GLOSSARY

ADDRESSABLE TV

DEUTSCHE
TV-PLATTFORM

VERSION 1.0
JUNE 2022

Glossary: Addressable TV

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Introduction

The German TV Platform's Smart Media Working Group has been promoting the development of Smart TV and smart applications on the German market for many years. Among other things, it deals with HbbTV, accessibility, content discovery, multiscreen scenarios, OTT, and, of course, addressable TV (ATV).

Everybody seems to be talking about ATV, but it is still not clear what the term actually means – and what it doesn't. For this reason, the German TV Platform set up a task force to develop a glossary in order to sort out and define the terminology surrounding ATV.

At the same time, this glossary provides a comprehensive overview of all fields that are currently relevant. ATV is not limited to advertising, although it is discussed and applied mostly in this specific context, and therefore the glossary's present version 1.0 focuses on advertisement-related terms.

In section 1, the glossary explains a few general terms. Section 2 deals with important content and forms of advertising. Section 3 constitutes the core part of the glossary and defines essential terms of advertising technology (ad tech). The glossary is completed with a listing of key technological standards which are relevant in an ATV context.

In order to facilitate the targeted search for specific terms, the terms are listed alphabetically within each section. Cross-references (marked with an ➡) point to other terms relevant in this context.

The present glossary's version 1.0 was completed in March 2021. It was developed in cooperation with leading German broadcast groups, Internet companies, and research institutions.

Should you have any questions or suggestions regarding the ATV Glossary, don't hesitate to contact our Head Office. You will find contact information in the imprint on page 10.

General Terms

Addressable TV (ATV)

combines linear television (including time-shift) with online content on Internet-enabled consumer devices, such as ➡ Smart TVs and set-top boxes (STBs) or ➡ OTT Streaming Devices. By dynamically serving personalized ("addressed") TV content, products, or ➡ Advertising Media, viewers can be offered a personalized TV experience. One example would be overlaying a linear TV ➡ Commercial with personalized advertising media, e.g. via ➡ HbbTV on a smart TV, or via ➡ OTT Services on an OTT streaming device.
Not all market players refer to personalized services on OTT streaming devices as "Addressable TV."

Advanced TV

is used internationally as an umbrella term for the use of digital technology and data for marketing and/or personalization purposes of TV and online coverage via ➡ Addressable TV (ATV), on-demand- or OTT video streams on any consumer device, such as smartphone, tablet computer, ➡ Smart TV, ➡ Connected TV, or Internet-enabled set-top box.

Advertising Media

(also ad[vert] media): form of communicating an advertising message relating to a brand, product, or service to a select target group. The advertising material is hosted by an ➡ Ad Server with specific delivery criteria (e.g. ➡ Targeting) and will be delivered via the ad server in accordance with the campaign goals; advertising materials may be uploaded to the ad server or retrieved from a third-party server.

Connected TV

a TV set which is connected to the Internet, either natively (➡ Smart TV) or via an external device (e.g. ➡ OTT Streaming Device or gaming console).

HbbTV (Hybrid broadcast broadband TV)

a Consortium / Association defining technical specifications for providing interactive value-added services on ➡ Smart TVs to complement linear television broadcasts.
The ➡ HbbTV Specification enables, for example, the direct linkage of a TV program with additional services related to the program (such as EPG, supplemental program information, audience polls, gaming) and with portals for accessing additional editorial multimedia content (such as catch-up TV and video on demand [VOD]). HbbTV services are accessed via the ➡ Red Button on a remote control.

Example for Addressable TV with L- shaped banner

OTT (Over-the-Top) Services

a summary term for services and offers that allow access to multimedia content via unicast over the open Internet.

OTT Streaming Device

a device that allows access to ➡ OTT Services, for example ➡ Smart TVs, smartphones, tablet computers, or devices such as streaming sticks plugged into a TV set via HDMI connector.

Smart TV

a TV set that allows the use of Internet-based services and applications through its Internet connection; most smart TVs sold in Europe these days are equipped with ➡ HbbTV.

Content and Forms of Advertising

Addressable TV Spot (ATV Spot)

an addressable advertising medium that is substituted for a linear (broadcast) ➡ Commercial (cf. Targeting); the ATV spot is thus one of the advertising media available in ➡ Dynamic Ad Substitution (DAS).

Ad Opener / Ad Closer

an element incorporated at the beginning / end of a commercial break; a linkage between a sponsor and a related format can be created.

Branded Red Button

an advertising medium which usually displays a Red Button graphic at the lower edge of the screen during a ➡ Commercial: By pressing the ➡ Red Button on their remote control, e.g. during a commercial, viewers will be taken to a ➡ Microsite operated by the advertiser, where they will find additional information on the product or service advertised, on the brand, or on current promotional campaigns.

Commercial

(also ad[vert/ising] spot) a short clip shown as an advertising medium in the usage context of audiovisual media.

Microsite

a thematic web page which displays supplemental information (e.g. on a product, a campaign, a TV format, a program, a news or weather item) in a compact form; it may contain interactive elements, such as video clips (“click to video”).

Pre-Roll / Mid-Roll / Post-Roll

commercials inserted dynamically at the beginning of / during / at the end of content (cf. also ➡ Dynamic Ad Insertion (DAI)).

Red Button

a key on the remote control that launches universal access to a TV broadcaster’s HbbTV offerings and thus to a variety of interactive value-added services; according to ➡ HbbTV specifications, a Red Button icon should be displayed on screen after switching on or to a channel which offers HbbTV services.

Switch-In

an addressable advertising medium which briefly inserts a graphic (usually an L-shaped banner) with an advertising message after switching channels; switch-ins may be configured for interactivity (taking viewers, for example, to a ➡ Microsite) and may also include animated advertising inserts.

Examples for Germany-wide campaign (1)
regional campaign (2)
metropolitan Campaign (3)
or federal state-wide campaign (4)

Advertising Technology (Ad-Tech)

Ad Impression

is registered by an ➡ Ad Server whenever a particular ➡ Advertising Medium is being served or displayed; the evaluation of ad impressions is based on ad ➡ Tracking.[1]

[1] The successful delivery ("viewability") of an advertising medium is defined by IAB in this document:
http://mediaratingcouncil.org/063014%20Viewable%20Ad%20Impression%20Guideline_Final.pdf
oder kürzer:
https://tinyurl.com/mrc-adimpr

Ad Request

an advertising medium's request to an ➡ Ad Server, triggered by an event, such as viewing a video or reaching a mark within a stream that is intended for advertising; the request may be launched directly from the viewer's device or via an intermediate server, and it may contain additional information (e.g. ➡ Targeting criteria).

Ad Response

an ➡ Ad Server's response to an ➡ Ad Request received; the response specifies the address where the ➡ Advertising Medium to be played out is found, how it should be played out, whether interactions within the advertising medium are possible, and how ad ➡ Tracking should be handled. An ad response may be formatted, for example, according to the ➡ VAST (Video Ad Serving Template) standard.

Ad Server

a Web server specializing in serving ➡ Advertising Media, with its specialization allowing, for example, ➡ Targeting and ➡ Tracking of the ad playout as well as decisions on which advertising medium should be served to which customer at what time on which consumer device. The ad server is the central interface for designing, monitoring, and evaluating advertising campaigns.

Application Discovery over Broadband Phase 2 (ADB2)

an ➡ HbbTV Specification which – via watermarks in audio/video – offers an alternative option for launching an application and transmitting a timeline and stream events.
ADB2 allows ATV content and advertising forms to be played out on HbbTV-enabled TV sets, even when the broadcast signaling (AIT) isn't available, for example when a non-HbbTV-enabled set-top box is connected to the TV set via HDMI.
A new version of the ADB2 specification, which is currently being developed by the HbbTV Association, integrates ➡ Targeted Advertising (TA) functionalities. This use and signalisation of watermarks for controlling the TV set is also called "Signaling on the Media Essence" (SoME).

Consent

viewer consent via opt-in to processing their personal data by ➡ Targeting on the ➡ Ad Server, constituting a GDPR-compliant legal base for this kind of data processing. In addition, users have the option to decline the consent request via opt-out completely or select certain purposes within the consent request (partial opt-in). Serving personalized ➡ Advertising Media requires an active user opt-in, while non-personalized advertising may also be played out without explicit consent.

Cookie

a data file stored on a local storage by an application, allowing the same application to retrieve the stored information (such as user ID, privacy settings, layout, shopping cart) on future visits. Cookies allow viewers to be identified by an ➡ Ad Server, as long as they have given their ➡ Consent.

Dynamic Ad Insertion (DAI)

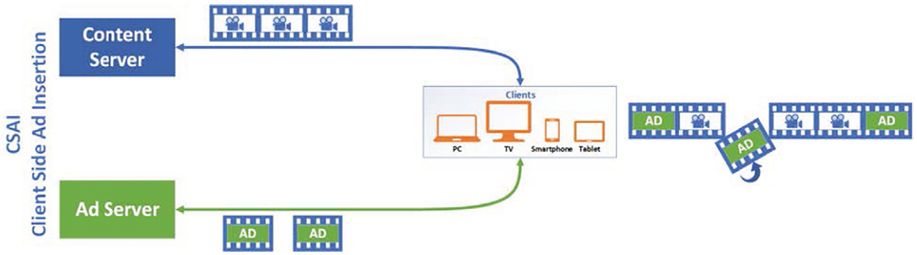
a process in which a ➡ Commercial played out via an ➡ Ad Server is inserted before/during/after video content, e.g. as ➡ Pre-Roll / Mid-Roll / Post-Roll. These ➡ Advertising Media are being played out in an addressed (personalized) form in the context of ➡ Addressable TV (ATV) (cf. also ➡ Targeting). Depending on whether the advertising spot is inserted on the client's side (i.e. in the consumer device) or by the server, a distinction is made between ➡ Client-Side Ad Insertion (CSAI) and ➡ Server-Side Ad Insertion (SSAI) (cf. also images below).

Dynamic Ad Substitution (DAS)

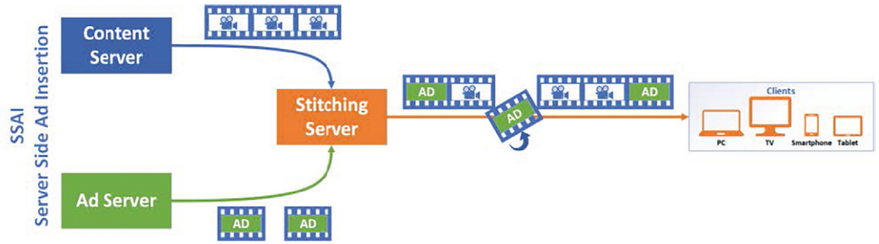
a process (also called ad replacement) in which a ➡ Commercial within video content is replaced by another, personalized (addressed) spot (cf. also ➡ Targeting). Depending on whether the advertising spot is inserted on the client's side (i.e. in the consumer device) or by the server, a distinction is made between ➡ Client-Side Ad Substitution (CSAS) and ➡ Server-Side Ad Substitution (SSAS) (cf. also images below).

Images Ad Insertion / Ad Substitution

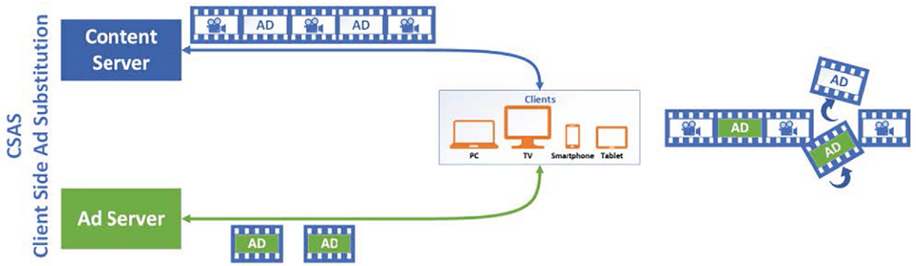
Client-Side Ad Insertion (CSAI) cf. also ➡ Dynamic Ad Insertion (DAI)



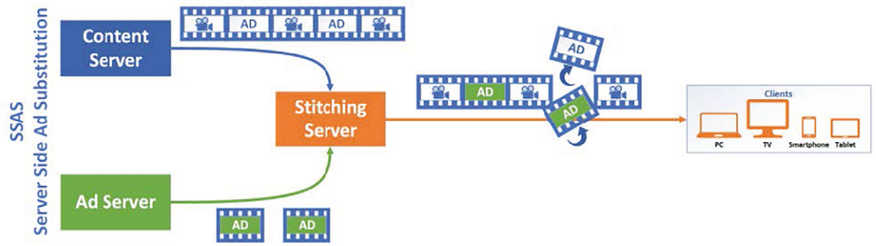
Server-Side Ad Insertion (SSAI) cf. also ➡ Dynamic Ad Insertion (DAI)



Client-Side Ad Substitution (CSAS) cf. also ➡ Dynamic Ad Substitution (DAS)



Server-Side Ad Substitution (SSAS) cf. also ➡ Dynamic Ad Substitution (DAS)



Frequency Capping

a predefined limit (e.g. for a ➡ Unique Device ID, a household, or a user) for the maximum number of playouts or displays of a specific personalized advertising medium (or several ➡ Advertising Media from a single campaign) within a given time frame.

HbbTV Stream Event (DSM-CC)

a cue for ➡ HbbTV that is embedded in an MPEG-2 transport stream. A broadcaster might use it to signal a ➡ Placement Opportunity, in order to trigger the substitution of a ➡ Commercial. HbbTV Stream Events can be used as cues for both ➡ Dynamic Ad Insertion (DAI) and ➡ Dynamic Ad Substitution (DAS) via HbbTV.

Placement Opportunity

allows broadcasters to set time markers in a TV signal at which personalized ➡ Advertising Media, for example, may be inserted or substituted. Placement opportunities may be signaled, for instance, by either ➡ HbbTV Stream Events or ➡ SCTE 104/35 messages.

Stitching

an insertion, combination, or substitution of individual video sequences within a stream; cf. also ➡ Dynamic Ad Insertion (DAI) and ➡ Dynamic Ad Substitution (DAS).

SCTE 104/35

standards – SCTE 104 for uncompressed video signals and SCTE 35 for compressed video signals – describing cueing by the broadcaster, for example to signal a ➡ Placement Opportunity. SCTE 35 is used in DVB transport streams, HLS, and DASH. Cueing via ➡ HbbTV uses ➡ HbbTV Stream Events.

Substitution Content

content / ➡ Commercial streamed via Internet to replace – via ATV technology – content of identical duration contained in the original signal.

Targeted Advertising (TA)

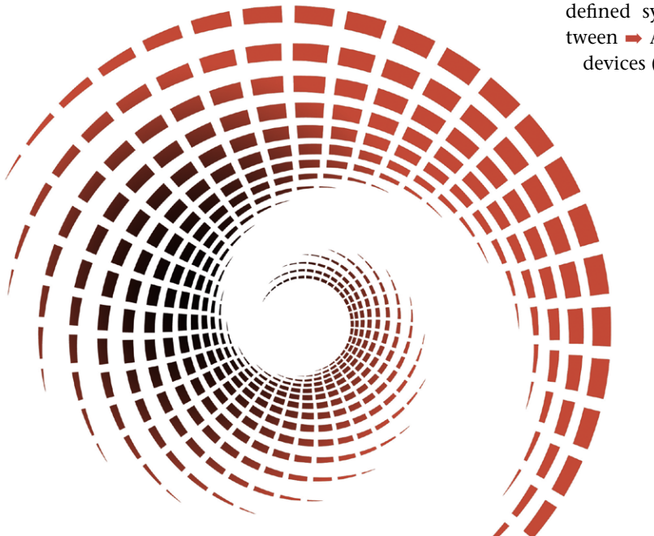
an optional ➡ HbbTV specification for allowing ➡ Dynamic Ad Substitution (DAS) processes of significantly higher quality (compared to HbbTV 1.5+ standards) on HbbTV 2.0-enabled consumer devices (e.g. for more precise switching from linear to personalized ➡ Advertising Media and back).

Targeting

a specification of playout criteria based on various campaign parameters (e.g. programming context) for ➡ Advertising Media on an ➡ Ad Server, in order to achieve targeted delivery of a specific advertising medium to the target group defined by the advertising client.

Timed External Media Information (TEMI)

a robust media timeline in an MPEG-2 transport stream, which may be used in ➡ HbbTV (version 2.0.1 or later) to synchronize several audio and video streams. According to HbbTV-TA, the TEMI timeline can also be used to precisely trigger the switch between broadcast and substitution content.



Tracking

a process registering which ➡ Advertising Media were displayed on a specific consumer device (cf. ➡ Unique Device). In video advertising, the playback duration on the device is usually also tracked in quartiles (25 %, 50 %, 75 %, 100 % viewing).

Unique Device

a consumer device uniquely identifiable by an ➡ Ad Server, provided its user has given his or her Consent.

VAST (Video Ad Serving Template)

a standard response format for messages with a defined syntax, used for communication between ➡ Ad Servers and addressable consumer devices (cf. also ➡ Ad Response).

Standards

ADB2

Technical Specification on HbbTV “Application Discovery over Broadband” Phase 2.

https://www.etsi.org/deliver/etsi_ts/103400_103499/103464/01.02.01_60/ts_103464v010201p.pdf
https://tinyurl.com/etsi-ts-103464

HbbTV Specification

In 2020, the HbbTV Association published its “HbbTV 2.0.3 Specification” which was also published as ETSI specification ETSI TS 102 796 V1.6.1 in April 2021.

https://www.etsi.org/deliver/etsi_ts/102700_102799/102796/01.06.01_60/ts_102796v010601p.pdf
https://tinyurl.com/etsi-ts-102796

IAB (Interactive Advertising Bureau)

IAB standards and guidelines:
– Video Ad Serving Template (VAST), version 4.2 (2019-06)
– Digital Video Impression Measurement Guidelines: Broadband Video Commercial Measurement Guidelines, version 1.1 (2018-06)
https://tinyurl.com/bvc-meas

Targeted Advertising Standards

In early 2020, the HbbTV Association published the HbbTV Specification for Targeted Advertising (HbbTV-TA).
Later that year, the DVB Project also published its Targeted Advertising Specifications (DVB-TA). DVB-TA complements the HbbTV-TA specifications with standards for signaling DAS in the broadcaster signal (e.g. conversion of SCTE 35 to stream events).

DVB-TA (Dynamic substitution of content in linear broadcast)

Part 1: This document specifies the signaling used, for example, by smart TVs or STBs, in order to identify placement opportunities in a DVB transport stream (e.g. SCTE 104/35 or stream events). Revision 1 includes the addition of Watermarking / SoME.

https://dvb.org/wp-content/uploads/2020/12/A178-1r1_Dynamic-substitution-of-content-in-linear-broadcast_Part1_Signalling_Draft-TS-103-752-1v121_Feb-2021.pdf
https://tinyurl.com/DVB-A178-1

Part 2: This document contains instructions relating to the ad server interface for delivering addressable content.

https://www.etsi.org/deliver/etsi_tr/103700_103799/10375202/01.01.01_60/tr_10375202v010101p.pdf
https://tinyurl.com/etsi-tr-103752

HbbTV-TA

Part 1: This document lists the functional requirements, including a definition of the “Fast Media Switch API”.

https://www.etsi.org/deliver/etsi_ts/103700_103799/10373601/01.01.01_60/ts_10373601v010101p.pdf
https://tinyurl.com/etsi-ts-103736

Part 2: This document lists non-functional requirements, e.g. requirements with regard to performance and memory size of smart TVs and STBs.
https://www.etsi.org/deliver/etsi_ts/103700_103799/10373602/01.01.01_60/ts_10373602v010101p.pdf
https://tinyurl.com/etsi-ts-103736-2

Define the target group precisely, determine the region and use ADT spots precisely and advantageously. This characterizes addressable television.

Imprint

Publisher: Deutsche TV-Plattform e.V.
www.tv-plattform.de
Register of Associations No. 73VR9797

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About the German TV Platform
The Deutsche TV Plattform is an association of more than 50 members, including commercial and public-service broadcasters, streaming services, appliance manufacturers, Internet companies, infrastructure operators, service and technology providers, research institutes and universities, state and federal authorities, and other companies, associations, and institutions concerned with digital media. Since its launch in 1990, it has been the goal of this non-profit organization to establish digital technologies, based on open standards.

Disclaimer:
The information in this glossary was thoroughly researched and assembled to the best of our knowledge, based on the unbiased approach of the Deutsche TV Plattform's Smart Media Working Group / ATV Glossary Task Force. Any information herein reflects the status quo at the editorial deadline. However, the members of the working group and the Deutsche TV Plattform cannot guarantee its quality and/or that the compiled information is current, correct, and complete. Therefore, the Deutsche TV Plattform, as the publisher of this brochure, cannot accept any liability for material or immaterial loss or damage arising from the use of this publication or its content or as a result of inaccurate or incomplete information contained therein.