NAPM LLC Vendor Proposal Advisory Committee (VPAC)

May 19, 2005
Participation

- John Chomyak – Verizon (VPAC Chair)
- Jeff Adrian – Sprint
- Dave Garner – Qwest
- Gina Jones – Verizon
- Mark Lancaster – AT&T
- Jason Lee – MCI
- Karen Mulberry – MCI (LLC Co-Chair)
- Susan Ortega – Nextel
- Mark Pohlman – Frontier
- Gary Sacra – Verizon (PE)
- Dan Sciullo – Counsel
Mission Statement

Regarding the review and evaluation of all unsolicited proposals, the collective NAPM LLC membership will formulate and present recommendations to Vender proposals related to NPA, and an advisory committee that will focus on
Assumptions

Assessment factors are based on a high-level overview. Current proposals lack sufficient detail to allow a quantitative comparison. Information is limited.

Only a cursory vendor comparison is possible without defined requirements (i.e., "level playing field"). Evaluation criteria are subject to change as the process evolves. The outcome of the evaluation will aid in determining if further action is warranted by the LLC. Any threshold has yet to be established.

Any recommendation must consider the needs of both current and potential NPAC users, in addition to the industry's ability to support any suggested changes to NPAC architecture. Each VPAC attendee company will be afforded a "vote" in the ratings.
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<tr>
<th>OTHER</th>
<th>RELIABILITY</th>
<th>FUNCTIONALITY</th>
<th>TECHNOLOGY</th>
<th>COST</th>
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<td>Performance</td>
<td>Features</td>
<td>Administration</td>
<td>Transition/Integration</td>
<td>Existing Service Bureau?</td>
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<td>Vendor 1 Name:</td>
<td>Vendor 1 Reliability Rating</td>
<td>Vendor 1 Functionality Rating</td>
<td>Vendor 1 Technology Rating</td>
<td>Vendor 1 Cost Rating</td>
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<td>Vendor 2 Name:</td>
<td>Vendor 2 Reliability Rating</td>
<td>Vendor 2 Functionality Rating</td>
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<td>Vendor 3 Name:</td>
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<td>Vendor 3 Functionality Rating</td>
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<td>Vendor 3 Cost Rating</td>
<td>Vendor 3 Neutrality Rating</td>
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Confidential

Evaluating Company Name: ____________________________

Presentation Elements:
Less
More

NPAC Svc.

Current

Vendor 2 Name: ____________________________
Comments: ____________________________

Vendor 2 Rating: ____________________________
Vendor 2 Cost Rating: ____________________________
Vendor 2 Neutrality Rating: ____________________________
Committee and its functioning at the May 2005 NANC Meeting.

The FCC and the NANC will be advised of the formation of this advisory
coc-chairs. 

unless otherwise expressly authorized by the Members (will be from the
All communications to Vendors subsequent to initial presentations
vendos or prospective vendors.

co-meetings or any contractural discussions with any
authority to solicit proposals or requests for information or proposals or
action or approval by the Members. The VPAC shall have no power or
The VPAC will then formulate recommendations for presentation and
Committee (VPAC).

Vendor inquiries will then be referred to the Vendor Proposal Advisory
following presentations, follow-up and investigation of the unsolicited
portion of regular member meetings.

All initial presentations by vendors shall be to the full membership at open
of contract.

All unsolicited vendor inquiries or requests to make presentations must
be communicated to and through co-chairs. This will be the single point

Committee Consensus Points

Vendor Proposal Advisory
Telcordia Next Generation Number Portability Administration Center (NPAC)

To: North American Portability Management LLC

Telcordia Contacts:
Tom Mazzone – Executive Director
Global Numbering and Routing Solutions
Joel Zamlong – Executive Director
Network Solutions
Adam Newman – Sr. Manager Global Numbering and Routing Solutions
Current Challenges

- Limited ability to accommodate new service provider types from VoIP, cable and other non-traditional telecom markets who don’t have a CMISE SMS/SSOA
- Current cost mechanism not competitive
  - Rising operations charges including connectivity costs
  - Large change management fees
- Potential re-architecture of NPAC to simplify porting process

To meet the challenges in a more efficient and cost-effective manner requires responding to number port requests and the associated administrative processes in a “next generation” world
Moving to the “next generation” solution

• Any changes must address current users as well as new potential users

• Key stakeholders include:
  - NAPM LLC
  - Existing SOA/LSMS customers
  - LTI customers
  - Service bureau customers
  - Potential new “direct connect” non-CMISE customers

• At least 3 evolution scenarios could adequately address the needs of these stakeholders
Goals for A Next Generation NPAC

- Interface to the existing NPAC for smooth transition
  - Telcordia system could act like a service bureau SOA/SMS to the existing NPAC sending information about numbers that are ported in it to the NPAC/SMS and receiving porting information about numbers ported through the legacy system
  - Alternatively, current NPAC could be modified to allow for the presence of multiple primary SMS reducing the CMISE overhead for the new systems to just communicate with the outdated interface

- Will support simplified interfaces and connectivity (e.g., SOAP/XML, IP-VPNs)

- Enable new carriers to start with this system and existing carriers to migrate over time. Migration is not forced as long as current NPAC stays in place.
Three NPAC Evolution Scenarios

1. **Replace**: Replace the existing NPAC (US and Canada) and support all North America.

2. **Split**: Split NPAC services on a per region basis with NeuStar or other vendor(s) and support some of the eight regions to provide a more competitive environment and the technological and costs benefits competition provides.

3. **NG-NPAC**: Offer a new “next generation” NPAC that focuses on leading edge providers and interfaces with the existing NPAC and LSMS.
   a. In this scenario a new non CMISE based system would be offered that leverages standard industry interfaces (e.g., SOAP, XML).
   b. A simplified NP process would be offered all through the centralized clearinghouse.
   c. Companies that currently connect to the existing NPAC could migrate on their schedule to this new system to minimize the cost impact of supporting the new interfaces.
   d. This solution could allow for multiple competitive NPAC providers in a single region.
Scenario 1 – Transitional Phase - Replacing Existing NPAC in all Region

- Proposed NPAC starts as a service bureau
- SPs migrate to new NPAC on a determined timeline w/option of SOAP/XML or CMISE
- New SPs would likely use the SOAP/XML interface
Scenario 2 – Transitional Phase - Replacing Existing NPAC one or more Regions

- Proposed NPAC starts as a service bureau
- SPs migrate to new NPAC on a determined timeline w/opt of SOAP/XML or CMISE
- New SPs would likely use the SOAP/XML interface

*SPs may have other options of connecting their SOPS with NPAC such as direct or batch processing etc.*
Scenario 3A - Next Gen NPAC as Service Bureau

- Proposed NPAC acts as a clearinghouse
- Existing and Proposed NPACs provide broadcasts to each other
Scenario 3A – Pros/Cons

Pros
- Solves NPAC accessibility issues for non-traditional carriers
- Provides a migration path for existing SOA users
- Much smaller ongoing maintenance and operations costs (vs. Existing system)
- Allows SPs competitive choices in a region between NPAC service bureaus

Cons
- Costs of maintaining two separate environment
Scenario 3B – New XML/SOAP interface between Existing and Fully Functional Proposed NPACs

- Proposed NPAC acts as fully functional NPAC
- Need to determine controlling NPAC
Scenario 3B – Pros/Cons

Pros
- Solves NPAC accessibility issues for non-traditional carriers
- All Enhancements done in the new NPAC (Cost and Maintenance advantages)
- Provides a migration path for existing SOA users using new XML/SOAP interface
- Much smaller ongoing maintenance and operations costs (vs. Existing system)

Cons
- New Interface (or modified CMISE) between Existing and Proposed NPACs
- Need to determine which NPAC is master of a record
Telcordia Next Generation NPAC
Message Flow Options

- Telcordia can support current NANC messaging flows
- Telcordia has simplified messaging flows that could optionally be used between carriers using the Next Generation system or could be migrated to by all carriers
- Telcordia would work with industry and the LLC to achieve the right level of messaging and verification with the least amount of cost
- Simplified flows reduce fall-out and speed port processing leading to reduced SP costs
Next Generation NPAC Building Blocks

- Telcordia solution based on existing Number Portability Clearinghouse (NPC) software platform product that supports number portability in Greece and Lithuania

- Provided as a managed service with interfaces to support access by
  - Service Provider and Service Bureau Participants via VPN or GUI
  - Regulators as needed
  - Consumers as needed
Telcordia Next Generation NPAC – Technology

- 3 Tier service oriented architecture utilizing standard, open technologies including:
  - J2EE, SOAP, XML, https, SSL Certificates, and Digital Signatures
- Designed to be
  - Reliable/Highly Available
  - Secure
  - Scalable
- Dual sites for disaster recovery
NPC Software Architecture

**Web Tier**
- Web GUI
- Customer SOAP System
- Internet/HTTPS
- Web Server
- SOAP Client
- J2EE Application Server Cluster
  - GUI Servlet
  - EJB
  - SOAP Servlet
- Application Services
  - Message Processor
  - Timer Processor
  - Report Generator
- System Administration
  - Admin Functions
  - Performance Monitor

**Application Tier**

**Data Tier**
- Input/Output Queues
- Allocated Blocks
- Business Rules
- Admin Data
- Parameter Data
- Current Transactions
- Porting History
- Routing Data
- Service Provider
- Report Data
Telcordia Next Generation NPAC Connectivity

Primary Site

Help Desk & Monitoring

DR & Test Site (TBD)

IP Network(s)

SOAP Participants

GUI Participants

CMISE Participants
Conclusions

- Now is the time to take advantage of the competitive alternatives available
- In an industry that is zealously cutting costs and seeking the most efficient and innovative solutions available, LNP should not be left behind
- LLC should seek out the most innovative services available at the best prices for your companies, the industry as a whole, and for the public rate payers.
- Several potential areas for follow up including:
  - Additional technical discussion of potential evolution scenarios
  - Discussion of business implications of evolution scenarios
- All contingent on NAPM LLC desire to move forward with alternatives to existing solution
Benefits of Competition

- Industry has achieved significant savings in other number administration competitive procurements even when the incumbent administrator won that competition
- NANC recommended multiple administrators to the FCC espousing the benefits of competition in NPAC Vendors:
  - “Having multiple database administrators permits competition in both the initial and future competitive bidding and selection processes, which should enable carriers to obtain more favorable terms and conditions than if only one database administrator had been selected.”
- Competition has long been a hallmark of FCC policy and with regard to competition in NPAC vendors it has stated that competitive procurement of NPAC administration has benefits:
  - “There are clear advantages to having at least two experienced number portability database administrators that can compete with and substitute for each other, thereby promoting cost-effectiveness and reliability in the provision of Number Portability Administration Center services.
  - Do not, at this time, adopt a requirement that two or any other number of entities serve as local number portability database administrators.”

* FCC 97-289 Second Report and Order CC Docket 95-116 paragraphs 36 and 38