Digital Out of Home

A Primer | Section 4

Creative & Content: How do I develop content and ads for a digital out of home campaign?

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In partnership with:
Digital Place-Based Advertising Association
Digital Signage Federation
Interactive Advertising Bureau
Geopath
Out of Home Advertising Association of America

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Content & Ads

DOOH is continually innovating in creativity and content production. With full motion video, dynamic real-time content, social media engagement, mobile geo-targeting, multi-screen messaging, syncing and touch screen interactivity, augmented reality, mobile to screen, gesture recognition and more, DOOH advertising rivals the innovation of every digital platform with the ability to reach consumers other mediums simply cannot. It is also an effective reach partner for print out of home campaigns as well as for larger media campaigns that integrate television, audio, online, mobile and print.

Advertisements

Ad content is typically designed by advertisers, creative agencies or production houses. Network owners need to supply content specifications to designers, including:

- Loop or slot length (if applicable)
- Capabilities: linear, dynamic, data-driven, real-time optimization, etc.
- Physical display size
- Resolution of display and aspect ratio
- If sound is available
- Motion types accepted
- File type and maximum size accepted
- Video codec type (if applicable)
- Content restrictions such as adult content, alcohol, violence, drugs, political, etc.

Networks that serve ads programmatically will possibly require additional information, based on the application and specific marketplace.

Content

Third-party content can be displayed in the loop occupying its own slot or it might form part of the overall composition of the creative.

Third party content could be something that is contextually relevant to the location of the screen. For example, there might be local service announcements from the town or municipality to help the citizens aware of something happening in or with their community. Typically this type of content might occupy its own slot.

Content that forms part of the overall content composition could be bus or train times that are relevant to the specific location or a scrolling news headline feed; these are normally seen 100 percent of the time, along with the paid advertising.

Branded/Sponsored Content

Branded or sponsored content is often found on formats that have a longer dwell time such as inside taxis, on gas pumps or in elevators. This content is often from a third-party content producer such as a news or TV station who is making longer-form content that will be in the loop alongside paid advertising.

Branded and sponsored content can also be created by a media owner and sold to an advertiser. For example local weather conditions could be displayed and the advertiser's brand could be present. This approach offers the advertiser an awareness proposition for the audience.

User Experience

Today, audiences have come to expect a high-quality user experience in all of their interactions with brands. If their experience is suboptimal, it's unlikely they will interact in the way the brand intended.

User experience in DOOH can be as simple as making sure the copy size is sufficient for the audience to read it from the intended viewing distance to ensuring the display is bright enough to be viewed in its environment to ensuring a gesture based interface is intuitive enough for the audience to successfully complete the task or reach the goal.

Executional Techniques

Please note that executional techniques and motion and sounds levels can be combined in any combination. For example, dynamic and linear content can be either one of static, subtle motion, full motion, or equally all three motions levels could be applied to a single executional technique. Because of this, the definitions are all individually defined. The combinations are normally defined by what technical capabilities the displays have and what level of motion and sound is permitted based on the contractual or municipality obligations.

Linear (A Static Ad or a Video)

Most DOOH content is linear. Linear ads are full-display ads, either static or video, that are sandwiched between segments of other content. That other content can be other ads (for example, a loop of static ads that show for 10 seconds each or a loop of video ads that play for 15 seconds each). In the case of video, linear ads can also be sandwiched between other

types of video (entertainment or information-providing), the same way you're used to seeing commercials periodically interrupt shows on television.

Linear ads can theoretically (although they often don't, to allow for fast and frequent updates) live locally at a display location to minimize potential for disruption. Ads could play on a loop even if the Internet connection was lost. These are some of the simplest and easiest types of DOOH campaigns to deploy.

Even though they can be deployed simply as a loop, it's also possible for linear ads to be fairly sophisticated. Using scheduling, pre-designed content can be shown if certain conditions are met. For example, different versions of the same ad can be shown depending on the time of day, day of the week, location and so forth. The key difference between this kind of linear ad and the next type, dynamic creative optimization, is that the content already exists and isn't actually redesigned on the fly -- it's waiting and ready to go if conditions change. That means when the creative is being designed on the front end, potentially many different versions of the content would need to be designed.

Dynamic Creative Optimization

Dynamic creative optimization (DCO) is a technique that updates ads based on a variety of data and conditions. In DOOH, DCO is best used to create a higher level of contextualization of the ad based on the audience.

There are three categories of data that can be considered when developing DCO for DOOH.

1. Local player information: Longitude/latitude, date/time, player ID
2. Third party: This could be almost any data feed available from a free or paid services such as weather data, sports scores, social media, stocks and shares, travel information.
3. Owned data that is specific to the brand, such as pricing, availability, user analytics, etc.

DCO can increase the media value by improving sales uplift, adding relevance, increasing attention, making more people more likely to recommend a brand or product or improving response rates. There are many studies to support the use of DCO.

Interactive

Interactive content can create surprising and memorable experiences. Through the use of creative technology, interactive campaigns offer deeper levels of engagement for the audience.This is possibly one of the most exciting areas of digital OOH, with a wider range of

technologies available to deliver unique and innovative executions. Some of the technologies are:

- Touch: Touch screen technology allows for physical interaction with the display
- Gestures: Infrared-based cameras can be used to translate user gestures into interactions
- Recognition: Technology with the ability to know who is looking at content or what is within proximity of the display and when, then tailoring content based on these conditions
- Camera-based: Interacting with a camera for user generated content to create potentially sharable content
- Mobile: Interactions that use smartphones as a method to control on screen content
- Augmented, virtual and mediated reality: Using tools that can make the audience appear to be anywhere, doing anything with anyone
- Physical to digital: Transforming physical, kinetic or haptic interactions into content triggers
- given display.

Motion Levels & Sound

Static

Static DOOH ads are still images with no motion or video. To an advertiser or a viewer, they appear not much different than printed OOH ads.

They can still be served digitally, a huge advantage for ad buyers, which allows easier re-use of existing creative assets, quicker turnover/changeout (at no cost, unlike printed posters or billboards) and the ability to be bought and sold programmatically.

In addition to frequent change outs, digital static ads can also be looped, which means that a single screen can show eight or ten ads at once, for example, or scheduled based on time of day.

Subtle Motion

Subtle motion is a creative technique that allows for the addition of some limited motion graphics to otherwise static creative. Examples are fades, partial motion, especially along the edges of a graphic, and slow movement. This allows for dynamic ad content. Studies have shown that even subtle motion on a digital advertisement can have a positive impact and increase engagement.

Subtle motion ads exist because of federal and state regulations of billboards and other large format OOH that can be seen by vehicle drivers. Video and full motion graphics are typically prohibited by law in this application.

Full Motion

Full motion ads are video or full-motion, computer-rendered graphics. Full motion ads are high impact and <u>desirable to marketers</u>, with such advantages as the use of adapted video content and the ability to display multiple copy messages within a single ad. The length of the ad spots should be dependent on the location and dwell time of the audience.

Format Specifications

Physical Display Sizes

Direct View LED Content

For direct-view LED displays, the relationship between resolution and the display size are a bit different than for other types of displays, and this affects how the content is designed. On a direct view LED display, the pixels (essentially a cluster of LEDs) are mounted directly to the circuit board. On large pixel pitch displays, a pixel contains three separate LEDs -- one green, one red and one blue. On smaller pixel pitch displays, in which the pixels are much smaller, the three emitters (also known as sub-pixels) are placed into a single LED.

Pixel pitch measures the distance between the center of each pixel (LED cluster) in millimeters. So a 5mm LED display has 5 millimeters between the centers of two pixels, while a 1.5mm would only have 1.5 millimeters between the centers.

Since resolution is determined by the number of pixels and the pixels in direct view LED displays are fixed, the resolution of a direct view LED display is determined by only two factors -- the pixel pitch and the physical size of the display. For example, if a direct view LED display has a pixel pitch of 4mm, there would be about 76 pixels in a linear foot (there are 304.8 mm in a linear foot and 304.8/4 = 76.2). To achieve a high definition resolution, which would be a minimum resolution of 1280x720 pixels, the size of the display would have to be approximately 16.8 feet x 9.5 feet.

On other types of displays, content that is the same aspect ratio can often be scaled with the use of a high quality scaler, either up or down. Because of the visibility of the pixels on direct view LEDs, content should ideally be the exact resolution of the display. So if a display has a

resolution of 1280x720, the ideal content is designed to exactly 1280x720, rather than another 16:9 aspect ratio resolution.

Pixel Width & Height

Content for DOOH screens are typically in the following aspect ratios (for full-screen ads):

16:9 (horizontal) or 9:16 (vertical)
Common resolutions:
HD: 1920x1080 or 1080x1920 (often referred to as 1080p)
HD: 1280x720 or 720x1280 (often referred to as 720p)
UHD/4K: 3840x2160 or 2160x3840

16:10 (horizontal) or 10:16 (vertical)
Common resolutions:
HD: 1920x1200

Other common resolutions:

- 160x600 (skyscraper)
- 448x252 (rectangle - small)
- 300x250 (rectangle - medium)
- 640x480 (rectangle - large)
- 728x90 (leaderboard)
- 400x1400 (bulletin board)
- 400x840 (poster billboard)

File Types & Sizes

IMAGE SPECS
The following specs cover image creative types. Some specifications may allow animations where others are static images. Image files should not require additional manipulation prior to delivery to the out of home console.

Size	Name	File Format	Animation	Minimum DPI	Max File Size
1080 x 1920	Poster (V)	.jpg, .bmp, .gif	No - static only	72	500 kb
1080 x 1920 Dyamic	Poster (V)	.jpg, .bmp, .gif, html5	No - static only	72	500 kb
160 x 600	Skyscraper	.jpg, .bmp, .gif, html5	Yes - up to 15 seconds	n/a	200 kb
1920 x 1080	Poster (H)	.jpg, .bmp, .gif	No - static only	72	500 kb
1920 x 1080 Dynamic	Poster (H)	.jpg, .bmp, .gif, html5	No - static only	72	500 kb
300 x 250	Rectangle - medium	.jpg, .bmp, .gif, html5	Yes - up to 15 seconds	n/a	200 kb
448 x 252	Rectangle - small	.jpg, .bmp, .gif	Yes - up to 30 seconds	n/a	250 kb
640 x 480	Rectangle - large	.jpg, .bmp, .gif	Yes - up to 30 seconds	n/a	250 kb
728 x 90	Leaderboard	.jpg, .bmp, .gif, html5	Yes - up to 15 seconds	n/a	250 kb
400 x 1400	Bulletin Board	.jpg, .bmp, .gif	No - static only	72	
400 x 840	Poster Billboard	.jpg, .bmp, .gif	No - static only	72	

- Orientation: Describes whether the image will be displayed in portrait or landscape
- File format: Highlights the available file formats for creative submissions
- Animation: Identifies whether the execution allows for any animation
- Minimum DPI: Defines the minimum pixel dots per inch to ensure clarity of the image for rendering on media consoles of various screen dimensions
- Max file size: Represents the maximum file size allowable in kb (kilobytes) or MB (megabytes)

VIDEO SPECS (NO SOUND)
The following specs cover video enabled executions which do not offer sound. Video creative can be a full-motion video or animated gif format. Some video files may be encoded to enable successful delivery to the media console.

VIDEO SPECS (NO SOUND PLAYBACK)

Size	Name	File Format	Codec	Ratio	FPS	Max File Size	Animation Length (seconds)
1080 x 1920	Video - Silent	.mov, .mp4	H.264, Apple ProRes	9:16	29.97	7 MB	8, 10, 15, or 30
1920x1080	Video - Silent	.mov, .mp4	H.264, Apple ProRes	16:9	29.97	7 MB	8, 10, 15, or 30
640 x 480	Video - Silent	.mov, .mp4	H.264, Apple ProRes	4:3	29.97	7 MB	8, 10, 15, or 30

Note: Alternatively, an animated .GIF can be submitted utilizing the image specs

Terminology:

- File format: Highlights the available file formats for creative submissions
- Codec: Software for encoding and decoding digital video
- Ratio: Defines the video aspect ratio
- FPS: Video recording should match the recommended frames per second
- Max file size: Represents the maximum file size allowable in MB (megabytes)
- Animated GIF: Identifies whether an animated .gif file format can be delivered for the video execution
- Animation length: Describes the maximum length of the video animation

VIDEO SPECS (WITH SOUND)

The following specs cover video enabled executions which offer sound. Video creative can be a full-motion video or animated GIF format. Some video files may be encoded to enable successful delivery to the media console.

Size	Name	File Format	Codec	Ratio	FPS	Audio Codec	Max File Size	Animation Length (seconds)
1080 x 1920	Video	.mov, .mp4	H.264, Apple ProRes	9:16	29.97	MP3 or AAC	7 MB	8, 10, 15, or 30
1920x1080	Video	.mov, .mp4	H.264, Apple ProRes	16:9	29.97	MP3 or AAC	7 MB	8, 10, 15, or 30
VAST	IAB VAST	.mov, .mp4	H.264, Apple ProRes	16:9	29.97	MP3 or AAC	7 MB	6, 15, or 30
1920 x 1080p Cinema	Cinema Video	.mov, .mp4	Apple ProRes 422HQ	16:9, 1.85, 2.35	23.98	ACC or AC-3	Unlimited	8, 10, 15, 30, 60, 90 or 120s
640 x 480	Video	.mov, .mp4	H.264, Apple ProRes	4:3	29.97	MP3 or AAC	7 MB	8, 10, 15, or 30

Terminology:

- Codec: Software for encoding and decoding digital video
- Ratio: Defines the video aspect ratio
- FPS: Video recording should match the recommended frames-per-second
- Audio codec: Software for coding and decoding a digital audio stream
- Max file size: Represents the maximum file size allowable in MB (megabytes)
- Animation length: Describes the maximum length of the video animation

Content Production Teams & Curation

Content production is the process of originating or modifying creative assets using specific techniques to deliver the desired final asset that will be played out on screen. With the wide range of executional techniques available and with advertisers having an ever increasing ambition to push creative boundaries, it is important to have a production team that has the specialist skills needed to deliver that ambition.

A full service production studio in today's landscape is likely to include the following team members: creative and technical directors, experience, motion graphic, 3D and graphic designers, copy writers, illustrators, front and back end developers, technicians, project managers or producers, quality assurance specialists and account management.

These teams will be capable of modifying or originating the assets, then outputting them to meet the defined specifications of each format and generally work on time- and material-based invoicing, which means each project will be quoted on a case-by-case basis.

When curating a team to work on a project, it is important to find one that has the experience to deliver the project requirements within the time and budget constraints that have been defined. It is important to share quality expectations and state the budget that is available, which will allow the team or production house to accurately define the scope of what they will deliver. This is normally in the form of a scope-of-work document, which can be used as a schedule in contracts, protects all parties and should facilitate the delivery of the project.

Content Rights Management

Given the number of potential stakeholders in the production and delivery of content to a display, it is important be aware of content rights management. On the most basic level, no content should be shown on a display without the permission of the content owner.

For example, large sporting events such as the Olympics or FIFA World Cup have copyrights on the event names and all associated content. They do not allow that content to be displayed unless you are an official sponsor and even then, only working within the constraints of the content agreement.

The responsibility of content rights management normally rests with the advertiser, but the media owner should be aware of any potential implications based on the agreements with the landlord of the site the media is on. If there are any doubts about content rights, we suggest that specialist legal advice is sought.

ABOUT THE DOOH PRIMER
This project was compiled using a combination of original writing and sections taken from over 400 pages of documents owned and originally produced by the five industry associations that came together to produce the project. All sources were used with permission from the five associations.

ABOUT THE DIGITAL SIGNAGE FEDERATION (DSF)
DSF's Mission is to support and promote the common business interests of the world-wide digital signage, interactive technologies and the digital out of home network industries. The DSF is a not-for-profit independent voice of the digital signage industry reflecting the diversity of its membership. It promotes professional recognition through certifications, continuing education, conferences, publications, and presentations offered by the DSF and affiliate groups. It provides advocacy by leveraging the collective strength of members and represent their interests at the higher levels of government and the community. The DSF provides leadership and networking opportunities focused on building a strong foundation for the advancement of the digital signage industry.

For more information, please visit digitalsignagefederation.org.

ABOUT THE DIGITAL PLACE BASED ADVERTISING ASSOCIATION (DP-AA)
The Digital Place Based Advertising Association (DPAA) leads the Digital Out of Home (DOOH) industry as marketing to consumers *outside* the home is experiencing aggressive growth versus advertising *inside* the home, which is continuing its fragmented decline.

DPAA fosters collaboration between advertisers, agencies, ad-tech, mobile companies, location data, software, hardware and others while providing guidelines, standards, best practices and industry-wide research all promoting the effectiveness of digital place based advertising.

For more information, please visit dp-aa.org.

ABOUT GEOPATH
Founded in 1933, Geopath is the industry standard that powers a smarter OOH marketplace through state-of-the-art audience location measurement, deep insights and innovative market research. The organization is headquartered in New York and governed by a tripartite board composed of advertisers, agencies and media companies spanning the entire United States.

For more information, please visit geopath.org.

ABOUT THE INTERACTIVE ADVERTISING BUREAU (IAB)
The Interactive Advertising Bureau (IAB) empowers the media and marketing industries to thrive in the digital economy. Its membership is comprised of more than 650 leading media and technology companies that are responsible for selling, delivering, and optimizing digital advertising or marketing

campaigns. The trade group fields critical research on interactive advertising, while also educating brands, agencies, and the wider business community on the importance of digital marketing. In affiliation with the IAB Tech Lab, it develops technical standards and best practices. IAB and the IAB Education Foundation are committed to professional development and elevating the knowledge, skills, expertise, and diversity of the workforce across the industry.

For more information, please visit iab.com.

ABOUT THE OUT OF HOME ADVERTISING ASSOCIATION OF AMERICA (OAAA)

The Out of Home Advertising Association of America (OAAA) is the national trade association for the $7.8 billion US out of home (OOH) advertising industry, which includes digital out of home (DOOH), and is comprised of billboards, street furniture, transit advertising, and place-based media.

Comprised of 800+ member media companies, advertisers, agencies, ad-tech providers, and suppliers that represent over 90 percent of the industry, OAAA is a unified voice, an authoritative thought leader, and a passionate advocate that protects, unites, and advances OOH advertising in the United States.

For more information, please visit oaaa.org.

ABOUT THE RAVE AGENCY

Founded in 1998, THE rAVe Agency, co-owned by Gary Kayye and Sara Abrons, is a creative agency focused on B2B technology markets, particularly the audiovisual and digital signage industries. It offers consulting and creative services such as marketing strategy, market research, speaking, social media marketing and more. Gary Kayye has been an assistant professor at the UNC School of Media and Journalism, focused on advertising and new media, since 2009.

For more information, please visit THErAVeAgency.com.