
Technology Trends in Telecommunications

CMOS Workshop,
Vancouver, August 6-7, 2008

Theresa Carbonneau

August 7, 2008

Main Trends

Convergence of

Network

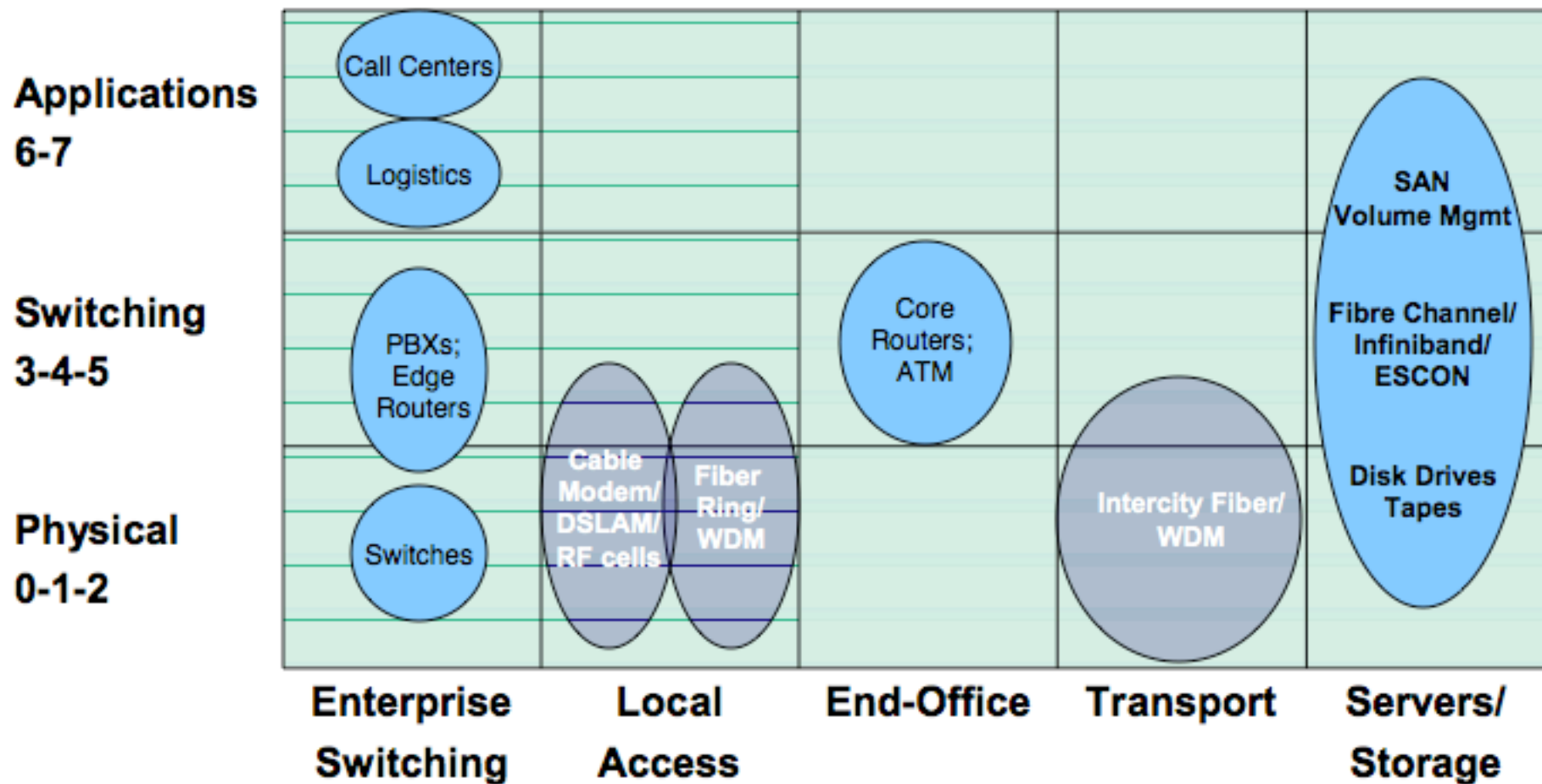
- Circuit to Packet
- Core switching/routing to Edge
- Transport aggregation
- Wireless; mobile evolution, 3G/4G, LTE; fixed and nomadic, WiFi and WIMAX

Service Platform

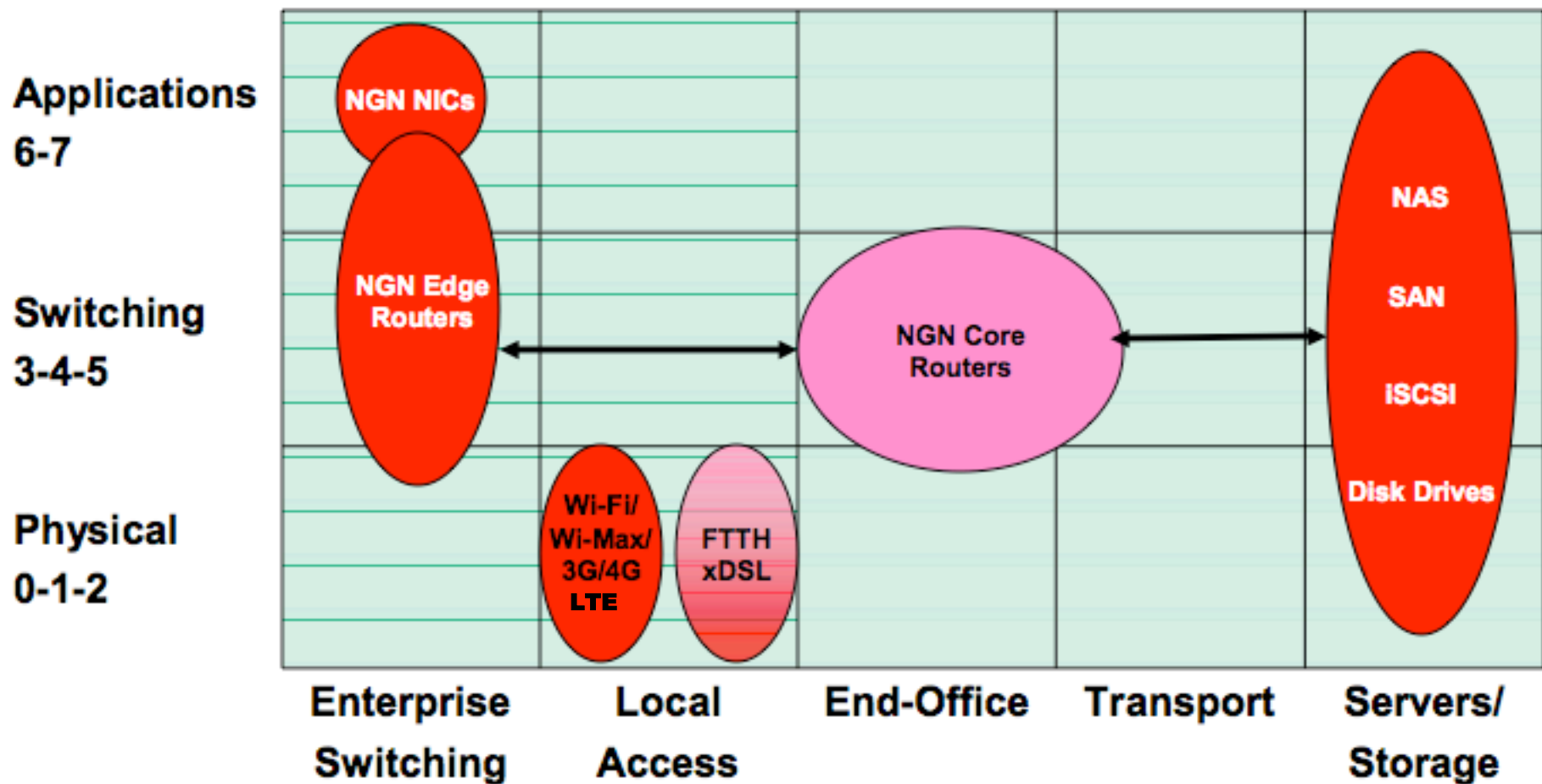
- Multiple services
- New services by deploying softswitches and network cards (PCIs)
- Convergence of testing, operations and OSS

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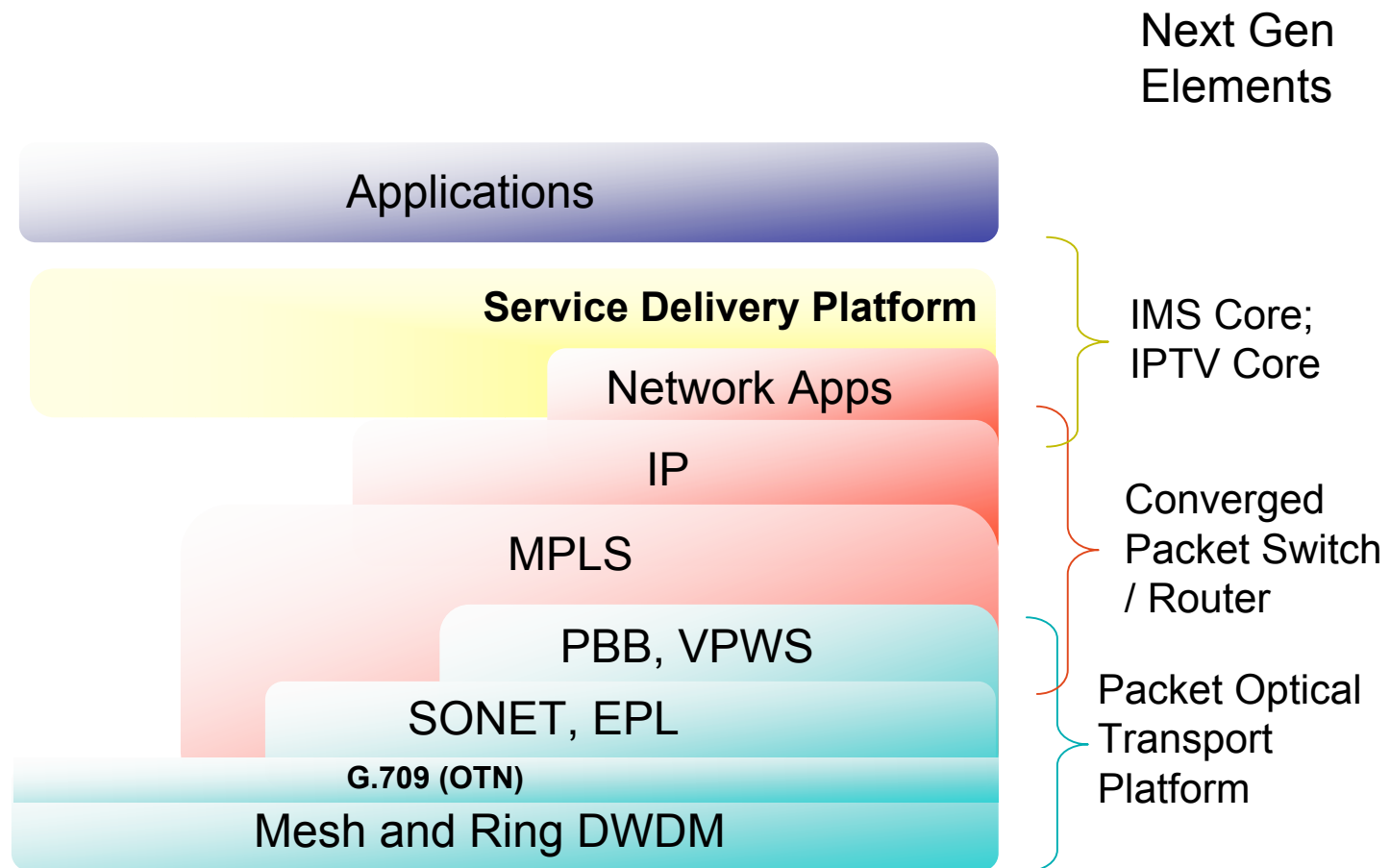
➔ Key NGN Equipment: Historical



➔ Key NGN Equipment: Future



Core Architecture Target



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Transition from Legacy to NGN

- Pace of transition varies from region to region
- Some carriers embracing changes and driving them
- Others slowing down or impeding adoption
- Greenfield sites have advantages

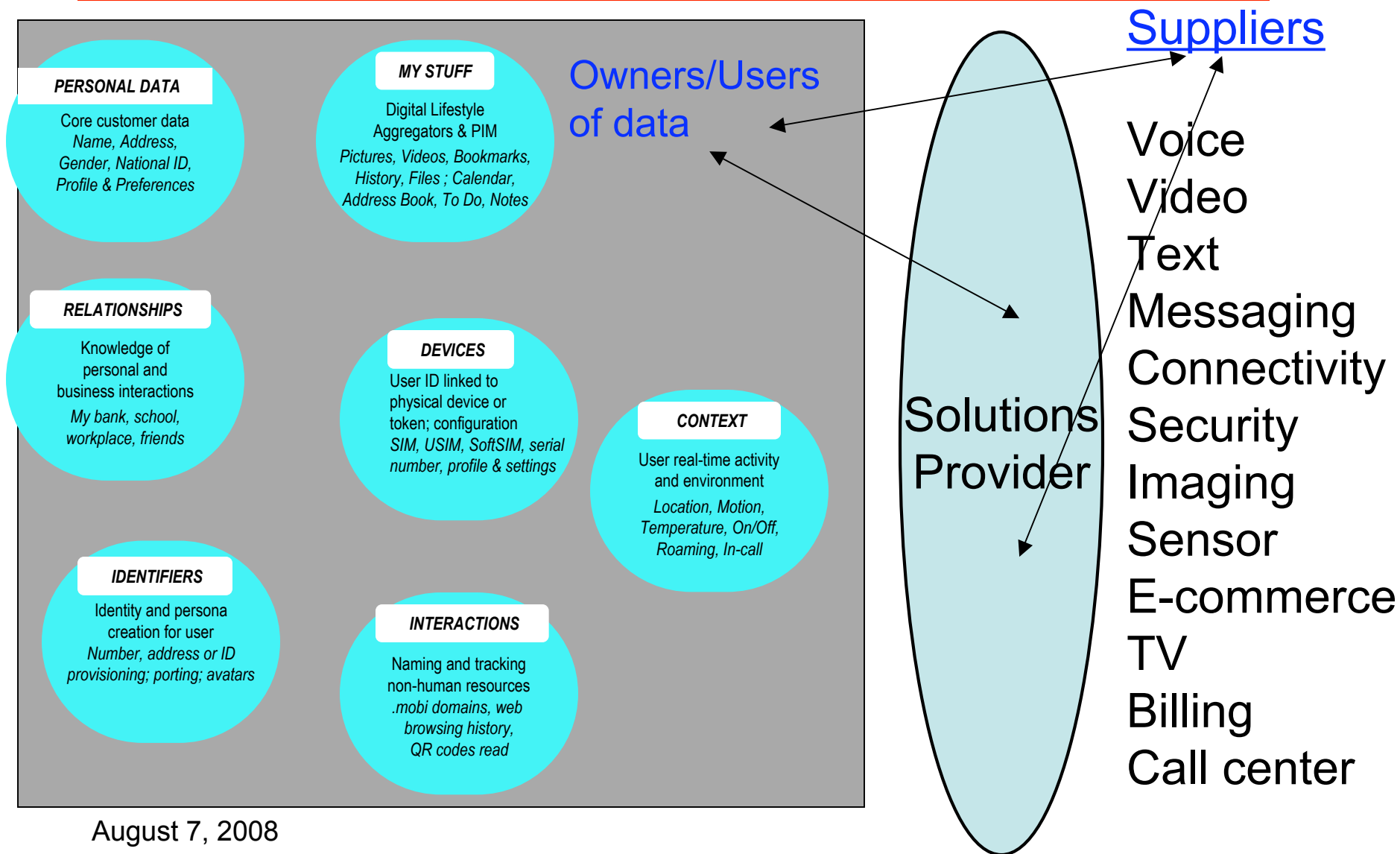
New Business Model Required

- Utility to commercial operation - a long process
- Regulatory bodies slow to keep pace with technology changes - are they still needed?
- Operators reluctant to abandon traditional business model despite unsustainability of PSTN and broadband data - (core assets)

New Model

- Operators must become '**logistics solutions providers**' for data (voice, messaging, video, web, personal information)
- Need to make sure data is delivered to the right place at the right time in the right way, and enable different parties to get paid in appropriate ways (billing systems and customer support services)
- To do this they make use of **multiple distribution systems** (eg. internet, mobile, broadcast, network caching, physical media) some of which they own, some of which they don't.
- Crucially, they operate a **2-sided business model**, getting paid by upstream partners *as well as* downstream end-users

New Market Model



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