

HDFI 2021 WEBINARS

"Mass-market linear TV via OTT"

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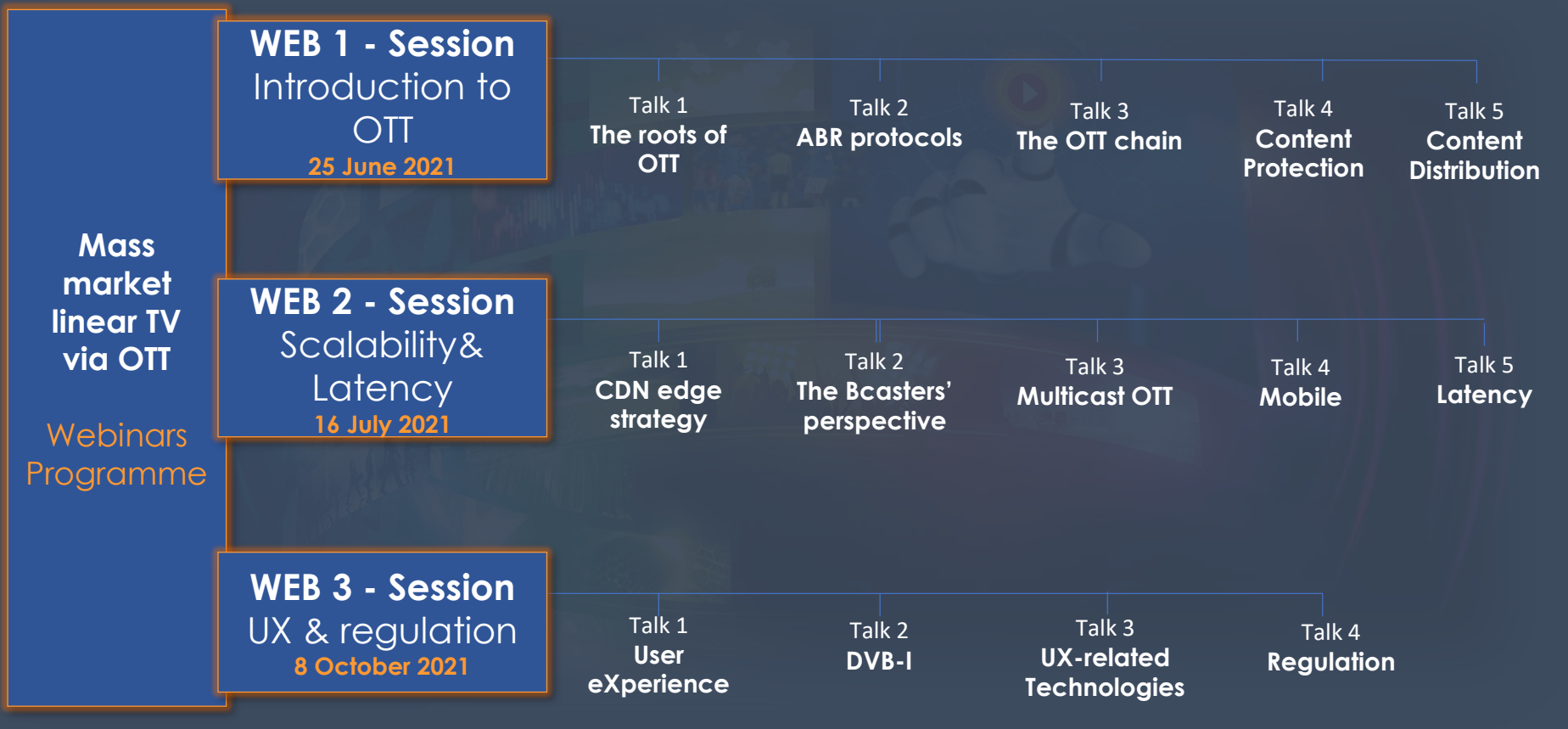
OTT (Over The Top) is nowadays universally recognized as the primary way to distribute on-demand contents across a variety of devices

Broadcast distribution (DTT, satellite) is still the preferred way for enjoying high quality linear mass market TV, in high and ultra high definition, on large screens

Using OTT for linear TV has started spreading on PC and mobile devices, reaching also the main screen for premium events like soccer matches

Which are the remaining technical, commercial and regulatory barriers to be overcome for OTT to possibly become a peer alternative to traditional broadcasting for linear mass market TV?





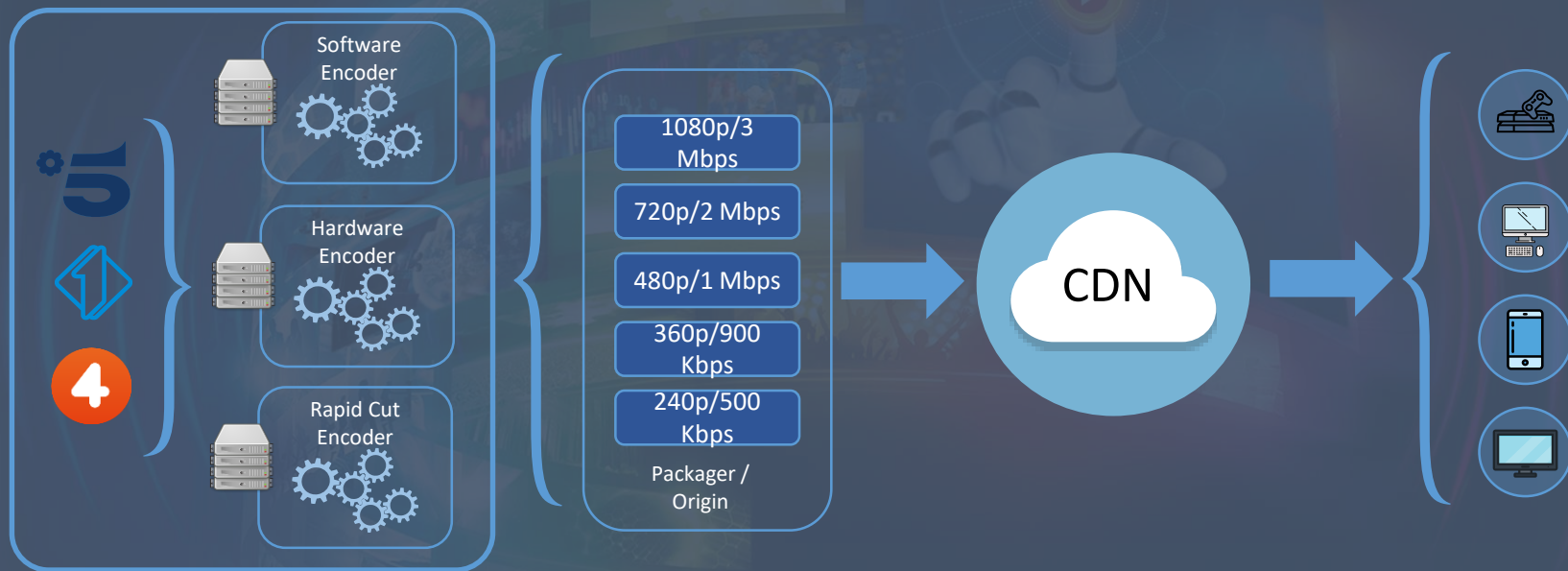
After an historical excursus about video over telco networks, key success factors of OTT have been highlighted:

- Low infrastructural entry barrier
- Open technical standards
- Global coverage
- Convenience for customers (anytime, anywhere, on any device)
- Affordability for customers
- Availability of appealing contents

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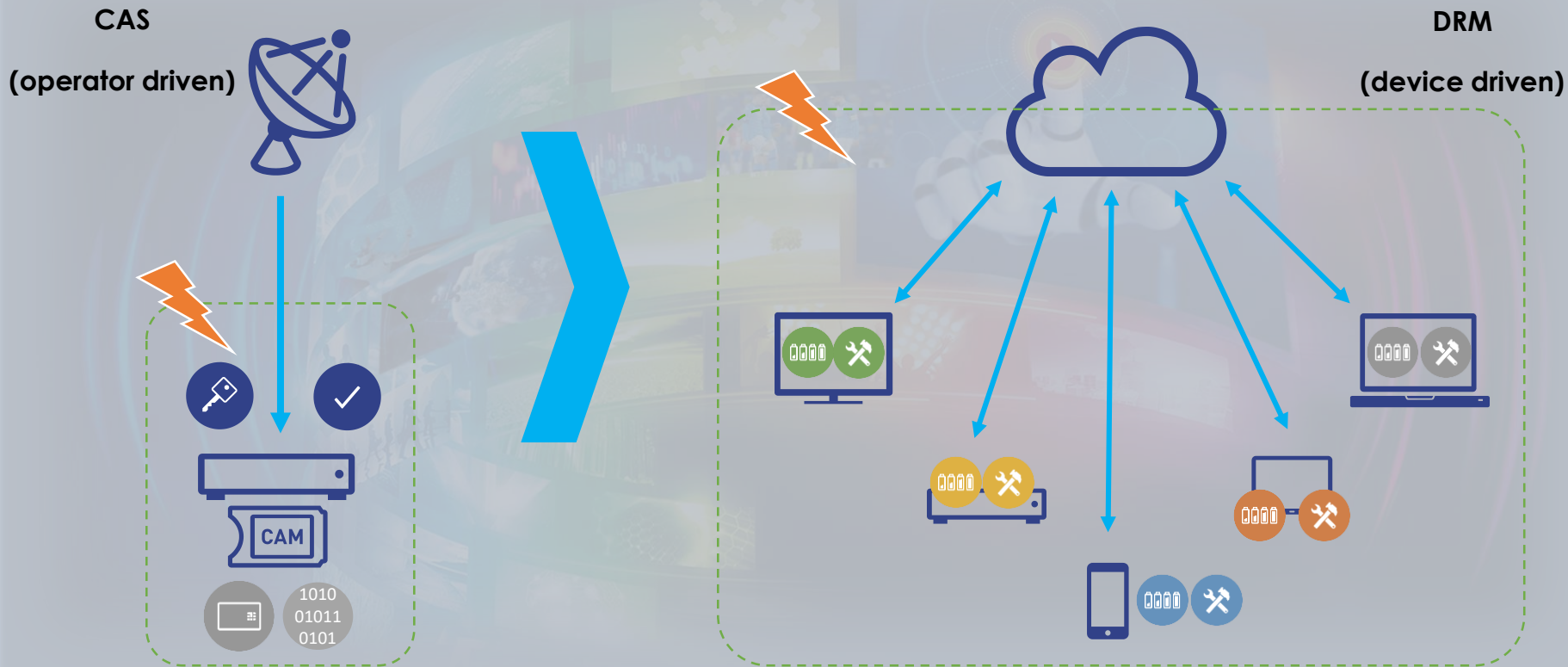
Webinar 1: ABR protocols



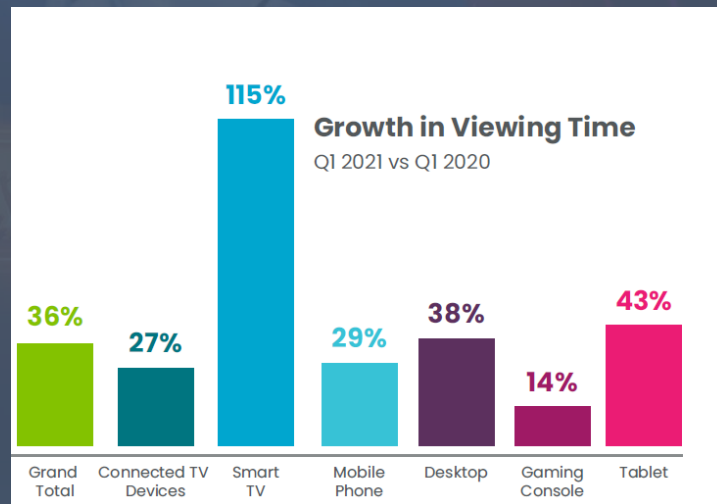
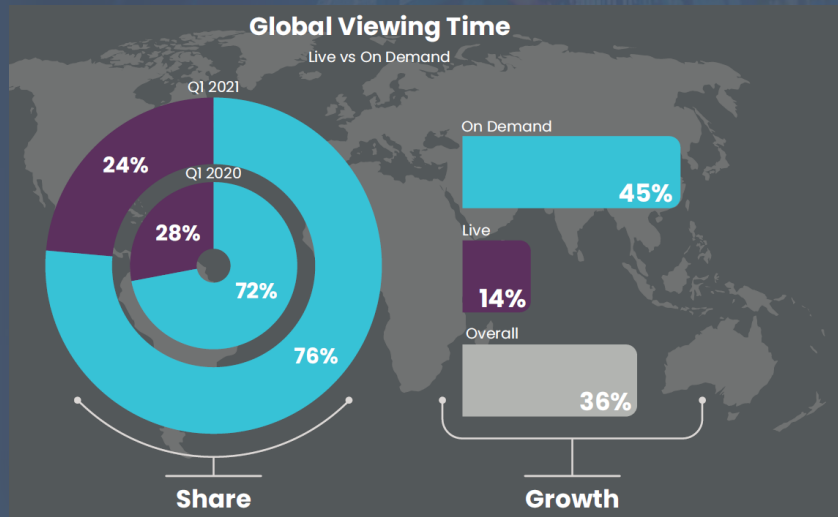


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Webinar 1: Content protection



In spite of the pandemic crisis, the consumption of linear TV has been shrinking, with an increase in VOD consumption for movies, tv series, documentaries. Smart TVs engaged viewers with the biggest expansion of time spent over Q1 of last year



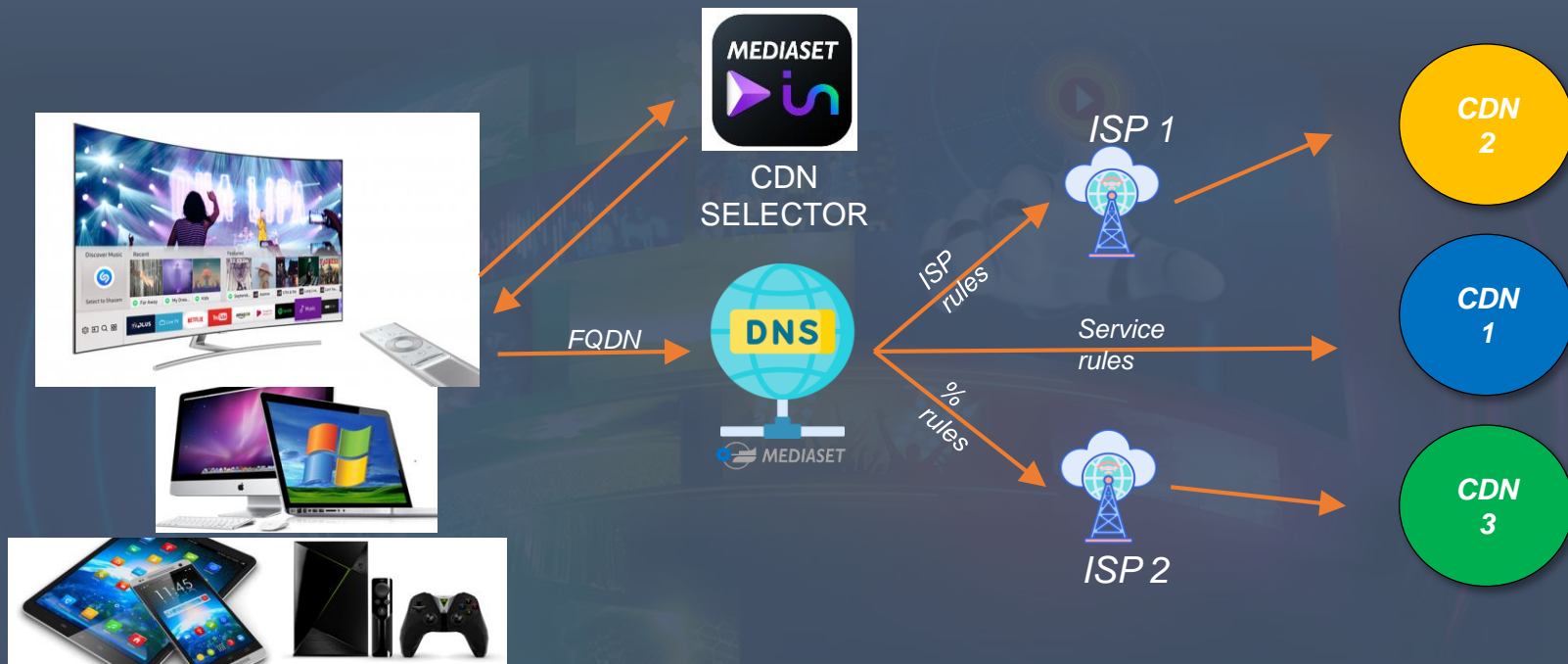
Source: Conviva_state_of_streaming_Q1_2021

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Webinar 2: CDN Edge strategy



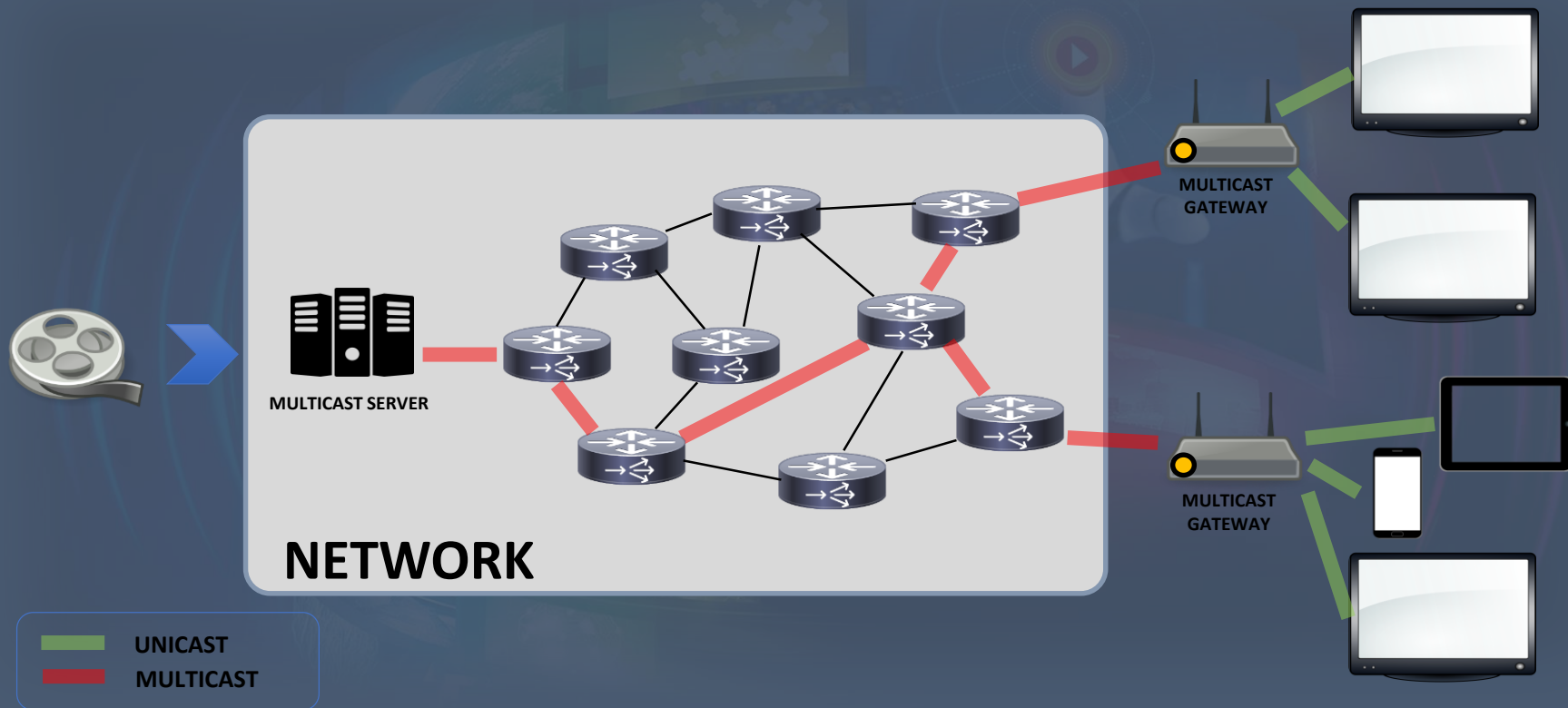
The July 11 Italy-England football final peaked at 34.9 Tbps on the Akamai edge platform. It was the highest that Akamai reached for the tournament and was nearly 5x greater than the 7.3 Tbps peak of the 2016 Portugal-France championship match.



The CDN selector decides if and which base url and content url is given to the device. Operator's DNS can customize the distribution of global traffic to the desired rules, by ISP or by percentage for example.

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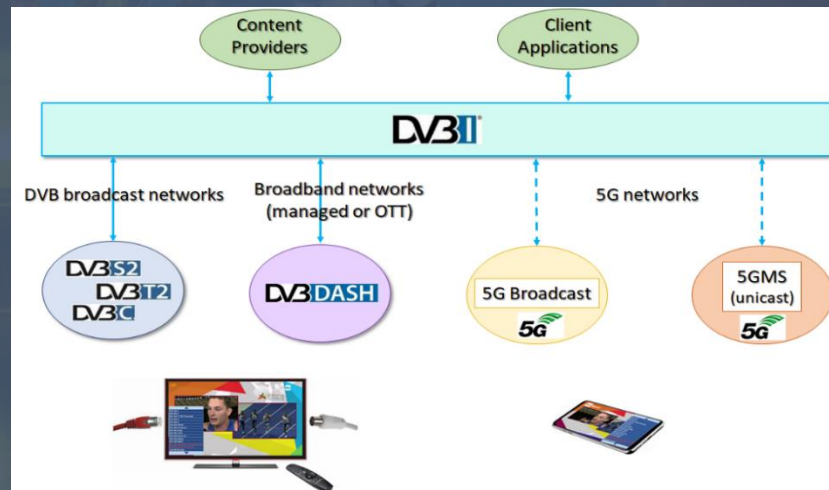
Webinar 2: Multicast for OTT



For a completely seamless switching and, hence, an optimal user experience, a common service layer is needed, able to signal both broadcast and unicast services and to facilitate the synchronization and the stream-switching within the client.

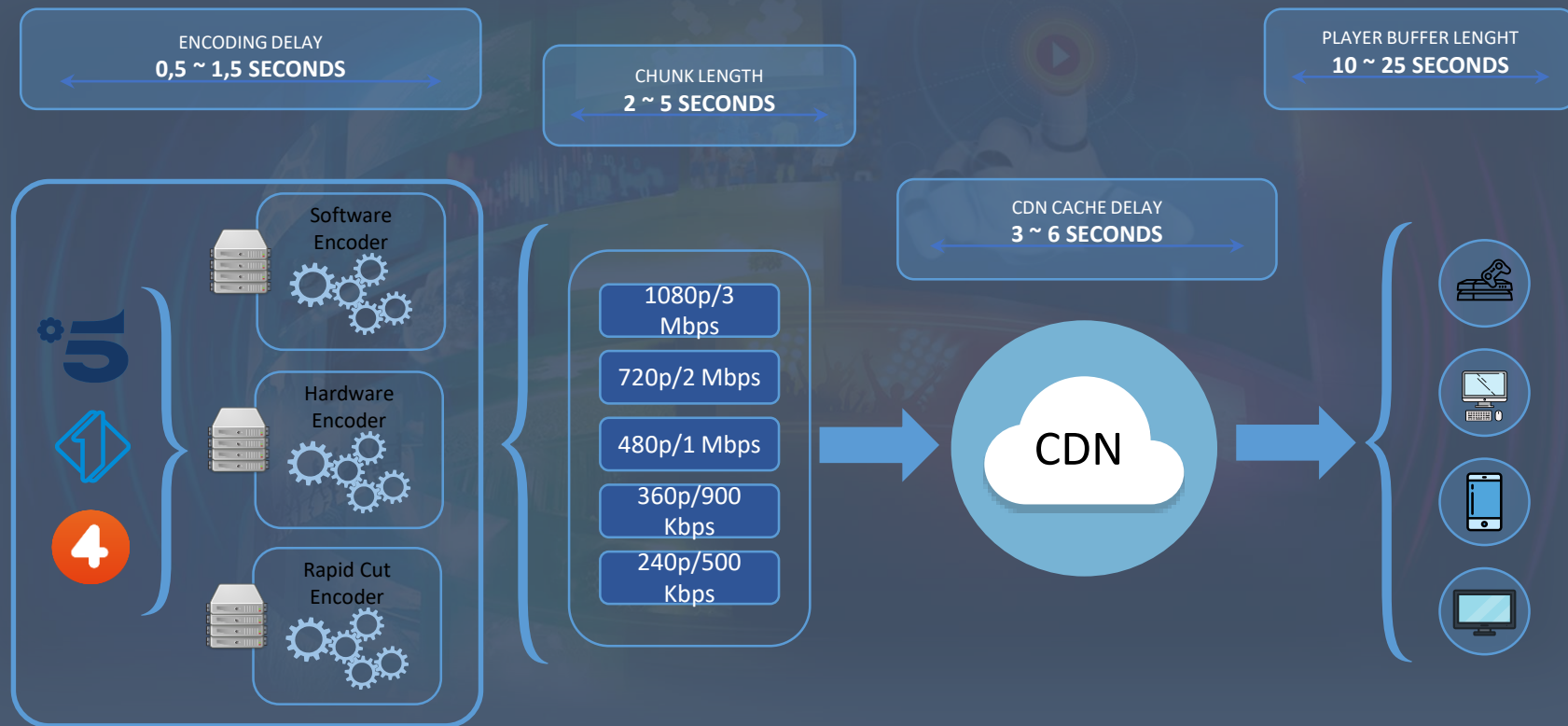
The service layer should allow discovering the supported delivery options and, then, select as a first choice the 5G Broadcast signal (where available) to consume the TV service.

DVB-I supports discovery and delivery of TV services over IP networks with a user experience comparable to the one we are accustomed to on traditional broadcast networks

















DVB-I specification covers the existing DVB ecosystem

Work in progress on a possible extension to include also 5G delivery among the supported delivery options



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Webinar 3: UX

	APPLE TV	CHROMECAST	FIRE TV STICK	LG TV	NOW STICK	SAMSUNG TV	SKY Q	TIM BOX	VODAFONE TV
	✓	✓	✓	✓	✗	✓	✗	✗	✗
	✗	✓	✓	✓	✗	✓	✗	✓	✓
	✗	✓	✓	✓	✓	✓	✗	✓	✓
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Fonte: Giuseppe Salsano

- **Opportunities**

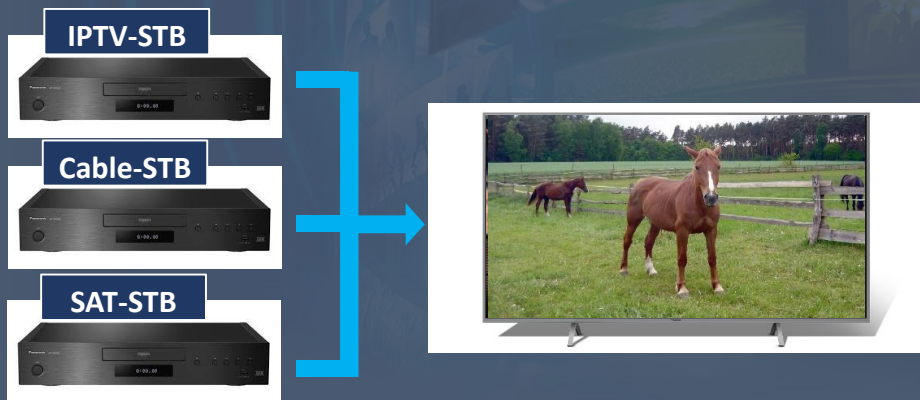
- DVB-I makes it possible to create a standards based OTT TV platform equivalent to DVB-T/S/C for the first time
 - All DVB features supported – linear TV, subtitles and accessibility, HbbTV applications, free and pay, ...
 - IP specific features – VoD, personalised channels, ...
- No need to provide and maintain a dedicated app for each smart TV platform

- **Challenges**

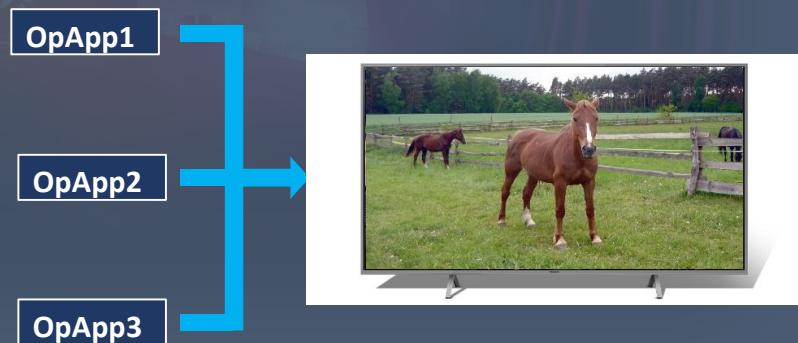
- Who provides Service Lists?
- Two clear possibilities:
 - Individual broadcasters (and TV integrates lists for presentation to the user)
 - Co-ordinated list across all services on a platform

- Operator Applications behave like virtual Set-Top-Boxes
- The standard allows switching as if they were “real” STBs connected to a TV

Physical STBs



Virtual STBs (OpApp's)



Today's devices bring us closer to reality



Stunning HDR displays



Thrilling immersive sound

Audiovisual Media Directive 2018/1808

AVMS vs video-sharing platform rules

Rules on AVMS linear and non-linear services

- General principles and jurisdiction
- Retransmissions
- Authorizations regime
- Respect and protect human dignity
- Protection of minors
- Accessibility for people with disabilities
- Major Events
- Promotion and distribution of European works
- Detailed measure for
 - commercial communications,
 - sponsorship,
 - teleshopping,
 - product placement

Rules on for video-sharing platform

- Some kind of jurisdiction principle
- Protection of minors (auto and co-regulation)
- Protection from contents containing incitement to violence or hatred or criminal offence
- General requirements on commercial communications

Those measures shall be practicable and proportionate, taking into account the size of the video-sharing platform service and the nature of the service that is provided. Those measures shall not lead to any ex-ante control measures or upload-filtering of content

Webinars' recordings and presentations can be found at

<https://www.hdforumitalia.it/webinar2021/>

Thank you!