IPNNI- 2015-00009R000

**Contribution**

**TITLE**: IP Interconnection Routing Report

**SOURCE\*:** Verizon

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**ABSTRACT**

This contribution based upon the latest Routing report draft (IPNNI-2014-00083R014) is intended to mirror the changes accepted at the December 3, 2014 meeting to the Protocol Profile report that provide textual changes to address concerns that the document may be misinterpreted and used as a measure of technical compliance. New text appears in the Notice of Use and Applicability clause and the Application Section 1.3. The text in the body of the document describing the routing alternatives has not been altered and is not included in this contribution.

**NOTICE**

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**ATIS-1000062**

Technical Report on

IP Interconnection Routing

Alliance for Telecommunications Industry Solutions

Approved Month DD, YYYY

Abstract

As Service Providers introduce and expand IP-based service offerings, there is increasing interest in identifying the opportunities for the industry to facilitate IP routing of VoIP traffic using E.164 addresses. The ATIS/SIP Forum IP-NNI Task Force has taken on the initiative to develop a Technical Document and is publishing a draft report to describe the candidate proposals for circulation and comment. Recognizing that IP traffic exchange is developing as an overlay to existing TDM interconnection and will be implemented by different service providers with varying timelines, the purpose of this draft report is to:

1. Provide an overview of in-use and proposed architectures with the provisioning processes and calls flows to facilitate the exchange of VoIP traffic associated with IP-based services using E.164 addresses.
2. Present comparative characteristics that may be useful in understanding the approaches.
3. Consider how such in use and proposed solution(s) may be adopted and/or coexist, and evolve for transition to a future integrated registry envisioned at the FCC Numbering Testbed Workshop.

# Foreword

The Alliance for Telecommunications Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The [COMMITTEE NAME] Committee [INSERT MISSION]. [INSERT SCOPE].

The SIP Forum’s mission is to advance the adoption of products and services based on the Session Initiation Protocol and to maintain and serve a global community of commercial SIP based service and technology providers. The primary goals of the SIP Forum are to foster interoperability and adherence to standardization efforts, and provide educational resources and a platform for productive communication among industry participants.

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This document was developed by the ATIS/SIP Forum IP-NNI Task Force and is subject to change. The implementation of recommendations, methods and descriptions in this document are not mandatory and participation in the task force does not obligate any ATIS member company to use them.

This document represents the consensus view of the task force however the consensus views expressed herein should not be interpreted as an endorsement by any ATIS member company to create a new technical or regulatory requirement for commercial interconnection arrangements.

This document was developed by the ATIS/SIP Forum IP-NNI Task Force

Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, [COMMITTEE NAME], 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of consensus on this document, [COMMITTEE NAME], which was responsible for its development, had the following leadership:

[LEADERSHIP LIST]

The [SUBCOMMITTEE NAME] Subcommittee was responsible for the development of this document.

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# Scope, Purpose, & Application

## Scope

This document was developed under a joint ATIS/SIP Forum collaboration. The document discusses existing in-use and proposed routing solutions to facilitate the exchange of traffic associated with IP-based services between North American service providers.

Many options and issues were previously investigated by an ATIS Inter-Carrier VoIP Call Routing Focus Group (IVCR-FG), which issued its final report in February 2008. At that time, the IVCR-FG report noted that a number of vendor proposals have been made, but no initiative exists to develop the necessary standards needed to enable VoIP call interconnectivity [1].

The initial objectives of the ATIS/SIP Forum IP-NNI Task Force as memorialized in the agreement between ATIS and the SIP Forum included defining “the architecture and requirements for a shared “Thin” registry of NNI interconnection data.” The Task Force was unable to reach consensus on a single registry architecture. Accordingly, this report summarizes the various proposals for IP interconnection routing that have been discussed by the Task Force, both registry and non-registry based, and how they may interoperate.

Subsequent to the formation of the ATIS/SIP Forum IP-NNI Task Force, the Federal Communications Commission authorized the creation of a Numbering Testbed to “spur the research and development of the next generation standards and protocols for number allocation, verification, and call routing.”[2] The Commission also held a workshop to initiate a Numbering Testbed on March 25, 2014. Discussion at the Workshop focused on ideas for a “future integrated registry” that would support number allocation, verification, and call routing across all types of NANP numbers in a post TDM environment.

It should be noted that this initial report of the ATIS/SIP Forum IP-NNI Task Force report does not address the development of such an integrated registry, but instead focuses on the identification of existing in-use and proposed solutions to facilitate call routing across IP interconnections between now and the deployment of the future integrated registry envisioned at the Workshop.

## Purpose

As Service Providers introduce and expand IP-based service offerings, there is increasing interest in identifying the opportunities for the industry to facilitate IP routing of VoIP traffic using E.164 addresses. The ATIS/SIP Forum IP-NNI Task Force has taken on the initiative to develop a Technical Report and is publishing a draft report to describe the candidate proposals for circulation and comment. Recognizing that IP traffic exchange is developing as an overlay to existing TDM interconnection and will be implemented by different service providers with varying timelines, the purpose of this draft report is to:

1. Provide an overview of in-use and proposed architectures with the provisioning processes and calls flows to facilitate the exchange of VoIP traffic associated with IP-based services using E.164 addresses.
2. Present comparative characteristics that may be useful in understanding the approaches.
3. Consider how such in use and proposed solution(s) may be adopted and/or coexist, and evolve for transition to a future integrated registry envisioned at the FCC Workshop.

Based upon the output and feedback on this draft report, further analysis will be required including but not limited to:

1. Refine solution(s) that includes consideration of feedback obtained from the draft report.
2. Detail how existing in-use and proposed interim solution(s) may be adopted and/or coexist, and evolve.
3. Finalize comparative characteristics

## Application

This document describes in-use and proposed routing alternatives that may be used for planning North America deployments, but may be applicable for deployments outside North America.

Impact on Services - The routing alternatives described by this document are not intended to establish a new “compliance” requirement for existing or future products and services offered by any ATIS member company.

Impact on Interconnection Arrangements - The routing alternatives described in this document do not account for every routing alternative and although Providers may voluntarily employ them to facilitate interconnection planning, it is not a replacement for the technical discussions required during the development of commercial interconnection arrangements.

Impact on Regulations - Commercial interconnection arrangements allow Providers to address differences in their network and customer needs, and describing these alternatives in an ATIS Standard or Technical Report is not an endorsement by any ATIS member company to alter any existing regulatory obligation, or create a new regulatory obligation.