Make sure you use sudo before mv command.

If you don’t want it to run, you can always rename the gnome panel again.

SIGNAGEPLAYER - LIUX INSTALLATION DETAILS

To run the SignagePlayer on an Ubuntu / Linux machine, the SignagePlayer has to run as root. It cannot run as a standard user. Let’s look at some of things which were actually modified during the installation.

Use the following command on the terminal: sudo/vi/etc/sudoers. Scroll down and you’ll see a new entry added. This was done to remove root password promoting by the OS.

Also if you type the command cd/opt/SignagePlayer/share/linux and ls, you’ll see multiple files listed.

The SignagePlayer Desktop version should never be executed to load directly by a User, instead it is the responsibility of the SignageController to fork the SignagePlayer process. The SignageController has privileges of root and they will pass down the fork tree to the SignagePlayer.

Always run the executable signageController.sh as root

Next we are going to review: How the SignagePlayer automatically starts. Our install script install.sh took care of this task. If you cd to your home directory, and go to the config directory we added the SignagePlayer.desktop command. This causes the SignagePlayer to automatically start.

If you want to see this from the GUI, go to System - > Preferences - > Startup applications and see the SignageStartup file listed.
This is how the SignagePlayer to automatically starts upon OS boot up. To get more details, select the SignageStartup file and click the EDIT button.

You'll see it runs a script named gnomeStartup.sh.

From the startup, it points to this signageController.sh file, which is the proper way you should be executing the SignagePlayer. This is because it takes care of running the SignagePlayer not as root, but as a standard user, you may get privilege related errors.

If you want to run the SignagePlayer manually, type the commands cd /opt/SignagePlayer/share/linux and the ls command, and open the ./signageController.sh file.

SIGNAGEPLAYER - MAC INSTALL

In this section we'll cover the Mac mini platform running the SignagePlayer Desktop version.

The Mac mini is a good solution for running the SignagePlayer; mainly because of its small size and powerful processing unit.

To have the SignagePlayer running on a Mac mini, the first thing you do is to install the Adobe AIR runtime (if you don't have it already). Go to the official website of Adobe AIR and download it.

After you downloaded the file, proceed with the installation process.

Next install the SignagePlayer Get Started.

After the installation is complete you will receive a warning letting you know the installation is not yet done. Kick off the install.sh script from a terminal session.
You first open a terminal and run the file to complete the installation. Launch a terminal and cd; change the directory, to the install directory.

After you changed the directory type the ls command to view its content.

Next, give full permissions to all the files within the directory.

At this point you may be prompted to enter your admin password. Next, make sure you know which user logs in by default on your Mac. One way of knowing is by typing the echo $USER

User is the actual username in our example. Now you can run the command sudo ./install.sh to start the installation process.

We require root privileges to be able to run the SignagePlayer Desktop version; so choose y/YES.

Next, provide username we used to login to the computer.

The next question is: Would you want to automatically start the SignagePlayer on boot up? Choose y/YES.

Next, choose y/YES to reboot the computer.

After reboot, you'll see the doc has gone, the top menu bar is gone, and you have a clean Signage Player running.

INSTALLATION REVIEW - MAC

In this Section we'll discuss some of the changes we've made to the file system and how the install.sh file operates.

The first thing we'll do is launch the Terminal. Let's see how the SignagePlayer knows to automatically start when you boot up the PC. This is done through a directory called see a file named local.signageplayer.plist.

If you cat the file you'll see the content that was injected to auto starts the player.

The signagecontroller.sh file you see listed above is the batch file that launches the SignageController; which in turn launches the SignagePlayer.

In order to run as root and without having to prompt you for a password every time, the script uses the sudo command.

If you go to the end of the file, you'll see we made a few entry changes which will actually allow the player to launch without user interaction.

We also hide the menu bar and the doc. First we changed the directory to Applications / SignagePlayer.app / Contents.

and the file Info.plist was modified.
In this file you can see the entries which allow you to hide the doc and the menu bar.

SIGNAGEPLAYER - STATIONS

As soon as you click on the Register button, a new Station will appear in the SignageStudio. It will have a status of Ready and it will be set to accept remote commands from it working.

Now we’ve installed a Desktop player on a computer and connected the Computer to one or more screens. We can visit the Stations area of the SignageStudio application to control and manage the SignagePlayer Desktop and its content.

After you access the Stations area (by clicking on the Stations button from the main Navigation menu), you’ll notice it has three sections:

1. Campaigns (on the left side of the interface)

2. Stations (on the center side of the interface)

3. Properties panel (on the right side of the interface)

CAMPAIGNS AREA

In the Campaigns area, you’ll see listed a directory of the Campaigns you created. You’ll associate a Campaign with a Station using the Station’s properties panel.

STATIONS AREA

In the Stations area, you’ll see all your Stations listed; meaning the Computers on which you have installed SignagePlayers (Desktop and Mobile). You can remotely manage them.

To control the listed players in the Stations section, you'll use the toolbar located on the top of the Stations panel.
To start playing a selected Station, select it in the Stations panel and click on the Play button.

After you click on the Play button, a new dialog box appears on your Screen.

In the dialog box you can choose to save changes to server and to update station/s with changes.

The save changes to server option refers to any change you made to your Campaigns since you last saved. If you enable this option it will save all the changes to the server.

The update station/s with changes refers to applying the changes you saved using the first option (to the selected Station). If enabled, this option will update the selected station and all other Stations using the Campaign you've applied changes to.

In the dialog box, you have the option to click on the PLAY button and the Player will start playing immediately, or to click CANCEL and abort the operation.

You'll notice after you choose to play a particular Station, its status will change from Ready to Playing.

THE STOP OPTION

To stop playing a certain Station, first select it in the Stations panel and then click on the STOP button.

After you click on the Stop button, a dialog box appears on your screen.

You can click YES to Stop the Station from playing, or NO to cancel the operation. If you click YES, the status of the selected station will immediately change from Playing to Ready.

PING SIGNAGEPLAYER OPTION

Ping will retrieve the latest statistics from the Player and verify it is alive.

If you click on the ping button you'll notice the Peak memory and other Player statistics will update.

THE SNAPSHOT OPTION

If you click on the Capture button,

the server will request a real time snapshot from the Station. The station will reply with an image of the current playback state.
You'll notice the system took a picture of whatever was playing on the Station at that particular moment. You have the option to set a quality of the preview. Higher quality snapshots result in a longer delay between previews.

Set a zoom level for the LIVE capture.

CHECK NEW VERSION

The Check New Version feature allows you to propagate MediaSignage latest releases builds to the SignagePlayer. The latest software revision will automatically download and install on the remote SignagePlayer with no user interaction.

REMOTE UPDATES

Clicking on the Updates button will save whatever changes you've made in the SignageStudio, and will push it to one or more Stations.

EXPORT DATA

The Export SignagePlayer data allows you to export the current campaign bound to a station and all its associated data to a folder. You can later import the data locally on the computer where running the SignagePlayer. Sometimes referred to as SneakerNet as you need to walk (i.e.: sneakers) to the physical station to perform an action.

This method is mostly used to update your SignagePlayer offline when no internet connection is present at the location.

REBOOT STATION

The reboot feature will physically reboot the computer where you have installed the SignagePlayer Desktop version. If you select a Station and click on the reboot button,

CLEAR PLAYER CACHING

Clear caching allows you to remove the local data used by a particular remote Player. In the previous Chapters we mentioned our Signage Platform uses an advanced caching system which allows continuous playback even when the internet connection is interrupted.

When you click on the Clear Player Caching button, a new dialog box appears.

You can click on YES to CLEAR the caching data remotely or you can choose NO to CANCEL the operation.

DELETING STATION

To DELETE a station, you select it in the Stations directory and click on the Delete button.

When you click on the delete button, a dialog box will appear on your screen.

If you choose YES, the selected station will be permanently DELETED. If you choose NO, you CANCEL the operation.

STATIONS AREA - STATISTICS EXPLAINED

Below the toolbar we discussed earlier, is where all your Stations are listed; along with several Statistics for each Station. The Statistics are organized in columns.
Tip: You can click and drag a column's name to change its place in the section. Arrange the columns using your mouse. This applies to all columns found in any section of the SignageStudio.

We will now discuss each Statistics column from the Stations area.

**CONNECTION**

In the *Connection* field, you can check if a Station is connected to the server and if it can be managed from the SignageStudio. The connection is indicated by a colored LED. The LED can have three colors:

- **Red**
- **Green**
- **Yellow**

The red LED indicates no connection.
The green LED indicates the Station is connected using a Socket.
The yellow LED indicates the Station is connected using HTTP pooling.

**CONTROLLER**

In the *Controller* field, you can check if the SignageController of a particular Station is running or not.

If the SignageController is not running, the status will say *not running* and you will not be able to take advantage of some features like remote snapshot and computer reboot. Desktop version and the SignageController installed correctly on the computer connected to your Screens.

**STATION**

In the *Station* field, you'll find the name of the Station.

You can change the name of any Station at any time directly from the SignageStudio.

**LAST UPDATE**

The *Last Update* field displays the last time the SignagePlayer was updated. Check out this field to know precisely when you updated the selected Station with the latest changes.

**LAST STATUS**

In the *Last Status* field, you can check the latest status of a Station. In this column you'll see the last event the SignagePlayer reported back to the server. Remember that if a Station is currently off, the last status will indicate the last event reported even prior to losing connection to the server.

**CACHING**

In the *Caching* field, you can see the number of cached resources and the number of resources ready to be cached by the player. In the screen shot below, you'll notice the selected Station has a total of 21 Resources available for caching and all 21 have been cached.

**STARTED**

In the *Started* column, you can see when the SignageController first started.

**RUNNING**

In the *Running* column, you can check how long a particular SignageController has been running. In the image below, the first field indicates the SignageController is not running minutes passed since the SignageController associated with the selected Station began working.
CURRENT MEMORY

The current memory shows the current volatile memory available on the selected Station.

PEAK MEMORY

The peak memory field shows the latest amount of memory used by the SignagePlayer on the selected Station.

OS

The OS column indicates what Operating System of the selected Station. In the image below, the selected Station uses Windows 7 as the Operating System.

VERSION

The Version field indicates the version of the SignageStudio.

AIR VERSION

The AIR Version field indicates the SignagePlayer Adobe Integrated runtime version. The AIR version is controlled by MediaSignage, but you are always safe installing the latest.

These are all the columns in the Stations area. You can click on any column title to change the sort order. The arrow indicates all the Stations will be listed in an ascending or descending order based on the respective column title.

STATION PROPERTIES PANEL

When you select a Station in the Stations directory, you'll access its properties panel. In this section, we'll discuss each station's property in detail.

The properties panel of a Station has three main tabs:

- 1. Station
- 2. Location
- 3. Advertising

STATION

Under the Station tab, there are four categories:

- 1. General
- 2. Station Mode
- 3. Reboot Conditions
- 4. Power Saving
GENERAL
When you click on the General tab (under Station in the properties panel), you’ll gain access the following settings:

- 1. Name
- 2. Campaign
- 3. Output
- 4. Send Notification

NAME FIELD
To change the name of a Station, first you select it in the Stations directory and type the new name in the Name field located in the properties panel of the selected Station, press enter to complete the process.

CAMPAIGN
To show your Signage Presentation on a particular Station, you’ll select a Campaign that will be played by the SignagePlayer installed at the location. To re-assign a Campaign, first select the Station and choose a Campaign from the dropdown list.

You can switch between the available Campaigns at any time and assign different Campaigns to the same Station whenever you want. Remember to click File > save and restart player with changes if you wish to apply the changes immediately.

OUTPUT
In the Campaigns Chapter, we discussed creating more than one Output within the same Campaign. If you create more than one Output within a Campaign, you need to choose one from the selected Campaign.

You can only assign one Output at a time to a select station.

SEND NOTIFICATION
The send notification feature allows you to receive an email every time a Station goes down.

To use the send notification feature, you first set up a default email address that will be used by the system to send emails.

Go to File in the main top menu of the SignageStudio interface and choose Setting.

In this window you’ll set the email address where you want to receive notifications.

Enter the email address in the email field.
STATION MODE

In **Test station mode**: All your applications and open windows will keep running. This feature is recommended when testing the SignagePlayer on your own PC.

In **Real station mode**: All running applications and opened windows will be closed as well as hiding the Task Manager. This option is recommended for dedicated SignagePlayer operation; i.e. you'll only use the computer for playing your Signage Presentation.

To change the Station mode of a particular Station, you select the Station in the Station directory and click on the **Station Mode** tab, choose either Test Station mode or Real Station mode.

---

REBOOT CONDITIONS

When you select a Station from the Stations directory and click on the Reboot conditions tab, you'll have access to several settings which allow you to control and schedule the rebooting of the selected Station.

These settings are:

1. **Reboot Exceed Memory**
2. **Reboot Every Day**
3. **Reboot on Error**

---

REBOOT EXCEED MEMORY

In the **reboot exceed memory** section you can program the selected Station (hardware) or the SignagePlayer Desktop version (software) to reboot if a certain memory threshold is exceeded.

Let's demonstrate how this feature works.

**Step 1:**
Set a maximum limit for the RAM memory in the Giga field.

The minimum amount of memory required is 1 GB. You can type a different numerical value or you can use the UP and DOWN arrows keys.

**Step 2:**
Set the action that will take place if the amount of memory is exceeded.

-1. Off
-2. Player
-3. Station

If you choose the OFF option, the feature will not be applied.
Enabling the Player option, will program the SignagePlayer Desktop version to reboot if the amount of memory set at Step 1 is exceeded.

Enabling the Station option, will program the Station / Computer to reboot if the amount of memory is exceeded.

---

### REBOOT EVERY DAY

Using the reboot every day option, you can program either the SignagePlayer Desktop version (software) or the Station (hardware) for a daily reboot.

To schedule a particular Station or Player to reboot every day, follow the next steps:

**Step 1:**

In the designated field, set a time when you would like the Player or the Station to reboot.  

In the first field enter the **hour** and in the second one enter the **minutes**. You can also use the UP and DOWN arrows keys to set the time. In the image above, the reboot will take place every day at 23:59 hours.

**Step 2:**

Set the action to take place when the time is reached. You have three choices:

- 1. **Off**
- 2. **Player**
- 3. **Station**

If you choose the OFF option, the feature will not take effect.

Enabling the Player option, will program the SignagePlayer Desktop version to reboot every day when the time is reached.

Enabling the Station option, will program the Station / Computer to reboot every day when the time is reached.

---

### REBOOT ON ERROR

Using the reboot on error option, you can program either the SignagePlayer Desktop version or the Station which runs the Player to reboot every time an error occurs.

Set the action to take place if an error occurs while playing the presentation.

Just as in the above cases of rebooting, you have three choices:

1. **Off**
2. **Player**
3. **Station**

If you choose the OFF option, the feature will not be used.

Enabling the Player option will program the SignagePlayer to reboot if a certain error occurs.

Enabling the Station option, will program the Station / Computer to reboot if a certain error occurs.

---

### POWER SAVING

If you click on the Power Saving tab, you'll gain access to a section of the properties panel where you can control when Stations and Monitors turns ON or OFF. To save energy...
To schedule a monitor or station to turn ON or OFF at a particular day and at a certain time, follow the next steps.

STEP 1:
Select one of the two available options, either the Monitor or the Station.

STEP 2:
If you select the Station in Step 1, you can choose each day of the week and at what time the selected Station turns OFF. A Station cannot be turned ON remotely from the SignageStudio, but it can be physically set to turn ON if the BIOS of the computer support it.

EXAMPLE 1: Schedule a Station to turn OFF
Select the day and the time you want the selected Station to turn OFF. We'll set the selected Station to turn OFF every day at 19:00 hours.

EXAMPLE 2: Schedule a Monitor to turn ON or OFF
Select the day and the time you want the Monitor of the selected Station to turn ON or OFF.
In our example, we will set the monitor to turn ON every weekday at 10:00 AM and on weekends at 11:00 AM. We'll also set the monitor to turn OFF every weekday at 19:00 hours and on weekends at 21:00 hours. This is what the configuration should look:

ADVANCED POWER SAVING OPTIONS
In this section we’ll discuss how you can physically set the PC to run your Signage Presentation to turn back ON. Setting your physical SignagePlayer computer to Turn OFF will save on energy and increase the lifespan of the PC.

If your BIOS support it, you can physically set your SignagePlayer PC to automatically turn back ON in case there is a power failure or if an alarm is set for that purpose.

BIOS SETTING
The first thing you do is to boot your PC. Press the DELETE key or the F2 key (depending on your PC) to go in to the BIOS. When you are inside the PC BIOS, enter the Standard CMOS Features.

Confirm that the date and time are correct; this step is important.
Under the Power Management Setup, you set the *PowerOn after Power-fail* setting to ON.

This will allow the system to come back ON if there is a power failure. If you have this option in your BIOS make sure it's enabled.

Next, select the *Power-ON by Alarm* option.

This option needs to be enabled if you want the machine to automatically turn back ON in any day and at any time. If you set the *Power-ON by Alarm* to ON, you can set the date of the month and the time.

We've seen how you can set the Computer to Turn Back ON at a certain time and date. If you want to set the machine to Turn OFF, you can do it remotely, directly from the SignageStudio.

You should check the date and time set for the operating system. Make sure the time and date set on your Operating System matches the time and date set on the BIOS.

### 1. LOCATION

If you click on the Location tab in the properties panel of a selected Station, you can associate a location to that particular Station. This feature is useful when you're planning to allow advertisers to play ads in that location.

We'll discuss more on Advertising, on the Incoming and Outgoing ads in another chapter, but for now we will demonstrate how the Location feature works.

Let's say, for example, you have a Station located in Los Angeles, USA. To save the location and associate it with your Station, you enter the address or zip code in the Location field.

Next, click on the right arrow key or press ENTER on your keyboard to search for the map of LA. If you typed the correct data, you'll immediately see (just below the Location field) a map of the city and surrounding area.

#### LOCATION MAP CONTROLS

After you've entered an address or zip code in the Location field, you can control the map of that location in several ways.

### 1. TYPE OF MAPS

There are three different types of representation you can choose from:

1. **Map**
2. **Satellite**
2. THE ZOOM FEATURE

You can zoom in or out of the mapping representation, using the zoom buttons located on the top left side of the map.

If you click on the Minus (-) sign, it will zoom out of the map. If you click on the plus (+) sign you’ll zoom into the respective map.

You can also left click with your mouse on a particular area of the map, and it will zoom in to that respective area. If you click several times, it will keep zooming into that area.

Every time you use the zoom feature, you’ll see in the bottom left corner of the map how the scale representation changes. It will show the zoom distance in miles and kilometers.

3. DRAGGING THE MAP

You can use your mouse to drag the map around, to view other locations. Click and hold the left button of your mouse and then drag the map around.

ADVERTISING

The last tab in the Properties panel of a Station is the Advertising tab. In the Advertising section you’ll access several settings regarding the mediaADNET and the Advertising engine.

We will discuss more about this feature in another chapter, but to summarize; here you’ll be able to choose if a certain Station is public or not; meaning it can or cannot be for. You can choose what rates you are charging so you decide how much advertisers should pay you for allowing them to play ads on your screens.

REMOTE UPDATES

There are several ways to update the remote SignagePlayers.

1. THE SAVE DIALOG

The easiest way to update all your remote Players is through the SAVE dialog. Click on FILE and then choose SAVE (upload) from the main Menu of the SignageStudio user interface.

After you choose SAVE, a new dialog box appears.

In this dialog box, you can enable the Restart stations with changes option. Enabling this option, will synchronize all Stations and update them with the latest changes you made in a single SignagePlayer Desktop version installed anywhere in the world and is connected to the SignageStudio, will reboot and play with the latest changes you made to your Station. If you leave this option disabled, the system will save the changes to the server but it will not propagate them to your Stations; until the next player reboot.

Using the SAVE dialog is efficient if you have a smaller network. If you have a larger deployment, it can be hard to manage all the SignagePlayer and update every single one.

2. THE UPDATE BUTTON

Another option is to save the changes using the SAVE dialog, but leaving the Restart stations with changes option disabled.

This way, we are saving the entire configuration to the server but we are not updating each Player installed on location. If you want to apply the latest changes only to a specific Station, select it and click on the update feature from the Stations toolbar.
You can choose YES to update/synchronize the selected Station, or you can choose NO and CANCEL the operation.

You can also select multiple Stations by holding down the Ctrl key on Windows and select each Station with your mouse.

To apply the latest changes only to the selected Stations.

Another option is holding down the Shift key on Windows and with the left mouse you can select a series of Players from the Station’s directory. Use the Ctrl key to select or de-select Stations.

Once you selected the Stations, you can click on any of the available buttons in the Stations toolbar and the operation you choose will affect only the selected Stations.

One important thing to remember is to always SAVE the changes to the server before updating the selected Player or Players.

Let’s say for example we make a change to a particular Campaign.

next, we go back to Stations, select one or more Stations and click on the update button.

Choose YES on the Sync Station dialog.

Even if we clicked on YES, the updates are not going to be reflected on the selected Players because we never saved the changes. Anytime you change something in the SignageStudio you must remember to choose (upload) from the File menu to first save the changes to the Server.

Only after you’ve saved the changes to the server can you select one or more Stations and click on the Update button to update the Stations.

**3. THE PLAY BUTTON** Another way to update the remote Players is to select them and click on the Play button.

You have two options:

-1. Save Changes to Server
-2. Update Station/s with Changes

If you enable the Save changes to server option, the system will save whatever changes you have made to your presentation to the server. It will do this before it instructs the selected Player/s to restart.

You may sometimes notice this option is not available.

This is because you didn’t make any new changes to the presentation. If you go back and make any change to the Presentation, after you click on the Play button, you’ll notice this option becomes available again.

If you enable the Update station/s with changes option, the system will tell each remote SignagePlayer to contact the server and see if there are any changes made, before it takes effect.
If the option is disabled, the system will simply instruct all the selected Players to start playing.

4. Closing the SignagePlayer on location

Another option you can use is to update the SignagePlayer by physically closing it

If you close the SignagePlayer Desktop version, the SignageController will restart it. As soon as it comes back on, it will contact the server again and it will stream down the latest available, the Player will load the cached content.

**OFFLINE UPDATER (SNEAKERNET)**

The Offline updater allows you to physically take your Signage Presentation from the SignageStudio and update the SignagePlayer Desktop version that doesn't have an internet connection. This is very useful if you have for example a billboard and you physically go to you billboard once a week, have a USB flash drive prepared, and update the Signage Presentation manually.

For the next example, we have a Station that is Offline.

We are going to update this Station without connecting to the internet.

We will take the entire Signage Presentation that supposed to run at this particular Station, we copy it into a Flash drive and manually update the content at the location.

*Note: To update offline a Station, the SignagePlayer Desktop version needs to be registered at least once, when you install the SignagePlayer Desktop version, the Station has to be connected to the internet. After that, the internet connection is preferable but not mandatory.*

Step 1: Assign a Campaign and an Output to the Station that is currently offline. Everything that resides in this Campaign, every resource, every file and the entire Campaign a dedicated folder.

Assign a Campaign and an Output to the Station that is currently offline.

Click on the Export SignagePlayer data button

Here you can see how all the resources, the global data; outputs data that have been exported.

Step 3: Click on the START button

to search for a location on your computer or external drive. Once you defined a location, the path to that location will be visible in the export window. We will choose for this example to save the data on a new folder named on the Desktop and then copy the data onto a USB Flash Drive.
Step 3
Click on the START button to begin exporting the SignagePlayer data. There are five operations to complete:

- 1. Download Resources
- 2. Receive Global data
- 3. Receive Outputs data
- 4. Receive styles
- 5. Save to drive

If all the operations are completed successfully, you'll get a message telling you that the player.data folder is ready to be imported from SignagePlayers.

Step 4
After the exporting process has finished you can go to the newly created player.data folder.

Notice the player.data folder contains two main folders:

The xxxxxxxx from the business folder will be replaced with the number associated to your business. If you like to check that the number is correct, you can access Help -- > About you can see the business number displayed in the About box.

These folders contain all the data that is necessary if you decide to copy the same configurations, the same settings, the same presentations you have on the SignageStudio SignagePlayer Desktop version installed.

We will open for example a persistent.xml file from the businessxxxxx folder using the Adobe Dreamweaver editor.

Notice that the file contains xml data regarding all sections of your Signage Presentation like the Screen Divisions illustrated above. You can manually make changes to the XI advanced feature of the SignageStudio so make sure that you know what you are doing when editing xml files outside the Studio.

Step 5
Now that you have exported and saved the SignagePlayer data, to use that data on a computer that has the SignagePlayer Desktop version installed but no internet cc Desktop interface.

First, copy all the data from the Flash Drive to the Computer on location.

Import the SignagePlayer data physically by opening the SignagePlayer Desktop version and click on the Import button.

Click on the browse button and search for the player.data folder.

Click the START button to import the data into this SignagePlayer.

A message will let you know that the Import process is completed and the Player will reboot to load the new data.

Notice that the Signage Server is not connected, the Station is still offline.
but the SignagePlayer Desktop version is running the latest Signage Presentation we’ve configured and imported physically on the machine.

WEB AND EMBEDDED SIGNAGEPLAYERS

The SignagePlayer Web and Embedded versions are lighter versions of the player. They don’t have remote control capability and they are used mostly either to preview the presentation or to embed it on to your own website.

Remember regardless of which player version you are using, the SignagePlayer Desktop version, Web player, embedded or even mobile; when you make a change to your SignagePresentation, that change will propagate to all the Players.

WEB PLAYER

Unlike the SignagePlayer Desktop version, the SignagePlayer Web version doesn’t need require an installation. To work, the SignagePlayer Web version needs to run in a Web browser and Adobe Flash must be installed on the computer that will run the Player. Also, make sure window popup is enabled to open the Web Player.

You can use the Web Player to preview the Signage Presentation while you are working on it.

1. Using the main Navigation menu of the SignageStudio.

In the main navigation menu of the SignageStudio, located on the top left side of the user interface, you’ll find the Player button.

When you click on the Player button, a drop down menu will appear. The dropdown menu contains two options:

- Player Preview
- Install AIR Player

If you click on the Install SignagePlayer Desktop version button, it will take you to our download page.

If you click on the Player Preview button, a new window dialog will appear:

When you make changes to any part of your Signage Presentation, after you click on the Player Preview button, you have the option to enable the “save changes to server” option. Enabling this option will have your latest changes saved on the server, before the Web Player is launched.

CAMPAIGN

To preview a Presentation you first select a Campaign. If you created multiple Campaigns, you’ll see a dropdown list containing all your Campaigns.

CAMPAIN-SCREEN

After you selected a Campaign, you also need to select a Campaign-Screen or Output associated for that Campaign. If you created more than one Campaign-Screens, you’ll have it available in the dropdown list.

After you selected a Campaign and a Campaign-Screen, you may click on the Play button. You also have the option to cancel the operation by clicking on the Cancel button.
After you click on the Play button, a new dialog box will appear. If you enable the Restart station with changes option, the system will restart all of your remote Players and update them automatically with the latest changes you've made to launch and the SignagePlayer Web version will load.

After the Web Player has finished loading, your Signage Presentation will start playing inside your Web Browser.

1. Click on the dedicated button located in the middle of the Screen to enter Full Screen mode. In Full Screen mode, the Web Player will occupy the whole screen.

While you are playing your Signage Presentation in Full Screen mode, you can press the Escape key on your keyboard to exit Full Screen mode.

2. Click on the Preview in External Browser button

To preview a presentation using the Web Player, you can also use the Preview in External Browser button, located in the Outputs area of the Campaign section. If you click on this button, your default browser will launch and play the selected Campaign associated with the Output screen.

3. Using an automatically generated web link.

Another option is the SignagePlayer Web version with generated link. Any person with access to the link can view your presentation; the same Presentation that's running at the physical Output Screens is now available on the Web. It can be accessed at any time using any flash powered Web Browser.

You have three options to generate the link for your Web Player:

- The first option is to run the Player using the main navigation menu or the Preview in External Browser option, as we discussed earlier, and simply copy the link from the Web Browser.

- The second option is to use the SignagePlayer button from the Outputs area of the Campaign section of the SignageStudio.

If you click on SignagePlayer button, you'll get a dropdown menu; choose SignagePlayer Web and a new window will appear.

This is the Preview URL window. It allows you to Copy the URL to your clipboard and play your Signage Presentation. You can send this URL to anyone. Whenever you update and Play the latest version of the Presentation.

Remember when we used the Player Preview from the main navigation menu, the system asked us which Campaign and which Screen to preview? However when you click on...
SIGNAGEPLAYER EMBEDDED VERSION

We covered the SignagePlayer Desktop version and the SignagePlayer Web version. The SignagePlayer Embedded version is designed to be embedded inside an HTML website.

You'll access the SignagePlayer embedded version by selecting a Campaign and clicking on the SignagePlayer button from the Outputs area.

After you click on the SignagePlayer button, you choose the SignagePlayer embedded. When you do so, a new window will appear.

This is an HTML snippet. You can copy the code to your clipboard, paste it into your website, and have the same SignageStudio presentation playing embedded inside an Adobe Flash powered browser.

Notice the HTML code has Width and Height parameters. These are not available options for the Web Player, because using the Web Player will allow you to play your Signage Presentation in Full Screen, or at the full width and height of your desktop area.

Using the embedded version, allows you to play your Signage Presentations inside an embedded webpage or an HTML page, so you need to define the Width and Height for your presentation.

WIDTH AND HEIGHT OF EMBEDDED PLAYER

Let's say you want the embedded Presentation to have a size of 800 x 400 pixels.

```
WIDTH="800" HEIGHT="400"
```

Assuming you have already build an HD Screen of 1920 x 1080 pixels for your Campaign, you can follow the next steps to setup a Screen and assign it to that Campaign to be played by the Embedded Player.

Step 1:

In the Screens area of the SignageStudio, add a new Screen and set the resolution to 800 x 400 pixels.

Step 2:

Add a Screen Division and draw a configuration which will be played by the Embedded Player.

Step 3:

Switch back to the Campaign section, select a Campaign and a Timeline and add a new Output to the existing Campaign.

When the Output Wizard opens, choose the embedded screen we've created earlier.
At this point, we've created a second Output which has been added to the Campaign on to the selected Timeline. We will rename the two Outputs to HD and Embedded to keep things well organized.

Tip: When you are working with the SignageStudio, try to keep things organized. Assign proper names to the components, use folders and subfolders, make sure you manage the entire workflow.

Step 4:
Assign the Channels associated with the Embedded Output.

At this point, we have two Outputs named HD and Embedded. The HD Output is set to a resolution of 1920 x 1080 pixels and the Embedded Output is 800 x 400 pixels.

Step 5:
Select the Embedded Output by clicking on its corresponding tab in the Outputs area and then click on the SignagePlayer button.

Step 6:
Select the SignagePlayer Embedded option.

Step 7:
Now you can copy the HTML code from the snippet and paste it onto a Webpage.

The presentation we've set in the above example will play at a resolution of 800 x 600 pixels, which will correspond to the resolution we have in the HTML code. Of course, you should match the resolution of the Output Screen you've set in the SignageStudio to avoid content skewing.

Step 8:
We will use the Notepad application to demonstrate how to use the HTML code of the Embedded Player.

Open Notepad.exe paste the HTML code from the Embedded Player snippet, then save the file with any type of name. Make sure you add the .html extension.

Step 9: After you've saved the HTML file, you can open it and watch the Signage Presentation embedded on the basic Web page we've created in our example.

You can use the embedded version of the SignagePlayer on more complex websites. In our example we created a simple, basic webpage using Notepad, just to demonstrate definitely take advantage of the embedded version; it is a very useful and quick way to enrich your website. You can actually create banners and dynamic content that you can put on your website. The SignagePlayer Embedded version can even be used with touch screens or mouse / keyboard inputs to present interactive UI to an end user; resembling Kiosk functionality.

The SignagePlayer Embedded version can even be used with touch screens or mouse / keyboard inputs to present interactive UI to an end user; resembling Kiosk functionality.

www.digitalsignage.com/docs/html/MediaSignage_docs.html
SERVER CONNECTIONS (ADVANCED)

In this section we'll discuss how to connect the SignagePlayer Desktop version to the mediaCLOUD. There are two different ways to connect the player to the backend servers:

1. Connection via sockets
2. Connection via HTTP polling

LIVE SOCKET

When you have installed a SignagePlayer Desktop version and set the SignageController to auto start, you'll see the SignageController status as "Running" under the Station. And while the SignageController is working; you still need to enable proper internet / intranet connectivity so you can connect to the mediaCLOUD backend servers.

The SignagePlayer communication is done from the SignageStudio application to the mediaCLOUD servers over HTTP over port 80.

If you look at the above diagram, you can see any command sent from your machine, form the SignageStudio, will first reach our Servers over port 80 using standard HTTP protocol. From this point, the transmission of any command will propagate from the Server to the SignagePlayers installed on the field.

The communication between the SignagePlayers and the mediaCLOUD server farm on the other hand, can be done via real time sockets or HTTP.

Using sockets is the default behavior and this is how we try and connect the Servers with the SignagePlayer Desktop versions. Sockets will allow you real live connection, so anytime you do a Stop or Play or any type of command from the SignageStudio, the command will propagate immediately to the selected Players. This is because you have a live connection between your SignagePlayer and the mediaCLOUD.

HTTP POLLING

Under a firewalled environment where socket connection may be blocked, you may not be able to connect with the socket connection; thus the SignagePlayer Desktop player

One drawback of using the HTTP protocol is you don’t have a live connection like you would in the case of using sockets. If for example, you give a Stop command from the SignageStudio, it may take some time for the command to reach our Servers right away.

With the HTTP protocol, the SignagePlayer Desktop versions poll our Servers every 60 seconds.
This means if you sent a Stop command, a Play command, and a Screen Capture command in sequence, only the last command (which in this case will be the Screen Capture) will be executed during the 60 second duration window.

Live socket and HTTP connections are both supported but the live socket is preferred if you can add rules to your firewall to access our specific servers.

If you are having issues connecting to our server, it would be safe to assume you must have a local firewall.

The SignageStudio Stations will indicate the status of each remote player:

Yellow: connected via Polling
Green: connected via live socket
Red: not connected at all

To allow access to our servers be sure to open port 80 of both type socket and http to *.signage.me of inbound and outbound.

For explicit:

master.signage.me
business.signage.me
neptune.signage.me
galaxy.signage.me
mercury.signage.me
venus.signage.me

But note that servers are often edited, so *.signage.me will allow for greater flexibility.

**CONNECTION INDICATORS**

If you are using a Socket connection, under Stations you’ll notice a green LED light in the Connection field. The green light indicates you’re connected with the Signage SignagePlayer.

If you see a yellow LED light.

It means you’re using the backup HTTP protocol; so you may want to investigate why.

Possible causes are:
- A Firewall is installed on the actual Operating System of the SignagePlayer
- You have a Firewall within your Network or on the Router
- You have a proxy installed
- Enhanced network security settings
- Other settings

You might want to investigate other options preventing a connection using a Socket, but if don’t mind using the HTTP Protocol and wait between each command, we fully support this option as an alternative to a Socket connection.

One thing to keep in mind: If you’re using the HTTP protocol, it can actually take up to 5 minutes to update the Status of the SignagePlayer from yellow to red if you have a disconnect; with the a socket connection you would not experience such long delays in updates.

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**Catalog**

**INTRO TO THE CATALOG**

The Catalog is an advanced feature of the Digital Signage Presentation Software. It allows you to go through a sequential number of items or products, presenting them dynamically Components.

We constructed one Catalog as an example so you can have a basic understanding of it. Before we demonstrate how to build a Catalog from scratch, let’s take a look at one.

Under the Campaign’s area, in the Timeline, we see the Catalog Player is assigned to a particular channel.

We’ll double click the Catalog Player so we can access its properties and click the Play button from the main Outputs area.

If you are just starting with the software, you might want to go through chapters preceding this one, and come back to the Catalog component after you master the application.
In this example we sampled a store selling skates. When we clicked on the Play button the images and text located below played sequentially and dynamically in the Preview area. The catalog is an internal database of items with data and images associated with each individual item. With the catalog we can flip through these products while sorting for selected categories.

You can see the different images of skates, different prices, the stock status, and the description. All this is powered by the Catalog.

The advantage of using the Catalog is so you can add hundreds or even thousands of products to a presentation; easily and without having to configure each item individually.

The catalog template will allow you to preview the products without having to recreate each template for each single product. Also supported are categories; create subcategories.

To use the Catalog feature, on the file menu enable the Catalog so it appears in the SignageStudio Navigator menu.

The Catalog category has two subcategories:

- 1. Items
- 2. Categories

ITEMS

Whenever you enable the Catalog option in the main navigation menu, the Items subcategory will be open by default. Under the Items subcategory, there are four different sections:

- 1. The items search feature
- 2. The toolbox panel
- 3. Items area
- 4. The properties panel
First, we will briefly discuss each of these sections and then we are going to give an example of how to build a new Catalog from scratch.

ITEM SEARCH

To build a Catalog you can take advantage of resources. In the above example, we used images with skates as our resources. Sometimes, you may have hundreds or even thousands of products in your Catalog and if you want to search for a particular item it may be difficult, so you can use the Catalog search feature.

The search option is located on the left side of the Catalog section.

To search for a particular item, simply enter its name on the search box and only this item will be displayed in the Items section (acts as a filter). We will discuss the Items section later in this Chapter and demonstrate how the search feature works.

TOOLBOX PANEL

The toolbox panel is located by next to the main Navigation menu. The toolbox contains the Resources directory.

In our example, we’ve imported and saved to the server several Pictures of different skates.

ITEMS SECTION

The Items section is located next to the Toolbox panel, in the center of the Catalog section of the SignageStudio.

In this section, you’ll be adding products that are part of the Catalog. In our case, the products are the Skates images we imported earlier using the Resources directory.

- 1. The ADD Button
- 2. The DELETE Button
- 3. The NAME Directory

ADDING ITEMS TO THE CATALOG

There are two ways you can add items to your Catalog.

- 1. Using the Add button
ADD BUTTON TO ADD ITEMS

To add resources to the items section you can click on the ADD button.

After you clicked on the Add button, notice a new item has been added to the list.

assign a resource to it, change its name and settings.

DRAG AND DROP TO ADD ITEMS

Another option you can use to add items to your Catalog is by dragging and dropping Resources directly on to the items area.

You can also click on several Resources while holding down the Ctrl key on your keyboard to select them and then you can drag them to the Items area.

Another thing you can do is to click on one Resource to select it, hold down the Shift key on your keyboard the click another resource to select multiple Resources in the list a

After new items are added to the Catalog, you can assign new names and apply additional settings.

DELETING AN ITEM

To delete an Item you select it and then click on the DELETE button.

ITEMS PROPERTIES PANEL

The last section of the Catalog area is the Items Properties panel. The properties panel of an item will be visible only after you create the item; either by using the Add button earlier. Whenever you add a resource to the Items area the Resource becomes bound to the Item.

If you click on a particular item after you’ve added it to the Items directory, you’ll be able to access its properties panel.

The three sections of the Property panel are:

- 1. Item
- 2. Info
- 3. Resource

ITEM SECTION

If you click on the Items tab, you’ll gain access to the name field.

RENAME ITEM
To rename an Item, select it and type the new name in the Name field (located under the Item section of the properties panel.

INFO FIELDS

After you select an Item, if you click on the Info tab, you’ll see four tabs:
- Info0
- Info1
- Info2
- Info3

Each info section will contain the information specific to the item. You can use these fields for anything you want, like item price, item cost, item description etc.

For example, let’s type in the Info1 the price of the selected item. We’ll do this operation to all the items. Each item holds its own unique Info.

To enter any kind of information in the Info sections, click on the Info tab and enter your text below.

Under the Item0 section, we’ll type a price for the respective product.

Under de Item1 section, we’ll type a name to describe the product.

We’ll leave the other two Info sections empty, but you can enter any type of information you want in all four Info fields.

RESOURCE SECTION

Select the Resource section of the properties panel, you’ll be able to see a preview of the Resource associated with the selected Item.

If you added a new Item by dragging and dropping a Resource in the Items category, you’ll be able to see a preview of the item.

ASSIGNING RESOURCE TO AN EXISTING ITEM

You’ll assign a resource by selecting one in the Resources directory from the Toolbox panel, drag and drop it to the Resource preview area of the Property panel.

If you’ve added a new Item to the Catalog directly using the drag and drop operation instead of the Add button, and want to replace the existing Resource associated with the existing resource.

CATEGORIES

The Categories section is where you get the real advantage as you will be able to filter and present only a subset of items.
The Categories section will allow you to create different categories and associate each product to one or more Categories.

In our example we are selling Skates; Girl Skates, Boy Skates and unisex roller blades. We can associate each product with different Categories. For example, you can create products (regardless of gender) with this category, every time new products arrives. This allows you to dynamically show new products in your Presentation simply by associating the new products to the proper categories.

The Categories section has two main areas:

1. The Categories Directory
2. The Properties Panel

CATEGORIES LIST

ADDING NEW CATEGORIES

If you look at the Categories directory, you'll notice an empty Folder named Categories.

To add a new Category, you must click on the Add button.

Click the Add button to create a new Category.

You can rename the Category through its Properties panel. If you want to add another Category, first you select the main Categories' folder, and click on the add button once more.

SUBCATEGORIES

To build a more organized Catalog, you can create Subcategories. If you want to create a Subcategory, select an existing Category (not the main Categories folder), and click on the Add button. A new dialog box appears.

When you click on the ADD button, a new dialog box appears.

If you click YES in the dialog box, the selected category will become an actual folder and a new Subcategory will appear under it.

Select the Category folder instead of the main Categories folder and you click on the Add button, another Subcategory will be added.

You can add as many Categories and Subcategories as you like to keep things organized.
DELETING CATEGORY / SUBCATEGORY

To delete a Category or Subcategory, you select it and then click on the DELETE button.

When you click on the Delete button, a new dialog box appears.

CATEGORY PROPERTIES PANEL

Whenever you select a Category or a Subcategory from the categories directory, you'll be able to access its properties panel and rename the category.

For our example, we'll create a single Category with three different Subcategories of products:

- Roller Blades
- Ice Skates
- New Products

ASSOCIATING ITEMS WITH CATEGORIES / SUBCATEGORIES

After we've created the Category and the three Subcategories form our example, we need to associate each particular product / item with the type of a product it is.

The first step in this direction is to access the Items' area and select the first product listed; which in our case is Picture 1.
You'll notice in the Item section of the Properties panel of the selected item, under the Name field, our new Category.

Click on the arrow to expand the three Subcategories.

To associate the selected Item, which in our case is Picture 1, with a Subcategory, you select the checkbox next to the Subcategory name. We'll choose for our Picture 1 the I

For Picture 2 and 3 Items, we'll choose Ice Skates.

Let's suppose Picture 3 Item is an Ice Skate, but also a new product. In this case, we'll assign the Picture 3 Item to the New Products' category as well.

You're able to associate multiple Categories or Subcategories with a single product.

We've covered all you needed to know about adding Products and creating new Categories and Subcategories of products. Next we will cover associating the Catalog with a I

CREATING A CATALOG SCENE

After you've defined and named you products, associated your products / items with different Categories and Subcategories, you build a Scene which will contain your Catalog. Using the Scene editor, create a Catalog template that will display all of the products. Later in this chapter, we'll discuss how to associate different products with the Catalog Scene.

Create a new Scene, and name it My Skates.

Add a Background to the Scene.

Under the Components directory, you'll see the Catalog item Component.

Drag the Catalog item Component into the Scene.
COMPONENT ITEM PROPERTIES PANEL

The Properties panel of a Catalog item contains three tabs:

- Layout
- Common
- Item

We’ve already discussed the layout and Common sections; which are the same for all Components.

THE ITEM SECTION OF THE PROPERTIES PANEL

The Item section of the Properties panel contains several sections.

- 1. Field
- 2. Font style
- 3. Font size
- 4. Font Color
- 5. Text effects

THE INFO FIELD

When you add a Catalog item Component to a Scene, you assign a field to it. The field will be displayed by the Catalog item Component in your presentation.

The fields listed here represent the fields we previously covered when we explained the Items area of the Catalog section of the SignageStudio.

The first field is the name field, corresponding to the name of the presented item.

The Info 0, 1, 2 and 3 fields correspond to the ones from the properties panel of the Item in the catalog section.

The last field represents the resource associated with the item.

The last sections are related to the font used to describe certain fields.

At this moment, we added one catalog item component to the Scene. Next, we’ll assign a field to this Component.

Click on the Catalog item Component you’ve added to the Scene. Choose the Info 1 field from the dropdown list in the properties panel.
The description of the Catalog item Component has changed from name to info 1.

This means the Catalog item Component will display the data we've entered in the Info 1 section of the Items category. Remember, we entered a description for our Skates ar

Next, we'll change the color and font of the Info 1 description.

Now add another Catalog item component to the Scene and assign the resource field to it. It will display the resource in the Scene.

Now have the Resource in the bottom of the Scene and the description of the product on the upper side. Next, we'll add a new Catalog item component and assign the Info0 field that Info0 field will contain the price of the products.

To continue with our example, we'll add the third Catalog item Component next to the Resource. We also changed the Font color, style, and size.
Another thing you can do after you've added Catalog item Components to the Scene, is to add different effects to these Components. Anytime a new product or a new item is sequenced in, we'll see this special effect.

Let's say we want the description field of the product to have a Blur effect. Select the Dynamic Blur effect and apply the following settings:

You can also add to the Scene any other static information like a standard label or RSS component for example.

At this point, we've created a template which will be used to show the description, the price and the resource / image of different products.

BINDING CATALOG TO SCENE

Next we will associate different products with the Catalog Scene we've created earlier in this Chapter. This will be done on the Campaign's Timeline.

First, click on the Campaign tab from the main Navigation menu to enter the Campaign section of the SignageStudio.

Add a new Channel to the Timeline or use an existing one to be associated with our Catalog. We already have a Channel on our Timeline and we'll rename it Catalog.

Next, we'll open the Toolbox panel and search in the Components directory for the Catalog player Component.

Drag the Catalog player Component to the Timeline, and onto the Channel named Catalog, and increase its length so it matches the length of the Timeline.

Now, double click the Catalog player to access its Properties panel.

CATALOG PLAYER PROPERTIES PANEL

The Properties panel of the Catalog Player has three sections:

- 1. Player
- 2. Common
- 3. Catalog

In previous Chapters, we've covered the Player and Common sections of the Properties panel. Now, we'll review the last section of setting up the Catalog.

The Catalog section contains several fields:

- Scene Field
- Kiosk Mod Option
- Time Interval
- Category Zone
SCENE FIELD

Similar to other Player Components (like the Weather Player for example) in the Scene field you bind a scene from the Scene’s directory.

In our case, we will add the Catalog Scene we’ve created earlier. Drag and drop the My Skates Scene onto the Scene field. This will associate the Scene we created with the Catalog.

KIOSK OPTION MODE

The Kiosk mode feature is used to enable Kiosk functionality to the Catalog.

TIME INTERVAL

This is the time interval in seconds between Item iteration displayed by the Catalog.

You can increase or decrease the default time either by entering a numerical value in the designated field or by using the UP and DOWN arrow keys.

CATEGORIES

In this area you’ll see all the Categories we’ve created in the Catalog section of the SignageStudio.

The next thing we’ll do is to set up the actual Categories this particular Catalog is going to display.

As we mentioned, under the Catalog section of the properties panel, we have all the Categories created earlier.

Let’s assume we want this particular Catalog to show only New Products, not the Roller Blades or Ice Skates categories. For this, you select only the New Products category.

Now, if click on the Play button from the main preview area of the Outputs, you’ll see the catalog Player display sequentially all the Products / Items and descriptions associate

You can add additional items to this New Products Category to easily present newly received products.

You can also check all the Categories and the Catalog will play all the Products we have in our Catalog setup; not just the New Products category.

As you can see, the Catalog is a very flexible feature that allows you to easily cycle through thousands of items easily; create a single Template and use it everywhere.

In future releases we are going to make the Catalog even more powerful. You’ll have 3D objects, rotating carousels, many new dynamic product displays, sorting capabilities,
INTRO TO THE KIOSK

In this Chapter we’ll be covering the Kiosk. Kiosk are a set of features that enables a user to interact with the Screen. You can think of an ATM machine as a Kiosk, or a user buying movie tickets through a terminal. These are all Kiosk examples. Our Digital Signage platform has the Kiosk capability; so you can take advantage of the latest touch screen technology to provide a kiosk solution to your customers.

We also developed a custom Kiosk SDK Module so you can develop your own kiosk solution.

Next, we’ll be covering the different aspects of the Kiosk feature:

- How to Enable the Kiosk Mode for Your Campaigns
- How to Upload the Different Kiosk Modules onto the System

We will demonstrate the Kiosk feature by downloading a Kiosk module we’ve developed and use it as an example. This Kiosk module is a restaurant food finder and you can find it on our website. After you downloaded the zip file you can upload the file named RestaurantModule.swf onto the server from the Resources section of the SignageStudio.

After the resource has been uploaded and saved on the server, we need to mark it as a Flex module. This is because the module was developed using the open source Adobe Flex framework available through the Apache repository.

Also, we must allow the uploaded resource to access external domains by enabling the Trust content option.

The Flex module and Trust content options are located in the Properties panel of the selected Resource.

After you click on the Trust content option, a Warning message appears on your screen.

Click OK to enable the Trust content option. Remember to SAVE the settings.

Next, we will access the Scene Editor area of the SignageStudio by clicking on the Scene Editor tab from the main Navigation menu.

After we’ve created a new Scene, we’ll drag the RestaurantModule.swf resource onto the Scene. We’ll set a blue border for it so it will be seen more easily. We will also increase the size of the resource, because we want the Kiosk module to occupy the full Scene.
You can easily change the size of a resource or Component within a Scene using the Constrains feature. If you anchor the object, which in our case is the SWF file, type the number 0 on the x and y axes and the resource will match the size of the Scene.

Next select the Campaign tab from the main Navigation menu.

**CAMPAIGN KIOSK MODE**

To enable the Kiosk mode for a Campaign, you select it in the Campaign panel and click on the Kiosk tab in its Properties panel.

In the Kiosk section of the Properties panel you enable the Kiosk mode.

Enabling the Kiosk mode option, will allow mouse and keyboard interactivity with this particular campaign; you can also use your finger and virtual keyboard in tablets and touch screen capable screens.

After you’ve enabled the Kiosk mode, you also have to define a Kiosk exit key. The Kiosk exit key, allows an Administrator to exit the Kiosk. You don’t want public users to go in:

Enter in the Kiosk exit key field the password you want to set as an exit key phrase.

*Note: Only the SignagePlayer Desktop version uses the ESC + password functionality (not the Web Player).*

To actually close the Kiosk as an Administrator, you press the Escape key on the local machine and enter the password you’ve set in the field described above.

After we setup the Campaign and enabled the Kiosk mode, we’ll drag onto the Timeline the Kiosk Scene we’ve created earlier.

After you added the Kiosk Scene to the Timeline, double click on it to access its Properties panel.

In the Properties panel, you enable mouse and keyboard functionality for this Kiosk Scene and you’ll do this by enabling the Kiosk inputs option.
You can enable or disable Kiosk interactivity per specific resource making the Kiosk functionality more flexible. If you want mouse and keyboard interaction you must enable the timeline. This will allow for example to enable interaction with one HTML component, but not with other swf animations and HTML components.

The final thing we should do is to preview the presentation. We’ll use the SignagePlayer Web version for this, but we recommend using the SignagePlayer Desktop for better performance (and remember that password protection is only supported on Desktop version).

You can click on the images and test the mouse interaction with the Kiosk module.

If you have a touch screen device or tablet, you’ll be able to use your fingers to interact with the Kiosk module instead of using an actual mouse.

**SCREEN SAVER MODE**

In this section we’re going to discuss using a Digital Signage presentation in a Screen Saver mode. This feature is useful if you have for example, a Point of Sale system and a Screen Saver; so if the operator stops using the Point of Sale system for a certain number of seconds or minutes, the Presentation can kick in and start playing. First, access the Campaign tab from the main navigation menu.

In the Campaign area, select a Campaign you want to use the screen saver mode in. Next, access the properties panel of the campaign, click the Kiosk tab and you’ll see the options:

- 1. Kiosk mode
- 2. Interrupt mode

**INTERRUPT MODE**

To use your Signage Presentation in a Screen saver mode, select Interrupt mode.

To kick off the Presentation after a user stops moving the mouse, enable the interrupt mode for the selected Campaign.
To kick off the Presentation after a user stops moving the mouse, enable the interrupt mode for the selected Campaign.

This means the entire Signage Presentation will start playing normally, but only when there is no mouse activity for the designated timer length.

In the same section, you'll also see two additional fields which are used to setup the waiting period; or how long to wait before no mouse activity is present to begin and play the Presentation.

The first field from the left is where you'll enter the minutes. The second field is used for seconds. You can either type numerical values in the fields or use the UP and DOWN arrows to change the value.

INTERRUPT MODE WITH KIOSK MODE

In the previous section, we covered using the interrupt mode and having the [Show desktop] option enabled; that will allow the Signage Software to play your entire Presentation normally (every time a user stops using the mouse for a predefined period of time). We said this can be accomplished by setting terms of minutes or seconds.

Another option of using the Interrupt mode is together with the Kiosk mode. If you enable both Kiosk mode and the Interrupt mode, you'll be able to set a particular Timeline to play and allow users to interact with a predefined timeline.

To demonstrate this, we'll enable both the Kiosk mode and the Interrupt mode for a particular Campaign.

Under the Interrupt mode checkbox, there is a field named timeline having two buttons. You'll see the default option corresponding to these buttons is the [Show desktop] option.

Next, select a Timeline containing a Kiosk module you want users to interact with.

Click on the use current button to bind the selected timeline as the Interactive timeline for your touch screen.

This action will replace the [Show desktop] with your selected interactive timeline.

Now the Presentation will play like it normally does, with the settings you defined, and as soon as a user moves the mouse or interacts with the screen, Timeline 1 (in our case) is going to run for the Kiosk mode and users can interact with it across touch screens and tablets.

If a user stops interacting with the Timeline for the pre-defined period of time, then the Signage Presentation will begin to play normally until someone moves the mouse or interacts with the screen again.

Press the Clear button to revert back to [Show desktop] screen saver mode.
Music Player

INTRO TO THE MUSIC PLAYER

In this section we’ll discuss the Music Player. The Music Player is a standalone application that is installed on top of the SignagePlayer Desktop version. It allows you to run background music and have different Channels of music that you create. The background music is independent of the Signage Presentation; meaning, if you have videos playing with sound you’ll have two sound sources. In most cases, you will want to disable any other audio resources in your Signage Presentation.

To use the Music Player, click the Music tab from the Studio Navigator.

MUSIC CONFIG

The Music Player includes:

- 1. Channels
- 2. Resources Directory
- 3. Playlist

CHANNELS

Music channels contain playlists with songs you choose. To create a Music channel you click on the ADD button.

You can create as many Channels as you like.

In this section, you can also delete music Channels. To delete a music Channel, select it and click the DELETE button.

If you click on YES, the selected music Channel will be deleted. You also have the option to choose NO and CANCEL the operation.

MUSIC TOOLBOX

From the Toolbox panel you’ll access the Resources directory. Before you start using the Music Player you first need to upload the music files to the server; the supported format is .mp3.

For our example, we’ll upload eight .mp3 files.
Select the files and drag them to the Playlist area so you create Playlists within different Channels.

**PLAYLIST**

After you created a Channel you can add music files to the corresponding Playlist. The Playlist area is located at the center of the SignageStudio.

To add music files from the Resources directory to a Playlist, you first select them with your mouse then drag and drop them into the Playlist area. You can also select multiple files by holding down the `Alt` or `Shift` for a range selection.

To delete a sound file that you added to the Playlist, you select it and then click on the DELETE button. You can choose YES and DELETE the selected music file, or you can choose NO to CANCEL the operation.

**RENAMEING A CHANNEL**

You can rename a music channel by entering the new name in the name field of the Properties panel of the selected Channel.

Assign folders and subfolders to the music Channels to better organize your music collection in the same manner you manage resources.

Let's demonstrate how to create Channels, Playlists and how to remotely manage the Music Player.

First, click on the ADD button,

Proceed with renaming the channels:

- Pop Music
- Jazz Music
- Rock Music

After creating the music Channels, we select the Pop music Channel and drag and drop a few Pop music files from the Resources directory of the corresponding Playlist.
Next, we’ll select the Jazz music Channel and bind the Jazz song selection to it. Repeat the process for the Rock music Channel.

We created three different Channels, each Channel having its own Playlist of songs.

Next, we go to the Stations section of the SignageStudio.

We select a Station where we want the Music Player to run, click on the Music remote control button located on the top menu of the Stations section.

This window is a remote controller for the Music Player. It contains several settings that you can use to remotely manage the Music Player.

**MUSIC REMOTE CONTROL**

To activate the Music Player installed on the remote machine, first you select a Channel / Playlist from the corresponding dropdown menu.
Once you've selected a Channel, select a particular song from the dropdown list located below the Channel selector.

If you click on the STOP button, the Music Player will stop playing the current music selection.

If you click on the PLAY button, the selected song will start playing.

If you click on the NEXT button, the Music Player will start playing the next song after the current selected song.

If you click on the random list button, all music files from the current selected Channel will shuffle.

If you click on the sequence list button, all the music files from the selected Channel / Playlist will play in a sequential order.

The immediate action allows you to immediately apply changes to the Player as opposed to waiting for the current song to complete before applying your change.

If you have, the immediate action option enabled and you select a new song from the Playlist, the current song will stop immediately and the Music Player will start playing the new song.

But maybe you don't want the changes to take effect right away. Perhaps people are sitting at the location and listening to the current song selection. If you have the immediate action enabled and you select a new song from the Playlist, the current song will stop immediately and the Music Player will start playing the new song.

VOLUME

Another option on the remote controller is controlling the volume.

Using the minus button will decrease the volume while plus button will increase the volume.

CONTROLLING MUSIC FROM BROWSER

You can also have the same control over the Music Player from a web browser. The remote controller window has a URL path.

This URL will allow others to manage the Music Player virtually from any web browser; allowing employees and colleagues the ability to control the playlists. Simply copy the URL and share it with others.

MUSIC PLAYER - USER INTERFACE

When you remotely start the Music Player, it will appear as a small window at the corner of your Screen.
It will display the name of the Song playing, the Volume, and a graphical illustration of the volume intensity. The Music Player is a standalone application and with its remote control functionality, it is an easy way to inject background atmosphere to your screen locations.

Mobile Controller

INTRO TO THE MOBILE CONTROLLER

The MobileController allows you to view the status of your remote SignagePlayers and apply basic management functions using a simple HTML user interface.

You can have live access to your Digital Signage network from anywhere with the Mobile Controller.

The UI is optimized for mobile devices such as the Android and iPhone.

Best of all, you get full remote control to all your remote SignagePlayers, including:

- Live Snapshots
- Play
- Stop
- Reboot
- Stats
- Much More

To launch the MobileController portal point your mobile browser to: MobileController

Use your existing login e-mail and password as you do to login to the SignageStudio, it's that simple! Note that if you are an Enterprise user, DO NOT login with your enterprise credentials; you must use an end user account.
You’ll see a list of all your registered Stations.

To use any of the available controls, first select the Station by clicking on the SELECT button.

The following controls are available:

- **1. THE REFRESH BUTTON**
Click on the refresh button to refresh the selected Station list.

- **2. PLAY**
Click on the Play button to start Playing the selected SignagePlayer.

- **3. STOP**
Click the Stop button the stop playing the selected SignagePlayer.

- **4. LIVE SNAPSHOT**
Click on the Live Snapshot button to retrieve a LIVE snapshot image of whatever is currently playing on the selected Station.

- **5. CHECK NEWER VERSION**
If you click on the Check for newer version button, the system will check if the selected Station has the latest version of the SignagePlayer installed.

- **6. UPDATE**
If you click on the Update SignagePlayer with the new changes button, the latest Changes that you and saved to the server will get pushed down to the remote Station.

- **7. REBOOT STATION**
If you click on the Reboot Station button, the selected Station will reboot at the hardware level.

- **8. CLEAR PLAYER CACHE**
If you click on the Clear Player Cache button, the system will clear the local cache of the SignagePlayer.

- **9. LOGOUT**
If you click on the Logout button, you will be logged out of the SignageController.

### STATIONS STATISTICS

The following Statistics are available:

- Signage Controller status
- Name of the Stations listed
- The last status of your Stations
The last update of your Station

Caching status

Current memory

Peak memory

Enterprise Edition

When you join the mediaCLOUD Enterprise edition you'll be able to take full advantage of all the advanced features. Start using a powerful and flexible Digital Signage today. Maximize the potential growth of your business and MediaSignage provides all the necessary tools.

Take advantage of the features you need to operate a successful and reliable digital signage network; full access to the EnterpriseStudio with all its advanced management, advertising engine and more.

With the mediaCLOUD Enterprise edition you are free to market yourself as you please, opening the gate for you to choose your own business model.

We offer a simple, yet robust solution with low barriers to entry. No complicated contracts and no long term obligation. We make it easy for you; just as you would expect from us.

Tap into the potential of digital signage and energize your sales. Add digital signage consulting to your services and grow your business. Our Enterprise users rely on our solid where they need; 24/7, 365 days a year. Digital signage is not just for public spaces and retail anymore. Corporations are now discovering digital signage as an ideal tool to communicate with staff and clients; screens are popping-up in lunch rooms and lobbies.

Digital signage doesn't need to be a hard sell because MediaSignage will give you the flexibility you need to match any price and outbid the competition while delivering a superior quality product. Now you can manage your clients through your own account and brand the complete solution. Bundle your own creative services for a complete one-stop experience; make digital signage an integrated part of your business.

We know your success is our success, and so we developed a program that allows you a substantial growth while keeping costs down.

Want to start your own business? Want to get passive monthly income?

Start your own Digital Signage network and stay ahead of the curve. The industry of Digital Signage is still young and many opportunities exist.

When you join the mediaCLOUD Enterprise edition you’ll pay a flat subscription of $99.00 per month. You get unlimited SignagePlayer Desktop and Mobile licenses (screens) businesses. That's it, simple? We think so!

Get full access to all the advanced mediaCLOUD management features as well as a long list of business advantages. The important thing to remember is that you are always free to maintain your own pricing strategy that's right for you. MediaSignage gives you the flexibility to control your customers, signage content creation, or possibly graphic design assistance. You can provide training to your customers.

The mediaCLOUD Enterprise edition will get you access to the EnterpriseStudio; a real time monitoring tools which allows for central management of your subscribers and full disable delinquent accounts and notify your customers of updates and changes. The EnterpriseStudio includes many advanced features, such as the advertising engine, mediaSTORE and more; all covered in the following chapters.

WHITE LABEL / BRANDING

When you sign up as a mediaCLOUD Enterprise user you can take advantage of the Branding / White Label. Designed for individuals and companies who own or operate a complete MediaSignage solution onto your own website. These include all components, including login screen, SignageStudio, SignagePlayers and support components, all in a matter of minutes. Your web visitors can open new Digital Signage accounts directly on your website, while returning customers can login to their accounts through your web portal.

Give it your own look as if you developed the entire software suit; using your logos and company information. MediaSignage becomes transparent to your clients so you can run your own Digital Signage business; your way...

ADVERTISING ENGINE

www.digitalsignage.com/docs/html/MediaSignage_docs.html
BENEFITS

- White Label / Branding with your Logo, link backs and more
- Advertising Engine, Manage an advertising network
- Create access lists and user permission control
- Modify the overall Theme through editable CSS
- Get discounts on hardware and accessories
- Receive phone support and none client assistance
- download marketing material (source code available)
- Manage sub accounts and much more
- Access to the mediaSTORE

With branding you have the ability to host the complete application on your own website. This way, existing customers can login to their accounts on your website (through your accounts and get associated as sub-accounts under your Enterprise umbrella.

Some of the other benefits include support for multi users, create ACL or Privileges and Access Control Lists where you can assign users only access to certain areas of the .

You'll be able to manage all your businesses from a single location using the EnterpriseStudio.

- Advertising Engine

The Advertising Engine will allow you to send proof of play to advertisers and also join the MediaADNET where you can build your own advertising network. There are over fifty will cover them in detail in another Chapter.

- No Limits

Install unlimited number of screens at infinite number of locations.

Enterprise users receive 10 Gigabyte of storage on the mediaCLOUD to store videos, animation, and images (additional space can be granted if needed at no charge. None

Enterprise users can download and upload with no limits as we do not cap bandwidth speeds (none Enterprise Users bandwidth limit TBA).

- Multi User Management

Collaborate with other users. Work together on the same campaign and use source control to merge your work. Use perforce like features to manage your updates between

- Central SignageStudio access

Manage unlimited number of accounts and remote SignagePlayers all using central login. Get a global view of your entire player stats and receive live notifications.

- EnterpriseStudio access

Manage your network, setup branding, apply permissions, inject access control lists and more, all using single point and click management.

- EnterpriseStudio White Label / Branding

Brand the entire solution. Copy and paste the provided HTML snippet and allow customer login and create new account; accessed directly from your own website. All with you

- SignagePlayer White Label / Branding

Set the Signage Player to display your company's information anytime the Player is started or rebooted. Make MediaSignage transparent to your clients.

- Branded Embedded SignagePlayer

Embed the SignagePlayer Embedded version directly onto your own website. Enterprise edition users can remove the Copyrights snippet and set no references to MediaSign

- Advertising Manager

Manage thousands of Ads across any number of businesses using the "Incoming" Ad Manager module and provide proof of play to your advertisers. Set Approval rules and s

- API / SDK

Develop your own user interface using Web services and application program interface (API) for your Advertisers using web services and embed it all onto your own website. ASP.NET, PHP and more. Create a fully automated system with your CMS for Ad package creation, resource uploads and more.

Use the software development kit (SDK) and develop custom SignageStudio and SignagePlayer components. Use working samples to get up and running in hours, not days.

- Advertising Engine

Take advantage of a robust Advertising Engine including incoming and outgoing Ad management.

- Access Control List

Access Control Lists (ACL) allows you to set specific regions within the SignageStudio using 8 levels of control. Hide area you do not want specific users to access while maint

- Privileges

Privileges are set to control what users can do within the SignageStudio. Privileges include, read, update, delete, and modify control. Create unlimited number of sub-users ex

- Multi Player central management

Get a Global view of all the Players across the entire network from a single screen.

- Multi user management

Create unlimited number of accounts each with its own ACL and privilege group. Use default privileges for easy group privileged assignment.

- SignageStudio custom themes and CSS control

Choose a custom look and feel for the SignageStudio through pre-configured CSS Themes.

- Unlimited support

MediaSignage dedicated support through phone, email, forum and Live Chat. Support is guaranteed within 24 hours. Normally we reply to Enterprise member inquiries within

- Private Library of resources, videos, backgrounds and masks

Access hundreds of pre-made resources including backgrounds, masks, source SDKs, videos, images, SWF animations and more.

- Discounts on mediaBOX

Receive 5% OFF the mediaBOX; all version, including Linux / Ubuntu and Windows / Embedded version.
Receive 5% OFF the mediaBOX; all version, including Linux/Ubuntu and Windows/Embedded version.

- Discounts on the mediaSERVER
Receive 5% OFF the mediaSERVER. Also get access to our special pricing on Microsoft Windows 2008 64bit server edition license.

- Media SERVER Licenses discounts
Get lower prices on the mediaSERVER Licenses; prices drop to as low as 135.00 per single license (depends on volume).

- 25% OFF on some accessories
Receive discounts on accessories, such as, wall mounts, USB OS Imager, and other peripherals.

- Marketing material branded to your Company
Take advantage of marketing material including flyers, brochures, business card, white papers and more. Download the Photoshop source files and modify with your own corr

- Participate in the Lead generation program
Receive leads generated from potential new clients and increase your business exposure.

- Access the mediaADNET
Expose your Advertising Network through our mediaADNET and increase the exposure of your screens to national and international advertisers.

- Link backs from MediaSignage.com to your website
Increase online traffic to your own Digital Signage website through link backs and access the partner program.

- Early access to special promotions and package discounts
Receive early access to special discounts, promotions, news and beta release of the software.

- General consulting and advice
Consult our support team for additional information and resources concerning Digital Signage installation, maintenance, and setup.

- Direct access the online Video Tutorials
Host the entire video tutorials content library on your own website, none branded. Visit on how to host the video tutorials

- Permission to use information from the MediaSignage.com website
Copy and paste information from the MediaSignage.com website to your own site and promote your company with proven content.

As a mediaCLOUD Enterprise user you pay a flat $99.00 dollars a month subscription fee. This gives you access to the complete product solution; everything we have to offe the program. You get:
- All the software updates
- Access to all the features
- Technical support
- No setup fees
- No contract
- Month to month / cancel at any time

You get advanced, Enterprise level solution for one low cost.

HOW TO SIGN-UP

In this section we will be covering the Enterprise sign-up process.

To open an Enterprise account click on the [SIGN-UP] box below on the following webpage: Enterprise sign-up

Clicking on the [SIGN-UP] box will launch the SignageStudio Web version, and create your Enterprise account.

Note that if you are currently logged in as a standard end user, you must first click on File > Logout in the SignageStudio Web version, before you can re-launch the [SIGN-UP]
From the EnterpriseStudio you can manage all your Businesses and all the Users that registered under your Enterprise account, you can see all Stations managed by each customer, and can set up your Logos and more. We will cover the Enterprise level features in the following chapters.

### Incoming Ads

#### INTRO TO INCOMING ADS

As a mediaCLOUD Enterprise user you get to take advantage of the Advertising Engine. It allows you to manage all aspects of the out-of-home (OOH) advertising business in:

- Inventory Control
- Scheduling
- Proof of Play
- Execution
- Cross Business Ads
- Much More

Regardless of media type (e.g. billboard, transit shelter, airport, mall, bus, and digital signage), the Ad engine delivers creative and flexible campaigns across multiple platform management tool. The MediaSignage Advertising platform is designed to ensure you maximize your Ad revenues by using smart digital signage at the lowest total cost of own.

The Advertising engine is all about providing advanced campaign management and scheduling that allows you to deliver the right ad at the right time to the right customer across:

With the mediaADNET Advertising platform you can target advertising based on sites, demographics, time of day and specific screens; all within the simplest user interface for the Network owner and your advertisers.

Best of all, you can take advantage of a slimmed down, white labeled version of the SignageStudio and embed it directly onto your own web site to allow your Advertisers a portal for Ad management. You can also use the API we provide (Application Programming Interface), and create your own portal that caters to your own needs using other programming languages including PHP, ASP, Flash and others.

The Advertising Engine gives you a lot of different features including:

- Playback Analytics including Proof of Play
- Integrate existing campaign and timelines using the Ad Component
- Easily address thousands of Ads to different business using Ad Packages
- Set station with different hourly rate for Ads at any given hour per week
- Expose your Ad Network to the public mediaADNET
- Provide approval system, accept and suspend incoming Ads manually or automatically
- Dozens of customized reports / aggregated stats, exportable to CSV
- Assign Start and End dates for the Ad package
- Multi user Advertising privileges control
- Set geographical location for each Station using Live Maps
- Search Ad station in the Local Ad network or mediaADNET using keys, names and geo location

One of the great things about the Ad Engine is once you start using it, you can expose your Screens through the mediaADNET, a public network of users and advertisers business.

You also have the option to create your own local private Ad Network. So you don't have to join the mediaADNET; you can keep it all private.

If you purchase a mediaSERVER you can also establish a connection between your mediaSERVER and our mediaADNET.

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**ADVERTISING ENGINE AND NETWORK EXPLAINED**
In this section, we’ll use a fictitious user named Joe. Joe is an accountant who is looking to expand his business and find more clients.

Joe gets coffee every morning at his local coffee shop and he sees Digital Signage with an Advertise here message, together with a URL address.

Joe goes back to the office and uses the advertised URL address so he can find more information about placing ads at the local coffee shop.

We’ll use this example to show you everything you need to know about the Ad Engine. From Joe’s perspective, where Joe creates his own Ad package, and how he will upload his files as videos and images that he wants to use to run his ads. Joe’s Ad submission will go to the Coffee Shop owner who manages the screen.

We will also cover what you need to know from the perspective of the Coffee Shop owner, approving Joe’s Ad packages, setting up the different Ad rates and providing proof of play.

INTRO TO INCOMING ADS

To access the Incoming Ads section of the SignageStudio, you must enable its functionality from the main top file menu of the SignageStudio.

After you enable the Incoming Ads section, you can access the area by clicking on the Incoming Ads tab located in the main Navigation menu.

You’ll notice three subsections available under the Incoming ads section:

- Advertisers
- Rates
- Analytics

The Coffee Shop owner in our example needs to set up a Station (a PC connected to a screen) at his location. He will register as an Enterprise user on the mediaCLOUD and connected to a large 32” screen in his Coffee Shop.

The Coffee Shop owner will proceed by building his Campaigns and Timelines and configure the Advertising options for his Station.

First we will begin by enabling advertising capabilities at the Station level.
Under the Stations section of the SignageStudio, we select a Station that we would like to run Ads on. The Advertising option is located in the Properties panel of a Station.

ADVERTISING PROPERTIES PANEL

The first option in the Advertising section is named Public. It allows a Station to be exposed to a private advertising network or through the public mediaADNET.

If the Public option is set to none, you will not be able to run any of the advertising tools. However, selecting the Local network will expose the Screen to any business that's willing to expose your Screen to possible advertisers throughout the entire public mediaADNET.

If you select the mediaADNET, the Station will be exposed to possible advertisers from both your own local Ad network as well as the mediaADNET, which includes our mediaCLOUD servers and customers who purchase a dedicated mediaSERVER and connected it to the mediaCLOUD.

Next, you can add a Description so users who search for screens can read and get more information about your exposed Station; i.e.: type of business it's in and price information.

The Coffee Shop owner from our example can also add some searchable keys. You can add searchable keys in the designated field.

RATES

If you click on the Rates tab under the Incoming Ads section of the SignageStudio, you'll access the Rates tables where you can configure prices per hour for your Ad packages.

Rates allow you to set the price per hour / per any day of the week so you can charge your advertisers accordingly. Rate Tables are bound to specific Stations. Running a month's worth of data on its bound rating table to compute total charges.

The Rates section is broken down to:

- 1. Rates Main Panel
- 2. Rates Timetable
- 3. Rates Properties Panel

RATES PANEL

Located on the left side of the user interface, the main panel of the Rates section allows you to add or delete rate tables.
Located on the left side of the user interface, the main panel of the Rates section allows you to add or delete rate tables.

### ADDING RATE TABLE

To create a new Rate table, click on the ADD button.

You can create an unlimited number of Rate tables. However, a single Station can be bound to only one Rate table at a time.

A Rate table allows you to create four different levels or rates. So you can charge 4 different rates per hour per week.

### RATES TABLE

The Rate table is located in the center of the Rate section of the SignageStudio. Here you set 4 different levels of prices for every hour of the week.
You can change the name of a Rate table at any time; select the Name field of the Properties panel to enter a new name.

HOURLY RATES

The Properties panel contains four different fields for the hourly rates that you can set; distinguished by four colors. You define how much to charge by entering the value in currency in the hourly rate fields.

The selected button is used so you can determine the currently selected rate.

The colored squares represent the 4 rates that you can set with the Rate table.

After you select a particular hourly rate, use your mouse to drag regions in the Rate Timetable to associate the respective hourly rate within a week's time.

CREATING AND APPLY RATE TABLE

In this section we'll be creating a new Rate table from scratch and applying it to a station.

Step 1:
Add a new Rate using the ADD button.

Step 2:
Select the newly created Rate and access its properties panel on the right. Change the name of the Rate in New Rate.

Step 3:
Use the Red color to define the rate for the weekend hours. If for example you know the weekend is the busiest time at your business, you can set higher rates for Sat and Sun.

Type the number 20 in the red represents 20.00 dollars an hour.

Step 4:
Using our mouse, select the period of time between 8:00 and 24:00 for Saturday and Sunday.
From midnight until 8 AM, we leave the hourly rate at zero (noted with the grey color). This is because we don’t want to charge our advertisers when the business is closed.

Step 5:
For the rest of the week we set an hourly rate of 10.00 dollars. Type the number 10 in the green hourly rate field. Select the Green color and use your mouse to drag and def

Step 6:
For Friday we set 15.00 dollars per hour. Use your mouse to define blue instead of green for Fridays.
At this point we have created a Rate table. You can create as many Rate tables as you want and choose different hourly rates for different periods.

After the Rate table is created, access the Stations area of the SignageStudio and assign the Rate table to your Advertising Station.

Step 7:

In the Properties panel click on the Advertising tab and select the Rate from the dropdown list.

SET UP A LOCATION

To add a Location, click on the Location tab from the Stations Properties panel of the selected Station.

Enter a ZIP code or town in the Location field and save your configuration.

CREATE A CAMPAIGN FOR AD ENGINE

Next we create a new Campaign and a Timeline.

Next we add the Advertising Component to it to the empty channel. Access the Component panel and drag the Advertising Player Component to the Timeline.

This particular Channel will be the portal for the Advertising Engine; on this Timeline / channel, all the advertising resources will play. The Resources submitted by the Advertiser Advertising component was assigned, to prevent content skewing. Double click on the Advertisement component and access its Properties panel, the only option is the default resource.

This default resource is going to be a video file or an image that's going to run on this particular Screen Division IF no ad packages have been scheduled. Therefore, if you haven't sold any ads, or you haven't scheduled any ad packages, the default resource will play. We assign a PNG image as the default resource for our Advertising component.
To assign a particular resource as the default resource for the Advertising component, select it in the Resources panel, then your mouse drag it into the default resource field to bind it.

**ADVERTISER SECTION OF INCOMING ADS**

Joe, the accountant from our example, has seen the Coffee Shop rates and submitted an Ad package to the Coffee Shop owner. In the next chapter, we’ll explain how to search Advertisers side.

*Note: Once an Ad package has been submitted, it may take a few minutes for it to synchronize among all the mediaCLOUD servers. You can speed up the process by selecting the latest Ad engine data and onto the SignageStudio.*

The Advertising section of the Incoming ads has six main areas:

1. User / Domain Directory
2. Business / Package
3. Ad Status
4. Properties Panel
5. Content Listing
6. Content Preview

**USER / DOMAIN DIRECTORY**

After Joe submitted an Ad package, the Coffee Shop owner will be able to see the user who submitted the Ad package and the domain under which the user is registered.

The User / Domain directory is listed on the left side of the interface.

In our example, the user is **test02** and the domain is **signage . me**. In this area of the user interface you see all users who submitted an Ad package and the domain they belong to. Domains are used to identify private mediaSERVERs that extend onto the public mediaADNET; therefore they will have a different domain name.

**BUSINESS / PACKAGE**

The Business / Package area is located next to the main navigation menu.

It contains four different columns:

- Business
- Package
- Date Start
- Date End

The **Business** column contains fields showing the business under which the Advertiser submitted ads.

The **Package** column contains fields describing the name of the Ad Package as well as the Start and End dates; time set by the Advertiser as to when to start and end playback of the submitted Ad package.

We only have one Business and one Package available, but it could be any number of businesses and packages.

**AD STATUS AREA**

The status area of the Ad packages submitted by advertisers is located next to the Business / Package area. It contains five columns:

- Status
- Station
- Week Days
- Hour_Start
- Hour_End
### STATUS

The **Status** field is used to display the current status of the Ad package submitted. In the above example, the current status of the Ad package is pending.

The **Status** can be either:
- Pending
- Accepted
- Suspended
- Declined

### STATION

The **Station** field displays the name of the Station to play the Ad package that was submitted.

### WEEKDAYS

The **Weekdays** field refers to the days of the week chosen by the Advertiser to play the submitted Ad package.

In our example, Joe the accountant wants his Ad package to play every day of the week. Each day of the week has a check box. The first checkbox represents Sunday, the next one Monday, and so on. If the Advertiser wants his Ad package to playback only on certain days, only those specific days will be checked in the **Weekdays** field.

### HOUR START

The **Hour Start** field is used to display the hour to start playback of the Ad package as set by the Advertiser.

The Advertiser can set the exact start time specified in hours and minutes. In our example, the starting time is just after midnight.

### HOUR END

The **Hour End** field is used to display when to stop the playback of the Ad package as set by the Advertiser. In our example, the end playback time is just before midnight.

In the Properties panel you can apply:
- Ad-in Domain
- Ad-in Domain Business
- Ad-in Package
- Package Station

### AD-IN DOMAIN PROPERTIES PANEL

To access the Properties panel of the Ad-in Domain, you select the domain used by the Advertiser. The domain in our example is signage.me.

After you select the domain used by the Advertiser, you can access its properties panel.
The properties panel contains only one field. It can be used to set whether to accept manually or automatically future businesses registered under the selected Domain.

If you set this option to *automatically*, any package coming from the selected domain will be accepted without having to approve it.

If you set the option to *manually*, you must manually accept all the Ad packages submitted from the selected domain.

**AD-IN DOMAIN BUSINESS PROPERTIES PANEL**

To access the Properties panel of the Ad-in Domain Business, or the Username of the Advertiser, select the username used by the Advertiser. The *username / Business in our example is Test02.*

The properties panel contains only one field which can be used to set whether to manually or automatically accept future new packages registered under the selected business.

Notice if you set this option to *automatically*, any package coming from the selected *Username or Business* will be accepted automatically.

If you set the option to *manually*, future submissions must be accepted manually for ad packages coming from the selected *Username or Business*.

**AD-IN PACKAGE PROPERTIES PANEL**

To access the Properties panel of the Ad-in Package, select the Package submitted by the Advertiser. In our example, Joe the accountant submitted an Ad package to the Coffee Shop owner named  

After you select the Ad package, you access its Properties panel.

In the Properties panel you can set to manually or automatically accept different changes made to the selected package.

**PACKAGE CONTENT MODIFIED**

If you enable this option and choose automatically from the dropdown list the action will automatically be accepted by the system if:

- The Advertiser Modifies the Content of the Ad Package
- Items are Removed
- Items are Added

**STATUS / STATION PROPERTIES PANEL**

If you select the Status of the submitted package you access its properties panel.
In this area you can change the actual Status of the selected package:

- Pending
- Accepted
- Suspended
- Declined

**SUSPEND MODIFIED PACKAGE / STATION**

When enabled, anytime the Advertiser modifies the Ad package, the Status will automatically change to Suspended.

For our example, the Coffee Shop owner will add additional videos to the Ad package and the Status of the Ad package will change to suspended until approved by the Coffee Shop owner.

Once the Status is changed from Pending to Accepted the Ad package will begin running on the Ad network. The Ad package will run within the schedule set for it.

**CONTENT LISTING AREA**

The Content Listing area contains the Items / Resources that are part of the Ad package:

- Content
- Duration
- Repetitions
- Percent

<table>
<thead>
<tr>
<th>Resource</th>
<th>Type</th>
<th>duration</th>
<th>repetition</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture 1</td>
<td>jpg</td>
<td>0:00:31</td>
<td>12</td>
<td>10.3%</td>
</tr>
<tr>
<td>Picture 2</td>
<td>jpg</td>
<td>0:00:05</td>
<td>12</td>
<td>1.6%</td>
</tr>
<tr>
<td>Picture 3</td>
<td>jpg</td>
<td>0:00:05</td>
<td>12</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

**CONTENT**

The Content column is a list with names of the Resources that are part of the Ad package. In our example, Joe the accountant submitted three files named Dream Vacation, Sunset, and Lands End.

**DURATION**

In the Duration column you set the duration of each file within the Ad package that was submitted by the Advertiser. In our example, one file has duration of 31 seconds, the next 5 seconds and last with 5 seconds. The Advertiser has the ability to override content duration.

<table>
<thead>
<tr>
<th>duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00:31</td>
</tr>
<tr>
<td>0:00:05</td>
</tr>
<tr>
<td>0:00:05</td>
</tr>
</tbody>
</table>

**REPETITIONS**

The Repetitions column shows how many times the selected Resource will run within a single hour. In our example, each file is set to have 12 repetitions; thus the system will try to run each file 12 times within an hour.

<table>
<thead>
<tr>
<th>repetition</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>12</td>
</tr>
</tbody>
</table>

The Advertiser can set the repetitions value.

**PERCENT**

The Percent column shows the percentage of time filled within an hour by the selected Resource. If the Resource is longer and/or the number of Repetitions is higher, the playback percentage will also be higher.
The percentage can also be set by the Advertiser.

Note: If multiple Ad packages are submitted by Advertisers to a single Station, some of the ads may get pushed back, eventually all ads will receive playback time. Some content may receive higher impression rate as dictated by the values described above.

CONTENT PREVIEW AREA

Network owner can preview resources in the Content listing before deciding if to approve or deny it into their Ad network.

ANALYTICS

The Analytics of the Incoming Ads is a key feature as it allows you to provide proof of play to advertisers.

Use Search to look for Ad packages assigned to your Screens within a specified Year / month.

After you entered the date, click on the Go button to begin searching the database.

The system will find Ad packages that played during the specified month and provide full analytics including dates, times, ads, charts and more. The data is exportable to CSV analytic tools.

As you can see in our example, the Ad package submitted by Joe, the accountant was found. Once selected, we can find details related to the Ad package.

The Analytics main area:
- 1. Grid
- 2. Charts

The GRID area contains columns with information related to the Advertisements played on Stations.

You can filter what information to display in the Grid area, select or deselect features under:
- 1. Baseline
- 2. Present

Under the Baseline, you can choose to display Analytics on an hourly, daily or both.

Using the Present, you can display analytics for Package, Content and Station currently in use.

Date: specified date the selected Ad package played.

Time: when the Ad packages played.
Package: name of the Packages that Played.

Station: Stations that played the Ad packages.

Content: name of each individual resource that played within the specified Ad package.

Count: number of counts for each Resource played.

Duration: length of each resource played per station as part of an Ad packages.

AVG SIZE (MP): average size in Megapixel as in total megapixels divided by total ads.

Hourly rate: the hourly rate applied to the selected Ad package as set by the Rate table.

Price: calculated price that Advertiser should pay as set by the Rate table.

At the bottom of the main Analytics area, you see a summary of the information.

- Total Counts for the Ad Packages
- Total Duration
- Average Hourly Rate
- Average Size
- Total Price

**EXPORT ANALYTICS**

The Export function is used retrieve analytics data and import into a CSV file. CSV is a Comma Separated Values format that can be opened natively with application such as Microsoft Excel.

If an Advertiser requires proof of Play for a submitted Ad package, you can generate the required report from the proof of play raw CSV data.

Click on the Export button and you will be promoted to SAVE the data file. Name the file end save it to your Computer. After its saved, you can open it with Microsoft Excel.
Another section of the Analytics is Charts; a visual representation of the raw analytics data. The Charts data contains both Baseline and the Present fields. Charts can display:

- Counts
- Duration
- Price

For each of the three sections you can choose to display:

- Column
- Line
- Plot
- Area
- Bar

If the data is not visible on your screen, use the horizontal and vertical scroll bars to navigate through the Charts.
In this chapter we focused on the Coffee shop owner (Ad network operator). He determines the rates, default resource and Ad component channel assignment. It is also his job to accept or reject incoming Ad packages submitted by the Advertisers.

In the next chapter, we will cover the Outgoing ads used by the Advertiser (i.e.: Joe the accountant).

## Outgoing Ads

### INTRO TO OUTGOING ADS

In this chapter we will cover Outgoing ads. Outgoing Ads are a collection of advertisements (videos, images and animations) called Ad packages that are created by the advertisers and pushed to their own screens or public screens available through the mediaADNET.

The process includes:
- Build an Outgoing Ad Package
- Find available Screens (private or through the mediaADNET)
- Set the Start and End Date / Time for the Ad Package
- Configure the Ad Package with Advertisements / Resources

In the Setup incoming Ads chapter we introduced the Advertising engine; a set of tools used by a Digital Signage network operator to accept or deny incoming Ad packages. If accepted, the Ad package will run on the designated screen for the duration set on the Ad package. At the end of each month the Digital Signage network operator can provide a detailed proof of play report for the Advertisers.

In this chapter we will cover the Advertising Engine from the point of view of the Advertiser; building Outgoing Ads.

First, an Ad package needs to be created. An Ad package is made of resources including videos, images and animations.

Next, the Advertiser needs to find available Screens to play the Ads.
The Ad package will be set to play within certain times; when the advertisement package will start running and when it will end. He will also set a start and an end date to define the Ad package's time frame.

Next, the Advertiser will submit the Ad package.

The Station owner will either accept or reject the incoming Ad package. Keep in mind that in a small Digital Signage network it may very well be that a Digital Signage Network operator will use both the Outgoing Ads (create Ad packages) as well as the Incoming Ads (approve Ad packages), and if that is the case it is possible to set an automated approval process.

If the Ad package is accepted by the Station owner, it will begin playback on the selected Screens.

If the Ad package is rejected, the creator will receive a notification through the SignageStudio.

Using our sample scenario from the Incoming Ads chapter, Joe the accountant was looking to advertise at the Coffee shop and it was up to the owner of the Digital Signage network to accept or reject the incoming Ad package. Now, we will cover the Advertising engine from Joe's perspective. We’ll explain how to prepare and submit an Ad package using the Outgoing Ad tools.

To use the Outgoing Package manager you must enable its functionality from the main file menu of the SignageStudio. Click on the File menu > Navigation button and enable the Outgoing Ads feature.

OUTGOING ADS USER INTERFACE

The Outgoing ads include:

- 1. Packages Panel
- 2. Toolbox Panel
- 3. Content Section
- 4. Group Section
- 5. Properties Panel

PACKAGES PANEL

The Packages panel is located by on the left side of the user interface, below the main Navigation menu. You’ll use this area to create Ad packages or delete existing ones.

ADDSING AD PACKAGE

To create a new Advertising package, you click on the Add button.
The newly created Package will have a default name.

DELETING AD PACKAGE

To delete an existing Ad package, select it and click on the DELETE button.

You have the option to choose YES and DELETE the selected Ad package or you can click on the NO button and CANCEL the operation.

AD PACKAGE TOOLBOX

The toolbox panel is located next to the main Navigation menu:

- 1. Resources Directory
- 2. Station Picker

RESOURCES DIRECTORY

In the Resources directory you’ll upload all files included in your Ad packages. We’ve covered this in the chapter on Resources.

After you imported the selected Ad files you can include them in your Ad package.

STATION PICKER

The Station picker allows an advertiser to search for available Stations in the Ad network.

Access the Station Picker by clicking on the tab in the Toolbox panel. An advertiser can search a local / private network, which is often the case if the Digital Signage Network operator is also the one creating the Ad packages on behalf of his Advertising clients. An Advertiser can also search the public network; the mediaADNET.

Note that as an Enterprise user you have the ability to hide the entire mediaADNET from users; thus only exposing them to your own private screens.

Search properties:

- 1. Search Criteria Fields
- 2. List of Found Stations
- 3. Description of Found Stations

SEARCH CRITERIA FIELDS

Search options:

- 1. Name
- 2. Location
The *Name* allows the advertiser to search for available advertising Stations using:
- 1. Business name
- 2. Station name
- 3. Station key

You can search for available advertising stations by entering a business name. A business name corresponds to the name picked by a user when he opened his account on the mediaCLOUD.

Click on the Search button to start searching for the Stations. The system will list all the Stations found.

### SEARCH BY NAME

You can search for available advertising Stations by entering a Station name as defined by the Screen Owner.

Click on the Search button to start searching for the Stations. The system will list all the Stations found.

### SEARCH BY STATION KEY

In the *Incoming Ads* chapter we explained that a station owner can set keywords, or searchable keys. The keys are used to increase the chances others will find the screen. When an Advertiser wants to find available Stations using searchable keys, he will enter relevant words that could match the keywords set by the Station owner.

### LOCATION SEARCH CRITERIA

The second option used as search criteria is Location.

- 1. Location
- 2. Coordinates
- 3. Radius

The Location field can be used by typing a location or US ZIP code. To enter a Location, click on the square located to the right of the *Location* field.

Enter the address location or US ZIP code.

The system will search by location and if it finds a match, it will display it using the result map.
Click OK to accept or Back

**RADIUS**
Enter a radius to search for Stations within a kilometers range of the set location.

![Map Image]

**COORDINATES**
The Coordinates field is used to display the GPS Latitude and Longitude of a selected Location.

![Coordinates Table]

Click on the Search button to begin the search.

**FOUND STATIONS**
If the system found Stations that match your search criteria, it will display the output in the result list.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Business</th>
<th>Station</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>signage.me</td>
<td>test02</td>
<td>Station 1</td>
<td>0 km</td>
</tr>
</tbody>
</table>

In the Domain column, the system will display the name of the Domain under which the Station is registered. In the Business field, the system will display the name of the Business related to the Station owner. In the Station column, the system will display the name of the Station that was found using the search feature.
In the **Station** column, the system will display the name of the station that was found using the search feature. In the **Distance** column, the system will display the distance between the actual location of the Station and the Location you set in the search field.

Select any found Stations to view additional information under the **Description** field.

In the "Incoming Ads" chapter we explained that a Station owner can use the **Description** field to add comments about the Station like pricing and contact information.

---

**CONTENT**

When creating a new Ad package, the **Content** of the Ad package will initially be empty.

---

To add content (as in videos, images and animation resources), drag resources into the **Content** area.

---

- Resource (name of the resources)- Type (the file type)- Duration (length of resource)- Repetition (how many times to play Resource per hour)- Percentage (how much of an hour should the resource occupy)

An Advertiser can change the values for the **Repetition** and **Percentage** fields.

Note that if multiple Stations were added to a single Ad package, any change made to the content properties will affect all stations running the particular Ad package.

---

**GROUPING**

After you added the content of the Ad package, you can associate one or more Stations; essentially grouping them.

The **Group** section of the Outgoing Ads category is where you associate Stations that you want to run the Ad package on.

---

**ADD STATION TO GROUP**

After you found one or more Stations using the search feature, you can use your mouse to drag it/them into the **Group** section.

The **Group** section contains several columns:

- Domain (name of Domain used by the Station owner)
- Business (name of Business/user of the Station owner)
- Station (name of the Station)
- Weekdays (days in which the Ad package will play on)
- Hour Start (time when Ad package begin playing)
- Hour End (time when Ad package will stop playing)
- Status (current package status)

The **Weekdays**, the **Start hour** and the **End hour** parameters will be set by the Advertiser before submitting the ad package.

---

**DELETING STATION**

You can delete any Station added to the Group using the **DELETE** button.

To delete a Station from the Group, select it and click on the **Delete** button.

Choose **YES** to **DELETE** the Ad package Station or you can click on **NO** and **CANCEL** the operation.
Remember, you can add unlimited number of Stations to the Advertising Group; across campaigns and across businesses, making it easy to manage thousands of stations with a click of a button.

**AD PROPERTIES PANEL**

The properties panel area is located on the right side of the user interface. It can be used for various settings, depending on the selection you make within the sections.

**AD OUT PACKAGE PROPERTIES PANEL**

Select the Ad package added to access its properties panel.

To change the name of an Ad package, select it and then type the new name in the "name" field.

Set the date when the selected Ad package will start playing. Click on the calendar icon to choose a certain date.

Here you can set the date when the selected Ad package will end playing. Click on the calendar icon to choose a certain date.

**CONTENT PROPERTIES PANEL**

After you add a resource to the content section of the Outgoing Ads, you can access its properties panel by selecting it.

---

```
<table>
<thead>
<tr>
<th>Resource</th>
<th>Type</th>
<th>duration</th>
<th>repetition</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture 1</td>
<td>.jpg</td>
<td>0:00:05</td>
<td>12</td>
<td>1.6%</td>
</tr>
<tr>
<td>Picture 2</td>
<td>.jpg</td>
<td>0:00:05</td>
<td>12</td>
<td>1.6%</td>
</tr>
<tr>
<td>Picture 3</td>
<td>.jpg</td>
<td>0:00:05</td>
<td>12</td>
<td>1.6%</td>
</tr>
</tbody>
</table>
```

- Duration
- Repetitions

Increase or decrease the duration of a selected resource by entering the desired value in the Duration field. To accomplish this you can also use the up and down arrow keys.

For example, if you have an image with the duration set to 5 seconds, it will play for the specified length of time before moving to the next Ad resource.

**REPETITION**

The repetition field refers to the times the selected resource will attempt and run within a single hour. In the snapshot below, we have a repeat value set to 12 times within an hour. Stations may be overbooked with advertisements and so total playback may vary.

The duration and repetitions values are related as the two will compute the total time requested by the Advertiser to playback the Ads. Increase in duration and repetitions will possible Ad exposure.
The Advertiser is not guaranteed each Ad resource is going to playback for the full computed percentage. If an Advertiser sets an Ad resource for a playback 12 times an hour, on how many other Ad packages were submitted and accepted for a station.

A complex round robin algorithm is used to ensure best case scenario for overbooked Ad stations.

However, an Advertiser is able to push or give higher priority to specific resources. The higher the percentage per hour, the better chance a resource has for maximum impression.

If an Advertiser is the only one advertising on a selected Station, he may not occupy 100% of the hour at the location. Therefore the SignagePlayer will use the Default resource. If on the other hand Ad packages from other Advertisers were accepted and exceeded 100% of the hour; the Default Resource would never play.

GROUP PROPERTIES PANEL

After you drag a Station into the Group section of the Outgoing Ads, you can select it to access its Properties panel.

- Weekdays
- Hour start
- Hour end

Advertiser can set the days of the week when he wants the selected Ad package to play. Select or deselect any day of the week by clicking on the corresponding check box.

You can use the same ad package with multiple Stations and you can set different days.

The hour start field is used to set time to start playing the Ad package. The hour end field is used to set time to stop playing the Ad package.

OUTGOING EXAMPLE - SUBMITTING AD PACKAGE

When Joe the accountant from our previous example builds his Ad package, it is going to be constructed from three different ingredients:

- What?
- Where?
- When?
The "What"

The What would define the different files that Joe would like: videos, images, SWF animations and other types of resources. All resources are imported using the SignageStudio and added to the Ad package.

THE "WHERE"

The Where would be the Screens he would find using the Search feature. This is where Joe would decide to push his Ad packages to.

THE "WHEN"

The When would be the start and end dates when Joe would like to run his Ad package; setting start and end hours for day selected.

These three ingredients, What, Where and When, will construct the Advertising package by the Advertiser.

BUILDING AND SUBMITTING AD PACKAGE

Step 1 - Create the advertising files

Images, videos, SWF animations, any file that is supported by the system can be used within an Ad package. You can create the ads yourself or use a professional design service.

Important!

It is best if all your ads have the same dimensions and the same aspect ratio. If your ad files have different sizes chances are they may get skewed when played on different Screens. This is because the Screen Division used by the Screen owner for the Ad engine has a certain size and ALL ad packages will play within that particular Screen Division.

Step 2 - Import the resources

After you created your Ads, import the files to the Resources directory. These files are your Advertisements.

Step 3 - Create a new Ad package

Access the Outgoing Ads section of the SignageStudio and create a new Ad package using the ADD button.

Step 4 - Define the Start and End dates

After you created a new Ad package, you define the Start and End dates of that Ad package. You do this using the Properties panel of the Ad Out Package.

Here you can also change the name of the Ad package.

Step 5 - Add resources to the Ad package

After you created a new Ad package and defined the Start and End dates, you add the resources you imported earlier. Open the Toolbox / Resources panel in the Outgoing Ads section, choose the files you want to use and drag them into the Content area.

Step 6 - Define settings for the ad content

After you added resources to the Ad package and into the content area, you can set settings for Duration and Repetitions of the Ads. Remember Ad packages are built using increments of one hour.

Step 7 - Search for available Screens

Next step involves using the Search feature to find available advertising Stations. From the Outgoing Ads section of the SignageStudio, open the Station picker.
Using different search criteria such as Location, Business name, Station name or searchable keywords, find desired screens.

Step 8 - Contact the Screen Owner

After you found a Screen, look at the description field and if contact information is available, contact the Screen owner to discuss any necessary details like prices, schedules.

Step 9 - Ad Station to Outgoing Ads

Next, after you found a Station you are interested in and agreed to the terms set by the Station owner, you can add it to the Group area of the Outgoing ads. Just drag the Station area.

You can add multiple Stations if you like but keep in mind the same ad package will be played on all Stations.

Step 10 - Days and hours

After you added a new Station to the Ad package, you can select it and access its Properties panel.

In the Properties panel you can set the days when you want your ads to run. You can also set the start and end hours.

Next, save your configuration by choosing File -> Save from the file menu.

So we covered everything you need to know about Outgoing Ads; from the perspective of an Advertiser. When you completed all steps you may need to wait for the Screen owner to approve your Ad package. Once approved, it will begin playing at the selected locations on the set times.

Account Management

MANAGING MULTIPLE BUSINESSES

When you join the mediaCLOUD Enterprise edition you can manage unlimited number of sub-accounts (also known as businesses). Note that we use the term Business and Account. Multi Business Management allows you to manage multiple accounts from a single location accessed through the EnterpriseStudio.

New accounts can be added in one of several ways:
1. New account created directly from your own private labeled website
2. Customer downloads SignageStudio from a link you provide
3. You create an account on behalf of client

The accounts will appear as sub-accounts in the EnterpriseStudio and will allow for administrative access to the EnterpriseStudio admin.

PRIVATE LABEL BUSINESSES REGISTRATION

When a new visitor enters your web site he will have an option to create a new account on the mediaCLOUD. However, MediaSignage will be transparent to the web visitor as and SignagePlayer. This process is accomplished using a URL embedded ERI (Enterprise Reseller Info) that is part of an HTML snippet. The snippet is used to private label the web site. We will cover chapter.

MANUAL BUSINESSES REGISTRATION

You can register unlimited number of Businesses directly from the EnterpriseStudio. To register a new Business go to the Businesses section of the EnterpriseStudio.
After you select the Businesses tab, you gain access to the module where you can manage multiple Businesses.

![Businesses Module](image)

All Businesses registered under EnterpriseStudio are listed under the main Navigation Menu (on the left side of the user interface). The section contains two columns:

- 1. The Business ID
- 2. The Business name

You can click on the column description to list the content alphabetically.

![Business List](image)

Every Business registered under your account has a unique Business ID. This ID is used by the System to identify the account. Every Business has a name which may be visible to other users in the network, for example if you use the Ad Engine.

**ADDING NEW BUSINESS**

Under the main navigation menu of the EnterpriseStudio there are two test Businesses created.

![Business List](image)

To add a new Business in the EnterpriseStudio, click on the Add button.

You can perform the following actions:

- 1. Add account from sample
- 2. Add abstract account
- 3. Add an existing account
ADDING ACCOUNT FROM SAMPLE

If you choose to add a new account from a sample:

Here you can create a new account directly from an existing sample or template. To create a new account, select a template and click on the Create account button.

Fill in the required fields, agree with the terms and conditions, and click on the Create New Account button. You may need to verify the account's email before you can proceed.

ADD ABSTRACT ACCOUNT

An abstract account is a blank account, with no data in it.

Fill in the required fields including name and password. Keep in mind the name must be a unique value that has not been used previously by anyone in the mediaCLOUD. We chapter.

ADDING EXISTING ACCOUNT

This option will allow you to re-associate an account that's currently not under your Enterprise account. To do this, you will need to know both the Username and the Password.

Click on add an existing account option.

Enter the username and the password of the existing account and click the OK button. The account will be moved under the existing EnterpriseStudio and you'll be able to manage businesses with a business ID and name.
DELETING A BUSINESS

To delete an existing business from your Enterprise account, first select it and then click on the DELETE button.

In this window you enter your Enterprise user credentials and click OK to DELETE the selected account.

REFRESH

When new businesses or users have been added, they don't automatically appear in the list. You can click on the Refresh button to retrieve the latest info.

Many of the tools like adding new businesses, deleting businesses or using the refresh feature can also be accessed through the context menu.

Right click on an empty area of the Businesses panel, or directly on an existing business to access its context menu.

RENAME A BUSINESS

To rename a business, select the business name and click on the Rename button.

Enter the following fields:
- 1. Email
- 2. Password
- 3. New Business Name

USERS AND STATIONS

Every account can also have unlimited number of Stations and Users. Stations are the actual SignagePlayers installed in the field. Users are people that can have full or limited sub-account.
We will cover multi-user management in another chapter.

User Management

INTRO TO USER MANAGEMENT

In this section we cover User Management; how to set-up multiple users under a mediaCLOUD Enterprise account.

In previous chapters we covered managing multiple businesses (also known as multi accounts) under a single Enterprise account. In this chapter we will cover adding multiple businesses. In order to manage users under an Enterprise account, you must first login to the EnterpriseStudio with Enterprise credentials. Continue to the Users section of the Studio. Note that we use the term Account and Businesses interchangeably.

The Users section has two main areas:

- 1. Users toolbar
- 2. Users listing area

With the toolbar you can:

- 1. Add new user
- 2. Change password
- 3. Launch Studio as selected User
- 4. Save
- 5. Delete user

ADDING USER

Any Business that registers under an Enterprise account can have multiple users associated with it.

When a new Account / Business is created, a single default user will also be defined.

Click the Add button to add new users directly from the Users section. You can add an unlimited number of users per Business.

In order to add a new user, first select the Business that the new user will belong to, and then click on the Add button.
Enter a user and password and define the privilege and access keys. We will cover privilege and access keys in another Chapter.

<table>
<thead>
<tr>
<th>Username</th>
<th>User</th>
<th>Privilege</th>
<th>Access keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test123</td>
<td>Test123</td>
<td>privilege</td>
<td>✓ 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Test124</td>
<td>Test124</td>
<td>privilege</td>
<td>✓ 1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

**CHANGE PASSWORD**

Select a user listed under the Users section, click on the Change user password button.

Confirm the password for the selected user. You can enter a new password.

Click OK to change the password for the selected user or choose Cancel to abort the operation. If you click OK, you will be prompted with a message that confirms the success.

**LAUNCH STUDIO AS USER**

Another key feature is the ability to launch the SignageStudio from within the EnterpriseStudio, as if you are the selected user. This will allow administering the SignageStudio as the selected user.

Select a user and click on the Launch Studio button.

The system will launch the SignageStudio in a separate window.

The SignageStudio will have identical configurations including Campaigns, Timelines and Resources as if accessed directly through the SignageStudio standalone app. Enterprise admins who are assigned all privileges and access keys have full administrative control over all areas of the SignageStudio.

You can open multiple SignageStudios, each corresponding to a different user.
SAVING

Unlike the SignageStudio where you have a File > Save option, the EnterpriseStudio has a special Save button:

DELETING USERS

To delete a user, select the user and click on the Delete button.

In this window enter your Enterprise credentials. Click OK to delete the account or Cancel the operation.

USERS LISTS

The user list displays:

- 1. The Business ID
- 2. The User
- 3. Privilege
- 4. Access Keys

The Business ID represents the unique identification number of the Business under which the user registered. Under the User column you will see all the names of all users. A username cannot be renamed.

PRIVILEGES / ACCESS KEYS

Display both the privileges and access keys for all users of the business selected. We cover privileges and access keys in another chapter.

MULTI USER SUPPORT

The Business ID is the same for both users, indication that both users are registered under the same Business. So both users can login individually and work at the same time.
First, we make a change to a Screen Division as if we are user Test 01, and save our work.

The system did not prompt us for any conflict as no other users touched this portion of the application while we were working on it.

Next we switch to the SignageStudio to user Test 02 and make a change to the same Screen Division.

Again we save, but now the system prompts us for conflict as the screen division was modified and saved while Test 02 user's SignageStudio was open. Now we need to resolve the conflict.

We can either take their changes or our changes. In order to accept changes made by other users, we click on All theirs button. The system will ignore our changes and overwrite with the changes made by the other user.

If we want to accept our changes, we click the All yours button.

SYNCHRONIZE

Next, we switch to the first user Test 01, make another change to the Presentation and click File > Save.

Next, we switch back to user Test 02 and choose File > Synchronize from the file menu.

This will sync the SignageStudio of Test 02 to the latest changes saved to the server. This option is useful if you know others are working on your account and you wish to syn
So far we've seen that we can resolve conflicts; accept our changes or their changes. However, the system can also provide more details as to what changed so we can make an intelligent choice regarding which changes to accept.

In the Resolve conflicts window, click the resolve button.

This will display all the fields modified.

This option can assist you in making the best decision as to which changes to override with and save to the server. Information is color coded so you will have a clear understanding of the changes:

- Blue: no conflict exists
- White: items were not modified
- Red: conflict exists

Based on the color coded info, you can make a decision on which changes to accept.

Multiuser support is flexible and allows for collaboration between colleagues, all working at the same time on the same account.

STATIONS

Under the Businesses tab, next to Users, you can select the Stations module.

Here you can view all Stations that belong to the selected Business:

- 1. Stations
- 2. More Statistics

Select a Business to view all the Stations associated with it.

Select a Station for additional info including Connections, Operating System, Business ID and more. Use the criteria to sort the list:

- Stations that are connected
- Business name
- Operating system
- AIR version
- App version

In the Business field, you filter by name.

OS

In the OS field, you can filter by Operating System.
In the **AIR ver** field you can type the number of the Adobe Integrated Runtime version to filter by it.

you can also check other statistics.

The statistics area display additional indicators as to the Stations and Business. Online businesses are the total number of Businesses connected to the Enterprise account.

Total rows are the total items listed in the grid.

Total stations are the total remote Stations currently online and connected to the Enterprise account.

In the statistics area, you can also see the number of Stations that were online in the last 10 minutes, last hour, or the last 24 hours.

The Unique load and Unique saves references the total number of SignageStudio loaded and presentations saved for each unique user and IP address. Counters with high v

The counters help provide analytics as to how many users are actively using a private labeled Enterprise account.

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### Privileges

#### INTRO TO PRIVILEGES

In this Chapter we cover Privileges. Privileges are used to show or hide specific sections of the SignageStudio to selected users.

To access the **Privileges** section of the EnterpriseStudio, select the **Settings** tab, from the main navigation menu.

Under the **Settings** tab:

- 1. Privileges
- 2. White-label

We cover **White-Label** in another Chapter.

Under **Privileges** you will see:

- 1. Privileges panel
- 2. Administration area
THE PRIVILEGES PANEL

The privileges panel is located on the left side of the user interface, under the main Navigation menu of the EnterpriseStudio.

By default a single privilege set exists, named Privileges. To rename it, double click on its name and change it to Admin rights.

To add a new Privilege group, click on the Add button and give it a name.

The new privilege set is now listed under the Name column.

It will also be available under the Users module of the EnterpriseStudio. Under the Users module, you can select a user and apply a set of Privileges to it.

In our example, we have two sets of privileges: Admin rights and User rights.

SETTING DEFAULT PRIVILEGE

Any new user that registers under an Enterprise account will receive the default privilege group. In our example, the Admin rights privilege group is the default. The default privilege group is marked with a Key icon next to its name.

To allow new registered users limited access to the SignageStudio, create a limited privileged group and set it to be the default one.

DELETE PRIVILEGE GROUP

Select a privileged group and click on the Delete button.

Note that you cannot delete a default privilege group. If you select a default privilege group and click on the delete button, you will be prompted with a warning message.

In order to delete a Privilege group that is currently set as the default one, you have to remove its default assignment by assigning it to a different privilege group.
PRIVILEGES ADMINISTRATION

In the privileges administration module you create privilege groups and set what the users will have access to, for the underline group.

Set the access limit by removing specific categories. For example, if you don’t want users to be able to access the Catalog feature, simply deselect the Catalog option.

After selecting/deselecting certain features, click on the Submit button to save your work.

After saving, click on the launch SignageStudio button to test your work for the user that was assigned the newly created privilege group.
As you can see from the image above, the user assigned the Privilege group cannot see the Catalog module.

**ADVANCED OPTIONS**

With privileges you can also show or hide subsections of the SignageStudio. Each section of the SignageStudio has a button named Advanced associated with it.

For this example we will enable the Catalog module, but use the advanced section to restrict specific properties.

For every property you can enable or disable its permissions:

- 1. Delete
- 2. Add new
- 3. Update

Disable the Delete option to prevent user access from deleting categories; thus deactivating the selected option.

Disable the Add new option to prevent user access to the Add category.

Disable the Update option to prevent user access from updating existing configuration (saving).

Next we will cover which sections and subsections can be restricted with privileges.

**SCREENS**

**RESOURCES**

**EDITORS**
In addition to choosing individual categories and restricting access to certain sections or subsections of the SignageStudio, you can also use the Global settings access control. With features like the ability to delete, add new items, or update changes to ALL modules available in the SignageStudio.

For example, if you disable the Delete option from the Global settings field, any user assigned to that Privilege group will not be able to delete anything from any section or subsection of the SignageStudio.

With the mediaCLOUD Enterprise edition you can set Privileges that allow you to hide or show certain areas of the SignageStudio, so you have detailed control on what each user can and cannot do within your Digital Signage network. Setup unlimited number of Privilege groups and use Default keys to easily manage new users.
Branding

BRANDING

In this chapter we cover Branding (also known as White Labeling or Private Label). This feature allows you to take the entire mediaCLOUD Enterprise platform and host it on your website simply by copying and pasting a snippet of HTML code that's embedded with your own ERI code.

The hosted solution will include your customized SignageStudio Logos, customized SignagePlayer splash screen, customized textual info, customized link backs and more; making MediaSignage transparent to your customers.

Branding is only available to subscribers of the mediaCLOUD Enterprise edition. So with White Labeling existing customers can login to their accounts through your web portal as well.

The MediaSignage mediaCLOUD platform becomes your hosted software that is still streamed down from our mediaCLOUD servers, but with no reference to MediaSignage, it becomes your business.

At MediaSignage we go to great lengths to make sure we keep it all private. We use 3rd party domain names, hidden reverse name looks ups and encrypted ERIs to deliver transparency to your product.

WHITE LABEL SETUP

The first thing you do to create the White Label solution is to open a mediaCLOUD Enterprise account. Once you are logged in to the Enterprise Studio, click on the Settings tab.

Under the Settings tab:

- 1. Privileges
- 2. White-label

We covered Privileges in a previous chapter. Select the White-label to proceed.

Select the White-label checkbox to enable the feature.

Next you can change and set parameters including:

- 1. Logo
- 2. Splash Screen
- 3. Back Links
- 4. Menu
- 5. Theme

Access each category by clicking on the corresponding tab.

So with White Labeling you can use your own Logo on both the login screen and inside the SignageStudio. Click on the Logo tab to access its setting.
You can set:
- Name
- Logo
- Logo tooltip
- Logo link

The Name field is used to display the name of your company in different areas of the application.

Users logged in under your Enterprise account will see your business name instead of MediaSignage Inc.

In order to use your own Logo, click on the browse button located next to the MediaSignage logo, search for a logo in your computer, and upload it.

The Logo has to be 175 x 100 pixels in size and it can be any format accepted by our platform including jpg, png and swf. The Logo will be displayed in the Help > About window.

The logo tooltip field will be visible when a user hovers the mouse over the Logo.

You can use the logolink field to enter a linkable web address for the Logo.

Whenever you make a change, remember to click on the Save button in order to update to remote server with your changes.

**SPLASH SCREEN**

The Splash Screen allows you to display a custom swf file on your remote SignagePlayers whenever they are updated / restarted.

Click on the browse button to search for a swf file on your PC and save it onto the server.

As of current release, the Splash screen must be an Adobe Flash swf file.

In order to use a custom Splash Screen you need create one outside the SignageStudio. You can use different applications like Adobe Flash, Adobe Flex, Adobe illustrator as well.

We recommend you use a vector based swf so it scales proportionally to any screen size.

**LINKS**

With White Label you can also add your own SignageStudio links.

These include:
- Application links
- Twitter link
- Live Chat link

Select the Links tab.
The application links include Home page, Download page and the Contact page.

The **Home** page is accessed when a user logs out of the SignageStudio and presented with a link to your home page.

The **Download** page is accessed from the SignageStudio whenever a user clicks on the Player > Install SignagePlayer Desktop version link. So be sure you redirect it to your own Install / Download page on your own website.

The **Contact us** page redirects users to your contact web page.

In the **Links** area of the White Label section you can also add your own Twitter link and choose to enable or disable the Twitter button.

If you choose to enable the Twitter button, users logging onto the SignageStudio will be able to see the Twitter link and follow you.

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**LIVE CHAT**

Add custom Live Chat link to provide live support to your users.

If you choose to enable the Live Chat button, users logged in under your Enterprise account, will be able to click on the Live Chat link and redirect to your support page.

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**BANNER**

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**MENU**

Modify the Help Menu links.

Set both the name of the link and the link URL address.
THEME

Access the Theme by selecting the Theme tab. Can choose between two themes: White and Black.

After choosing a theme, you will be prompted to restart the EnterpriseStudio for changes to take effect.

The color themes will apply to both the EnterpriseStudio and end user SignageStudio.

Next we explain how to setup a Web portal so users can both log-in to existing accounts, and open new accounts directly from your website.

WEB PORTAL

Select the file menu > Tools to access the White-Label HTML page.

Click the white-label page button.
Copy the HTML code and paste it into Notepad.

Save the document to the local PC. This HTML snippet will be part of your own website, so you will need to upload the HTML file to your personal hosted web server. You do not need any special web server capabilities such as scripting or secure SSL pages. Simply upload the HTML file as it is to your hosted web server.

Open the HTML file using any web browser.

The page provides all the necessary links for your users.

This buttons are:
- Installing the SignageStudio Desktop version
- Installing the SignagePlayer Desktop version
- Launching the SignageStudio Web version
- Login to the SignageStudio Web version

All the graphics for the buttons and links can be modified. Look at the HTML source code to make changes.

HTML SNIPPET

The HTML snippet includes the ERI (Enterprise Reseller Identification) which identifies your account.

When you create a mediaCLOUD Enterprise account an ERI will be generated for you. When customers create an account on your site through the HTML snippet embedded with your ERI, they will be automatically associated as sub-accounts of your Enterprise account.

Look at source code of the HTML snippet to both modify image paths and to view your ERI.

With MediaSignage you can easily brand the entire mediaCLOUD Enterprise solution as your own.

Set your own application links, menu links, custom logos, and color themes; make MediaSignage transparent to your customers.

It's your solution, we just provide the tools.
Access Control Lists

INTRO TO ACL

In this Chapter we cover Access Control Lists (ACL). Access Control Lists use Keys to extend the functionality of Privileges. ACL allow finer control on access to specific items.

PRIVILEGES VS ACL

With Privileges, you have the ability to either show or hide complete sections of the SignageStudio. For example, show or hide the entire Screens module to to specific users. Access Keys are used to manage specific items that you create such as Scenes or Campaigns, thus allowing finer control on which items to show / hide to specific users.

![ACL Key Management](image)

So with ACL you can set it up so a user is able to work only on a specific Scene and nothing else. To do this, you assign a specific Scene a key value and assign the user a matching key value.

DEFINING ACCESS KEYS

In this section we will demonstrate how to bind keys to resources.

Create a new Privilege Group and name it Scene Users.

![Privilege Group Management](image)

Any user assigned to the Scene Users privilege group will be able to work on specific Scenes.

Remove all sections of the SignageStudio privileges except for Editors.

![Privilege Management](image)
Next, access the Users module of the EnterpriseStudio and add user Test01 as a member of the Scene Users group.

Set Test01 with access key #2 by selecting the checkbox next to number 2, under the access keys list. Next click Save to submit your changes to the server.

Next assign the same access key to a selected resource in the SignageStudio.

Select user Test02 and give it all access keys.

Next launch the SignageStudio as Test02.

Open the Scene editor and create several Scenes.

To give Test01 access only to a specific scene (and not to any other scene), select the Config tab under the Scene properties.

Since we launched the SignageStudio as user Test02, we are able to set any key value that Test02 possesses (in our example Test02 possesses all keys). Change the selected Scene key from the default 0 to 2 and save your work.

Go back to the EnterpriseStudio and launch a new instance of the SignageStudio as user Test01 (remember Test01 own only access key 2).

Test01 can work on this scene, he can make any changes he wants to it, but cannot view any other scenes, as he was only assigned access key value 2. User Test01 cannot limited privileges set.

To continue with our example, close all instances of the SignageStudio and go back to the EnterpriseStudio.

Now, assign user Test01 both access keys 1 and 2.

Save the configuration and re-launch the SignageStudio as user Test01. The user can still access only one scene as no other scene was assigned access key 1. However, click on the scene, and you will see that now user Test01 can set access keys 1 or 2.

In the previous example, Test01 only had access to key 2, but now he can also select from the drop down menu key 1. Therefore user Test01 can modify the permission to the scene.

Switch back to the users module of the EnterpriseStudio and assign a new user Test03, an access key 4. Change the privilege group to Campaigns and allow the user to view
Next, we will launch the SignageStudio as user Test02, (that possesses all keys). Go to Campaigns and select Campaign 1.

In the Properties panel of the selected Campaign, set the access key to 4.

This means that only users with access key of 4 will be able to work on this specific Campaign. We will re-launch the SignageStudio as the user Test03 and select Campaigns.

Test03 can view only Campaign 1 as it was assigned access key 1. All other Campaigns are hidden to the user.

Access keys extend the power and flexibility of Privileges, allowing you to create specific show / hide rules for items created in the SignageStudio.

XML Component

INTRO TO THE XML COMPONENT

The XML component is an extremely versatile component that allows you to retrieve data over the web as long as the respective data is structured as a valid XML format. What own structure which can be any XML data source and be able to bind to specific attributes and elements to retrieve the information snippet that you need. If you want for example food prices and images from a local POS (Point of Sale) system; the XML component can easily be configured to do just that. The XML component can also connect to a database.

The XML component uses standard E4X Tags so it's easy to get specific information using elements and properties / attributes. The XML component can also bind to a series of several items one after the other.

CREATING A NEW XML COMPONENT

In this section will demonstrate how to configure the XML component using the XML data structure below.
The Local Point of Sale can feed the information to XML component over an HTTP link and this information includes the burger name, the price, and also a resource description set as an image.

We can use the above data structure to dynamically feed into our food menu board.

To demo the setup we configured a simple four screen configuration along with some images that were added to the timeline. The images are going to transition over a background image.
What we need to add to the presentation are the prices and the descriptions of products, and so let's set it up.

First, we will navigate to the Scenes area of the Signage Studio.

Click on the + sign to add a new Scene.
Click on the + sign to add a new Scene. Rename the Scene, we will call it "Item scene." Drag the XML Item component from the Components library and drop it into the Scene. We will add three XML items, one for the image of the product.

The Scene we are creating will represent a single product like a hamburger or cheeseburger for the food menu. The data will be present a single record in the food menu board.

Next we can change the color of the items and the font. Also we can position / align the three items in Scene.

Next, we need to map each XML Item to a proper attribute. In order to understand what attributes are, let's take a look at our xml structure. Looking at the XML structure, we can...
The attributes are the size, the name, the oz., the price and the resource. The way we bind to the attributes is through the @ sign. Next, let's go ahead and set up the attributes for the XML Items inside the Scene that we've created.

First, select one of the three XML Items and set the attribute @name for the Field name, in the properties panel. Also select the second object and set its attribute to @price and for the last object set the attribute to @resource.

For the last item, also set the Field type to Resource so we can display an image.

Remember that you don't necessarily have to use the XML structure from our example, you can invent your own XML structure as long as it is a valid XML data structure.

To recap, so far we've created a scene that will hold a single Item, in other words a single product. Next, we need to create a scene that is going to hold all products; all the different items from our XML structure.

Click on the + sign and add a new Scene.

We will rename the Scene Food Menu Scene. You can also choose to modify the size and other attributes of the Scene.
Next, we will look under Components for the XML Player Component and drag three XML players into the Scene. Each player will be present one particular product, so we have more products, you can simply add additional XML Player Components.

Now that we have our three XML players that are going to display three products in our wrapper Scene, the Scene that is going to hold them, we need to associate each one with a particular product. We will point each XML player to the data source; the POS system that is serving the XML file. To do this, type the URL address that contains the XML file into the **Url** field in the XML Player's Properties panel.

Next, we are going to set up each XML Player to show a unique product. In order to do this, for the first product we will build an E4X statement.

```
<Burger size="8" name="ChickenBurger" or="2.5" price="9.99"
resource="http://dynawebs.net/assets/images/ChickenBurger.png">
  <ID>10560440</ID>
</Burger>
```

So in order to pull this information from the XML file, we need to create an E4X statement which is going to be the following:

```
Burger. (@name="ChickenBurger")
```

Of course you can choose other attributes of the products.

Type the E4X statement into the Items path field of the Properties panel of the selected XML player.

Next, in order to display the Item we need to associate the proper Scene with each XML Player. Drag the Item scene that we've created earlier, from the Scenes, under the Toolbox (again, don't drag the original Scene but rather the one from under the Toolbox), and drop it into the Scene field of the Properties panel of the selected XML player.

Repeat this process for all three Products, so you can have all the related data pulled into the appropriate XML Players.
The next step is to add the Scene to the timeline. Navigate to the Timelines area of the Signage Studio then drag the Food Menu Scene we've created earlier and drop it into the Timeline.

You will see a dialog box as soon as you drop the Scene into the Timeline. Choose Add a scene shortcut and click OK.

Next, click on the Play button and view the presentation containing the products linked to the external XML file.
The XML component really shines when you need to add or remove things. For example, right now we have three products in the Scene.

Let's say you want to add a fourth product to the Food Menu board. This will be easy to do because we have the layout in place, so all we need to do is go to the Components, Scene, associate the Item Scene, set the URL and the Item path for the respective product. This process will add another product just below the last one added. Our scene was set up with a Vertical layout and so no special alignment is necessary when adding additional XML players to the wrapper scene.

Now, let's go ahead and add the ounce (OZ) next to the price of each product. In order to do this, go back to the Item Scene, drag a new XML Item and drop it into the Scene. Make sure you add into the Field name the @OZ E4X statement. If you go back to the main Food Menu Scene, you will notice the new OZ data is now added.

Now you can really appreciate the flexibility of the XML Component as it allows you to grab data from external sources. Also, working with the XML Player will save you time as any changes made to the Sub Scene (in our case Item Scene) will simply propagate throughout all the products added to the Main scene (in our case Food Menu scene).

QR CODE COMPONENT
USING THE QR CODE COMPONENT

In this Chapter, we will be discussing the QR component, also known as the Quick Respond code. With the QR code, you can easily link the Digital Signage screen with your mobile device. You can add a special QR code symbol to any area of the presentation and type in whatever information you want, for example, what you type in could be a phone number, an SMS number, or a URL. When a person pulls up their mobile device, he or she simply scans the URL, scans the SMS, and scans the phone number using the special QR code, and then it will automatically open a browser.

Using the QR code component, presents an easy way to link your Digital Signage presentation with a handheld device simply by providing this special bar code.

The QR codes are vector based so you can make them very small, but you can also make them very large. This comes in handy, for instance, if your screen is placed somewhere across the room (it's going to be a bit farther), especially if the camera is a bit older. Therefore, you can scale the QR code to any size you like. And you can embed it just like any other component in Scenes, in any Timeline or Screen Division.

For this example, we've made a presentation and added into the Timeline a new Chanel within a small screen division. In this channel we are going to place our QR code.

To do this, we have to drag the QR code component into the Timeline.
If we double click on the QR code we can access the properties panel of the QR code. Then we can just type in our information under the QR tab. We will type a web address number or an email address.

It's all very easy and it automatically creates the QR code for you. If we review the presentation we can see the QR code in it.

The QR code is an incredibly efficient way to link your Digital Signage screen to your mobile customers.

FACEBOOK COMPONENT

INTRO TO THE FACEBOOK COMPONENT

In this Chapter, we are going to discuss the Facebook component. Using the Facebook component, you can configure a Facebook app and connect to your Facebook album customized experience using the Scenes.

CONNECTING TO A FACEBOOK ALBUM

To start the process, the first thing you will need to do is navigate to the following web address: developers.facebook.com. You will need to do this after you've logged into your
Next, click on APPS.

Now click on the Create new app button

In the App name field you can enter a new name for the app and click continue.

After you click on the Continue button, you will be able to see the App ID.

The App ID will be used to connect the SignageStudio and the SignagePlayer with your Facebook account. So go ahead and make a note of your app ID.

Next we will switch to the SignageStudio and let's configure our Facebook account.

Access the Scene editor and create a new Scene. Name the Scene FB Scene.
From the Components panel, drag the Facebook item component into the Scene. If you look at the Properties of the Facebook item you will see that it has Friend information, Events.

We will start by setting up an album. First, select the Facebook Item from the Scene and choose from its Properties the Photo Big option. Then, click on the Pos/Size tab and set the Facebook item to occupy the entire Scene. This way, we will have an image that will be as large as the size of our Scene.

Next, switch back to the Timeline area of the Signage Studio and from the Components choose the Facebook Player.
Drag and drop the Facebook Player into the Timeline and double click it to load its Properties.

In the Properties panel of the Facebook Player, click on the Facebook tab. Here you will need to enter the App ID, the Email and the Password.

The last thing you will need to do is associate the Facebook Scene with the Facebook Player. In order to do this, we will drag the FB Scene we've just created and drop it into Player component.

Next, you will be able to see in the Album field all your Facebook albums. Once you select an album, you will notice in the preview window how the images will dynamically load.

We can also set other properties like the interval to set how often we images will cycle.

To further customize the component go back to the Scene Editor, add a new Label and a thumbnail for the images inside the Album. Next, drag the Label Component and a n Scene. Set the Facebook item property as Photo small.
Scenes are fully customizable using the Facebook component. Just to recap, make sure you create your App ID, paste it into the AppID field along with your Login Email and Password for your Facebook account.

**CONNECTING TO FACEBOOK FRIENDS**

Next, we will use the Facebook component to connect to our Friends list. Drag and drop three Facebook Items into a Scene. Then, we choose for each item different fields from the properties panel. The first item will be Friend’s name, the second one Friend’s sex and the third Friend’s picture.

After you customized your Scene, go back to the Timelines area and open up the Properties panel for the Facebook Player. This time, select as DataType Friends instead of Albums and Events.

**CONNECTING TO FACEBOOK EVENTS**

Next let’s setup Facebook Events. Login into your Facebook account and click on Events.

Here you can add as many Events as you like. We’ve already set-up to example events.

Go back to the SignageStudio and into the Scenes area, drag and drop into a Scene three Facebook Items. Set the first Facebook property for Event’s name.
For the second Facebook item set up the Event's location.

and the third one the Event's start date.

Switch back to the Timelines area and load the Properties for the Facebook Player components that was already added to the Timeline. The Scene is already associated with Properties panel the Events Data type.

With the Facebook Component it's easy to integrate Facebook information right onto your Digital Signage Presentation.

**FORM COMPONENT**
INTRO TO THE FORM COMPONENT

In this Chapter, we are going to discuss the FORM component. The Form Component allows you to easily create a Kiosk submission form so your customers can enter their information. When a client clicks on the Submit button, this information will be passed to the webserver where it can store the data and return a string to the form so you can display a custom message.

USING THE FORM COMPONENT

Let's proceed and create our new form. First, we need to navigate to the Scene editor and create a new Scene. We will rename this Scene to Collection Scene. This scene will hold all the events for the form. Then, we will add a second Scene and name it Form Scene. Finally, we will add one more scene and call it Success Scene. The Success Scene is going to be what the customer sees once they submit the information to the server.

Now go to Components, drag the Collection component and drop it into the Scene.

Once you dropped the Collection component, increase its size so that it will cover almost the entire Scene and then set the mode to Kiosk in the properties panel.

Next, we will need to associate the Scenes that we are going to use within this Collection. In order to do that, switch to the items in the Properties panel of the Collection component.

Next, switch over to the Scenes and make sure you use the Scenes under the Toolbox and not the main source Scenes.
Now drag the Form Scene and the Success Scene into the Items area.

So we are associating both scenes as members of the Collection and the Form Scene is the default Scene (the first one associated).

Next, we will switch back to the Form Scene in the main Scene area and edit it. Drag and drop the Form component into the Scene.

Under the Properties panel of the Form component, you will see the Items section. Open it and add four items by clicking on the + sign.

Now we will name each label.

Then we will specify the field names that are going to be passed back to our webserver.

This filter will be passed to our webserver so we can process the data.

Next, add the Submit button. In order to do that, go to Resources and then drag and drop a .png image into the Scene, this image will act as the Submit button.
After you've added the Submit button and positioned it inside the Scene, under it's properties panel set the name and check the interactive option so it will be a clickable object. We will set the name to

You can of course change the color of the fonts, the size, and customize the scene anyway you like.

Under the properties panel of the Form, under the Items tab, check the require checkbox for the User, the Company and the Phone. These fields will be required fields. Set the will be checked for a valid email format. The other will be text.

You can tell that the required fields are marked with an * so that customers can identify the field must be entered.
Next we will set up the Form with a target URL to submit the information to. First we will select the Form with the mouse and under its Properties we will click on the Events tab.

Here we will need to associate the Submit button. First, use the mouse hold down and drag the target sign over the Submit button.

Next we will select Post .

And we will also paste in the URL where we will be sending the information to. Finally, we need to look for a success string. A success string is any particular string that we are successfully submitted. We will call it SUCCESS but this can be any string that you want as long as this string is available within the HTML page that will be generated once the URL is hit.

Keep in mind that this URL can be both the webserver as well as a standard HTML page as long as you supply all the required fields for the HTML. And we do support hidden pre-existing HTML form.

The last thing that we are going to do in the Form Scene is to associate the actual Form with a unique identifier so we can receive events from it.

Select the Form and click on the Definitions tab in the Properties panel. We will enter Submit Form into the name field. Keep in mind that this name will be the identifier to receive events when this form is inside the Collection. So let's go ahead and copy it.

Next, we will complete our Success Scene, which is what the customer will see once he submits information.

We will add a Label component and customize it so it is a simple Success message.
Now that we've completed our Success Scene and the Form Scene let's switch back to the Collection Scene.

We can now see the Form inside the Collection since this is the Default Scene, or page1.

Now create a new event to capture the Submit click. Go to Events, add a new event and paste in the Form Name that we've copied earlier and tell it to go to a specific page from the Toolbox.

Again hold down the target and select the Success page.

This completes the association and completes the Form. Let's go ahead and test it.

Switch to the Timelines and from the Toolbox drag the Collection Scene and drop it into the Timeline.
Double click to load up the properties, type some text into the fields. If we leave the Phone field empty we will get an error message, since it is a required field.

Before we submit the information to the server, let's take a look at the back end webpage that gets generated from the URL we pasted in. This is nothing more than a standard HTML page that gets generated but we do have a Success string embedded in it.

The success string can be any string that we've embedded into the webpage and so once our form receives the Success string the form will know that everything was successful and proceed to the next Success Scene. If the information that was submitted through the Post doesn't meet the Service criteria you simply don't return a Success string and so the User will not get directed to the Success Scene.

Let's type the Phone number now and click on the Submit button.
And we are redirected to the Success Scene.

The Form component and its interactivity function is useful in getting information from customers thus creating a customized info collection portal.

TWITTER COMPONENT

INTRO TO THE TWITTER COMPONENT

In this Chapter we will use the XML Component to bring in a live Twitter feed. We will also be showing you how to mix in animation and include images from Twitter. We will control touch control to the Twitter feed.

TWITTER COMPONENT - SLIDESHOW MODE

Begin by navigating to the Scene Editor in the SignageStudio. Add a new Scene and call it the Twitter Scene.

In our first example we will use the XML component Slideshow mode and use it to show one tweet after the next. We will connect to the CNN breaking news twitter account and

If you want to connect to a different Twitter account, simply swap the characters in the URL, for the correct XML data to be retrieved.

To control the number of tweets to be retrieved, change the count parameter at the end of the URL.

Let’s review what information we want to pull out of this tweet. The two pieces of information that we are interested in are the text, which is the actual tweet and the image of the account that has multiple people tweeting, you will see multiple images as part of the XML source. Now let's go ahead and configure the XML item.
In the Scene editor, under Components we will drag two XML items into the newly created Scene. The first Item will be set as our image, select it and go to it’s Property panel i

In our example we do not need to set the URL Base for the resources as all of the URLs for the images retrieved from the CNN feed are constructed using an absolute paths. on a relative path, you can use the URL Base to construct absolute paths from the relative paths.

For the second XML item we choose text in the Properties panel.

In the Timeline section, drag the XML Player component to the Timeline.

Double click the player in the Timeline to access its properties panel, drag the Twitter Scene we've created earlier into the Scene field.

Next we will paste the address for the Twitter that we've used earlier. We also need to provide the element's path. The element's path is the Status, the one that repeats itself

We can change the interval of the Slideshow. In our example we will move from one tweet to the next every 3 seconds.

Next we add animation. First select the Text from the Twitter Scene and go to its properties panel. Click Common and set the Alpha to dynamic. When the text first loads, we s

For the second point in the animation cycle, we set duration of 500 and the opacity to full. Next we set up easing, so the effect will have a more elastic tween. You can set oth others.

As you can see, it's very easy to add animation to the XML data.

**TWITTER COMPONENT - INTERACTIVE MODE**

Another great feature of the XML component is the ability to change data source on the Fly. So for example you can be looking at one Twitter account and on the Fly change

Add a new Scene and name it XML Wrapper. Next, drop the XML player right into the Scene instead of the Timeline as in the previous examples. Select the XML player and in created earlier.

Next, put the URL for CNN Twitter account and change the items path to Status, just like before.

Next, we switch to the Resources in the Toolbox and drag a few arrow images. We use these images to cycle to items in the XML source.

Switch to Components and drag over a couple of Labels.

The purpose of this configuration is that we will cycle trough the items back and forth and load both CNN and FOX news on the FLY. Make each button and Label an interactive properties panel, and make them interactive.

Next, we select the XML player from the Scene and access it's properties panel, open the Events tab and add four Events.

Use the target icon to bind to each of the buttons and labels.

For the Left and Right buttons we will set the Command to Previous and Next page and for the two Labels we will set it to Load the specified URL. Paste in the URL addresses

Set the XML Player to Interactive mode instead of Slideshow mode. Select the Player in the Scene and from its Properties panel, under the General tab, uncheck the box that
You can preview the Presentation in the Timeline and use the buttons to navigate back and forth through the different XML items.

We can also click on the Load FOX label to change the XML data source.

The XML component a versatile tool, that allows the retrieval of any XML remote data. You can preview the information in a slideshow mode or set an interactive mode when using the collection component.

COLLECTION COMPONENT

USING THE COLLECTION COMPONENT

In this Chapter, we will be talking about the Collection component. The collection component can be setup in two modes: Kiosk mode and Slideshow mode. In the Slideshow mode, items can be resources such as video files, images or swf animations, or they can also be scenes you’ve prebuilt. The Collection is going to cycle from one item to the next. You can set the duration for each item individually.

If you are not necessarily a fan of a visual timeline, you can use the collection simply by dragging and dropping items to it and the Collection will cycle through these items.

The second mode will be the Kiosk mode. With the Kiosk mode, you can actually set the Collection to accept touch, or mouse clicks, and with it you can direct each click to a particular scene or resource. Therefore, you can add interactivity to your presentation using the Collection.

The Collection will allow you to build a presentation and play it on mobile devices, or on tablets such as the iPad or an Android device. We will be adding a lot of functionality to the collection component in the upcoming releases.

USING THE SLIDESHOW MODE

Navigate to the Timeline in the Campaign’s area, and under the Components, you will see the Collection component. Drag and drop the component into the Timeline, and double-click on it to see its properties. The default duration is actually 10 seconds. We will change the default duration to 3 seconds.

Next, we will click on the Items tab, and drop a few Resources in the area from the Resources area.
Once we do this, we can see how the Collection cycles through the images. We can also set a specific duration for a particular image.

In our example, we've set the duration of 10 seconds for the wrap product, and this means the image of this product will remain visible for 10 seconds, and then the slide will continue, showing the other images.

The Collection, using the slideshow, is just a simple way to cycle through items. The great thing is: we can also mix some scenes between the items listed. Let's go ahead and...
You will notice the slideshow plays the Scene just like the rest of the items listed.

**USING THE KIOSK MODE**

Next, we will discuss more about advanced functionality of the Collection; which is the Kiosk mode. With the Kiosk mode you can actually use your finger or mouse clicks to interact with the Collection, and have it switched to other scenes.

First, navigate to the Scenes editor.

For a starter, we will create four Scenes. Our Collection will be location finder Kiosk.

In the Map Scene, we will be adding a Map image.

In the Library scene, we will add some more information using a Label and the Rich text component—just some basic information.
In the About Scene, we will also be adding some informational text.

Next, switch back to the Collection scene and add the Collection component to it.

With the Collection component selected, click on the Collection tab of its properties panel and select the Kiosk mode.

Under the Items tab, we will add the three scenes we've created.
As soon as we save the presentation, we can see the Collection showing the first Scene in the Items list.

Next, we will add some text above the map using the Label tool.

What we would like to setup now is: when a person touches the About the Library text above the map, it will actually show us the About Scene we've created. In order to do this, Definitions tab while selecting.
Next, we will switch back to the Collection, and access the Collection tab. We will rename each Scene / Page.

Now, what we need to do is associate a touch event with the About label. So we will switch to Events tab and click on the + sign to add a new event. Notice that we have a target sign.

Drag the target icon over the About label.
You will see that as soon as you let go of your mouse, this event will be associated with the label.

Next, we will define a command or action, this way we know what will happen once the user clicks on it. So select from the dropdown Selected page.

Now, just like before, we are going to hold the mouse and drag the target icon. And as soon as we do this, you will see the Item tab open up, and we can select a Page or Scene.
Now, to test out Collection, go to the Timeline and drop the Collection Scene onto the Timeline, double click on the top to see a preview and click on the text or the label. You view.

Next, we will setup the Map, when someone touches the Library on the map; he or she can see the operating hours. So we will switch to the map scene and drag a small image interactive and rename it.
Next, we will switch back to our collection Scene, and we will associate another event for the Collection that is for the Library button. But instead of using the Target icon, we will manually type the name of our image.

Then, set the selected page option and associate the Library Scene.
Now, as soon as we click on the Library button, we can access some information about the Library—like the Opening and Closing hours.

In our example we only used a selected page, but of course, you can also use the first page, or the other options.

If you want to find out the order of the pages, just switch to the Items area and see the order of the pages.

Another thing we should mention is: you can also create nested collections. So if we switch back to the library scene, we can drop another collection component into the collector this page. As a result, the system can really become navigable. Just remember, the simpler mode of the Collection in the Slideshow mode, and the Kiosk mode, the easier it w
VIDEO WALL

VIDEO WALL SETUP

In this Chapter, we are going to review video wall. With a video wall you can actually span a presentation across multiple screens. For instance, if you want to put multiple screens have the content bleed from one screen to the next, or you can also have the option to run individual content on each one of the screens.

With the current release we support 4096x4096 pixel resolutions. Thus you can use vertical or horizontal configuration. We will cover some of the possible configurations you can use.

To take advantage of multi screen you’ll need to get a good computer for your signage player. The computer you choose can run with the Windows and Mac. It should have a good video card that can drive two, three or even four screens.

Right now we are looking at the display properties of our PC and this particular PC was setup with four video outs.
It has two screens on top and two screens on the bottom. Just to confirm that this configuration is valid, you can see that each screen right here is set to be 1920 x 1080.

As a result, if we multiply the width of the two screens, it is 3840, which is smaller than our allowed size of 4096.

Also the height is 2160, which is smaller than our allowed 4096.

In the following configuration we've connected 5 screens to a single computer, but we've setup all the screens in vertical mode.

And here you are looking at the windows display property. You can see the total is 3840. Just like before, this is a valid configuration which will work just fine, because we're still within our 4096 x 4096 max resolution configuration.

Therefore, in the previous configuration each screen was set to a high definition 1920x1080. In this configuration we set each screen to a smaller resolution of 1024x728. We did so to allow us to build the video wall to sixteen screens (with each screen in horizontal or landscape mode).

If you do the same screens and set them to a vertical or portrait mode, you will be able to fit twenty screens into your video wall. But remember, you still need a computer strong enough, along with a video wall controller capable of driving that many screens.

And what's great about this configuration is: it allows you to create the presentation. You simply bleed your content across all your screens regardless if they are images or videos; the controller will take care of the content for you.
At the same time, if you want to control individual content of a specific screen, you can do that too. Let's jump into the studio and see how to configure all this.

Once you setup your PC with a proper screen configuration, we can go to navigation and to screens. Let's go ahead and add a new screen.

Therefore, if you want a vertical configuration you must use 1080x1920 instead of 1920x1080 pixels.

Next, let's setup this configuration (you see here), which is used for HD screens.
We will setup a setup 3840x2160 screen layout and draw four screen divisions, and set each one for 1920x1080.

Of course, we can have different channels in the Timeline and run different content for each screen division.

Subsequently, if you want content to bleed across all screens --simply use one screen division.
And if you want different content for each screen —use multiple screen divisions.

As a result, you have full flexibility over which content will run within your four screen layout configuration. And because you are driving all the screens from a single computer you can really set any type of screen division.

want to setup layers or masks or create multiple Screen Divisions —all which is very flexible and is completely up to you. Let’s use this configuration in a Campaign.

Add a new Campaign and use our screen layout. Then you can add resources to the timeline and build your Campaign.
VIDEO CONVERSION

CONVERTING VIDEO INTO THE CORRECT FORMAT

In this Chapter, we will discuss Video conversion. When you upload video files to the Signage Studio, you must upload video formats we support. These formats include FLV, include either H.264 or MPEG4 encoding. To get the best performance and speed, we do recommend using FLV file with H.264 encoding.

If you have video files that we don't support, such as AVI or Window media format, you can use a free utility called Freemake (available at www.freemake.com), to convert your files into the supported format.

In this Chapter, we will show you how to use the Freemake utility to convert a video file from an unsupported format into a supported format, and how to upload it into the Signage Studio.

First you need to visit www.freemake.com and download the software in your machine.

After you've installed the application, to add a video for conversion, simply open it and click on the + button.
Select a file from your computer and then click on the FLV icon at the bottom to customize your output.

You have different parameters, but we are going to set it Same as source.

Next, click on the Setting’s option.

Change the code to H.264, click OK, and then convert.
Open the Signage Studio and import the Video by going to the Resources area and clicking on the + sign.

Then, you can add your FLV video file into the Timeline and it will work perfectly.

We demonstrated that converting video files using Freemake is a very simple process.

The mediaSTORE

INTRO TO THE MEDIASTORE

The mediaSTORE is an up and coming feature as part of the major 3.1 release due March 2012. The mediaSTORE will expand the MediaSignage component list with lots of new and cool add-ons including:

- XML Generic component
- Facebook component
- Twitter component
- QR component
- Kiosk builder component
- Collection component
- WayFinder component
- and more

mediaCLOUD Enterprise subscribers will enjoy all components for FREE.

None Enterprise members (FREE users) will be able to purchase individual components from the mediaSTORE for a onetime low price (i.e.: free users purchase the component once, and NOT pay per component / per screen).

However, we expect the mediaSTORE to only be available to FREE users of the mediaCLOUD around August / September of 2012.

Be sure to follow us on Twitter or on Google+ for the latest updates.
API and SDK

INTRO TO THE API AND SDK

In this Chapter, we cover the Application Programming Interface and software development kit (API and SDK). One of the benefits of signing up as a mediaCLOUD Enterprise interface.

With the API you can develop your own application that uses the MediaSignage back-end services to create a user interface for your customers; all branded with your logo or ways to build and configure a signage presentation. The API includes a set of Web services that include the upload of resources, create Ad packages, search the mediaADNE

With the SDK you can develop your own SignageStudio and SignagePlayer components that can be uploaded and used throughout a presentation. The SDK is built around a public Apache.org repository. The framework is called Flex and it is developed using a powerful scripting language named ActionScript 3.0. Enterprise users download a work developed on top of. Once the SDK custom component is ready, it is uploaded using the Navigator > resources SignageStudio module. The custom component is dragged on component property dialog as well, just like any other component in the SignageStudio; so when a custom component is double clicked it will present a custom property tab.

API

In order to use the API feature, the first thing you do is visit the website: MonsterSignage.com

-1. Resources
-2. MonsterSignage.com sample application
In the API documentation pages you will find source code for the API, including public methods, explanations of each class, methods, and everything you need to know in terms

VIDEO TUTORIALS

The API video tutorials are available through the site’s links.
Flex is an open source programming framework build around ActionScript 3.0 and it is available through the Apache.org repository. If you don’t have it already, you can download Adobe.com.

MonsterSignage is a sample working application developed by MediaSignage. You can also download the complete source code for the MonsterSignage by clicking on the Download source code.
In order to demonstrate the usage of the API, we will first download the source code. Will also download a 30 trial of Adobe Flash Builder that comes with the open source File:

In order to install the Adobe Flash Builder, import the download sample application MonsterSignage.fxp project file.
After the source code of the application has been imported into Adobe Flash Builder, you can explore the classes and package structure.

Open the SRC folder, that contains the source code, double click on the MonsterSignage.mxml file.

The MonsterSignage.mxml file takes care of the Login process and the validation procedure. Once we are authenticated against the server, the ModuleLoader will load.

The ModuleLoader loads the PackageModule.
To understand all aspects of the API, you have to look at the different classes and debug the application to see how everything is set up.

Keep in mind MonsterSignage is a sample application. You are free to use any programming language you like and take advantage of the remote web service calls. You are not locked into using Flex as the API is SOAP based and program language independent.

To get a better understanding of the remote calls be sure to review the core API under the Globals folder. The class `IMediaSignageServices` represents the actual web service and its call backs.

The `IMediaSignageService` is an abstract class, to review the Interface implementation look at `MediaSignageService`.

MediaSignageService is the only class that you need to explore if you are interested in developing in another development language. The class represents all methods for and API.

These public methods include creating an Advertising Package or the ability to get all the existing packages, deleting packages, uploading files, finding Stations and other functions.

The `business domain` is the assigned account host the application will communicate with.

If we take adService / web service for example. You can see the different web service calls that are available through it. Go back to the documentation and open the Globals category. The Interface is implemented by `MediaSignageService`.

<table>
<thead>
<tr>
<th>Interface</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3AdModule</td>
<td>The 3AdModule is an abstract class implemented by PackageModule so we can use the other compatible loadable modules as possible children of MonsterSignage main application.</td>
</tr>
<tr>
<td>IMediaSignageService</td>
<td>The IMediaSignageService is the interface for the class MediaSignageService.</td>
</tr>
</tbody>
</table>
As mentioned earlier, if you wish to develop in another programming language like C Sharp or PHP, use these methods to call out the web services and listen to the callbacks.

**MONSTER SIGNAGE SAMPLE**

MonsterSignage is a sample application that was developed by MediaSignage and source code is available for download. Enterprise users are welcome to modify the application.

To test the MonsterSignage application, go to monstersignage.com you click ENTER.
You can login to the application with the same credentials as you use to access the SignageStudio. You can also create a new account.

After you Log-in you will gain access to the Outgoing Ad management section of the application.

In the above example you can see there is only a single Ad package, called LA Coffee. This ad package has a single Resource named Coffee_1.
This Resource will play on two available Stations.

So the MonsterSignage app allows our end users to configure Outgoing Ad packages without having to Login to the SignageStudio. If you are not familiar with the Advertising

**ADDING RESOURCE**

To add a new Resource click on the + button.

In this window we are presented with the same resources that are available through the SignageStudio. Click on each resource to preview it. Click the + button to upload new

Refresh the resource directory by clicking on the refresh button.

We select a SWF file and click on the check button.

The Ad package "LA coffee" now has two resources that will play on the two available Stations.

**DELETING RESOURCE**

To delete a resource, click on the select check box of a resource and select the - button.

**ADDING PACKAGE**

Add an Advertising package:

Define the Advertising package name, the date when you want to start the Ad package and the date you want to end it. After all settings are done, click on the Create button to...
Define the Advertising package name, the date when you want to start the Ad package and the day you want to end it. After all settings are done, click on the Create button to add the new package.

**ADDING STATION**

Add additional Stations, click on the Add new Station button, located on the right corner of the application:

Use different filters for the search to find Stations. After you find a particular Station, select it and then click on the Insert Ad package button.

**REMOVING STATION**

**STATION INFO**

Double click or press the Info button of a Station to see if it is running. If the station is on you can also take a live snapshot and get additional details.

- **Info**
  - **Location**

The statistics found under the info tab include Station status, operating system and mode.

**THE LOCATION**
Under the Location tab, you can view the geographic location of the selected Station.

CONFIGURING MONSTER SIGNAGE APP

If you are not a developer and still wish to host the MonsterSignage app "as is" on your web site, you can still do it and brand it as your own. The app XML configuration file is used to modify the application parameters.

To configure the MonsterSignage app go to MonsterSignage web site and click on the App Configuration link.

- 1. The application needs to be hosted on a secure webserver (https). Hosting it on a none secure site will result in a security box error.

- 2. Make sure that you insert the ERI (Enterprise Reseller Identifier) that is available to mediaCLOUD Enterprise users. The ERI is listed under the EnterpriseStudio > Tools > airApplicationArguments. Copy the ERI number and paste it into the XML file.

Example: `var airApplicationArguments = 'f7bee07a7e7912f1d7951b4d24de';`

Make sure that the main /rules.xml file resides in the same application directory on the server.

XML CONFIG FILE

Modify parameters in the XML file to customize the application.

- APP NAME
- COPYRIGHTS
- LEARN MORE URL
- ABOUT INFO
- WEB ADDRESS

You can also replace the path for the LOGO with your own.

Set parameters as to what users can and cannot do within the application. For example, you can allow users to add stations by modifying the corresponding value to either TRUE or FALSE. Setting parameters to TRUE or FALSE will allow you to set permissions in the MonsterSignage app.

PACKAGE FILTER

By default the Ad Package filter is disabled (as set by the XML config file).

If you want users to have access to a particular Ad package, you can enable the Ad Package filter. Use a specific Ad Package number so when a user logs-in, he will only be able to work on that Ad Package, simplifying the UI.

The MonsterSignage app can be used as is; a working application for Ad management. It is also a great kick-off base development app, for developers using Flex and other platforms.

SDK

The software development kit allows any ActionScript 3.0 developer to easily extend our sample code and develop their own SignageStudio and SignagePlayer components.

The developed component is uploaded through the standard Resources module of the SignageStudio and behaves like any other component in the system (i.e.: RSS, MRSS from the Resources panel onto a timeline or a Scene. Their custom properties panel is accessed when they are double clicked or selected, just like any other native MediaSignage component.

It can also be configured with its own Properties panel to load and save component data / configuration.

Custom developed components take full advantage of the internal framework methods including caching, access local resources and dynamic items (like Weather / Stock Items).

The SDK will be available to Enterprise subscribers and be publicly available for download around June 2012. Be sure to follow us on Twitter or Google Plus for the latest updates.

ANDROID PLAYER

ANDROID PLAYER SET UP
The Signage Player is fully compatible with the Android Operating system. This means you can run the player on both phones and tablet. The Signage Player for Android will phones and tablets having the experience as Signage Desktop version.

It includes things like smart auto scaling. If you build the presentation for one resolution, it actually scales itself to fill the whole screen on the resolution. The Android player is acceleration. You must make sure your device supports it.

It also comes with full remote player management utility, set to remotely control your Android players from the Signage studio, from the station's section of the Signage Studio.

It also includes auto updates, so you can always push new updates from the player to the studio. Once you install the Player on your device, select the Media Cloud to conne- password, and select login.

Use these election rollers to select your campaign in output.

And the presentation will start playing.
To load the control screen, press your finger on the screen for a few seconds, and with the control screen you can stop, you can play, or you can quit the presentation. The newer Android based devices -- dual core or better. In our example, right now we are running it on the Samsung tablet, as well as, Kindle fire from Amazon. It works very well on both devices. With the Signage player for Android, you can truly get a build once, run everywhere experience.

THE mediaDROID
MEDIADROID SET UP

For our installation, we have a TV screen that has 2 HDMI ports. We will take our MediaDROID and connect it to one of the HDMI ports.

Next, we will connect the Power. For that, we will use the micro USB and connect it to one of the free USB ports of the TV.

This will power the MediaDROID directly from the TV, therefore you don't need any power supplies, but if your TV doesn't have an open USB port, you can use the power sup into your wall outlet.
The videos will play at a good quality and have a smooth playback on the mediaDROID. We've tested on an HD screen and the MediaDROID was running at 1280x720p.

There are optional accessories you can get for the mediaDROID, including the Ethernet module, if you want to connect to a LAN, as well as, the Bluetooth Flymouse.
Keep in mind, if you order both the Ethernet module and the Bluetooth Fly mouse, you will need to purchase an addition USB hub, since the mediaDROID only has one free U

The mediaSERVER

INTRO TO MEDIASERVER
The mediaSERVER is a private Digital Signage solution that is capable of running a network with thousands of SignagePlayers over the LAN, VPN, WAN and across the WEB.

The mediaSERVER is an affordable, self-hosted Digital Signage server for medium to large size organizations. The mediaSERVER is available as both plug and play appliance provide your own dedicated Windows 2008 64 server and use our mediaKEY USB licensing dongle to build a customized server solution.

MEDIACLOUD VS MEDIASERVER

MEDIACLOUD is a cloud based Digital Signage (also known as SaaS or software as a service). It is a FREE service that allows you to get UNLIMITED licenses (SignagePlayer)

Each SignagePlayer can be connected to one or more screens. All of your media files (videos, animations etc) are stored on our servers (the mediaCLOUD servers) and locally cached on the remote SignagePlayer so they do not depend on a constant internet connection. The mediaCLOUD Enterprise edition is only $99.00 a month (flat NOT 

MediaSERVER is a privately hosted server solution. The server software and hardware are purchased and owned by you. All the licenses for the players are also owned and pay a subscription fee (as you may pay with the mediaCLOUD Enterprise edition); however there is an optional updates and support annual fee. The mediaSERVER is design Enterprise edition, but in a privately hosted server. The mediaSERVER can be installed on any PC running Microsoft Windows 2008 64 bit English version Server.

MEDIASERVER BENEFITS

The mediaSERVER is designed to deliver uninterrupted service to thousands of concurrently connected Digital Signage and Kiosk screens. Managing a privately hosted med from MediaSignage that many large companies often require. And while the SaaS model is more affordable, when it comes to true ownership and management over your network solution.

- No recurring monthly fees
- Manage the mediaSERVER in your trusted domain
- Independence from the MediaSignage farm
- Stream sensitive media file and data within your LAN, VPN, WAN or across the WEB
- Set your own downtime and maintenance schedule
- Access the same features as the mediaCLOUD Enterprise edition
- Receive quarterly software updates and support **

A privately hosted server solution allows you full access to all the features you fell in love with in our software as a service (SaaS) model. You get full access to the SignagePlayer...
A privately hosted server solution allows you full access to all the features you fell in love with in our software as a service (SaaS) model. You get full access to the SignagePlayer Web and Desktop versions, SignagePlayer Mobile version, SignageStudio Web and Desktop versions as well as to the EnterpriseStudio. All applications access your privately hosted server for both management and presentational use:

- Manage unlimited number of accounts
- Run thousands of SignagePlayers concurrently
- Self-contained Server with easy installation and setup
- Receive live Server and player updates
- Get direct access to the backend including database and web services
- Collect and manage server and player statistics
- Works across the LAN / VPN / WAN / WEB
- Works in a visualized environment (dedicated USB access required)
- Optimized OS and web services to deliver the best possible throughput

** ADMINISTRATION **

Manage your Signage network from anywhere. Web management is an integral part of the mediaSERVER. You can access all of your accounts through the EnterpriseStudio.

** Always up-to-date, always new features and enhancements **

With the mediaSERVER we include a sophisticated, fully automated update mechanism for all aspects of the server services. This includes web services, database, web server, Flash modules, SignageStudio and SignagePlayer. As part of the SLA, you will continue and enjoy new features and enhancements that roll out to your network. And of course, you have full control over when and how these updates are performed.

** SLA purchased annually - see pricing section for more details **

** SECURITY **

The mediaSERVER was built first and for most to serve our SaaS businesses model (the mediaCLOUD), and so security was designed directly onto the core product. All components include RSA public / private key authentication process to protect your content wherever it may be.

- RSA Public / Private authentication scheme
- SSL Web services
- Multi level user management control
- SignagePlayers designed to work within a firewall secured environment
- Admin server login access console
- Private mediaSERVER / SignagePlayer authentication schema
- Signage service management tools

** SPECIFICATIONS **

Hardware and Software details

- OS: Windows 2008 Server 64 bit English version and the latest service packs (clean OS)
- Internet Information Server 7+ (clean install / not configured)
- Intel Quad Core2 or better (recommended Intel Quad core)
- Hard disk 500+ GB (recommended 1TB for extra file storage)
- 2GB DDR Memory (recommended 4GB DDR3)
- Requires 3 IP addresses (IP must be static internet accessible if you plan to access the server over the web)
- Requires 3 prefixed domains (i.e.: master.yourdomain.com, business.yourdomain.com, socket.yourdomain.com)

** mediaSERVER Install and Setup Guide **

** MEDIA SERVER CONFIG **

In this Chapter we cover the process of purchasing, licensing, installing and configuring the dedicated mediaSERVER.

** mediaSERVER minimum requirements **

- Dedicated Computer / Server running on a Dual Core 2.7GHz Desktop Intel processor or better. Keep in mind that the faster server and more memory you get, the more resources your server will be able to manage. - A clean install of Microsoft Windows 2008 64 bit Server English version. Microsoft has different versions of the 2008 64bit Server and any version of will work just fine. - Latest service packs installed - Internet information Server (IIS7+)
- 3 Static IPs (internet accessible for web management). If you are planning on running the mediaSERVER over a LAN, VPN or WAN and don’t need web access you can use 3 players across the Web with internet control you will need to purchase 3 static IPs from your internet service provider.
- 3 Prefixed domains (e.g. master.yourdomain.com, business.yourdomain.com, socket.yourdomain.com). The domains can be locally mapped through the /etc/hosts file or from a local DNS server for private LAN, WAN and VPN integration. However if you wish to have the mediaSERVER as web accessible you will need to map the prefixed domains through a public DNS server.
- A mediaKEY USB device with one or more licenses. The mediaKEY is license authentication dongle that must remain plugged-in to your mediaSERVER at all times. It holds the mediaSERVER license.

** PURCHASING THE MEDIA SERVER **

To purchase the mediaSERVER solution go to the mediaSERVER order pages.
Enter your information on all the fields to place the order and be sure to make a note of your user credentials as you will need them to install the mediaSERVER.

Order mediaSERVER

Product: mediaSERVER Appliance $2196
SignagePlayer Licenses: 1 x $195 = $195
Shipping: In the US $59
Total: $2449

Create billing account

Company name: Your Company
Billing user name: Your Username
Billing password: 
Confirm password: 

Click on the Continue button to view the Billing and Shipping page.

After entered the information, click on the buy now button to complete the purchase. Once the order completes successfully, you will receive a confirmation message.

Thank you for your interest in our Digital Signage solution,

Congratulations, your order completed successfully.

You will soon receive an email with instructions on how to proceed.

Get Ready to be amazed!

MediaSignage will ship the mediaKEY that holds your license count. The mediaSERVER software is downloaded and installed on any Windows 2008 64bit Server, however your process.

INSTALLATION AND SETUP

Before you begin the installation process, make sure you LOG IN to your Windows Server 2008 64bit server as the Administrator. If you are just a regular user that is part of the Admin group you will not have sufficient rights to do a proper installation. The installation may go through, but some registry settings will be missing; be sure you are logged in as Administrator.
The mediaSERVER software is installed on a clean Microsoft Windows 2008 server. Install Internet Information Server (IIS7) which is Microsoft's Web Server.

1. Open the **Service Manager** open **Roles** and click on the **add Roles**.

2. Add Web Server (IIS)

3. Click on **Next** and under **Role Services** make sure you check the **ASP .net** option.

Click on the Install button to kick off the installation of IIS7

Proceed to download the **mediaSERVER software installation toolkit**

After you downloaded the .exe file, begin the installation process. Be sure to plug-in the mediaKEY prior to installing the server. Otherwise you will see an error:

```
To install the mediaSERVER you need to plug the mediaKEY to a usb port and click [Retry].
If you don't have the mediaKEY you can order it by clicking [Order Now].
```

The mediaKEY USB dongle must remain plugged in to the Windows Server at all times; during the install process as well as during server operation.
Note: The mediaKEY is NOT a storage device, if you try to access the mediaKEY through the Windows File Manager you will receive an error indicating the device is not readable. The mediaKEY is a sophisticated authentication peripheral with built-in CPU and memory.

After you plug-in the mediaKEY USB device, and kicked off the server installation process you will be prompted to enter your Provider credentials (same info picked when purchasing the mediaSERVER online). Next, pick new ProviderStudio and Database account credentials.

Click on Create accounts. In the next dialog enter 3 prefixed domains. Configure the server with 3 Static IPs:

- 1. Access the Control Panel
- 2. Open Network and Sharing Center
- 3. Go to Manage Network Connections
- 4. Open the Local area Connection interface
- 5. On the Local Area Connection Status window click on Properties
- 6. Open the Internet Protocol Version 4

This is our first Static IP:

This IP address is a proxy IP (internal network only), and not a real IP that is addressable from the Web. Thus this mediaSERVER cannot exist on the internet (unless you configure special NAT firewall mapping rules).

If you do want to provide services to SignagePlayers across the web, the IPs must be static (contact your ISP for more info and prices).

To add two more IPs, click on the advanced button, in the same dialog.

Add two more IPs using the Add button.
The next step is to enter the subdomains in the installation dialog and click refresh.

The 3 IPs resolved successfully to their corresponding prefixed domains, marked by the 3 checkboxes.

Click Continue to go to the next window.

Configure notification emails. The mail server is set up to send an email every time a new account is created, so the user can verify the account using a verification link.

You can use your own mail server or use our mail server, to generate these emails. We will use the default mail server. If you choose to use the verification email process, you must first enter your own email address and can click on the send verification code button to verify your email account.

You can also skip the process altogether and not enforce email verification (recommended).
Next press *Continue* to proceed with the installation. The installer takes care of all the libraries, SQL database, IIS setup and registry settings.

On the top right corner you can view the total number of licenses purchased. Use the *Buy more* button to purchase additional licenses and download them dynamically to the

![SignagePlayer Licenses](image)

Once the installation process is complete, you can use the *Check for new updates* button to contact the MediaSignage server and check for new software releases.

Next install the SignageStudio and SignagePlayer as well as Adobe Integrated Runtime.

![http://master.mydomain123.tmp/Code/AirStudio.air](image)

![http://master.mydomain123.tmp/Code/AirPlayer.air](image)

Remember that all computers running SignageStudio and SignagePlayer must be able to resolve the prefixed domain names to the 3 IP address bound to the mediaSERVER, to confirm connectivity; once everything is working fine you can tighten up the security of the mediaSERVER.

If you are having issues connecting to your mediaSERVER from remote computers, we advise that you also check your network firewall rules.

The mediaSERVER supports both LIVE Sockets as well as HTTP Polling. To check which type of connection is used, register a SignagePlayer Desktop version and go to SignageStudio:

- Yellow: connected via Polling
- Green: connected via live socket
- Red: not connected at all

To allow access to your mediaSERVER server be sure to open port 80 for both SOCKET and HTTP type traffic to the destination of your prefixed domains.

Be sure to watch the [Firewall video tutorial](#) for more info on this subjects.

**SIGNAGEPLAYER AND SIGNAGESTUDIO SETUP**

Next we will configure the SignagePlayer and the SignageStudio Desktop versions to work with your private mediaSERVER.

In our example we use Windows 7 PC for both SignageStudio and the SignagePlayer.

First thing to check is accessibility to the mediaSERVER. Open the Windows 7 command line window (cmd.exe) and ping all 3 prefixed domains to verify connection.

![c:\windows\system32\cmd.exe](image)

As you can see, the ping operation failed as Windows was unable to resolve the prefixed domain to an IP address.

If you use a mediaSERVER online and your domain names are web addressable you can skip the following step.

However in our example the mediaSERVER is installed locally within our own network, so we need to edit the hosts on each PC and add all 3 prefixed domains.

Open notepad.exe to `c:\windows\system32\drivers\etc\hosts`, add the 3 prefixed domains / matching IPs and save the file.
Repeat the ping process.

Proceed with installing the Adobe Integrated Runtime.

Next install the SignageStudio and SignagePlayer from:

http://master.mydomain123.tmp/Code/AirStudio.air
http://master.mydomain123.tmp/Code/AirPlayer.air

Change the "mydomain123" with your prefixed domain name.
On the SignageStudio dialog, enter your master domain and click Connect.

Next, provide the Login user and password for the SignageStudio. These will be the username and password that you picked during the server installation process. Once you (SignageStudio with Enterprise UI).
Next install the SignagePlayer Desktop version. Kick off the SignagePlayer install file and provide your master domain, just like as you did with the SignageStudio.

Register the SignagePlayer to a sub-account.
ADDING LICENSES

If you own a mediaSERVER and interested in purchasing additional licenses the Server licenses web page.

Login with your existing Provider credentials originally used to order the mediaSERVER, and click on the buy now button. The licenses will be downloaded directly onto the US the snail mail. Proceed by clicking on the Check for new updates on the mediaSERVER installer application to apply the purchased licenses.

The mediaBox

PACKAGE CONTENT

The mediaBOX Media Player is shipped pre assembled and ready to play. It is a plug N play device which was designed to deliver seamless and easy integration even for non

The following is a list of the products you receive with the purchase of your new mediaBOX Media Player and optional accessories.

- Intel® H67 Express chipset with 2nd generation Intel® QuickPath tech (Core2/i3/i5/i7 supported)
- Ethernet (10/100/1000Mbps) LAN connection
- WiFi module with dual antennas
- HDMI / DVI / VGA / DisplayPort (power up to x 2 screens with different content on each one)
- Intel® Clear Video HD technology (Direct-X and Open GL)
- 4 USB 3.0 ports (2 on back panel, 2 via header)
- 8 USB 2.0 ports (4 on back panel, 4 via header)
- 1 HD Audio Port (7.1-channel) with Digital Optical S/PDIF outputs
- Slim hard drive powered by SATA
- DDR3-1066/1333 2 x 240 pin DDR3 DIMM slots (Up to 16GB ransion)
- PCI Express x16 (Supports live mediaTV Capture device for Live TV, sold separately)
- Internal 150PSU DC-DC convertor
- 120V-240V AC-DC convertor
- Supports USB Dynamic OS Restore system (sold separately)
- mediaTV Live capture device (sold separately)
- Mounting accessories (sold separately)

PRE INSTALLATION REQUIREMENTS

The following are things to consider before you install the mediaBOX Media Player.

Ethernet

The mediaBOX is equipped with Ethernet 10/100/1000MB onboard internal network interface card. If you wish to use a wired local area network connection be sure to run Cat location of the Media Player. The cable must be plugged in to a LAN switch or router with a maximum distance of 100 meters. Distance may be extended with a repeater.

Wireless

The mediaBOX has a built in 802.1x compatible wireless network card. The wireless interface card must be connected to the supplied antennas (x2) in order to insure maximu advantage of the Wifi capabilities of the mediaBOX Media Player, be sure to install a Wireless router within close proximity. Actual signal strength and maximums wireless dists layout. You should perform signal quality tests to confirm the device can properly work with your current wireless configuration.

Video

The mediaBOX Media Player supports all high definition formats including 720P and 1080i. The Media Player is equipped with VGA / HDMI / DisplayPort and DVI video ports. E Media Player directly to your LCD or Plasma screen. You may need a converter (i.e.: HDMI to DVI) to establish proper connections between the Media Player and legacy devi

Sound

The mediaBOX Media Player supports high definition sound. You have the option of using the optical, coax or mini jack sound ports. If you wish to have support for audio be s Refer to the back panel diagram for a complete layout of all audio ports.

THINGS TO CONSIDER

The mediaBOX Media Player is an advanced device which needs to be handled with care. It's important to install the device in areas where room temperature does not exce refer to the back panel diagram for a complete layout of all audio ports.
The mediaBOX is designed to auto restart after a power outage. Uninterrupted power supply is not necessary for safe operation of the Media Player. The mediaBOX does not them for standard operation as all controls are executed remotely from the SignageStudio. You will however need to get a USB Keyboard and USB mouse when setting the rx

OVERVIEW

Network

The mediaBOX depends on reliable internet connectivity to get data updates, stream down media files into its caching repository and report back to the server and SignageSt Media Player will only communicate back with the hosted Digital Signage servers if an update is initiated from the SignageStudio, or if the Media Player is rebooted.

A constant internet connection (a connection that is always up and active) is not required as the mediaBOX Media Player will cache content internally (using the internal hard content via portable devices such as a USB flash drive. Manual content update can be used in areas where internet connection is not available.

You may choose to connect to the local area network via wireless or wired interface. The wireless method reduces cabling requirements and is normally the preferred way of monitor.

The mediaBOX is shipped with DHCP enabled and will automatically retrieve an IP from a local area network DHCP Server or NAT enabled router. You may reconfigure TCP/IP respectively for further information on configuring network connections. The mediaBOX does not require a static IP; auto assigned private IPs are fully supported.

The mediaBOX internal firewall is disabled by default. All egress and ingress communication is done over the TCP/IP protocol and live socket connection exists between it and

Monitor and display setup

The mediaBOX supports up to two monitors consecutively. It includes VGA / DVI / HDMI / DisplayPort connections through the back panel. You may choose a combination of a setup (each screen running different or same content supported). Two monitors of same or different resolution may be connected to produce a total desktop width or height, 1 connector is included with the mediaBOX.

If the monitors are configured in a landscape mode the total desktop width is monitor A width + monitor B width. If the monitors are configured in portrait mode the total desktop height is monitor A height + monitor B height.

Live TV via mediaTV (example source include Satellite, cable box, Security cameras, DVD)

The mediaBOX may be purchased with a built in Capture device (also known as the mediaTV). A capture card will allow you to connect external peripherals and display the ou Division. The capture card connections include S-Video, Composite, Component and HDMI / Video /inputs using the supplied dongle. It supports full HD 1920x1080 or s be used with the mediaBOX.

The capture device can be connected to most common input sources including external DVD players, satellite box, cable box, security camera systems and others. The capture card is an External Application Component in the SignageStudio and select the AverMedia Center Capture device from the drop down menu. The mediaTV takes advantage of hardware the capturing process (frames processed by the Video card’s GPU) and no latency will be evident. The mediaBOX comes preloaded and ready to work with the mediaTV. When needed as the mediaBOX is a Plug and Play device, ready to accept the certified mediaTV component. Note that mediaTV is only supported through the Win7e OS (and the li with the mediaTV).

USB OS restore system

The USB operating system restore device may be purchased separately as add-on accessory for the mediaBOX Media Player. The USB OS restore system allows for a compi seconds. This is ideal for environments where customers are interacting with the device (Kiosks / Internet Cafes) and may corrupt the underline OS.

In such environments the USB OS restore system allows for a quick and easy way to get the mediaBOX Media Player up and running.

Another key advantage of the USB OS restore system is the ability to easily upgrade the entire OS to the latest software revision. Simply download the last released mediaBO supplied USB flash device. Once the download is complete you may follow the steps below to apply the new OS image to the Media Player.

The USB OS restore system includes a USB flash memory device. The USB device needs to be inserted in the back panel USB just above the SATA label.

The following section describes in detail the process required to restore a Windows W7e or Ubuntu Linux OS back to factory defaults.

Please be sure to follow the process meticulously to avoid confusion.

Attention: please note that imaging your mediaBOX Media Player will erase all its content including cached media files. It will completely wipe out your existing hard disk. You would like to save. Note that you do not need to backup any files for proper operation of the mediaBOX. Once you reimaged the Media Player you will be prompted to re-register complete registration and select the campaign to join, the SignagePlayer will download your digital signage or kiosk configuration and begin to re-cache the entire campaign.

Note: The BIOS is preset from the factory to support the USB restore drive. If you want to confirm the BIOS settings are properly set for USB Restore, press [DEL] at POST to Configuration > SATA Mode > AHCI Mode. Validate that the SATA mode is set to the AHCI mode and Aggressive power managed is enabled.

www.digitalsignage.com/docs/html/MediaSignage_docs.html
OPERATING SYSTEMS RESTORE POINT PROCEDURES:

- 1. Connect a USB keyboard to the mediaBOX (not supplied). Next insert the supplied USB flash memory device into the back panel USB port just above the panel labeled (important you must use the correct USB port).

- 2. Next, turn on the mediaBOX Media Player. As soon as the first Vendor Logo bootup screen appears, press the [F11] key to enter the boot option menu.

- 3. Select the USB Flash drive. It will most likely be called ut165 USB2Flash or something close to that. Use the arrow keys to select and press [ENTER]

- 4. Select CloneZilla Live (the default) in the Orange screen

- 5. Select en_US.UTF-8 English

- 6. Select Don't touch keymap

- 7. Select Enter_shell

- 8. Select #2 and press [ENTER]

- 9. Enter sudo -i and press [ENTER]

- 10. Type the command `mount -t vfat /dev/sdb1 /home/partimag` and press [ENTER]

- 11. Type `exit` and press [ENTER]

- 12. Again type `exit` and press [ENTER]

- 13. In the blue menu select Start_clonezilla

- 14. Select device-image work with disks or partitions using images

- 15. Select skip use existing /home/partimag (Writable devices) at the bottom of the menu

- 16. When prompted press "Enter" to continue [Press ENTER]

- 17. Select Beginner mode in the menu

- 18. Select Restore Disk (Restore an Image to local disk) in the menu
- 19. Select the image to restore (Linux or Windows will be listed) and press [ENTER]

- 20. Select the hard drive to restore to (only option) such as sda_160g_wdc

- 21. Press [ENTER] to continue

- 22. When prompted "Are you sure you want to continue" press y and [ENTER] to continue

- 23. When prompted "Let me ask you again, are you sure you want to continue" press y and [ENTER] to continue

- 24. Wait for the restore process to complete and reach 100%. When completed press [ENTER]. The whole process should take about a minute.

- 25. Now Remove the USB restore drive and power cycle the mediaBOX. Done!

Note that to update and re-image the entire operating system with a new version image, you must first download the new image from your reseller's web site. The OS image is device labeled as "Image".

Make sure that the unzipped directory resides on the root of the USB drive. For example, if the unzipped image you downloaded contains a base folder name "Win7ZH67v14" the USB drive and not within any other sub directories.

Once the newly downloaded folder was unzipped onto the USB flash drive, you may follow the steps above to complete the reimage process and restore the entire operating system.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® H67 Express (53 rev) chipset</td>
<td>4 x SATA cables</td>
</tr>
<tr>
<td>Socket LGA1155</td>
<td>1 x DVI-to-VGA adapter</td>
</tr>
<tr>
<td>Intel® QuickPath technology</td>
<td>1 x I/O back plate</td>
</tr>
<tr>
<td>Low profile super quiet single fan system</td>
<td>2 x WiFi antennas</td>
</tr>
<tr>
<td>External DC-DC Power supply</td>
<td>1 x 4-pin power supply cable</td>
</tr>
<tr>
<td>Ultra small form factor design</td>
<td>1 x USB 3.0 header (full-size bracket)</td>
</tr>
<tr>
<td></td>
<td>1 x USB 3.0 low-profile bracket</td>
</tr>
<tr>
<td></td>
<td>1 x VGA</td>
</tr>
</tbody>
</table>
FORMATS

The Player supports all of the native Flash 10.X+ formats which include the following:

- Video Formats: Flash video FLV (H.263), MPEG-4 (H.264) , MOV, M4A, MP4V, 3GP, 3G2, AAC (HE, LC), SWF
- Animation: SWF
- Images: JPG, PNG
- Sound: MP3

You may also use the External Application component of the SignageStudio to integrate binary external applications into an assigned screen division. This allows you to use applications such as the open source freely distributed media player software called Video LAN (aka VLC).

To learn more about VLC and its supported formats you may visit the following link:

Go to Videolan

PANEL CONFIGURATION

The image below maps the main ports of the mediaBOX back panel:
THE DIGITAL SIGNAGE NETWORK

Connecting to the Digital Signage Cloud

The Digital Signage network cloud is comprised of network servers and routers which are hosted at central data centers. The hosted servers provide all services to your Digital Signage network. In order for the mediaBOX Media Player to join this cloud you will need to insure that the Media Player can transmit ingress and egress data from and to the digital signage cloud. The following sections will cover requirements for proper SaaS model.

Registering into the Digital Signage networks

The mediaBOX ships preloaded with a stable version of the SignagePlayer. When a Media Player boots up, the SignagePlayer is configured to automatically start. On the first boot up you will be prompted to enter your login email and password. These will be the same email and password you use to login to the SignageStudio. Once you provide this information, the Media Player will be associated with your account. After proper authentication is completed, the Media Player will be allowed to join your digital signage network.

Once successfully registered, the SignagePlayer will prompt you to select the campaign and output that you would like to connect to. The campaign and output can be modified at a later time through the SignageStudio "Stations".

Broadband

The mediaBOX Media Player relies on a broadband connection to download all of the campaign's data. This includes RSA authentication, XML configuration and media files. It also uses the broadband to access external data sources such as RSS, video podcasts and other data. It is vital to a successful integration of a digital signage solution that you provide a fast reliable internet connection. It should be noted that the SignagePlayer will work with almost any type of connection; the SignagePlayer uses internal caching and retry mechanisms to insure smooth playback at all times.

The SignagePlayer will not be affected when internet connection is down given that all resources had an opportunity to cache locally. The SignagePlayer may also be rebooted. SignagePlayer will roll back to the last good known campaign. However, a fast broadband connection will allow for rapid download of content, smoother transitions into new content and more reliable remote control functionality.

Security

The SignagePlayer uses an elaborate authentication scheme to validate against the Digital Signage servers. Once fully authenticated, the SignagePlayer will be allowed to join the cloud. It uses 128 bit private and public keys. It is powered by RSA ciphering cryptography to insure maximum security. All tokens used are validated on the server side before they are allowed to pass through.

The SignagePlayer stores the authenticated password locally within the local file system as an encrypted key. If you plan on moving the Media Player or possibly shipping it to an offsite location, consider first unregistering the SignagePlayer. Unregistering the SignagePlayer will remove it from the Digital Signage cloud as well as remove all locally saved passwords.

Firewall

The SignagePlayer communicates with the hosted servers over TCP/IP. The protocol uses http (as well as RSA public / private keys over standard http) and raw sockets. If you do not have a firewall, you will need to insure proper rules exist within your firewall to allow traffic originating from the mediaBOX to pass through.

If you are having issues connecting to our server you must have issues with a local firewall. We support both Live Sockets as well as HTTP Polling.

Under the SignageStudio > Stations you may get 3 color indicators:

- Yellow: connected via Polling
- Green: connected via live socket
- Red: not connected at all

To learn more about this and how it is setup, please watch this video tutorial:

Note that if you have a firewall with an existing port 80 rule, this may NOT be enough. The reason is that many firewalls will only allow HTTP traffic. However, the mediaBOX connection. You may need to add a rule in your gateway / router to specifically allow connection oriented traffic over port 80 (not just HTTP).

You should know that opening port 80 on your firewall does not compromise in any way the security of your local area network. Allowing trusted traffic originating from within your network does not induce any potential security breach. This is acceptable and standard procedure in internet security models.

Windows 7 Embedded Setup and Configuration
USER INTERFACE

The mediaBOX Media Player was designed as a plug-N-play device. The Media Player requires very little maintenance after its initial setup. The Windows W7e was compiled to optimize memory and resources. The OS was stripped down to reduce the number of controls. The OS was designed to recover from power failures with resiliency in mind.

The main user interface is the OS Toolbar which is hidden by default by the SignageController. To pull up the Toolbar use the WinKey or press Control-ESC.

To access the SignageController press the Eye icon on the SignagePlayer.

The SignageController is a persistent task. This means that even if you try and terminate the SignageController using the Task Manager, the SignageController will re-spawn. This is by design to make the mediaBOX as resilient as possible.

The SignageController is an integral part of the mediaBOX and it is launched from the internal W7e registry startup key.

The SignageController has two configurable modes that can be set during the initial registration of the Media Player, or at a later time from the SignageStudio Stations section. The SignagePlayer can monitor the SignagePlayer but will not interfere with other OS activities. In Real mode however, the SignageController will terminate any pop up messages, or none certified digital signage applications thus delivering a true dedicated playback with no interruption or none related OS alerts. In real environment installs we recommend that you operate under Real mode.

If for any reason you wish to terminate the SignageController, click the Eye icon on the SignagePlayer, this will show (unhide) the SignageController, give focus to the SignageController, and press followed by y to accept and terminate the SignageController.

To re launch the SignageController it’s best to simply to reboot the mediaBOX. Click front panel button / blue LED to turn the mediaBOX ON and OFF.

You can also press the WinKey or press Control-ESC and select Shutdown or Restart from the Start menu.

NETWORK SETUP

Wired Network

The mediaBOX ships with DHCP enabled by default. To access the wired network configuration:

- 1. press WinKey or press Control-ESC
- 2. Select the Control Panel
- 3. Click network and Internet
- 4. Click Network and Sharing Center
- 5. Click Change Adapter settings
Wireless Network

The mediaBOX ships with DHCP enabled by default. To access the wireless network configuration:

- 1. press WinKey or press Control-ESC
- 2. Select the Control Panel
- 3. Click network and Internet
- 4. Click Network and Sharing Center
- 5. Click Connect or Disconnect
- 6. Select one of the available Wireless networks from the pop up menu

Host name

The mediaBOX comes preconfigured with a default host name called OEM. When running multiple mediaBOXes in the same virtual network, you may encounter an error on the screen since multiple mediaBOXes have the same host name. The Windows OS requires that each host has a unique identifier. To apply a unique name to each one of your mediaBOXes follow these steps:

- 1. Press WinKey or press Control-ESC
- 2. Under "Search all programs and files" type regedit and then click OK.
- 3. Locate the following registry key: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion
- 4. To change the company name, do the following:
   - In the right pane, double-click RegisteredOrganization. Under Value data, type the name that you want, and then click OK.
   - To change the name of the registered owner, do the following:
     - Double-click RegisteredOwner. Under Value data, type the name that you want, and then click OK.
     - Click >b>Exit on the File menu to quit Registry Editor.

DISPLAY CONFIGURATION

The mediaBOX Media Player comes with 4 types of display connections including VGA, DVI, HDMI and DisplayPort. You may use any one of these ports for your main display.

The mediaBOX Media Player also supports up to two active monitors per single box. When using two monitors you will have a desktop space which is a total of both monitor display presentations that spans both monitors. You can also configure the monitors in landscape or portrait mode.
Single Display

To configure the resolution of your display:

- 1. Press WinKey or press Control-ESC
- 2. Under “Search all programs and files” type display
- 3. Select Change display settings

Dual Display

The mediaBOX Media Player allows you to use any 2 of the 3 available video ports (i.e.: VGA and DVI, DVI and HDMI, HDMI and VGA, etc). Once you connect both displays, you should see both monitors appear under the Display settings.

To enable the secondary display, select the 2nd inactive monitor and click on the checkbox “Extend these displays”.

Note that you may also drag and drop each display box within the gray canvas to change the order and match your physical mounting installation.

You should know that in your Signage presentation a single screen division cannot surpass 4096 x 4096 pixels in width or height. If the total width or height of both monitors exceeds 4096 x 4096 pixels, you will need to break your screen setup into at least two divisions to compensate for this limitation. In most cases this is not a problem as multiple screen divisions are used. The SignagePlayer supports unlimited number of screen divisions.

Rotating the Display

The mediaBOX Media Player allows you to set each display in a landscape or portrait mode.

To configure rotation of your display:

- 1. Press WinKey or press Control-ESC
- 2. Under “Search all programs and files” type display
- 3. Select Change display settings
- 4. Change the orientation

RUNNING THE SIGNAGEPLAYER

Running the SignagePlayer should always be done via SignageController.exe. It is the SignageController that executes the SignagePlayer. The SignageController is set autor was modified in order to set the SignageController.exe to auto start:

To review this you can execute:

- 1. Press WinKey or press Control-ESC
- 2. Under “Search all programs and files” type regedit and then click OK.
- 3. Locate the following registry key: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\RUN

www.digitalsignage.com/docs/html/MediaSignage_docs.html
Note: The Registry is the main config database of the Windows W7e OS. Editing the registry is a high risk task. Modification of keys may cause the Windows registry to corrupt. Take special care when adding, modifying or deleting any entries in the registry.

UNREGISTERING AND CLEARING CACHE

You can unregister your account directly on the SignagePlayer. Simply click on the “Unregister” button, provide your login email address and valid password and click ok. This will also unregister the Player with the remote server and remove the Player from the list of available “Stations”.

You may also delete the SignagePlayer local cache directory for one of the following reasons:

- 1. You forgot your login email or password
- 2. You want to remove all cached content from Player including media files and RSS data
- 3. SignagePlayer is not working properly and you want to troubleshoot the issue by clearing everything

The SignagePlayer stores all account information and local cached content under:C:\Users\user\AppData\Roaming\SignagePlayer.XXXXXXXXXX

To delete this directory follow the steps:

To review this you can execute:

- 1. Press WinKey or press Control-ESC
- 2. Under “Search all programs and files” type Windows Explorer
- 3. Change dir to C:\Users\user\AppData\Roaming\SignagePlayer.
- 4. Delete the complete Dir: C:\Users\user\AppData\Roaming\SignagePlayer.*
- 5. Reboot the mediaBOX
- 6. Re-register the SignagePlayer

MAINTENANCE

The mediaBOX Windows W7e edition does not require any special maintenance. The scandisk and other normal disk utilities were removed as the OS is designed to work as is.

It is however common practice to reboot or PC at least once a day. Although the SignagePlayer will run continuously without interruption for weeks or even months at a time, rebooting may help keep the system in good condition and may help increase performance as system buffers will be refreshed and memory restored to zero fragmentation.

To configure a daily reboot, first register the SignagePlayer. Once registered open the SignageStudio, under “Stations” you will see your newly added mediaBOX player appear in the list. Select it, and under its Properties > Reboot conditions set the checkbox. Set a time when you wish to set the automatic daily reboot. By default the SignagePlayer will reboot at 0:0 which is 12:00AM.

Note that there are other configurable reboot conditions as well which may cause the SignagePlayer to reboot; these include memory thresholds and internal errors. These are all well as Ubuntu Linux OS.

The Automatic Adobe AIR auto updates were disabled in order to prevent popup messages which may come up during new Adobe AIR software releases. To enable the auto update you can run:

“C:\Program Files\Adobe AIR Settings Manager\Adobe AIR Settings Manager.exe”

and click “Enable Updates”.

REMOTE LOGIN

The Desktop SignagePlayer can be remotely controlled using the SignageStudio (Web or Desktop version). The remote functions include Play, Stop, update software builds, and more. Under normal circumstances you should not need any further remote functionality. However, it is a good idea to plan for disaster recovery. Part of this plan is to allow for internet access.

This type of access can be managed with the free service: LogMeIn®, TeamViewer® and others (Go to LogMeIn or Go to TeamViewer).

The services will allow you to bypass firewalls and other restrictions to gain remote access to the mediaBOX. With these type of services installed and pre-configured on your Digital Signage player, just in case.

Read the end user license agreement at LogMeIn® for further details on the service and commercial / none commercial offering.

A second option of gaining remote secure access to your mediaBOX is to use the free application Tight VNC (Go to TightVNC) .

Note that with TightVNC you will need to use a static IP or use a port forwarding rule on your local internet gateway / router.

Again, both LogMeIn® and TightVNC are optional as the SignageStudio provides all of the essential remote management functions needed to operate and control the Desktop SignagePlayer.

WHITE LABEL SETUP

The Windows W7e is configured to display a custom background image on login, bootup and during shutdown.

The image may be replaced with your own custom image. To modify these images replace the content located under: C:\Windows\System32\oobe\Info\Backgrounds folder.

The SignagePlayer branding and white label configuring is also available for resellers. Be sure to check with your reseller for additional information on customizing the SignagePlayer.

www.digitalsignage.com/docs/html/MediaSignage_docs.html
## Ubuntu Linux Setup and Configuration

### USER INTERFACE

The Ubuntu Linux operating system was specifically compiled to serve as an appliance type device. The OS was loaded with an ultra light X11 Window Manager. The Window area to deliver the most efficient and reliable platform.

However you can still get the full power of the gnome Window Manager that is available for you to setup and management. To learn more about gnome you may visit:

**Go to Gnome**

To access the gnome panel **right click** on the **black background** and select **Task Manager**. Right clicking on the black background will pull additional menu options includir

You should explore the gnome panel to familiarize yourself with the available applications and utilities. Some of these applications include computer management, task manager and other core configuration utilities that help with setting up the network and display properties.

### NETWORK SETUP

#### Wired Network

The mediaBOX ships with DHCP enabled by default. You can check network status by **opening the gnome panel**, **right click** the black background and select **Task Manager**.

Run the gnome management top panel.

#### Wireless Network

The mediaBOX is preconfigured with a wireless module. The following section covers the wireless configuration necessary to enable wireless connectivity to your local secure network.

Note that you should have a strong wireless router in close proximity to the mediaBOX to achieve good enough signal strength for smooth operation of your SignagePlayer.

If your wireless icon appears on the right corner it means you are currently not using the wired Ethernet connection. Also, if an exclamation appears next to it, it means you wi

- **Right click** on the **black background** and select **Task Manager**
- From the gnome **Task Manager** select **System > Preferences > Network Connections**
- **Select the wireless tab**
- **OR** instead of following steps 1-3, you can click on the wireless icon directly from the taskbar as shown below

![Network Configuration](image-url)
- 5. Once selected, you will be prompted to enter a wireless network key.

- 6. Next you will need to provide the root password. The root password is: password

- 7. Once all fields are authenticated the wireless status bar and signal strength will appear on the gnome panel.

- 9. Click on your wireless network (Auto SignMon in our example) and click on Edit.

- 10. Now select the Wireless Security tab

- 11. Next enter the password key again under Key:

- 12. And be sure to select the Available to all users checkbox (important)
DISPLAY CONFIGURATION

The mediaBOX Media Player comes with 3 types of display connections including VGA, DVI and HDMI. You may use any one of these ports for your main display.

The mediaBOX Media Player also supports up to two active monitors per single box. When using two monitors you will have a desktop space which is the total of both monitor signage presentation that spans both monitors. You can also configure the monitors in landscape or portrait mode.

Single display

To configure the mediaBOX screen display

- 1. Right click on the black background and select Task Manager
- 2. System > Preferences > Monitor
- 3. This will open the monitor preferences. If you have two monitors configured; the mediaBOX will detect each one and you can configure the resolution accordingly.

Dual display

You may also drag and drop each display box within the gray canvas to change the order and match your physical mounting installation.

In your Signage presentation a single screen division cannot surpass 2880 pixels in width or height. If the total width or height of both monitors combined exceeds 2880 pixels two divisions to compensate for this limitation. In most cases this is not a problem as multiple screen divisions are used. The SignagePlayer supports unlimited number of screen divisions.
Rotating the display

The device driver allows you to rotate your display in portrait or landscape mode. To set this up, select the Rotation from the main configuration menu.

RUNNING THE SIGNAGEPLAYER

The mediaBOX Media Player is configured to preload the SignagePlayer and SignageController upon bootup. It is configured to run the gnome Windows Manager.

The following is the main startup configuration file: 

```
/home/user/.config/autostart/SignagePlayer.desktop
```

which in turn runs:

```
/opt/SignagePlayer/share/linux/startSignage.sh
```

The Black Box startup config file (.bbstartup) will launch the signageController.sh which is the proper (and only) way of executing the Digital Signage and Kiosk presentation, launching the SignageController and the SignagePlayer. It also maintains the health status of the SignageController and validates the integrity of all running processes.

The SignagePlayer installation resides in /opt/SignagePlayer

The SignagePlayer Linux configuration resides in /opt/SignagePlayer/share/linux

Cached content resides in /opt/SignagePlayer/share/buisnessXXX where XXX is your business account number.

The Linux environment comes with several command line aliases. These aliases are quick shortcuts which can be execute from any open terminal.

```
sign_run = runs the Signage shell startup script
sign_cd = change to SignagePlayer Linux directory
sign_unregister = unregister the account and clear all cached cookie info
sign_clear = remove all cached content
sign_showActive = print all active signage related processes
sign timeZone = configure timezone
```

HDMI SOUND

The Ubuntu mediaBOX is pre configured with standard audio through the back green mini jack output port. In order to enable HDMI sound through the HDMI port you should follow these steps:

1. Right click on the black background and select Task Manager
2. System > Preferences > Sound
3. Switch to the Hardware tab
4. From the profile drop down select Digital Stereo HDMI output
You can go back and forth between HDMI and Analog stereo input depending on your configuration requirements. You can also control the audio output levels and other parameters through the sound configuration utility.

**MAINTENANCE**

The mediaBOX Linux edition does not require any special maintenance. The fstab auto validation and other normal disk utilities were removed as the OS is designed to work as a dedicated peripheral. It is however a common practice to reboot the mediaBOX at least once per day. Although the SignagePlayer will run continuously without interruption for weeks or even months, rebooting may help increase performance as system buffers flush and memory restored to zero fragmentation.

To configure a daily reboot, first register the SignagePlayer. Once registered, open the SignageStudio, under “Stations”, you will see your newly added mediaBOX player appear under the “Stations” data grid. Select it and under its Properties > Reboot every day set the radio button to a time when you wish to set the automatic daily reboot. By default, the SignagePlayer will reboot at 0:00 which is 12:00 AM. You can also choose between rebooting the whole mediaBOX (Station) vs restarting only the SignagePlayer (Player).

Note that there are other configurable reboot conditions as well which may cause the SignagePlayer to reboot. This includes memory threshold and internal error. These settings are applicable to both the Windows W7 & OS as well as Ubuntu Linux OS.

The Automatic Adobe AIR auto updates were disabled in order to prevent popup messages which may come up during new Adobe AIR software releases. To enable the Adobe AIR runtime is available you can run:

```
/opt/Adobe AIR Settings Manager/bin/Adobe AIR Settings Manager
```

and click “Enable Updates”.

The Ubuntu automatic software updates were also disabled in order to prevent unnecessary downtime of the Media Player. If you would like to enable the automatic updates
1. Right click on the black background and select Task Manager
2. On the gnome panel select System > Administration > Update Manager
3. Click on Check to find new software updates
4. Once the check is done, click on Install Updates to proceed with the install

REMOTE LOGIN

The Desktop SignagePlayer can be remotely controlled using the SignageStudio (Web or Desktop version). The remote functions include Play, Stop, update software builds, more. Under normal circumstances you should not need any further remote functionality. However, it is a good idea to plan for disaster recovery. Part of this plan is to allow for remote desktop access to the mediaBOX over the internet.

The Ubuntu mediaBOX ships preconfigured with remote access. To enable remote access:
- 1. Right click on the black background and select Task Manager
- 2. On the gnome panel select System > Preferences > Remote Desktop
- 3. Select "Allow other users to view my desktop"
- 4. Select "Allow other users to Control my Desktop"
- 5. Close preferences

At this point you should be able to install TightVNC viewer on your personal Windows computer. To download the TightVNC viewer: Go to TightVNC

From the TightVNC viewer you will enter the IP address of the mediaBOX to remote login to it. If you are unsure of the IP address of the mediaBOX, right click on the Desktop and run the address of the network interface.

Note that if the mediaBOX resides behind a firewall or within a private Local Area Network and it is not configured with a static IP, you will need to configure the local router / g eth0 interface to forward remote computers (e.g., public machines on the Internet) to connect to a specific computer within a private LAN. You should consult with your network administrator on how to enable remote access.
WHITE LABEL SETUP

The mediaBOX Ubuntu Linux is powered by Plymouth, a distribution made to fit the mediaBOX SignagePlayer. Plymouth is a boot loader utility which allows you modify the boot process.

First begin by creating your own custom boot up image. The image must be in a .png format. Name your custom image `ubuntu-logo.png` and place it in:

```
/lib/Plymouth/
```

Once the image has been copied you will need to update the system with the following command:

```
update-initramfs -u
```

This will apply your new custom bootup image as part of the internal system.

Reboot the mediaBOX Media Player and you should be able to preview your image as part of the boot up and shutdown process.

---

Stats and Monitoring

SIGNAGE CONTROLLER

The SignageController (also known as SignageController) is a vital part of the Media Player software suit. It insures that the SignagePlayer is running at all times and monitors rebooting the SignagePlayer, provides remote snapshots and more. You should confirm that the SignageController is running. You can tell if the SignageController is running.

Method 1: Using the SignageStudio switch to "Stations" and view the data grid. Each connected SignagePlayer is marked with a colored LED. If the LED icon is marked in yellow the signplayer is connected to the backend server; however the SignageController is not running. A Red LED means the SignagePlayer is not connecting and a Green LED means that all systems are good; SignageController is running and the SignagePlayer is connected.

Method 2: Simply by looking at the graphical user interface of the SignagePlayer you can tell the status of both SignageController and status connection to the backend server.

REAL TIME SNAPSHOTS

The SignagePlayer allows you to get live real time snapshot. These snapshots are a great tool to see what is running at a specific location. To get a live snapshot the SignagePlayer must be running. In the SignageStudio go to "Stations" and click on the camera icon to get a live preview of the remote SignagePlayer Desktop version.