

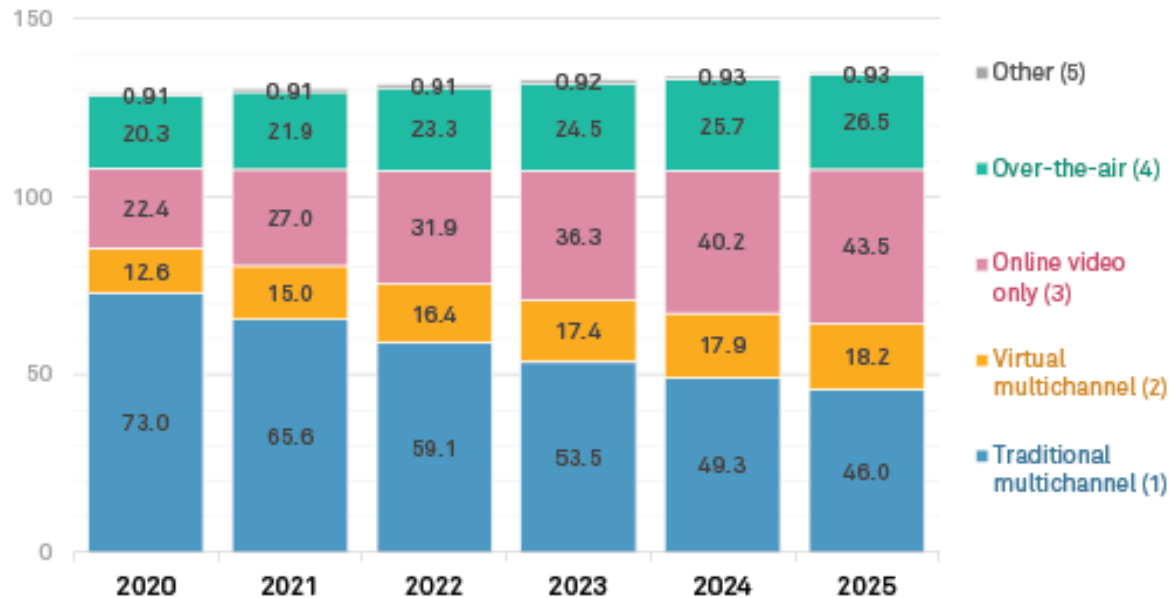
# CableLabs<sup>®</sup>

## *Future of cable television delivery in Europe*

**Curtis Knittle, VP Wired Technologies**  
November 19, 2021

# Fundamental Change to Video Business CableLabs®

US household segmentation, 2020-2025 (M)



As of May 2021.

(1) Traditional multichannel household count excludes DBS overlap created by households taking multiple multichannel subscriptions. Includes cable, DBS and telco multichannel platforms. Excludes commercial subscribers and virtual multichannel subscribers. Includes households that also access online video (formerly OTT).

(2) Virtual multichannel (also called VSP, vMVPDs or virtual PayTV) characterized by unmanaged broadband delivery of aggregated live, linear networks and on-demand content similar to a traditional multichannel offering for a monthly subscription. Excludes overlap created by households taking dual virtual and traditional multichannel subscriptions, which is allocated to traditional multichannel. Examples include SlingTV, Hulu + Live TV, YouTube TV and AT&TV.

(3) Online video-only Households (OTT) are households that rely on unmanaged broadband delivery to view television shows or movies in lieu of a traditional or virtual multichannel subscription. Figure does not include subscribers to virtual multichannel providers such as SlingTV, Hulu + Live TV, YouTube TV and AT&TV. Figure does not include households with an over-the-air antenna.

(4) Households that receive broadcast network signals over the air using an antenna and do not subscribe to a traditional or virtual multichannel service. Includes households with an antenna that also access online video.

(5) Includes non TV households and TV households without a video input such as a DVD-only entity.

Sources: Industry data; Kagan estimates

Kagan, a media research group within the TMT offering of S&P Global Market Intelligence.

© 2021 S&P Global Market Intelligence. All rights reserved.

- Traditional multi-channel video delivery will become a minority compared to virtual and online delivery formats
- Profound impact to content creation / distribution ecosystem
- With the exception of OTA, all other segments are migrating to IP distribution

## Result:

- On the service side, cable operators are adjusting to support delivery-agnostic content aggregation and OTT distribution

- Support traditional cable delivery

- Host apps like Netflix, Youtube, Prime, etc.

- On the network side, cable operators will evolve network capacity to support future broadband subscriber requirements

# Capacity Roadmap

CableLabs®

~1G

**DOCSIS 3.0**

DS: 1G, US: 100M

~5G

**DOCSIS 3.1**

DS: 5G, US: 1-2G

~10G

**DOCSIS 4.0**

DS: 10G, US: 6G

~25G+

**Next-Gen DOCSIS**

**DOCSIS**

**PON**

**CPON**

**2.5G/1G PON**

DS: 2.5G/1G  
US: 1.25G/1G

**10G PON**

DS: 10G  
US: 10G

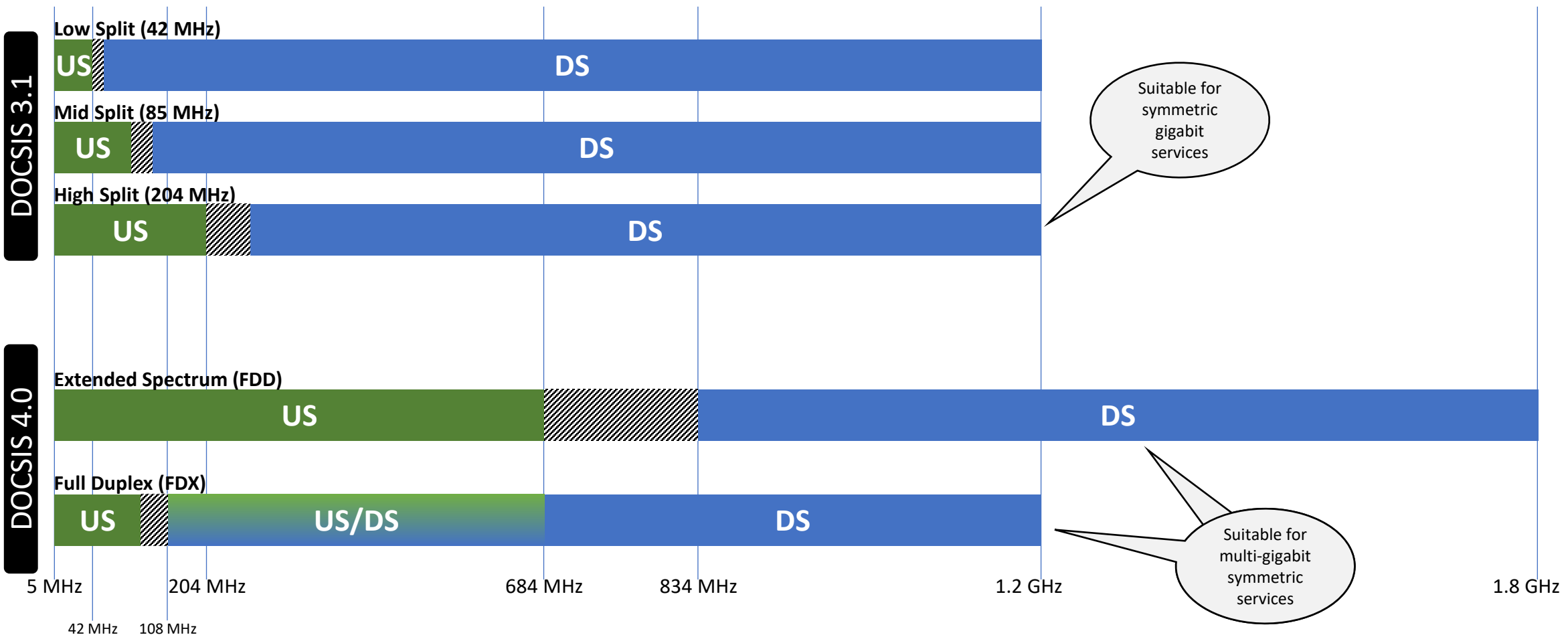
**25G/50G PON**

DS: 50G/25G  
US: 50G/25G

DS: 100G (75G/50G/25G)  
US: 100G (75G/50G/25G)

Today

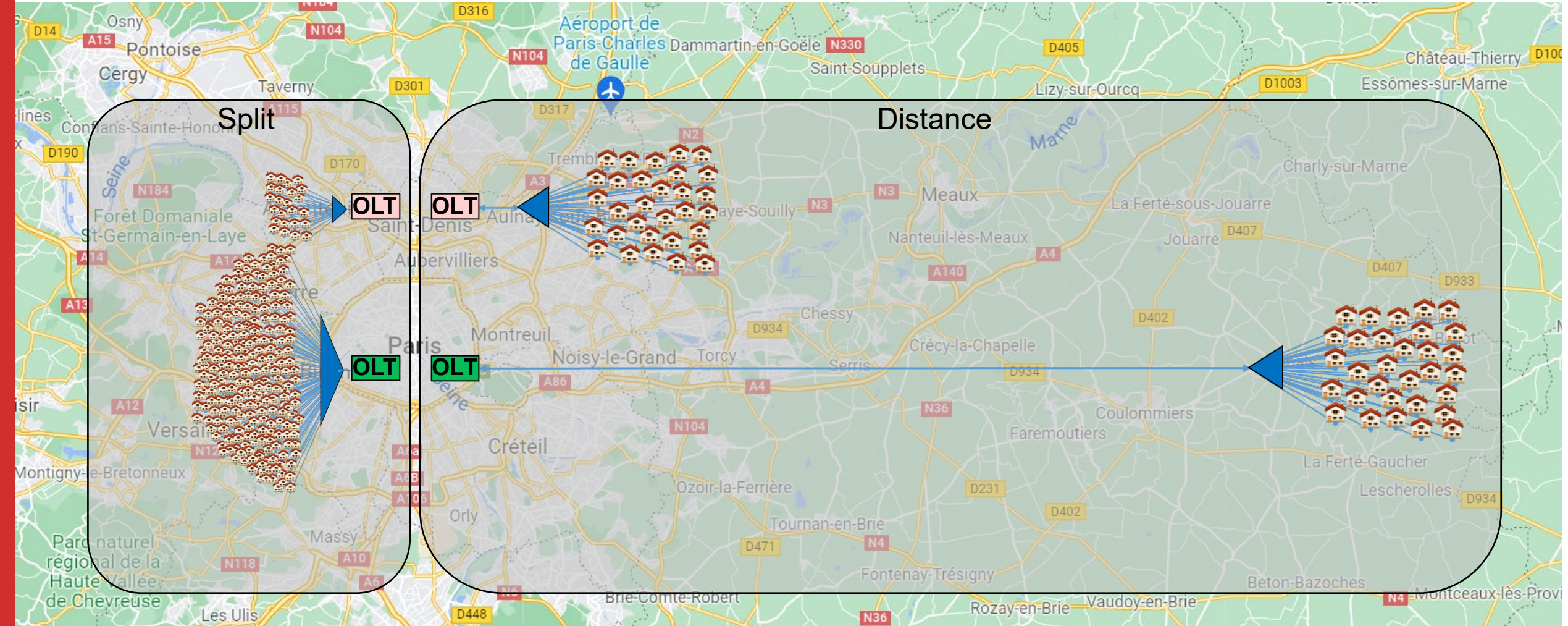
# DOCSIS 4.0: More Spectrum, More Capacity



# Coherent PON (CPON):

CableLabs®

More Capacity (100G), Longer Distance (x4), Higher Density (x16)



# CableLabs®

A nighttime photograph of a city skyline. In the foreground, a modern walkway with a glass railing runs along a body of water. The water reflects the lights of the buildings and the bridge. In the middle ground, a prominent cable-stayed bridge with a tall central pylon and numerous stay cables is illuminated. The background features several skyscrapers with lit windows, and a tall, thin tower structure is visible on the right side of the skyline. The sky is dark, and the overall scene is lit up by city lights.