

# Interconnection and Access Reform Issues and Considerations



Mike Romano – December 2019

# “IP Transitions” and Regulation

- 2004: FCC says VoIP is interstate . . . something
- 2005-2010: FCC “onesy-twosy” regulation of VoIP
- 2011: FCC brings VoIP traffic within a reformed ICC structure
  - Requires “good faith” in negotiating IP-IP interconnection
  - Says states set network edges in bill-and-keep world for ICC traffic
  - Seeks comment on both IP-IP interconnection and “network edges”
- 2012: AT&T and NTCA file “IP transition” petitions
- 2013: FCC starts “Technology Transitions” docket

# “IP Transitions” and Legislation

- Telecom Act of 1996 . . .

- . . . TRACED Act



**Nearly 850 providers in 45 states, serving 35% of the U.S. landmass**

Avg. Pop. Density  
~7/sq. mile

Avg. Serving Area  
2200+ Sq. Miles

60% of RLEC customers served via FTTP

25% of RLECs have <2/sq. mile



Nearly 70 SRC Awards

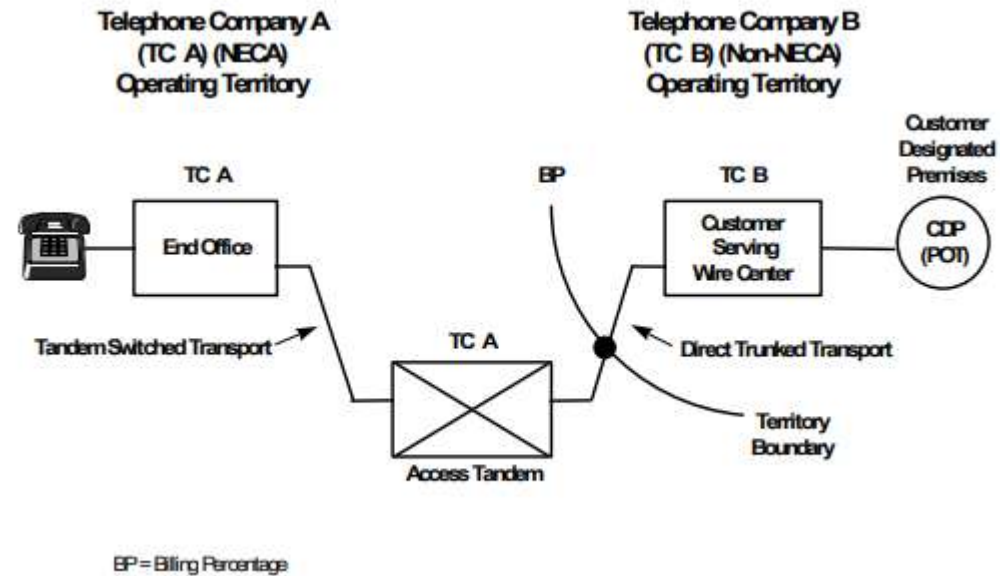


More than 175 Gig Certifications

# Smaller Operators are *Not* The Long Pole in an “IP Transition”

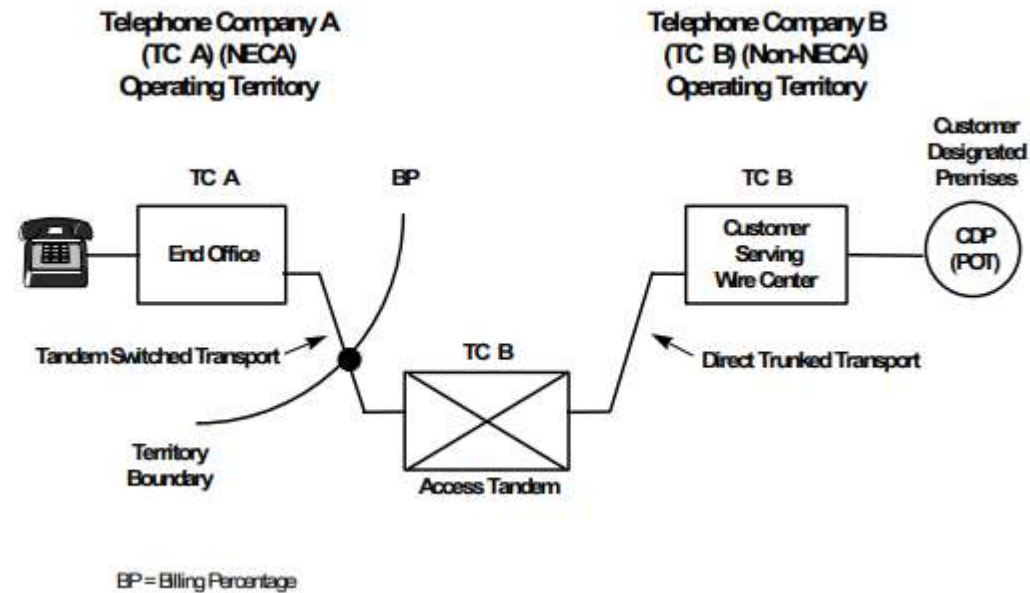
- Perception
  - “Stodgy old” telephone companies that cling to TDM
- Reality
  - Substantial Broadband Deployment
    - 70% of customers – access to at least 25/3 Mbps
    - 57% of customers – access to at least 100 Mbps
    - 23% of customers – access to at least a Gig
  - Switching
    - 93% of RLECs are using IP-enabled switches
    - Most TDM switches with small companies serving fewer than 1650 customers

# It's All About the Edges



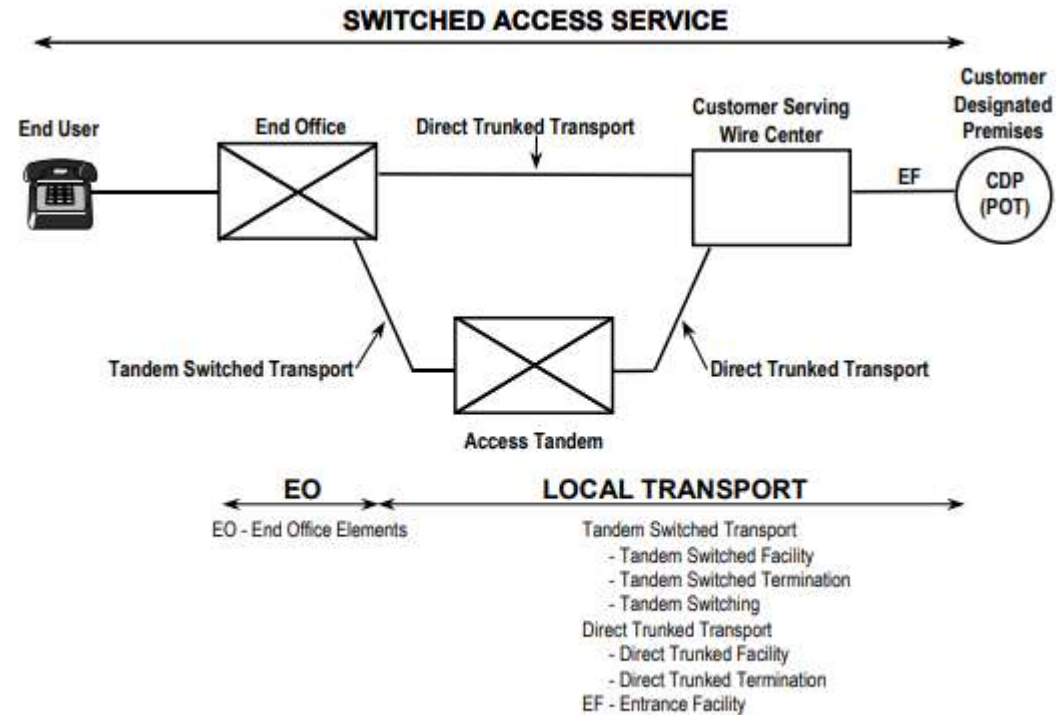
Source: NECA Tariff No. 5

# It's All About the Edges



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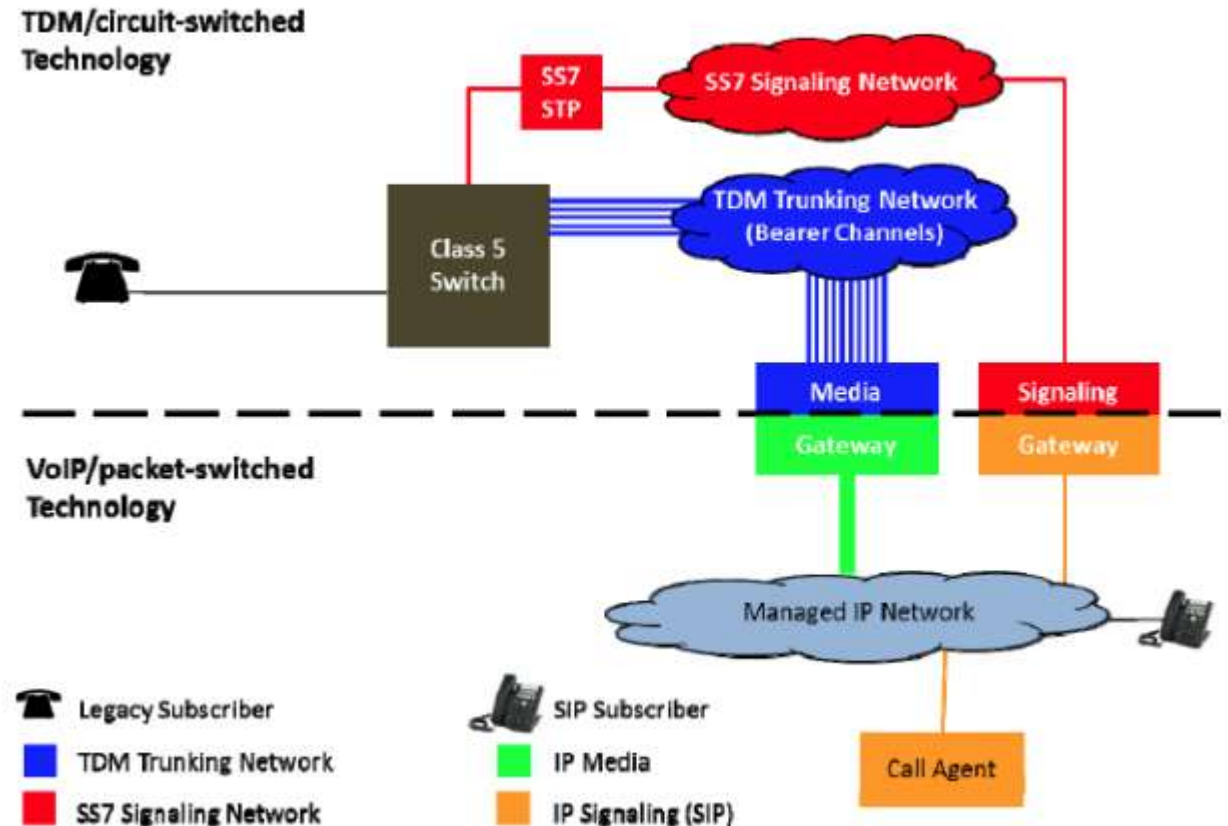


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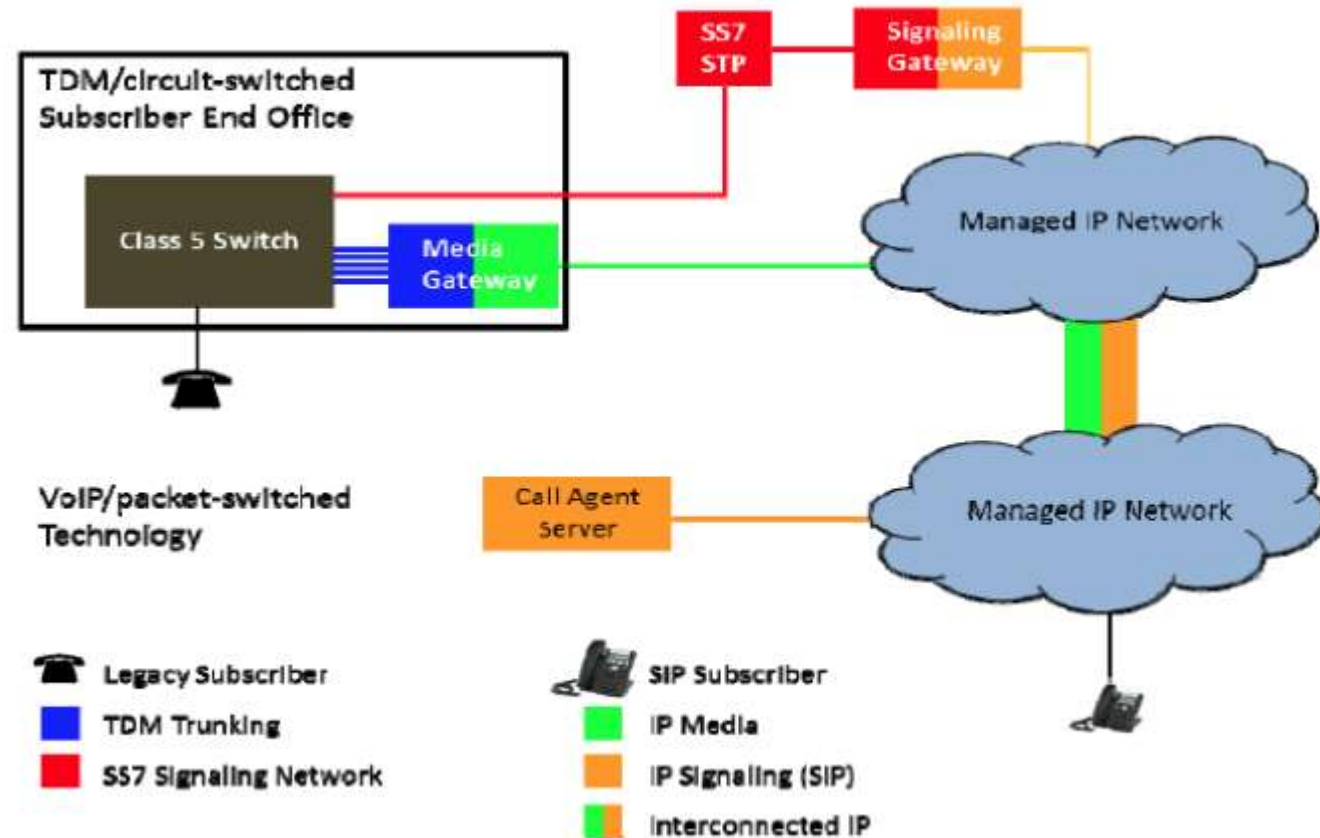
Figure 1: VoIP-to-TDM Interconnection



Source: Gillan and Malfara, *The Transition to an All-IP Network: A Primer on the Architectural Components of IP Interconnection*, National Regulatory Research Institute (May 2012).

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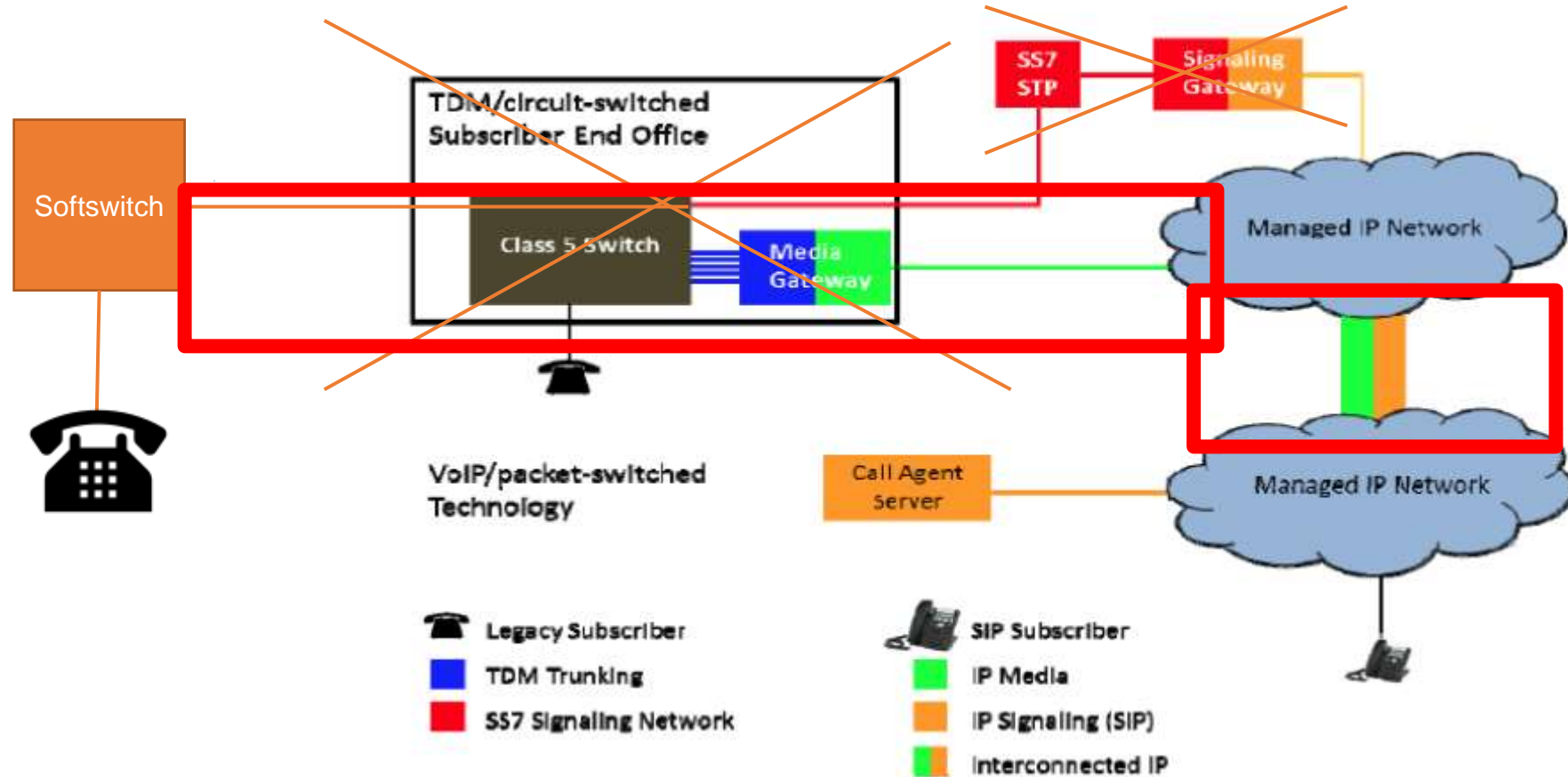
Figure 2: IP-to-IP Interconnection with VoIP/TDM End Point



Source: Gillan and Malfara, *The Transition to an All-IP Network: A Primer on the Architectural Components of IP Interconnection*, National Regulatory Research Institute (May 2012).

# It's All About the Edges

Figure 2: IP-to-IP Interconnection with VoIP/TDM End Point



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# What Now?

- Traditional ICC/Access Reform
  - Arbitrage – Stimulation and 8YY
  - Network Edge Comments?
  - State Role?
- IP Interconnection
  - Robocalling & SHAKEN/STIR
  - How to mandate/incent IP conversion?
  - Not about technology (at least in all cases) – often “just” about terms/economics
  - “Hold Harmless”? “Rural Transport Rule”?
  - Set stage for other changes – e.g., NNP?