AGENDA

1. What is the ATIS Robocalling Testbed?
2. Testbed process and participation status
3. Potential future areas for testing
4. How to register and participate?

WHAT IS THE ATIS ROBOCALLING TESTBED?

Formally launched in February 2017 to promote SHAKEN framework industry testing and broad adoption

Virtualized industry test platform to help service providers, suppliers and third parties verify implementations of ATIS SHAKEN framework for interoperability

Neustar partnered with ATIS to exclusively operate Testbed:

- ❑ Physical lab environment to support remote testing
- ❑ Lab support resources
- ❑ Applicable documentation to support testing
- ❑ Dedicated e-mail for Technical Support requests

Supports testing per ATIS/SIP Forum IP-NNI Task Force "Secure Telephone Identity (STI) Protocol Test Plan" (IPNNI-2018-00055) and joint standard, "SHAKEN" (ATIS-1000074)

Provides non-preferential participant access

Open to both ATIS members and qualified non-ATIS members

Supports scheduled testing 9:00 AM – 5:00 PM Eastern Time, Monday through Friday

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TESTBED SCOPE AND SHAKEN FRAMEWORK ARCHITECTURE

1. Secure Telephone Identity-Governance Authority (STI-GA) not shown
2. STI-Policy Administrator (STI-PA)
3. STI-Certification Authority (STI-CA)
4. STI-Certificate Repository (STI-CR)
5. Secure Key Store (SKS)
6. STI-Authentication Service (STI-AS)
7. STI-Verification Service (STI-VS)
8. Service Provider-Key Management Server (SP-KMS)
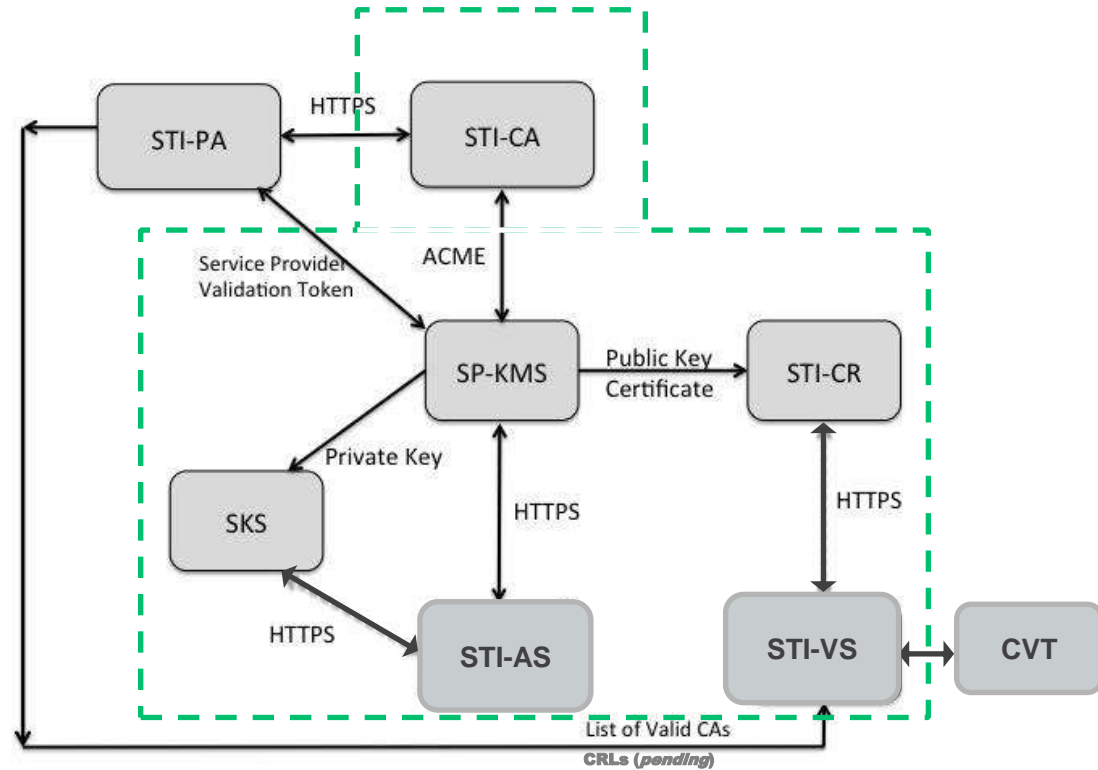9. Call Validation Treatment (CVT)

Figure 7.1 from ATIS-1000084

SUMMARY OF TESTBED CAPABILITIES

Call Authentication and Verification

❑ Authentication Service (STI-AS) instance

❑ Verification Service (STI-VS) instance

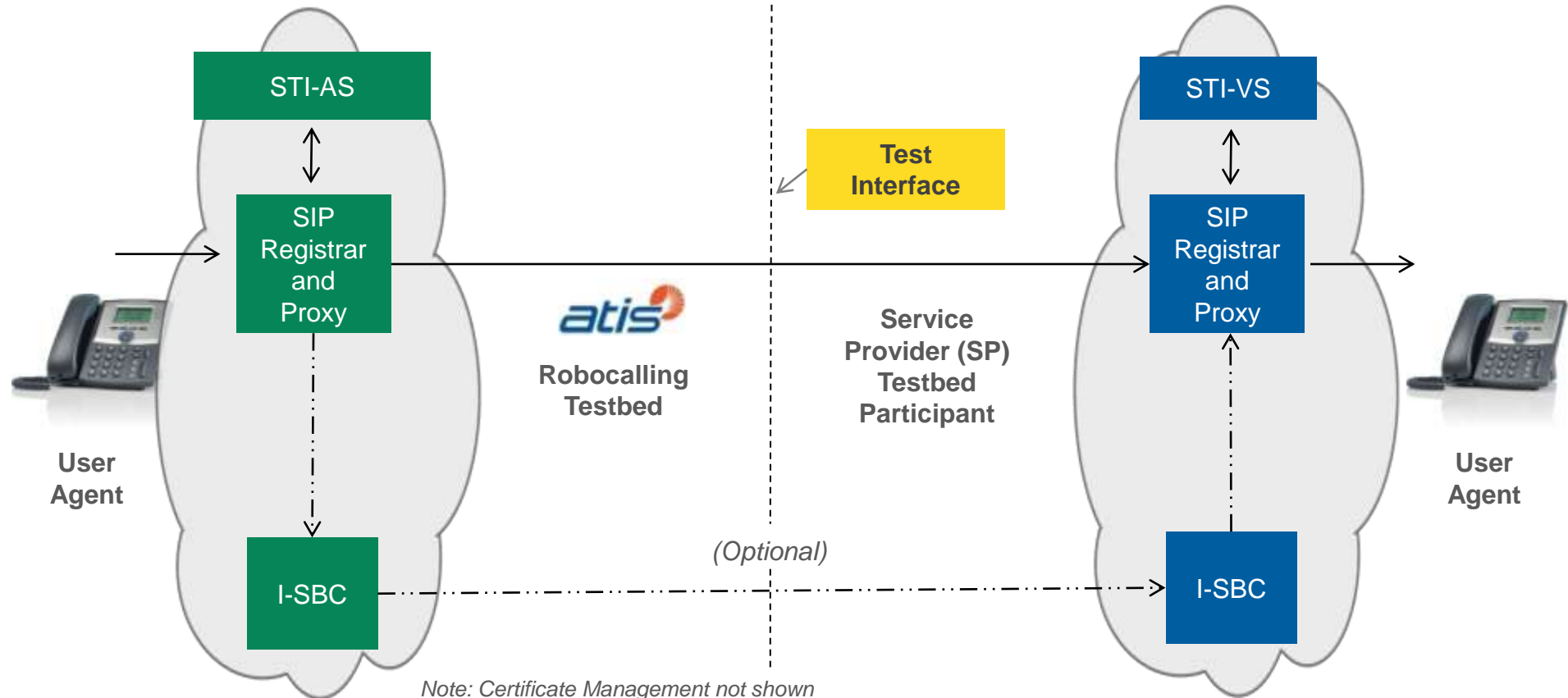❑ Both accessed via documented REST APIs or SIP Proxy

Certification Authority

❑ EJBCA instance (e.g., signing and storing certificates from Certificate Signing Requests, including "TN Authorization List" certificate extension)

❑ Integrated with STI-AS instance above through SP-KMS and supports any STI-VS as a public STI-CR

Access and Network infrastructure

❑ Phones

❑ Asterisk PBXs (SIP Registrars and Proxies)

❑ Oracle/Acme SBCs (simulating inter-carrier connectivity)

❑ Access Firewall (public Internet, whitelisting IPs)

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TYPICAL TEST SCENARIO #1
TESTBED SIMULATING SP AND ORIGINATING CALLS WITH STI-AS

STI-AS

SIP Registrar and Proxy

I-SBC

User Agent

Test Interface

Robocalling Testbed

Service Provider (SP) Testbed Participant

(Optional)

STI-VS

SIP Registrar and Proxy

I-SBC

User Agent

Note: Certificate Management not shown

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TYPICAL TEST SCENARIO #2
TESTBED SIMULATING SP AND TERMINATING CALLS WITH STI-VS

Note: Certificate Management not shown
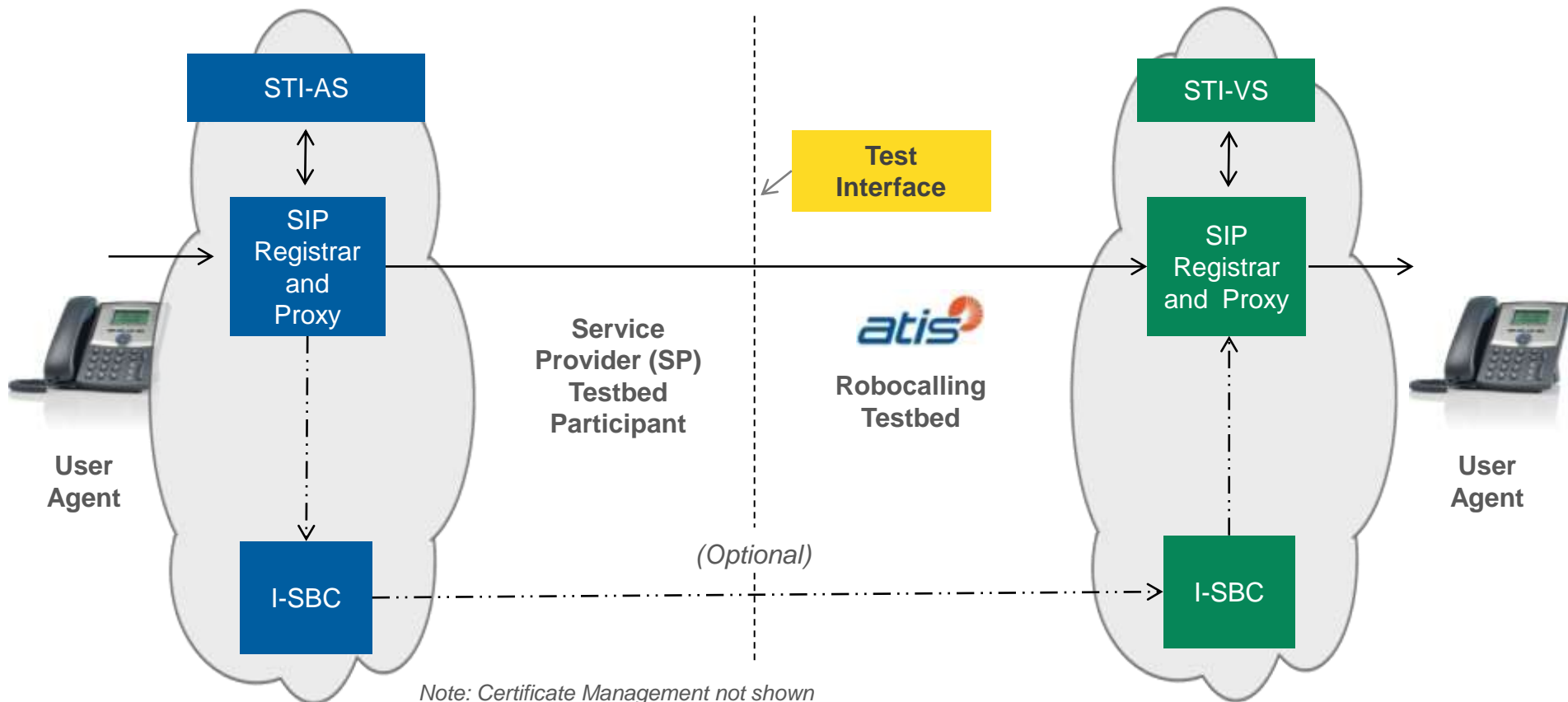
TESTBED PROCESS

1. Participant registers by signing two (prerequisite) documents

2. Neustar shares latest version of "ATIS Robocalling Testbed Connectivity Guidelines"

3. Neustar schedules and hosts testing kickoff call for review of test scenarios

4. Neustar drafts and posts detailed test plan document to private Participant folder managed through Neustar's implementation of the "Box" secure file sharing and collaboration application

5. Neustar further provides Participant access to separate, shared "Box" folder that contains all approved and anonymized "Test Results Summary" documents to date

6. Neustar and Participant schedule date and time to conduct testing (typically via Webex)

7. Neustar ensures that Testbed environment is properly configured in advance of testing

8. On completion (which usually takes several sessions), collectively complete detailed test plan document with traces and results for their own use and mutually agreed to summary of testing. The approved and anonymized Test Results Summary document is then published as .PDF file to shared folder referenced above

TESTING PARTICIPATION STATUS: SIPNOC 2017

20 Registered Test Participants

at&t · FIRST ORION · COMCAST · CenturyLink · bandwidth · SecureLogix · G · COX · Frontier · SOMOS · Charter COMMUNICATIONS · ERICSSON · InCharge Systems, Inc. · TransNexus · metaswitch · inteliquent · neustar · NOKIA · verizon · Sprint

Testing Status

- 4 Completed
- 4 In-progress/Pending

TESTING PARTICIPATION STATUS: SIPNOC 2018

37 Registered Test Participants

85% increase in Registrations

188% increase in Testing activity

Testing Status
- 14 Completed
- 9 In-progress/Pending

Testing participation rate: 54%
Testing mix:
  65% Vendors
  35% Service Providers

POTENTIAL FUTURE AREAS FOR TESTING

1. Certificate management interoperability, including STI-CA(s) (with "TN Authorization List" extension through Testbed SP-KMS (before and after STI-PA established)

2. PASSporT extensions beyond "shaken"

3. Ongoing standards compliance for STI-AS and STI-VS (e.g., expected errata)

4. Other?
   a. Multi-Participant testing (see next Slide)
   b. Industry display considerations (landline and mobile)
   c. Industry CVT considerations
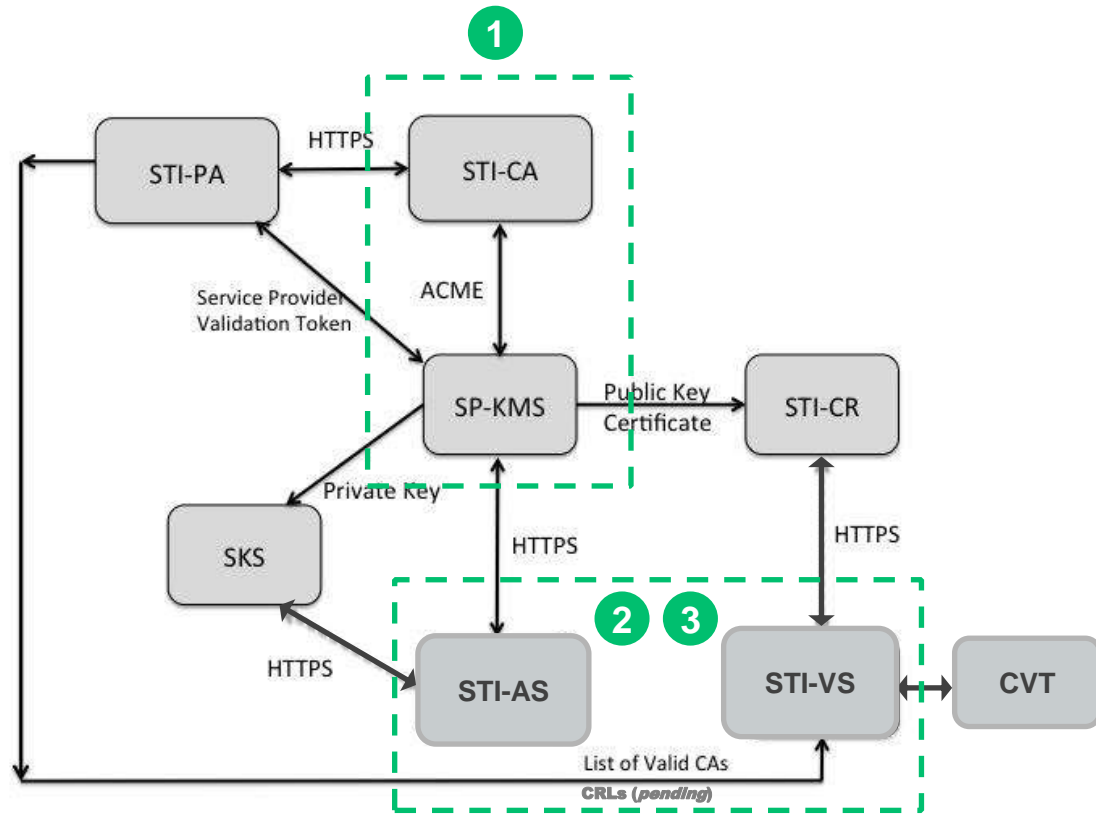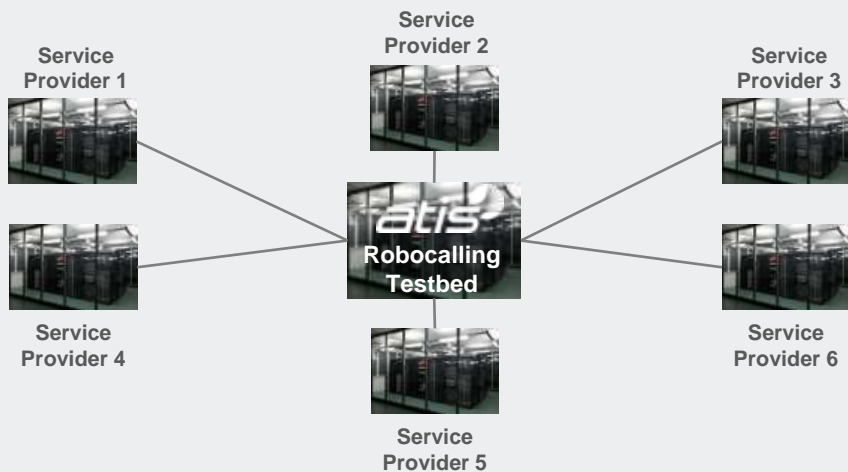

Figure 7.1 from ATIS-1000084

WHY PARTICIPATE?

Key Benefits:

Test (and re-test) against de facto "reference" implementation before testing in service provider labs

Industry interoperability through ATIS-developed test plan

Verify error-handling functionality through automated tool scripts (e.g., invalid certificates)

Industry feedback – share/discuss/resolve issues identified during testing

Remote access to virtual lab through uniform set of access, connectivity and configuration profiles

No cost testbed solution for ATIS and qualified non-ATIS members through at least 1Q 2019

HOW TO REGISTER AND PARTICIPATE?

Engage on-line at: https://www.neustar.biz/atis-testbed/index.php

Review, sign and return following two prerequisite documents:

- ❑ ATIS Confidentiality Agreement
- ❑ Neustar Robocalling Testbed Use Policy

- ▪ Review "ATIS Robocalling Testbed Overview" presentation

Request and review "ATIS Robocalling Testbed Connectivity Guidelines"

- ❑ Illustrates representative test scenarios
- ❑ Identifies technical information that a participant needs to provide for testbed access
- ❑ Provides technical information that a participant needs to configure and test
- ❑ Provides information on how an ATIS member "observes" testing

Engage through Technical Support link (robocall-testbed-support@neustar.biz)

Note: No scheduled testing will take place during holiday period of 12/17 through 1/4/19

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ABOUT NEUSTAR

Neustar, Inc. is a leading global information services provider driving the connected world forward with responsible identity resolution. As a company built on a foundation of Privacy by Design, Neustar is depended upon by the world's largest corporations to help grow, guard and guide their businesses with the most complete understanding of how to connect people, places and things. Neustar's unique, accurate and real-time identity system, continuously corroborated through billions of transactions, empowers critical decisions across our clients' enterprise needs. More information is available at https://www.communications.neustar/.

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