



Is standardization still valuable
for broadcasting?

HbbTV & DVB:
Developing an IP-based future

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DVB has adopted an Internet-centric approach ...

Major work items include:

- DVB-I
- Targeted Advertising (TA)
- DVB-DASH Profiling and Validation and Verification (V&V)
- Next Generation Video Coding (NGVC)

HbbTV also has
a complementary
TA specification



HbbTV references
DVB-DASH
& helps with V&V

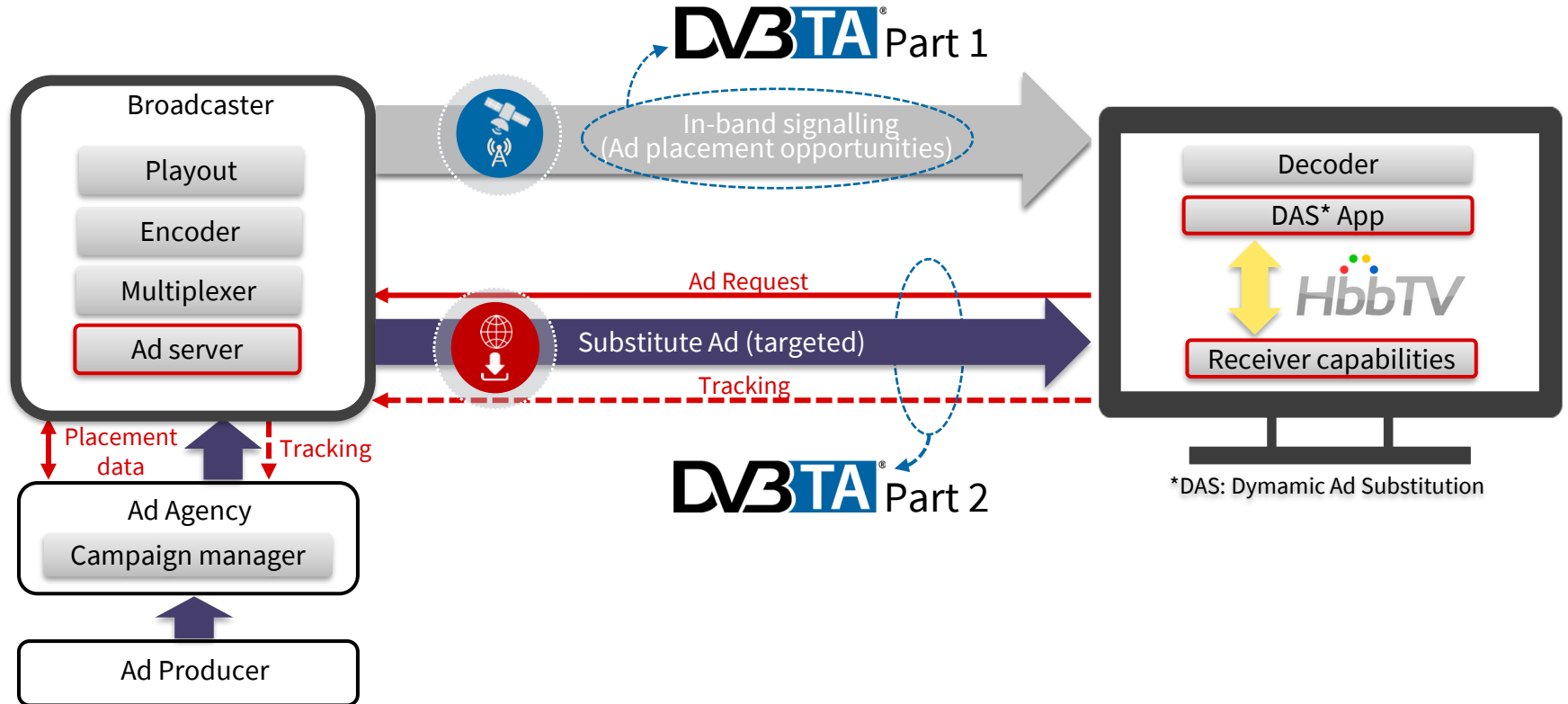


HbbTV uses DVB A/V codecs



..... in partnership with HbbTV

Targeted advertising on TV: enabled by DVB & HbbTV



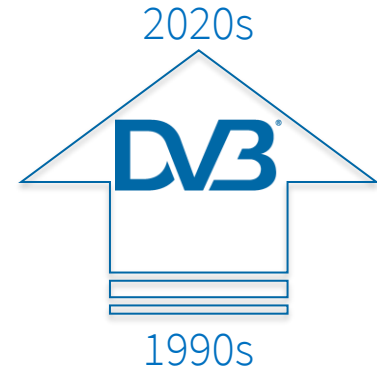
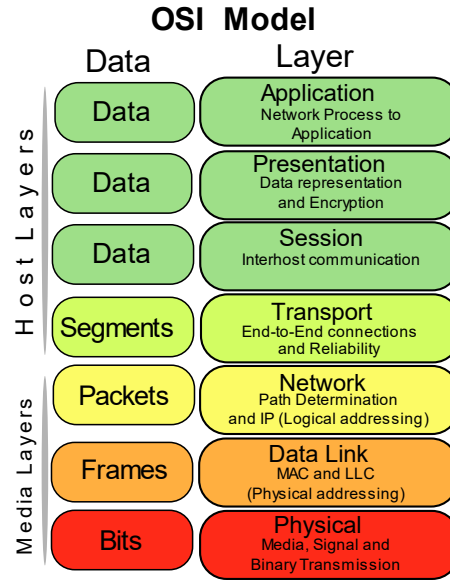
*DAS: Dynamic Ad Substitution

HbbTV is DVB's hybrid TV partner

- MHP was ahead of its time. RIP
- HbbTV resonated with an industry ready for “interactive TV” and with better infrastructure to support it
- Combination of HbbTV and DVB addresses use cases that some claim are only possible “fully IP” systems
- HbbTV and DVB are installed in connected TVs in Europe
- And a rich range of application are widely deployed
- Is there anything wrong?

Standardisation & OSI Model

- Higher OSI layers have shorter life cycles, more flexibility, but heightened need for interoperability aids
- Lower OSI layers are closer to physical layer means longer life cycles, greater need for formal standardization (e.g. regulation)



Source: <https://commons.wikimedia.org/wiki/File:Osi-model-jb.svg>

Becoming an IP-centric body

1. Make sure you have good partners
 - e.g. HbbTV
2. Shorten your life cycles
 - e.g. produce Commercial Requirements faster
3. Are standards your most appropriate tool?
 - e.g. focus efforts on market deployment, not standard/specification production
4. Aids to interoperability
 - e.g. Instill testing into the fabric of solution development
5. Promote yourself
 - e.g. reach out to new stakeholders not familiar with your work and how it can aid industry

Building an IP-based future together

- Many common members between DVB and HbbTV
- DVB has been around for so long that it needs to change to address the challenges of the market shift
- IP-centric organisations don't always focus on standards and DVB doesn't have to either
- The OTT industry is now recognising the value of multi-vendor, interoperable, standardised solutions
- DVB and HbbTV have a lot of work to do together

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DVB is an industry-led consortium of the world's leading media & technology companies designing open technical specifications for digital media delivery.

