DIGITAL VIDEO IN-STREAM AD METRIC DEFINITIONS

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This document has been developed by the IAB Digital Video Committee

The IAB Digital Video In-Stream Ad Metric Definitions were updated in 2014 by a working group of volunteers from 39 IAB member companies.

The Video Metric Definitions Working Group was led by:

- Margenett Moore-Roberts, Yahoo
- Michael Evangelista, FreeWheel
- Michael Goefron, UnRuly Media

The following IAB member companies contributed to this document:

A&E Television Networks	Ernst & Young LLP	Spongecell
AdExcite	ESPN.com	Spotify
Akamai	Extreme Reach	SpotXchange
BlackArrow	Fox Networks Group	Synacor
BreakMedia	FreeWheel	Time Inc.
Brightcove	Google & YouTube	Turner Broadcasting System
BrightRoll	ImServices Group Ltd.	UnRuly Media
CBS Interactive	Innovid	Viacom
Channel Factory	LiveRail	Vibrant Media
comScore	Mixpo	Vindico
Critical Media	Nielsen	Yahoo
DG	PointRoll	YuMe
Disney Interactive Media Group	Rovi Corp	
	SET	

The IAB lead on this initiative was Jessica Anderson

Contact adtechnology@iab.net to comment on this document.

ABOUT THE IAB'S DIGITAL VIDEO COMMITTEE

The Digital Video Committee of the IAB is comprised of over 180 member companies actively engaged in the creation and execution of digital video advertising. One of the goals of the committee is to implement a comprehensive set of guidelines, measurement, and creative options for interactive video advertising. The Committee works to educate marketers and agencies on the strength of digital video as a marketing vehicle. A full list of Committee member companies can be found at: www.iab.net/digital_video_committee

This document is on the IAB website at: iab.net/digitalvideoinstream

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Executive Summary

With the growth of digital video advertising, publishers and marketers need clear definitions more than ever. While dozens and even hundreds of metrics may be used to measure engagement in one ad, these definitions establish a baseline for ad performance measurement that everyone can use and build upon.

The IAB Digital Video In-Stream Metric Definitions were last updated in 2008. Released in early 2014 this document is a much-needed refresher to metric definitions that had gone stale with advancing technology. While most definitions have not been changed, other than to more clearly state the purpose for each, a few new metrics have been introduced, some minor changes made, and some outdated definitions deprecated.

IAB technical standards released in 2012, known as the IAB Digital Video Suite (V-Suite), introduced new metrics that superseded the 2008 version of this document. Without an official definition and with some metrics in conflict with older metric definitions, this update brings today's technical solutions for digital video more inline with industry-developed metric definitions.

With 39 IAB companies and digital video committee oversight, this update offers refreshed metric definitions that the marketplace can use to improve communication around digital ad performance.

What's Covered

This document provides definitions for common metrics used in digital in-stream ads for video. These metrics are an extension to the 2009 Update for Digital Video Ad Impression Measurement Guidelines that covers technical measurement details for counting digital video ad impressions.

The metrics defined in this document describe behaviors specific to ads served in a publisher's video player as opposed to the kind of video ads served to a page, otherwise known as display video ads or in-page video ads. Please see section 1.1 for a description of digital in-stream video ads.

Out of scope for this document are any metrics used to determine whether a digital in-stream video ad is in view. At the time this document was released, viewability in digital video was being addressed under a different initiative. An in-view measurement guideline had yet to be established and could not be included in this document. Please visit http://measurementnow.net for more information on industry efforts for determining ad viewability.

Updates in this document

For people who are familiar with the 2008 release of the Digital Video In-Stream Ad Metric Definitions, the changes made in this update have been summarized below:

Introduced metrics

- **Ad expand/Ad collapse:** used to describe ad creative expansion behavior and distinguish from the Expand/Collapse metrics, which described player behavior.
- **Skip:** used to describe when a user intentionally activates a control in a linear video ad to skip the ad and move on to the next ad or to the streaming content.
- **Other Ad Interaction:** used to capture additional ad interactions not described in this document.

Changed

- Distinguished between player metrics and ad metrics to differentiate ad performance measurement from player interactions. Player interactions may still apply to ad performance, especially for linear ads, but grouping them may improve ad/player performance analysis.
- Expand/Collapse is still used to describe player behavior, but has been modified to "Player Expand" and "Player Collapse" to add clarity.

Deprecated

- **Non-overlay, nonlinear ads:** these ads are no longer used in the marketplace or used very rarely, in which case a companion ad can be used to accommodate such use cases.
- **View:** too often confused with impression, this metric should no longer be used to measure ad views. Technology vendors may use the metric "creative view" to help track which video codec or technical version of an ad was played in a particular environment, but that metric is used for technological analysis and not for measuring user engagement.

  Note: The "view" metric was never intended to be used to indicate whether a digital in-stream video ad is in-view. Viewability metrics are out of scope for this document and are currently being developed under the Making Measurements Make Sense (3MS) initiative led by the IAB, 4A's, ANA, and the Media Rating Council (MRC). Please visit measurementnow.net for more information.

1   Background

In December of 2009, the digital video committee released an updated version to the Digital Video Ad Impression Measurement Guidelines (DV Measurement Guidelines), which specify how digital video ad impressions should be counted. While the DV Measurement Guidelines offer information for how to measure digital video ad impressions, additional metrics are needed to measure ad performance. Additionally, the DV Measurement Guidelines restrict the definition of Digital Video Ads to the context in which they are executed— essentially a browser-based player that streams video, games, animation, or other content into a player. This document elaborates on both the definition for digital video ads and the metrics used to measure interactions within those ads.

1.1 The Digital Video Ad

Digital video ads are described in the DV Measurement Guidelines as ads that are displayed "online, specifically, on-line browser or browser-equivalent based Internet activity that involves streaming video..."

The DV Measurement Guidelines restricts its scope in section III as follows:

> Many names have been used to describe the TV-like "video ad" units in the marketplace. Some of the many names that have been used for this ad placement include: in-stream ads, in-video ads, streaming ads, video ads, multimedia adjacencies, and many others. So as to have a standard term for these ad units, the IAB Digital Video Committee recommends using the name "Digital Video Ad." The Digital Video Committee chose this term because "Digital Video Ads" may appear before (pre-roll), during (mid-roll) and after (post-roll) content.

> These recommendations focus on streaming video based advertising. These guidelines do not address streaming audio only ads or video within in-page ad units.

> "Digital Video Ads" may appear before, during, and after a variety of content including, but not limited to, streaming video, animation, gaming, and music video content in a player environment. This definition includes Digital Video Ads that appear in live, archived, and downloadable streaming content. Whenever a companion ad is served along with the Digital Video Ad, the publisher should provide a mechanism for tracking all the ads, whether separately or combined, and also fully disclose the methodology of the tracking.

Despite this description, the difference between an ad that is a video and an ad that plays within the context of video has become blurred in interactive advertising buying and selling. In addition, while not stated explicitly, the implication is that digital video ads are served into *publisher* content.

Not All Video Ads Are Considered *Digital In-Stream Video Ads*

An ad that is simply a video asset can play anywhere that any creative asset can play, such as part of an in-page ad or text ad. It's a webpage element that is downloaded to the page along with other elements such as images and other files. However, the IAB Digital Video Committee's definition of a digital video ad excludes such ads when it states, "These guidelines do not address...video within in-page ad units." In-page ad units with video, more commonly known as display or in-banner video ads, are classified under IAB Standard Ad Units, and are not served before, during or after streaming content in a player environment. They are stand-alone video ad impressions or part of an ad unit or creative that contains the video.

Digital In-Stream Video Ads Are Served to the Publisher's Player

Digital in-stream video ads are ads served within streaming video, however, they are executed within a publisher's player environment. The ad itself may be a static image, interactive rich media, or a video in addition to other formats. These ads are executed in the context of streaming content (in-stream) in a player environment.

The distinction is an important one because the technology for serving and executing is different for each. An ad served to a webpage, video or otherwise, is executed using HTML protocols and is highly standardized. However, ads served to a player must be read and executed by the player. Players are all built differently and support for digital video advertising requires different resources than digital display advertising.

The illustration below depicts a common video content webpage that provides a video player, but also uses page real estate to offer display ad space. Ads served into the video player before, during, or after publisher

video content are digital in-stream video ads. Any ad served to the HTML display ad space is a display ad, even if the ad is a video. Such ads are classified in-banner video, in-page video, or display video.

The following diagram helps illustrate the difference between a display video ad and a digital in-stream video ad.
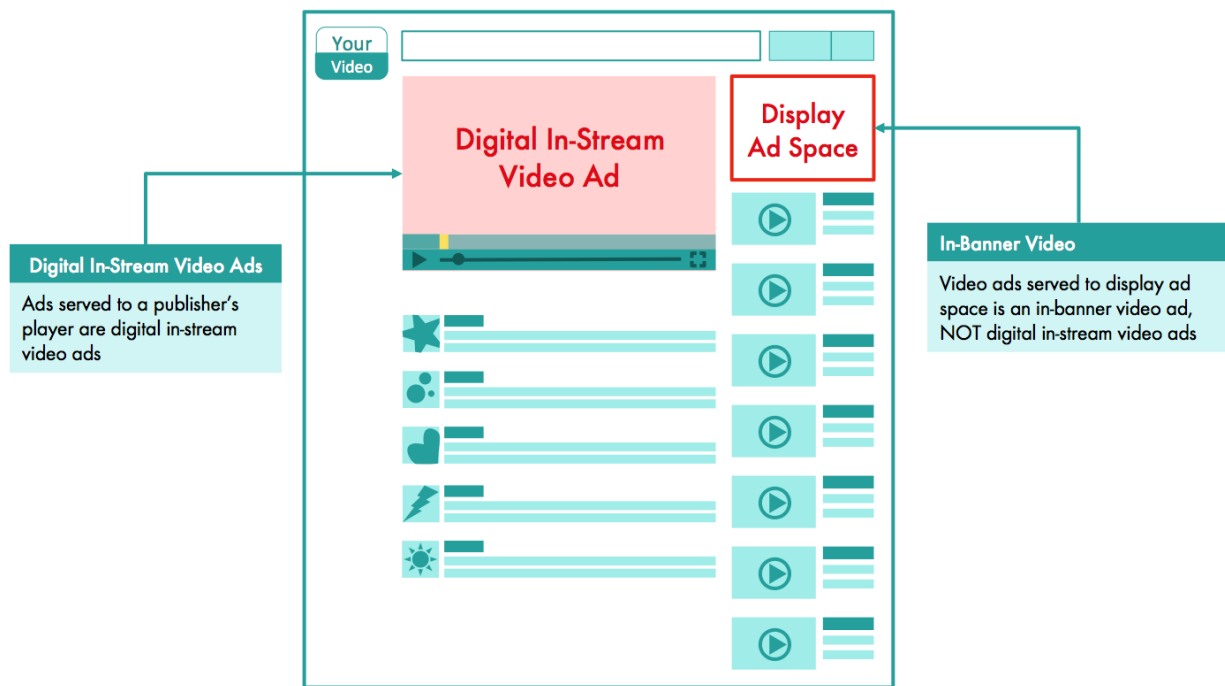
The scope for this document is limited to defining ad metrics for digital in-stream video ads as described above.

1.2 Mobile Digital Video Ads

Mobile devices have swept the globe since the last update to these metric definitions, and digital video offers a vast landscape of advertising opportunity. While digital in-stream video ads are agnostic to the device that runs the player in which they play, mobile technology presents some challenges to tracking interactive video ads designed for in-browser players. The lack of a persistent Internet connection in mobile devices limits the two-way communication necessary to track interactions like when a viewer pauses the video or clicks the ad. To the extent possible, the metrics defined in this document should apply to any digital in-stream video ad, regardless of the device in which it plays, but metrics and technology specific to mobile video were not considered in these metric definitions.

1.3 Digital Video Ad Formats Overview

We break digital video ads down into two different formats: linear and nonlinear. Either format may include a "companion" banner ad that displays outside the player. Each format is described below.

Linear 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. Linear ad formats can be accompanied by a companion ad, or they can include an interactive component.

Nonlinear video ads are typically served as images that "overlay" the video content. The ad runs concurrently with the streaming content so the user sees the ad while also viewing the content without interruption. Ideally, the nonlinear video ad is small enough to allow a relatively unobstructed view of the content and can be delivered as text, static images, interactive rich media, or video overlays. Typically, a nonlinear video ad developer can take advantage of the medium and use the small overlay as an invitation for consumers to further engage with a more robust set of interactions. As with Linear ads, nonlinear ads can be served with companion ads.

Companion ads are ads that are served along with linear or nonlinear ads in the form of text, static image display ads, rich media, or skins that wrap around the video experience. These ads come in a number of sizes and shapes and typically run alongside or surrounding the video player. The primary purpose of the companion ad is to offer sustained visibility of the sponsor throughout the streaming video experience. Digital video companion ads are always served with a master ad, which is either the linear or nonlinear ad.

The following image illustrates where these ads might fit along the timeline of the streaming video content.
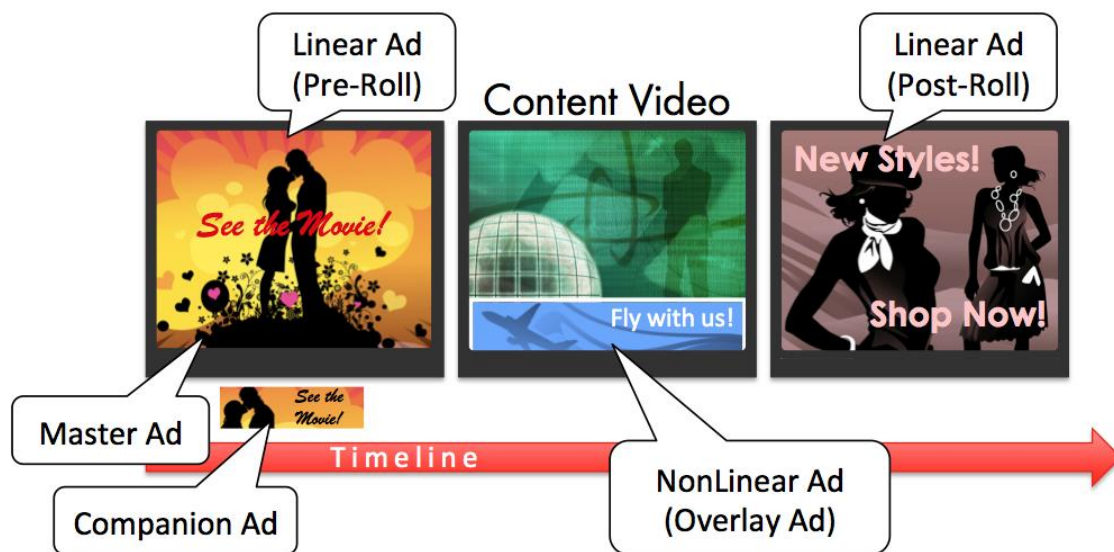
1.4 Changing Linearity of Digital Video Ads

The interactive nature of digital video ads enables them to change state from a linear ad to a nonlinear ad, or more commonly from a nonlinear ad to linear ad and back again. For example, a consumer may click a nonlinear ad designed to pause the streaming content in order to play a linear video portion of the ad. After the linear portion plays, the ad may revert back to its original nonlinear state.

2   Reporting Metrics

Reporting metrics may indicate either the consumers' interactions with the player or with the ad itself. The metrics defined in this document are broken down as follows:

- Player Operation
- Linear Video Ads
- Nonlinear Video Ads
- Digital Video Companion Ads
- Other Metrics

Note	Since metrics defined in this document are based on the formats and requirements of the 2008 Digital Video In-Stream Ad Formats and Best Practices Guideline, products that do not adhere to those ad formats may not be able to offer metrics in compliance with these definitions because of their implementations.

2.1 Player Operation Metrics

Many of the metrics previously defined involved player operation, meaning the consumer interacted with player controls while the ad was being executed, but not necessarily in response the ad. Grouping these metrics as player operations doesn't change their definitions but improves ad performance measurement by distinguishing between ad interaction and player interaction.

The following metrics measure player operation:

Audio Mute: the user clicks or otherwise activates the mute control. While the player may be muted the ad or the device on which the player operates may be in a different "state." Audio mute should not be considered an accurate substitute for the "state" of audio in the ad.

Audio Un-mute: the user clicks or otherwise actives the un-mute control. If the un-mute control is the same as the mute control, the reporting mechanism should be able to differentiate the two events. Even if the player has been unmuted, the ad or the device on which the player operates may have the audio turned off. Audio un-mute should not be considered an accurate substitute for the "state" of audio in the ad.

Pause: the ad was intentionally stopped mid-play when the user clicked or otherwise activated a Pause control. Pause should not be considered an accurate substitute for the "state" of the video.

Resume: the ad was intentionally re-started when the user clicked or otherwise activated a Resume control. If the Resume control is the same as the Pause control, the reporting mechanism should be able

to differentiate the two events. Resume should not be considered an accurate substitute for the "state" of the video.

Rewind: the user clicks or otherwise activates a Rewind control in order to move backwards along the video ad's timeline.

Skip: a user skips an ad during the ad's play when a skip option is made available, causing the ad to skip to the next ad or to the content within the video player. An ad that is skipped is still counted as an impression if it meets the criteria for the Impression metric. Considerations for the skip metric include determining the minimum amount of time an ad should display before presenting the skip control, the appearance of the skip control, and how much time elapsed before the user skipped the ad. These considerations should be negotiated between buyer and seller before implementation.

Player Expand: the user activated a control to extend the player's viewing pane to a larger size. This metric was previously known as "expand."

Player Collapse: the user activated a control to reduce the player's viewing pane to a smaller size. This metric was previously known as "collapse."

Player Expansion Note	While "Player Expand" and "Player Collapse" are renamed to distinguish player expanding features from nonlinear ad expanding features, these two metrics do not exactly match the "Full Screen" and "Exit Full screen" metrics described elsewhere in the industry, in particularly in the IAB VAST 3.0 specification. "Player Expand" and "Player Collapse" indicate that the video player has either expanded or collapsed, respectively, to a new width and height. On the other hand, "Full Screen" and "Exit Full Screen" indicate that the video player either expanded to the edge of the device screen or returned to its original width and height, respectively.

2.2 Linear Video Ad Metrics

In the initial version of these metric definitions, a linear video ad was a simple video that could only be acted upon indirectly with player controls, other than the ability to click the ad for access to the Advertiser's specified landing page.

However, as technology advances, linear video ads may include interactive options that offer rich engagement opportunities. Metrics for linear video ads are broken down into the general metrics used for linear video ads and a couple of advanced metrics for the linear interactive video ad.

In the case where a user interaction changes the linearity of a linear video ad to a nonlinear video, metrics for nonlinear ads should be used while the ad is in the nonlinear state.

2.2.1   Linear Video Ad

Linear video ads are displayed in sequence before, during, or after the streaming content being consumed by the users. One of the key characteristics of a linear video ad is that the ad demands the full attention from the consumer as the ad takes over the experience entirely, typically for a bounded period of time.

The following metrics are used to describe linear video ad behavior:

Impression: indicates that the ad was displayed in the player according to the **Digital Video Ad Impression Measurement Guidelines** found on IAB's site:

http://www.iab.net/guidelines/508676/guidelines/campaign_measurement_audit

Monitor ad impression measurement guideline developments at http://measurementnow.net.

Impression Note	An impression should be used once to indicate that the ad was displayed and should not be used to track additional components of the ad. For example, a nonlinear ad might be clicked to initiate a linear component of the ad. For this ad, an impression should only be counted when the nonlinear portion displays. Subsequent components are part of the ad and should be tracked with other metrics.

Video Clickthrough: occurs when a user clicks on the linear ad and is taken to the advertiser's Web landing page.

Percent Complete: percentage of video viewed continuously at normal speed. If a rewind event occurs during play, percent complete may be calculated on total amount of unduplicated video viewed at normal speed. Each section of video may only be considered once in the calculation. This definition governs the triggering of any "partial play" metrics, such as the common quartile percentages (25%, 50%, 75%), most commonly tracked as first quartile, midpoint, and third quartile. Specifically, reporting on any partial play should be the result of how much of the ad was played at normal speed.

Publishers and marketers may measure progress in different increments in addition to these percent complete quartiles, but these quartiles offer a baseline measurement and should be used whether or not other methods are used.

Completed Play: the end of the linear video ad was reached at normal speed after 100% of the video is played.

Time Spent Viewing: amount of video viewed at normal speed in seconds or other appropriate time-based units; if a rewind event occurs during play, time spent viewing may be calculated on total amount of video viewed at normal speed, which may include additional amounts of video viewed after rewinding.

2.2.2   Linear Interactive Video Ad

Linear Video Interactive Ads allow a user to interact with an ad message within the player's viewing pane. The ad plays for a prescribed minimum length of time, usually the length of the linear video creative, with an invitation for the user to interact. Upon interaction, the linear state of the ad may change to nonlinear format and ad duration may continue as long as the user continues to interact with the ad based on publisher requirements. The nonlinear portion of the ad may include video, animation, images, games, or other interactive media.

When interaction with a linear interactive video ad changes the linearity of the ad from linear to nonlinear, nonlinear metrics should be used to measure engagement. For the linear portion of the ad, the following metrics may be used to measure engagement in a linear interactive video ad.

The following metrics may be used in addition to the metrics defined for linear video ads.

Accept Invitation (Linear): the user activated a control that launched an additional, often more engaging, creative portion of the ad.

Other Ad Interactions: an optional metric that can capture all other user interactions under one metric such as hover-overs, or custom clicks. It should NOT replace clickthrough events or other existing events like mute, unmute, pause etc.

2.3 Nonlinear Video Ad Metrics

Nonlinear video ads run in parallel to the main content experience, meaning that the ad displays on top of, or overlays, the streaming content. Ideally the initial display of the nonlinear ad is small enough to be minimally obstructive to the streaming content while just large enough to display its message.

Most nonlinear formats employ multiple stages for ad display. Initially, there is some form of invitation or teaser unit that invites the user to further interact. Upon interaction, the streaming content is paused while the user engages with the ad. Interactions that result from an accepted invitation may include a video, an ad expansion that includes a game, social media, subscription form or other engaging activity to keep the user's attention.

Nonlinear ads may display in phases that may include three general sizes: expanded, collapsed, and minimized. An example of these phases is illustrated below, beginning with the original nonlinear ad.

| Original | Expanded | Collapsed | Minimized |
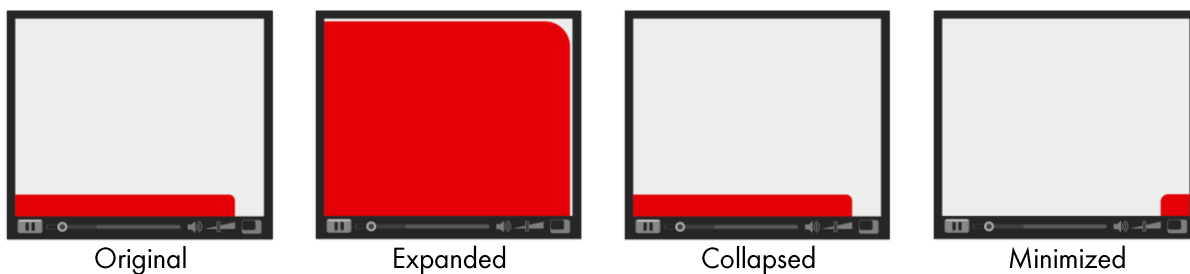
Nonlinear video ads are initially delivered as text, graphical banners/buttons, or as video and are placed within the player's viewing pane. In the case where interaction changes the linearity of a nonlinear video ad to a linear video ad, metrics for linear video ads should be used while the ad is in a linear state.

Metrics for nonlinear video ads are described as follows:

Impression: indicates that the ad was displayed in the player according to the **2007 Update: Rich Media Ad Impression Measurement Guidelines** found on IAB's site:

http://www.iab.net/guidelines/508676/guidelines/campaign_measurement_audit

Monitor impression measurement guideline developments at http://measurementnow.net.

Impression Note	An impression should be used once to indicate that the ad was displayed and should not be used to track additional components of the ad. For example, a nonlinear ad might be clicked to initiate a linear component of the ad. For this ad, an impression should only be counted when the nonlinear portion displays. Subsequent components are part of the ad and should be tracked with other metrics.

Clickthrough: either the action that occurs when a user clicks on the ad and is taken to the advertiser's Web landing page or the URL used to point to the advertiser's Web landing page.

Accept Invitation: the user clicked or otherwise activated a control used to pause streaming content, which either expands the ad within the player's viewable area or "takes-over" the streaming content area by launching an additional portion of the ad. An ad in video format ad is usually played upon acceptance, but other forms of media such as games, animation, tutorials, social media, or other engaging media are also used.

Ad Expand: the user clicked or otherwise activated a control used to expand the ad creative within the player.

Ad Collapse: the user clicked or otherwise activated a control, available while the ad is in an expanded state, used to reduce the ad back to a smaller state that is minimally obstructive to the streaming content while still displaying the ad's message.

Minimize: the user clicked or otherwise activated a control used to minimize the ad to a smaller size than a collapsed ad but without fully dispatching the ad from the player environment. Unlike a collapsed ad that is big enough to display it's message, the minimized ad is only big enough to offer a control that enables the user to redisplay the ad if desired.

Close: the user clicked or otherwise activated a control for removing the ad, which fully dispatches the ad from the player environment in a manner that does not allow the user to re-display the ad.

Overlay View Duration: the time that the initial ad is displayed, specifically the time between the impression and either the completed length of display (based on the agreement between transactional parties) or a close, minimize, or accept invitation event.

Other Ad Interactions: an optional metric that can capture all other user interactions under one metric such as hover-overs, or custom clicks. It should NOT replace clickthrough events or other existing events like mute, unmute, pause etc.

Note about nonlinear, non-overlay ads:	Nonlinear, non-overlay ads were described as ads that would display concurrently with the streaming content but without obstructing the view of streaming content. These ads were perceived to be a reigning format in the marketplace and were accounted for in the previous version of this document. However, these ads quickly faded away in the marketplace and are no longer in use. If such an ad resurfaces in the marketplace, companion ads that may serve as a skin for the player may also create the nonlinear, non-overlay ad experience.

2.4 Digital Video Companion Ads

Companion ads are served along with a linear or nonlinear video ad (master ad), but outside the player environment, offering a "leave-behind" to remind consumers of the message they saw in the master ad that displayed in the player. While companion ads may offer clickthrough interactivity and rich media experiences, impression and click tracking should be governed by measurement guidelines developed for display ads. The measurement guidelines and subsequent updates are listed on the following site:

http://www.iab.net/guidelines/508676/guidelines/campaign_measurement_audit

*As of the release of this document, the impression measurement guidelines were under review and in the process of being redefined. Please check often for updates or monitor progress for measurement developments at http://measurementnow.net.

2.5 Other Metrics

This document defines only a select few of the dozens or hundreds of metrics that can be tracked in digital video advertising. The metrics defined here establish a baseline for the most commonly used metrics across digital video ad types. Additional metrics can be used in digital video transactions and are encouraged, but metrics defined in this document should maintain their definitions when included in such transactions.

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