



OMA Digital Guideline

01 INTRODUCTION

The Outdoor Media Association (OMA) is the peak national industry body representing most of Australia's Out of Home (OOH) media display companies and production facilities, as well as some media display asset owners.

OMA members endeavour to develop high quality signage that adds to the vibrancy of the urban environment. The OMA supports regulation which allows for fair and reasonable development standards that are appropriate for signage land use and which acknowledge the introduction of digital technology.

The OMA has developed the following Guideline to develop understanding of digital technology and its place in OOH advertising in Australia.

Signage has evolved over time, hand painted signs became printed paper pasted on the board. Paper and paste has given way to computer-generated images printed on plastic substrates. The next generation of billboards is digital.

02 BENEFITS

Digital signage offers a number of benefits, and some of these are listed below.

Utility – Digital screens can be used at short notice for emergency messaging and to provide up to date community information. Into the future, there is the potential that this infrastructure can provide Wi-Fi hubs, charging stations, and more.

Environment – Digital screens produce no PVC/vinyl waste.

Luminance control - while digital can be very eye catching, it can also be more visually discrete as it adapts to ambient light levels. The brightness of digital billboards can be adjusted in response to changes in surrounding light conditions and at night, unlike traditional billboards.

Vibrancy – Digital technology allows for signage that is vibrant, has high image quality and is visually interesting. This signage can contribute to exciting and vibrant urban spaces. Community benefit – it is more economically viable to make digital screens available for charities and community messaging as one sign can take on the role of many, without the cost of printing and installation.

03 TRAFFIC SAFETY

The safety of digital roadside signage is often raised as an issue.

OMA members are very concerned with public safety and ensuring signage is safe for the roadside. Research on digital OOH has found them to be safety neutral. In 2015, the OMA published the findings of its driver behaviour research, which were:

- People spend the same amount of time (average 78%) with their eyes on the road whether in the presence of digital, static or on premise signs.

- There was no significant difference in the length of time people look (fixation duration) at digital signage compared with static signage.
- There was a higher number of short glances (fixations) towards digital billboards, but the length of these fixations was very short (less than 500 milliseconds)
- Drivers maintain the same safe average vehicle headway (distance between themselves and car in front) in the presence of all three signage types.
- Over 99% of all glances towards advertising signage were less than 750 milliseconds. This is a good finding for road safety as 750ms is the minimum time needed by a driver to perceive and react to an unexpected event. These glances were well below 2 seconds which is very positive as the largest to date naturalistic driving study by the National Highway Traffic Safety Administration (NHTSA) identified that “Glances totalling more than two seconds for any purpose increase near-crash/crash risk by at least two times that of normal, baseline driving.”

04 REGULATIONS

All OOH advertising is highly regulated. The two key areas of regulation for digital signage are luminance and dwell time.

4.1 Dwell Time and Animation

The OMA advocates for a 6-8 second dwell time in all speed zones which are based on international best practice. For example, the US Federal Highway Administration (FHWA) recommends an eight second display time. There is a range of variance in dwell times across Australian jurisdictions at this time:

Queensland – 10 seconds under 80km/h and 25 seconds above 80km/h.

NSW – 10 seconds under 80km/h and 25 seconds above 80km/h.

Victoria – 30 seconds; however lesser dwell times can be approved based on expert advice. Approvals range from full animation to 45 seconds across a range of speed zones.

Western Australia – 10 seconds under 80km/h and 25 seconds above 80km/h.

South Australia – 45 seconds

The OMA does not advocate at this time for animation on digital signage facing the roadway.

4.2 Transition or Cross-Fade

OMA advocates for instantaneous transition from one message to the next avoiding transition effects – generally approximately 0.1 seconds.

4.3 Luminance

Digital billboards can adjust brightness in response to changes in surrounding light levels so that the signs are not unreasonably bright. Digital billboards are equipped with sensors to make sure the billboards are only as bright as necessary to be legible.

Regulations for digital signage luminance vary across the states in Australia. The OMA has developed the following best practice guidance for luminance levels in conjunction with an expert, which is appropriate for different areas and times:

Lighting Condition	Zone 1	Zone 2	Zone 3
Full Sun on Face of Signage	Maximum Output	Maximum Output	Maximum Output
Day Time Luminance	6000-7000 cd/m2	6000-7000 cd/m2	6000-7000 cd/m2
Day Time Luminance Morning and Evening and Twilight and Inclement Weather	1000 cd/m2	700 cd/m2	600 cd/m2
Night Time	500 cd/m2	350 cd/m2	300 cd/m2

Zone 1 covers areas with generally very high off-street ambient lighting, e.g. display centres, central city locations.

Zone 2 covers areas with generally high to medium off-street ambient lighting.

Zone 3 covers areas with generally low levels of off-street ambient lighting e.g. most rural areas, many residential areas.

4.4 Community Benefit Contribution

OMA members support the provision of an appropriate public benefit when developing signage. However, it is important to note that this benefit must not result in the sign no longer being commercially viable.

There is no set community benefit contribution; however it can range from developing and building a pedestrian bridge, through to the provision of bus shelters and bins. With the introduction of digital technology some OMA members are also providing in kind media for local charities and events as part of this public benefit contribution.

4.5 Content

Content on digital technology is subject to the same self-regulatory system as all OOH advertising. All OMA members only post content that complies with the Australian Association of National Advertisers (AANA) *Code of Ethics* and abide by all decisions made by the Advertising Standards Board (ASB). In practice this means that digital technology cannot be used to run content that would not normally be used in traditional OOH advertising.

In particular OMA members ensure digital advertisements do not include:

- Images which may be considered discriminatory on any grounds, including race, ethnicity, nationality, sex, age, sexual preference, religion, disability or political belief.
- Violence which is not justified in the context of the advertisement or may not be suitable for a broad audience. For example, guns cannot be pointed at the viewer or any characters in the advertisement.

- Images which do not treat sex, sexuality and nudity with sensitivity to a broad audience.
- Any use of strong or obscene language which is inappropriate for a broad audience.
- Images which may contravene prevailing community standards about health and safety. For example, images cannot show drug use or smoking/tobacco.

Additionally, OMA members must also abide by the *OMA Code of Ethics and Content Review Policy*.

05 PUBLIC CONCERN AND OPINION

OMA members will work with members of the community to alleviate any concerns in relation to new digital signage, particularly in relation to luminance levels.

Research on public opinion finds that people like digital billboards and see digital advertising as part of the makeup of a contemporary global city. Public attitude testing was undertaken in Sydney in 2015, finding that 67% of people ‘expect any large city to promote the use of new technology in advertising’.¹

06 DEFINITIONS/TERMINIOLOGY

Candela (cd) – a measurement of directional light/intensity from a point source.

Controller – computer or computer-type device used to program and operate digital displays.

Dwell time – the length of time an advertisement is shown on screen before changing.

Expected lifetime – Anticipated length of use for an LED. The expected lifetime of an LED is measured at the point when the sign has degraded to 50 percent of its original intensity. LEDs have a typical expected life of 50 000 to 100 000 hours (as specified by the manufacturer).

Intensity – Often called brightness. The LED industry measures display intensity in candelas per square meter, which is also referred to as nits.

Light Detector, Light Sensor – An electrical component used to detect the amount or level of ambient light surrounding a display. If dimming has been set to ‘AUTO’, the light detector or sensor adjusts the intensity of the LEDs accordingly.

LED (Light Emitting Diode) – A solid-state component that uses a semiconductor (a silicon chip or some other type of semiconductor) that emits visible light when electronic current passes through it. LED illumination is monochromatic, occurring at a single wavelength, and the output can range from red to blue-violet, green, amber and white. An LED consists of two elements of processed material called P-type semiconductors and N-type semiconductors. These two elements are placed in direct contact, forming a region called the P-N junction. In this respect, the

¹ Sweeney Public Attitudes testing, 2015, conducted by the City of Sydney

LED resembles most other diode types, but there are important differences. The LED also has a transparent package, allowing visible energy (or in some cases infrared energy) to pass through. The PN-junction of LEDs is larger than that of other diodes, too, and its shape is tailored to the application.

Loop – The designated media content that runs before the content is repeated. A loop is comprised of slots.

Luminance – The amount of visible light leaving a point on a surface in a given direction. This ‘surface’ can be a physical surface or an imaginary plane, and the light leaving the surface can be due to reflection, transmission and/or emission. The standard unit of luminance is the candela per square meter (cd/m²). As used in video applications, luminance is the degree of brightness (black and white portion of the video signal) at any given point in the video image. A video signal is comprised of luminance, chrominance (colour information) and synchronisation. If luminance is high, the picture is bright, and if low, the picture is dark. Changing the chrominance does not affect the brightness of the picture.

Pixel – The smallest single point of light on a display that can be turned on and off. For LED displays, a pixel is the smallest block of light emitting devices that can generate all available colours. For incandescent displays, a pixel is an individual lamp on the matrix.

Pixel Pitch – The centre-to-centre spacing of pixels in a matrix, expressed in inches or millimetres. An equivalent inch and mm value should be shown in the same order, e.g. 1 inch and 25mm.

Readability Angle – The angle at which the LEDs on a sign can still be seen and/or read. The readability angle, which is dependent on ambient light and site conditions, is much larger than the viewing angle. For instance, a 30 degree readability angle LED sign can easily be read at angles greater than 90 degrees at night. In an instance where the LEDs are dimmed to less than 50 percent, for example, a viewer would still be able to see or read the LEDs, hence the greater angle than in viewing angle. Readability angle is largely subjective and difficult to measure. (See viewing angle)

Transition – A visual effect used on an LED display to change from one message to another.

Veiling Luminance – A measure of ‘disability glare’. Luminance superimposed over the eye's retinal image produced by stray light within the eye.

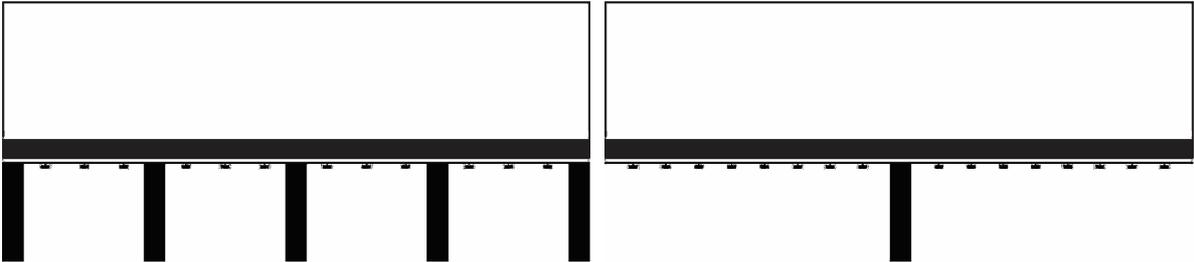
Viewing Angle – The area will provide optimum viewing of a display. The angle is determined by the horizontal and vertical points at which the measured light intensity is 50 percent of that measured directly in front of the display. Expressed another way, the maximum viewing angle is defined by the vertical and horizontal points where the information displayed can no longer be interpreted by the viewer. (This does not mean that the LED cannot be seen outside the viewing angle. Viewing angle is an industry-accepted term and used by the LED manufacturers themselves.) (See readability angle)

Viewing Distance – In general, the distance from a sign that text can be read. For digital displays, the maximum viewing distance is gauged by the readability of the entire display. It is generally accepted that for every 50cm of display height, there is a viewing distance of 20 metres (40:1 ratio). For example, a 2m display could

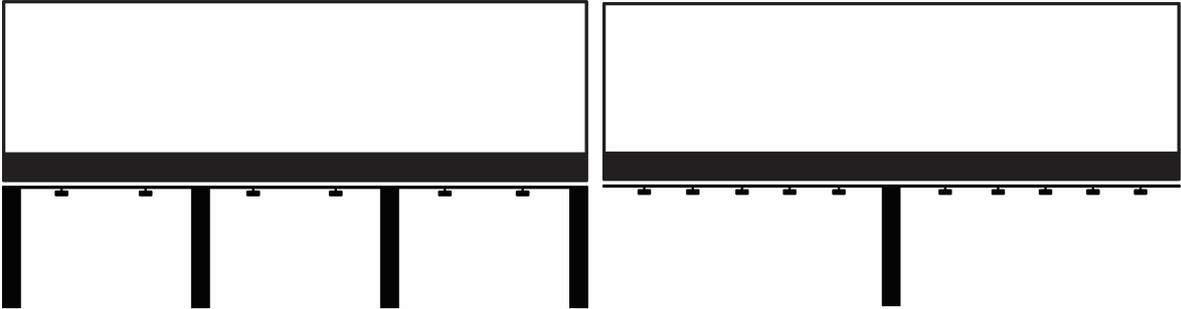
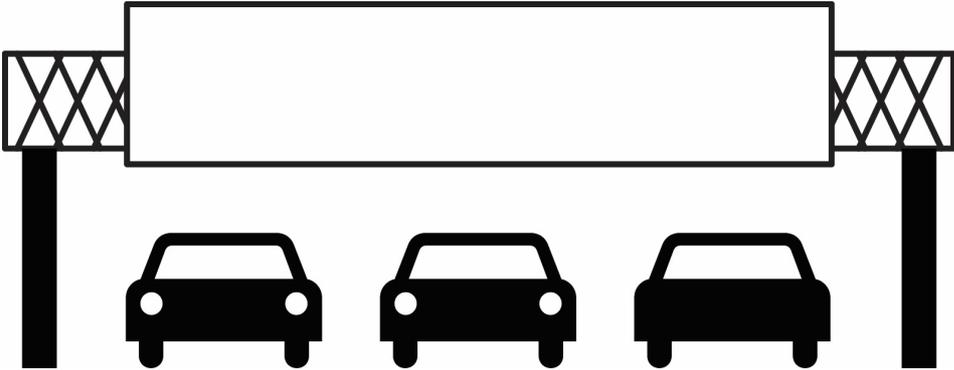
reasonably be viewed at a distance of 80m. For traditional matrix displays, the maximum viewing distance is gauged by using the smallest text character (using a 7-pixel-high font). The accepted standard is that displays gain 6m of viewing per centimetre of character height. For example, using a 7-high font for a 4cm pixel (character height = 7 pixels x 4cm = 28cm), the viewing distance would be 168m. The minimum viewing distance is defined as the closest distance at which the colours from an individual pixel being to blend with the surrounding pixels.

07 COMMON SIGNAGE SIZES (MAY VARY)

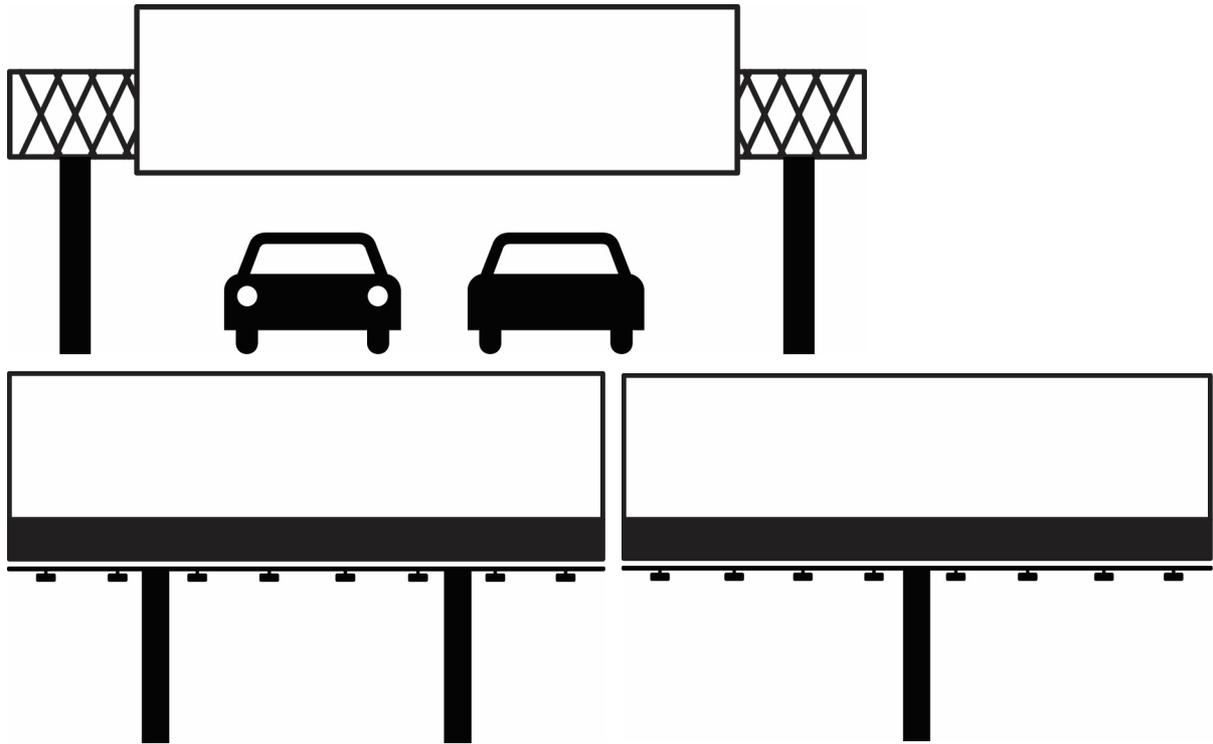
Spectacular – 19m x 4.5m



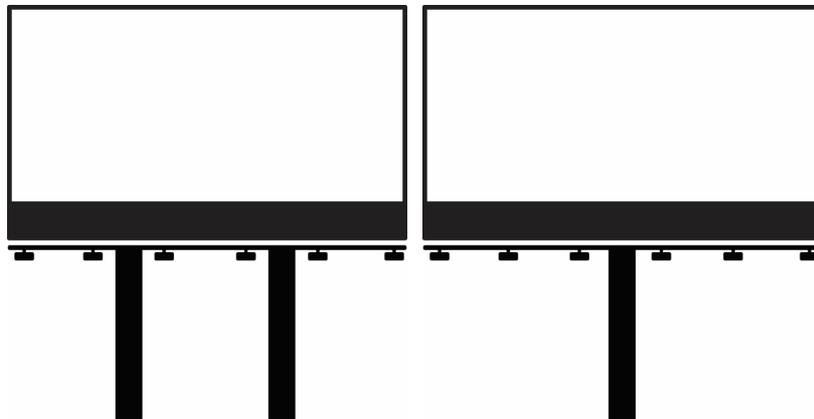
Supersite 12.66m x 3.35m



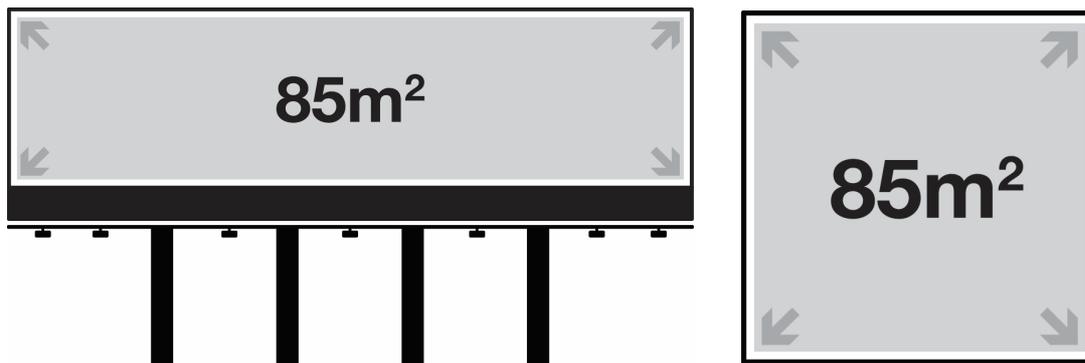
Super 8 – 8.3m x 2.2m



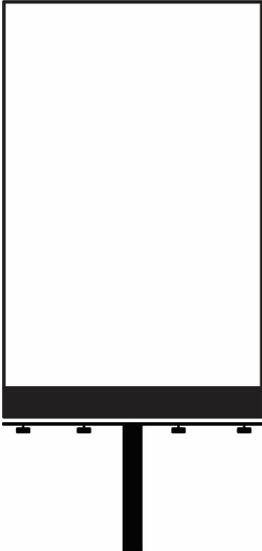
Poster 6m x 3m



Landmark – various sizes



Portrait – 4.5m x 3m (can also be other sizes depending on locations)



Street Furniture

