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March 24, 2014

Via ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

**Re: GN Docket No. 13-5, GN Docket No. 12-353, WC Docket No. 10-90, CG
Docket No. 10-51, CG Docket No. 03-123, WC Docket No. 13-97
Numbering Testbed Proposals
Written Notice of *Ex Parte***

Dear Ms. Dortch:

John Staurulakis, Inc., (“JSI”) hereby submits the attached written notice of *ex parte* describing JSI’s Number Management in an All IP Network proposal for consideration during the Federal Communications Commission’s (“FCC”) Numbering Testbed Workshop on March 25, 2014.

JSI appreciates the opportunity to contribute to the FCC’s “development of a telephony numbering testbed for collaborative, multi-stakeholder research and exploration of technical options and opportunities for telephone numbering in an all-IP network.”¹

Respectfully submitted,

Valerie Wimer
Vice President

Cc: Dr. Henning Schulzrinne, Chief Technology Officer

Enclosures

¹ See *Technology Transitions et al.*, GN Docket No. 13-5 et al., Order, Report and Order and Further Notice of Proposed Rulemaking, Report and Order, Order and Further Notice of Proposed Rulemaking, Proposal for Ongoing Data Initiative, FCC 14-5 at para. 152 (rel. Jan. 31, 2014) (“Technology Transitions Order”).

Overview of JSI's Number Management in an all IP Network Proposal

JSI offers the attached proposal, Number Management in an All Internet Protocol Network, for consideration during the FCC's Numbering Testbed Workshop on March 25th. This proposal addresses the architecture of the number administration databases and inventories in an all IP network. Details of the content of the databases are not covered in this document and should be defined by consensus in the industry.

JSI serves as the Number Administrator for nearly 400 ILEC and CLEC companies and as the NPAC Service Bureau for over 280 rural companies. JSI is committed to assisting its client companies' transition to an all IP infrastructure as smoothly as possible and without completely disrupting their day to day business practices.

The proposed number management structure allows for the flexibility of one or multiple Number Management databases in tandem with the initiation of alternate databases for the purpose of security credentials, IP addresses and routing instructions.

JSI envisions a Number Management structure that will allow the Service Provider to maintain responsibility for its numbering resources – telephone numbers, IP addresses and security credentials – and assign them to customers upon requests.

As illustrated in the proposed Number Management in an All-IP network diagram on slide 9 of the attachment, the NANP Administration System (NAS), the Pooling Administration System (PAS) and the Number Portability Administration Center (NPAC) will be combined to create a centralized or multi-vendor Number Administration Database (NAD).

The NAD will allow the Service Provider to request numbering resources -for storage in its internal inventory- as well as port telephone numbers. In addition, the Service Provider will request IP address allocation and an allotment of security credentials to inventory for assignment to customers when new service is initiated. The IP addresses may be static or dynamic and the type of security credentials will depend upon the industry's consensus on how to secure telephone numbers and IP addresses in the all-IP arena.

Service Providers will allocate customer telephone numbers and assign security credentials and IP addresses to the telephone numbers. The telephone numbers and routing data (IP addresses and credentials) will be activated in the NAD and broadcast to the ENUM servers connected to the NAD for upload into individual

service provider servers or routers that house the routing information for the respective company.

Number Management in the future all-IP arena should be simple, reliable, effective and allow Service Providers to maintain the core services they are expected to provide to customers on a daily basis – quality service, immediate telephone number assignment and seamless porting.

JSI appreciates your consideration of the attached proposal for inclusion in the FCC's Numbering testbed discussions to be held March 25th.

Attachment



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***NUMBER MANAGEMENT
IN AN ALL IP NETWORK***

**Number Management in an
All-IP Network: Databases**

IP ADDRESS ALLOCATION

- The current Regional Internet Registry(RIR) for the United States is ARIN
 - American Registry for Internet Numbers (ARIN)
 - IPv4 addresses are limited and require ‘proof of need’ prior to allocation
 - New IPv6 addresses are available for allocation
 - Service Provider assigns the IP address(es) to customers



SECURITY CREDENTIALS

- Security protocols for the telephone phone numbers are assigned in this database
 - digital credentials/certificate assigned
 - Each VoIP TN
 - Each service
 - SP assign to customers
- Accommodate Static and Dynamic IP addresses
- Multiple vendors providing the service to providers



NUMBER ADMINISTRATION DATABASE

- The Number Assignment Database (NAD) is a combination of the NANP Administration System (NAS), the Pooling Administration System (PAS) and the porting database (NPAC).
- TNs are allocated and ported to the Service Provider's network within the NAD.



ENUM

- The ENUM servers are queried for termination directions when a call is made via the IP network.
- Includes CNAM, LIDB and Toll free routing instructions



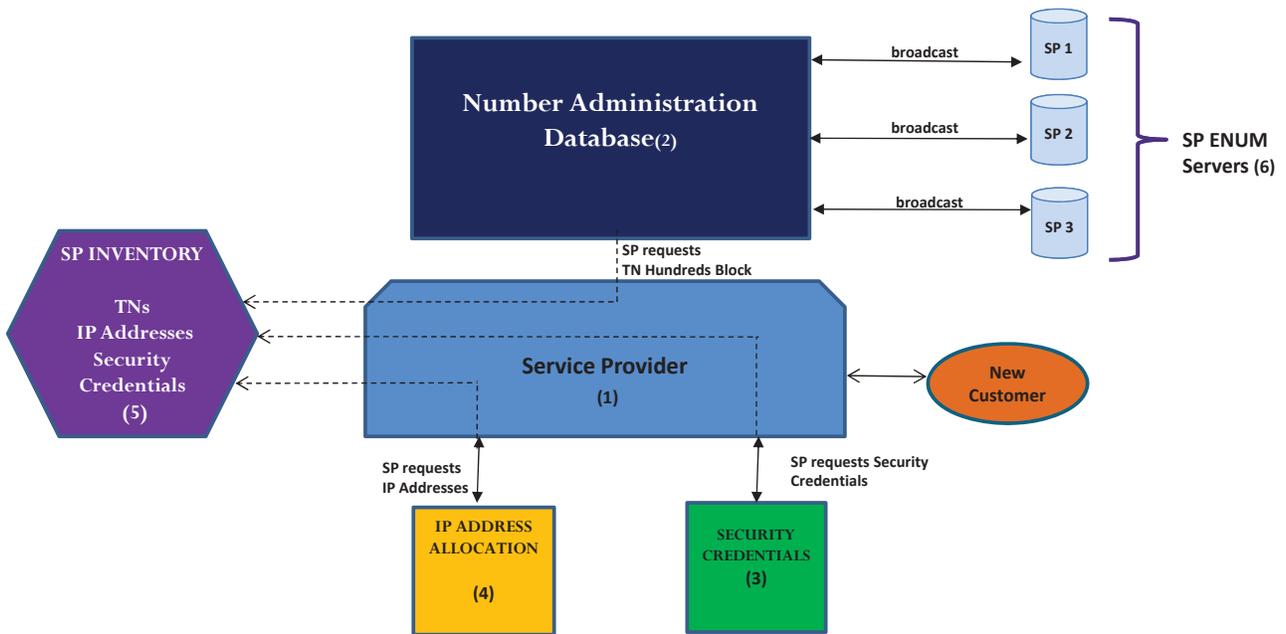
SERVICE PROVIDER INVENTORY

- All allocated resources - Telephone Numbers (TNs), IP Addresses and Security Credentials - are stored in the Service Provider's inventory and available for assignment to new customers upon request.



**Number Management in an
All-IP Network: Diagram & Narrative**

NUMBER MANAGEMENT IN AN ALL IP NETWORK



NUMBER ADMINISTRATION PROCESS

- The Service Provider (1), requests numbering resources at the Hundreds Block level from the Number Administration Database (NAD)(2)
- Service Provider (1) requests Security Credentials (3) from the vendor.
- Service Provider (1) requests IP address allocation (4)



NUMBER ADMINISTRATION PROCESS

- Upon service request by a new customer, the SP(1) assigns a new TN,IP address and security credentials to the customer from the SP's inventory(5).
- The NAD(2) is updated to reflect the IP address and security credentials associated with the TN.
- All data is broadcast to the ENUM servers(6)

