

Autonomous E2E-Optimized Network Management Technologies

Su.B.7 – Special – F5G Optical Network Technologies towards 2025 and 2030 – What, Why and How?

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First Question

What is from 1984 and has seven layers?





L7 - APPLICATION L6 - PRESENTATION L5 - SESSION L4 - TRANSPORT L3 - NETWORK L2 - DATA LINK

L1 - PHYSICAL

# Second Question

What is from 2022 and defines the F5G **E2E** management and control architecture as a subset of the overall F5G MCA Plane?



# ETSI GS F5G 006 V1.1.1 (2022-09)



Fifth Generation Fixed Network (F5G); End-to-End Management and Control; Release #1



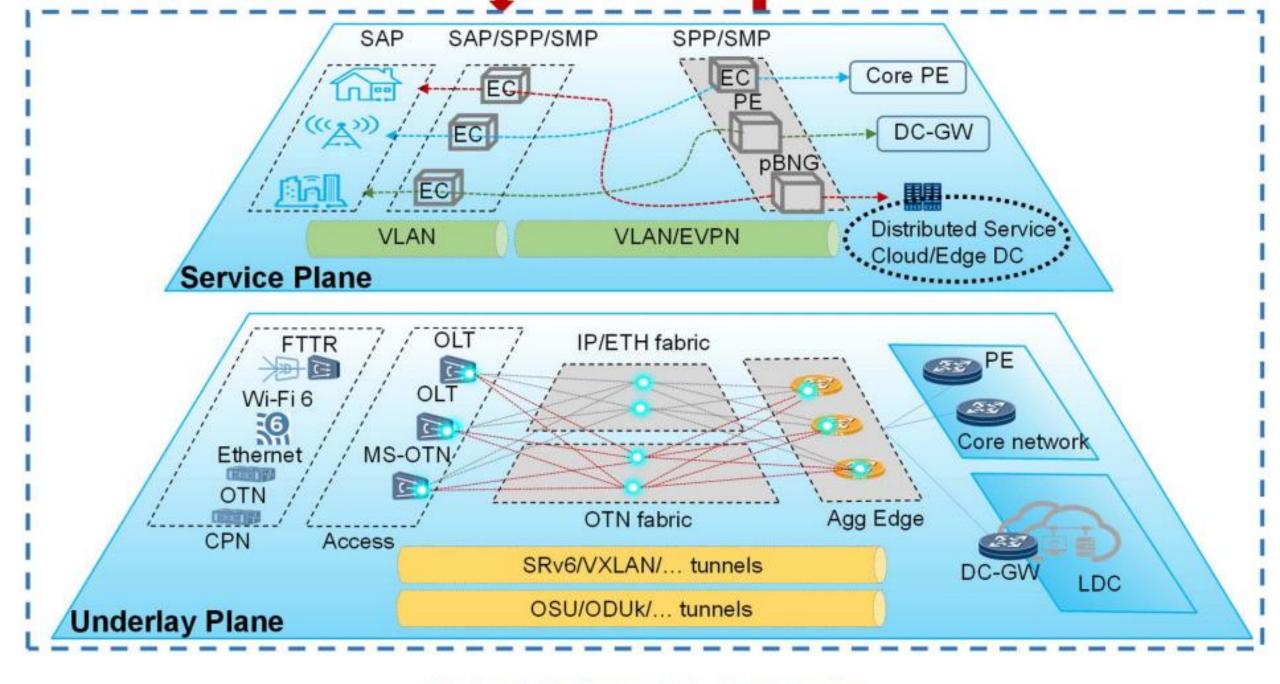


Figure 1: F5G network architecture

# The green economy



Climate change

Geopolitical events

#### **RESULT**

Increased focus on energy per bit



# The rise of coherent pluggables



Shannon's limit is looming

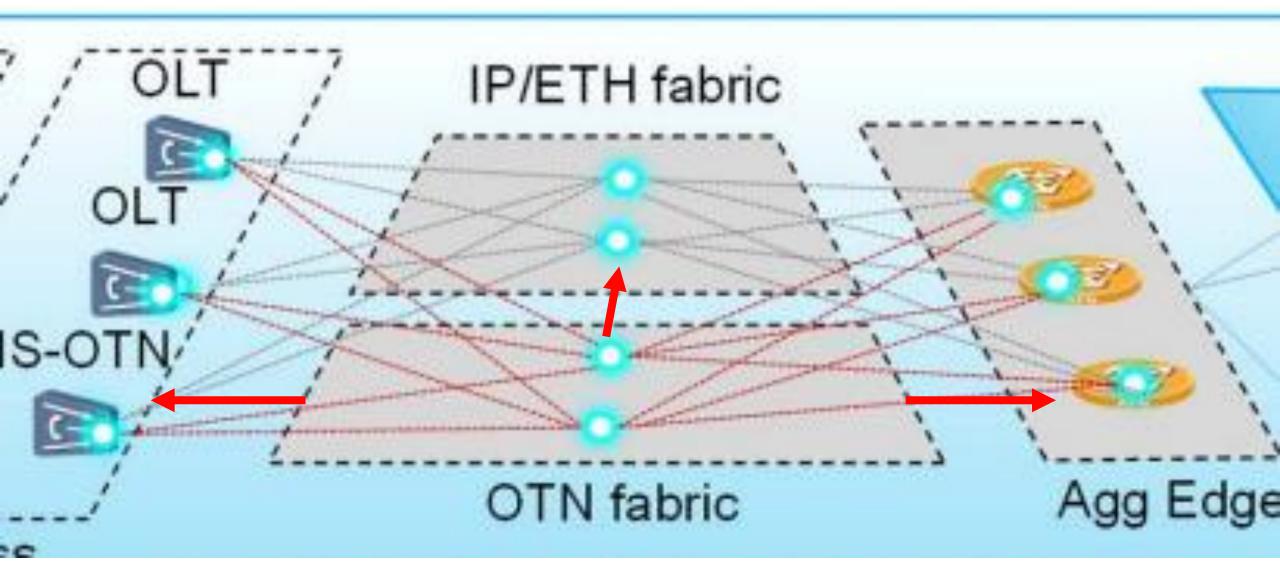
Inflection point: optimize for space & power

#### **RESULT**

Big impact on hardware architectures



## Architecture Needs to Adapt to Hardware Implementation

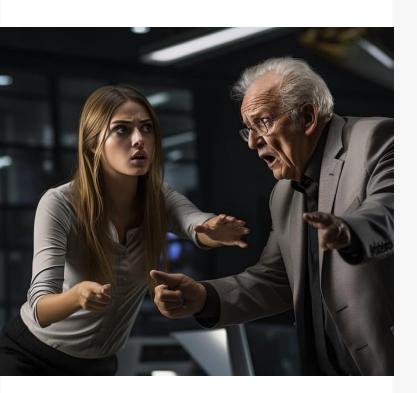




# Workforce demographics

Telecom boom in the 1990s

Supplier consolidation in the 2000s

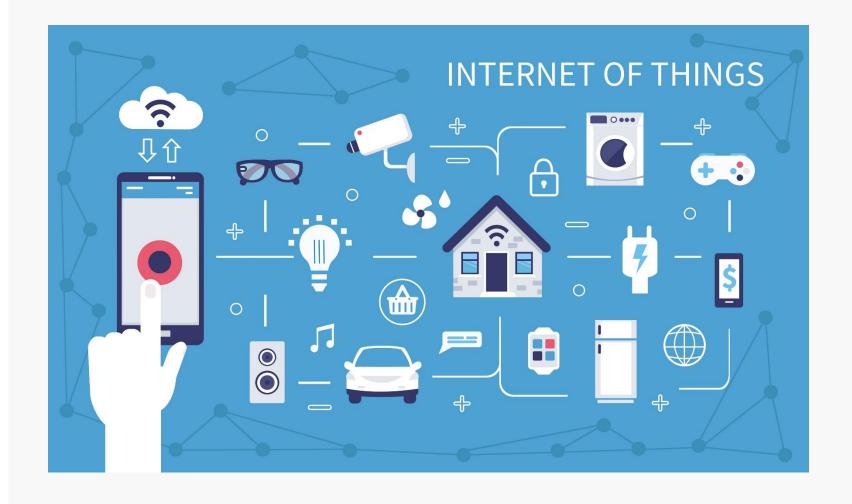


#### **RESULT**

Opportunity / challenge as veterans will start retiring



# Taking Cues from Adjacent Markets II



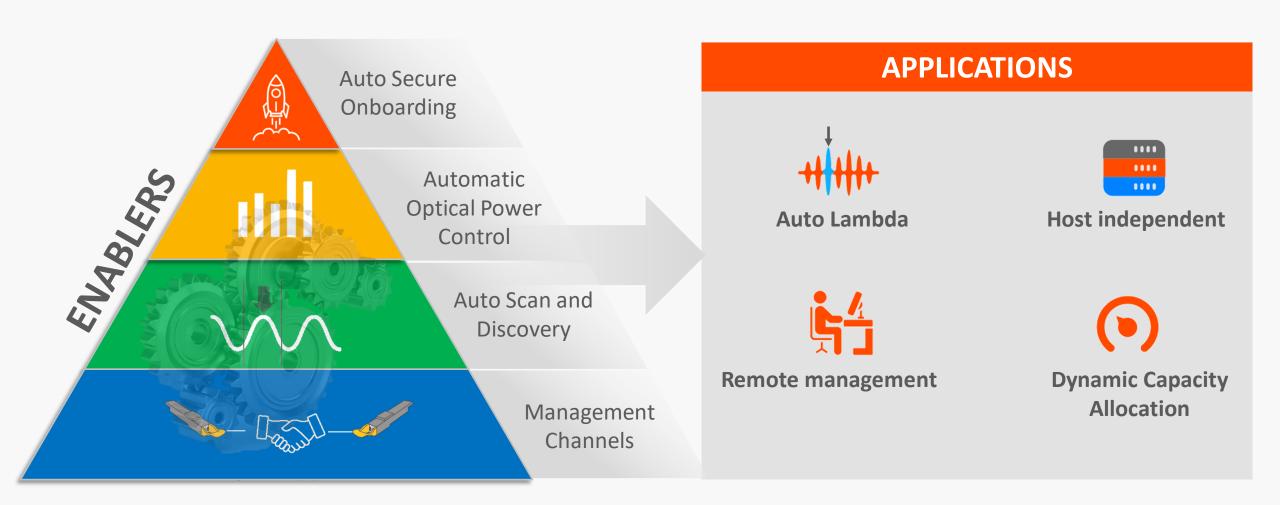


# Taking Cues from Adjacent Markets I





## Example: Infinera Pluggables with Zero-Touch Provisioning





### Wrap-up



- Leverage new software tools
  - Attractive to new employees
  - Improves productivity
- Take inspiration from adjacent fields
  - Solutions may already be at hand



# **Thank You**

