



OmniDisplay

User Reference Guide v11.0

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Introduction

OmniDisplay is an intuitive, easy to use communications platform that enables a user to extract, aggregate, compose and stream live real-time information from multiple external and internal sources to any video display.

OmniDisplay auto-installs OmniTicker (our iconic scrolling ticker) and OmniRSS (our RSS Feed Manager). Additional User Guides: [OmniRSS User Guide](#) | [OmniTicker User Guide](#)

OmniDisplay is a Windows 10 application; it uses the Windows Extended Desktop to create OmniDisplay Virtual Displays (OVDs). OVDs can be published to any physical display that accepts a video output; Smart TVs, video monitors, LED displays and LED tickers.

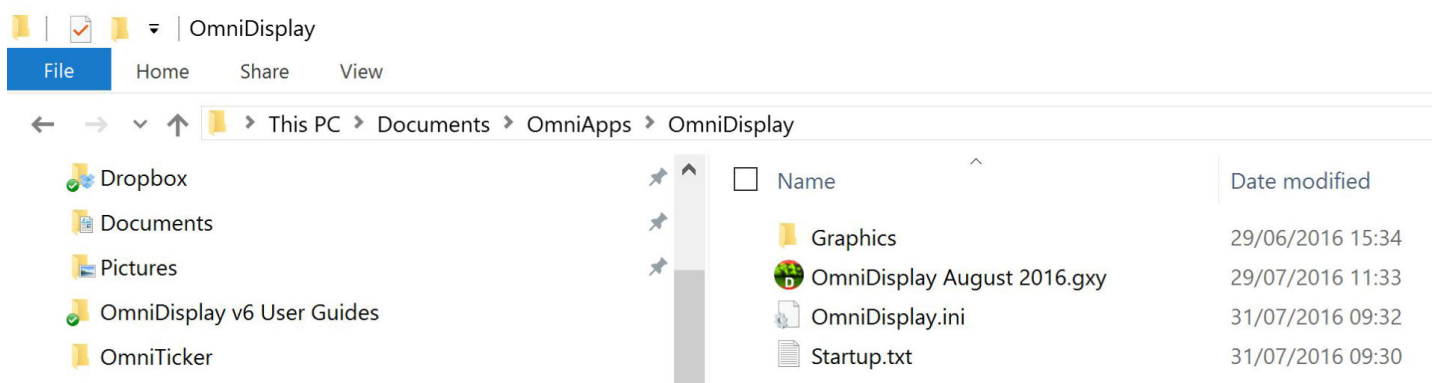
System Requirements

Windows 10 standard desktop hardware with a minimum disk space of 10MB, HDMI port or wireless adapter for a single display application. Multiple displays will require additional HDMI ports or third party networking and routing hardware/software.

OVDs are connected to physical displays either via an HDMI port, or through the use of Video Controller software and hardware. For example: OmniDisplay has been tested with Matrox Power stream software and controllers to enable seamless and transparent connection to physical displays.

Installing OmniDisplay

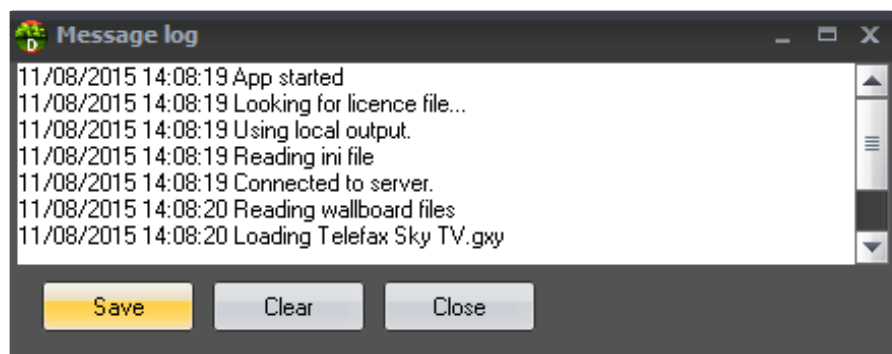
OmniDisplay is provided through a secure download. On installation, OmniDisplay is placed into the specified folder and the application is run by selecting it from the Start bar menu. When started for the first time, a sub-folder is created in the documents directory (OmniApps\OmniDisplay), and a further sub-folder is created (Graphics).



These folders maintain user configurations, display definitions and media items (text, images and video) which have been imported into OmniDisplay layouts. The default location for all OmniDisplay layout files is Documents/OmniApps/OmniDisplay.

Alternatively, when an OmniDisplay layout is created it can be stored in a location of the user's choice, alongside any media items associated with that layout. This is covered later in this document.

During initialisation and subsequent usage any significant events are recorded in a log.



The message log is viewed to track the progress of the application installation and initialisation with successful events and errors being recorded. When the application is first used, this message log window will resemble that shown above. Actual messages may vary depending on the particular system configuration.

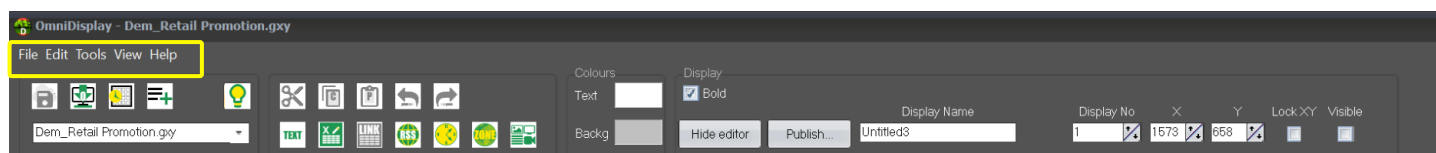
Supported Media Options

A comprehensive range of multimedia options are supported and include:

- Internal data imported from Excel and Application Frames
- External data extracted from RSS feeds
- Images, Graphics and Text from on-premise files
- Pre-recorded video from on-premise files
- External URL sourced video and live web pages

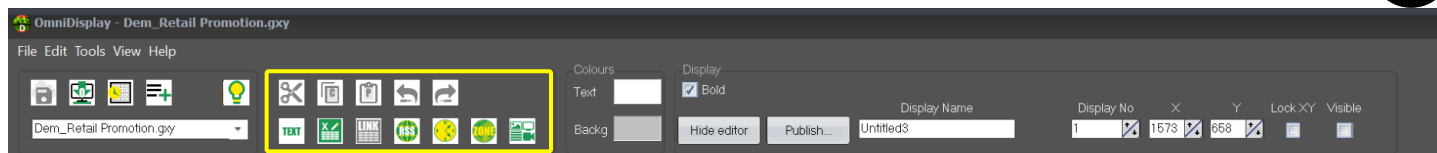


Standard 1920x1080 Layout featuring TV Channels, Video Playlists, Welcome Playlists, Vertically Rotating Message Bars and a Scrolling Ticker.



Tool Bar Navigation - v10.0 Updated July 2020

File New Display Layout Open Content File Save Content Save As Remove Layout Publish Schedule Playlist Run OmniTicker	Top Row Tool Bar Defines the size parameters for a new Display Opens a file previously saved file from the OmniDisplay folder Save current content and layout if previously saved Save current content and layout with a new name Removes the Display from the list of active Displays Saves current content and layout to a user named folder Set up a schedule (Load various files at different times). Set up a Playlist (Load various files at defined intervals). Activates OmniTicker to run alongside OmniDisplay
Edit Undo Redo Cut Copy Paste Paste Link Bring Forward Send Back Bring to Front Send to Back New Item Delete Select All Search/Replace Item Properties	Top Row Tool Bar Undoes the last editing action Resets the last editing action to the prior status Deletes current selection after copying it to the clipboard. Copies the current selection to the clipboard Creates new selection from clipboard contents. Create a DDE link or links from selection in Excel. Brings selected object one layer forward Sends selected object one layer back Brings selected object to the front Sends selected object to the back Creates a Text, DDE, RMP or Graphic object Permanently deletes and Item or group of Items Selects all objects in the layout Identifies/Replace 'Service' & 'Topic' from a Feed Handler Identifies the object properties
Tools Layout Properties Comms Properties Environment Options Refresh Display Clear/Refresh Board Clear/Refresh All Boards Feed Handler Connect World Clocks Clean Graphics Folder	Top Row Tool Bar Establishes the width and height of the layout in pixels Only used when setting up a serial connection, default 'None' General, Display, DDE & RMP Cache settings Trans-Lux ONLY - refreshes physically connected Display Trans-Lux ONLY - clears/refreshes connected Display Trans-Lux ONLY - clears/refreshes ALL connected Displays Connection settings for local host (defaults set) Identifies world time zones from Windows registry Removes all graphics objects not in use by active Displays
View View Status Bar DDE Link Status Message Log	Top Row Tab Identifies object source when mouse hovers over the object Identifies status of links with Excel spreadsheet Maintains log of programme actions
Help About	Identifies Release Level and links to the online User Guide

**Edit**

Cut
Copy
Paste
Undo
Redo
Colour

Top Row Buttons

Deletes current selection after copying it to the clipboard.
Copies the current selection to the clipboard.
Creates new selection from clipboard contents.
Undoes last action (up to 100 levels).
Undoes last 'undo'.
Set the colour of the selection's text.

Edit

Text
DDE
Paste link
E
Clock
World clock
Graphic

Bottom Row Buttons

Create a single line static text object.
Create a DDE link.
Create a DDE link or links from selection in Excel.
Create an Item using data from OmniRSS.
Create a time or date Item.
Create a world clock Item
Create a graphic / media Item

Colours

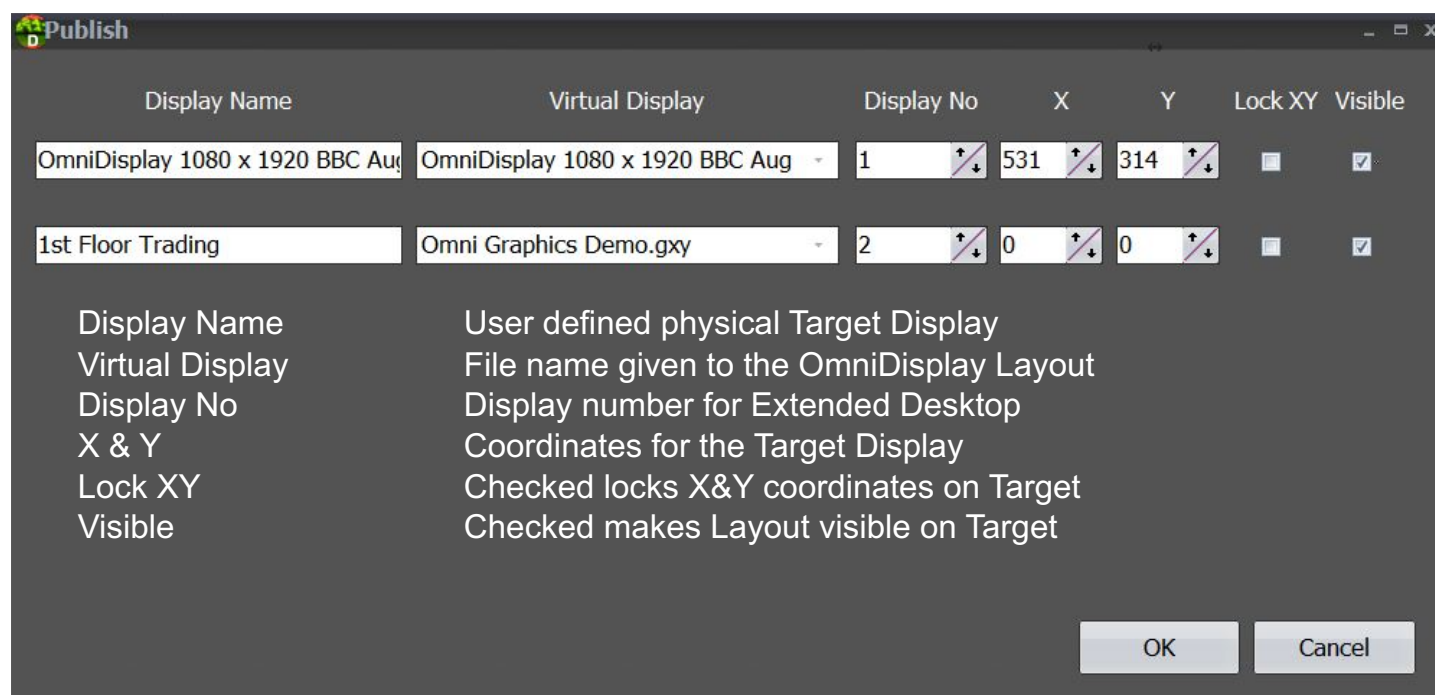
Text
Backg

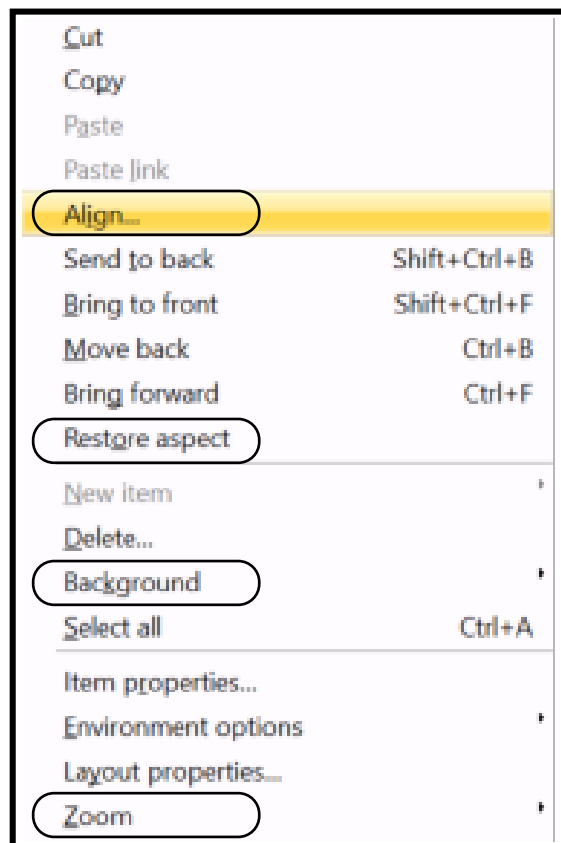
Set ALL Text to a chosen colour.
Set the Background colour.

Display

Bold
Hide editor
Publish

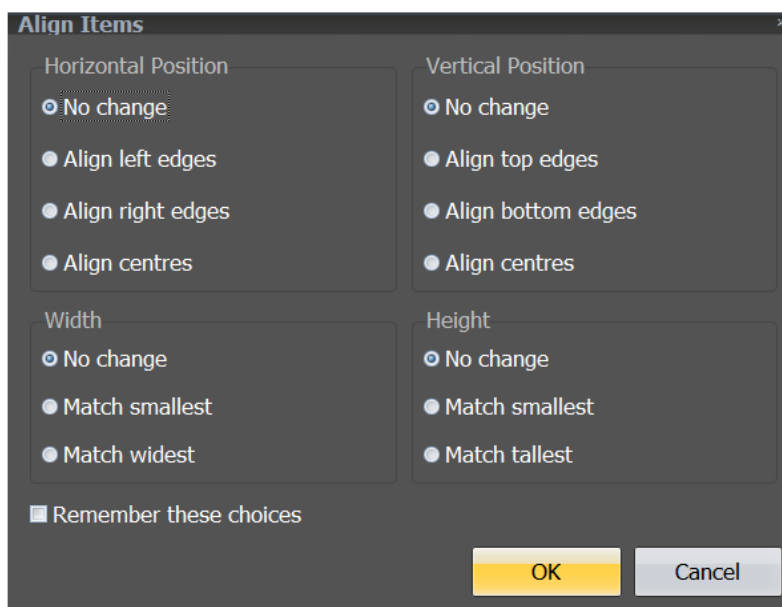
Emboldens all characters on the published display.
Minimises editor to the task tray. Double click icon to restore.
Opens **Display Management Dashboard**





Layout Right-Click Functions

On Right-Click replicates editing functions available from the main menu, but adds four specific additional functions:



Align provides various options for aligning multiple media objects, horizontally and vertically. Media objects include video, TV channels, text fields and numerical tables.

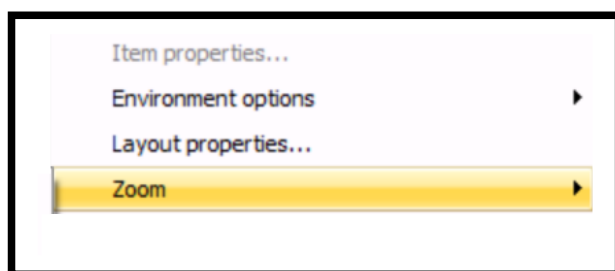
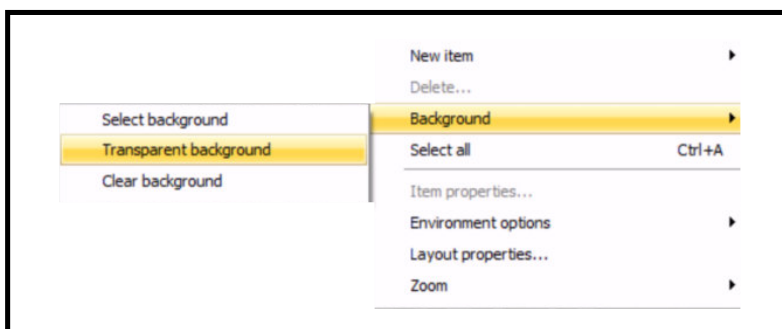
Restore aspect returns a resized object to its original proportion. It can be used for all objects, but is relevant to video and graphic images.

Background provides an option to create a watermark background image. A JPEG image can be selected from source to act as a watermark using the Transparent background option.

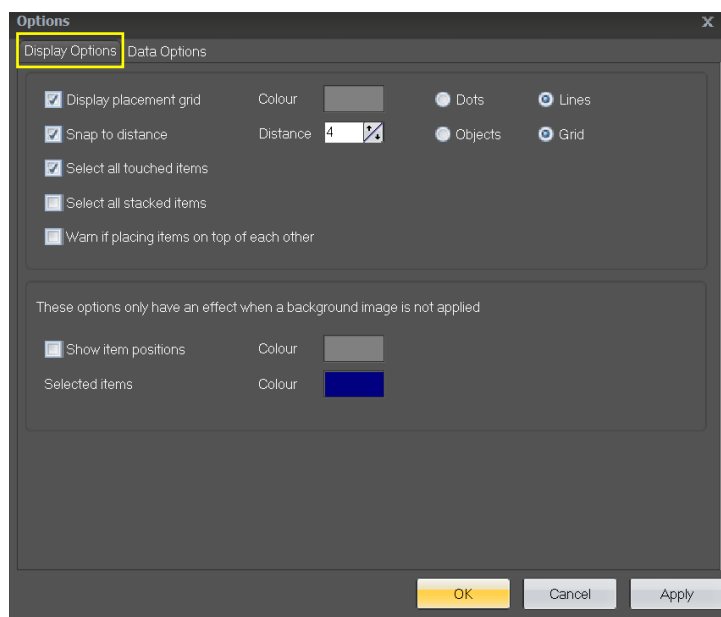
To avoid distortion an image should be the same size as the layout (e.g. a layout of 1080px 1920px would have an image of the same resolution).

The image replaces the Background Colour selected from the main menu. Clear background removes the watermark image and returns the background to the colour previously selected.

Zoom provides a 50%, 100%, 200% and 400% magnification of the on the Layout Editor. This offers the capability to view smaller or larger layouts within the user windows without having to scroll to see the complete virtual display. allows the layout editor to change the visible size of the layout; Zoom does not affect the actual layout size.



Environment Options

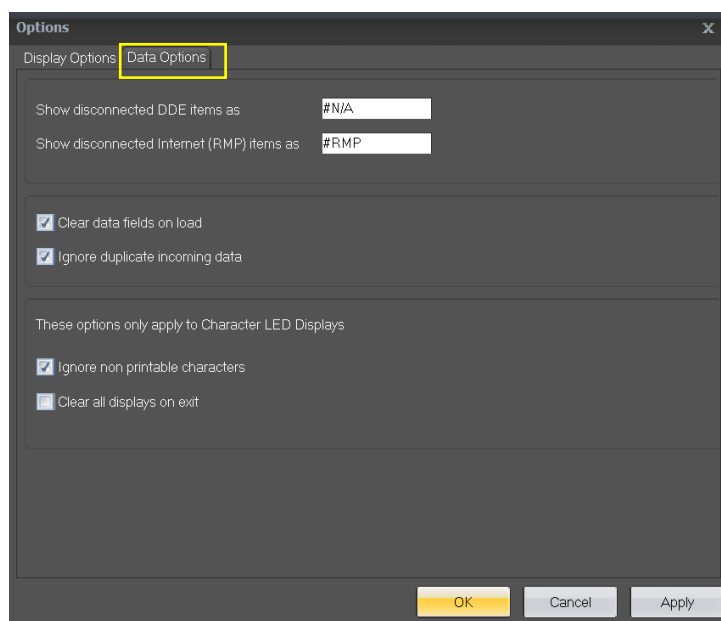


New for the July 2020 Release is a restyled and simplified suite of Environment Options:

Display placement grid provide a user layout grid in pixels (lines or dots) where the spacing between them is shown in pixels with a **Snap to Distance** of a user's choice.

A marquee select can **Select all touched objects** or only those completely surrounded by the selection rectangle. Where objects overlap each other, a user can opt to select just the top one, or the whole stack. A user can opt for a warning if placing objects on top of each other.

An additional option will **Show item positions** highlighted allowing a user to see the object boundaries (but not where a background image has been set).



The default values for disconnected DDE and RMP items are set as #N/A and #RMP. A user can change these value to their own values.

Clear data fields on load clears any residual values that may be present on LED displays and **Ignore duplicate incoming data** ensures displays are not unnecessarily updated when the incoming values have not changed from their refresh.

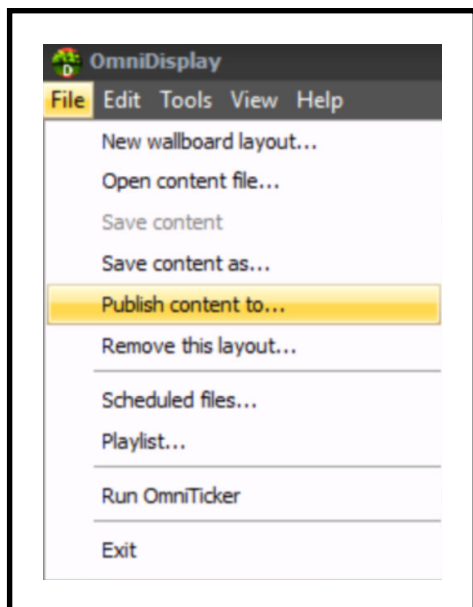
Two specific vales **Ignore non-printable characters** and **Clear all displays on exit** apply only to Trans-Lux Character-based LED datawalls

The new layout for the July 2020 Release does not remove any functionality that would be in current use for Trans-Lux datawalls.

Default Locations, Cloud Store & Connection

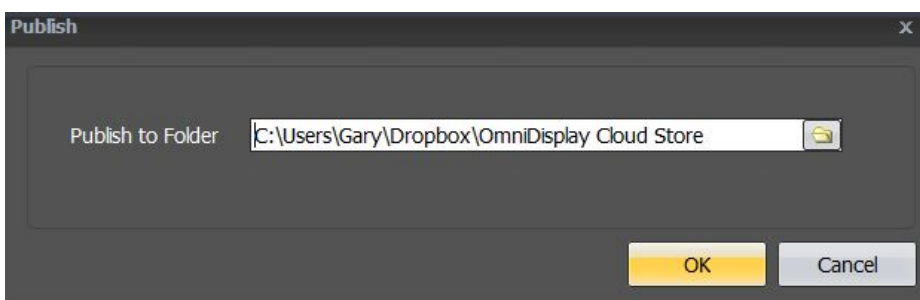
The default path for OmniDisplay layouts files is:

Documents/OmniApps/OmniDisplay/ (file name).

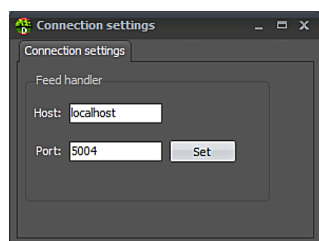


'Publish content to' provides the user with the option to save the layout file (and any content graphics) to another local or cloud-based folder/ location of their choice.

For example, the cloud-based folder could be stored on One Drive, Dropbox or to any other hosted location. This location is stored alongside the content within an OmniDisplay layout.



OmniDisplay Connection Settings



From the Tools tab within OmniDisplay select 'fetch feed handler'.

This will show the default connection settings as 'localhost' and Port 5004 for information purposes only; they will match OmniRSS settings.

OmniDisplay and OmniRSS are designed to run from the same PC with both installed at the same time.

Display Layout Editor



Any object on the display layout editor can be moved by selecting the object and dragging it with the mouse to the chosen coordinates. Additionally, graphical display objects can be resized by dragging the bottom right hand corner of the object. Multiple objects may be selected by dragging a rectangle on the display editor; all touched objects will be selected. Any selections can be moved and graphical displays scaled up or down. Text based items can be layered; the options opposite provide for items to be moved back and forward. Restore aspect applies to video and graphic items and restores the item to its original height and width ratio.

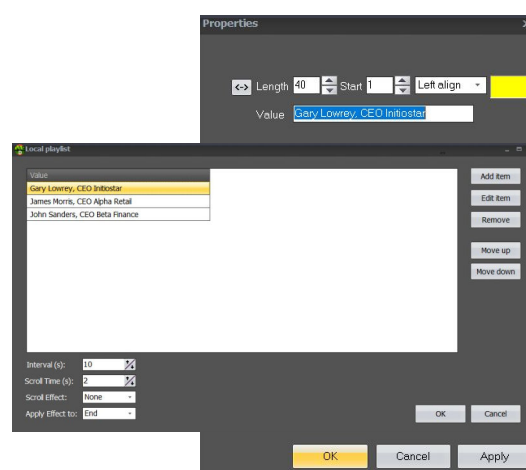
Using the Layout Editor

TEXT

Static text

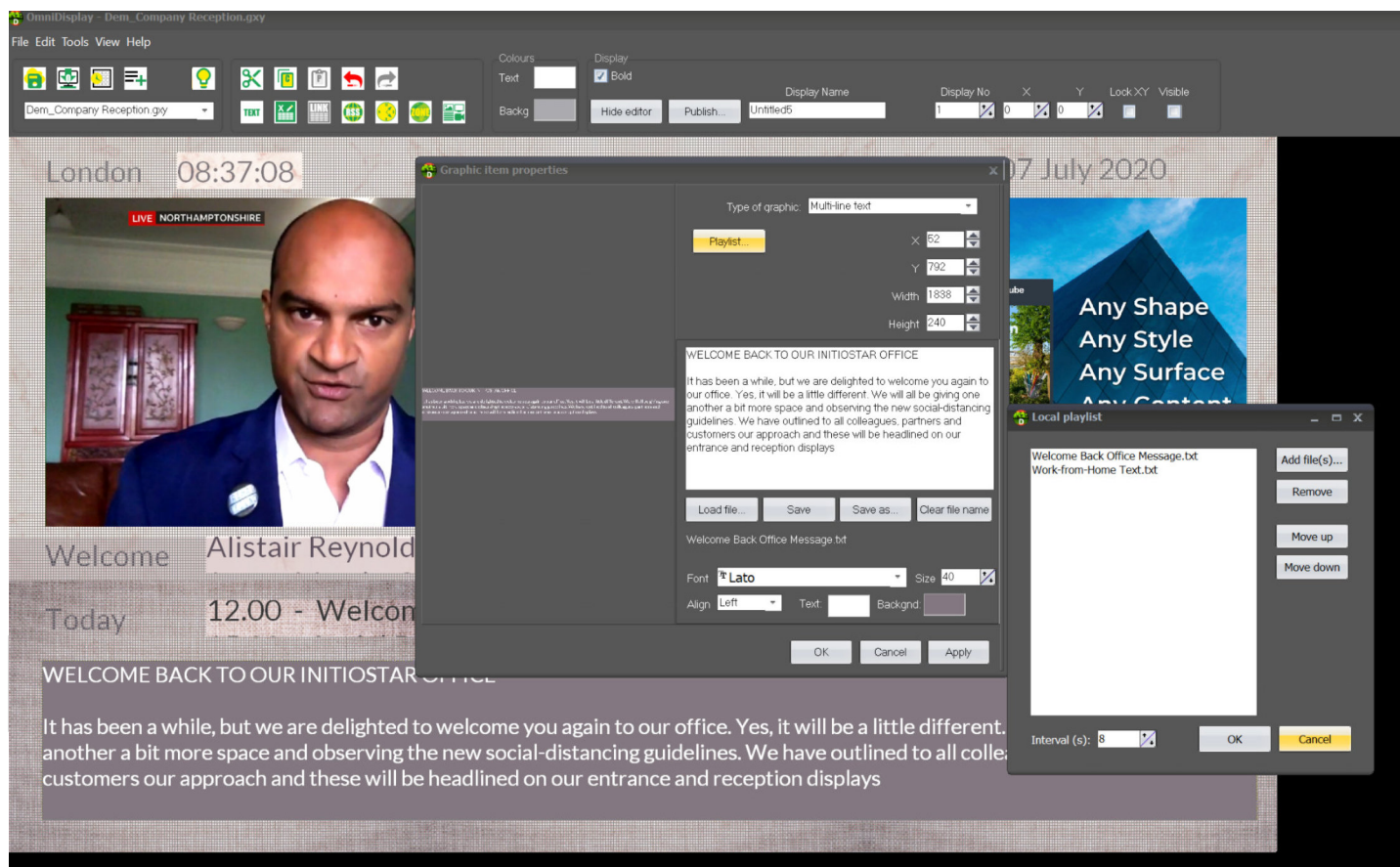
Static text is a single line text object, used for titles, headings and messages. Simply enter text in the value field and select a colour. For video all displays, a user can choose a font style and size. The text item is then dragged to its position on the display editor.

The Static text option has a Playlist function, whereby for each line of text vertically revolves in a predetermined sequence to allow, for example, welcome messages to scroll within the same display area. Various scroll effects and sequences are available in time intervals.





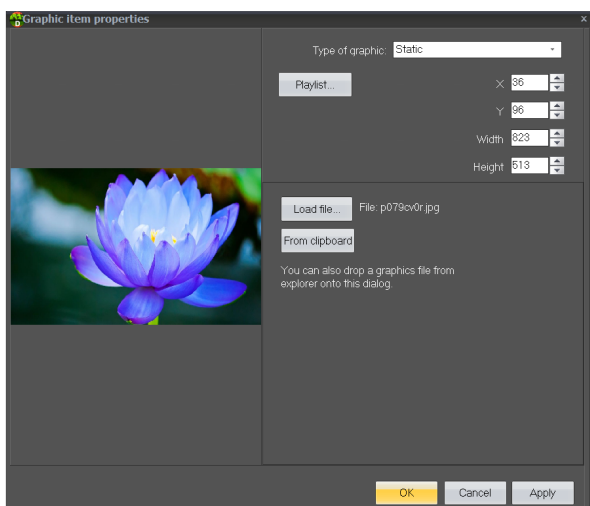
Multi-line Text



Available through the add **'Media'** item dropdown menu, this is a simple text editor (.txt format) allowing a user to create a box of text with the font and colour of choice which will wrap-around in the box provided. Multi-line text objects can be entered directly into the application in the box provided or loaded from a '.txt file; the completed text should be saved. Different text based messages can be incorporated into Playlists, scheduled to run in a user's chosen sequences and times. A text box can be sized to accommodate the desired height and width that best suits the display.



Images (JPEG)



Accessed from the same media dropdown menu, images (which should be in JPEG format) can be placed anywhere on the layout. Image resolution should be at least the same size in pixels as the image to be displayed.

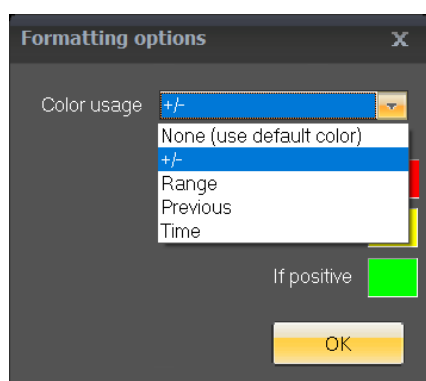
This can be a single image or a collection of images in a local playlist. When there are multiple images the playlist will display them in a user-defined sequence and interval.



Excel Integration

The screenshot shows the OmniDisplay software interface with a financial dashboard. The dashboard displays various stock indices and their values. A 'Properties' dialog box is open, showing settings for the selected data point. The 'Properties' dialog includes fields for Width, Height, Value, Service, Topic, Item, Formatting, and Prefix text. A 'Formatting options' dialog box is also open, showing color usage settings for positive and negative values.

OmniDisplay supports a powerful and transparent level of Excel integration. It offers a user the capability to select any group of cells from an Excel spreadsheet and map them to a layout. When a cell value changes the layout auto-refreshes with the new value in real-time.



Comprehensive formatting options are provided. These include real-time conditional formatting based on the immediately previous value and the new value on a cell-by-cell basis.

For example, when a value changes from positive to negative conditional formatting allows a traffic light colour theme to show red for negative and green for positive. Other colour conditions include where a value is within a range, previous and time.

Additionally, an 'Enable Flash' option is provided to draw attention to the change in value.

The Enable Flash option can apply to any alphanumeric change, the colour of which is user-defined.



Linking Excel Items

A DDE object is a live link to an Excel spreadsheet. A user can copy a range of cells and use right click **'Paste Link'** the place those cells on their layout. This brings across cell formats, fonts and alignments. Resizing cells thereafter is achieved by resizing the target cells through select and drag to size or by width and height in the Properties box. Changing font and alignments for cells on the layout is permitted and does not change the target link.

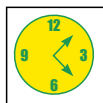


External Sourced Data

Externally sourced data can be accessed through a proprietary RSS Feed Manager (OmniRSS)) using a Record Management Protocol (RMP).The 'E' button shows a dialog box with three source levels: "Service", "Topic", and "Item" with options for formatting and prefix text.

OmniDisplay has one standard Service, RSS, and a reserve (unused) "WWW" tab in the dropdown menu. "Topic" refers to an RSS feed that has been captured by OmniRSS, "Item" refers to the item number from the list. Item numbers start at "00" upwards with the most recent RSS items first.

Line items can be added to a Playlist, where that playlist can be a composite aggregation of data items from different sources.



Local User-Defined Clocks

A Local Clock takes its time and date from the host Windows desktop and world clocks that take their time from the Windows registry of time differences. For a Local Clock select the icon from the editing menu and select the date and time in the required formats.



Mapping Time Zones

To add a time zone, select the time zone from the dropdown menu and add it to the time zones for the Local Clock.



Live Screen Capture

Live off Screen (Web page/ video)

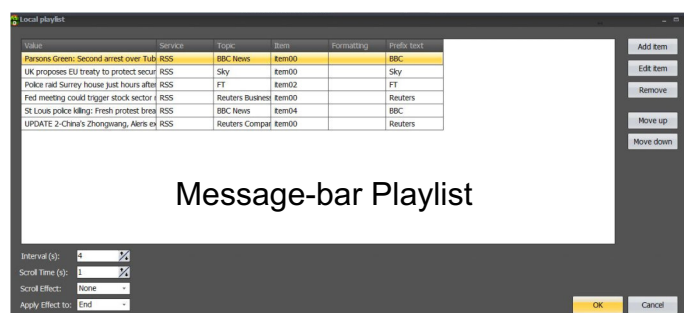


This media type uses any data sources accessible from a URL; includes live video such as Sky News and the BBC (if in the UK). The URL is entered into the dialogue box. The portion of the web page to be shown on the display is captured using the source rectangle over the browser window which appears when the 'Go' button is activated.

The rectangle can be adjusted by dragging its borders to fit the desired target image. Source width and height adjusters can also be used. Each item can be resized using the display editor to fit the desired size on the display; this will automatically re-scale the source rectangle to fit the user's preferred size on the display. Restore aspect can be used to ensure an image or video is in the same perspective as its original source.



Live of Screen (Application Frame)



This media type sources data from any open window on the desktop. It works on the same principles of selecting an area to be displayed as identified by the source rectangle whose X and Y coordinates are adjusted in the panel.

In the example above, the open application window is Excel and the graph within that spreadsheet is selected for display as an Application Frame. Whenever there is a change in source data this is immediately reflected in the display.



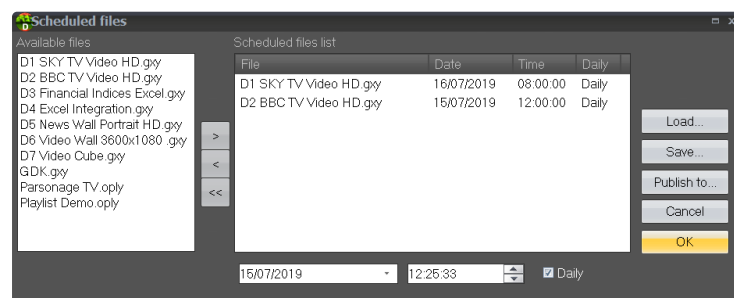
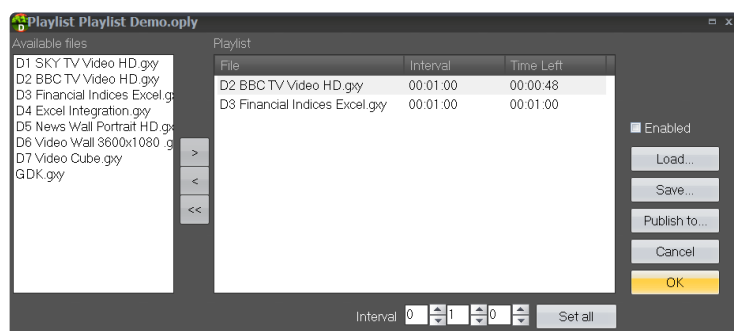
The combination of Excel integration and Application Frames creates a real-time image for management reporting.

An Application Frame can be a selection from any open window. For example, if a user wants to display a data selection such as a management dashboard from another application, this can be selected and resized on the layout as required.



Live Webcam from Desktop

OmniDisplay supports the integration of a desktop webcam. This can be used (for example) for periodic broadcasts to employees.

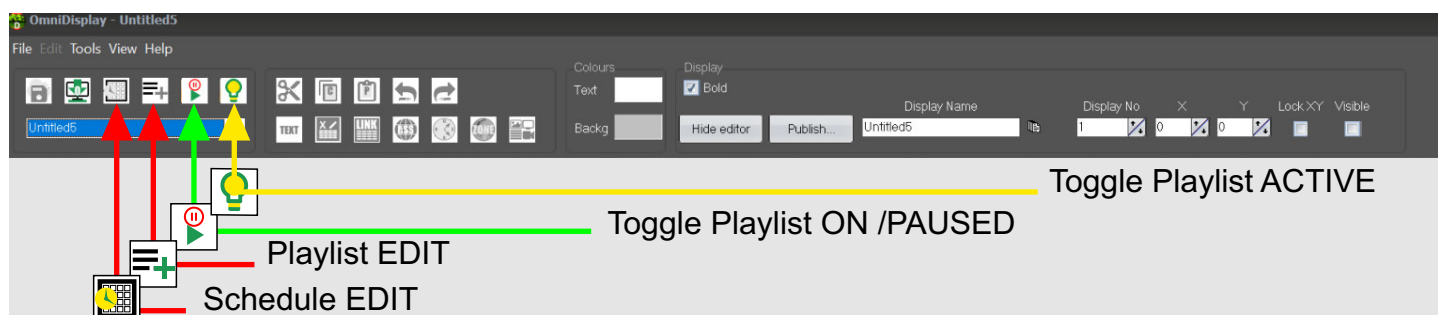


Local Playlists

Playlists can be created for vertically rotating message-bars, static graphics, (images), multi-line text (text boxes) and videos.

For message-bars data can be a mixture of alpha numeric text and internal/external data sourced from RSS feeds managed by OmniRSS, including Twitter. Vertically rotating message bar provide the opportunity to create a user defined list of data items to be displayed. In the example above, RSS feeds have been selected from multiple sources.

The user defines the interval or length of time each data item appears, the time taken to scroll and any scroll effect; the latter has various options that can be used for visual impact.



Layout Playlists & Schedules

Layout Playlists and Schedules are groups of virtual displays that can be published at user defined intervals. Schedules and playlists must initially be placed in the local **Documents/ OmniApps** to be available. They will not otherwise show as being available for selection.

All Playlists and Schedules are standard OmniDisplay layouts that are grouped together. A user can set the time each virtual display layout will be published to a physical display and the sequence in which they will appear.

Playlists can be reviewed and changed at any time, provided the playlist is paused. This is achieved through the toggle button in the main menu; ONLY when paused

Similarly, schedule are can be set up for loading different layouts to the same display, or a Playlist of files can be displayed in rotation.

In the example above two files are selected, each to run for one minute, although they can be set



individually. can a Playlist be edited. Scheduled files have a start date and time. They can be set individually to run daily from a start date.

Publishing Virtual Displays

The Publish button brings up the Display Management Dashboard. This lists all the Virtual Displays

The screenshot shows a window titled 'Publish' with a table of virtual displays. The table has columns: Display Name, Virtual Display, Display No, X, Y, Lock XY, and Visible. There are three rows of data.

Display Name	Virtual Display	Display No	X	Y	Lock XY	Visible
Sky TV_ Video Demo_Boardroom	D1 SKY TV Video HD.gxy	1	-82	888	☐	☒
Inregation Demo_Room 101	D4 Excel Integration.gxy	1	0	0	☐	☒
Playlist DEMO Reception	Playlist Demo.oply	1	683	957	☐	☒

At the bottom right of the window are 'OK' and 'Cancel' buttons.

that are available to publish to physical displays.

For ease of reference, the **Display Name** is user defined, whereas the **Virtual Display** is selected from the dropdown menu, which lists displays that are open and available.

These include standard layout displays, layout playlists and layout schedules (playlists and schedules identified by their icons).

Display No: This is the display number identified from Windows Extended Desktop. For example a second monitor would be 2 and a third and forth, 3 and 4.

X & Y: For a standard video display these are usually be set to (0,0). Where the virtual display is required to appear on a display larger than the virtual display size in pixels, the X and Y coordinates would be specified by the user and will need to be set such the virtual display appears in the correct position on the the target display.

Lock XY: Ensures each time OmniDisplay restarts the virtual display will appear in the correct place on the target physical display.

Visible: A user can opt to the make a particular virtual display not visible on the target display. This could be a user is editing the virtual display or has chosen the publish a different virtual ticker to that physical ticker or display