DIGITAL AD CREATIVE GUIDELINES

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BEST PRACTICES FOR DIGITAL AD CREATIVE DEVELOPMENT

At a Glance Digital Ad Guidelines:

Universal Standard Display Ad Dimensions & File Weights

IAB Ad Unit Name	Dimensions	File Weight
Leaderboard	728x90	<150 KB
Medium Rectangle / Big Ad / Big Box	300x250	<150 KB
Skyscraper	160x600	<150 KB
Half Page Ad	300x600	<200 KB
Mobile Leaderboard	320x50	<50 KB

Creative Best Practices: General Display Advertising

- Use at least four of the most popular ad sizes to maximize exposure (see recommended sizes above).
- Keep the message focused and simple. Do not make people work to understand your message.
- Logo should be prominently visible.
- Include human presence and product shots.
- When arriving to your landing page, users should be able to easily find what your ad promises.
- Use the same creative elements from your ads on your landing page. They should have a similar "look and feel".
- Consider including your URL in the ad for those individuals who avoid clicking. This will give them an address to navigate directly to your site.
- Call-to-action: Give them a reason to engage with you. Action buttons encourage engagements (clicks). Do not use the word "click", but phrases like "order here", "enroll today", and "instant access" provide an implied benefit to the user.
- A void ad fatigue. Make new creative as often as your budget allows. It is important to keep your ads fresh.

Additional Best Practices for Retargeting/Remarketing Campaigns

- Ads should be unique to retargeting because your audience is <u>already</u> engaged with you.
- Do not make it obvious that you are retargeting your website visitors.
- Provide compelling reasons to encourage return visits to your website.
- Include strong call-to-action offers like "free shipping", "free application", "special considerations", etc.
- Make sure your creative elements are brand consistent.

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Standard Digital Display Ads

Display ads are ads that appear with a picture. To ensure that your display ads are appropriate, we also have additional requirements when using the display ad format, as shown below.

Static / Non-Animated Display Ads
- Can be formatted as JPEG, .JPG, .PNG, and .GIF files.
- Ads with light backgrounds must have a distinct SOLID border (1 pt. black border).
- Ideal file size for all ads should be < 40KB to allow maximum distributions, but up to 50KB is allowed.
- Do not use the word 'Click' in the ads as some publishers will not allow it.

Animated GIFs
- Animated GIF ads must have a frame rate no faster than 5 FPS.
- Animation length should be a maximum of 15 seconds or shorter. No continuous looping.
- Ads with light backgrounds must have a distinct SOLID border (1 pt. black border).

Static / Non-Animated Display Ad Specifications

File type	.JPEG
	.JPG
	.PNG
	.GIF
File size	**150 KB or smaller**
Dimensions	**Mobile leaderboard: 320x50**
	Leaderboard: 728x90
	Inline rectangle: 300x250
	Skyscraper: 160x600
	Half-page: 300x600

Bolded Sizes are standard sizes used for most campaigns. All dimensions are pixels.

HTML5 Display Ads

HTML5 ads are like mini web pages and contain multiple file types that combine different types of technologies such as HTML, Javascript, Cascade Style Sheets (CSS), Web Fonts, shared javascript libraries, SVG, WebGL and other assets like images and video files. The number of requests made to fetch files has a big impact on load performance of the ad as well as the page. HTML5 ads must optimize the number of requests being made to the server to reduce the impact on performance.

- Animation length should be a maximum of 15 seconds or shorter. No continuous looping.
- Ads with light backgrounds must have a distinct solid color 1px border.

HTML5 Display Ad Specifications

Supported ad sizes	**Leaderboard: 728x90**
	Mobile leaderboard: 320x50
	Inline rectangle: 300x250
	Wide skyscraper: 160x600
	Half-page: 300x600
Supported file size	**200 KB** or smaller
File type	.ZIP
	The .ZIP file should contain the HTML for the ad as well as any of the other following file types:
	.CSS
	.JS
	.HTML
	.GIF
	.PNG
	.JPG
	.JPEG
	.SVG
Border	The creative must be clearly separated from the site content either by a 1px border or a non-white background color.

Bolded Sizes are standard sizes used for most campaigns. All dimensions are pixels.

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File weight calculation:

All files for the ad (.html, .js, .css, images, etc.) must be included as part of the maximum file weight calculation for all file load limits. File weights are calculated after files have been compressed into zip format.

HTML5 Display Ad ClickTag Parameters

The ClickTAG parameter is provided to the primary HTML file as a URL parameter. The name of the URL parameter is customizable at the time of creative upload or during editing. We suggest using JavaScript to read the parameter from the document location URL and using it to set up the landing page for your clicks.

Audience Targeted Display Ad Click Tag (TTD):

Immediately following the <head> tag, before the closing </head> tag, add the following script:

```
<script type="text/javascript" charset="utf-8">
     function getParameterByName(name) {
name = name.replace(/[\[]/, "\\[").replace(/[\]]/, "\\]");
var regex = new RegExp("[\\?&]" + name + "=([^&#]*)"),
results = regex.exec(location.search);
return results == null ? "" :
decodeURIComponent(results[1].replace(/\+/g, " "));
}
var clickTag = clickTAG = clicktag = ClickTag = ClickTAG = CLICKTAG =
getParameterByName('clickTAG') || getParameterByName('clickTag') ||
getParameterByName('clicktag');
var oobClickTrack = getParameterByName('oobclicktrack');

var el = document.getElementById("banner");
el.addEventListener('click', function() {
     console.log(this);
   window.open(clickTag, "_blank");
   if(oobClickTrack  != null) { var img = new Image(); img.src =
oobClickTrack; }
}, false);      var clickTAG = getParameterByName("clickTAG");
     //At this point, the value for the clickthrough URL is stored in
the variable "window.clickTAG"
     //clickTAGs are case-sensitive, so make sure TAG/Tag/tag is
uniform throughout the creative and any supporting files
   </script>
```

Immediately following the <body> tag, add the following script:

```
<a href="javascript:window.open(window.clickTAG);void(0);">
```

Immediately before the closing </body> tag, add the following:

```
</a>
```

Lee Enterprises News Website Display Ad Click Tag (DFP):

Immediately following the <head> tag, before the closing </head> tag, add the following script: (width and height need to be adjusted for each ad size to the ad's dimensions)

```
<meta name="ad.size" content="width=300,height=250">
<script type="text/javascript">
var clickTag = "http://www.google.com"; </script>
```

Immediately following the <body> tag, add the following script:

```
<a href="javascript:window.open(window.clickTag)">
```

Immediately before the closing </body> tag, add the following:

```
</a>
```

Mobile/Tablet Display Ad Specifications (expanded from above)

Creative Unit Name	Dimensions	File Weight	Animation/Video Guidelines
Smartphone Static Banner	300x250, 320x50	40 KB	15 sec max length for animation Video not allowed for this unit. See "In-Banner Video" & Rich Media units below for video.
Tablet Static Banner	300x250, 728x90, 160x600	150 KB	15 sec max length for animation Video not allowed for this unit. See "In-Banner Video" & Rich Media units below for video.

Bolded Sizes are standard sizes used for most campaigns. All dimensions are pixels.

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In Banner (In-Display) Video Ads

In-Banner or In–Display video may be served into a display ad placement that may or may not use a player to receive and execute the ad. The key difference between in-stream and in–banner video ads is that in-banner video ads leverage the existence of standard display ad units to deliver a video experience as opposed to another static or rich media format. These in-banner video ads are not the focus of the page and not rendered in a prominent player.

For example, a site visitor may view an article on a news website. A muted, auto -play video ad may load in a standard display ad unit and then be followed by some video footage. This is an example of "in-display' video because the consumer did not visit this page w/ the intent to view this video unit.

In-Banner/In-Display Video Ad Specifications

Supported ad sizes	**Leaderboard: 728x90**
	Mobile leaderboard: 320x50
	Inline rectangle: 300x250
	Skyscraper: 160x600
	Half-page: 300x600
Supported file size	50 KB or smaller, 15 sec max length (unlimited user-initiated)
File type	At a minimum, the MP4/H.264 file format should be provided, but alternate files using formats such as .mov, .WebM and .VP8 may also be submitted. Ads should be in Flash Format.

Bolded Sizes are standard sizes used for most campaigns. All dimensions are pixels. Audio: Must be user-initiated. To allow for audio initiation in videos without player controls, a control may be included for user to initiate audio.

Required for ads with video: Video may omit controls until user initiates interaction. Upon user interaction, video controls must include Play, Pause, Mute or volume control to zero (0). For auto play videos that play in banner only Mute or volume control to zero(0) is required. These videos should have no audio heard unless initiated by a mouse over. Auto-play videos should also be backstopped by a 300x250 ad unit that clicks to a landing page.

HTML5 video controls: To improve performance and reduce file size, use control attributes in the HTML5 video tag for controls instead of providing custom assets for displaying controls. Video tags are not recommended on HTML5. Audio tags should only play if the user intentionally starts audio (no auto play).

Display Ad Content Requirements

Graphical layout
Ads must take up the entire space of the image size you've chosen, and they can't appear sideways or upside down. Ads can't be segmented, contain multiple copies of itself within the ad, or appear to be more than one ad. Our ad networks also don't allow ads that expand beyond the frame or otherwise encroach on the website or app.

Note that in each display ad, we include a small informational graphic overlay. We will not resize your image to accommodate this element. Your ad should always be submitted in the full original format size and take this overlay element into account. If the ad you submit is resized in advance, there may be extra white space visible when your ad is displayed.

Relevance and quality
Display ads must be relevant to the advertised site or app. Ad images must be clear and recognizable, with legible text. We don't allow unclear, blurry, or unrecognizable images to be used in ads.

Strobing and flashing
Our ad networks don't allow strobing, flashing, or otherwise distracting ads.

Mimicking site content, news articles, or text ads
Our ad networks don't allow ads that mimic other publisher's content or layout, or news articles and features. Ads may also not contain screenshots of Google text ads or otherwise simulate an AdWords text ad in any way.

YouTube TrueView In-Stream Ads

How TrueView in-stream ads work
TrueView in-stream ads run on videos served on YouTube or on a collection of sites and apps in the Google Display Network (GDN). These ads may also run on YouTube videos that are embedded on other sites or apps. They can also appear on Android and iOS YouTube apps, m.youtube.com (on iPad and Android), and on connected TVs.

Viewers can choose to skip the video ad after 5 seconds. If they choose not to skip the video ad, the YouTube video view count will be incremented when the viewer watches 30 seconds of the video ad (or the duration if it's shorter than 30 seconds) or engages with your video, whichever comes first. Video interactions include clicks to visit your website, call-to-action overlays (CTAs), cards, and companion banners. If view counts on YouTube are a concern, it's a good idea to make videos at least 12 seconds long. YouTube analytics doesn't track views less than 10 seconds.

For this ad format, we won't make any changes to the content of your video. You will need to provide one of the following:

- YouTube URL (preferred)
- A raw video file

Non-skippable in-stream video ads must be 15 seconds or less. There is no time limit for skippable TrueView in-stream video ads.

YouTube TrueView In-Stream Ad Specifications

	Required/Optional	TrueView auction
Where ads appear	N/A	YouTube videos
		Display Network videos, games, and apps
YouTube video URL	Required	The video must be uploaded to YouTube
Companion	Optional, YouTube or GDN	300x60 JPG, static GIF, or PNG
		300x250 also available for GDN
		300x250 video wall will show on YouTube if no companion ad is provided.
		150 KB (50KB max for non-skippable video)
Display URL	Required	Required by AdWords UI. The domain will show on the live video.
Final URL	Required	The destination can be your website or YouTube video or channel.

When uploading a video for a TrueView ad, follow these specifications for the video file:
File format: .MOV, .MPEG4, .AVI, .WMV, .MPEGPS, .FLV, 3GPP, or WebM
Aspect ratio: 4:3 or 16:9
Maximum file size: No maximum
Video length: 15 seconds or less
Video requirements:

- Must be hosted on YouTube
- Must be public or unlisted

If you use a previously uploaded YouTube video, the formatting of your video must meet these requirements:
Embedding: The video must allow embedding.
Privacy settings: The video can be public or unlisted, but cannot be private.
File format: AVI, ASF, Quicktime, Windows Media, MP4, or MPEG
Preferred video codec: H.264, MPEG-2, or MPEG-4
Preferred audio codec: MP3 or AAC
Resolution: 640x360 (16:9) or 480x360 (4:3) recommended

Frame rate: 30 FPS
Aspect ratio: Native aspect ratio without letter-boxing (examples: 4:3, 16:9)
Maximum file size: 1 GB
Click-throughs: A third-party click redirect or click command is acceptable.

In-stream video 300x60 companion banner display ad (optional)

- **Dimensions**: 300x60 pixels
- **File format**: JPG, static GIF, or PNG
- **Maximum file size**: 150 KB (50KB max for non-skippable video)
- **Rich media**: Not acceptable for this ad unit (no audio)

YouTube TrueView Ad Content Requirements

Playing time and user interaction

- Non-skippable in-stream ads must be 15 seconds or less. Depending on the country or region in which you want to show your in-stream ad, the video can be up to 20 seconds long.
- There is no time limit for skippable TrueView in-stream video ads.
- The static image overlay will appear within the bottom portion of the video.

Graphical layout

Ads must take up the entire space of the image size you've chosen, and they can't appear sideways or upside down. Ads can't be segmented, contain multiple copies of itself within the ad, or appear to be more than one ad.

Video Pre/Post/Mid-Roll Ads (Non YouTube)

Pre-Roll video ads are the ads, typically in video format, that interrupt streaming video content much like a TV commercial. They can play before (pre-roll), during (mid-roll), or after (post-roll) the streaming content. In its most basic format, the ad plays for a prescribed amount of time before it ends and the player resumes regular operation.

Video Pre/Post/Mid-Roll Ad Specifications

File type:	MP4, FLV, WEBM, MOV, MPG, MPEG
Video dimensions:	Minimum height of 144px
Aspect ratio:	16:9 or 4:3
Max file upload size:	200mb
Standard length:	15 – 30 seconds
Max file upload length:	60 seconds

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Connected TV Ad Content Requirements

Connected TV Ad Specifications

File type:	MOV, MP4
File Quality	1080p (1920x1080)
Bitrate	Minimum 1200-1500 KBPS (1.6-3.2 MBPS recommended)
Max file upload size:	15-50 MB (recommended compressed at 1.5 MBPS)
Standard length:	15 – 30 seconds
File Tags	VAST

Facebook Targeted Ads

For all Facebook ad sizes, character counts, and ad standards, please visit:
https://www.facebook.com/business/ads-guide

Cannabis Network Advertising

Display ads are ads that appear with a picture. To ensure that your display ads are appropriate, we also have additional requirements when using the display ad format, as shown below.

Cannabis Network Guidelines

- The promotion of cannabis should not include communicating information abou the price or distribution
- A method of age-verification must be in place before a user can access a website regarding cannabis
- Advertising may only promote a brand and not the product in general
- Advertising cannot attempt to influence adult non-consumers to try cannabis
- Advertising cannot imply consumption
- Advertising cannot use imperative language to encourage consumption or purchase of cannabis or accessories
- Advertising cannot display, reference or use cannabis brand elements, or producer, seller distributor, or service provider names in promotions
- Edible and concentrated cannabis promotion is not permitted
- Advertising cannot be direct toward or appeal to young persons (no branding with characters or animals, or use of content that depicts glamour, recreation, excitement, vitality, risk, or daring nature)
- Advertising cannot suggest that adults use cannabis for therapeutic or health related reasons

- Advertising cannot involve a contest, game, draw, or lotterly
- Advertising must accurately & legibly identify the licensed producer

Static / Non-Animated Display Ads
- Can be formatted as JPEG, .JPG, .PNG, and .GIF files.
- Ads with light backgrounds must have a distinct SOLID border (1 pt. black border).
- Ideal file size for all ads should be < 40KB to allow maximum distributions, but up to 50KB is allowed.
- Do not use the word 'Click' in the ads as some publishers will not allow it.

Animated GIFs
- Animated GIF ads must have a frame rate no faster than 5 FPS.
- Animation length should be a maximum of 30 seconds or shorter. No continuous looping.
- Ads with light backgrounds must have a distinct SOLID border (1 pt. black border).

Static / Non-Animated Display Ad Specifications

File type	JPEG, .JPG, .PNG, or .GIF
File size	**150 KB or smaller**
Dimensions	**Mobile leaderboard: 300x600**
	Leaderboard: 728x90
	Inline rectangle: 300x250
	Skyscraper: 160x600

Bolded Sizes are standard sizes used for most campaigns. All dimensions are pixels.

Native Advertising
- Headlines should have a maximum of 55 characters and a minimum of 15 characters (including spaces)
- Body should have a maximum of 120 characters and a minimum of 25 characters (including spaces
- Image should not contain any overlay text and must be in a high resolution (300 pixels per inch and above)

File type	.JPEG, .JPG, .PNG, or .GIF
File size	**150 KB or smaller**
Dimensions	**1200x628**
	600x600

Video Advertising

File type:	3GPP, ASF, AVI, FLV, M3U8 (url format only), MOV, MP4, MPEG, MPG, OGV, VPAID 1.0 (in a VAST wrapper, 3rd party only), VPAID 2.0, VAST, WEBM, & WMV
Video dimensions:	640x360 or 640x480
Aspect ratio:	16:9 or 4:3
Max file upload size:	150mb
Standard length:	15 – 30 seconds
Max file upload length:	90 seconds

Targeted Email

Targeted Email Ad Specs

Width	650px (max 750px)
Height	Max 1728px
Max File Size	**200kb**

LinkedIn

For all LinkedIn ad sizes, character counts, and ad standards, please visit: https://business.linkedin.com/marketing-solutions/success/ads-guide

Waze

- Business Name should have a maximum of 30 characters
- Location/Business Details should have a maximum of 60 characters
- Branded Icon images should be 152x112px
- Banner Images (Zero-Speed Takeover) should be 690x550px

Branded Pin

Location Address	Required
Branded Icon	152x112px
Business Hours	Optional
Banner Image (Zero-Speed Takeover)	608x240px (optional)
CTA	Drive There, Save For Later, Save Location, Call Now

Zero-Speed Takeover

Location Address	Required
Business Hours	Optional
Banner Image (Zero-Speed Takeover)	608x240px
CTA	Drive There, Save For Later, Save Location, Call Now

Nearby Arrow

Branded Icon	152x112px
Banner Image (Zero-Speed Takeover)	608x240px
CTA	Drive There, Save For Later, Save Location, Call Now

Location Preview Screen

Location Address	Required
Branded Icon	152x112px
Business Name	30 character (max)
Phone Number	Optional
Business Hours	Optional
Banner Image (Zero-Speed Takeover)	608x240px (optional)
Mobile Friendly URL	optional

Promoted Search

Branded Icon	152x112px

GLOSSARY OF TERMS

Animation A programmatically generated display of sequential images, creating the illusion that objects in the image are moving. Not digital video, as it relates to this document (see the definition for "Video").

Audio The audible file that may accompany ads. Advertising audio should never play without user-initiation.

Banner Also known as "display ads", banner advertisements are a form of graphical ads embedded into a webpage, typically including a combination of static/animated images, text and/or video designed to convey a marketing message and/or cause the user to take an action. Banner dimensions are typically defined by width and height, represented in pixels.

Between-the -Page Also known as "interstitial" ads, between-the-page ad units display as a user navigates from one webpage to the next webpage. The ad appears after the user leaves the initial page, but before the target page displays on the user's screen. Typically, the ad is self-contained within its own browser window, but may also appear briefly as an overlay on the target page rather than in its own browser window.

Billboard An IAB Universal Brand Package ad unit template designed with options for rich interactivity to display prominently inline with Publishers' webpage content. A distinct feature of the Billboard is a close button that a user may click to collapse the ad completely if the user doesn't want to see the ad.

Bitrate The rate of bits processed per unit of time, commonly measured in bits per second (bps), kilobits per second (Kbps), or megabits per second (Mbps). The bitrate is one of the biggest factors in audio or video quality.

Byte A unit of digital information in computing and telecommunications that most commonly consists of eight bits. Historically, a byte was the number of bits used to encode a single character of text in a computer and for this reason it is the basic addressable element in many computer architectures.

Caching The practice of temporarily storing files on local servers for quick retrieval the next time the file is needed. Cached files supply an old copy that may not be up to date with the file stored at the original source, but are often necessary for improving page load performance.

Campaign The advertising period in which an ad delivery strategy is executed.

CDN An acronym for Content Distribution Network, a CDN is a system of geographically dispersed servers used to provide web content to a

	browser or other client. Files are strategically pulled from a server on the network based on the location of the user, the requesting server, and the delivery server of the CDN to provide the best delivery performance.
CLEAR Ad Notice	CLEAR is an acronym for "Control Links for Education and Advertising Responsibly," a set of technical guidelines developed by the Interactive Advertising Bureau (IAB) and the Network Advertising Initiative (NAI) to empower members of the online advertising community to communicate their presence and behavioral advertising targeting practices (if any) to consumers in a simple and direct manner. Derived from: http://www.iab.com/media/file/CLEAR_Ad_Notice_Final_20100408.pdf
Click	An interaction between a website visitor and the browser in which the website visitor uses a device, such as a mouse, to move the cursor (or pointer) to an active area of the screen and then deliberately interacts with that area by clicking a button on their device, triggering an event. In the case of touch-screen devices, the user "clicks" by touching the active area with their finger or a stylus.
Close X	A creative control that enables a user to close an ad (remove it from view) or to reduce an expanded panel back to its original size.
Collapse	An event where the expanded panel of an expandable ad reduces to its original size, or disappears completely.
Compression	The practice of packaging a digital file so that it uses less storage space.
Controls	Active elements of an ad that enable a user to control the advertising experience. Examples of common controls include the "Close X" button in an expandable ad or the Play/Pause/Mute buttons in a video player.
CPU	CPU is an acronym for Central Processing Unit, the key component of a computer system, which contains the circuitry necessary to interpret and execute program instructions.
CPU Usage %	A guideline for the amount of central processing power used to display advertising content compared to what's available on an individual's computer. CPU usage percentage can be measured directly, during the execution of an online ad. In addition to file size, the complexity of drawings, gradients, slow moving animations and detailed moving elements can affect the number of calculations the CPU must make for each frame.
CPU Spike	A brief increase in central processing power, sustained for no more than a few seconds, experienced while "heavy" content is loaded/executed.
Creative	An advertising unit created by an ad designer, in accordance with publisher specifications and guidelines, for the purpose of communicating a marketing message to that publisher's audience. One creative may consist of multiple files in various formats, such as standard images, animation, video, execution files (.html, .js, etc.) and other files that work together for an interactive experience.

Creative Dimensions	Measured in pixels, the width and height of an ad unit (WxH). The width is always the first dimension listed, followed by the height dimension (i.e. an ad that is 300×250 is 300 pixels wide by 250 pixels high).
Cursor	The graphical representation of a "pointer" on a user screen, controlled by the user's interaction with controlling devices such as a mouse, mouse pad, stylus or other input hardware.
Expanded Dimensions	The secondary dimensions of an expanding ad unit (after the ad is expanded). Initial dimensions are fit to the dimensions of the placement. Then, either by auto-play or by user interaction, the ad unit expands to its secondary dimension.
File requests	In the context of displaying digital content, the browser loads code that contains instructions about where to retrieve files such as text, images, videos, and any other components that contribute to the display experience. Each time the browser must retrieve content from another server, a file request is made. Too many file request may reduce page load performance.
Flash™	Software and tools developed by Adobe used to build, generate, and play animated files. Also used to define the creative files generated by the program. In order for Flash files to execute in a browser, the Flash player plug-in must be installed. However, Flash development tools can also generate files in HTML5 format so that no plug-in is required for execution.
FPS	FPS is an acronym for Frames Per Second, the metric used to indicate the frame rate of animated or video creative content.
Frame Rate	The rate at which video frames or animated images display as the video or animated file executes, measured as the number of frames per second (fps).
GPU	GPU is an acronym for Graphics Processing Unit. In modern computers, the GPU handles graphical processing, decreasing the processing burden handled by the CPU.
Gzip	Automatic compression of creative assets for an ad when delivering from an ad server to a web page or application. The key difference between .zip files and gzip is that zip is used for storing files, and gzip is used for compressing files that are in transmission from one server to another.
H.264	A video coding format that uses a block-oriented, motion-compensation-based video compression standard. H.264/MPEG-4 AVC is one of the most common formats used for recording, compressing, and distributing video content. For more information see: https://en.wikipedia.org/wiki/H.264/MPEG-4_AVC
HLS	An acronym for HTTP Live Streaming is an HTTP-based media streaming communications protocol implemented by Apple Inc. It works by breaking the overall stream into a sequence of small HTTP-based file downloads, each download loading one short chunk of an overall potentially unbounded transport stream. As the stream is played, the client may select from a number of different alternate streams

	containing the same material encoded at a variety of data rates, allowing the streaming session to adapt to the available data rate. At the start of the streaming session, it downloads an extended M3U playlist containing the metadata for the various sub-streams [that] are available. See http://en.wikipedia.org/wiki/HTTP_Live_Streaming for more information.
Host-initiated	Any activity that is auto-initiated.
Host-initiated sub-load	The additional file limit allowed for rich media and Rising Star units that is auto-initiated one second after the domContentLoadedEventEnd occurs (web page content has been loaded) on the host computer or device.
Hot Spot	A "hot spot" is an area of an ad unit, which when rolled-over/rolled-on by the user's cursor, such rollover triggers an event (i.e. expand ad). The hotspot should never be larger than 1/4th the size of the original (collapsed) ad unit. The trigger event should not occur unless the user's cursor rests in the hotspot zone for at least 1-second. Hotspots should never initiate audio (audio should only be initiated by a click). When hotspots are used, the trigger event should stop immediately upon the user's cursor leaving the hotspot zone (i.e. ad collapses), and the ad unit should return to its original state.
HTML5	An acronym for Hypertext Markup Language, version 5. HTML5 extends earlier versions to include tags for processing video, audio, canvas, an other embedded audio and video items without requiring proprietary plug-ins and APIs. HTML5 has been used as an alternative to developing and executing interactions similar to those using Adobe Flash but with very different technology.
IBA	Interest-based advertising — which is also sometimes called "online behavioral advertising" — uses information gathered about a site user's visits over time and across different websites or applications in order to help predict preferences and show ads that are more likely to be of interest to you. For example, a sporting goods manufacturer might work with an advertising network that collects and uses interest-based advertising information to deliver ads to the browsers of users that have recently visited sports-related sites, or an airline might direct ads to users that recently visited mobile travel apps. Definition from aboutads.info site: http://www.aboutads.info/how-interest-based-ads-work
In-Banner Video	A video delivered as part of (inside of) the display ad creative for a given placement rather than initiating the use of a video player.
Initial Dimension	The original width and height (in pixels) of an expanding ad. Expanding ads are designed to expand to dimensions larger than the initial dimensions.
Initial File Load	Includes all assets and files necessary (.html, .js, .css, .woff, images, ets.) for completing first visual display of the Ad. The initial file load size of an ad is limited in order to preserve the page load performance and thus the user's web browsing experience. For non-rich media ads, the initial file load size limit is all that's allowed for the ad.

Interstitial	See 'Between-the-Page'
JavaScript libraries	A collection of pre-written code used to simplify development of web-based applications.
Kilobyte (KB)	A multiple of the unit 'byte' for digital information, used to quantify computer memory or storage capacity equal to a 1,000 bytes (or technically, 2^10 = 1,024 bytes). For the purposes of this document, this measure relates to creative file size. (See definition for Byte)
Labeling Requirements	The minimal requirements for distinguishing an online advertisement from regular webpage content.
Megabyte (MB)	A multiple of the unit 'byte' for digital information, used to quantify computer memory or storage capacity equal to 1,000 kilobytes (or technically, 2^20 = 1,048,576 bytes). For the purposes of this document, this measure relates to creative file size. (See definition for Byte)
Minification	The practice of removing unnecessary characters from code to reduce its size, removing unnecessary spacing, and optimizing the CSS code; thus improving load times.
moov atom	A video data object in a media file used to execute the video. The moov (or movie) atom should be placed at the beginning of a video file to ensure proper execution.
Mouse-off	The act of a user moving the cursor away (off) from the hot spot of an ad. Mouse-off by a user may trigger an event, such as collapsing an expanding panel or stopping any animation in progress.
Mouse-over	The act of a user moving the cursor and resting it on the hot spot of an ad for at least one second. Mouse-over may trigger an event such as expanding the ad or initiating an animated sequence within the ad. Mouse-over may NOT initiate audio play.
MP4	A digital multimedia format used to store video and audio, but may also include features such as subtitles, chapter details, and other data related to the video or audio file. The filename extension for MPEG-4 files is .mp4.
MPEG	A set of standards for audio and video compression and transmission established by the Moving Picture Experts Group.
MPEG-DASH	An acronym for MPEG Dynamic Adaptive Streaming over HTTP. This adaptive streaming technique allows for a streaming experience using progressive download of several small chunks of video at different bitrates. An HTTP-connected video player (the client) detects the bandwidth at each chunk of time (about 3-5 seconds) and determines which quality level to download and play for the small duration allotted.
MRAID	An acronym for Mobile Rich Media Ad Interface Definition. MRAID is a protocol that enables communication between an ad and a mobile application in order to execute interactions such as geolocation, ad resizing, and accelerometer functions among others.
Overlay	An ad unit that displays over the webpage content briefly when initiated.

Pause	A video, animation or audio control that enables users to stop the video, animation, or audio from playing until the user is ready to resume play.
Pixel (as a unit of measure)	The smallest unit of measure for graphical elements in digital imagery, used as the standard unit of measure for ad creative (i.e. 300×250 pixels). Pixels may also represent x/y coordinates relevant to a given space, such as the browser window, an application workspace or the user's computer screen. (See also "Tracking Pixel")
Pixel Density	The number of pixels displayed on the screen within an inch (pixels per inch or PPI) or within a centimeter (pixels per centimeter or PPCM). Screen pixel density varies by device with older monitors displaying 67 – 130 PPI. Mobile devices often exceed that at 300+ PPI. Pixel density of 163 PPI is referred to as pixel density of 1 in this document.
Play	A video, animation or audio control that enables a user to initiate (or avoid initiating) the video, animation or audio of an ad.
Polite file load	Withholding a portion of the total ad creative file size (besides any initial file load size) from loading on a page until publisher content has loaded. With the release of the Display Creative Guidelines in 2015, polite file load has been replaced "Host-initiated subload." See Host-Initiated Subload for definition.
Pop-up Ad	Any advertising experience where visiting a website in an initial browser window initiates a secondary browser window to deliver an ad impression directly above the initial browser window.
Portrait	An IAB Rising Star ad unit template that uses up to three interactive modules chosen (by the ad designer) from a variety of modular application options in a 350×1050 pixel space.
Progress Bar	A video or animation control that shows users the progression of the video or animation in relation to its total duration.
Progressive Load Video	A distribution method for serving video files in which the video file downloads progressively into the cache of a user's computer, much the same way images and other content elements are downloaded. HTML5 files use progressive download for video files, but streaming methods can be simulated using adaptive bit streaming technologies such as HLS and MPEG-DASH.
Resolution	The quality of an image or video file often determined by the number of pixels displayed on the screen and usually annotated as a pixel width and height dimension. However, resolution can be measured in a number of ways and takes into account pixel aspect ratio, pixel density, and other factors that determine the viewing quality of the file.
Retraction	An event programmed into an expandable ad the causes the ad to be reduced to its original dimensions (i.e. the expanded portion of the ad retracts).
Rising Stars Display Ad Units	IAB invited companies and individuals to submit ad templates designed to drive brand equity. Six templates were chosen to be validated by the market. Rising Star Display Ad Units are designed to be the only ad on a page. Their file load limits are larger than for other

	ads, so not only would a Rising Star Ad Unit overshadow any other ads on the page but they would also compromise the performance of the page should other rich media ads be allowed to load simultaneously.
Rollover	The willful pause of the user's cursor on the target portion of the creative (the "hot spot"), such pause lasting at least one second in duration, before an action may be initiated by the ad (i.e. trigger an expand event, etc.). This one-second pause/delay requirement prevents unwanted, user-initiated actions and false reporting of user engagement. Rollover may NOT initiate audio.
Shared Libraries	In digital advertising, shared libraries are collections of pre-written code and resources that are used for implementing features and functions for an HTML5 ad. Instances of such resources that are downloaded to the browser from a specific server, like a CDN, are cached on the browser. Once cached, shared libraries can be shared with other ads that reference the library and the host server.
Skyscraper	A standard ad unit with dimensions of 160×600 pixels.
Standard Ad Units	A set of ad specifications for standard image or animated in-page ad units that establish a framework for advertising inventory and webpage design.
Streaming Video	A distribution method for serving video files such that the video is played over a persistent connection between the browser and the ad server. Versions of the file at different levels of compression (quality) can be served based on detection of the user's Internet bandwidth. HTML5 files cannot be streamed and rely on adaptive bitrate streaming technologies such as HLS and MPEG-DASH.
Submission Lead Time	The number of business days (non-weekend/non-holiday days) prior to a campaign going live in which a publisher needs to validate advertiser submitted creative(s) for a campaign.
Supporting files	In the context of HTML file loads, supporting files are files that the browser needs to reference in order to execute display of file contents and any interactions. Examples of supporting files include JavaScript libraries, font libraries, CSS files, and others.
SWF	Acronym for Shockwave Flash™. ".swf" is the file naming extension used for animated files complied using Adobe Flash™ software. HTML cannot execute .swf files without the browser-installed Flash player plug-in. For this reason, many content and ad providers are moving to the HTML5 format for more efficient execution of interactive media files.
Tracking Pixel	A 1×1 pixel-sized transparent image that provides information about an ad's placement. In many cases, a tracking pixel is used to notify an ad tracking system that either an ad has been served (or not served, in some cases) or that a specific webpage has been accessed. Also known as: beacon, web beacon, action tag, redirect, etc.
User	An anonymous person who uses a web browser to access Internet web content.
User Initiation	The willful act of a user to engage with an ad. Users may interact by clicking on the ad, and/or rolling over an ad (or a portion of an ad).

When a user engages the ad using a rollover action, the user's cursor must rest on the hotspot for at least one second before any action may be initiated in the ad. See the definition for rollover for more information.

Video (aka "Digital Video")	In online advertising, the digital recording of a physical event or animated files that have been transcribed into a digital video format.
Volume	A control that enables users to adjust the audio output of ad creative. Volume controls should always allow adjustment down to zero (0) output.
VP8	A video compression format owned by Google and created by ON2 Technologies. Latest version is VP9.
WebM	WebM is a video file format. It is primarily intended to offer a royalty-free alternative to use in the HTML5 video tag. The development of the format is sponsored by Google, and the corresponding software is distributed under a BSD license.
Z-index	Enumerated layers of elements and content on a publisher's webpage. Consideration of the z-element in page content design such as navigation, imagery, and ads is important for providing a seamless experience when page content overlaps (i.e. an expanding ad with a z-index that is lower [on the z-index scale] than navigational elements may give the appearance that page navigational elements are showing through the expanded portions of the ad).