



**PSTN Transition Focus Group
Assessment and Recommendations**

January 2013



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Table of Contents

1	PROBLEM STATEMENT	1
2	SCOPE OF EFFORT.....	1
3	CURRENT STATE OF THE PSTN IN TRANSITION	1
4	IMPLICATIONS OF SOCIAL POLICY & REGULATION ON PSTN TRANSITION	1
5	ASSESSMENT & CONCLUSIONS.....	1
5.1	APPLICATION SERVICES	1
5.2	ACCESS.....	2
5.3	TRANSPORT	2
5.4	NUMBERING.....	3
6	RECOMMENDATIONS.....	3
6.1	APPLICATION SERVICES	3
6.2	ACCESS.....	4
6.3	TRANSPORT	4
6.4	NUMBERING	4
	APPENDIX A: APPLICATION SERVICES	7
A.1	INTRODUCTION.....	7
A.1.1	BACKGROUND	7
A.1.2	OBJECTIVE & SCOPE	7
A.1.3	DEFINITIONS	7
A.1.3.1	<i>PSTN in Transition</i>	7
A.1.3.2	<i>Successor Networks</i>	7
A.2	KEY INTERESTS.....	7
A.2.1	<i>Economic</i>	7
A.2.2	<i>Public Safety/Accessibility</i>	8
A.2.3	<i>National Security</i>	8
A.3	ASSESSMENT APPROACH	8
A.4	DEFINING PSTN SERVICES IN TRANSITION.....	8
A.4.1	<i>Core Voice Services/ Regulatory Services</i>	8
A.4.1.1	<i>Dual-Tone Multi-Frequency Signaling (DTMF)</i>	8
A.4.1.2	<i>Emergency Services</i>	9
A.4.1.3	<i>Lawful Intercept</i>	11
A.4.1.4	<i>Priority Services</i>	13
A.4.1.5	<i>Malicious Call Trace</i>	14
A.4.1.6	<i>Portability</i>	16
A.4.2	<i>Advanced Communication Services</i>	18
A.4.2.1	<i>CLASSSM Features</i>	18
A.4.2.2	<i>Database Services</i>	23
A.4.2.3	<i>ACD</i>	25
A.4.2.4	<i>IVR-based Systems</i>	26
A.4.2.5	<i>IN Services</i>	26
A.4.2.6	<i>Voicemail</i>	27
A.4.2.7	<i>Voice Conferencing</i>	29
A.4.3	<i>Media Services/CPE Dependent Services</i>	30
A.4.3.1	<i>Fax</i>	30
A.4.3.2	<i>Alarm System</i>	31
A.4.3.3	<i>BRI Services</i>	32
A.4.3.4	<i>PRI Services</i>	33
A.4.3.5	<i>Channel Associated Signaling (CAS) Trunk Services</i>	34

A.4.3.6	<i>Analog Loop Signaling</i>	35
A.4.4	<i>Accessibility/Assistance Services</i>	35
A.4.4.1	<i>Public Service Functions</i>	35
A.4.4.2	<i>Telecommunications Relay Services (TRS)</i>	39
A.4.4.3	<i>Video Relay Service (VRS)</i>	41
A.4.4.4	<i>IP Relay Service</i>	42
A.5	NEW SERVICES & CAPABILITIES IN SUCCESSOR NETWORK	43
A.5.1	<i>Presence</i>	43
A.5.2	<i>Location</i>	44
A.5.3	<i>Messaging</i>	46
A.5.4	<i>HD Voice</i>	47
A.5.5	<i>Video Calling/Conferencing</i>	48
A.5.6	<i>Content Sharing</i>	49
A.5.7	<i>Social Networking</i>	50
A.6	CONCLUSIONS & RECOMMENDATIONS	51
A.6.1	<i>PSTN Services Summary</i>	51
A.6.2	<i>New Applications in Successor Networks</i>	57
A.6.3	<i>Recommendations for Further Study</i>	58
A.7	ACRONYMS	58
APPENDIX B: ACCESS		64
B.1	INTRODUCTION	64
B.1.1	<i>Background</i>	64
B.1.2	<i>Objective & Scope – Access Networks</i>	64
B.1.3	<i>Definitions</i>	64
B.2	ASSESSMENT APPROACH	64
B.3	CPE STRANDING	65
B.3.1	<i>Stranding of Analog Phones</i>	65
B.3.2	<i>Stranding of Fax machines</i>	66
B.3.3	<i>Stranding of Alarm Systems</i>	66
B.3.4	<i>Stranding of Public Payphones</i>	66
B.3.5	<i>Stranding of TTY Devices</i>	66
B.3.6	<i>Stranding of Analog PBXes</i>	67
B.3.7	<i>Stranding of Other Types of CPE</i>	67
B.3.8	<i>CPE or Services Not Included in this Analysis</i>	67
B.4	CENTRAL OFFICE PROVIDED POWER	68
B.5	ROBUSTNESS	68
B.5.1	<i>Robustness During the PSTN Transition</i>	68
B.5.2	<i>Robustness After the PSTN Transition</i>	69
B.5.3	<i>Technologies to Improve Robustness</i>	69
B.6	CONCLUSIONS & RECOMMENDATIONS	69
APPENDIX C: TRANSPORT		72
C.1	INTRODUCTION	72
C.1.1	<i>Purpose</i>	72
C.1.2	<i>Definitions</i>	72
C.1.3	<i>Background</i>	74
C.2	INTERCONNECT REFERENCE MODELS	76
C.2.1	<i>ATIS NGN Architecture</i>	76
C.2.2	<i>IMS Architecture</i>	78
C.2.3	<i>i3 Forum Bi-Lateral Interconnect Model</i>	83
C.2.4	<i>i3 Forum Implementation Practices of the GSMA IPX Model</i>	92
C.2.5	<i>IETF models</i>	101
C.2.6	<i>Other Interconnect Models</i>	109
C.3	INTERCONNECT BUSINESS MODELS	110

C.4 TECHNICAL CONSIDERATIONS AT INTERCONNECT	112
C.4.1 Bundling of Signaling with Media	112
C.4.2 Addressing & Routing	112
C.4.3 Media Routing & NAT Traversal	112
C.4.4 Security	113
C.4.4.1 Signaling Security at Interconnect	113
C.4.4.2 Media Security at Interconnect	113
C.4.4.3 End Party Identify Verification & SPam over Internet Telephony (SPIT) Considerations	113
C.4.5 QoS in Support of Voice SLAs	113
C.4.6 Charging	120
C.4.7 Roaming	121
C.5 ASSESSMENT OF KEY INTERCONNECT MODELS	121
C.5.1 i3 forum	121
C.5.2 ATIS NGN	121
C.5.3 IMS	121
C.5.4 IETF	122
C.5.5 Other Models	122
C.5.6 Summary	122
C.6 CONCLUSIONS	122
C.6.1 Foreword	122
C.6.2 Observations/Expectations	122
C.6.3 Key Issues	123
C.6.4 Recommendations & Next Steps	125
APPENDIX D: NUMBERING	127
D.1 BACKGROUND	127
D.2 NAMES & ADDRESSES	127
D.3 TELEPHONE NUMBER STRUCTURE	127
D.4 RATE CENTERS & LATAS	129
D.5 INTERCONNECTION & ROUTING	129
D.6 GEOGRAPHY & TELEPHONE NUMBERS	129
D.7 IMPACT OF PSTN TRANSITION	130
D.8 FUTURE OF PSTN NAMES	130
D.9 ADDRESSING	130
D.9.1 IP Network Addressing	130
D.9.2 TDM Network Addressing	131
D.10 ADMINISTRATION	132
D.10.1 Network Resources	132
D.11 AUTHENTICATION	133
D.12 RECOMMENDATIONS	133
APPENDIX E: SOCIAL POLICIES & REGULATIONS	136

Table of Figures

FIGURE C.1 - CURRENT US TELEPHONY PSTN INTERCONNECT MODEL	75
FIGURE C.2 - BILATERAL CARRIER VOIP INTERCONNECTIONS	76
FIGURE C.3 - INTERCONNECTION REFERENCE MODEL	77
FIGURE C.4 - INTER-IMS NETWORK TO NETWORK INTERFACE BETWEEN TWO IM CN SUBSYSTEM NETWORKS	79
FIGURE C.5 - INTERWORKING MODEL FOR IM CN SUBSYSTEM TO IP MULTIMEDIA NETWORK	80
FIGURE C.6 - TRANSIT ROUTING VIA VPLMN AFTER SUCCESSFUL ENUM/DNS RESOLUTION - EXAMPLE USE CASE	81
FIGURE C.7 - FORCED HOME ROUTING - EXAMPLE USE CASE	81
FIGURE C.8 - GENERAL REFERENCE CONFIGURATION	83
FIGURE C.9 - GENERAL REFERENCE ARCHITECTURE BETWEEN CARRIERS	84

FIGURE C.10 - ACCESS AND NETWORK LINKS.....	85
FIGURE C.11 - SERVICE REFERENCE CONFIGURATION	86
FIGURE C.12 - ONE-TO-ONE INDIVIDUAL BI-LATERAL COMMERCIAL AGREEMENTS	87
FIGURE C.13 - SENDING PARTY PAYS (SPP) BUSINESS MODEL	88
FIGURE C.14 - TRANSPORT REFERENCE CONFIGURATION	89
FIGURE C.15 - IP INTERCONNECT LINKS – PRIVATE (MANAGED AND CONTROLLED)	90
FIGURE C.16 - EXAMPLES OF PUBLIC INTERCONNECTION.....	91
FIGURE C.17 - GENERAL IPX REFERENCE CONFIGURATION FOR VOICE SERVICES.....	93
FIGURE C.18 - EXAMPLE OF IPX DOMAIN	95
FIGURE C.19 - HIERARCHICAL TIERED ENUM ARCHITECTURE.....	102
FIGURE C.20 - ENUM INTERCARRIER INTERCONNECT EXAMPLE.....	104
FIGURE C.21 - IETF RTCWEB MODEL	106
FIGURE C.22 - SIMPLIFIED INTER-TECHNOLOGY INTERCONNECT RTCWEB.....	107
FIGURE C.23 - ICE ESTABLISHMENT OF PEER TO PEER CONNECTION.....	108
FIGURE C.24 - SIMPLIFIED BUSINESS MODEL WITH NO ROAMING OR SNI.....	110
FIGURE C.25 - SIMPLIFIED BUSINESS MODEL WITH ROAMING AND NO SNI.....	111
FIGURE C.26 - SIMPLIFIED BUSINESS MODEL SHOWING SNI WITHOUT ROAMING	111
FIGURE C.27 - REFERENCE CONFIGURATION FOR QoS MEASUREMENT	118
FIGURE D.1 - TN STRUCTURE	128

Table of Tables

TABLE A.1- ETS DOCUMENTS PRODUCED OR IN PROGRESS IN THE ATIS PTSC	14
TABLE A.2 - CLASS FEATURES AND GENERIC REQUIREMENTS DOCUMENTS.....	18
TABLE A.3 - SPECIFICATIONS AND GENERIC REQUIREMENTS FOR VOICEMAIL.....	29
TABLE A.4 - LIST OF SERVICES AND DRIVERS	51
TABLE C.1 - MANDATORY AND OPTIONAL NARROW BAND CODECS FOR VOICE	98
TABLE C.2 - MANDATORY AND OPTIONAL WIDEBAND CODECS FOR VOICE	98
TABLE C.3 - PACKETCABLE IP INTERCONNECT SPECIFICATIONS AND DOCUMENT CONTROL NUMBERS.....	103
TABLE C.4 - LEGEND FOR DIAGRAM OF ENUM INTERCARRIER INTERCONNECT EXAMPLE (FIGURE C.20).....	105
TABLE C.5 - RELATIONSHIP OF SYMPTOMS, NETWORK INFLUENCES AND QoS METRICS	115
TABLE D.1 - QUANTITY OF NUMBERING RESOURCES	128
TABLE E.1 - EXISTING SOCIAL POLICIES AND REGULATIONS	136

Executive Summary

1 Problem Statement

The infrastructure of the Public Switched Telecommunications Network (PSTN) has been transitioning from TDM (time division multiplex) technology to IP (Internet Protocol). The TDM network that consists of a telecommunications service provider providing a single-purpose voice connection to the consumer is being replaced by an IP network where a voice application (Voice over IP, or VoIP) is transported over a multi-purpose broadband connection.

IP is significantly different from TDM. The existing processes and regulations associated with the PSTN are based on a TDM network. As the network transitions to IP, it is important for the industry to evaluate the impact of this transition and make changes and recommendations where necessary. The ATIS PSTN Transition Focus Group was formed to examine this issue.

2 Scope of Effort

The PSTN Transition to an IP-based network will impact many facets of the current network. For this reason, it was decided to assess this transition across four areas of network evolution: *application services, access, transport, and numbering*. The subsequent analysis will provide conclusions and recommendations around each of these topics.

3 Current State of the PSTN in Transition

The PSTN is in transition as more and more consumers each year decide to forego PSTN fixed voice in favor of alternative communications technologies. The PSTN is a voice-centric network that no longer satisfies all of the interactive communication needs and demands of the broad base of consumers. The transition opens many opportunities for new and richer communication capabilities. Interoperability between existing PSTN services and these newer IP-based services will need to continue for a number of years. Thus, PSTN transition is an *evolutionary* process, not a network replacement event.

“Successor networks” will consist of multiple interconnected networks supporting a range of IP-based services and applications. Consumers will have access to a baseline set of voice and data communication services. To meet our national goals, these services will have to achieve certain targets with respect to reliability, emergency notification, accessibility, and other critical needs.

4 Implications of Social Policy & Regulation on PSTN Transition

The Focus Group also reviewed the various aspects of the PSTN transition in the context of existing social policies and regulations. The identification of the key social policy areas related to PSTN transition and the associated regulatory framework related to each policy (see Appendix E) provided a baseline for further examination of the application services, access, transport, and numbering issues impacting the network evolution.

5 Assessment & Conclusions

5.1 Application Services

To understand the impacts on the PSTN services in transition, each application was analyzed in multiple dimensions. Consideration was given to both the current and future states as well as any implications for