**Contribution**

**IP NNI Phase II Deliverables** (See Annex A for a detailed work plan)

1. **SIP Protocol Profile:**

*1.1 Point-to-Point Video*

Initial work has begun in the SIP Forum on SIP Connect 2.0 specification to enable interoperable point-to-point video communications from the Enterprise to the service provider/Operators’ network (Any-To-Any video interoperability).

The Task Force will identify and incorporate core functionality that is common across a number of existing video specifications, including identifying the potential need for new interworking functions.

The Task Force will incorporate current best practices and a set of new recommendations for inclusion in the ATIS SIP Protocol Profile specification to facilitate interoperability across all industry segments of the Video services/platforms.

*1.2 Anti-Spoofing Caller Validation Solutions*

The task force will develop a recommendation to facilitate anti-spoofing caller-ID validation solutions (new message bodies, new headers, etc.,) into the ATIS SIP Protocol Profile specification. The protocol profile will address the following:

* Protocol(s) used in the profile. If extensions or restrictions to the base protocol are recommended, these will be identified as well.
* Example (not reference) call flows identifying where the message flow fits into the call flows.

*1.3 Enhanced CNAM:*

The Task Force will recommend changes to the ATIS SIP Protocol Profile to facilitate Enhanced Calling Name Delivery (CNAM) mechanism. The Task Force will focus its initial efforts on Enhanced CNAM within the existing SIP signaling mechanism between trusted service providers.

1. **Testbed Landscape Team (TLT) Support:**

*2.1 Routing*

The task force will assess the Testbeds Landscape Team (TLT) routing use cases to provide the following input to assist in the development of the test plans:

* **Use case**: complete description of the use case.
* **Scope of the testing**: identify the functions and call flows to be tested.
* **Test plan**: provide input for the detailed test plan.

The task force will receive the output from the testing and decide at that time if further input is necessary.

*2.2 STIR*

The task force will assess the Testbeds Landscape Team (TLT) STIR use cases to provide the following input to assist in the development of the test plans:

* **Use case**: complete description of the use case.
* **Scope of the testing**: identify the functions and call flows to be tested.
* **Test plan**: provide input for the detailed test plan.

The task force will receive the output from the testing and decide at that time if further input is necessary.

1. **VoIP Security Whitepaper**:

The task force will undertake an assessment of security implications as the PSTN transitions from TDM to IP. The assessment will characterize the different levels of security between VoIP transported over the open Internet and VoIP over a managed IP service offered by the service provider to determine how each of these compare with the security of the TDM-based PSTN. Where issues are identified, the task force will discuss mitigation strategies that are being applied or evaluated.

Annex A – Proposed work plan detail – For task force use only.

1. **SIP Protocol Profile:**
	1. *Point-to-Point Video*

**Video Calling / Video Interoperability/Inter-Carrier Video Communications**

The initial Network to Network Interface specification, by design, was centered on voice communications. The ATIS SIP Forum Task Force will build on that work to facilitate Inter-Carrier multimedia communications between service providers over NNI interfaces, including video communications using E.164 as well as SIP URI addressing. Initial work has begun in the SIP Forum on SIP Connect 2.0 specification to enable interoperable point-to-point video communications from the Enterprise to the service provider/Operators’ network (Any-To-Any video interoperability). The Task Force will communicate with other Industry and Standards Development Organizations and consider current best practices and if required, recommend changes to the ATIS / SIP Forum SIP Protocol Profile to facilitate interoperability across Video services/platforms.

The Task force, to facilitate interoperability, will recommend:

* The IETF RFC’s and other standards to facilitate end to end rich multimedia communications across service provider boundaries.
* Minimum set of audio/video codecs
* Define security trust mechanisms
* Define Quality of Service mechanisms
* Identify and consider core functionality that is common across a number of video conferencing specifications at the NNI, including identifying the potential need for interworking functions.

Completion date July 2016

*1.2 STIR*

The task force will develop a proposed profile for implementing a STIR solution. The profile will address the following:

* Protocol(s) used in the profile. If extensions or restrictions to the base protocol are required, these will be specified as well. This would include open APIs used in the solution.
* Example call flows across the NNI, identifying:
	+ All elements involved in the call flow
	+ The actions or role performed by each element
	+ Clearly indicate where the STIR message flow across the NNNI fits into the routing call flows, and the elements where the example call flows share common infrastructure or protocols.
* Mechanisms for key discovery, key download, and key provisioning.

Completion date July 2016

*1.3 Enhanced CNAM*

The Task Force will recommend a technical profile for an Enhanced Calling Name Delivery (CNAM) mechanism. The CNAM service in the PSTN is a well-understood Signaling System 7 service. It is currently limited by a limit to the number of characters that can be displayed and the use of ASCII character set. The Task Force will focus its initial efforts on recommending a mechanism to deliver Enhanced CNAM within the existing SIP signaling mechanism between trusted service providers.

The recommendation would utilize some concepts now under development by ATIS PTSC for a verbose expression of CNAM Plus data fully imbedded within the SIP signaling mechanism or by URI reference to a trusted source.

The Task Force will not at this time address issues of trust mechanisms, data integrity or validity of the CNAM Plus data, provisioning mechanism or query response mechanisms from trusted data sources.

Consideration will be given to potential long term synergies with STIR.

Completion date: July 2016

1. **Testbed Landscape Team (TLT) Support:**

*2.1 Routing*

The task force will support the efforts of the Testbeds Landscape Team by providing routing interoperability test use cases for voluntary use among interested SPs and Vendors.

The task force will provide the following input to the Testbeds LT routing use cases:

* **Use case**: description of each use case.
* **Scope of the testing**: identify the elements and call flows that should be tested **Objective**: identify the expected outcome and success factors for the testing.
* **Test plan**: provide input for the detailed test plan.

The task force will receive the output from the testing and decide at that time if further steps are appropriate in developing an IP-NNI routing recommendation.

The task force will also evaluate ongoing IETF work that is relevant to the IP-NNI, and based on the analysis of the task force, and the results of ATIS and industry activity, develop consensus positions where possible. The consensus positions would help the task force members provide coordinated input into the relevant IETF working groups from a routing perspective. IETF WGs of interest would include, but not be limited to:

* MODERN

Target Completion: March 2016

*2.2 STIR*

The task force will propose how the STIR profile could be voluntarily tested by SPs and Vendors, including identifying:

* Functions involved in the testing
* Interfaces and/or APIs to be tested
* Call flow to be tested
* Detailed test plan
* Results expected

The task force will receive the output from the testing and decide at that time if further input is necessary.

The task force will also evaluate ongoing IETF work in STIR that is relevant to the IP-NNI, and based on the analysis of the task force, and the results of ATIS and industry activity, develop consensus positions where possible. The consensus positions would help the task force members provide coordinated input into IETF STIR.

Target Completion date July 2016

1. **VoIP Security Whitepaper**:

The task force will undertake an assessment of security implications as the PSTN transitions from TDM to IP. The white paper will specifically consider if the transition is leading to a PSTN that is more secure or less secure. The assessment will characterize the differences in security between VoIP transported over the open Internet and VoIP over a managed IP services offered by the service provider to describe how each of these compare with the security of the TDM-based PSTN. The interaction between the elements of the underlying transport infrastructure and the resulting resiliency and security at the VoIP application layer will be included in the scope of this assessment.

The task force will focus on implementable and deployable approaches to security rather than a theoretical analysis. Recognizing that security within each service provider’s network is not directly affected by standards, this analysis will take an interconnection / IP-NNI perspective. Where issues are identified, the task force will discuss mitigation strategies that are being applied or evaluated.

The task force will capture the results of this analysis in a white paper that will provide an informed assessment of the actual level of VoIP security when provided over a managed service provider IP network, and describe mitigation strategies to address any remaining issues. The white paper will be based on a solid technical analysis, but will be targeted to a policy audience.

Target completion date: January 2016.