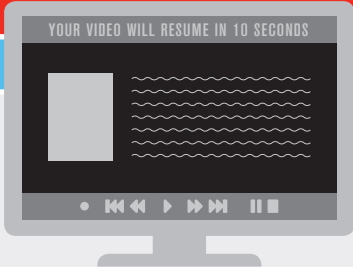

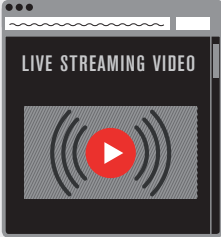

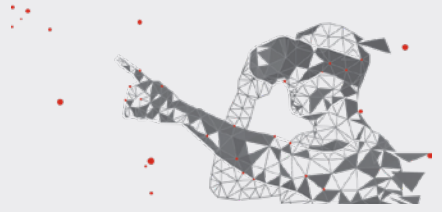
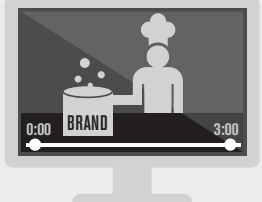



TERM	DEFINITION
<b>GENERAL VIDEO TERMS</b>	
<b>Ad-based Video On-Demand (AVOD)</b>	A streaming video service that offers consumers access to a catalogue of on-demand content and contains advertisements. 
<b>Addressability</b>	The ability to target a message to a device, browser, segment, and/or individual. Those segments could be matched or modeled by behavioral, demographic, and geographic factors from 1st, 2nd, or 3rd party data sets.
<b>Addressable TV</b>	Technology that lets you show different ads to different audience segments watching the same TV program on IPTV and set top boxes. Those segments could be defined by behavioral, demographic, and geographic factors from 1st, 2nd, or 3rd party data sets.
<b>Advanced TV</b>	Any television content that has evolved beyond traditional, linear television delivery models. This umbrella term is inclusive of the following: <ul style="list-style-type: none"> <li>- Interactive TV (iTV): The catch-all term for adding a viewer engagement piece to television. This can include both interactive content and advertising, and can be delivered in a variety of ways, including through the first- and second-screen.</li> <li>- Connected TV (CTV): A television set that is connected to the Internet via OTT devices, Blu-ray players, streaming box or stick, and gaming consoles, or has built-in internet capabilities (i.e., a Smart TV) and is able to access a variety of long-form and short-form web-based content.</li> <li>- Smart TV: A subset of Connected TV.</li> <li>- Linear Addressable: The addressable ad inserted into live programming. For example, DirecTV, Dish, and Cablevision's inventory is all linear addressable.</li> <li>- VOD Addressable: The addressable ad is inserted into cable programs within the VOD content accessible through a cable provider set top box. For example, Comcast's addressable inventory is VOD addressable.</li> </ul>
<b>Augmented Reality (AR)</b> 	An experience that utilizes a camera to change or enhance something in the user's real world. This augmented reality experience can be app based or web-based, though app based is more common today. Note: Although the term utilizes the word "reality", the experience does not need to look realistic. Ads within AR can be presented in two ways: through the use of markers (such as QR code) or by placing a brand object in the immediate real world environment using the device camera
<b>Channel</b>	A mechanism of distribution that refers to live or on-demand online content stream(s) featuring user or publisher content, curated together.
<b>Cross-Screen Measurement</b>	Tracking and measurement of video metrics across Mobile/Tablet/Out-of-Home/Television/Advanced TV/Desktop.
<b>Data-Driven Linear TV</b>	The ability to use different data sets including demographics, interests, and viewing behavior to optimize a linear TV schedule that uses specific networks and dayparts to better reach an advertiser's audience.

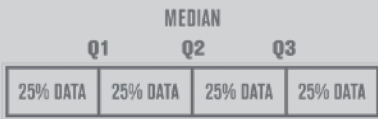
TERM	DEFINITION
<b>Live Streaming Video</b>	<p>Video content streamed digitally in real time as the event or program takes place. Content can be streamed on mobile devices, computers, smart TVs, or internet-enabled TVs.</p> 
<b>Multi-Channel Network (MCN)</b>	<p>A standalone entity that leverages digital video platforms to enable content producers to program, promote, monetize, and distribute their content as well as offer technical assistance in exchange for a percentage of the ad revenue earned.</p>
<b>Multi-Channel Video Programming Distributor (MVPD)</b>	<p>A service provider that delivers video programming services, usually for a subscription fee (pay television). Usually includes cable, satellite, and telecommunications service providers.</p>
<b>Subscription Video On-Demand (SVOD)</b>	<p>A streaming service that consumers subscribe to for a fee and can access a catalogue of on-demand content</p>
<b>TV Everywhere</b> 	<p>An online business model in which television broadcasters, particularly cable networks, allow their customers to access live and/or on-demand video content from their networks through Internet-based services. The fee for such access is covered as part of their subscription to the service, via an MVPD. The viewers use credentials from their MVPD for authentication and access to the content.</p>
<b>User Generated Content (UGC)</b>	<p>Content that is voluntarily generated by individuals* that has the potential to create engagement and/or drive conversation. *Individuals are defined as those who do not have a material connection with a brand. This would exclude paid influencers or professional bloggers</p>
<b>Video Aspect Ratio</b>	<p>Video comes in several aspect ratios. The two main ones are widescreen (16:9) and standard (4:3). The aspect ratio of an image describes the proportional relationship between its width and its height. It is commonly expressed as two numbers separated by a colon, i.e., 16:9. Preferred aspect ratio is 16:9 (formatted for HD screens). For vertical video, the recommended aspect ratio is 9:16 (most phones), 3:4 (iPad), and 10:16 &amp; 2:3 (other phones/tablets). For more information please refer to the Digital Video In-Stream Ad Format Guidelines doc section 2.2.1. This document provides useful information on frame rate, audio data, etc. We also refer to HLS and recommend using these files to create the adaptive bitrate file fragments. In addition, section 2.2.2 focuses on SSAI through a “Mezzanine file” that can easily be used to transcode on the fly.</p>
<b>Video On Demand (VOD)</b>	<p>Video content that is controlled, enabled, and consumed whenever a viewer wants after its official release date or original air date and time. VOD content can be found on set top boxes, OTT devices, mobile web, mobile apps, and video streaming services.</p>
<b>Virtual MVPD (vMVPD)</b>	<p>New form of digital-only cable alternative which provides access to on-demand and live content delivered over the internet without the traditional network infrastructure (i.e. DirecTV Now, Hulu with Live TV, PlayStation, Sling TV, Vue).</p>

TERM	DEFINITION
<b>Virtual Reality (VR)</b>	<p>An experience that is made to be significantly more immersive than standard video assets. VR allows a user to be completely immersed into an environment of the marketer's choice. Ads within VR must occur within either a designated ad space (such as street side billboard), as a video (that might play in a virtual home TV or virtual movie theater), or as an object (such as a branded bag of potato chips on the table). Fully branded 3D scenes can also be created as "virtual rooms."</p> 
<b>AD &amp; CREATIVE TYPE TERMS</b>	
<b>360 Video Ads</b>	<p>360-degree videos, also known as immersive videos or spherical videos, are video recordings where a view in every direction is recorded at the same time, shot using an omnidirectional camera or a collection of cameras. During playback the viewer has control of the viewing direction like a panorama. These types of ads can be served without requiring a VR headset, using keyboard/mouse/touch controls or motion sensors in smartphones/tablets to control the viewing orientation.</p>
<b>Ad Pod</b>	<p>An individual ad pod is a group of ads expected to play back-to-back in one commercial ad break similar to how consumers experience commercial ad breaks in broadcast television. An ad pod can be of varying lengths and can be inserted at any point in a stream of content (pre, mid, or post).</p>
<b>Autoplay Video Ad</b>	<p>A video ad or an ad linked with video content that initiates "play" without user interaction or without an explicit action to start the video (essentially automatically starting without a "play" button being clicked by the user).</p>
<b>Branded Video Content</b>	<p>Video content that is supported by a brand and is non-promotional in nature. It grabs the attention of the consumer and drives engagement through content.</p> 
<b>Dynamic Creative</b>	<p>Video ad creative customized in advance and/or able to transform itself upon delivery to target relevant audience segments. Customization may include delivering a specific combination of ad content such as the copy, the background images, and the size and color of the call-to-action button.</p>
<b>In-Stream Video Ad</b>	<p>Played before, during or after the streaming video content that the consumer has requested (Pre-roll, Mid-roll, Post-roll). These ads cannot typically be stopped from being played (particularly with pre-roll) but can sometimes be skipped. This format is frequently used to monetize the video content that the publisher is delivering. In-Stream Video Ads can be played inside short or long-form video and rely on video content for their delivery. There are four different types of video content where in-stream may play: UGC (User Generated Content/Video), Syndicated, Sourced and Journalistic. In-Stream Video Ads are displayed within the context of streaming video content.</p>

TERM	DEFINITION
<b>Interactive Video</b>	<p>A type of digital video creative that can take user input to perform some enhanced actions through elements integrated above and beyond the standard video playback controls (i.e., play, pause, rewind, and mute). These interactions can include varied calls-to-actions, forms, polls/surveys, links, chapter menus and hot-spots that may affect story progression of the video content and/or drill down on specific parts of the content itself. The goal of the creative is to give the user various options to engage with the message beyond viewing the video.</p>
<b>Interstitial Video Ad</b> 	<p>Video ads that occur between two content pages. These formats are most often found in apps. They are considered less disruptive as they occur during natural transition points for a consumer.</p>
<b>Long-Form Video</b>	<p>Video content that always has a content arc with a beginning, middle, and end and that, in its entirety typically lasts longer than 8 minutes (i.e., movies and original series). If the content is ad supported, it typically contains breaks (mid-roll). This is different than commercial videos, which typically put the product upfront and run under one minute.</p>
<b>Native Advertising</b>	<p>A form of paid media where the ad experience follows the natural form and function of the user experience in which it is placed. These paid ads aspire to be so cohesive with the page content, assimilated into the design, and consistent with the platform behavior that the viewer simply feels that they belong.</p>
<b>Outstream Video Ad</b>	<p>A form of video advertising that takes place outside of In-Stream Video content. One type of outstream video is in-feed video ads which are found in content, social, or product feeds. Another type of outstream video ad is in-article video ads that are served between text.</p> 
<b>Short-Form Video Ad</b>	<p>Video content that has a duration of less than 8 minutes.</p>
<b>Skippable Video Ad</b>	<p>Video ads that allow viewers to skip after a predetermined number of seconds</p>
<b>Sticky Video Ad (aka adhesion ad)</b>	<p>Video ads that are anchored to the bottom or top of the screen and follow the user as they scroll. They are allowed under the following guidance: 1. Ad height MUST be less than 25% of the screen height. 2. The ad MUST have a clear boundary to separate it from the content. 3. The ad MUST cover the full width of the screen edge to edge. 4. The ad MUST have a 'close button' above top right corner of the ad as defined in LEAN User Experience and Ad Content.</p> 
<b>Opt-In Value-Exchange Ads (aka rewarded ads)</b>	<p>Premium ads that offer consumers something in exchange for providing their time and attention. In all instances, the value exchange is opt-in. Video is a commonly used type of opt-in value exchange placement.</p>

TERM	DEFINITION
<b>Vertical Video Ads</b>	<p>“Vertical Video” is displayed in portrait mode but can be shot in portrait/landscape mode - i.e., skinny and tall video (9:16 aspect ratio), rather than the widescreen format (16:9 aspect ratio) normalized by movies and television. These types of video ads are mostly displayed in mobile devices as they have the optimal aspect ratio to fill the whole screen.</p>
<b>METRIC TERMS</b>	
<b>Audible and Viewable on Complete (AVOC)</b>	<p>The percentage of measurable impressions that were audible and viewable when the video reached completion.</p> 
<b>Cost Per Completed View (CPCV)</b>	<p>The price an advertiser pays every time a video ad runs through to completion. Rather than paying for all impressions, some of which may have been stopped before completion, an advertiser only pays for ads that finished (CPCV = Cost ÷ Completed Views).</p>
<b>Cost per point (CPP)</b>	<p>A pricing model based on the cost of a campaign divided by each full percentage rating point of a targeted demographic that the campaign successfully reaches.</p>
<b>Cost per view (CPV)</b>	<p>A pricing model where the advertiser only pays for a video start. Typically sold at 1000 impressions.</p>
<b>Cost per viewable impression (CPVI or VCPM/VCPV)</b>	<p>A pricing model where the advertiser only pays for video ad impressions that are considered viewable based upon MRC and IAB viewability guidelines. Typically sold at 1000 impressions.</p>
<b>Gross Rating Point (GRP)</b>	<p>A term used to measure the size of an audience reached by a specific media vehicle or schedule. It is used to measure the exposure to one or more programs or commercials, without regard to multiple exposures of the same advertising to individuals. For example, an advertisement that is aired/served 5 times reaching 50% of the target audience each time it is aired would have a GRP of 250 (5 x 50%). GRP values are typically used by media buyers to compare the advertising strength of various media vehicles.</p>
<b>Quartiles</b>	<p>Percentage of video ad viewed continuously at a 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 the 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 (the creative played continuously for at least 25% of the total duration at normal speed), midpoint (the creative played continuously for at least 50% of the total duration at normal speed), and third quartile (the creative played continuously for at least 75% of the duration at normal speed). 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.</p>
<b>Target Rating Point (TRP)</b>	<p>The percentage of an advertiser’s target audience that sees its commercials, advertisements, or campaign. Typically advertising is bought against a guaranteed demographic or audience segment. The TRP expresses that guaranteed audience.</p>

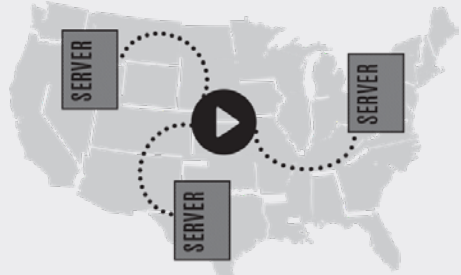
TERM	DEFINITION
<b>Video ad completion</b>	When a video ad starts and plays through its entire duration to completion.
<b>Video ad completion rate (VCR)</b>	The percentage of all video ads that play through their entire duration to completion. Also known as Video Completion Rate (VCR). Not to be confused with the videocassette recorder. <div style="float: right; text-align: center;"> </div>
<b>Viewability Rate</b>	The percentage of video ad impressions that were deemed viewable as per the video viewability definition of the measurement vendor
<b>Viewable video impression</b>	A desktop video ad or mobile video ad that meets the criteria of: (i) Desktop: 50% of the ad's pixels on an in-focus browser tab in the viewable space of the browser page that has met the time criterion that two continuous seconds of the video advertisement is played. (ii) Mobile: 50% of the ad's pixels on an in-focus browser or a fully downloaded, opened, initialized application, on the viewable space of the device that has met the time criterion that two continuous seconds of the video advertisement is played. (iii) For both desktop video and mobile video, the required time is not necessarily the first two seconds of the video ad; any unduplicated content of the ad comprising two continuous seconds qualifies in this regard.




## TECHNOLOGY TERMS

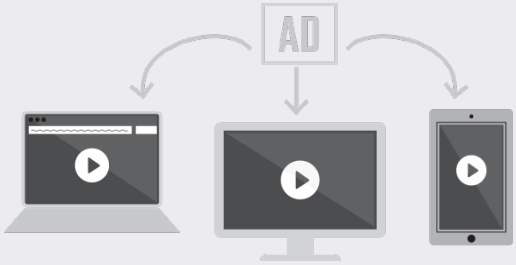
<b>Adaptive Bitrate Streaming (ABS)</b>	<p>Adaptive streaming is a technical process that adjusts the quality of a video delivered to the client/video player of a connected device based on changing network conditions, video buffer status, and CPU utilization to ensure the best possible viewer experience. The video quality is determined and set by real time detections of a user's available bandwidth (throughput), video buffer capacity and CPU utilization. Based on these conditions the bitrate is adjusted in real time to ensure the best possible quality.</p> <div style="text-align: center;"> </div>
<b>Automated Content Recognition (ACR)</b>	<p>ACR is an opt-in identification technology embedded in a device that allows content to be recognized by video, audio or watermark cues and matched back to a database for verification. This technology can recognize content regardless of its distribution source (i.e. OTT, linear, etc.). Marketers use this information to understand when a consumer has seen their ads.</p>




TERM	DEFINITION
<p><b>Bitrate or bit rate</b></p>	<p>Encoded bit rate: The number of bits (or amount of data) per second that has been used to store a media signal. In audio, this usually is presented in kilobits per second (or kb/s or kbps), while for high-quality video, this might be presented in megabits per second (or Mbps, or Mb/s). For example, the music you buy on iTunes is 256 kilobits per second, meaning there are 256 kilobits of data stored in every second of a song, and an HD video file might be encoded at 2.0 megabits per second, meaning there are two megabits of data.</p> <p>The encoded bit rate is the one used for business requirements as it represents a strong signal of fidelity.</p> <p>Available bit rate: The instantaneous delivery rate of data in bits per second (bps), kilobits per second (kbps), megabits per second (mbps), etc. from the source server to destination device through one or many digital networks. The slowest portion of the network path determines the end-to-end maximum bitrate of the delivered stream. Some media content such as audio streams may use less than the maximum available bandwidth. HTTS Live Streaming (HLS) is a variable bitrate protocol for delivering video content. HLS starts the stream at a low bitrate which provides low video resolution and increases the bitrate and video resolution as the network conditions permit.</p> <p>The available bit rate is used for technical purposes as it represents how much data can be passed from the ad server to the client for an ad to deliver without jitter.</p>
<p><b>Connected TV (CTV)</b></p>	<p>A television set that is connected to the Internet via OTT devices, Blu-ray players and gaming consoles or has built-in Internet capabilities (i.e., a Smart Television) and is able to access a variety of long-form and short-form web-based content.</p>
<p><b>Content Distribution Network (CDN)</b></p>	<p>A service that hosts online assets and provides content management via servers located around the globe to reduce the latency of downloads to users.</p> 
<p><b>Dynamic Ad Insertion (DAI)</b></p>	<p>Technology that allows advertisers to swap out ad creatives in video on demand content.</p>
<p><b>Encoding/transcoding/renditions</b></p>	<p>Encoding when referencing video or audio involves the change from one physical format to another, i.e., the change from film to digital format, or change from analog to video.</p> <p>Transcoding refers to the creation of a file from one of a similar format, i.e., compressing a video file (e.g., mp4) at different bitrates from a source file (e.g., MOV). The source file, known as the mezzanine, and the resulting compressed versions of the same creative, known as renditions, are all digital in format, although they may be different dimensions and bitrates from one another.</p> <p>Please note: Encoding of video should not be confused with encoding of reserved/special characters in http links to pixels, click-throughs, calls to VAST, or other http assets. More information on what constitutes a character that has a special purpose in http and how they must be percent encoded to prevent failure is detailed <a href="#">here</a>.</p>

TERM	DEFINITION
<b>Identifier for Advertising on OTT (OTT IFA)</b>	<p>The Guidelines for Identifier for Advertising (IFA) on OTT platforms are recommendations on how to maintain a high-quality advertising experience within over-the-top television (OTT) environments. These technical guidelines provide instructions on best practices for delivering targeted ads, as well as controlling ad frequency and rotation across a wide variety of disparate smart TVs, connected devices, and other OTT systems. In order to be compliant with these guidelines, these three parameters must be sent as part of any ad request: identifier for advertising (IFA), IFA type, and Limit Ad Tracking (Lmt).</p>
<b>Latency</b> 	<ol style="list-style-type: none"> <li>1) The time it takes for a data packet to move across a network connection.</li> <li>2) The delay between request and display of content and an ad. Latency sometimes leads to the user leaving the site prior to the opportunity to see. In streaming media, latency can create stream degradation if it causes the packets, which must be received and played in order, to arrive out of order</li> </ol>
<b>Over the top device (OTT)</b>	<p>A device that can connect to a TV (or functionality within the TV itself) to facilitate the delivery of Internet-based video content (i.e., streaming boxes, media streaming devices, Smart TV's and gaming consoles).</p>
<b>Over the top video (OTT Video)</b>	<p>Over the Top Video is video content transported from a video provider to a connected device over the Internet outside the closed networks of telecom and cable providers.</p>
<b>Server-side ad insertion (SSAI)</b>	<p>Server-side ad insertion (often referred to as “ad stitching”) is the process of stitching video content and ads together on the server side level rather than on the browser level (Client Side Ad Insertion). Videos and video ads are coming from different places—videos typically come from a content delivery network (CDN) and ads from an ad server (video ads can also be served from CDNs, although content CDNs and ad CDNs often differ). These are then combined on the fly when people start watching videos. With server-side ad stitching, that combination of video and advertising happens on the backend.</p> <p>Server-side ad insertion allows for smoother ad user experiences as users do not have to wait for players to fetch ads and render them in real time. The stitching is all done prior to the user getting the ad break/pod. In the ad stitching process, ad specs are matched with content specs resulting in more consistent viewer experience as the ad quality will match the content quality.</p> <p>SSAI also allows publishers to mitigate ad blocking, as video content and ads are stitched together as a cohesive stream on the server side which allows them to bypass browser or device-level detection/blocking. When a browser or device-level script makes a call to the ad-decisioning system, the ad blocker can identify that signal, as opposed to a server-side script where the ads are already stitched into the player’s content, making it impossible to distinguish an ad from content.</p> <p>This is a great solution for a publisher, however advertisers may have concerns with measurement being made server side and request such delivery to be distinguished in reporting.</p>
<b>Streaming</b>	<ol style="list-style-type: none"> <li>1) Technology that permits continuous audio and video delivered to a device from a remote website.</li> <li>2) An Internet data transfer technique that allows the user to see and hear audio and video files. The host or source compresses, then “streams” small packets of information over the Internet to the user, who can access the content as it is received.</li> </ol>



TERM	DEFINITION
<p><b>Video ad serving template (VAST)</b></p>	<p>A framework for serving ads to a video player. The specification also describes expected player behavior for executing ads that are supplied using VAST. The interaction between the ad and the player is unidirectional, meaning that once the player receives the VAST tag no other interactions are possible except for the activation of select tracking beacons at appropriate times during ad playback.</p> 
<p><b>Video multiple ad playlist (VMAP)</b></p>	<p>VMAP is an XML template that video content owners and ad networks can use to schedule multiple ad insertions from a single tag. It is an ad response format that allows the definition of the number of ad pods and how long each should be for the full piece of content. VMAP allows content owners, who don't control the video player or the content distribution network to pre-define the ad breaks in their content when their content plays in a third-party video player. Many content owners retain the contractual right to control the ad 'playlist' within their content, but without control of the video player, defining the ad playlist has been next to impossible. With the release of VMAP, control of the ad playlist is now available to the content owner.</p> <p>VAST supports the ability to serve multiple ads in a single VAST ad response. A set of sequenced ads in a VAST response plays back-to-back ads as a "pod," similar to how consumers experience commercial ad breaks in broadcast television. With the introduction of VMAP, ad breaks can be specifically designed to accept Ad Pods and any combination of single ads, random sets of ads and structured ad pods. VMAP can include nested VAST 3.0 tags as well as the ability to serve multiple ads in a single ad response, however VAST 2.0 is still widely used, as often the need is only to deliver one ad at a time.</p>
<p><b>Video player-ad interface definition (VPAID)</b></p>	<p>The protocol between the ad and the video player required to enable ad interactivity and other advanced video advertising functionality. VPAID offers bilateral (two-way) communication between the ad and the video player, and meets the needs of emerging in-stream formats such as nonlinear video ads and interactive linear video ads. NOTE: One of the challenges with VPAID is its lack of transparency where publishers are not aware of the intent/content of the VPAID. This is addressed in <a href="#">VAST4.x</a> where nodes for verification/measurement and for interactivity are explicitly identified. Over the longer term, VPAID is expected to be phased out, with the Open Measurement Framework serving as the replacement of VPAID for verification and measurement use cases and a new spec (codenamed "VPAID-i") focused purely on interactivity. The Digital Video Working Group is working on "VPAID-i" for early 2019. See <a href="http://bit.ly/videoAdVision">http://bit.ly/videoAdVision</a> for more information.</p>

TERM	DEFINITION
<b>DATA TERMS</b>	
<p><b>Return path data (RPD)</b></p>	<p>TV tuning data that comes from set-top boxes in cable and satellite subscribers' homes. It can include information like the programs subscribers watch, when they watch them and where the subscriber households are located. This data helps enable audience measurement and addressable advertising capabilities.</p> 
<p><b>Video level data</b></p>	<p>Information about a video comprised by analysis of available metadata, which is used to help users search for videos and help marketers with content targeting efforts.</p>