

Anand Ram

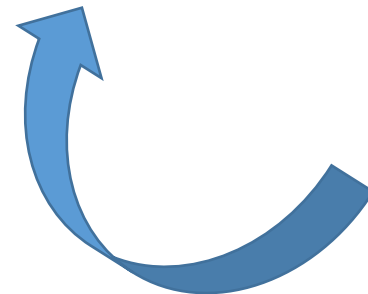
A close-up, dark-toned photograph of an owl's face, showing its large, yellowish-green eye and detailed feathers. The owl is looking towards the right side of the frame.

Clocking the Telco Cloud
The Telecoms Network in Data Centers

anand.ram@calnexsol.com

Clocking the Cloud

- We previously presented ‘Clocking the Cloud’
 - The need for precision timing to enhance data center features and efficiency
- So what is the ‘Telco Cloud’?
 - Early days – Disaggregation of Hardware & Software
 - We’ve covered timing challenges in Disaggregated systems previously
 - Building momentum – SDN, Containers, Microservices, Automation, Orchestration, ...
 - May or may not have considerations and impact on/by timing
 - Initial Deployments – Mobile Network Equipment & Functions in the Cloud
 - Starting with the Mobile Core then Transport, Switching and Radio functions

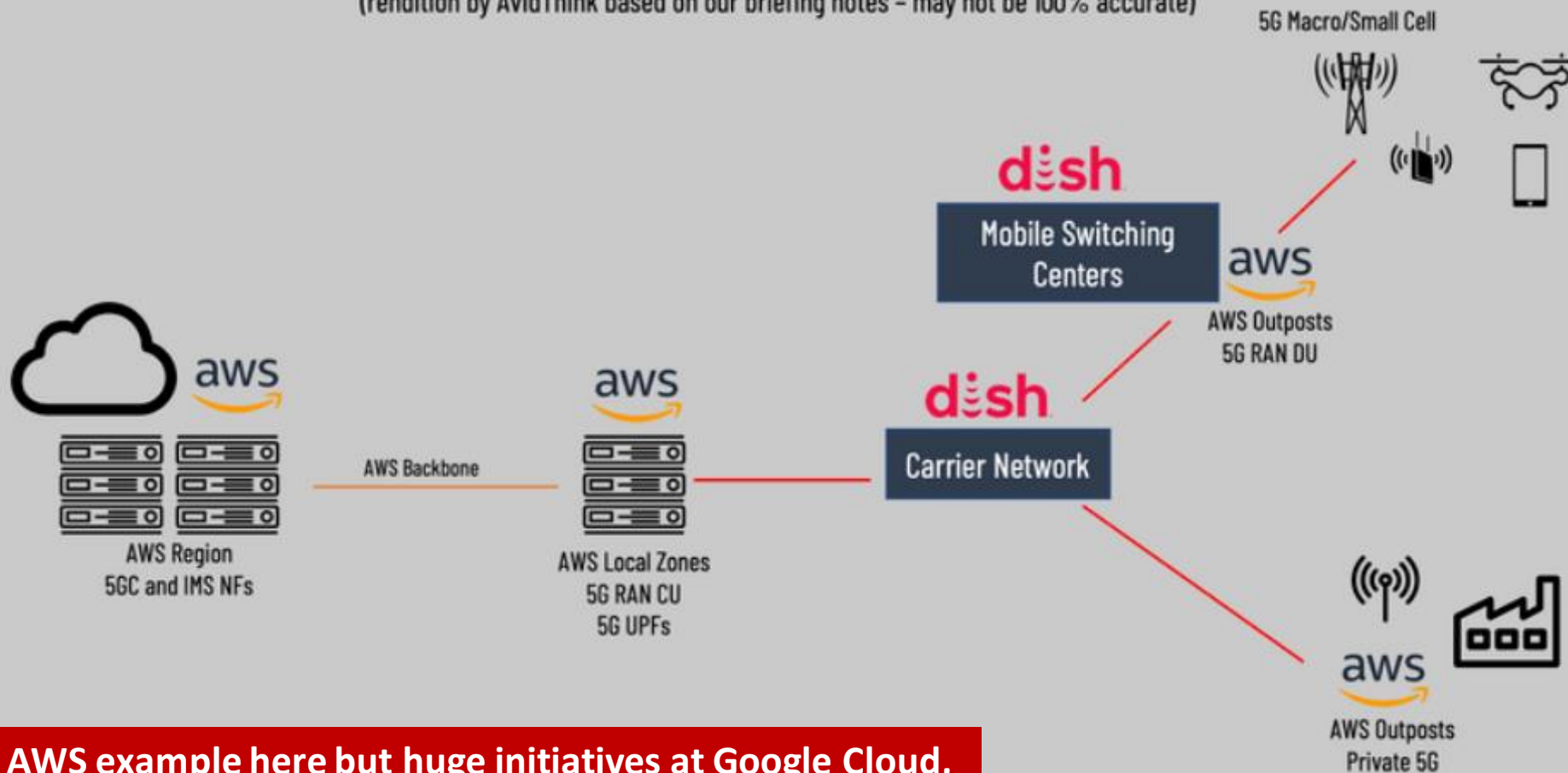


Focus of today's presentation

Telco Cloud – Why?

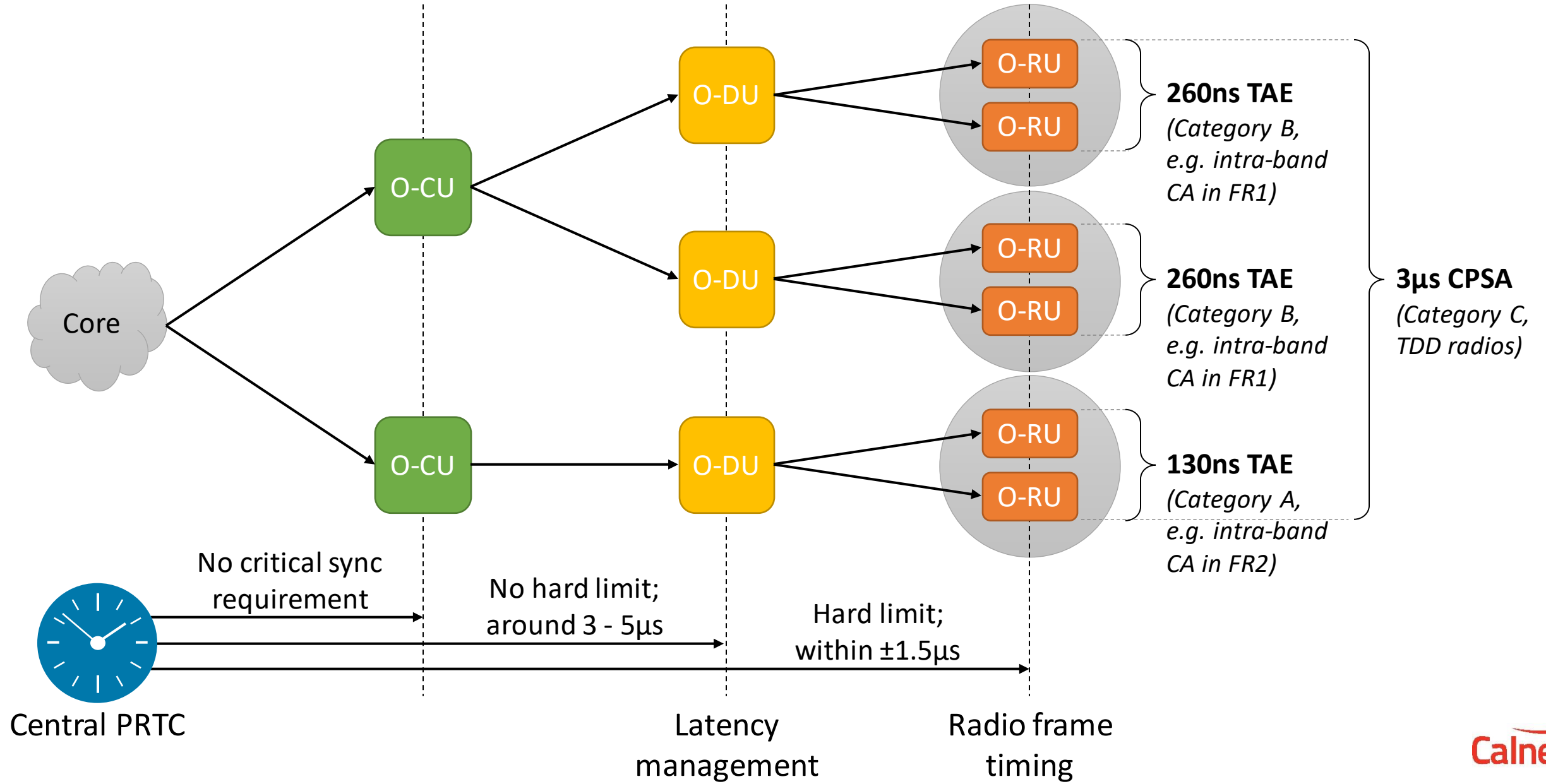
- More flexible; faster to roll out new services, customised services
 - New revenue streams
- Economies of scale of Cloud infrastructure
 - Mobile telco as a service / as a brand
 - More players in the game
 - Cloud' infrastructure and operations already there, still growing
- BUT
 - Cloud infrastructure, services and people are Cloud
 - Telco infrastructure, services and people are Telco

DISH Network using AWS's Infrastructure (rendition by AvidThink based on our briefing notes - may not be 100% accurate)

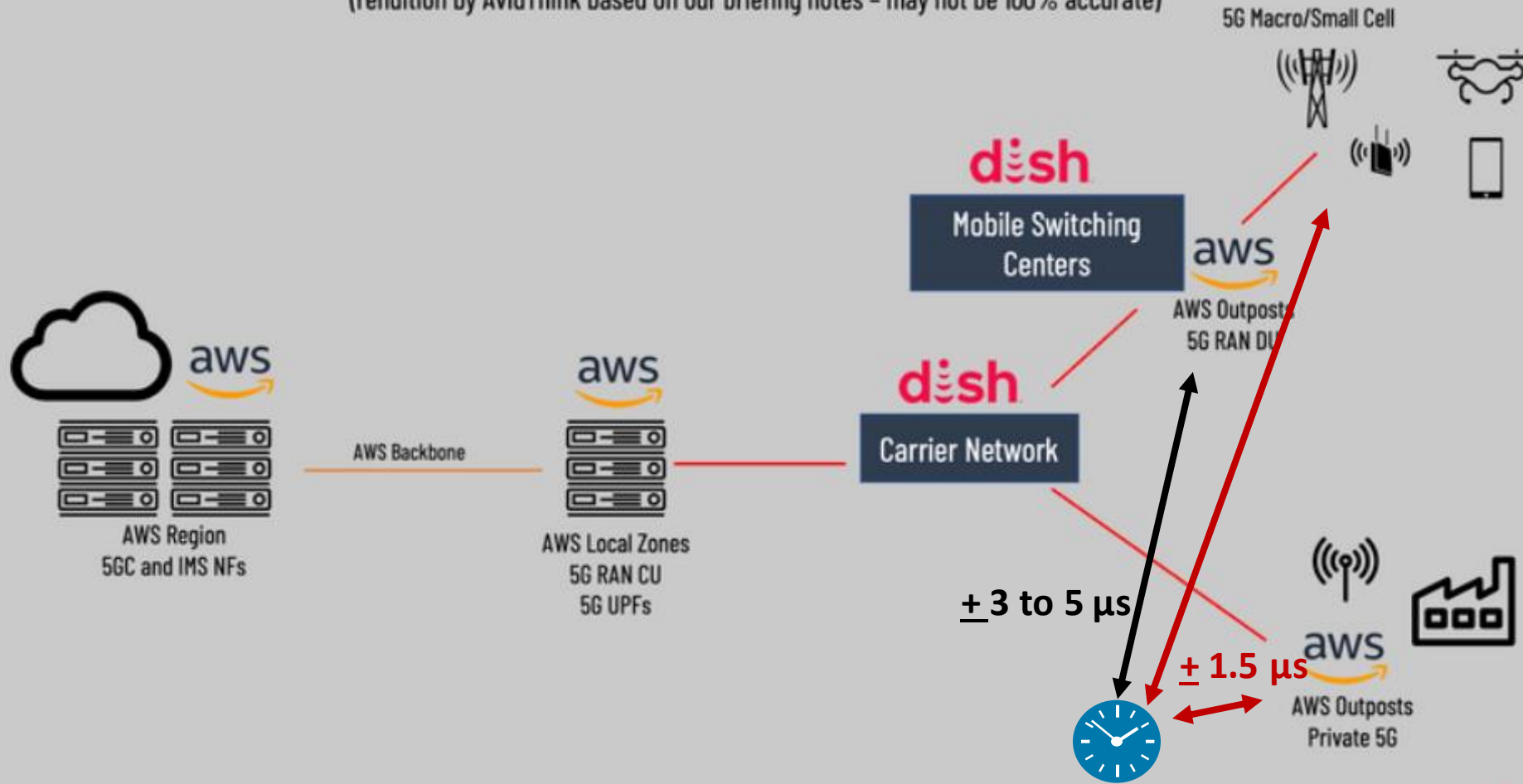


AWS example here but huge initiatives at Google Cloud, Azure for Operators, etc.

Synchronization Requirements



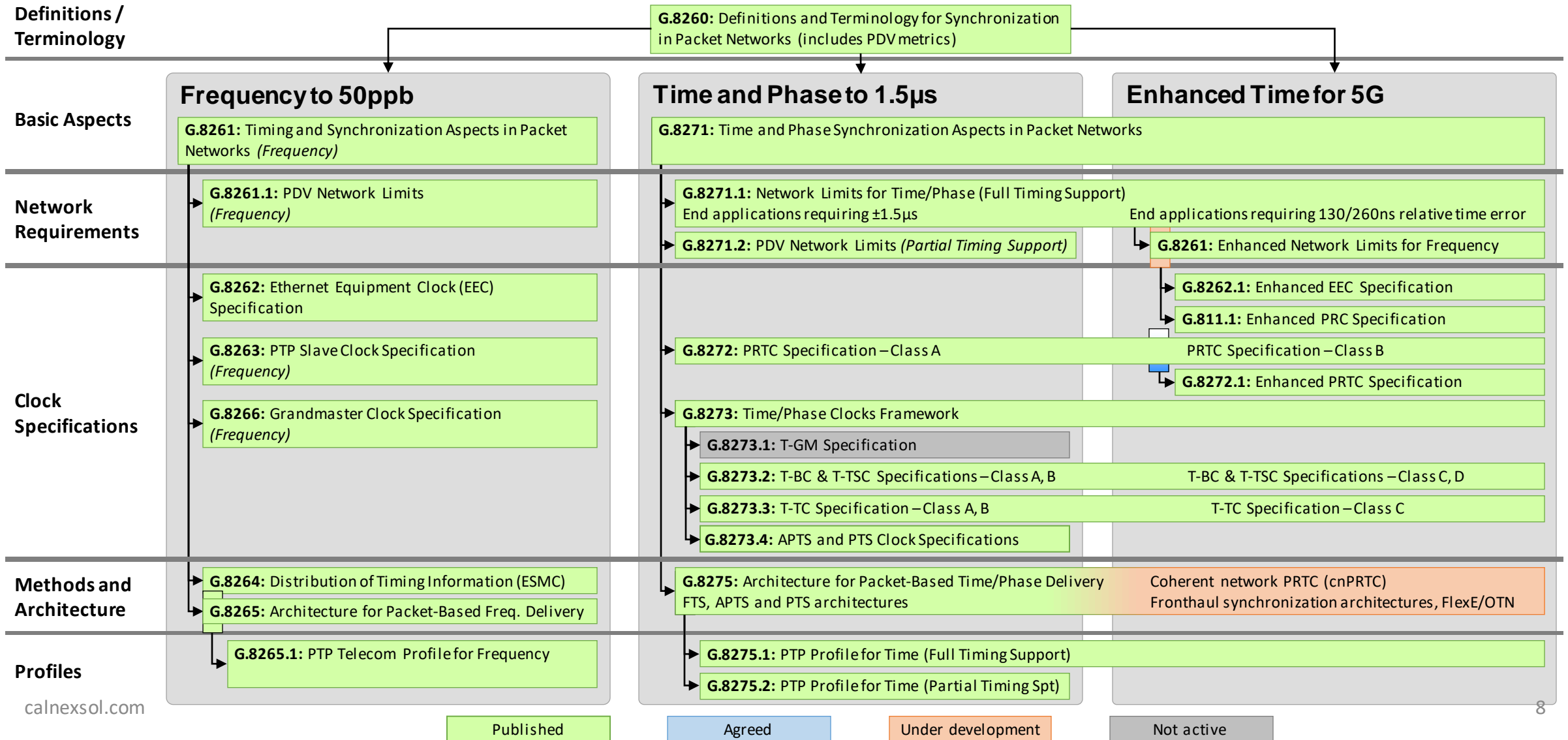
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Test Methodology and Equipment

- Standards and Recommendations
- Test Methodologies, Support and Resources

ITU-T Packet Sync Recommendations



Making it easy – ITU-T Sync Standards Resource



GdotWhat?

Overview

Pages

- ITU-T SG15 Standar...
- ITU-T Packet-Based ...
- ITU-T Packet-Based ...
- ITU-T Packet-Based ...
- ITU-T Packet-Based ...
- PTP Profiles
- ITU-T / IEEE Standar...

GdotWhat?



Welcome to **GdotWhat?**

Your guide to Sync standards and how to interpret them

Right now, we mainly cover the ITU-T Standards. We will be adding material from other standards bodies in the near future.

The starting point for learning about the ITU-T synchronisation standards is [ITU-T Packet-Based Synchronisation - A Guide to the Synchronisation Standards](#). Alternatively, you can search for the content you want using the search bar below, go directly to the topic you want from the list of featured pages or browse the table of contents to see what is available.

Q Search GdotWhat?

<https://calnexsolutions.atlassian.net/wiki/spaces/GDW/overview>

Summary

- Mobile Network Functions and Infrastructure moving to the cloud
- A host of new systems and software need to perform to Telco specs
- All that needs to be verified
- Good news – standards, recommendations & methodology in place...*almost*
 - *Ongoing refinement in O-RAN*
 - *Discussions in OCP*

Lunch & Whisky

- Lunch today hosted by Calnex
- Also... **30** of these to be won



When it's gone,



it's gone!