

TripleSign Digital Signage Concepts

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Updates road closed : The A30 from Penzance towards Honiton is closed between the junctions with the A382 and the A

Version 1

Revision 2

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1 Introduction

Digital signage can be thought of as electronic notice boards. Used well they can convey information clearly and quickly: used badly they will be like the notice board which has notices on it that are months out of date. Nobody will take any notice of them, therefore careful consideration needs to be made about what information is displayed and how best to show it.

This guide aims to show the basic principles that should be used to make digital signage as effective as possible.

2 Settings where digital signage is likely to be used

There are three main settings where digital signage is likely to be used:

- In circulating areas where people are on the move such as corridors, station concourses, store entrances etc. How long people have sight of the screens depends on how well they are sited, but generally people will only be in view of these screens for a maximum of 30 seconds. Unless there is a compelling reason to look at the screen, passers by may be unaware of the screen's existence and not see the information being displayed. Information shown must therefore be capable of being absorbed very quickly or so attractive that the viewer will stop and look at the screen, but if they find the information is not relevant to them, they will quickly move on. Information displayed on the screen will need a “wow” factor to capture the attention of the viewer. Simple layouts with limited information do this best. As a rule of thumb, the viewer will read approximately 3 words per second so if a viewer is in sight of a screen for 10 seconds, there should be no more than 30 words on the screen.
- In areas where people are waiting such as reception areas, outside lifts, in food outlets where people are queuing and so on. In these areas people will have time to look at the screens and absorb the information being shown. More complex information can be shown on these screens because they have time to take it in.
- As wayfinding devices in museums, galleries etc. Frequently these devices have interactive touch screens giving directions or allowing people to surf through information.

3 Viewing distances and readability

Information must be tailored to the situation in which it will be viewed and how it will be viewed. The viewing distance is very important. The further away from the screen the viewer is, the larger the image or text size must be. Table 3.1 below gives some rule of thumb information about text sizes and viewing distance.

Distance from viewer to screen	Minimum readable height of text
1.5 – 15 metres (5 – 50 feet)	2.54 – 5.08cm (1 – 2 inches)
15 – 30.5 metres (50 – 100 feet)	5.08 – 10.16cm (2 – 4 inches)
30.5 – 70 metres (100 – 2-- feet)	10.16 – 20.32cm (4 – 8 inches)

Table 3.1: viewing distance and readability

The larger the image or text is, the less of it that can be displayed on the screen.

TripleSign allows you to enter text ranging in size from 6 pixels up to 150 pixels. You will need to experiment with your displays to see which text sizes work best, bearing in mind the distance information given in table 3.1.

4 Fonts and readability

4.1 Choice of font

The choice of font is important as some fonts are easier to read than others. Fonts are generally described as falling into two types, **sans serif** and **serif**. Serif fonts work very well in printed materials such as newspapers, but work less well on electronic displays. Sans serif fonts work very well on electronic displays and should be used for preference. Serifed fonts, used with care, can be used for headings on electronic displays.

Fonts are best used in their native form but emphasis can be given to text by **boldening**, **italicising** and/or **boldening and italicising**. Colour can also be changed providing this is done with care: see section 4.2 for guidance. **Underlining** does not work well on electronic displays and should be avoided. Avoid using all capital letters: it is the text equivalent of shouting.

TripleSign has six fonts built in: sans serif fonts of **Arial** and **Tahoma** and serifed fonts of **MetaCorr**, **Courier New**, **Cheltenham** and **Times New Roman**. Some text in each font is given below. In each case the point size is the same but you will notice how different they appear.

This is **Arial**. The old lady stood in front of the shop window and gazed longingly at the beautiful dresses displayed and wished there had been such a wide choice when she was a young girl.

This is **Tahoma**. The old lady stood in front of the shop window and gazed longingly at the beautiful dresses displayed and wished there had been such a wide choice when she was a young girl.

This is **MetaCorr**. The old lady stood in front of the shop window and gazed longingly at the beautiful dresses displayed and wished there had been such a wide choice when she was a young girl.

This is **Courier New**. The old lady stood in front of the shop window and gazed longingly at the beautiful dresses displayed and wished there had been such a wide choice when she was a young girl.

This is **Cheltenham**. The old lady stood in front of the shop window and gazed longingly at the beautiful dresses displayed and wished there had been such a wide choice when she was a young girl.

This is **Times New Roman**. The old lady stood in front of the shop window and gazed longingly at the beautiful dresses displayed and wished there had been such a wide choice when she was a young girl.

It is good practice to use no more than two fonts on the screen and to avoid using italics.

4.2 Font colour and contrast

Choice of font colour is very important. Approximately 10% of the population suffers from some form of colour blindness and it is more common in men than women. The two most common forms of

colour blindness are the inability to distinguish between **red** and **green** colours or **blue** and **yellow**: it is good practice to avoid these combinations.

The font colour and the background it sits on are also very important. The contrast must be good or the font may appear washed out and difficult to read. Figure 1 shows a good contrast against the background.



Figure 1: examples of good contrast

The following is an example of poor contrast with the background.



Figure 2: poor contrast against the background

Backgrounds should be simple and avoid anything that is “busy” as it detracts from the text.

Changing the colour of a word in a section of text can be very effective in emphasising it. Make sure you choose a bold colour that compliments the main section of text.

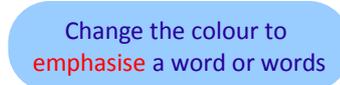


Figure 3: use of colour to give emphasis

If you have a dark background, the foreground material should be light and vice versa to create a strong contrast.

How much information is displayed on the screen is important too. Don't put too much information on the screen: it will only confuse people and turn them off. You will fail to get your message across. If you are using text remember the 3x5 rule. Use three lines of text with no more than 5 words in them or five lines of text with no more than 3 words in them.

4.3 The rules of thumb

- Keep it short and simple.
- Readers read text at an average of 3 words per second.
- Most digital signage screens are in view for a maximum of 30 seconds.
- Keep the content up to date.

5 A typical digital signage system and how it works

The TripleSign digital signage system is based on a central server which can be accessed from anywhere within an organisation's network using a web browser such as *Internet Explorer, Mozilla Firefox, Safari* etc.. It is agnostic of any computer operating system and can be accessed by any computer on the organisation's network, or if correct permissions have been given, from remote locations such as an administrator's home computer.

Material to be displayed on the system's screens, video, text, slide shows, still images, RSS feeds, is uploaded to the server by administrators who create playlists, the order in which the material is shown, and schedules, when it is shown.

Display screens are organised into **Display Groups**: all screens in a display group show the same material. Display groups will normally have their own local administrator or administrators who create, upload and schedule the material for the display group on the central server. Each display screen has a digital set top box or PC client which is connected to the server via the organisation's computer network and switches. The set top box or PC client collects the data from the server, video, text, still images, RSS feeds and so on and decodes it for display on the screen.

Tags can be added to playlists, layouts and display clients. Where a tag is added to a playlist or layout, it can only be shown on clients having a matching tag. This means that a single playlist can be used to deliver to multiple locations but not all seeing the same content.

Figure 4 shows a typical system. The TripleSign software is loaded onto a central server which is looked after by a **System Administrator**. For the majority of installations there will be more than one System Administrator ensuring there is always somebody to look after the system so that holidays, sickness, training etc. do not leave the system unsupported. The central server is connected via a computer network to a number of display groups which have within them a number of display screens. Each display screen has a digital set top box or thin PC client which is connected to a local network switch which in turn is connected to the central server. **Local administrators** look after each display group but the system can be "taken over" by the System Administrators or Super Users when there is a need for the complete system to be showing the same information for example in an emergency situation or something similar.

Display groups can be confined to one area of an organisation, or can be dispersed around the entire organisation. In the example shown in figure 4, the **Sports and Social club** have screens in several buildings so their message can be shown to staff throughout the organisation no matter where they are. The **Engineering display group** only want to show information to people in the **Engineering** building. Several screens may be put in the same area as shown in the example below where both the Sports and Social Club and **Reception** staff have screens in the main **reception** area.

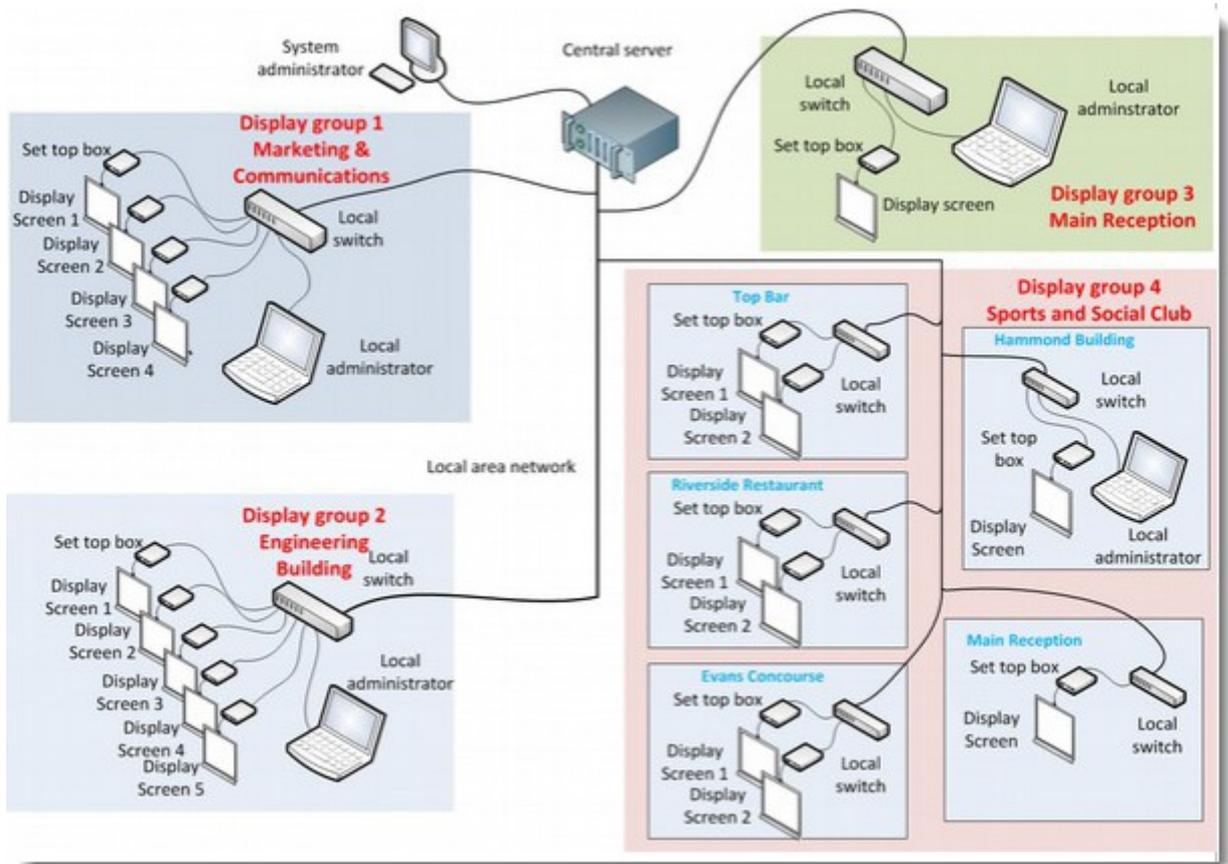


Figure 4: a typical digital signage system

6 Getting support from Tripleplay

Tripleplay has an extensive support service which is designed to help users make the most of their system and resolve any issues they may have.

Before you contact Tripleplay Support, please make sure you have the following information available:

- The name of the server hosting the Tripleplay application(s).
- The name of the site where the server is located.
- The full address of the site where the server is located.
- The name and contact details of someone who will act as liaison with Tripleplay's support team.

6.1 Contacting Tripleplay Support

You can contact Tripleplay support by telephone on **0845 094 3357** during office hours or e-mail support@tripleplay-services.com.

If you are requesting help with a fault, you will be given a ticket number. Please make sure you quote this in the subject line of all subsequent e-mails regarding this fault.

7 Revision history

Date	Version no	Revision no	Comments	Author
21/12/2015	1	2	Document extracted from User Guide	Stephen Harding

Table 7.1 - document revision history

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