Making a case for DVB-MABR

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Panelists

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Agenda

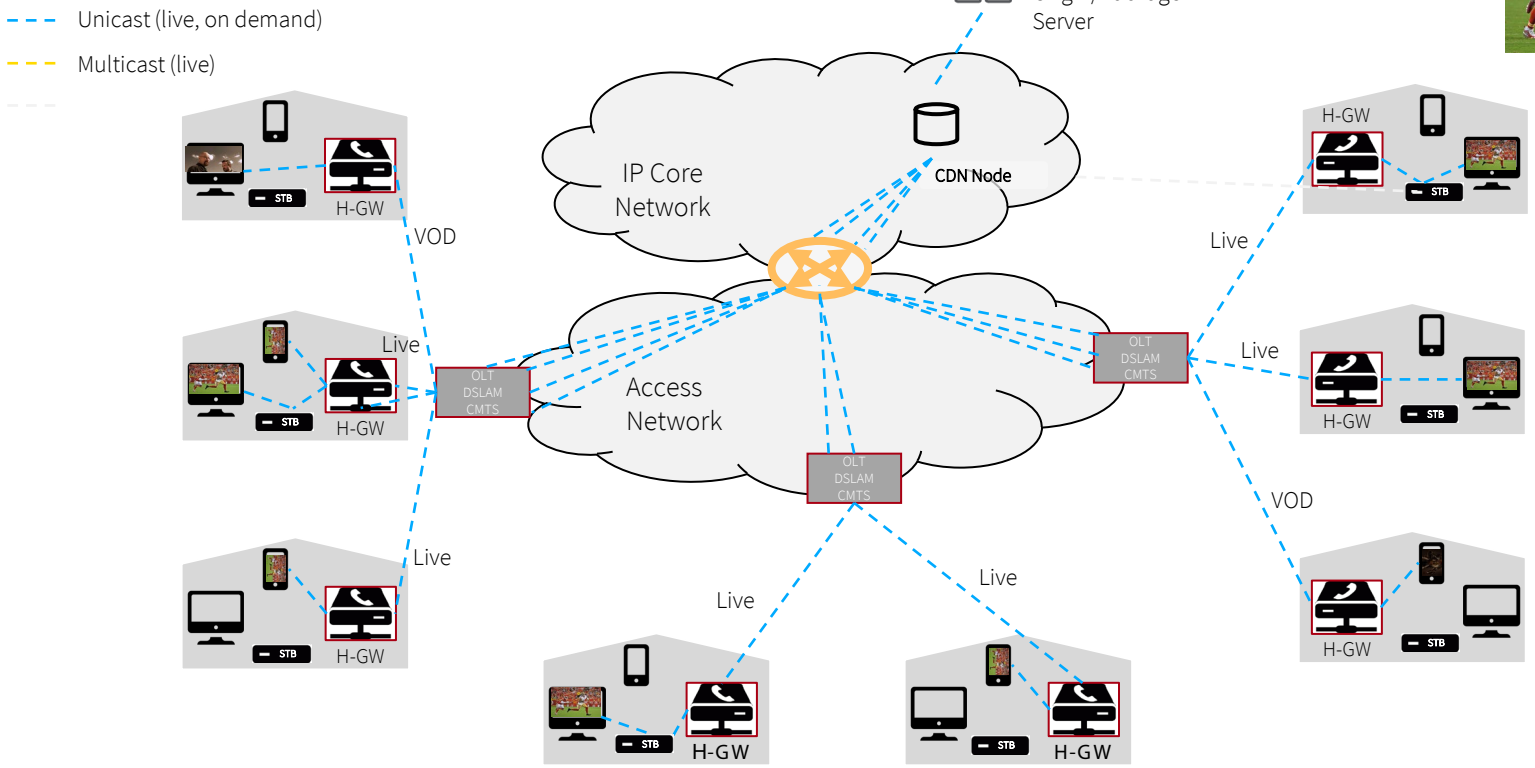
- What is MABR ?
- Business cases :

OTT over Satellite Williams Tovar	Next Gen IPTV Julien Lemotheux
Scaling ABR Delivery Xavier Leclercq	CDN Backhauling Williams Tovar

- MABR at DVB

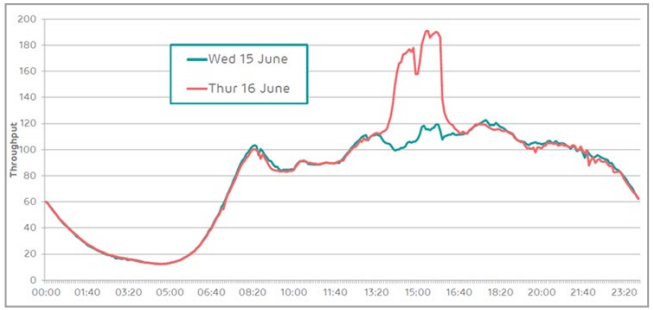
What is MABR ?

Video Streaming: Unicast ABR

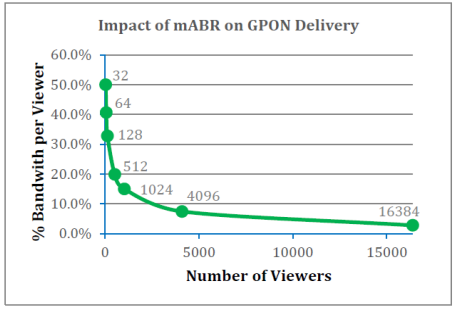


Motivations

Multicast versus Unicast



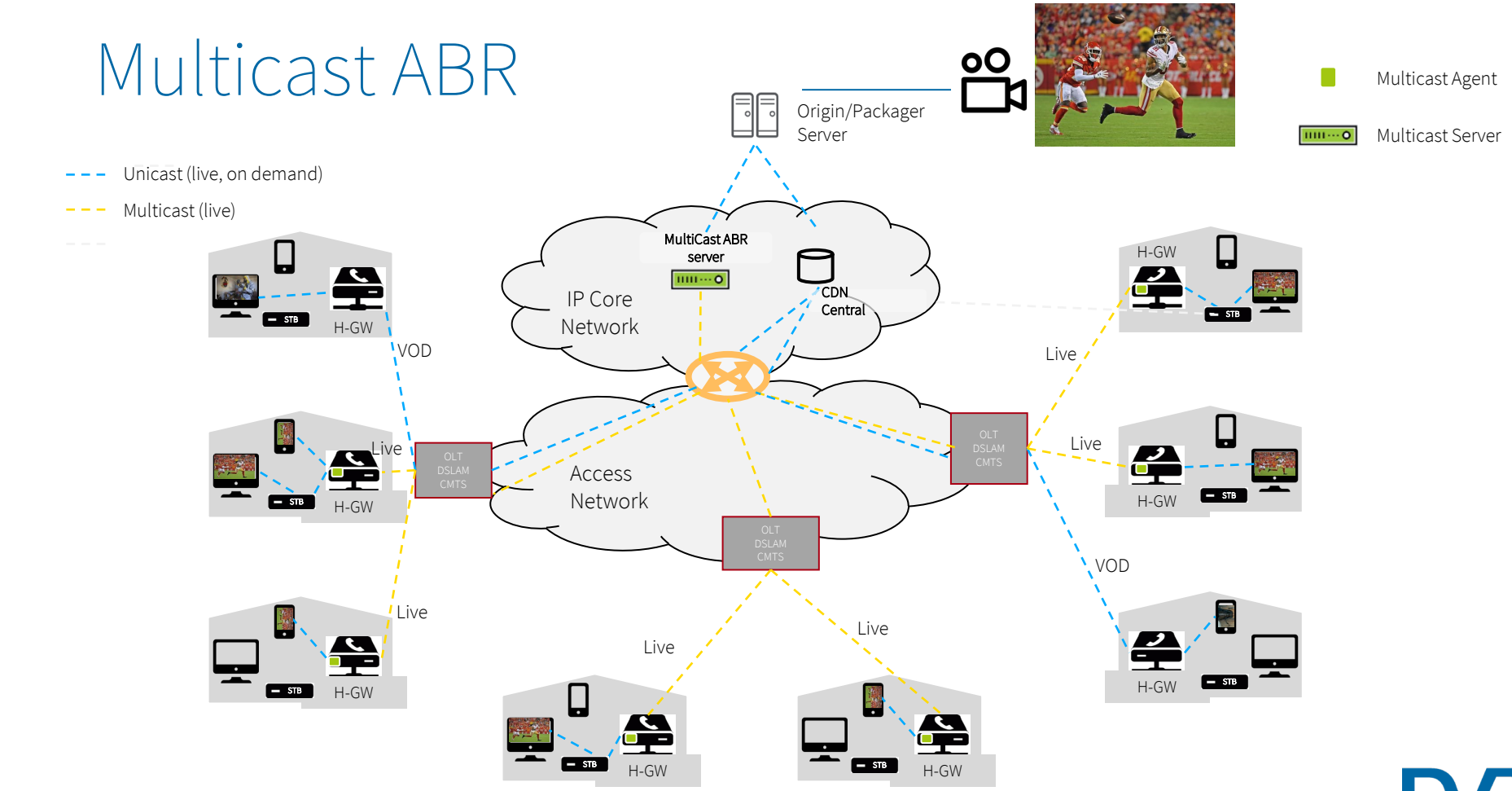
Source: British Telecom
Traffic levels on a UK mobile network on two consecutive days showing the bandwidth consumption peak on the second day when England played Wales in the Euro 2016 tournament.



Source: Streaming Video Alliance
"The Viability of Multicast ABR in Future Streaming Architectures" -April 2019

ABR content to all screens

Multicast ABR

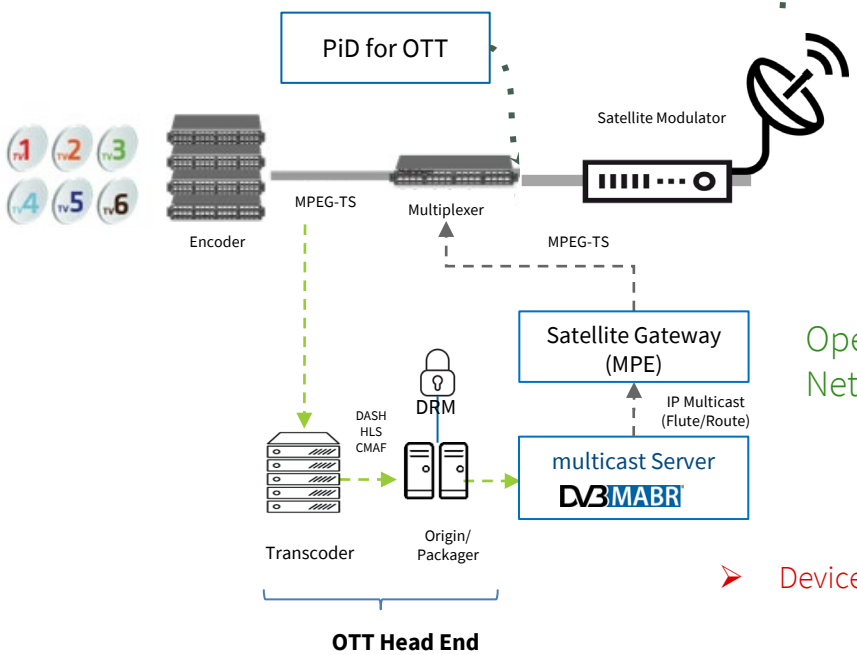


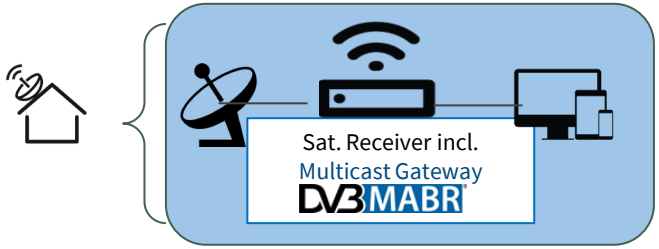
Business cases

OTT over Satellite

Today:

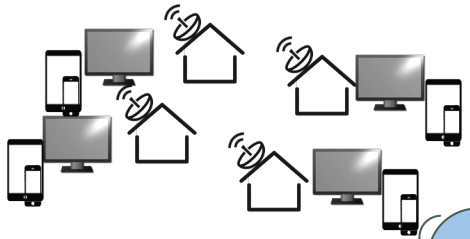
- Direct To Home for TV Sets
- 70% of Consumers Watch TV/Video from Smartphones



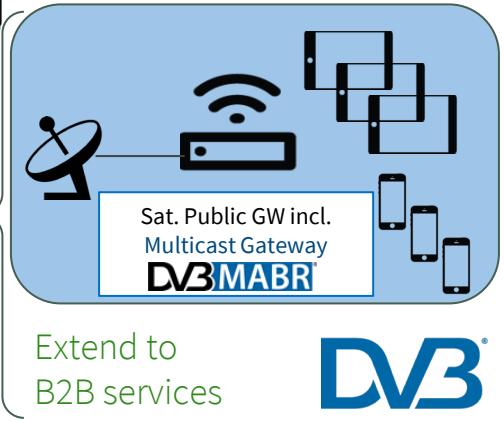


Extend to Multiscreen

Reduced Cost vs Broadband
Deliver OTT in places with no Broadband



Open and Future Proof Networks



Challenges :

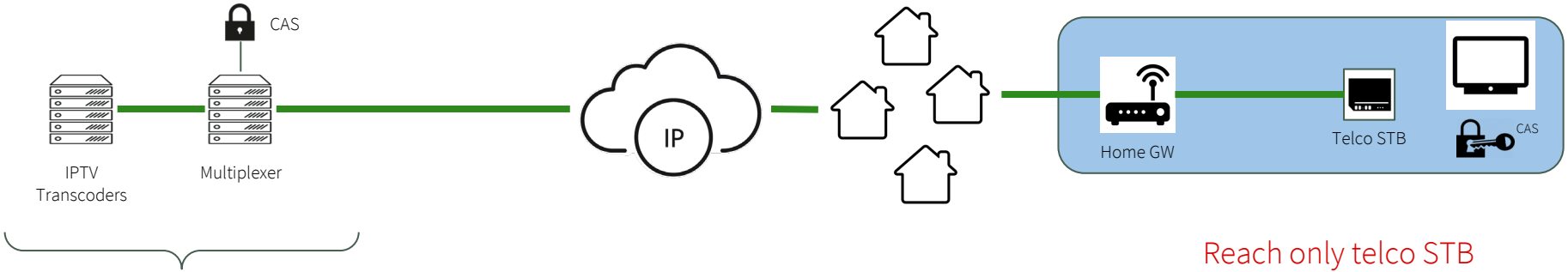
- Devices Integration (legacy vs OTT)

Extend to B2B services

Next gen IPTV

Unicast
Multicast

Innovation implies expensive and time consuming custom developments



Specific Head-end

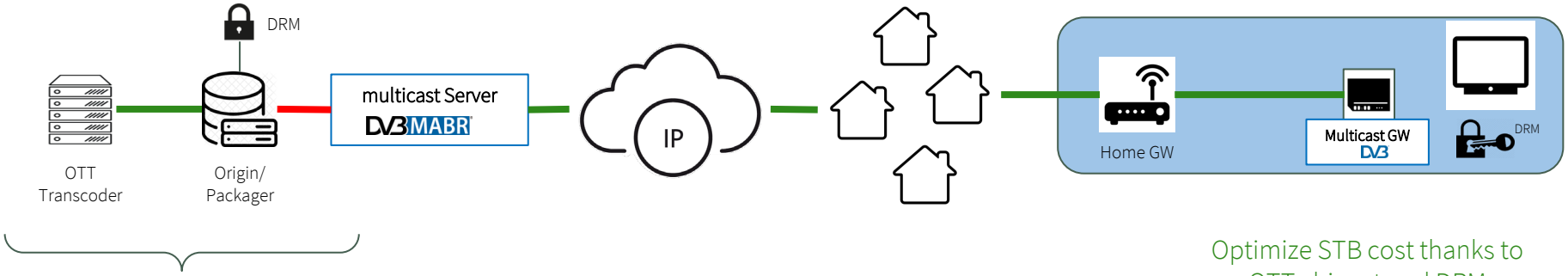
Reach only telco STB
With IPTV chipset and CAS

IPTV

Next gen IPTV

Unicast
Multicast

Take advantages of the OTT and IPTV ecosystems
(scalability, latency, innovation, integration with non live)



One head-end, one service platform for all devices

Optimize STB cost thanks to OTT chipset and DRM

DVB-MABR
with Multicast GW in STB

Challenges :

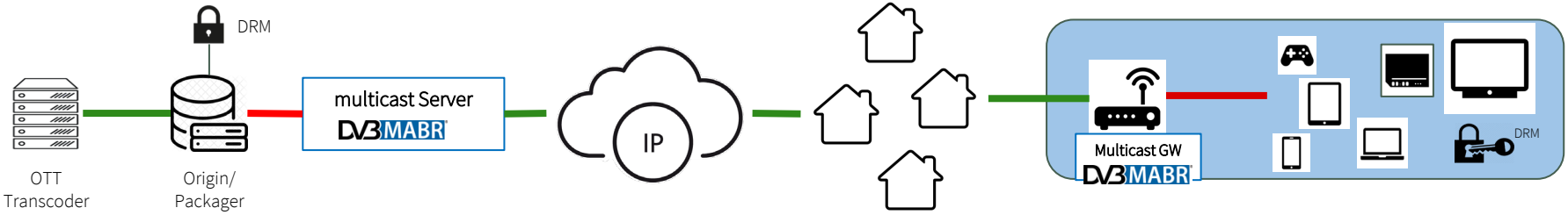
- Compatibility with deployed devices (integration in STB, multicast over wifi on the Home gateway…) and our suppliers
- DRM instead of CAS (accountability, parental control)
- Service platform sizing (more devices, DRM licenses delivery, delivery of information provided in IPTV streams…)

Next gen IPTV

Unicast
Multicast

Improve Quality of Experience on OTT devices thanks to the managed network

Allow multicast delivery of Live streams for 3rd party app



Reach all ABR devices

Allow to reduce the delivery cost of live streams on high audience channels for OTT devices

Allow to reduce environmental impact of Live delivery on OTT devices

DVB-MABR
with Multicast GW in Home Gateway

Challenges :

- Integration in the Home Gateway
- HTTPs certificate to be hosted in Home Gateway
- Targeted ad delivery to be optimized

Scaling ABR delivery

Adaptive Bit Rate (ABR) streaming is gaining ground

All screens: STB, tablets, Smartphones, TV

Content is mobile, **available everywhere**

Delinearized; Start-Over, Timeshift, nPVR, VOD

Designed for **personalized** content

Concentrate **all the innovations** today

ABR is the natural future of Video Delivery

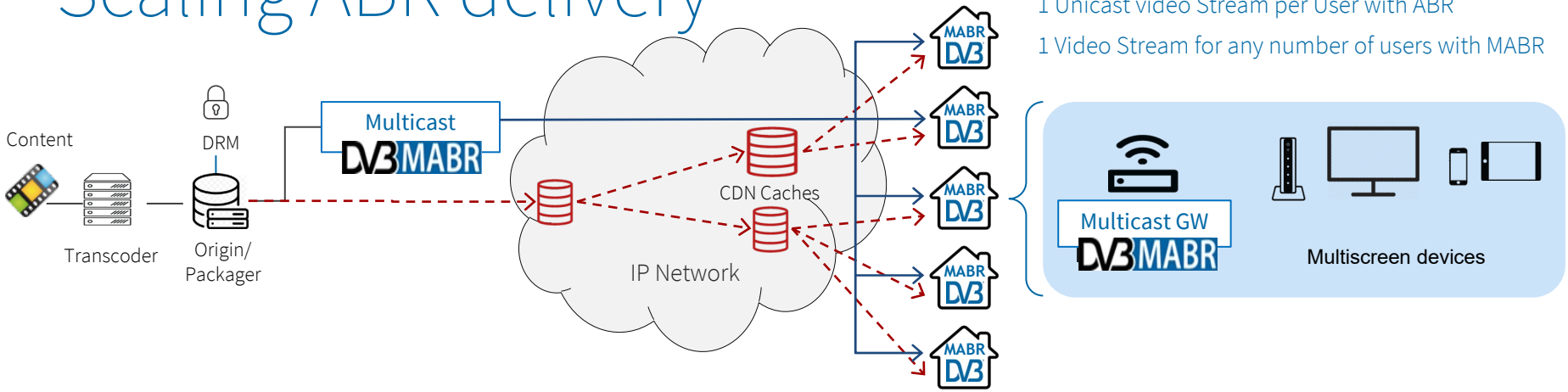
But ABR still doesn't yet replace broadcast for Live TV

Two problems to solve:

1. **Unicast Scalability** issue and demand still growing
2. **Quality of Experience** is not as good as in Broadcast

Problems coming from unicast distribution, not from ABR format itself

Scaling ABR delivery



1 Unicast video Stream per User with ABR

1 Video Stream for any number of users with MABR

Why

- Network Operators are introducing services **across all screens** like Liberty Global, or specifically on **connected TV** like Bouygues Telecom
- Leads to **high peaks of demand** for Live ABR content served by the CDN
- On-net **CDN capacity is usually licensed on peak bandwidth**, MABR avoids peaks due to live demands
- MABR is a more efficient approach with a **reduced carbon footprint**
- With multicast, **higher bit-rates can be delivered** and **latency is reduced**

Challenges

- Integration of the Multicast Gateway in the Home Gateway

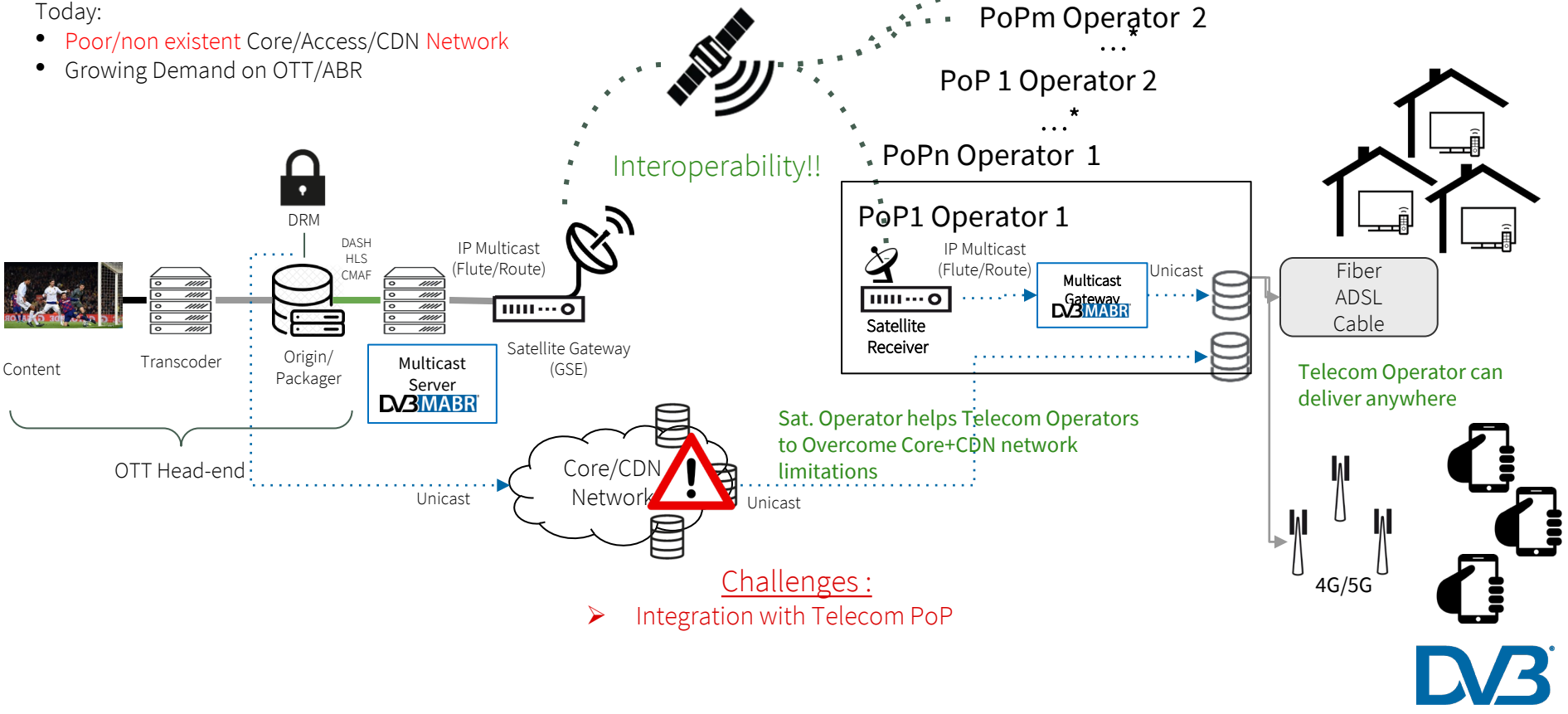
Deployments

- Some network operators have built business cases based on savings on **networks and CDN licenses**.
- **Customers** on Cable, Fibre, SAT **consume MABR streams today**

CDN Backhauling/Satellite

Today:

- Poor/non existent Core/Access/CDN Network
- Growing Demand on OTT/ABR



Challenges :

- Integration with Telecom PoP

CDN Backhauling For 5G networks

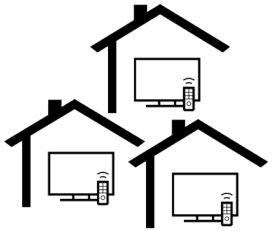
Optimize/Scale Core/CDN network

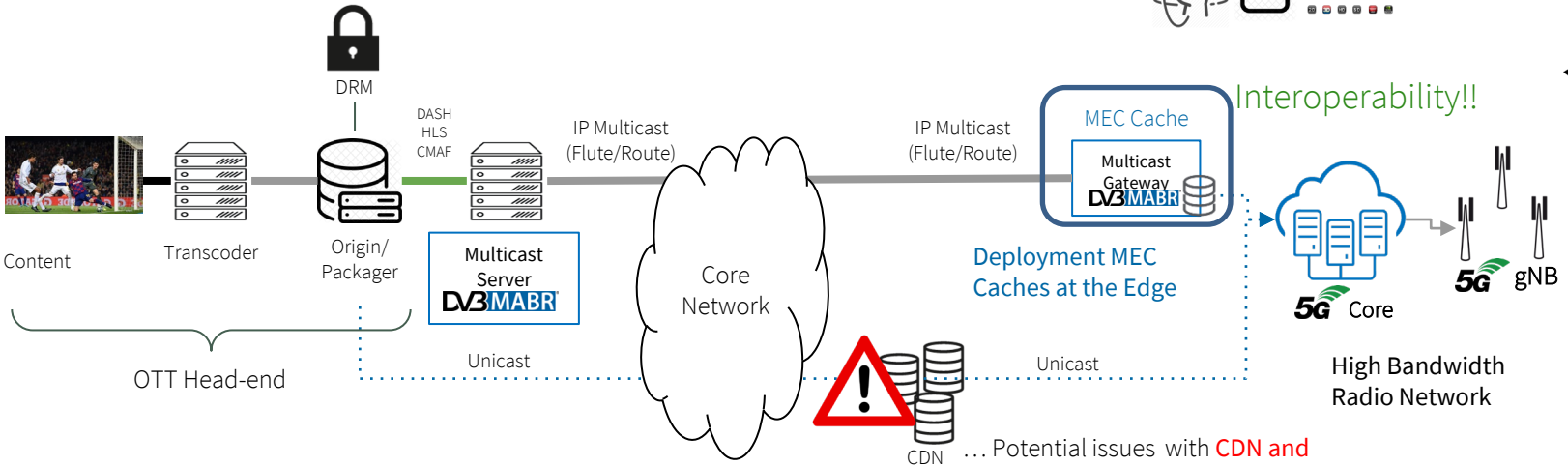
Delivers the promise of 5G:

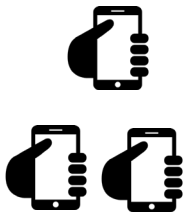
- Low latency &
- Higher bit rates for demanding applications

5G paves the way for bandwidth hungry Applications

Fixed Wireless Access Subs







Mobile Access Subs

Challenges :

- Potentially important number of MEC caches deployment

MABR at DVB

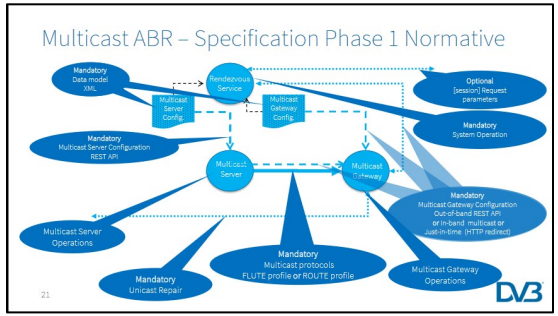
MABR at DVB

Phase I:

- March 2018: First version of the DVB-MABR Bluebook A176, including the reference architecture
- March 2020: Latest version of DVB-MABR Bluebook A176
- Publication as an ETSI Standard expected soon

Access to the specification
https://dvb.org/?standard=adaptive-media-streaming-over-ip-multicast

Webinar: Multicast ABR opens the door to a new DVB era
https://dvb.org/webinar/webinar-multicast-abr-from-dvb/



MABR at DVB

Phase II:

- Since May 2020, DVB is discussing enhancements, new features and new commercial requirements.

- Many topics are cross-cutting with other DVB specifications:
  - Target advertisement
  - *Native IP* delivery, service discovery & metadata

Q / A

Thank you !