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## SopraText Surtitling Suite

### Software overview

SopraText is a suite of applications and hardware LED signs that allow the presentation of Surtitles and Captions on a variety of output devices. Using LED signs, handheld tablets, LCD monitors and projectors surtitles and captions can be presented for the audience to view to enable further understanding and comprehension for not only hard or hearing people but also for translations, clarity, noisy environments and more.

One piece of software, the core software, allows the input, editing and output of surtitles to all of the output devices with many configurable options for which output goes to which display as an example. This allows for different languages to be displayed on different devices. Also, by using several output devices the surtitles can be displayed on the most appropriate device or location for that individual item.

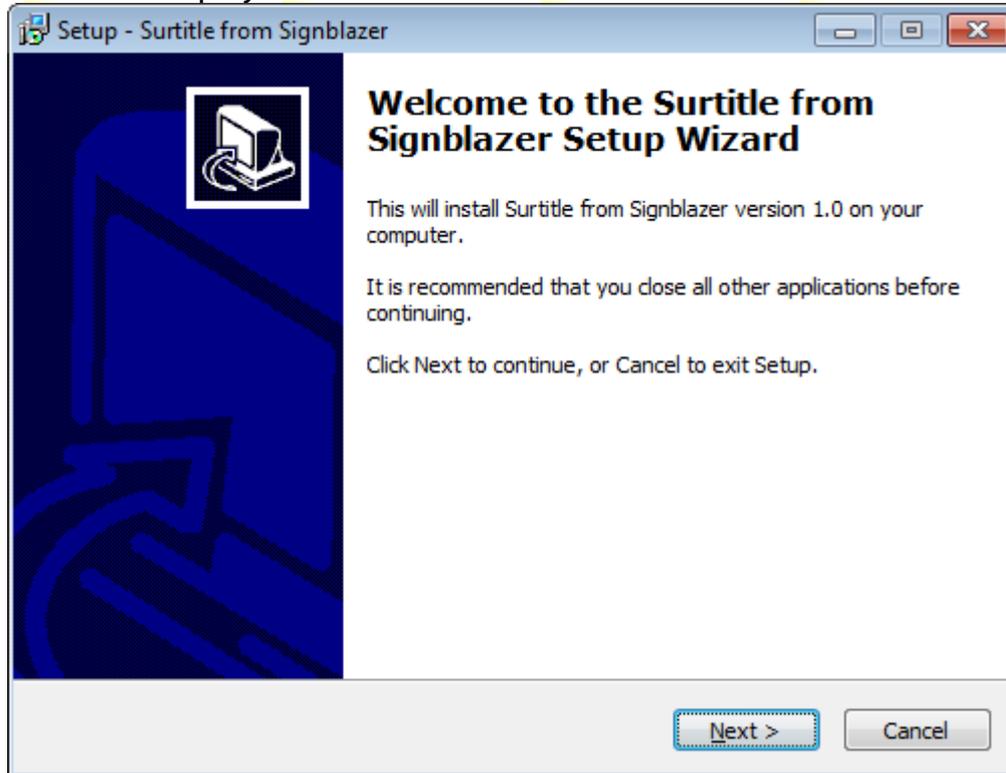
The surtitles can be imported from a Microsoft Word file (Word must be installed), taken from any text file via copy and paste or can be typed in using 2 editing options. Once the surtitles are imported they are arranged in Acts and Scenes for easy editing and outputting. The format of each surtitle is editable allowing for various vertical and horizontal justifications, different fonts and sizes, differing number of lines of text and colour.

Communication to the displays is predominantly via a network connection which gives low latency (time from operators key press to the surtitles being updated) and also robustness. By using WiFi mobile displays are catered for with the system working particularly well on Android tablets.

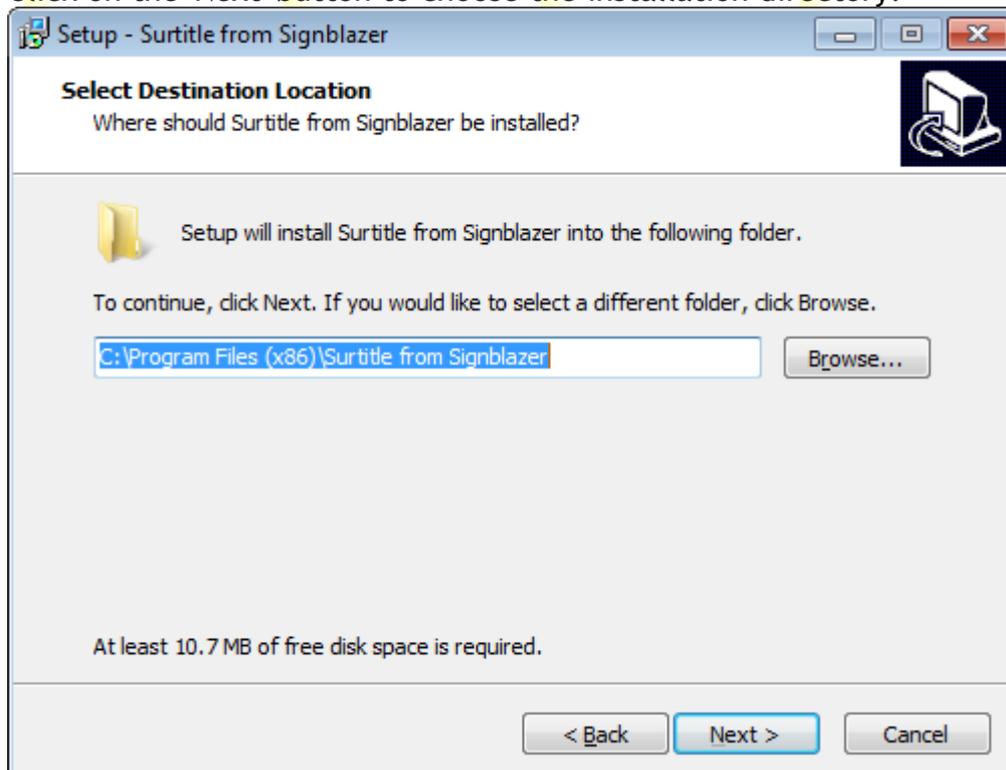
So, without further ado, let's get the core software installed, running and put to good work.

## Core Software Installation

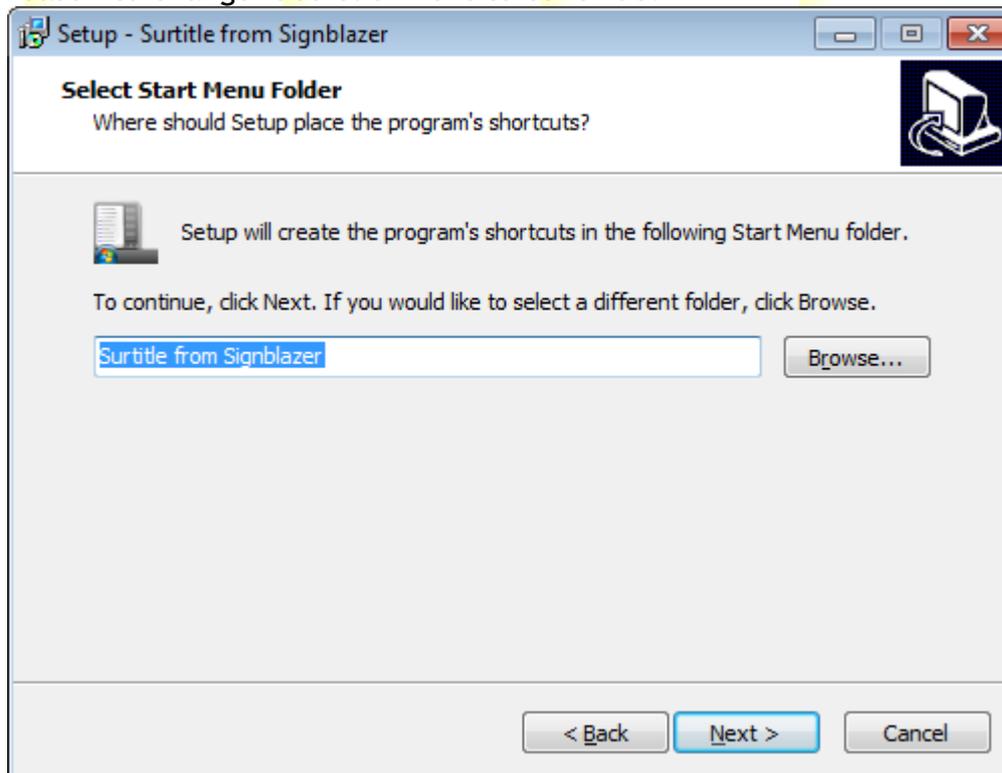
Once you have the installation file on your PC, run the executable to start the install process. The installation file is called 'Surtitle Setup.exe', once run it will display a windows similar to this:



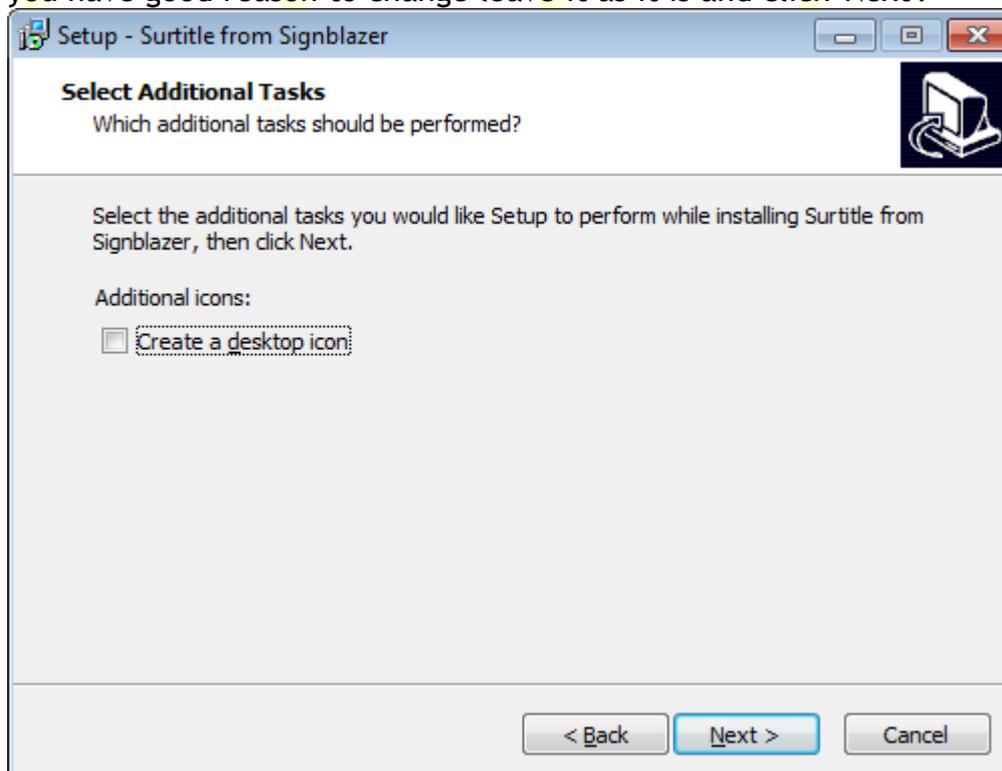
Click on the 'Next' button to choose the installation directory:



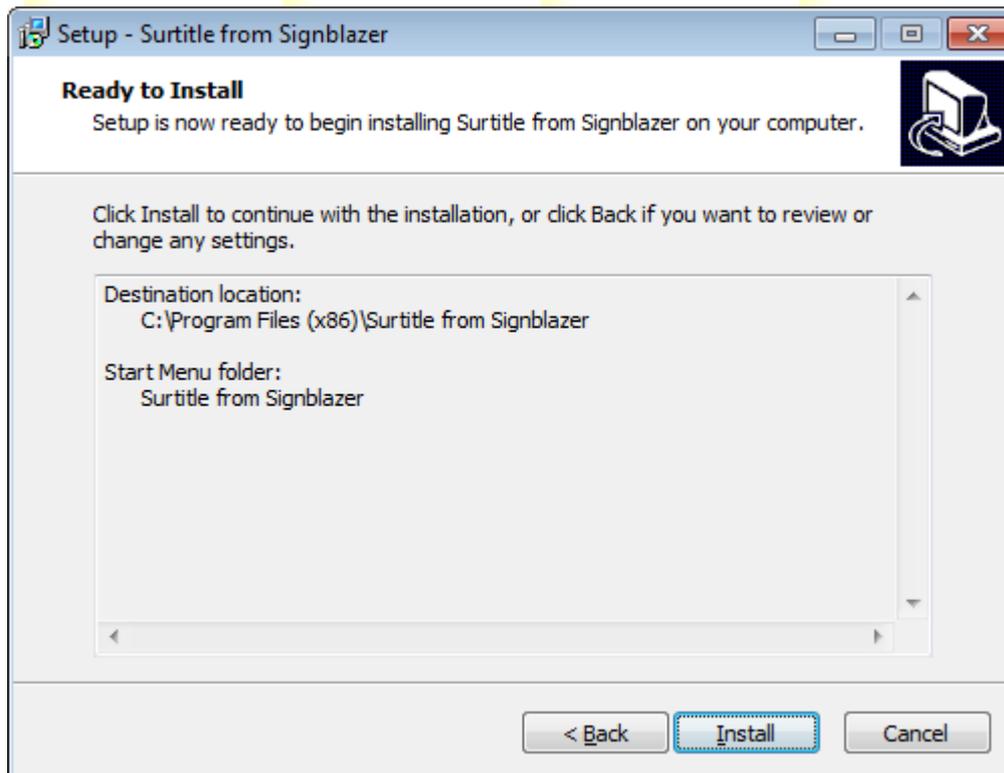
It is advisable to use the default installation directory unless you have good reason to change it so click next to continue:



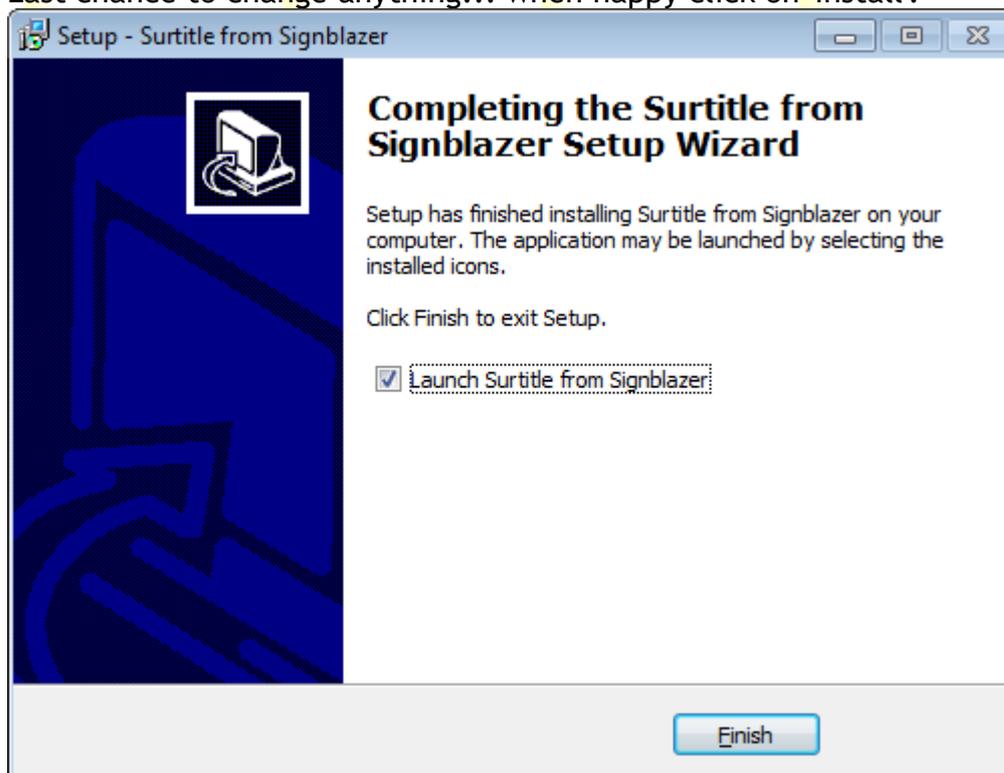
Here we are presented with the name of the Start Menu item, again, unless you have good reason to change leave it as it is and click 'Next':



If you like having shortcuts on the desktop then please click to place a tick in the 'Create a desktop icon' checkbox. Again click 'Next' to continue:



Last chance to change anything... when happy click on 'Install':



All installed okay, click on 'Finish' to exit the installer and run SopraText....

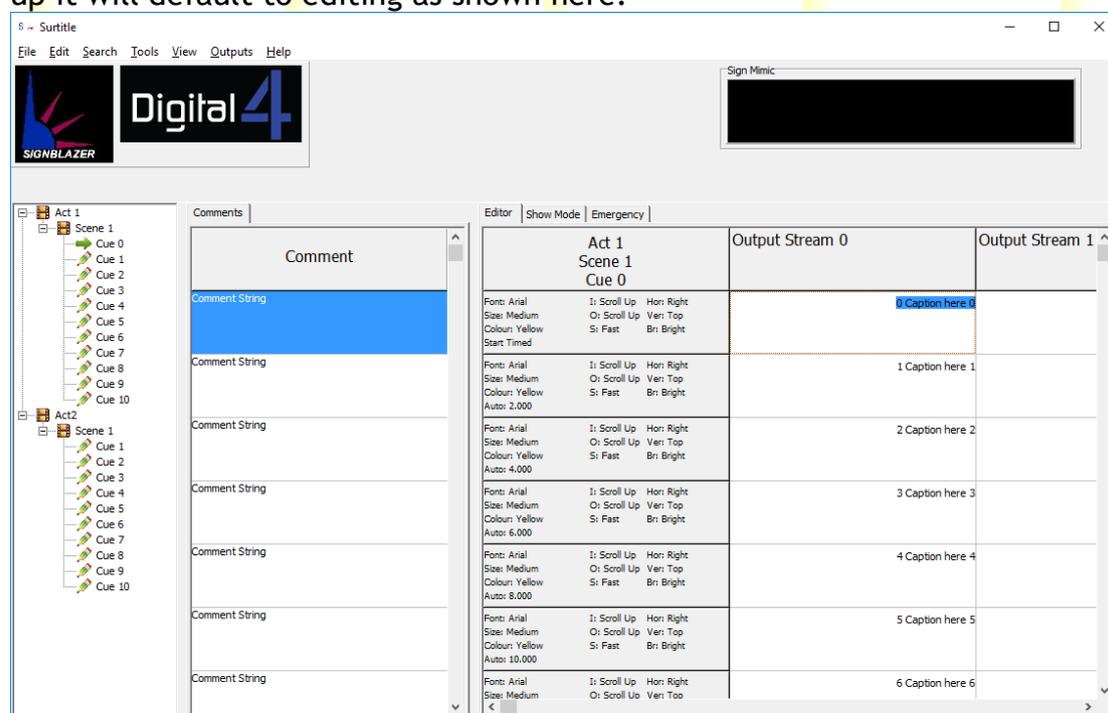
## Registering SopraText

SopraText uses an online registration process. Upon running an email is sent to our registration address containing a unique identifier for your installation along with operating system details to aid technical support. The registered user and company name are transmitted within this email for reference purposes. Once we have received your registration email we can generate the license file on our server for your installation to retrieve. Once you have run up the software with a valid license it will keep a local copy which is valid for the period of 2 weeks. Every time the software is run it will renew this license if there is a valid internet connection.

## Using SopraText

Now the fun begins.

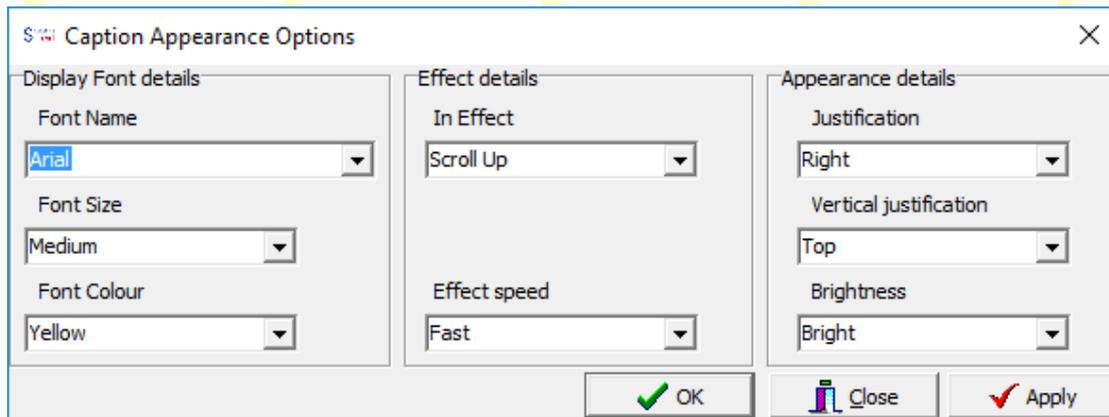
SopraText has two modes of operation, editing and showing. When it is run up it will default to editing as shown here:



On the left there is a list of Cues, they are arranged in Acts and Scenes for easy reference. The Acts, Scenes and Cues can be named as you wish as long as the Act names are unique, the Scenes within the Acts are unique and the Cues within the Acts are unique. Clicking on one of the cues will open the text editor at the cue defined by the click. This is a standard edit with the normal cut paste etc. clipboard operations which are accessible via the standard windows control keys or by right clicking on the editor. By right clicking another option to the normal is presented, 'Select Bitmap', this allows a bitmap to be displayed on LED signs. Simply choose a file on the PC which is of the correct size for the LED sign (typically 352x64 pixels) and this image will be displayed for that cue. If you wish to add a new caption then simply press 'Alt' Enter, a popup will show prompting for a new cue name - enter this (must be unique) and a new cue will be created ready for your text input.

Navigating through the cues is done using Page Up/Down or the mouse scroll wheel.

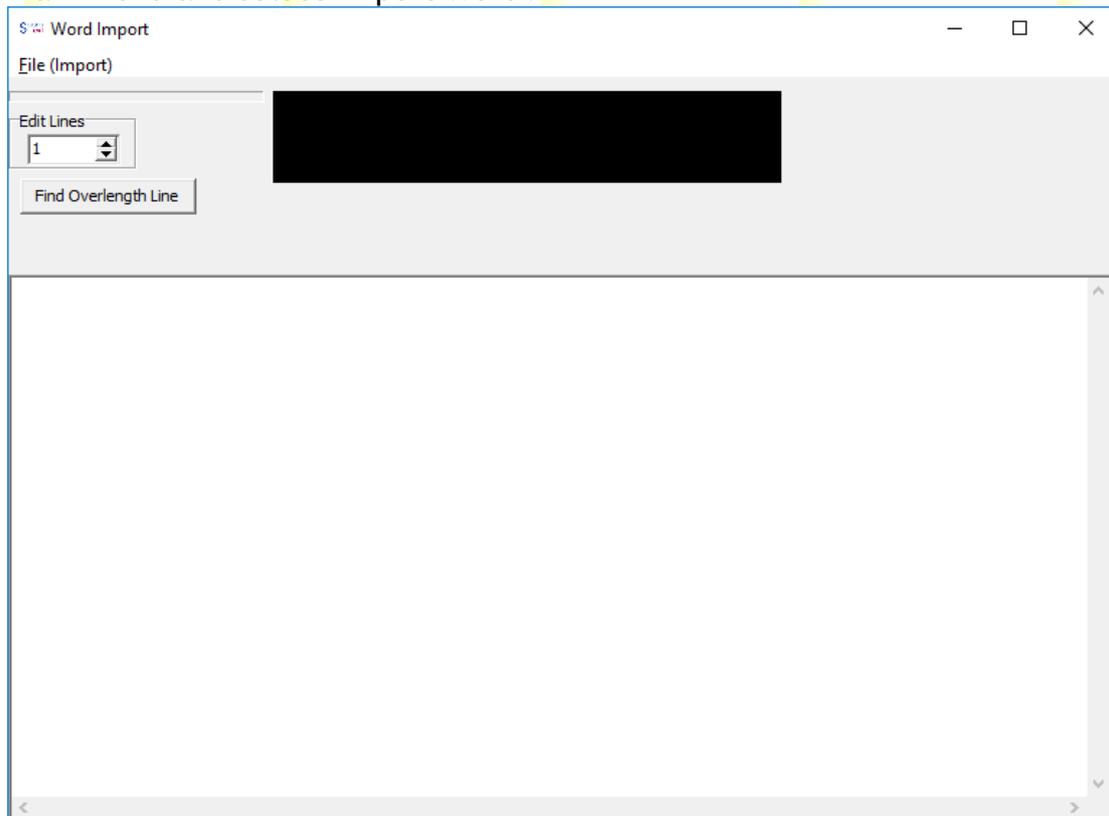
On the left of the captions the display options for the cues are displayed. double clicking on one of these will bring up a window like this:



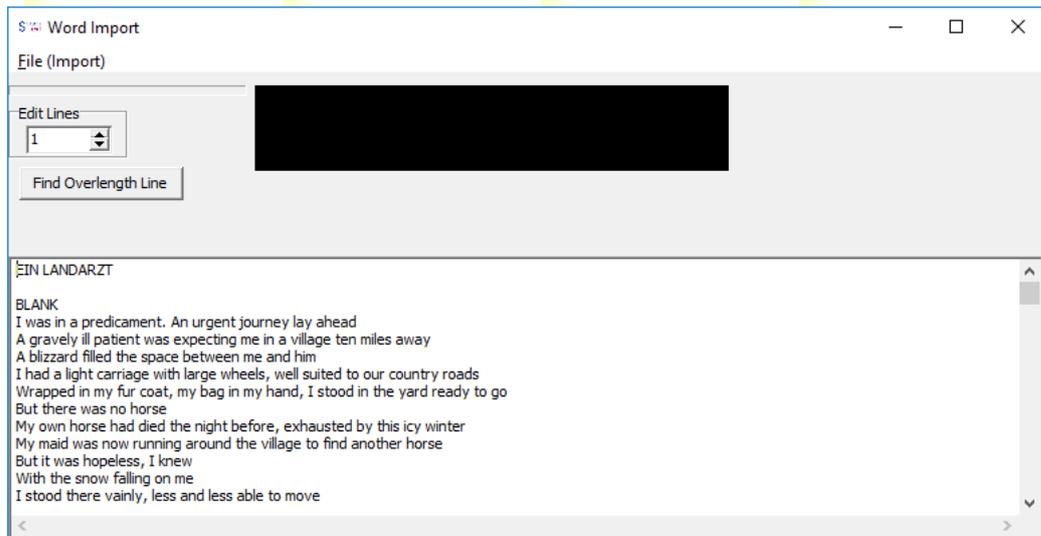
Here the display options for the cues are shown and are editable, I think it is all self explanatory? If you want to keep any changes you make then exit using Okay, if not use Cancel.

### Importing text

One of the powerful features of SopraText is the capability to be able to load existing surtitles from Word documents and also be able to load them from any Windows text based editor using the clipboard. Go to File on the main menu and select 'Import Word'.



Here we have the import text window where we can load surtitles from a Word file, paste in from another editor and also load from the main editing window. If you click on the load MS Word button a file open dialog will pop up, choose your surtitle file here and press Open.



The surtitles are now loaded into the main edit window where they can be edited until you are happy. There is an option to change the number of lines as a default for each caption. Typically 3 is good but this is changeable, this is used to split the surtitles into units of meaning. The mimic will show a representation of what the signs will display to aid formatting. Once you are happy click the 'Send to Surtitles' button, this will copy all of the text you have in this import window to the main editor and will assign default Scene, Act and Cue names. Please be aware that by Sending the Surtitles to the main editor all of the Act, Scene and Cue names will be lost, as will any changes made to the style (font etc.) of the surtitles. Use this only at early stages of editing.

It is also possible to edit the cues in the main menu, this a simple editor with a few useful additions. Firstly, if there is a need to split a cue to another one use Ctrl Enter. This will split the cue at the point of the cursor placing the text after the cursor into a new cue (you will be prompted for the name of the new cue).

If you right click in the text editing area then a context menu will pop up. In here you have the normal text clipboard operations but also an option to select a bitmap. Clicking on Select Bitmap will open up a file open dialog. Select a bitmap and click Open. When the software is in show mode and this cue is output then the bitmap will be displayed on the LED signs.

The other option is insert code. These are a list of special functions available to the operator. There are LED test patterns, blank and clear commands and HDMI input controls.

Talking of HDMI input... available as an optional extra is the capability to be able to use the LED displays with an HDMI input. The sign is software controlled over which input to use (SopraText of HDMI), this is selected by using the F12 key, the menu item View|HDMI Input or by using the code controls.

## HDMI Telnet Control

We have recently had the need to control external equipment to switch HDMI feeds from a digital presentation controller to our LCD output. This has been achieved by the use of commands sent over Telnet. To this end

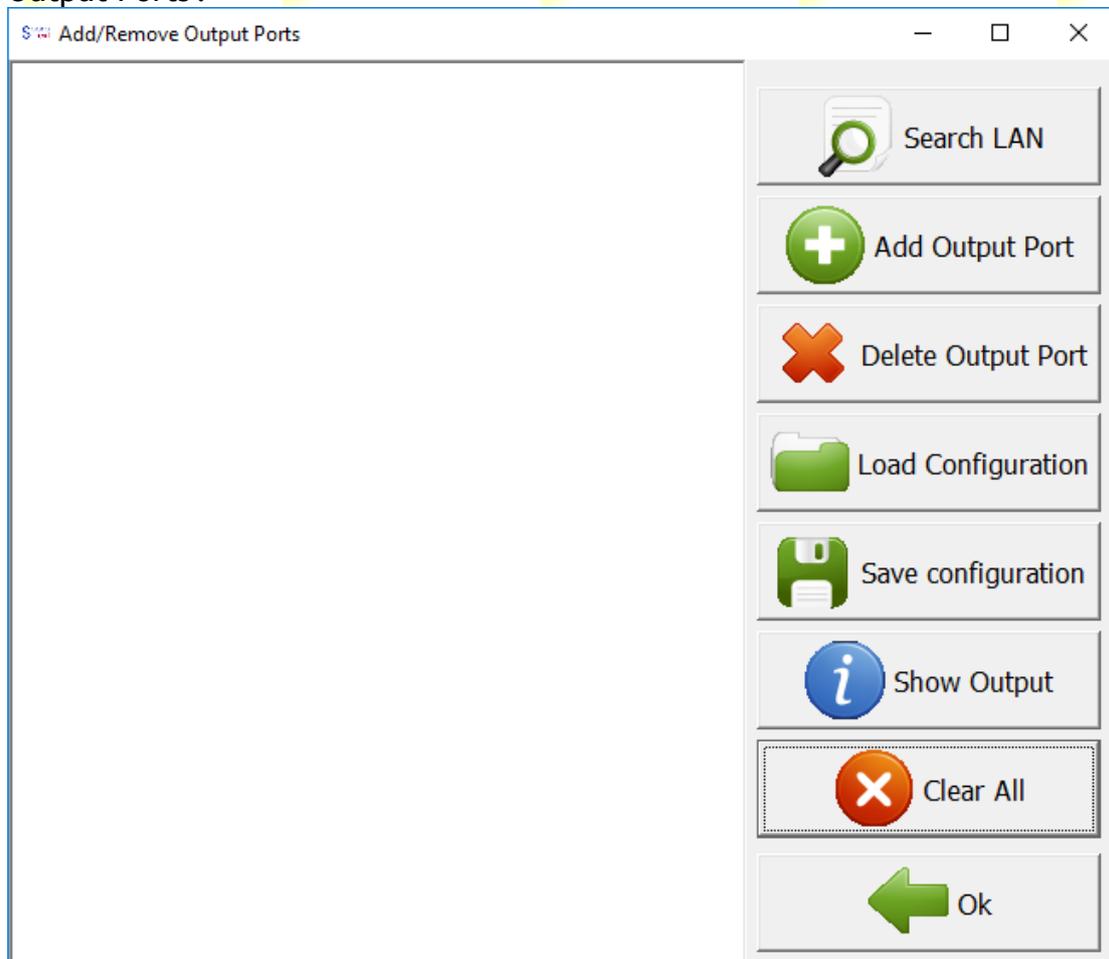
there is a new configuration window. This is accessed via the main menu in Communications | Configure Telnet HDMI. This window pops up:

The screenshot shows a window titled "HDMI Telnet Commands". At the top, there is a close button (X). Below the title bar, there is a label "IP address of device" followed by a text input field containing "127 . 0 . 0 . 1". Underneath, there are two side-by-side text areas. The left one is labeled "HDMI On Command" and contains the text "IP On". The right one is labeled "HDMI Off Command" and contains the text "IP Off". At the bottom of the window, there are two buttons: "HDMI On Test" on the left and "HDMI Off Test" on the right.

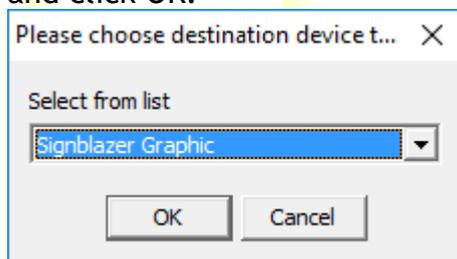
Enter the IP address of the switching device, port 23 for Telnet is assumed. There are two multiline edit boxes where the commands for switching the inputs for both HDMI On and Off. Multiple commands can be entered by adding one per line. Use the two buttons to test your commands.

## Outputting

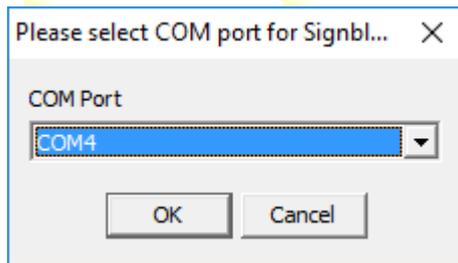
Okay, we have the surtitles in and now we have to output them somewhere. Head on over to the Outputs option on the main menu and select 'Edit Output Ports':



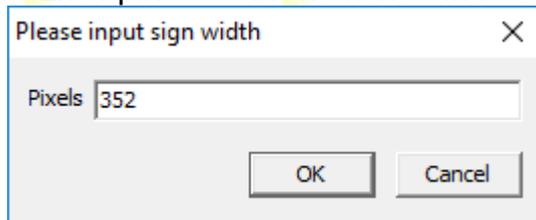
Here there are no output devices registered with the application. Let's add a standard Signblazer graphic display; click on 'Add Output Port', this brings up a window asking us to choose the device type, select 'Signblazer Graphic' and click OK.



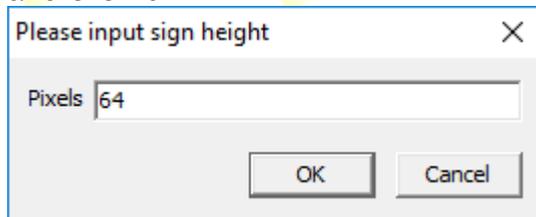
Next choose the COM port to use for communication from the list of available ports in the drop down:



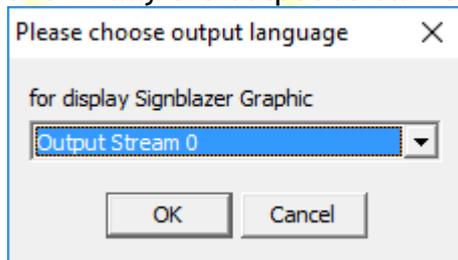
Now we have to configure the screen size, a standard surtitling sign is 352x64 pixels so in the next windows enter 352:



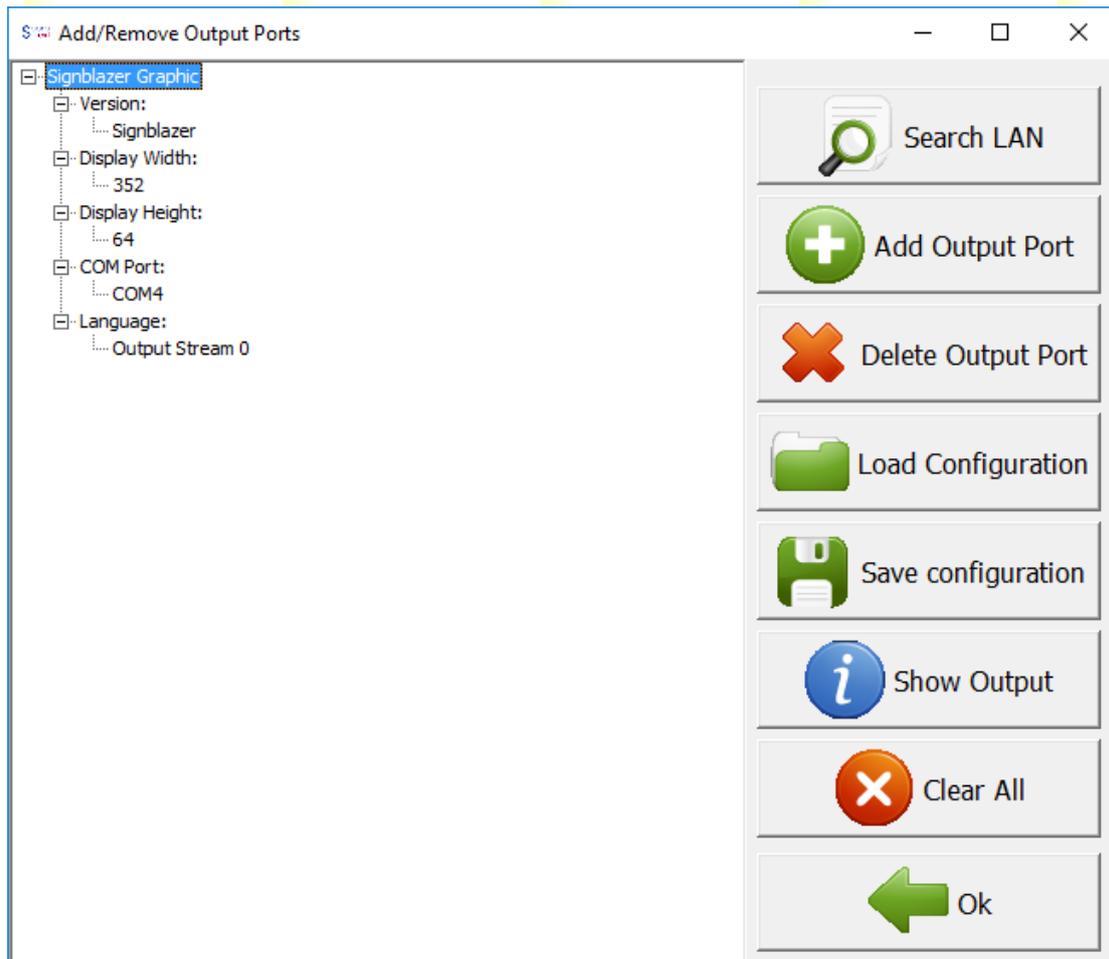
and then 64



and finally the output stream to use:

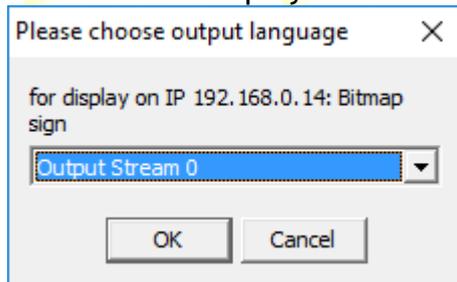


Once all this is entered the sign will be showing in the list on the left:

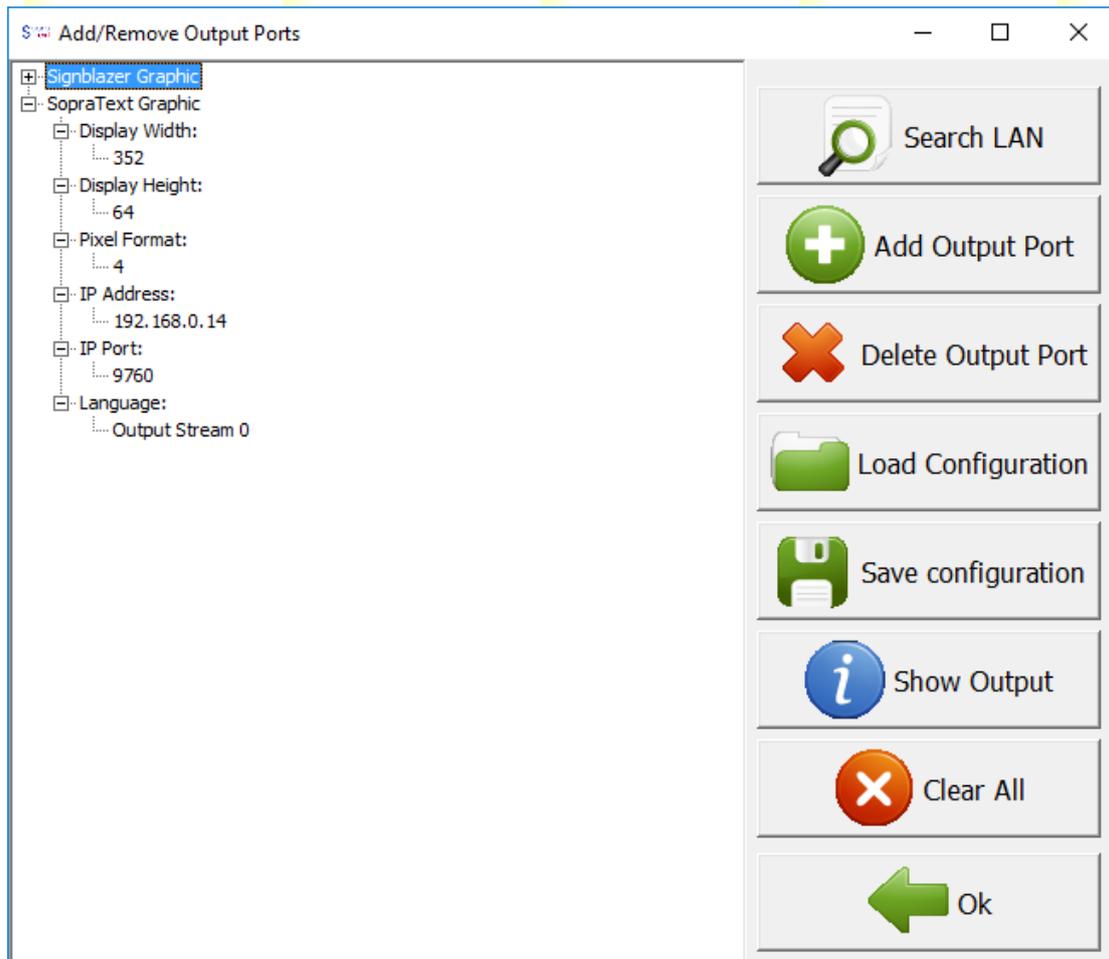


(For clarity I have expanded all of the tree)

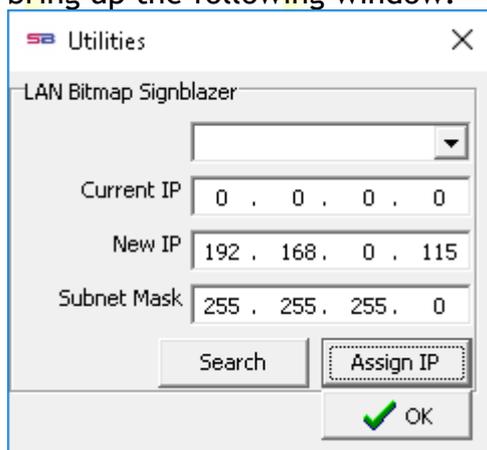
To add a SopraText LAN display simply make sure that this software is running when powering up the display. When the display is assigned an IP address it will broadcast its presence over the LAN and then the core software will display this message:



From here we can select the correct output stream and we are ready to go. If we go to the output ports list again we can see the new sign has been added in.



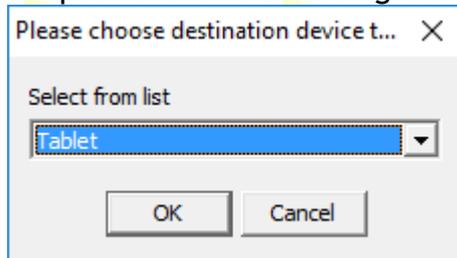
It is possible to set a static IP in the sign - this is remembered in non-volatile memory when the sign is powered off. To do this follow these steps:  
 In Edit mode go to Communications | Utilities in the main menu. This will bring up the following window:



Click on the Search button, this will search the LAN for SopraText LED signs and populate the drop down with any sign found. Select one sign from the list and the current IP edit will be populated with the IP address of the sign. Then populate the New IP and Subnet Mask edits with the new values. When you are happy, click the Assign IP button. The new IP will be sent to the display and for confirmation that display will show its status page with the

network parameters. In case the parameters are wrong for the network that you are connected to the sign can be reset by pressing the button on the back of the sign located by the network connection for 10+ seconds. To display the current settings simply click this button.

We can also add a tablet output if wanted. Do this by clicking on 'Add Output Port' and selecting tablet from the drop down list:



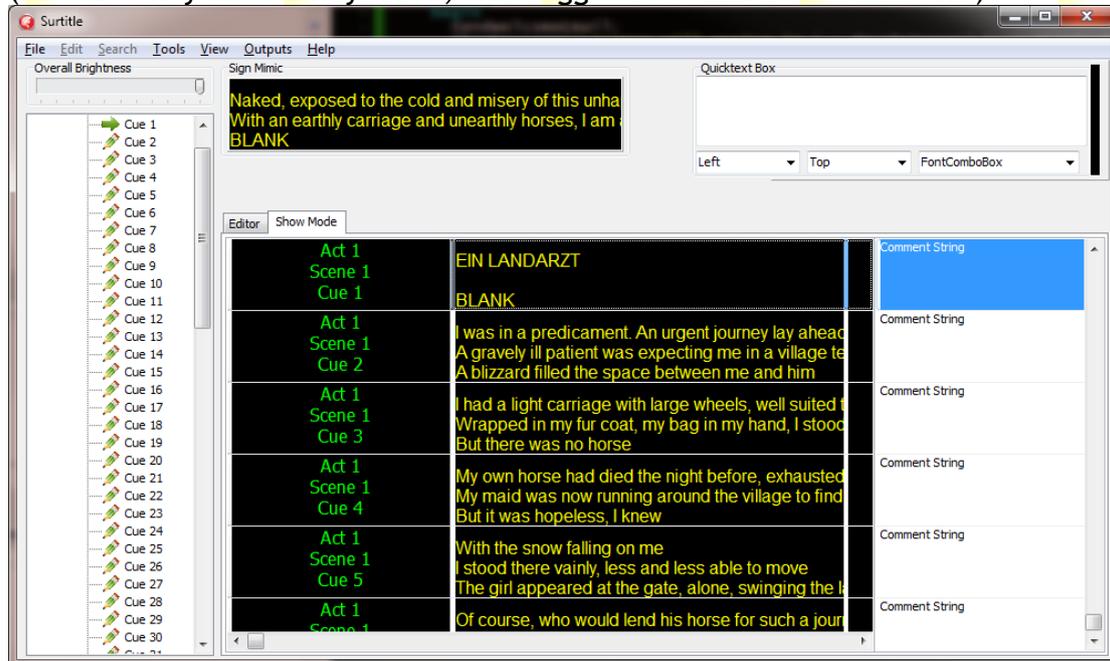
You will be presented with another window showing the available network interfaces if there is more than one present. Please select the correct one depending on the network that the tablets are running on.

The final display type which is available at present is the LCD output software. Please refer to the documentation for that application to guide you through the setup procedure for that software.

We now have our output sorted.

## Show Mode

So, we have our surtitles and our outputs set - let's go to show mode. On the main software screen click on the tab 'Show mode' or press F4 (function key on the keyboard, this toggle between the two modes):



Here we can see the output mode, the mimics of the text as it would be shown on the displays and also on the left side the reference for each surtitle. Navigation through the surtitles is by using the cursor keys for up and down with right cursor actually outputting the surtitle to the display(s). Page up and Page down will move through the surtitles one page at a time.

## Slideshow function

It is possible to send images to the LED displays prior or during a performance. This can either be via simple timing or by selecting and sending an image.

By going to the main menu and selecting View|Pre-show Slideshow a window will pop up:



Under the files heading the folder containing the image files is chosen. The software will go through all available BMP files and load those which are the correct size for the LED signs available in the software. The most common LED sign size is 352x64 pixels. The BMP files must be edited to this size. Due to the display limitations the number of colours will be reduced to 8 when displayed. Once the folder is selected the image list will be updated. If an external change is made to the files in the folder then pressing the refresh button will force a refresh on the list.

Each file will be shown for a period of time determined by the Slide duration box. This is in seconds. The slides will fade to black and then the next slide will fade up. There are two ways to start/stop the automatic output; by using the Play/Stop buttons in the slideshow window or by using the Pre-Show Slideshow checkbox in the main window. In order for the slideshow to operate the software must be in the Show Mode.

It is possible to send individual images without running the slideshow by clicking to select an image and then right clicking on it to bring up a context sensitive menu. There are two options in this, Send Now (which will send the image to the signs immediately) and Edit. If the slideshow is stopped then it is possible to send an image by using the Send Now option.

To make it easier to find and edit the files if you use the context menu and select Edit then the windows default BMP editor will be used (most often Paint).

A simple way to create text-based images or to create a template bitmap is to use the editing functions for the cues and then use the context sensitive menu on the sign mimic, simply right click on the mimic and select 'Save Image'. This will save the image to disk in a location of your choosing, the default will be the location used for the slideshow images.

An alternative to sending images is to show selected cues from your script for the slideshow. For this feature simply select the cues you wish to show using the Cue tree on the left of the main window and then click the play button in the slideshow window. Then the selected cues will be shown on a loop until stopped.

## Shortcut Keys

### Edit Mode:

Ctrl Delete - Delete Cue

Shift Insert - Add cue before current cue

Ctrl Insert - Add cue after current cue

Ctrl Enter - Splits current cue at cursor point and creates a new Cue with the text after the split.

Alt Enter - Adds a cue after the current one.

Ctrl Z - Undo

Ctrl F - Find text in cues

F2 - Show Caption Details

F4 - Go to Show Mode

### Drag/Drop operation in the structure tree:

Select and drag a cue/cues into the same scene to create copies

Select and drag a cue/cues and hold Shift when dropping cue(s) to move cues.

### Show Mode:

C - Clear screen

B - Blank screen

F - Fade screen

Q - quit out of timed section and skip to end

Page Up - Move up to previous cue (don't output)

Ctrl Page Up - Move to previous Act/Scene

Page Down - Output current cue

Ctrl Page Down - Move to next Act/Scene

Media Play/Pause - Pause current media (Sound/video)

Media Stop - Stop current media

Cursor Right, Space, S - Output current cue

F2 - Show caption details

F4 - Go to Edit Mode

F5 - Show/Hide Act/Scene/Cue to gain screen real estate

F6 - Show communication status

F9 - Show timing recorder

F11 - Show Pre-Show control window

F12 - Toggle SopraText units between internal CPU and HDMI input

## Context Menus

Right clicking on the show structure tree on the left brings up a context menu with the following options:

**Add Item Before** - Adds an Act/Scene/Cue before the currently selected item. If the current item is an Act then a new Act will be added.

**Add Item After** - As above but after the currently selected item.

**Delete Item** - Deletes the currently selected item, if that item happens to be a scene then the whole scene will be deleted - you have been warned!

**Edit Item Name** - This enables editing of the current item, whether it is an Act, Scene or a Cue. Please remember that the Act/Scene/Cue have to have unique identifiers within their parent, i.e. no two cues in one scene can have the same name but the same name is allowed if the cues are in separate scenes.

**Select All** - Selects all of the cues in that Scene, this allows for bulk attribute (colour for example) changes to be made.

**Insert Timing Stop/Start Pair** - Not yet implemented.

**Remove Timing from Section** - This removes the timing attributes from the selected section, use this to retime/record a section of cues.

**Split Timing Section** - This will split the timed section at the currently selected cue. It allows for the show to be sectioned up to allow for more timing cues to be added enhancing the quality of automatically output cues.

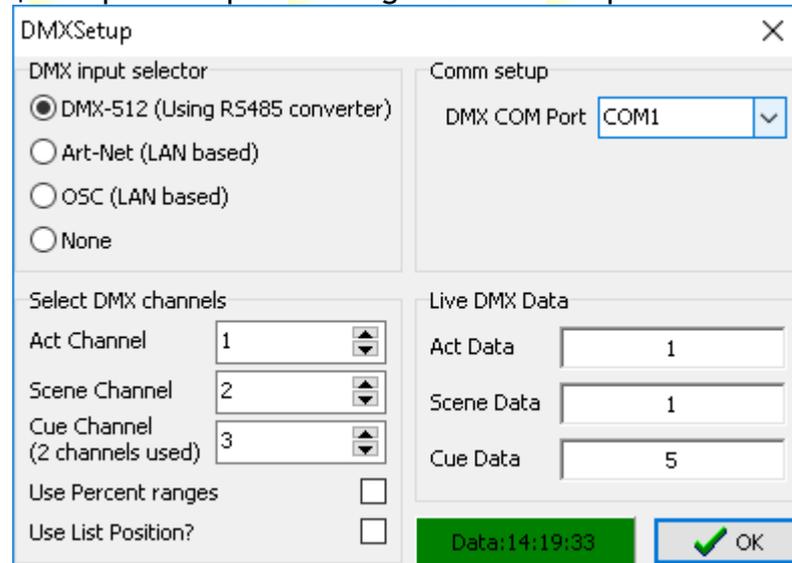
**Renumber Scene** - Sometimes it is good to renumber cues so that previous editing (inserting and removing cues) that has disturbed the numbering can be rectified. Especially useful for automatic output.

**Renumber from this point on** - This will renumber the scene from the current position, allowing the beginning of the scene to be left unchanged.

## Additions

It is possible to control the output of the captions using DMX-512 input, ArtNet or OSC. DMX requires the use of an extra piece of hardware which receives the DMX input and makes it available to the PC. Art-Net uses the network interface present on the PC. If using Art-Net then the data is sent using the DMX-512 embedded protocol.

To control the output from DMX 4 channels are used. Go to Communications | Setup DMX input to bring this window up:



As you can see in the above screenshot it is possible to select the DMX-512 input from the RS485 converter, Art-Net input or no external input. Here we are interested in the DMX-512 input so have that selected.

From here we can choose which channel input is going to select which part of the script. Act and Scene take one channel each (255 options) and Cue takes 2 channels (65535 options). If any of the channel values is zero then the surtitles will not be output. If all three inputs are zero then the displays will be blanked.

There are two ways to access the cues, one is by the position in the list of cues, ie. If cue 5 is requested then the 5<sup>th</sup> cue in the list will be shown. The other method is by using the cue numbers which are user editable. In this case the cues, scenes and acts must be numeric integers only. In other words the names for the act, scene and cue can only be numbers like 1,3,6 and not 'Act 1', 'Scene 3', 'Cue 6'.

If the 'Use list position?' check box is checked then this is how to access the cues....

To display the first Cue of the first Scene of the first Act output the values 1(Act (channel 1)), 1(Scene (channel 2)), 0(Cue (channel 3)), 1(Cue (channel 4)) to the relevant channels. The lower channel is the Most Significant Byte for the Cue number.

If the Scene or Act value is higher than the number of Scenes or Acts present in the presentation then the last Scene or Act will be used.

The new Cue is output on change of input, therefore if the software is showing Act1, Scene 2, Cue 45 sending this information again will not cause the cue to be resent but if another cue is requested via DMX then the change will be noticed and the new Cue displayed.

If the 'Use list position?' check box is unchecked then the Act, Scene, Cue names will be used. This means that if cues are moved about in the list the DMX triggers will stay with those cues.

It is very similar for Art-Net.

DMXSetup

DMX input selector

DMX-512 (Using RS485 converter)

Art-Net (LAN based)

OSC (LAN based)

None

Art-Net Port-Address

Universe

SubNet

Net

Select DMX channels

Act Channel

Scene Channel

Cue Channel (2 channels used)

Use Percent ranges

Use List Position?

Live DMX Data

Act Data

Scene Data

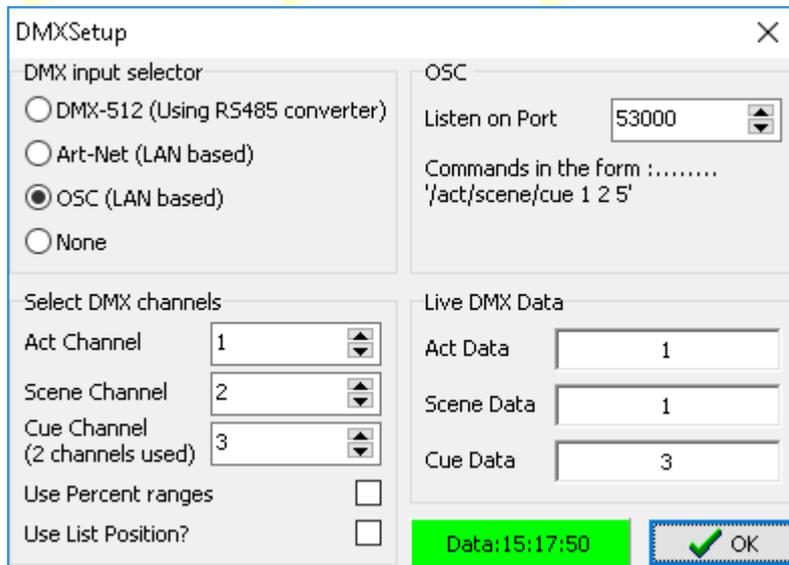
Cue Data

Data:14:19:51 OK

Here we choose the Universe, Subnet and Net of the Art-Net data that we are interested in. Again we choose the DMX channels that correspond to the Act, Scene and Cue that we wish to show. The software will broadcast itself over the Art-Net protocols and will send the description of 'SopraText from Signblazer Ltd and Digital-4 Ltd.'

DMX-Workshop from Artistic Licence Holdings is very useful for testing as Art-Net installation. (<http://www.artisticlicence.com/>)

And again for OSC.



The command is sent to SopraText using the OSC address `‘/act/scene/cue’` followed by the numbers for the Act, Scene and Cue. For example, the command for instructing SopraText to display the 5<sup>th</sup> cue from the second scene of the first act would be `‘/act/scene/cue 1 2 5’`. If the cue, scene or act names include a space character then enclose the name with quotes - `‘/act/scene/cue “first act” “first scene” “cue 5”` as an example.

It is also possible to send the act/scene and cues separately. For example, `‘/act 3’` will set the current act in SopraText Venue to `‘3’`, use `‘/scene’` to set the current scene and finally `‘/cue’` to set the current cue and send it to the displays.

Here is a screenshot of an example in QLab.

