

# Comment #77

## Review / Proposed Response

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IEEE 802.3 NEW ETHERNET APPLICATIONS AD HOC  
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# Comment #77

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I don't see how the curves for 800GbE and 1.6GbE were generated. I would expect a straight line from the same point where 400 GbE was standardized.

Proposed Remedy –

Please provide a better explanation for the generation of these curves.

# Text - Generation of Curve (D1.1)

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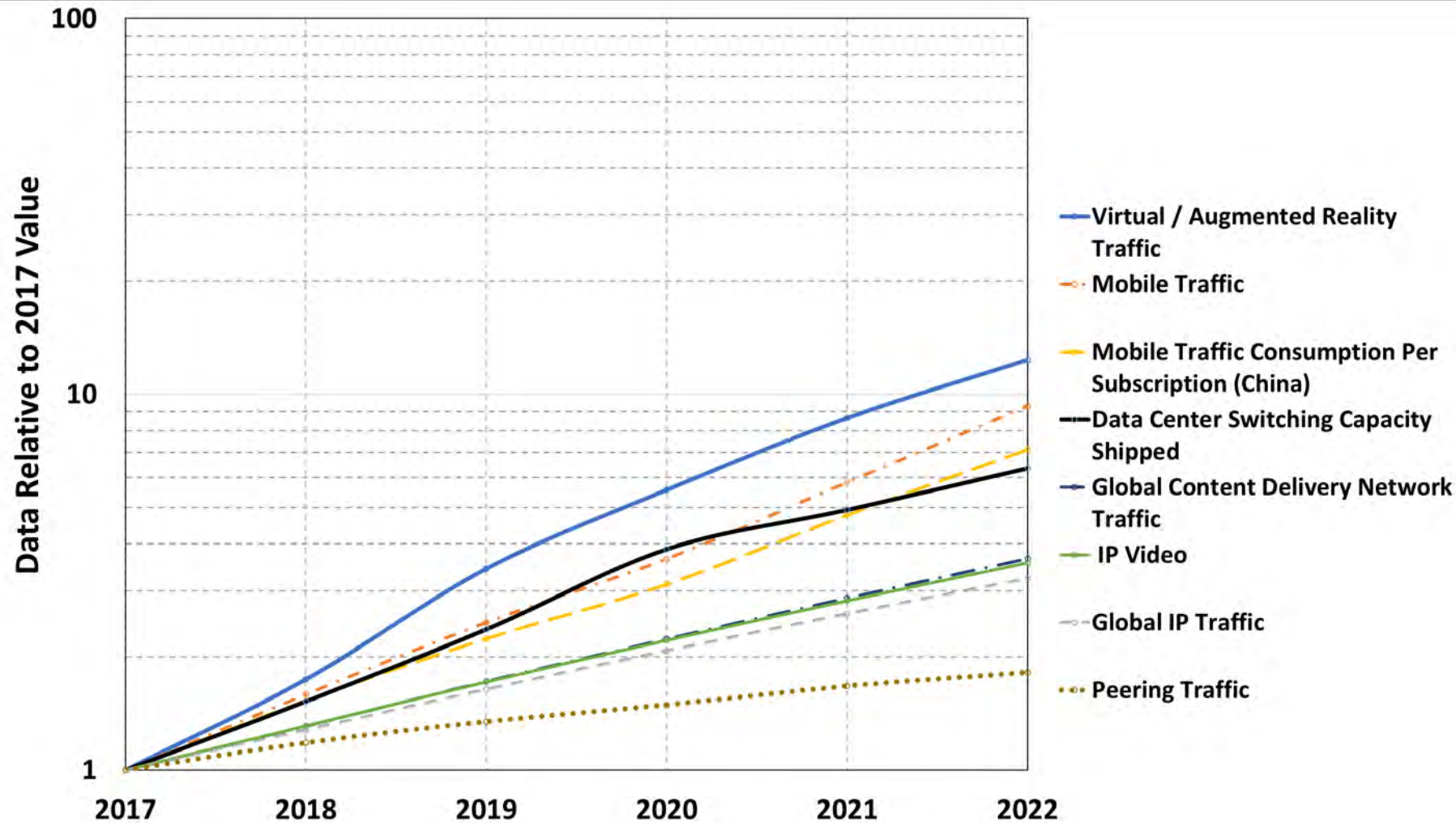
Subclause 4.6, Page 57,

Given the anticipated publication of this report in 2020, it was felt that a forecast 2 years beyond the publication date was insufficient, and a 5-year forecast would be more beneficial.

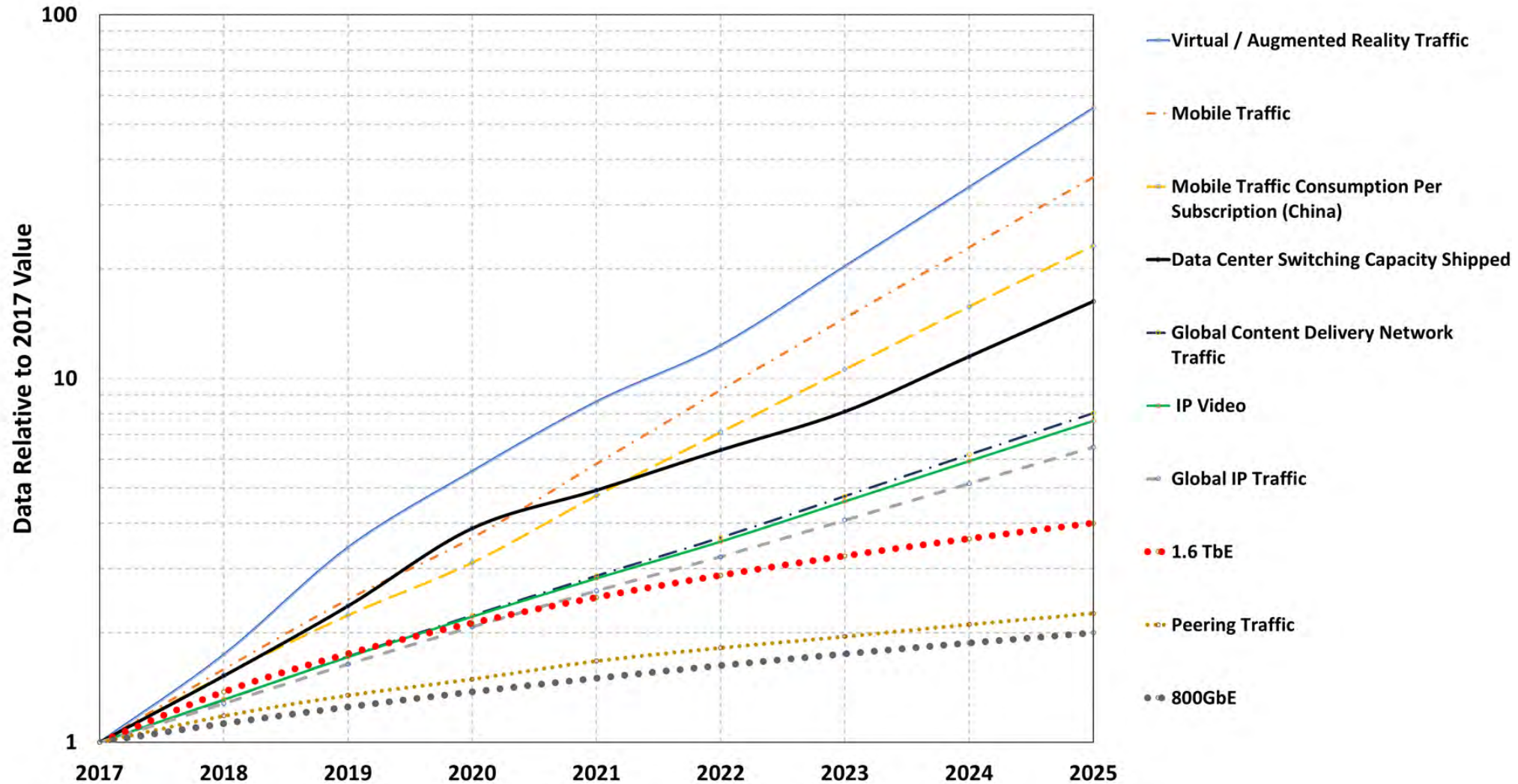
(Note - The forecast for "Global IP Traffic", "IP Video", "Virtual/ Augmented Reality Traffic", and "Global Content Delivery Network Traffic" were extended to 2023 - 2025 based on the reported CAGR for each parameter. The forecast for "Peering Traffic" was extended to 2023-2025 based on the an exponential fit of provided data. The forecast for "Data Center Switching Capacity Shipped" was extended for 2024-2025, based on the calculated CAGR of the provided data for 2017-2023)

Furthermore, to compare the various growth rates against Ethernet, two curves were generated, based on the assumption that it would take 5 years to complete the next speed project, and that rate would be either 800 Gb/s (Ethernet 2×) or 1.6 Tb/s (Ethernet 4×).

# Background - Figure 51 (D1.1)



# Background – Figure 52 (D1.1)



# Updated – Generation of Curves

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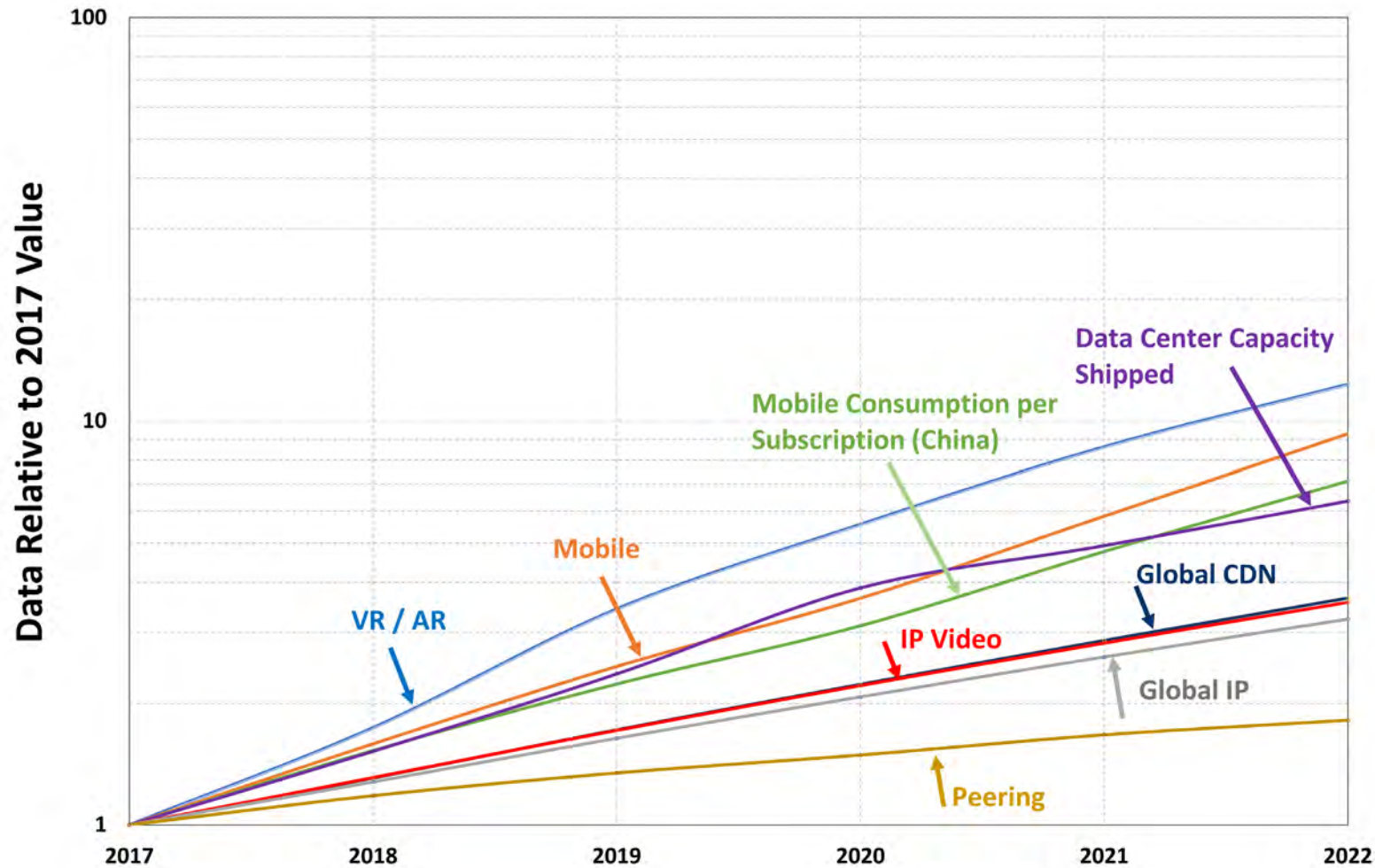
Proposal: Replace noted text from Slide #3 with the following.

Given the anticipated publication of this report in 2020, it was felt that a forecast 2 years beyond the publication date was insufficient, and a 5-year forecast would be more beneficial. To create the series of forecast curves shown in Figure 52, the following steps were taken:

- The forecast for "Global IP Traffic", "IP Video", "Virtual/ Augmented Reality Traffic", and "Global Content Delivery Network Traffic" were extended to 2023 - 2025 based on the reported CAGR for each parameter.
- The forecast for "Peering Traffic" was extended to 2023-2025 based on an exponential fit of provided data.
- The forecast for "Data Center Switching Capacity Shipped" was extended for 2024-2025, based on the calculated CAGR of the provided data for 2017-2023)

Two possible futures for Ethernet beyond 400 Gb/s are commonly discussed: **800 Gb/s Ethernet and 1.6 Tb/s Ethernet.** Based on prior experience, a project to develop either data rate would take 5 years and would complete in 2025 if started in 2020. Normalizing 400 Gb/s to the year it was standardized (2017), 800 Gb/s is noted as a 2x increase over 400 Gb/s in 2025, and 1.6 Tb/s is noted as a 4x increase over 400 Gb/s in 2025. To enable a comparison to the noted forecast curves, dashed lines were added between the introduction of 400 Gb/s in 2017 and each new data rate in 2025.

# Proposed Update – Figure 51



# Proposed Update – Figure 52

