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January 13, 2014

*Via Electronic Delivery* **EX PARTE NOTICE**

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Room TW-A325
Washington, D.C. 20554

Re: *Petition to Launch a Proceeding Concerning the TDM-to-IP Transition*, GN Docket No. 12-353; *Technology Transitions Policy Task Force*, GN Docket No. 13-5; *Numbering Policies for Modern Communications*, WC Docket No. 13-97; WC Docket Nos. 04-36, 07-243, 10-90; *Numbering Resource Optimization*, CC Docket No. 99-200; CC Docket Nos. 95-116, 01-92.

Dear Ms. Dortch:

On January 9, 2014, Neustar, Inc.'s ("Neustar") Mark F. Bregman, Senior Vice President and Chief Technology Officer, Len Kennedy, Senior Vice President and General Counsel, Tom McGarry, Neustar Fellow, and the undersigned met with Lisa Gelb, Deputy Chief of the Wireline Competition Bureu, Henning Schulzrinne, Chief Technologist, and John Chambers of the Office of Strategic Planning & Policy Analysis, on behalf of the Commission's Technology Transitions Policy Task Force, to discuss issues in the above-referenced proceedings.

Neustar explained that telephone number administration and routing are essential to a successful IP transition as they enable innovation, competition and economic growth in the communications sector. The specific topics discussed during the meeting are described in further detail in the attached presentation, which was provided to the Commission participants in the meeting.

In response to questions, Neustar discussed potential ways to address number demand due to increases in machine-to-machine applications, including the use of non-geographic numbers and the possibility of using routing numbers other than telephone numbers. Seperately, we discussed the use of number pooling in blocks of less than 1,000 as well as the FCC rules implicated by such a change. As discussed in previous comments in the above-referenced proceedings,[1] we discussed the technical feasibility of consolidating many of the numbering-

[1] *See* Neustar Reply Comments (June 3, 2013), http://apps.fcc.gov/ecfs/document/view?id=7022420825; Neustar Comments (July 19, 2013), http://apps.fcc.gov/ecfs/document/view?id=7520931995.

related databases as well as some of the challenges with doing so. Finally, we discussed the possibility of an engineering and technical workshop to explore numbering-related experiments.

The implementation and industry adoption of an all-IP framework for telephone numbers will be a multi-year effort, requiring the collaboration of service providers, industry organizations, technology vendors, state regulators, and the FCC. As the nation's neutral North American Numbering Plan Administrator, Thousands-Block Number Pooling Administrator, iTRS Administrator, p-ANI Administrator, and Local Number Portability Administrator, Neustar is committed to providing its technical expertise to support a successful IP transition that will promote innovation, competition, and economic growth.

This *ex parte* notification is being filed electronically with your office pursuant to Section 1.1206 of the Commission's Rules.

Sincerely,

Scott M. Deutchman
Vice President and
Deputy General Counsel
Neustar, Inc.

cc: Lisa Gelb
Henning Schulzrinne
John Chambers

# Connect, Conserve and Secure:
## Numbering and Routing Administration is a Catalyst for Innovation and Competition

Mark Bregman, CTO
Len Kennedy, SVP and General Counsel
Tom McGarry, Neustar Fellow
Scott Deutchman VP and Dep. General Counsel

January 9, 2014

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# Numbering and Routing Administration to Enable the IP Transition and Economic Growth

- The telecommunications sector is a major success story for the U.S. economy driving investment, innovation, competition, and consumer choice.
  - The United States information and communications technology market will be over $1.4 trillion in 2014. Source: Forrester (Apr. 25, 2013)
  - Telecom spending is expected to reach over $500 billion in 2014. Source: Forrester (Apr. 25, 2013)
  - Telecom employed approximately 858,100 employees in the U.S. alone during 2012, not including support and indirect jobs in other industries. Source: U.S. Bureau of Labor Statistics
- The IP Transition is "the great infrastructure challenge of the early 21st century." FCC, *Connecting America: The National Broadband Plan*, at 3.
- Just as the new, dynamic numbering system fueled investment, innovation and consumer choice following the Telecom Act of 1996, it must be an essential part of the IP Transition and an enabler of future economic growth.

# Connect, Conserve and Secure:

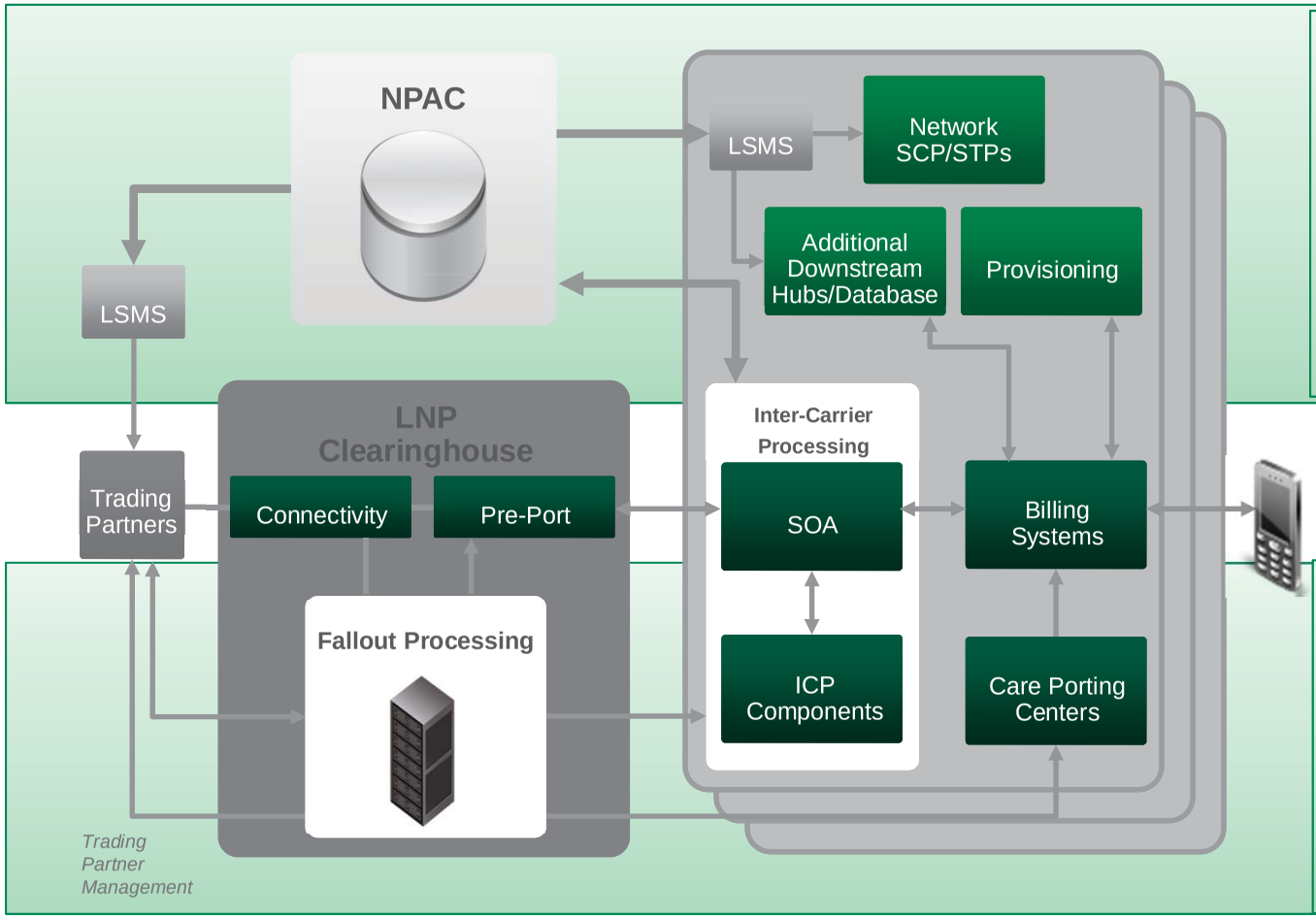
The IP Transition needs to rely on key elements of numbering and routing administration to:

- Connect
  - Utilize the NPAC as the authoritative IP routing database
- Conserve
  - Prepare for higher demand for telephone numbers
- Secure
  - An administrative model for authenticating telephone numbers

# Transition in the mid-90s: Implementing local competition

- Drivers
  - New investment in telecom
  - Policy environment that supported competition
- Enabled by
  - Telecom Act of 1996
  - Neutral number administration
    - North American Numbering Plan Administrator (NANPA)
    - Pooling Administrator (PA)
  - Neutral routing administration
    - Local Number Portability Administrator (LNPA) managing the Number Portability Administration Center (NPAC)
- Resulted in
  - Local competition – both fixed and wireless
  - Number portability
  - Extending the life of area codes and the numbering plan

# The infrastructure is already in place for the next transition




- Efficiently connects all US service provider networks
- Real-time data broadcast of authoritative routing
- Supports all communications services (fixed line, wireless, VoIP, text messaging

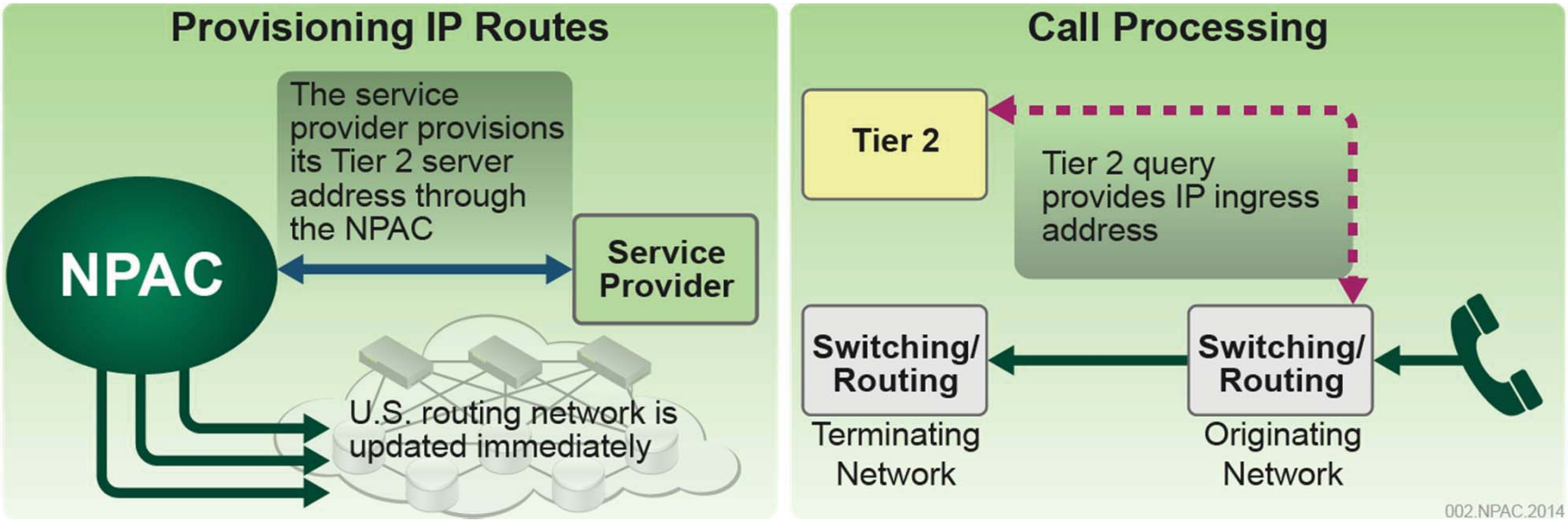
- Choice & competition
- Telephone number resource conservation
- Network transitions (2G-to-3G, VoLTE rollout, M&A divestiture, disaster preparedness / recovery

# Current Transition: Implementing IP technology

- Drivers
  - Broadband deployment – fixed and wireless
  - Internet adoption
  - Rich media communications
  - Device and application innovation – fixed and wireless
- Enablers
  - Neutral number administration
  - Neutral IP routing database
  - Example: Internet-based Telecommunications Relay Service (iTRS) database
- Results in
  - Innovation, competition and technology investment
  - IP interconnection for all
  - Access to PSTN identifiers for all
  - Maintaining trust in the communications network

# Connect:
# The NPAC as the authoritative IP routing database

- Existing solution, proven in industry tests
- Preserves industry role and FCC oversight
- Utilizes existing real-time interfaces to all service providers
- Ensures consistency of TDM and IP routes



# Number demand is accelerating

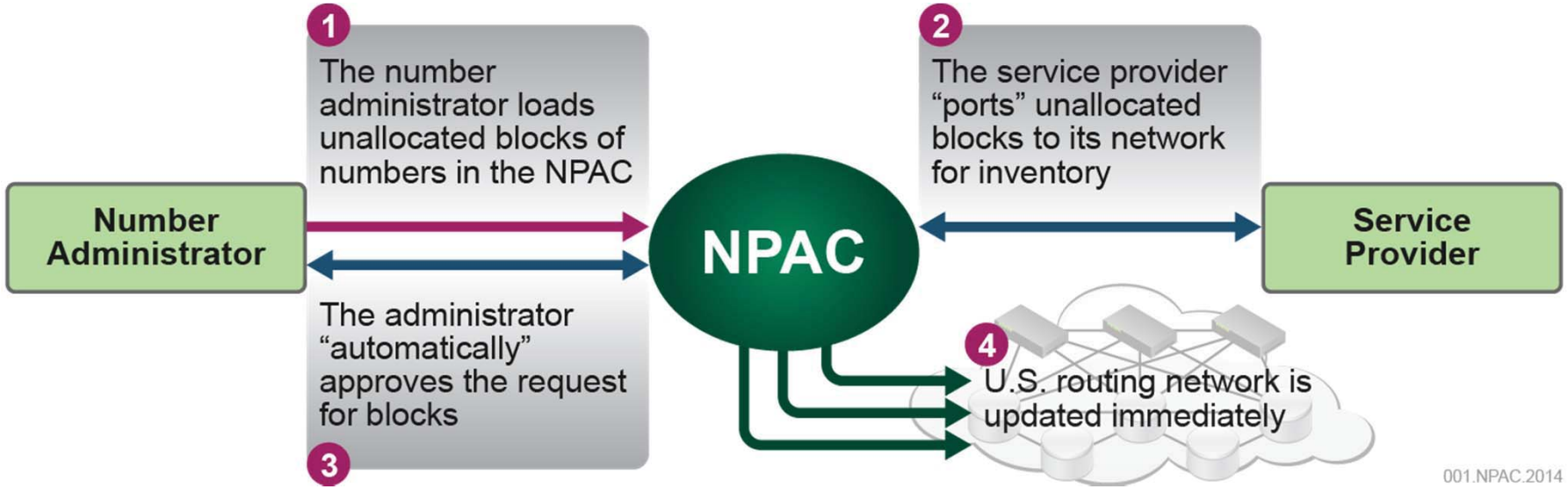
- Drivers for increased demand
  - New services, e.g., VoIP, M2M, connected devices
    - Juniper Research estimates 500M connected devices by 2018*
  - New service providers
  - Continued mobile growth
  - Direct access by VoIP providers

| Telephone Number and Service Provider Growth | 2009 | Oct. 2013 | Accelerating Demand |
|---|---|---|---|
| CLEC 12 mo. TN growth rate | 3.4% | 4.1% | 20% |
| Wireless 12 mo. TN growth rate | 5.4% | 9.6% | 77% |
| CLEC service provider growth | 609 | 727 | 19% |

* http://www.fiercemobileit.com/story/news-scan-cellular-m2m-devices-top-500m-intuit-buys-fullslate-more/2013-10-31

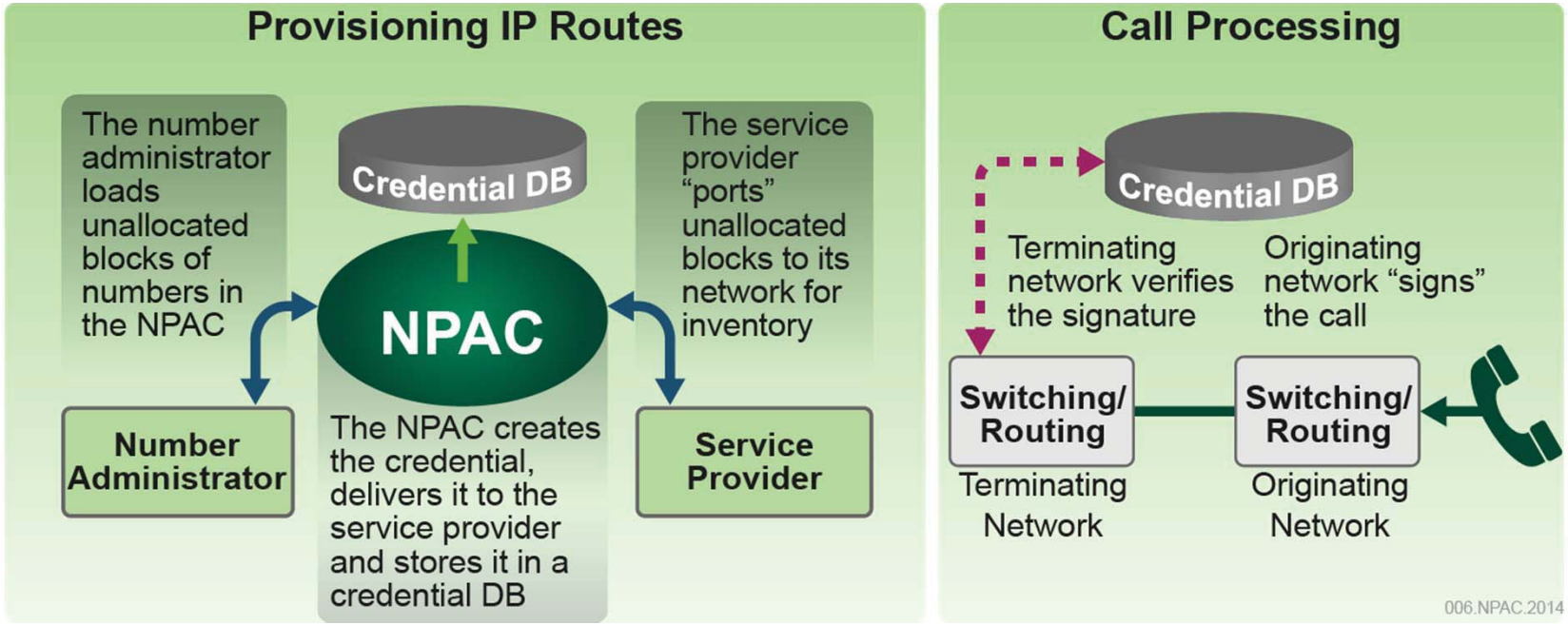
# Conserve:
# Preparing for higher demand

- **Promoting growth** by ensuring sufficient resources for all
  - Tighter integration of number administration and NPAC would:
    - Conserve numbering resources
    - Enable “immediate” network activation

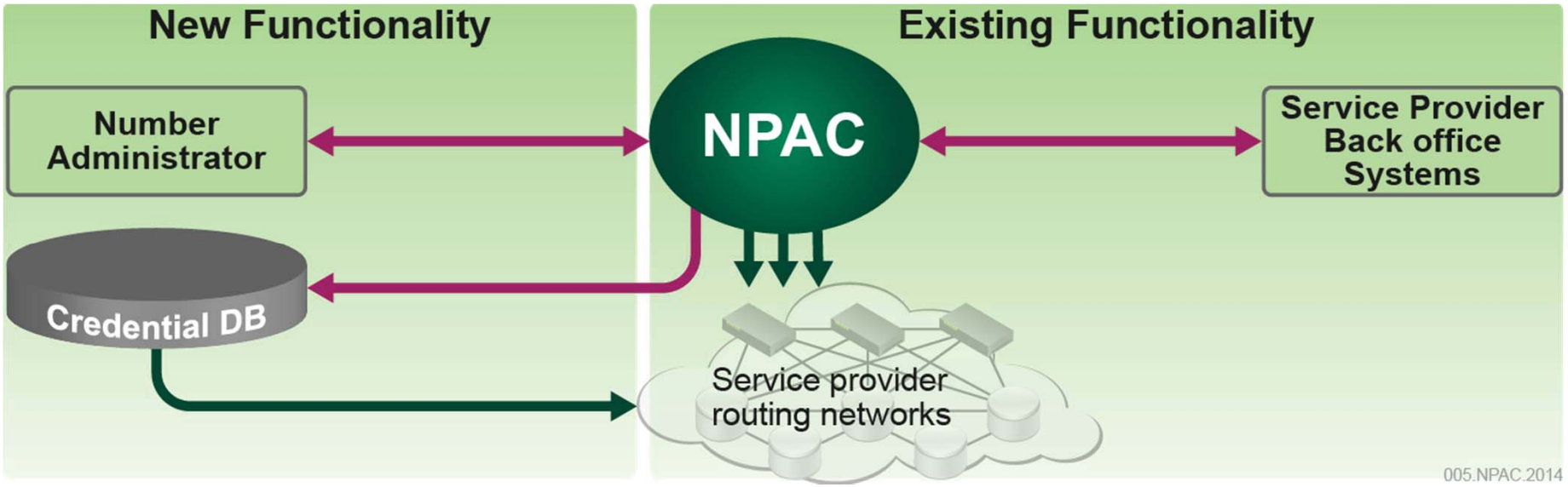


# Secure: An administrative model for authenticating numbers

- Ensuring the **public safety and national security** by securing numbers
  - Trust in Caller ID has been compromised
  - The industry is creating a technology solution
  - Number Administration and NPAC can administer this solution



# Connect, Conserve and Secure: Summary




- Foundation of last transition provides infrastructure for a faster, better and lower risk transition
- Centralized, neutral number administration is essential to drive innovation, competition and growth for U.S. communications