



9th HbbTV Symposium and Awards 2021

NOVEMBER 24th – 25th

Paris | CIUP

Maison Internationale

Chairman's State of the Nation

November 25

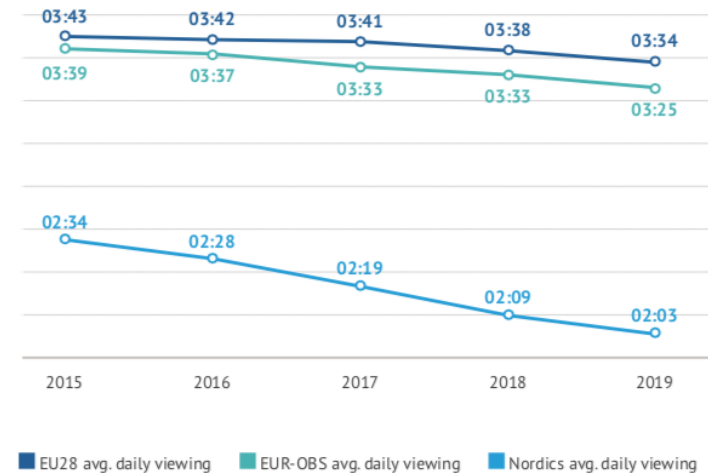


- I. Worth noting in our surrounding TV market
- II. How does HbbTV fit in this environment ?
- III. Some news about the HbbTV association
- IV. Looking forward : opportunities & challenges

I. Worth noting in our surrounding TV market

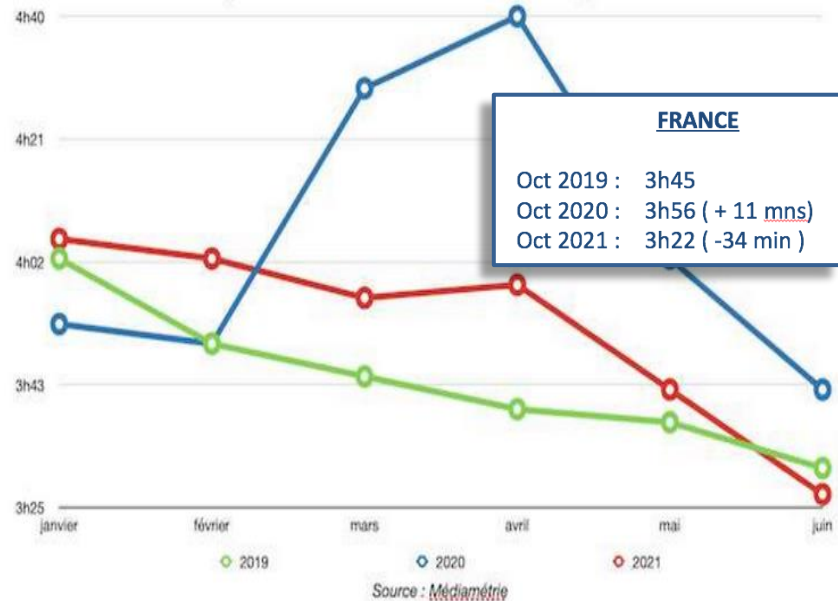
The COVID boost to linear TV seems to be over

Average daily television viewing per person (2015-2019, in hh:mm)



Source: European Audiovisual Observatory analysis of GLANCE audience data

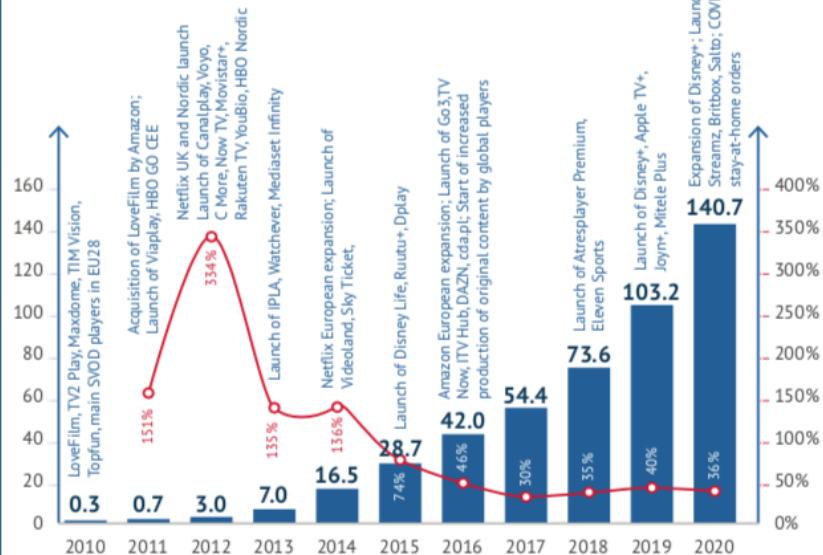
Durée d'écoute globale de la TV - Individus de 4 ans et plus - Premier Semestre



SVOD / OTT growth continues ...

EU28 subscriptions to OTT SVOD

(2010-2020 – in million subscriptions and % of subscriptions; YoY growth)



Source: Ampere Analysis

Not all SVOD services have been taken into account, only a selection, to show the most impactful

Streaming milestone: Global subscriptions passed 1 billion last year



Lin-Manuel Miranda and Phillipa Soo portray Alexander and Eliza Hamilton in "Hamilton" on Disney+. (Disney+)

BY RYAN FAUGHNDER | STAFF WRITER

MARCH 18, 2021 8 AM PT

.. so that streaming now plays at par with TV

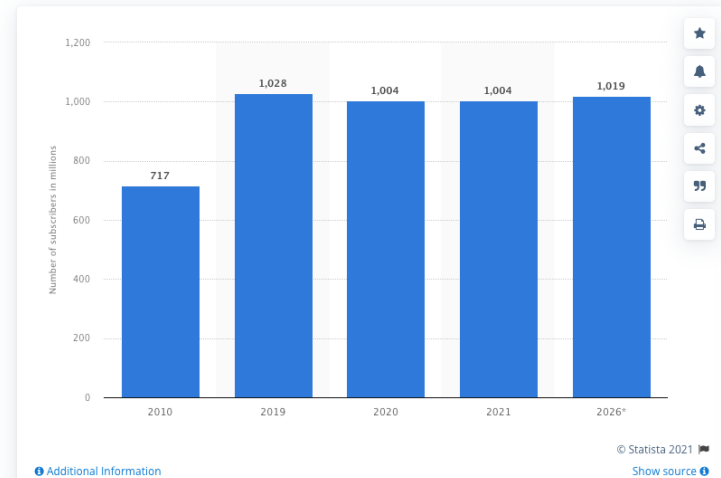
US Media Consumption Report 2021

Streaming overtakes live TV

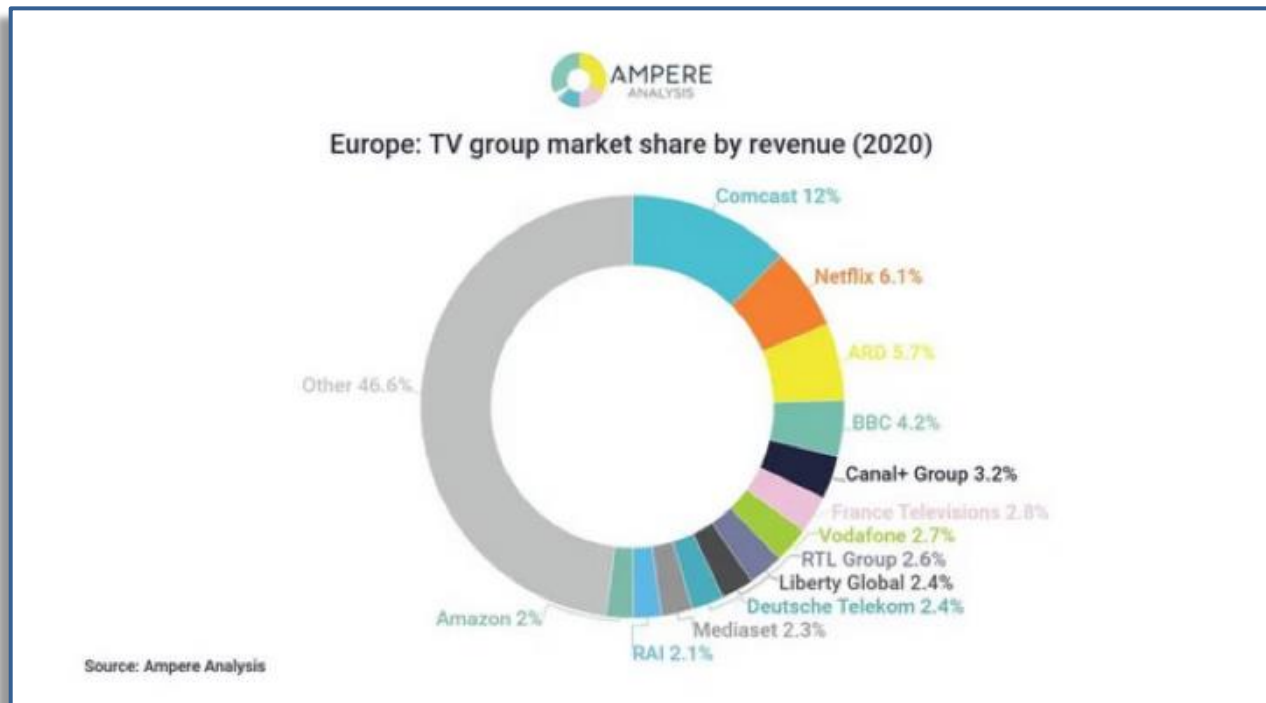
For the first time since we launched the Media Consumption Report in 2019, the number of Americans streaming TV content (83%) has surpassed those watching live TV (81%)

Number of pay TV subscribers worldwide from 2019 to 2026

(in millions)



and Netflix is now the N°2 TV player in Europe



but OTT & SVOD growth is not without limit either

THE STREAMING WARS | JULY 17, 2019

Netflix Is Losing U.S. Subscribers for the First Time in Eight Years

By Josef Adalian [@tvmojoe](#)

After years of unchecked growth, Netflix saw

Disney+ U.S. Growth Slows Sharply in First Half of 2021, Internal Data Shows

By Wayne Ma and Jessica Toonkel | July 2, 2021 10:24 AM PDT

Photo: Disney CEO Bob Chapek. Photo by Bloomberg.

U.S. subscriber growth at Disney's Disney+ streaming service slowed sharply in the past few months, according to internal data reviewed by The Information, with most of the growth in the

Netflix just revealed it's lost half a million users – so what's gone wrong?

By Tom Power last updated July 21, 2021

Netflix has seen a dip in its North American subscriber base



NETFLIX

and broadcast TV is still key to reach audience

BBC confirms linear return for BBC Three

MARCH 2, 2021 14:45 EUROPE/LONDON BY JULIAN CLOVER



BBC Three is to return to linear transmission, six years after it went online.

BBC Three viewing fell 89% following online switch

SEPTEMBER 9, 2020 11:27 EUROPE/LONDON BY JULIAN CLOVER



United Kingdom broadcasters lead Netflix

6 May 2021

Netflix only reveals selective viewing information. Most popular programmes compare to broadcast representative sample of 2,000 households in insight and suggests that the most popular pro channels still dominated viewing in 2020.

Television and viewing research company technique for estimating Netflix viewership through viewing data among a representative sample of United Kingdom.

Thinkbox, the marketing body for commercial Kingdom, has used this data, together with research the top programmes in terms of household viewership, to make a statement on the impact of one-off special programmes such as the statement.

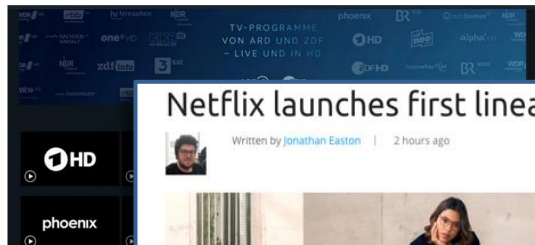
United Kingdom programmes in 2020 by household views per episode

Programme	Channel	m
1 <i>The Great British Bake Off</i>	C4	10.04
2 <i>Strictly Come Dancing</i>	BBC	9.53
3 <i>Des</i>	ITV	9.03
4 <i>Britain's Got Talent</i>	ITV	8.83
5 <i>And and Dec's Saturday Night Takeaway</i>	ITV	8.72
6 <i>I'm a Celebrity... Get Me Out of Here!</i>	ITV	8.60
7 <i>The Masked Singer</i>	ITV	8.44
8 <i>Quiz</i>	ITV	8.39
9 <i>White House Farm</i>	ITV	8.25
10 <i>Van der Valk</i>	ITV	7.99
11 <i>The Salisbury Poisonings</i>	BBC	7.95
12 <i>Call the Midwife</i>	BBC	7.52
13 <i>The Stranger</i>	Netflix	7.18

OTT and SVOD are not ignoring linear and Broadcast

Amazon launches 'free' live TV package in Germany

JULY 15, 2020 09:49 EUROPE/LONDON BY JORN KRIEGER



Amazon has launched Prime in Germany which includes a 'free' live TV package.

The line-up comprises HD channels, reports C

The HD channels include Phoenix, ARD-alpha, K Fernsehen.

Netflix launches first linear channel



Written by Jonathan Easton | 2 hours ago



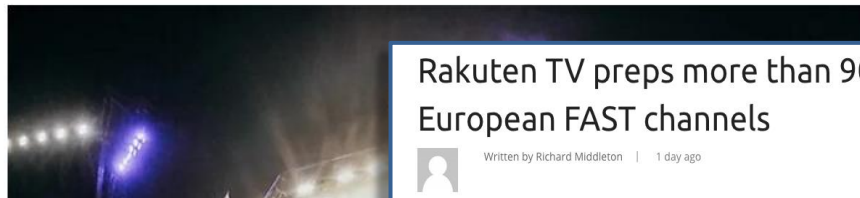
Netflix original The Hook Up Plan

Netflix has gone linear for the first time.

The channel, dubbed Direct, will launch in France as a test of the viability of Netflix as a more traditional TV offering. It will air French, international and US films and series that are available on the streaming service, available exclusively to Netflix subscribers.

BBC iPlayer trials 'Watch with friends' feature

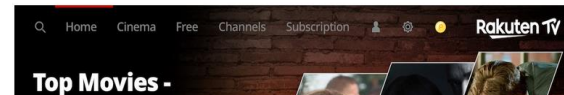
JUNE 24, 2021 12:59 EUROPE/LONDON BY JULIAN CLOVER



Rakuten TV preps more than 90 pan-European FAST channels



Written by Richard Middleton | 1 day ago




Netflix 'instant' play goes global


JANUARY 25, 2021 11:31 EUROPE/LONDON BY JULIAN CLOVER




Streaming service Rakuten TV is ramping up its presence across Europe by launching more than 90 new ad-supported linear channels.


Linear TV and OTT also engage convergence path at the regulatory level

 European Commission

English 



Home > Press corner > Guidelines on the revised Audiovisual Media Services Directive

 Available languages: English ▾

Questions and answers | 2 July 2020 | Brussels

Guidelines on the revised Audiovisual Media Services Directive – Questions and Answers

Page contents

Top

Why is the Commission issuing guidelines on the Audiovisual Media Services Directive?

EXCLUSIF

Réforme audiovisuelle : les plates-formes comme Netflix devront investir 25 % de leur chiffre d'affaires en France

Le ministre de la Culture a également dévoilé les contours des textes régissant les relations entre producteurs et diffuseurs, dont l'épineuse question de la production indépendante (fixée à 50 %).

PSB listings under threat on Smart TVs

AUGUST 14, 2020 11:35 EUROPE/LONDON BY JULIAN CLOVER

Streaming services to be brought under Ofcom regulation

JUNE 21, 2021 07:29 EUROPE/LONDON BY JULIAN CLOVER

as the world goes OTT, Telcos seem to loose their past interest in TV

Are Telcos Losing Interest in TV?

JUNE 17, 2021 15:57 EUROPE/LONDON BY JULIAN CLOVER

ARE TELCOS LOSING INTEREST IN TV?

Ziggo introduces standalone internet service

By CSI 19/05/21

Orange cherche un nouvel actionnaire pour sa chaîne OCS

ORANGE

SUIVRE CE SUJET



Domine Jerome/ABACA

L'opérateur télécoms a approché plusieurs groupes pour leur proposer d'entrer au capital de sa chaîne connue pour diffuser les séries *The walking dead* ou *Game of thrones*.

Écrit par **Jamal Henni**
Publié le 23/04/2021 à 9h38



BT opens talks over potential sale of sports broadcasting business

Telecoms company considers disposal or partnership as it looks to focus on core telephony operations

THE WALL STREET JOURNAL

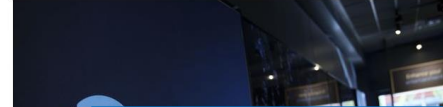
SUBSCRIBE

SIGN IN

BUSINESS

AT&T Carves Out Pay-TV Business in Deal With TPG

Private-equity giant to pay \$1.8 billion for 30% interest in new DirecTV unit



AT&T paid \$498 million for 30% interest in new DirecTV unit
PHOTO: PATRICK

05.03.2021 | Financial | Corporate

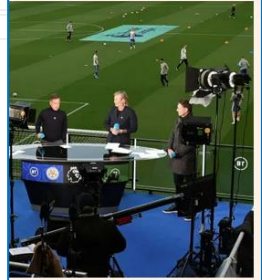
Verizon Media to be acquired by Apollo Funds

Media contact(s)

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Investor Contact: Peter Mintzberg
212.822.0528
APOInvestorRelations@apollo.com

Kim Ancin
908.801.0500
Kimberly.Ancin@verizon.com



Live match between Leicester City and West

22

Environment concerns will also be factored in the debate

iea

The carbon footprint of streaming video: fact-checking the headlines



George Kamiya, Digital/Energy Analyst
Commentary – 11 December 2020



The real problem with your Netflix addiction? The carbon emissions
Arwa Mahdawi

How cat videos could cause a 'climate change nightmare'

Umberto Bacchi

6 MIN READ

40% of UK consumers would consider streaming at a lower quality to reduce emissions.

49% of UK SVoD subscribers would pay extra for green streaming alternatives – which could generate over £400 million annually.

LoCaT
The Low Carbon TV delivery Project

A major study has concluded digital terrestrial television (DTT) consumes substantially less energy when compared to IP delivery such as streaming.

THE SHIFT PROJECT
THE CLIMATE TRANSITION THINK TANK

CLIMATE CRISIS: THE UNSUSTAINABLE USE OF ONLINE VIDEO
The practical case study of online video
Executive Summary

CONTEXT – AN UNSUSTAINABLE AND GROWING IMPACT

II. How does HbbTV fit in this world?

all this happens on a smart TV

The TV is still the preferred device for content consumption: new report

Today, the world seems filled with screens of high enough resolutions to consume the content they can show regardless of their size or portability. However, a new report shows that TVs have still managed to retain the greatest share (over 50%) of videos watched among respondents in the US. They spend an average of 20 hours per week using their TVs, compared to 4 hours watching phones.



The TV is still the most popular platform for videos. (Source: Philips)

Deirdre O'Donnell, 01/27/2020

Android

Audio

Desktop

iOS

iPad Pro

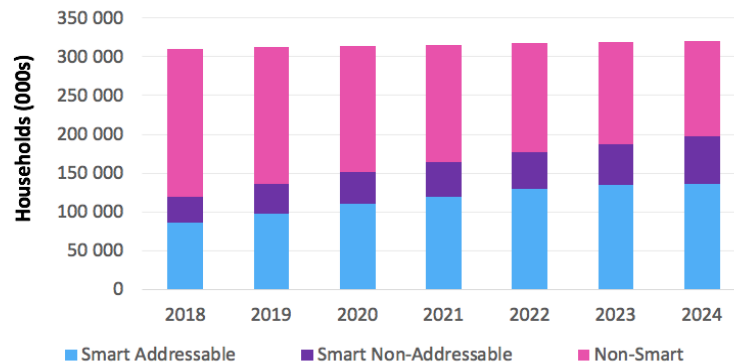
Monitor

Smartphone

Software

Tablet

Smart TV Household Installed Base in Europe



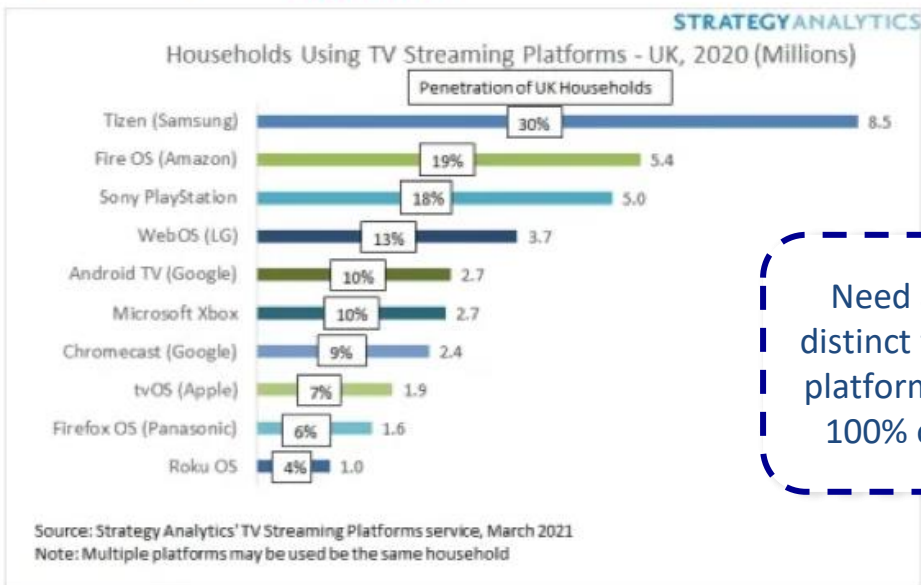
Notes: Non addressable Smart TVs are older sets with unsupported apps or platforms

Source: Omdia

© 2021 Omdia

Smart TV looks like a fragmented world

MARCH 23, 2021 20:22 EUROPE/LONDON BY JULIAN CLOVER



Need at least 6
distinct technology
platforms to reach
100% of TV sets

... which HbbTV has the power and the ambition to unify

TV as a STB ?

Amazon is now selling its own branded TV sets embedded with Alexa

SOPER on September 9, 2021 at 8:32 am

Sky launches the Sky Glass TV with a Sky Q box built in

The Sky Glass TV debuts alongside Sky TV over the internet with no need for a dish



Bloomberg | Quint

Comcast Aims to Become Streaming Gatekeeper With Smart TVs

Gerry Smith

Posted On 09:19 PM IST, 19 Oct 2021
Updated On 10:56 PM IST, 19 Oct 2021

Save Share Twitter More



HbbTV continues its successful installation in the TV ecosystem

Digital TV^{Europe}

News



DTG's D-Book makes HbbTV mandatory for first time

Written by [Stuart Thomson](#) | 28th October 2021 @ 13:12

PRESS RELEASE

Freeview Play hits 10 million users

26 OCTOBER 2021

Freeview has announced that its on demand platform **Freeview Play** is now used in over 10 million homes.* This follows over 14 million sales and cements its position as the fastest growing TV platform in the UK.

HbbTV leading TV app platform in Germany

NOVEMBER 10, 2020 20:30 EUROPE/LONDON BY [BROADBAND TV NEWS CORRESPONDENT](#)



Smart TV sales grow by 14% in Germany, 90% support HbbTV

OCTOBER 22, 2020 10:57 EUROPE/LONDON BY [JÖRN KRIEGER](#)

Absatz Smart-TV's in Deutschland

30 DEUTSCHE TV-PLATTFORM



Zahlen für den deutschen Markt, hochgerechnet auf 100% Coverage Quelle: GfK



Spain

LOVEstv

15M SmartTV (38%)

9M LOVEstv (23%)

1M active TVs per month (3%)



Pureplay SVOD platforms leverage HbbTV and DTT in a new way

Salto to launch on DTT in platform "modernisation"

APRIL 15, 2021 12:42 EUROPE/LONDON BY JULIAN CLOVER



French streaming service Salto is to launch on the country's DTT platform.

It follows approval Wednesday for the France Télévisions-TF1-M6 joint venture that will use the HbbTV platform.

9/04/2021 TV Streaming

0 commentaire

Arte.tv arrive sur le canal 77 de la TNT



arte

La plateforme Arte.tv a désormais son canal TV ([voir archive](#)). Le CSA a autorisé cette diffusion, sur le canal 77 de la TNT, pour une durée initiale de six mois. Arte utilise la technologie HBBTV (Hybrid Broadcast Broadband TV) qui permet de proposer un accès gratuit délinéarisé à l'offre numérique de la chaîne qui comprend des films, séries, documentaires et spectacles, soit environ 8 000 programmes, sans abonnement spécifique.

HbbTV emerges as a tool of choice to improve accessibility

EBU

OPERATING EUROVISION AND EURORADIO

TR 065

**GUIDELINES FOR DELIVERING
ACCESSIBILITY SERVICES
USING HbbTV**

A GUIDE TO CURRENT PRACTICE AND
FUTURE POSSIBILITIES

Geneva
November 2021



**Leave no one behind –
Accessibility using HbbTV**



**Freeview Play Accessible TV Guide:
A successful accessibility solution with HbbTV**

The proposed take-aways

1. classical linear TV is certainly not a dead model , but progressively has to enter into **co-leadership**
2. **OTT** continues its growth, playing at par with, or even exceeding traditional TV...though it may also approach some kind of **limit**
3. OTT and linear are not the opposite, and increasingly **converge**
4. **Environmental** concerns will also affect the shaping of the future balance
5. The world of connected TV & OTT is technically **fragmented**
6. ... a fragmentation which **HbbTV** can resolve
7. HbbTV is the preferred technology of European broadcasters and platforms to navigate this **transformation** and re-invent themselves in an on demand this hybrid world
8. HbbTV helps to leverage DTT energy efficiency
9. And **HbbTV continues its successful service & device installation in Europe**, including with new models

HbbTV is the right technology for this co-leadership era

II. Some news about the HbbTV association

slightly more than 10 years old now...



June 2020 : Spec 1.1.1

May 2011 : legal incorporation

Moving –temporarily- to a digital-only organization

- last symposium = Athens, November 2019
- last meeting in person = SG February 2020 in Barcelona
- GA 2020 with election : first on line
- GA 2021 on line also

Hoping for the best now

- Symposium 2021 Paris
- SG in presence again January 2022
- GA in presence : May 3d 2022 (election)

Successful webinar series



HbbTV Webinar Series

<https://www.hbbtv.org/hbbtv-webinar-series/>

- 16 successful webinars between June 2020 and Oct 2021
- and more to come !
- 100 to 200 connected participants in live + several 100s of post-event video views (max 1.500)
- a massive repository of information on HbbTV specifications, assets and case studies

Specification continues to evolve and progress

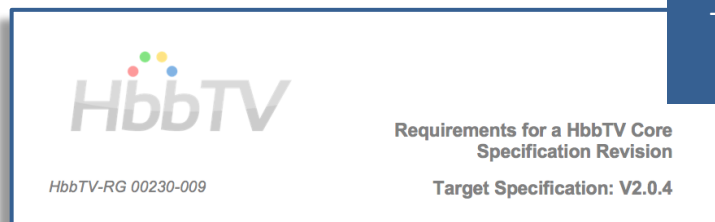
2.0.3 : published (Oct 2020)



TA ADB update



"2.0.4" : Core Requirement agreed (Nov 2020)



+ 2.0.5 add-on :
soon finalized

Test suite , the 2nd major output of HbbTV

Name	Approved size	% approved	Total size	Total size with Nordig & OIPF B	Date
v8.0	632	65%	966	966	31.07.2015
v8.1	731	76%	965	965	11.02.2016
v8.5	770	50%	1548	1548	31.08.2016
v9.0	1092	72%	1521	1715	31.10.2016
v9.1	1221	79%	1538	1791	16.01.2017
v9.2	1474	77%	1908	2102	20.07.2017
v9.2.1	1500	78%	1916	2110	17.11.2017
v2018-1	1674	87%	1924	2118	23.03.2018
v2018-2	1639	84%	1952	2146	04.07.2018
v2018-3	1644	84%	1951	2146	11.11.2018
v2019-1	1691	81%	2079	2274	15.03.2019
v2019-2	1677	75%	2239	2434	23.07.2019
v2019-3	1751	76%	2297	2492	12.11.2019
v2020-1	1879	79%	2391	2586	11.03.2020
v2020-2	2037	79%	2564	2759	13.07.2020
v2020-3	1929	73%	2626	2821	16.11.2020
v2021-1	2029	73%	2768	2963	26.03.2021
v2021-2	2202	79%	2799	3000	13.07.2021
v2021-3	2202	79%	2796	2997	17.11.2021



- reaching 3.000 tests in the test suite
- all TA tests on board
- all Op App tests on board
- 91% approval rate for core spec
- integrating W3C & MSE web tests

Planning for Next 5 years planning (Summer 2021)

- 1,5 m€ investment in test suite
- reaching 3.500 tests
- target >90% approval rate for core and non core

Investing in interoperability

DASH Conformance Tool

DASH-IF Conformance Tool is used to validate DASH content according to DASH-related media specifications. It aims to give information about the validity of the content against one or more developed media standards. Consequently, it reports on (un)expected behavior that can be observed in provided media services that are aimed to be working in alignment to these standards.

The development of the tool started in 2012 funded by continuously updated with newer versions of the already new standards as required. Currently, the tool is aligned to specifications, namely MPEG-DASH, ISO BMFF, DASH, HbbTV and CTA WAVE. It also integrates file format heuristics, including AVC, HEVC, AAC, HE-AAC, HE-AACv2, AAC, and TTML.

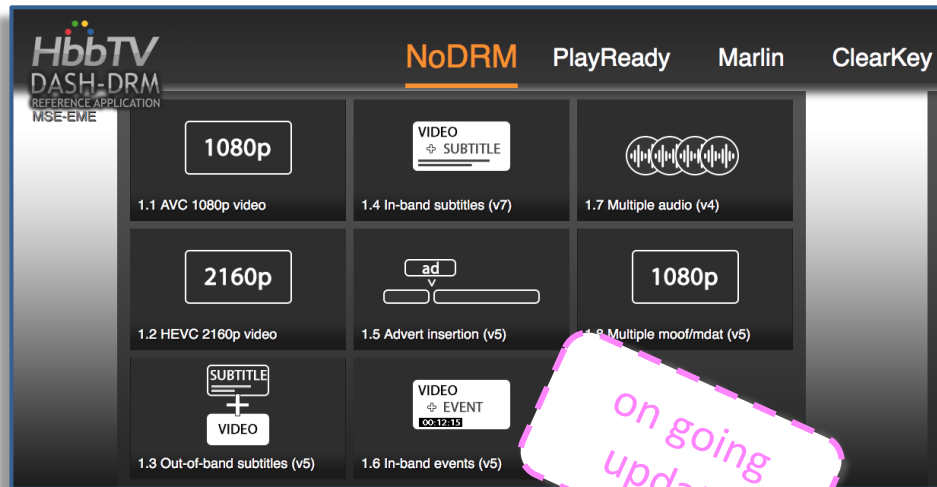
For each corresponding specification, the scope of the validation covers:

- **Media PresentationDescription (MPD) validation** where the MPD is checked if it is a well-formed XML file, appropriate according to DASH schema and MPD-level signaling is done correctly.
- **Segment validation** where the media content pointed to by the MPD is validated at container level.
- **Cross validation** of the MPD-level elements and attributes as well as of the media content(s) signaled at the same hierarchy.

The DASH-IF Conformance Tool is an open source software available on [GitHub](#). A live demo of the tool is also provided [here](#).


START

soon updated !



HbbTV
DASH-DRM
REFERENCE APPLICATION
MSE-EME

NoDRM PlayReady Marlin ClearKey

1080p 1.1 AVC 1080p video	VIDEO + SUBTITLE 1.4 In-band subtitles (v7)	 1.7 Multiple audio (v4)
2160p 1.2 HEVC 2160p video	ad 1.5 Advert insertion (v5)	1080p 1.8 Multiple moof/mdat (v5)
SUBTITLE + VIDEO 1.3 Out-of-band subtitles (v5)	VIDEO + EVENT 1.6 In-band events (v5)	

on going update

Privacy Task Force : facilitating the compliance of HbbTV services and implementations with GDPR and e-privacy



Outline for an **HbbTV Privacy Handbook**

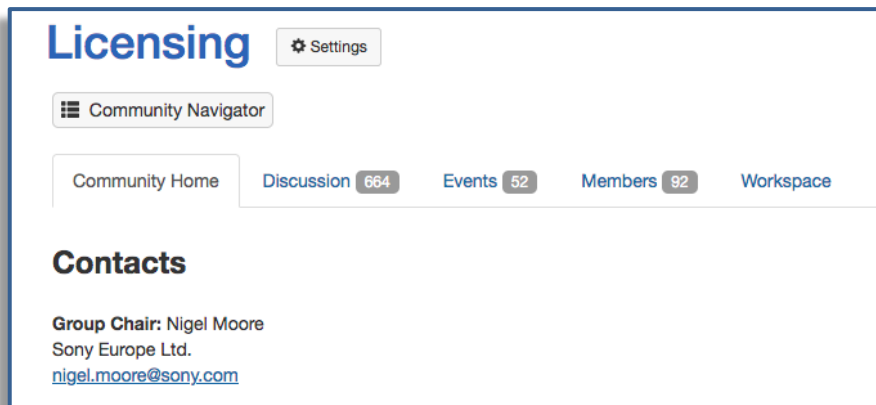
Bird & Bird

DRAFT OF THE LEGAL ANALYSIS

To:

HbbTV Privacy Task Force

Bird & Bird LLP
Carl-Theodor-Straße 6
40213 Düsseldorf
Germany
Tel +49 (0) 211 2005 6000
Fax +49 (0) 211 2005 6011
twobirds.com



- organizing the dissemination of the HbbTV assets to the ecosystem
- Also handles related important standard agreements
- test suite
- Logo
- ..



IV. Looking ahead : opportunities and challenges

1. a rich specification, fit for the job : fully meets requirements of today's demanding consumers and challenging market environment
2. an evolving specification, which adapts to key market evolutions
3. rich and up to date test suite; improving
4. supported by a proven organization in which all key players engage
5. growing appetite of the market as broadcasters actively transform their business models
6. growing recognition with substantial real life deployment and consumer usage
7. Money making business cases

- Dealing with edge issues (eg ; interoperability of recent DRM with HbbTV applications)
- Autonomizing HbbTV form Broadcast ; prepare for an all IP world
- Avoiding national fragmentation; maintaining unity in the HbbTV space
- How can we reach universal and “guaranteed” compatibility ?
- How can we make HbbTV more easy for manufacturers ?
- HbbTV works mostly with voluntary work and limited budget ; can it keep-up with industrialized alternative platforms ?
 - specification support
 - ecosystem alignment and animation
 - industrialized conformance and certification (pan European?)

(Not necessarily to be all owned and resolved by HbbTV Association; holistic “ecosystemic”)

Concluding message

- In these first 10 years, HbbTV has built a great foundation to support European TV industry transformation
- Very useful, great relevance to the players

Let us continue this together !