Getting started

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August 2013 (Managana 1.6.0)

it’s showtime!
Getting started with Managana
it's showtime!
Written and compiled by Lucas Junqueira
3rd Edition: August 2013 (Managana 1.6.0)

With information from
http://www.managana.org
http://www.ciclope.art.br/ciclopeen

Including material written by
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1 INTRODUCTION

1.1 About Managana

Managana is a free cross-platform software for digital publication based on imagination as interface. Created by the Ciclope Atelier, it allows the creation and maintenance of communities that share interactive content on the web, tablets, smartphones and exhibits. Each community has interactive streams composed of clusters of audiovisual, graphics, text and external feeds. Managana mixes and sequences playlists that can be created, displayed, and animated at the software itself.

Managana is made for the era of cloud computing, mobile devices and the panopticon: the Internet 3. The software, 100% free, published under the LGPL license version 3 of the Free Software Foundation, mixes and sequences media streams and their interaction with the main digital world platforms. It evolved from the software called Imagination Site, made by Ciclope Atelier, developed since 2002, having gone through five versions. The 6.0 software version was entirely re-written using free tools and baptized as Managana.

With roots in Sanskrit, the name Managana, composed of mana and gana, and present in the anthem of India, means “peoples minds”. The first verse of the anthem “Jana Gana Mana adhināyaka” is officially translated into English as: “Thou art the ruler of the minds of all people”.

You can check a small presentation video about Managana features at the software site: http://www.managana.org/versions/

1.2 Why use Managana

Managana will help you to develop any kind of audiovisual content for cross-platform environments without any knowledge on programming. In spite of this, Managana is not only for non-programmers. If you know a little of programming you also can make use of the scripts available for the software or implement your own. A note for hard programmers: Managana is also an open-
source software that you can modify under the LGPL version 3 to develop tools for your own customers.

Contents generated by Managana run on projections, televisions, computer monitors, notebooks, tablets and smartphones, in various conditions and operating systems like Windows, Linux, MacOS, Android and iOS.

It works with immediate update online via a graphical editor and through the integration of Twitter, Facebook, WordPress and RSS feeds. Managana not only imports content from places as also shares information on G+, Facebook and Twitter. Interactions with mouse, touchscreen, remote controls using tablets and smartphones, joysticks, Microsoft Kinect and various sensors are in its design.

Managana allows editing online via web. The content editing module allows dynamic editing, in draft, pending, and published. Access and modification management through administrators, editors, authors and communities is also implemented. Easy to translate, made in an open format and file structure, it allows third parties to include new features.

1.3 *The Showtime application*

Besides the web and mobile device players, Managana also offers the Showtime application as a solution for public presentations and digital artists. The software runs on both Windows and MacOS systems and allows you to use your Managana creations as digital exhibits.

If you want to learn about creating interactive content with Managana, this is not the document you are looking for. This one shows you how to take these creations to the public. For a step-by-step guide about creating with Managana, check our website – [www.managana.org](http://www.managana.org) – and look for the *Getting started with Managana: creating for mobile devices* at the downloads section.
2 INSTALLATION

The Showtime is an application made with Adobe AIR. Before getting started, you'll need to download and install this tool from the Adobe’s website:


Now, you can download the Showtime installer for your system (Windows or MacOS) at:

http://www.managana.org/downloads/

The installation process is simple. Just run the downloaded file (an .exe executable for Windows or a dmg disk file for MacOS) and, in no time, Showtime will be installed at your system.

P.S. You may need administrator privileges to install the Managana Showtime on your computer.

2.1 The ManaganaShowtime folder

When the Showtime application runs for the first time it creates a folder named “ManaganaShowtime” at your default documents folder. All configuration and resource files it uses are stored there. If you need to use your Showtime configurations on another computer, just copy this folder to it. You may also make security copies of it and even have multiple configurations on a single computer by renaming the folder. Every time Showtime does not find it, it creates a new one.

All configuration files (xml) found inside this folder are automatically adjusted by using the software configuration window – there's no need to change them manually. However, if you are an intermediate user you may find easy to open these files and change them using your text editor.

The “ManaganaShowtime” contents are:
The `config.xml` file holds all configuration in a simple, standard xml file.

The `font` folder holds all fonts available to the Showtime application (besides the default Managana ones: *Crimson*, *Not Courier Sans* and *Pfenning*). It also has a `font.xml` file for configuration.

> P.S. You may add your own, customized fonts to Managana. Just check further at this document to learn how.

The last folder is `community`. It holds all offline content you add to your showtime presentation. You must copy all community (.dis) folders you want to make available offline to it.

> P.S. To learn about Managana communities (the "dis" folders) access [www.managana.org](http://www.managana.org) and check the Getting started with Managana: creating for mobile devices at the download section.
3 CONCEPTS

There are some concepts that can be helpful to understand how Managana Showtime works. Some of them are shown below. These concepts actual usage is explained better at the Showtime configuration section of this document.

3.1 Remote and local content

When you use Managana to create content you need to install the editor at a webserver, either remote (on the Internet) or local (using a simulated, local webserver). In both cases you have an url to access it that we call your “managana installation url”. It is something like http://localhost/managana/ or http://www.yourhost.com/managana/. The Showtime application can connect to this url and play content directly from it. In these cases (both remote web or local webserver) we say that you are playing from remote content.

All Managana creations are made at communities. While you use the editor, these communities are saved as standard files under the “community” folder of your Managana installation as .dis folders (DIS stands for Digital Imagination Set). Every community has its own dis folder that holds everything needed to play it. You can copy (or download) these “.dis” folders to your ManaganaShowtime community folder to play the content in local form, without the need of an active web server or Internet connection.

When Managana Showtime starts loading a community, it first checks for the respective “.dis”. If it is found locally, the software loads it from the disk. If not, it tries to access it from the provided server url.

P.S. This behavior changed from previous Showtime versions. Until version 1.4.0 you had to specify whether to load data from disk or from the server.
3.2 Multiple displays

Managana Showtime can use multiple monitors and projectors connected to your computer. You don't need any special hardware or video configuration/tools for it, but you must know exactly all display devices resolutions and their order at your system display list.

Let's take the standard Windows 7 display setting for example (it works in a very similar way on MacOS):

![Configuration window](image)

The configuration window above shows that you have two monitors connected to your computer. The first one is selected and it has the 1440x900 resolution. Notice that these multiple displays are managed as “extended displays”, meaning that Windows show different content on them (and does not simply repeat the same image on both).

Windows defines the “main display” as the screen that holds the standard Windows task bar. Its (x, y) position is always set as (0, 0). All other displays are placed according to the main one. They can even be placed on negative positions like (-1440, 0). The main display isn't always the one identified with the number 1 – you can set any of your displays as the main one. Let's check some examples.
Let's consider that all three monitors above have the 1920×1080 pixels resolution and the one marked with green is the main one. Their positions are

- 1: (0, 0)
- 2: (1920, 0)
- 3: (3840, 0)

Now, if we set the monitor 2 as the main one, the new positions will become

- 1: (-1920, 0)
- 2: (0, 0)
- 3: (1920, 0)

Multiple resolutions and display positions are also supported by the system and by Managana Showtime. At the picture below, let's consider that the purple and green monitors have the 1920×1080 pixels resolution, and the orange ones have the 1024×768 pixels resolution. As before, the green display is the main one.
The display positions for the previous picture are

- 1: (0, 0)
- 2: (1920, 0)
- 3: (2944, 0)
- 4: (0, 1080)
- 5: (1920, 1080)
- 6: (3840, 1080)

Managana Showtime can use multiple screens connected to a computer as a single virtual display. Consider the following example of 4 monitors with 1920×1080 pixels resolution:

![Diagram of 4 monitors with display positions labeled 1 to 6. Monitor 1 is purple, monitor 2 is green, monitor 3 is purple, and monitor 4 is purple.]
Managana Showtime can handle this screen set as a single virtual display of 3840×2160 pixels resolution, placed at (-1920, 0).

Usually, desktop video boards support two or three displays but you may install additional video cards or use special ones with more display ports if you need more monitors/projectors. Please notice that you may need a powerful computer for this. Knowing the exact order and resolutions of your displays enables you to make multi-screen presentations like video walls.

3.3 Group interaction

Managana offers a remote control application for mobile devices. You can use this to enable public, group interaction with your Showtime presentations. First, you'll need to create a remote control app connected to your Managana installation (to learn more about it, check the appendix about the remote control at the end of this document). Then, you must make it available to your viewers – you may publish it on application stores like the Google Play or the Apple Appstore or you can simply make the app installer available at your website (for Android devices).

P.S. The remote control usage requires a Managana installation available on the Internet – local web servers won’t work for it.

You'll need to set a public connection key that will be shown to the viewers. They can, then, provide this key at their remote apps and connect to your presentation. This will provide them a public, limited access, enabling them to:

• check extra information (text) about the current content;

• share the content on social networks (Twitter, Facebook and G+);

• access the content directly on their devices;

Your viewers may also enter their login data to enable content rating and commenting. You can provide user logins using the Managana editor, but for public presentations, the best choice is to allow OpenID access, so your
viewers may use their existing Google or Yahoo accounts to access (you won’t receive any information about them – all login process is made at the Google or Yahoo site). Comments can be moderated at the editor interface.

3.4 Presenter control

The remote control can also be used by you to handle a presentation. The connection process is similar to the one for the viewers: first, enter the presentation public key at the remote app, then provide your login data. If you login with a super user or administrator account, all remote control features will be enabled. This means you can:

- force voting results (guide vote);
- set graphical user interface display (like showing/hiding the clock);
- navigate using next/previous and home buttons;
- vote for public interactions (check the chapter about content creation tips for details).
- access the custom function buttons (A to D);
- pause and play the presentation;
- adjust sound volume;
- zoom in/out the content and move it on the screen;
- move the target (mouse);
- open directly any stream or community available from lists.
4 USING MANAGANA SHOWTIME

When you run Managana Showtime for the first time, the configuration window appears. You can select among some configuration groups using the left list.

This window can be brought back any time by pressing the **F1** button. Another two windows used on Showtime for configuration are the video mapping and the Leap Motion Controller calibration ones, shown after pressing **F2** and **F3**, respectively (more about them further at this section).

*P.S. For presentations where users gain access to the keyboard, you may disable the configurations keys and set a pin code to re-open them. Check more about it on the "keyboard" interaction section.*
There are four main buttons at the Showtime configuration window:

- **exit Showtime** will close the application without saving any changes;
- **save and exit** will save any changes and close Showtime;
- **full screen** to return to full screen mode if desired
- **close window** will make the configuration go away.

Managana Showtime always start using the last configuration saved, and the config window will not appear automatically after the first run. This is useful if you intend to leave you creation at an exhibition spot without the need of your interference on every day basis. You can even set Showtime to run at system startup to make the exhibition automatic.

*P.S. Managana Showtime tries to stop software close attempts to make the “exit Showtime” button the only option to quit it. This feature is not 100% reliable since the operating system may provide several ways for closing an application.*

Windows 8 users may find challenging enabling Managana Showtime (or any other software) at startup. Here is a guide about how to do it in a simple way:

1. Open the run dialog (you can press together the Windows key and R).

2. Type `%appdata%` and press ok. An explorer window will appear.

3. Enter “Microsoft > Windows > Start Menu > Programs > Startup” folder.

4. Create a Managana Showtime shortcut and place at this folder.

This will enable Showtime to run at system startup, but it will still appear below the start tiles screen. You'll need to add another shortcut to the startup folder to bring the standard desktop (and Showtime) to the top:

1. Open the run dialog again (Windows key + R).
2. Type `%windir%` and press ok. An explorer window will appear.

3. Look for the *Show Desktop* shortcut.

4. Copy this shortcut to the same startup folder you created the Managana Showtime link.

The next time you boot Windows 8, Managana Showtime will appear automatically.

*P.S. Windows 8 users using touch screens must be warned about the start menu shown by the swipe gesture close to the right screen edge (the charms bar). Currently there is no way to turn it off for touch screens, making Windows 7 or OSX better choices for public kiosks.*

### 4.1 Window size and position

This is the first configuration group found when you open the Managana Showtime options window.

From it you can set the display size and position (just remember the multiple displays concept at section 3.2). There is, however, another option: you may set Showtime to run on fullscreen on a selected display – just set its position as you’d normally do and check the *run Managana Showtime in fullscreen mode* box. This will make the application ignore the size settings and fill the entire (single) display.
4.2 Graphic display

At this configuration group you can set some graphic options.

By default, Managana Showtime tries to place your content inside the virtual display size you set without distorting it. This may cause some bars around it:
At the picture above, the content has an orange background and is placed centered in the virtual display area. You may, however, check **distort content to fill entire window** so it will fit the entire area – check the following picture. This will make the zoom and position setting on remote control ineffective.

You can also decide not to show the content aligned at the middle of the display. Just check **set player position and size on window** and type the values you want.

Other simple settings are:
• **hide mouse cursor** will make the cursor invisible while over the Showtime window;

• **show interface** will allow the left-upper icon visible – this is useful if you want to use the remote control since the public connection key is shown close to the icon;

• **show clock** makes the right-upper clock visible showing the current and total stream time;

• **show play/pause graphic close to the clock** may be useful if your presentation is done on a touchscreen monitor;

• **hide voting graphics** makes the voting interface to be invisible (more about voting at the content creation chapter of this document);

• **disable html layers** stops the display of any html content that requires a graphic layer to be open above Managana, like the sharing, the login and url open;

• **show comments buttons, show rate button, show notes button** and **show zoom controls** set the visibility of extra widgets on the display window;

• **show user name / public connection key** sets the visibility of the connected user or the public key close to the logo button;

• **lock extra interface features** disables the display of the content manager and the plus menu of the viewer;

• **allow gestures** enable support on touch screen monitors for swipe and zoom gestures.

It is also possible to make some visual adjusts. The **background color** set the color to be used below the content (it doesn't need to be always black). You can even select a picture (or a swf file) to use as a background using the
The icon used by the left-upper interface is, by default, the Managana one, but you can change it to any PNG file you want setting the **interface icon**. Pictures win 60×60 pixels and transparent background are recommended.

The last graphic option is the **3D stereo** exhibition. Check the instructions found at the configuration window itself to better use this feature:

- there is no need of special graphic hardware on your computer, but the 3D requires lots of processing power;
- you may experience frame rate drops and some content resolution loss;
- the 3D display requires a monitor/TV capable of displaying side-by-side (SBS) content as stereo 3D;
- some TVs may require that you set the screen resolution at 1280x800 pixels;
- the Showtime display must fill the entire output screen (using fullscreen is the better choice);
- you must hide the user upper bar interface and the mouse for better results;
- direct mouse interactions are unavailable on 3D mode;
- all remote control functions work except zoom and position.

### 4.3 Player community

Managana organizes content into communities. You must tell Showtime the community to open when it is started. As explained at section 3.1, you can use *local* or *remote* communities. Showtime will try to load a community from local disk first. If it does not find it, it looks for it on the provided server url.
While the remote server url is optional, you must always provide the **community dis folder** name (community id without the ending “.dis”). This is the content Managana Showtime will load when it starts running.

If you use local communities, your presentation don't need Internet access. You can also do a little “trick” about video quality: while creating the content you can use lower resolution versions more suited to the web environment. When you copy the dis folder to your computer, you can replace the video files with higher resolution versions of them – you just need to use the very same name. The media files are always stored into the “media” folder of the dis content.

Least, but not last, using local content doesn't necessarily mean that you loose the remote control possibility. If you provide your Managana installation URL even when using a local community, Showtime connects with it just to enable the remote control. The content won't be downloaded from the server and the Internet traffic will be minimum.

*P.S. When viewers stream content from your presentation to their own devices (check the remote control appendix) they will always do it from the server, not from your local computer. This will not impact the Internet usage by Managana Showtime. Also, if you used the higher resolution videos “trick”, viewers will still see the lower res ones since they are accessing the Internet versions.*

### 4.4 Fonts and language

Managana comes with some open, default fonts built in, licensed under the OFL (Open Font License – [http://scripts.sil.org/OFL](http://scripts.sil.org/OFL)):

- **Crimson**, by Sebastian Kosch;
NotCourierSans, by Harrisson, Pierre Huyghebaert, Femke Snelting, Ivan Monroy-Lopez, Yi Jiang, Nicolas Malevé and Ludivine Loiseau;

Pfenning, by Daniel Johnson.

There are also some additional open fonts provided with Managana that can be removed any time using the fonts interface:

Free Universal, by Stephen Wilson;

Gentium, by J. Victor Gaultney and Annie Olsen;

Marvel, by Carolina Trebol.

The fonts configuration allows you to add/remove any additional fonts. Their format, however, is not a default one like true type or open type. The fonts must first be saved as swf files using the FontAsset project from Managana source code. You can find the Managana source code package at the downloads section of www.managana.org.

P.S. To use custom fonts, they must be add not only at Showtime configuration, but also at the Managana editor (menu configuration > fonts).

Besides the custom fonts, you can also use language files (the very same ones you can create on the Managana editor) to provide translations for the viewers interface.

4.5 Remote control

If you provide a public remote key, users may use their own mobile devices as remote controllers if they have the proper app installed (you can make it available on app stores like Google Play). Look for the Managana App Wizard to learn how to create the remote control app. If you want your remote control to work not only on your local network, but over the Internet, you must provide an Adobe Circus service key at the editor interface ("configuration > reader" menu).

These configurations let you to enable remote control use for your
presentation. First, you must have a valid remote app connected to you Managana installation available to your viewers (check the remote control appendix of this document). Then you can set the public connection key to any word you want (always using lower case). If the interface is shown, users will be able to see this connection key close to the upper-left corner.

At the Managana editor you can also set a password to lock some connection keys for your own use. If you did so, enter the password at public connection key password.

By default, the remote control apps require that the mobile devices and the presentation be connected to the same network. This is too restrictive and, fortunately, there is a way to overcome this problem. Managana can use the Adobe Cirrus service to establish the connection even if the devices are on another networks, like their 3G connections. You'll need, however, to sign for the Adobe Cirrus service – it's free but it is currently on beta stage. You'll receive a service key that must be provided at your Managana editor configuration (configuration > reader menu). To check the Adobe Cirrus service and request your developer key, access:

http://labs.adobe.com/technologies/cirrus/
4.6 Kinect support

The Microsoft Kinect is a great interaction device for public presentations since it doesn't require direct contact by the viewers, avoiding equipment damage or misconfiguration. Managana Showtime uses the OpenNI drivers to support both XBOX360 and Windows Kinect devices. The first thing needed is to install the OpenNI drivers. A step-by-step guide with download instructions for Windows and MacOS can be found at

http://code.google.com/p/simple-openni/wiki/Installation

Always use the 32 bit version of the drivers, even if you are running on 64 bit systems. Windows may warn you about the lack of signing on some drivers. Ignore it and keep installing.

Check **use Microsoft Kinect** if you want to activate it. When you do so, Showtime tries to track a single viewer (user) hand, picked by random, and moves the target (mouse) according to it. You can select the hand to track, left or right. If information about the selected hand for the current user is not found, the other one is used. When the target moved by the user passes over a link, it starts a countdown shown by a small bar below it. When the
countdown finishes, the action is executed.

There are some adjustments you can do to improve the target movement. The first one is about the **cover area adjust**. You can increase/decrease the target movement amplitude when the user moves the tracked hand. The picture below shows two different target moves from the same user interaction. At left side, the cover area amount is set to 100 (the default), while on the right it is doubled (200).

![Cover Area Adjust](image)

The second one is the **target position adjust**. It adds an offset to either x or y target positions that can be useful to limit user interaction to defined areas of the content. The picture below shows a negative adjust to the y axis target position as an example.

![Target Position Adjust](image)

Showtime can also use some icons to show if there is an active user tracked by Kinect. You can select standard picture files (transparent PNG ones are good choices) for both cases: user detected or missing. You can also adjust this **icon placement** on screen.

Microsoft Kinect also comes with an internal motor to adjust the camera angle.
Showtime can access this motor to move it up and down. This, unfortunately, is only available for Windows OS users.

4.7 System camera

The usual webcams can also be used for interaction. On Managana Showtime they are used as a sort of screen saver handler. When you check use screen saver mode, you can set two streams: the idle and the active one. Just write their IDs at the appropriate text input.

While showing the idle stream, Showtime keeps track of the motion level captured by the camera. When it reaches the motion level for active value the active stream is loaded. You can also set a time to load the idle stream again. If you leave this value as zero, your content must provide an alternative way to return to the idle stream if you want to restart the “screen saver” process.

4.8 Keyboard

Keyboards are the most common computer interaction devices. At Managana Showtime you can set custom actions (progress code) to run when a char key from E to Z is pressed. Keys A to D are reserved for content custom progress code.

P.S. If you want to learn more about the Managana progress code, access http://www.managana.org/managana-progress-code-reference/

If you check allow keyboard interaction you can also use the number keys
(both at standard keyboard and the numeric keypad) for content voting. You can even connect some wireless keyboards to your presentation computer to allow public voting without the need of the remote control app.

The **allow keyboard interaction** set also enables the arrow keys, page up and page down to navigate among streams:

- right/left: next/previous X streams;
- up/down: next/previous Y streams;
- page up/page down: next/previous Z streams.

The keyboard settings also enable you to prevent the configuration windows to appear when you press **F1**, **F2** or **F3**. This is very useful for installations where users gain access to the keyboard. For these cases, you must provide a 4 digit pin code to re-enable the configuration (just press the number keys at any time). Just check **disable configuration keys**.

> P.S. If you forget your pin code, the only way to reagin access to the configuration windows is te directly edit the "config.xml" file found on your ManaganaShowtime folder inside your documents.

### 4.9 TCP communication

TCP is a very common communication protocol used by many programs and developing languages. Managana Showtime allows you to create a TCP server so other programs can connect to it and send custom progress code to your presentations. This allows you to use your preferred development package like Processing, Open Frameworks or PD to catch your interactions and send them to Managana.
Managana Showtime can also connect, as a client, to other TCP servers to exchange data. You can even create a network of Showtime instances for a public highly interactive presentation.

The data exchange with Managana must follow a XML specification to work. When a client first connects to Showtime, it receives a welcome message with the following XML content:

```xml
<?xml version="1.0" encoding="utf-8" ?>
<data>
  <error>0</error>
  <event>welcome</event>
  <community>
    <![CDATA[the current community title]]>
  </community>
  <communityID>
    <![CDATA[the current community ID (DIS folder name)]]>
  </communityID>
  <stream>
    <![CDATA[the current stream title]]>
  </stream>
  <streamID>
    <![CDATA[the current stream ID]]>
  </streamID>
  <state>
    <![CDATA[the current playback state (play or pause)]]>
  </state>
</data>
```

All messages sent from server include an error value. If it is set to 0 (zero), there is, in fact, no error. However, other values may apply:
### Error Codes

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The last message sent from the client was not a valid XML.</td>
</tr>
<tr>
<td>2</td>
<td>No security key was sent from the client on last message.</td>
</tr>
<tr>
<td>3</td>
<td>The security key sent from the client was not valid.</td>
</tr>
<tr>
<td>4</td>
<td>The last message sent from the client did not include any progress code to run.</td>
</tr>
<tr>
<td>5</td>
<td>The last progress code sent from the client had errors.</td>
</tr>
</tbody>
</table>

The second information always sent by the server is the event. These are the possible values:

<table>
<thead>
<tr>
<th>Event</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>welcome</td>
<td>The client was successfully connected to the TCP server.</td>
</tr>
<tr>
<td>newstream</td>
<td>A new stream/community was open.</td>
</tr>
<tr>
<td>statechange</td>
<td>The content playback state changed (play/pause).</td>
</tr>
</tbody>
</table>

The other values on the XML depend upon the event type. For **welcome** and **newstream**, they are:

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>community</td>
<td>The title of the current community.</td>
</tr>
<tr>
<td>communityID</td>
<td>The ID (DIS folder name) of the current community.</td>
</tr>
<tr>
<td>stream</td>
<td>The title of the current stream.</td>
</tr>
<tr>
<td>streamID</td>
<td>The ID of the current stream.</td>
</tr>
<tr>
<td>state</td>
<td>The content playback state (possible values are play or pause).</td>
</tr>
</tbody>
</table>

The **statechange** event only include the state value.

All messages sent to the server must also be formatted as XML content. They have a strict format to follow:

```xml
<?xml version="1.0" encoding="utf-8" ?>
<data>
  <key>the security key defined by the server</key>
  <code><![CDATA[all progress code here]]></code>
</data>
```

The **key** value must always be the same security key defined by the TCP server.
server. The code value can hold any progress code supported by Managana. Progress code commands must be separated by | just like they are on the Managana editor.

P.S. If you want to learn more about the Managana progress code, access http://www.managana.org/managana-progress-code-reference/

While using Managana Showtime as a TCP client you can check **the server is another Managana Showtime instance with the security key**. This will enable you to connect multiple Showtimes in a network. To take full advantage of this feature, check the MESSAGE progress code group, specially the commands send, startPCodeSend and endPCodeSend. Showtime clients follow the same message rules as servers, and will run progress code sent to them.

### 4.10 Video mapping

Video mapping is an advanced feature meant for projections, specially on irregular surfaces. You can create “crops” of your content output and adjust where and how these images are projected. You can even set distortions to the output.

The video mapping requires a “control” monitor that will be used as the video source. This control monitor display must be the “main” one (as defined by
Windows) and be placed at (0, 0) position. All projectors (you can use as many as you want) must be “placed right” from the control monitor and may have any pixel resolutions you want. You'll need to provide information about the control monitor, but also about all the projectors. Let’s use the following set as an example.

Consider the following size and positions for monitor 1 and projectors 2 and 3:

- 1: size = 1920×1080 pixels, position = (0, 0);
- 2: size = 1024×768 pixels, position = (1920, 0);
- 3: size = 1280×800 pixels, position = (2944, 0).

At the video mapping configuration, the first information you need to provide is the **used area size**. You must sum all displays (control monitor and projectors) horizontal resolutions to find the width. The height value can be tricky: you'll use the highest one. For the previous example, the used area size would be width = 4224 and height = 1080. Check the picture below for details.

The next information is the control monitor resolution. The example one has
1920×1080 pixels. When all this data is ok, check **use video mapping** and click any of the **apply** buttons found at the video mapping configuration. You'll see that the video configuration will change immediately. Now, it's time to click the **open video mapping setup window** button. The configuration will disappear and a new setup window will appear.

*P.S. You can bring back the video mapping setup window at any time by pressing F2.*

*P.S.2 The Managana interface (upper-left icon) and the clock are not shown on video mapping mode. Also, the zoom and position functions of the remote control become unresponsive.*

*P.S.3 Higher control monitor resolutions may lead to better video mapping results.*

You can add as many video “crops” as you want. A crop is a video area taken from the control monitor (origin) and displayed at the projectors (output). An output will always display the entire content of an origin, with distortions if necessary. Origin crops are displayed with a green background, while the outputs have blue ones.
You can drag origins and output in the usual way. They also have some small red dots over them that represent their edge and center points. You can drag these dots too to adjust your distortions. As you can see at the video mapping configuration window, you can also set these values by typing them. Edge and center points positions are always placed relatively to the crop itself: a x position 100 means 100% of the crop width.
You may add as many crops as you want. When you have finished your
adjustments you must remember to close the video mapping window,
open the Showtime configuration one (F1) and save your setup. Like
any other Showtime configuration, the video mapping, if used, is applied when
the software starts.

P.S. The first crop you add will always be at the exact same size
and position of the current content.

P.S.2 At the standard configuration window you’ll also find an fps
adjust for the video mapping. Managana usually runs on 30
frames per second, but due to the higher processing needed for
video mapping you may need to reduce it.

4.11 Action schedule

Managana Showtime can also run custom progress code any time you want
during your presentation. You just need to create timed actions. You can set
the hour, minute, day and month to run them (including all days and all
months). Remember to check use action timers to make your timed actions
actually run.

4.12 Leap Motion

Managana offers support for the Leap Motion Controller, an interaction device
capable of finger and hands tracking. The support is automatic: if the device is
detected on your system, it is used.

Managana uses the first detected finger to move the cursor. It can also detect
swipe gestures on both horizontal and vertical to access the next and previous
streams on X and Y axis. Moving the hand rapidly towards the device (Z axis)
plays/pauses the playback.

By default, the Leap Controller is automatically calibrated, but you can improve
this calibration by pressing F3 at any time and following the on screen
instructions. This user calibration is saved so you won’t need to do it again
unless you change the presentation or the controller position.

If you want to learn more about the Leap Motion Controller, access:

http://www.leapmotion.com
5 CONTENT CREATION TIPS

If you want to learn the basics about Managana content creation, take a look at the *Getting started with Managana: creating for web and mobile devices* document. You can find it at the downloads section of the Managana site, [www.managana.org](http://www.managana.org). Even focused on mobile devices, the creation process is very similar if you intend to use your work on presentations. This is a great Managana feature: create once, show everywhere.

However, since sometimes you need to create content for a specific exhibition, we prepared some tips about it.

5.1 Community size

Managana always try to fit your content inside the display area without distorting it. While this is great when you are publishing for a multitude of devices and screen sizes, it can cause those black bars appear around your content. If you know the exact pixel size of the exhibition display (even the virtual for many monitors/projectors), use it. Remember that Managana Showtime always use the *landscape* version of your streams.

5.2 Meta data

Managana content can hold some meta data about it. While it is usually not visible by the viewers, some may add to their experience.

First, you may find very useful to provide the **about** data and the meaningful **title** for your streams. These texts will be displayed at connected remote controls of viewers mobile devices. They are also used for content sharing on social networks.
Another important meta data is the community icon. You can set it at the community properties, selecting from one of the picture files you uploaded. This icon is used for content sharing to drag attention from your friends to it. The best picture format to use is PNG. Try to use a picture of at least 256x256 pixels.
5.3 Stream custom functions

When the content is developed for single user, mouse interactions, it's easy to simply place actions as buttons on it. When you are creating for a public presentation, however, mouse movements may become hard to handle. Even considering that you can use the target with the remote control app, you can make your life easier by setting custom functions to the A to D keys. You can run them from the standard computer keyboard (just press the corresponding letter) or from the remote control (in an easier way than moving the target to reach some button.

Custom functions are set in a per-stream basis. Just check the stream properties window:

![Stream properties window](image)

5.4 Voting

Voting is a good way to provide public interaction for your viewers. Managana can keep track of user votes and run a defined action after some time. You can use it to jump to the most voted stream when a video finishes, for example. Votes can be sent by the viewers remote control app, even if they are not logged in. They can also be registered from the computer keyboard, so you can
connect some wireless bluetooth keypads and make them available to viewers enabling them to vote even if they are not using their mobile devices.

The voting interactions are created in a per-stream basis. Access the **stream > time and voting...** menu of the Managana editor and you’ll see the voting setup window.

The first thing to set is the **stream time**. By default, Managana streams are looped forever (**infinite time**), but you can also set a time for their finish, either by directly typing the number of seconds or by selecting one of the stream instances to wait for its playback finish. When you type the number of seconds, you can also tell Managana to start counting only after the first vote is received. The clock shown at the upper-right corner of the presentation show both the current and the total time (the smaller one). At the following picture, the total time is 45 seconds and the current one, 16.
When the total time is reached, Managana checks the voting options and run the most selected one. If there is a tie, it chooses one among the highest voted options. To set these voting options, check the time and voting window:
You can add up to 9 vote options (numbers 1 to 9 of the keyboard) using any progress code you want, like loading a new stream or community or changing an instance playlist element. When you create a new vote option, its graphic appear on the stream and you can place it by dragging the icon or by entering the number values. This graphic looks like a pie chart and is used to enable viewers keep track of the current voting results.

You can hide the voting graphics if you want and even replace the default ones by some that meets better your content. You'll need a graphic for each of the states: 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90% and 100%. Managana automatically places the vote number at their center. The custom voting graphics can be set at the community properties.

_P.S. The best format to choose for custom voting graphics is PNG._

You can also set initial voting for each stream in two different ways. First, check the **user interaction** tab of the community properties.
You can set the an option to receive one vote at the stream start by changing **default initial voting for public presentations**. You can also select **save stream voting results on server** to keep track of previous voting results. If this feature is on, Managana will check the last 10 voting results for the stream and add a vote to the most selected one, overriding the default initial voting setting. This server check requires Internet connection for your presentation.

**5.5 Progress code**

Managana uses its **progress code** to create interactions. Usually, the progress code you create for mobile devices work ok on public presentations, but you must be careful about the commands of the **MESSAGE** group.

*P.S. If you want to learn more about the Managana progress code, access [http://www.managana.org/managana-progress-code-reference/](http://www.managana.org/managana-progress-code-reference/)*

**Openurl, openfeedlink, sharefacebook, sharwitter and sharegplus** should be avoided. These commands will make Showtime open a browser window over the content. Notice that the remote control app has the sharing feature built-in and do not need these commands for viewers sharing.

**Send, startPCodeSend and endPCodeSend** are meant to be used if you enable the TCP server or client. They have no effect on the Managana default player (web or mobile).

Also, the value saving feature (**CODE** progress code group) will always save/load data from the computer disk, not from the server.

**5.6 Interactive swf content**

When you insert a picture file, the formats supported are **gif, jpeg, png** and **swf**. Managana can display interactive Flash movie files on desktop and Android systems, but their usage on public presentations must be done with care. Remember that viewers won't have access to the system mouse to interact...
with it, and the remote control target won't work as well. You should only use interactive swf files on Showtime if you intend to make your presentation on touch screen monitors.

5.7 Video subtitles

Sometimes you won't be able to use sound for your public presentations. This impact directly on the video you produce for it. Managana offers a workaround for these situations: you can add subtitles to your videos.

Managana uses the standard SubRip (.srt) format for subtitles. There are many free software over the web capable of creating a .srt file. Its usage is simple: just upload an .srt file with the exact same name as a video one (using the Managana video file uploader) and it will be automatically presented when the video is shown.

You can set the subtitle text appearance using the instance properties window on Managana editor (the text tab). You can even add progress code to show/hide subtitles: INSTANCE->name->showSubtitle and INSTANCE->name->hideSubtitle.

5.8 Streams on remote controls

When users connect the remote control app to a presentation, they have the option to open the currently shown stream on their devices. This is nice since they have the opportunity to have their “own versions” of the content. This is very useful when the main presentation have some text to be read or do not have sound (users may have their own, private sound).

While this is the default behavior, you can also set a secondary stream to load on connected remotes when users try to open it. You can, for example, create a label text for some video you are presenting. There are endless possibilities!

In order to set a secondary stream to load on remotes, check the stream properties at the Managana editor, Remote tab:
Select a stream to load on connected remote controls when the current one is open at the presentation.

- Aante da Mariana
- Afermação do Aglomerado da Serra
- Amúsica da Mariana
- As vias - Margareth
- As vias - Seu João da Folla
- As vias - Seu Nozinho
- Água - Dona Dália
- Água - Margareth
- Água - Maria do Socorro
- Água - Seu Nozinho
- Água - Turma de expressão corporal
- Caminhos - Dona Dália
- Caminhos - Dona Vida

[OK] [Cancel] [OK and Save] [OK and Publish] [OK]
APPENDIX I: THE REMOTE CONTROL

Mangana offers support to a remote control application developed for Windows, OSX, Android and iOS systems. It can connect to public, Showtime presentations and also to the Managana player on web browsers and even on another mobile device. It can be used in three ways

- For general public, as a part of a Showtime presentation, viewers will be able to check extra information, see a local version of your content and even share it on social networks. If they log in (with passwords provided by you or by using OpenID if you allow them to), content commenting and rating is also possible.

- For yourself or some people on your creation team, as a part of a Showtime presentation, allowing full control of the exhibition.

- For anyone with a login (or OpenID, if this is allowed), when Managana runs from a web browser or from a mobile device, allowing full control of their individual display.

When you want to use the remote control on Showtime presentations, you must set a public key as seen on section 4.5. Viewers can, then, enter this information at their remote controls to establish the connection. If you are the super user or an administrator of the connected Managana installation, you can provide your login data after connecting with the public key to gain the full access.

If you are checking Managana content on your web browser or on a mobile device, you can use the player interface to log in the player. Your e-mail will appear close to the interface icon (at the same place the public key would do). You can now log in at a remote control app to connect it to your individual presentation.
I.1 Creating a remote control application

The *Getting started with Managana: creating for web and mobile devices* document teaches you how to create an app with your content for distribution on app stores. The **Managana AppWizard** software used can also create a remote control application connected to your Managana installation. Let’s check how.

1. Download, install and open the **Managana AppWizard** (full installation instructions can be found at *Getting started with Managana: creating for web and mobile devices* document you can download at [www.managana.org](http://www.managana.org)).

2. Create a new app project of “remote control” type:

![Image of Managana AppWizard](image)

The first requires information is your remote application name. Then, you'll need an application id – usually started with your reversed site name (*com.mysite.myremote* at our example). The next step is to set the application
type to remote control.

After saving the app project, you'll be presented with some other required information. A very important thing to set is the Managana server URL. Use the very same web address of your installation on the web. Remember that the remote control will only work if the presentation have web access.

A remote control application connects to a single server URL. If you change your web address, you'll need to update your application.

**P.S.** The Managana **R** application Ciclope provides at Google Play and Apple Appstore is connected to its own Managana installation, working only for it. You’ll need to create your own remote control apps and make it available to your viewers.

3. When you provide all requested information, save your app project (scroll down on properties information for the save button).

**P.S.** The Managana AppWizard also offers some other customizing options, like changing the app icons and language settings. Just click the corresponding buttons to check them out. The “offline communities” are not used on remote control application type.

The next steps now are packaging your remote application for the systens of your choice. The procedure is the very same one described for player applications found at the *Getting started with Managana: creating for web and mobile devices* document.

**P.S.** iOS applications can only be distributed at the Apple Appstore – check [http://developer.apple.com](http://developer.apple.com) for more information. Android applications may be distributed on stores like the Google Play, Amazon Appstore or SlideMe or even by direct downloads from your site (users will need, however, to enable app installation from unknown fonts at their Android security configuration).

**P.S.2** Check the discussion about the Adobe Cirrus service at
section 4.5 to enable your remote control apps work without the need to connect the devices at the same network as the presentation.