ATIS-0300032

ATIS Standard on -

Next Generation Interconnection Interoperability Forum (NGIIF) Reference Document

Part X, Interconnection Between LECS Operations Handbook – Local Interconnection Service Arrangement

Version 14

As a leading technology and solutions development organization, the Alliance for Telecommunications Industry Solutions (ATIS) brings together the top global ICT companies to advance the industry's most pressing business priorities. ATIS' nearly 200 member companies are currently working to address the All-IP transition, 5G, network functions virtualization, big data analytics, cloud services, device solutions, emergency services, M2M, cyber security, network evolution, quality of service, billing support, operations, and much more. These priorities follow a fast-track development lifecycle — from design and innovation through standards, specifications, requirements, business use cases, software toolkits, open source solutions, and interoperability testing.

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Approved November 8, 2019

Abstract

The purpose of this document is to outline the procedures for installation, testing, maintenance and arrangement of local interconnecting service trunks. Included within the document are: Responsibilities for Local Service Customers (LSC) and Local Service Providers; Telecommunication Service Priority (TSP) guidelines; NXX Code Opening Guidelines; Trunk trouble reporting, trunk make busy, clearance, restoration guidelines. Where applicable, this document may address NGN aspects.

Foreword

The Alliance for Telecommunications Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Next Generation Interconnection Interoperability Forum (NGIIF) addresses next-generation network interconnection and interoperability issues associated with emerging technologies. Specifically, it develops operational procedures which involve the network aspects of architecture, disaster preparedness, installation, maintenance, management, reliability, routing, security, and testing between network operators. In addition, the NGIIF addresses issues which impact the interconnection of existing and next generation networks and facilitate the transition to emerging technologies.

The mandatory requirements are designated by the word *shall* and recommendations by the word *should*. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages. The word *may* denotes an optional capability that could augment the standard. The standard is fully functional without the incorporation of this optional capability.

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

At the time of consensus on this document, NGIIF, which was responsible for its development, had the following leadership:

Karen Riepenkroger, Sprint

Randee Ryan, Comcast

Trademark Acknowledgements

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1 Scope, Purpose, & Application

The purpose of this document is to outline the procedures for installation, testing, maintenance and arrangement of local interconnecting service trunks. Included within the document are: Responsibilities for Local Service Customers (LSC) and Local Service Providers; Telecommunication Service Priority (TSP) guidelines; NXX Code Opening Guidelines; Trunk trouble reporting, trunk make busy, clearance, restoration guidelines. Where applicable, this document may address NGN aspects.

2 Informative References

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ATIS-0300009, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part I, Installation and Maintenance Responsibilities Special Access Services, WATS Access Lines and Switched Access Services Feature Group A.*[1]

ATIS-0300010, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part II, Installation and Maintenance Responsibilities Switched Access Services Feature Group B, C, and D.*[1]

ATIS-0300011, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part III, Installation and Maintenance Responsibilities for SS7 Links and Trunks.*[1]

ATIS-0300013, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part III, Installation, Testing and Maintenance Responsibilities for SS7 Links and Trunks Attachment B ISUP Compatibility Tests.*[1]

ATIS-0300024, *Next Generation Interconnection Interoperability (NGIIF) Reference Document Part V, Test Line Guidelines.*[1]

ATIS-0300026, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part VI, Network Management Guidelines.*[1]

ATIS-0300030, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part IX, Installation, Testing and Maintenance Responsibilities of Facilities.*[1]

ATIS-0300033, *Part X, Interconnection Between LECS Operations Handbook – Local Interconnection Service Arrangement, Attachment A, Security Guidelines.*[1]

ATIS-0300046, *Recommended Notification Procedures to Industry for Changes in Access Network Architecture.*[1]

[1] This document is available from the Alliance for Telecommunications Industry Solutions (ATIS) at: < https://www.atis.org/docstore/ >.

ATIS-0300119, Thousands-Block (NPA-NXX-X) & Central Office Code (NPA-NXX) Administration Guidelines (TBCOCAG).[1]

GR-334, *Switched Access Service: Transmission Parameter Limits and Interface Combinations.*[2]

T1.TRQ.02-2001, *Number Portability Switching Systems (Revision of T1.TRQ.2-1999).*[1]

3 Definitions, Acronyms, & Abbreviations

For a list of common communications terms and definitions, please visit the *ATIS Telecom Glossary*, which is located at < http://www.atis.org/glossary >.

3.1 Acronyms & Abbreviations

ACAT	Additional Cooperative Acceptance Testing
AMA	Automatic Message Accounting
ANAC	Automatic Number Announcement Circuit
ASR	Access Service Request
ATIS	Alliance for Telecommunications Industry Solutions
CNAM	Calling Party Name
CPN	Calling Party Number
FCC	Federal Communications Commission
INC	Industry Numbering Committee
ISO	Issue Service Orders
LEC	Local Exchange Carrier
LSC	Local Service Customer
LSP	Local Service Provider
NGIIF	Next Generation Interconnection Interoperability Forum
NS/EP	National Security Emergency Preparedness
OBF	Ordering and Billing Forum
POT	Point of Termination
SP	Service Provider
SS7	Signaling System 7
TCIC	Trunk Circuit Identification Code
TQ	Translation Questionnaire

[2] This document is available from Telcordia at < https://telecom-info.telcordia.com >.

TSP	Telecommunication Service Priority

4 General

This document has been developed to provide operation personnel of interconnecting LECs with guidelines for the installation, testing, and maintenance of local interconnection service arrangement trunk(s) and services.

This document does not replace or supersede any tariffs, contracts or other legally binding documents. In case of conflict between this document and any legally binding document, such other document will prevail.

A Local Exchange Carrier (LEC), as referred to in this document, is any company that has been authorized to provide local exchange services.

Local Service Provider (LSP) is defined as the LEC selling local interconnection service arrangement trunk(s) to another LEC.

Local Service Customer (LSC) is defined as the LEC purchasing local interconnection service arrangement trunk(s) from another LEC.

The following are some examples of interconnection between LSPs and LSCs in an IntraLATA environment:

- End Office to End Office
- End Office to Tandem

Local interconnection service arrangements may include all wiring, cable, equipment and facilities up to the Point of Termination (POT). These guidelines also generally apply to E9-1-1 and Operator Assistance trunking.

5 Responsibilities

5.1 Local Service Customer (LSC)

The following are the responsibilities of LSCs:

- Provide trained personnel
- Advise the LSP when there is a potential service affecting LSC network failure
- Provide a contact number for trouble reporting that is readily accessible 24 hours a day, 7 days a week
- Maintain complete and accurate installation and repair records
- Provide LSP personnel access to the Point of Termination (POT) when required
- Provide access to test lines where appropriate
- Provide billing authorization to the LSP for any additional labor requested
- Ensure the test equipment used is compatible with the LSP's test equipment
- Cooperate with the LSP ensuring that trunks are installed in accordance with the service requests
- Notify the LSP of any changes affecting the service requested, including the service due date
- Assume control functions for maintenance of its trunk(s)
- Consult with the LSP before making any changes that could affect service, except under emergency conditions (See Clause on Network Modification)
- Accept trouble reports from their end users
- Accept trouble reports from the LSPs
- Sectionalize and clear the trouble in its own network
- Test cooperatively with the LSP to identify and clear a trouble, when the trouble has been sectionalized to an LSP network

- Keep their end user advised of the status of all trouble report(s)
- Perform cooperative analysis to determine if a trouble pattern exists
- Refer troubles to the LSP using the trouble reporting procedures
- Dispatch its own maintenance forces
- Perform verification tests to ensure that trouble has been cleared
- Perform scheduled testing and other maintenance services when requested
- Participate cooperatively with the LSP to further isolate and clear the trouble when trouble exists and cannot be sectionalized to the LSP or LSC portion
- Where it is technically feasible, signaling for all internetwork calls to a 10-digit telephone number should always be sent or received using 10 digits for the called party number, independent of how the call is dialed.

5.2 Local Service Provider (LSP)

The following are the responsibilities of LSPs:

- Provide trained personnel
- Advise the LSC when there is a potential service affecting LSP network failure
- Provide a contact number for trouble reporting that is readily accessible 24 hours a day, 7 days a week
- Maintain complete and accurate installation and repair records
- Consult with the LSC before making any changes that could affect service except under emergency conditions (See Clause on Network Modification)
- Provide access to test lines where appropriate
- Assume control functions for installation of the trunk(s)
- Coordinate with the LSC, ensuring that trunks are installed in accordance with the service request
- Notify the LSC of any changes affecting the service requested, including the service due date
- Accept trouble reports from the LSC
- Sectionalize and clear the trouble in its own network
- Test cooperatively with the LSC to identify and clear a trouble when the trouble has been sectionalized to the LSC network
- Perform cooperative analysis to determine if a trouble pattern exists
- Refer troubles to the LSC using the trouble reporting procedures
- Dispatch its own maintenance forces
- Clear troubles in its own network
- Perform verification tests to ensure that trouble has been cleared
- Provide status reports to the LSCs regarding installation and repair activity, or provides access to systems that will provide trouble status
- Perform scheduled testing and other maintenance services when requested
- Where it is technically feasible, signaling for all internetwork calls to a 10-digit telephone number should always be sent or received using 10 digits for the called party number, independent of how the call is dialed

6 Telecommunications Service Priority (TSP) Guidelines

This Clause provides TSP installation and maintenance guidelines for access services. This Clause further provides generic administrative procedures and interfaces between LSCs and the LSPs.

The TSP system provides for the priority treatment of National Security Emergency Preparedness (NS/EP) telecommunication services in order to prioritize their installation and maintenance.

In order for the TSP system to be effective, it MUST be incorporated into the day-to-day operating procedures for all LSPs and LSCs. All communications carriers are expected to cooperate in the installation and restoration of services with TSP that involve the facilities of more than one carrier.

6.1 Domestic NS/EP Services

The NS/EP TSP system and procedures provide priority treatment to the following domestic telecommunication services (including portions of U.S. international telecommunication services provided by U.S. providers) for which provisioning or restoration priority levels are requested, assigned, and approved:

- Commercially provided private services and public switched services

NOTE: Initially, the NS/EP TSP system's applicability to public switched services is limited to provisioning of such services (e.g., business, centrex, cellular, foreign exchange, Wide Area Telephone Service (WATS), other services that the selected vendor is able to provision, and restoration of services that the selected vendor is able to restore.

- Services that are provided by Government and/or non-common carriers and are interconnected to common carrier services assigned a priority level pursuant to Section 9 of the FCC's TSP system rules.

6.2 Control Services and Orderwires

The NS/EP TSP system and procedures are not applicable to authorize priority treatment to control services or orderwires owned by a service provider and needed for provisioning, restoration or maintenance of other services owned by that service provider. Such control services and orderwires shall have priority of provisioning and restoration over all other telecommunications services (including NS/EP services) and shall be exempt from preemption. However, the NS/EP TSP system and procedures are applicable to control services or orderwires leased by a service provider or user from another service provider.

6.3 Other Services

The NS/EP TSP system may apply, at the discretion of and upon special arrangements by the entities involved, to authorize priority treatment to the following telecommunications services:

1. Government or non-common carrier services which are not connected to common carrier- provided services assigned a priority level
2. Portions of U.S. international services that are provided by foreign correspondents

6.3.1 TSP Code Identification

The TSP Authorization Code is composed of twelve characters and is divided into two parts. The first nine characters comprise the TSP Control ID, a computer-generated number used for the government's tracking purposes. A hyphen is always the tenth character and it separates the TSP Control ID from the TSP Code. The final two characters are the TSP Code. The first character of the TSP Code (the eleventh character of the entire series) indicates the provisioning priority. Acceptable values are: E (Emergency), 1, 2, 3, 4, 5, or 0. A value of "0" indicates no provisioning priority is assigned.

The second character of the TSP Code (the twelfth character of the entire series) indicates the restoration priority. Acceptable values: 1, 2, 3, 4, 5, or 0. A value of "0" indicates no restoration priority is assigned.

A TSP Authorization Code is illustrated below:

T S P 1 2 3 4 5 C - 1 2

| |

Control ID Code

Figure 1: TSP Authorization Code

Table 1 below depicts the codes (eleventh and twelfth digits) allowable in the TSP system. A code of “0-0” indicates “Revocation”, the removal of a previously assigned TSP code.

Table 6.1- TSP Codes Reference Table

TSP Provisioning/Restoration Priority Levels

	P-R	P-R	P-R	P-R	P-R	P-R	P-R	
	E-1	1-1	2-1	3-1	4-1	5-1	0-1	
	E-2	1-2	2-2	3-2	4-2	5-2	0-2	
HIGHER ↑	E-3	1-3	2-3	3-3	4-3	5-3	0-3	↓ LOWER
←	E-4	1-4	2-4	3-4	4-4	5-4	0-4	→
	E-5	1-5	2-5	3-5	4-5	5-5	0-5	
	E-0	1-0	2-0	3-0	4-0	5-0	0-0	

E = Emergency Priority Level

P = Provisioning Priority Level

R = Restoration Priority Level

6.4 TSP Installation

Circuits with an E (Emergency) provisioning priority have the highest priority and must be installed As Soon As Possible (ASAP), dispatching outside of normal business hours when necessary. Circuits with TSP provisioning priorities 1 - 5 will be installed by the due date according to the TSP provisioning priority assigned (see Table 1 above). For example, a circuit with a provisioning priority of "1" would be installed before a circuit with a provisioning priority of “2" when they both carry the same appointment date.

6.5 TSP Maintenance

Available resources should be allocated to restore NS/EP services as quickly as practicable, dispatching outside normal business hours to restore services assigned priority levels "1", "2" and "3" when necessary and services assigned priority levels "4" and "5" when the next business day is more than 24 hours away.

The day-to-day administration for repair and restoral of services assigned a TSP restoration priority is shown in the following examples:

6.5.1 Example 1

If there are several pending Trouble Reports for circuits that do not have TSP restoration codes, and a new Trouble Report is received for a circuit with a TSP code of 23, that Trouble Report becomes the next Trouble Report to be worked, ahead of the other circuit Trouble Reports that have no TSP restoration codes. Upon completion of the repair/restoral of the TSP23 circuit, work continues on the Trouble Reports for the circuits that have no TSP restoration codes.

6.5.2 Example 2

If there are several Trouble Reports to be worked (which includes a circuit with a TSP23 code), and two new Trouble Reports are received for circuits with higher TSP restoration codes (such as TSP21 and TSP22), the circuit Trouble Report with the TSP21 code becomes the next Trouble Report to be worked, followed by the TSP22 circuit Trouble Report. The TSP23 circuit Trouble Report would then move ahead of the other Trouble Reports for the circuits that have no TSP codes. Upon completion of the repair/restoral of the TSP21, TSP22 and TSP23 circuits, work then continues on the Trouble Reports for the circuits that have no TSP codes.

6.6 Competition for Resources Between Provisioning and Restoration Priorities

In general, service providers should restore existing services assigned TSP priority before provisioning new service; an exception is the provisioning of services assigned emergency priority, which should always be done before the restoration of services assigned restoration priorities "2", "3", "4" or "5". Restoration of any service assigned restoration priority "1" takes precedence over any other service assigned any other provisioning and restoration priority.

When two or more TSP services are competing for resources, the priority sequence listed below will ensure proper handling of these circuits:

- Restore TSP services with restoration priority of “1”
- Provision TSP services with provisioning priority of “E”
- Restore TSP services with restoration priority of 2, 3, 4, and 5
- Provision TSP services with provisioning priority of 1, 2, 3, 4, and 5

Using the priority sequence listed above, the following are examples of two TSP services competing for the same resources at the same time. The underlined TSP service has the higher priority and should be worked on first:

- TSP code 2-1 and E-2 both in trouble status 2-1
- TSP code 2-1 in trouble and E-2 to be provisioned 2-1
- TSP code 2-1 to be provisioned and E-2 in trouble E-2
- TSP code 2-1 and E-2 to be provisioned E-2

6.7 TSP Installation Preemption

Where facilities and/or equipment are not available to install a service assigned a TSP priority, preemption (interruption of an existing service) of a non-priority or lower priority circuit may be required. User consent is NOT required to preempt any user's existing service to provision an NS/EP service assigned a provisioning priority level "E" (Emergency) or to provision an NS/EP service assigned a provisioning priority level "1" through "5".

6.8 TSP Maintenance Preemption

Facilities of message circuits may be used for restoral of services assigned a TSP restoration priority after ensuring that sufficient message circuits are available for public switched network use.

Where facilities and/or equipment are not available to restore a service assigned, a TSP restoration priority preemption (interruption of an active service) may be required. Interruption of a non-priority or lower priority circuit is authorized for the purpose of restoring the service assigned a TSP restoration priority.

6.8.1 To Restore Interrupted NS/EP Services

User consent is not required to preempt any user's existing service to restore any NS/EP service assigned a restoration priority lever from "1" through "5".

6.8.2 NS/EP Services

If no suitable spare or non-NS/EP services are available, existing NS/EP services may be preempted to restore NS/EP services with higher priority level assignments. When this is necessary, NS/EP services will be selected for preemption in the inverse order of priority level assignment.

Service vendors who are preempting services will ensure their best effort to notify the service user of the preempted service and state the reason for, and estimated duration of, the preemption.

7 NXX Code Openings[3]

NOTE: For information related to NPA-NXX testing refer to ATIS-0300024, Next Generation Interconnection Interoperability (NGIIF) Reference Document Part V, Test Line Guidelines.

This Clause outlines the process and procedures for the testing of newly assigned Central Office NXX or NXX-X codes opened for the first time. In addition, this Clause provides references for the user to ensure that they are familiar with the obligations associated with obtaining codes and notifying the industry of the pending opening of CO NXX codes. In a Thousands Block Number Pooling environment the first thousands block that is opened in a NPA/NXX will follow the same rules as outlined in all NXX code opening procedures. NPA/NXX and NPA/NXX-X are interchangeable in NXX code opening scenarios throughout the NGIIF documentation. In these cases, the Code Holder is responsible for the testing.

The non-operational aspects contained in this Clause do not replace or supersede existing industry forum agreements or documents covering NXX or NXX-X Code opening processes. Listed below are specific documentation provided by the Industry Numbering Committee (INC) and NGIIF that provides guidance to Code Administrators, Service Providers and Service Customers when obtaining, activating, and testing NXX or NXX-X codes:

- ATIS-0300046, Recommended Notification Procedures to Industry for Changes in Access Network Architecture
- ATIS-0300010, Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part II, Installation and Maintenance Responsibilities Switched Access Services Feature Group B, C, and D
- ATIS-0300032, Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part X, Interconnection Between LECS Operations Handbook – Local Interconnection Service Arrangement (this document)
- ATIS-0300119, Thousands-Block (NPA-NXX-X) & Central Office Code (NPA-NXX) Administration Guidelines (TBCOCAG)

[3] Clause 6 of ATIS-0300010, *Part II, Installation and Maintenance Responsibilities, Switched Access Services, Feature Group B, C, and D, of the NGIIF Reference Document*, includes the same information on NXX Code Openings. Any changes to this Clause should also be reflected in Clause 6 of ATIS-0300010, *Part II, Installation and Maintenance Responsibilities, Switched Access Services, Feature Group B, C, and D, of the NGIIF Reference Document.*

7.1 NXX of NXX-X CO Code Activation Planning

Service Providers requesting CO Code activation where the code involves the use of newly established switching facilities or additional interconnection trunking should perform the following prior to call through testing:

- Set up a planning session with the appropriate service providers where the code is being opened to determine what types of interconnection arrangements are required.
- Issue Service Orders (SO) to establish the appropriate facilities using the Access Service Request (ASR) and or translations using the Translation Questionnaire (TQ) for routing purposes.[4]
  - Access Service Request (ASR) Form Preparation Guide

    (ATIS/OBF - ASR - 001)
  - Trunking Service Request Form Preparation Guide.

    (ATIS/OBF - ASR - 004)
  - Translation Questionnaire (TQ) Form Preparation Guide

    (ATIS/OBF - ASR - 019)

7.2 Pre-NXX or NXX-X Activation

The following reference is provided to aid in the performance of activation and testing of CO NXX or NXX-X Codes:

7.2.1 BIRRDS

Before a CO Code (NXX or NXX-X) can become active, the service provider requesting a new CO Code is responsible for either directly inputting the information in Part 2 of the CO Code Assignment Request form into BIRRDS, providing it to the Code Administrator, or another party with BIRRDS access for entry.

7.2.2 iconectiv® LERG™ Routing Guide

During the process of entering the new CO Code (NXX or NXX-X) in the iconectiv LERG Routing Guide the code holder must identify the points of interconnection in the LATA where the CO Code resides. In addition, the code holder shall immediately assign a number to be utilized for call through testing purposes upon receipt of the CO Code and shall place the test number in the iconectiv LERG Routing Guide when entering the CO Code into the iconectiv LERG Routing Guide.

7.2.3 Facilities

Offices attempting to complete a call through test to the new CO Code (NXX or NXX-X) when the facilities are not in place shall contact the code holder and inform them that the routing of calls will not take place until the appropriate facility orders have been completed.

In cases where orders have been placed with LECs for facilities, but have not been implemented, the LEC shall provide the appropriate support to ensure that the orders are complete and appropriate testing has been performed to meet the due date.

7.2.4 Points of Interconnection

In cases where points of interconnection in the home NPA have not been identified and/or facilities have not been placed, the code holder (NXX or NXX-X) will accept full responsibility for placing such orders with the local exchange carrier (LEC) and schedule the due date for facilities testing. This will ensure that the facilities are in place prior to the date of the code opening identified in the iconectiv LERG Routing Guide. The LEC cannot be expected to meet

[4] Access Service Ordering Guidelines (ASOG), available at https://www.atis.org/docstore/.

the original effective date in the iconectiv LERG Routing Guide if all supporting information is not received in a timely manner.

If interconnection already exists between service providers and a CO Code is being opened, the code holder shall provide appropriate routing information in the iconectiv LERG Routing Guide to inform other service providers with which they do not have direct interconnection.

Where direct interconnection exists between service providers, it is presumed that all new CO Codes would be routed the same way as existing CO Codes, unless otherwise specified by the code holder in the ASR.

7.3 Translation Validation/Call Through Testing

The following process is outlined for the activation of new CO Codes (NXXs or NXX-X's) to provide assurance that routing and billing translations are tested/validated appropriately by service providers and IXCs. The following information also includes activities for serving switch change or tandem rehome of switch serving CO Codes (NXXs or NXX-X's)

Upon receipt of notification (the iconectiv LERG Routing Guide) that a new CO Code is to be activated all service providers shall ensure the integrity of routing and billing by the effective date in the LERG Routing Guide. For established CO Codes where there is a change to the serving switch or a switch tandem rehome the service providers, not directly interconnected with the service provider making the changes, will ensure routing and billing changes on the LERG Routing Guide effective date. The service provider(s) directly interconnected and the service provider making the changes will negotiate a time as to when the translations changes will take place.

The service provider assigned the new CO Code or implementing changes to the serving switch or implementing a switch tandem rehome will provide a test number that terminates to a recorded announcement (preferable) or milliwatt (1004 Hz) to provide assurance to personnel performing call through tests that they have indeed reached the terminating (serving) office.

Where billing is required, Automatic Message Accounting (AMA) validation shall take place by the service providers.

7.4 Intermediate Office(s) (Tandems/Access Tandems)

Intermediate Office(s) are those in which InterLATA and IntraLATA calls are routed to reach someone in a newly opened CO Code (NXX or NXX-X). Intermediate Offices shall:

- Complete all translations work five (5) calendar days prior to the date identified in the iconectiv LERG Routing Guide as the effective date.
- Perform Call Through testing starting five (5) calendar days prior to the date identified in the iconectiv LERG Routing Guide as the effective date.
- Identify problems during call through testing and resolve such problems prior to the effective date identified in the iconectiv LERG Routing Guide.
- For established CO Code(s) where there is a change to the serving switch or a switch tandem rehome, the service provider(s), not directly interconnected with the service provider making the changes, will ensure routing and billing changes are completed on the LERG Routing Guide effective date. The service provider(s) directly interconnected and the service provider making the changes will negotiate a time as to when the translations changes will take place. Testing will take place after the changes have been completed.

7.5 LEC Terminating Office (Serving Office)

The LEC Terminating Office/serving office is the office where a call terminates. The LEC will:

- Validate that all translations work is complete five (5) calendar days prior to the date identified in the iconectiv LERG Routing Guide as the effective date.
- Perform Call Through tests to ensure that calls can be initiated from the newly opened CO Code (NXX or NXX-X) starting five (5) calendar days prior to the date identified in the iconectiv LERG Routing Guide as

the effective date. An interLATA or intraLATA call, and an intraoffice call to an existing CO Code, where applicable, should be performed within the serving office.

- Perform, where applicable, an intraoffice call from an existing CO Code within the serving office to the newly opened CO Code.
- Identify problems during call through testing and resolve such problems prior to the due date identified in the iconectiv LERG Routing Guide.
- For established CO Code(s) where there is a change to the serving switch or a switch tandem rehome the service provider responsible for the terminating office will ensure routing and billing changes are completed on the LERG Routing Guide effective date. The service provider responsible for the terminating office will negotiate with the interconnected service provider(s) as to the time when the translations changes will take place.

NOTE: If the above functions are not performed, the originating office and intermediate office cannot perform their respective functions.

7.6 Originating Office

LEC end offices with direct interconnection to, or located within the same NPA as the LEC with the newly opened CO Code (NXX or NXX-X), will:

- Validate that all translations work is complete five (5) calendar days prior to the date identified in the iconectiv LERG Routing Guide as the effective date.
- Initiate a call through test to the test number to ensure that the call routes correctly. Call through testing should start no earlier than five (5) calendar days prior to the date identified in the iconectiv LERG Routing Guide as the effective date.
- Identify problems during call through testing and resolve such problems prior to the effective date identified in the iconectiv LERG Routing Guide.
- For established CO Code(s) where there is a change to the serving switch or a switch tandem rehome the service provider(s), not directly interconnected with the service provider making the changes, will ensure routing and billing changes are completed on the LERG Routing Guide effective date. The service provider(s) directly interconnected and the service provider making the changes will negotiate a time as to when the translations changes will take place.

7.7 Mechanized Testing

Where mechanized translation input and validation is available, such mechanized capabilities should be used to validate the routing and AMA capability. This function should be performed on or before the effective date identified in the iconectiv LERG Routing Guide.

7.8 Verification of NXX or NXX-X Code Openings, Switch Change/Rehome, or Switch Tandem Rehome Process

During the CO Code (NXX of NXX-X) opening, switch change/rehome, or switch tandem rehome process, the code holder may want to verify that test calls to the CO Code have been completed. It is recommended that entities performing call through tests to CO Codes being activated or moved provide the necessary Caller ID information required to verify the NPA-NXX or NPA/NXX-X from which the test call is being placed. Where contractual, technical, or regulatory restrictions apply, Caller ID capability cannot be utilized.

7.9 NXX or NXX-X Code Opening, Switch Change/Rehome, or Switch Tandem Rehome Process in Jeopardy Situations

The NGIIF recommends immediate reporting of non-circuit-specific troubles via telephone in order to facilitate the rapid restoral of service.

If prior to the LERG Routing Guide effective date for an NXX or NXX-X code opening, change in serving switch or switch tandem rehome, a Code Holder realizes that any problem in its own network may jeopardize the scheduled NXX or NXX-X code opening date, serving switch change or switch tandem rehome, the Code Holder will notify the interconnected carrier(s) immediately.

If prior to the LERG Routing Guide effective date for a NXX or NXX-X code opening, change to the serving switch or switch tandem rehome, an interconnected carrier realizes that it will not be able to meet the LERG Routing Guide effective date for NXX or NXX-X code opening, serving switch change or switch tandem rehoming the NXX or NXX-X code, that carrier will notify the Code Holder and other interconnected carrier(s) immediately.

Any carrier that identifies a problem within another carrier's network during call through testing will notify that carrier immediately.

Contact should be made using industry escalation procedures or published/mutually agreed to contact information.

8 Trunk Installation

Installation, as referred to in this document, pertains to that portion of the total provisioning process that starts when the service order is received by the LSP and ends when the LSC accepts the trunk(s). Installation includes additions and rearrangements.

The LSC will order the trunk(s) through a service order center, or equivalent, and all inquiries will be referenced by the service order number and trunk group identification. The trunk group identification consists of a Trunk Group Serial Number (TGSN); also referred to as the Two-Six Code, which is a shorthand version of the initial portion of the Common Language® Message Trunk Circuit Code (CLCI™ MSG Code) trunk information. The complete 41-character CLCI MSG Message Circuit Code structure includes the TGSN and the 11-character Common Language Location Code (CLLI Code) and is used to identify the message trunk group.

The LSP will ensure that all portions of the trunk(s) are installed properly and that the Due Date is met. Should any condition jeopardize a Due Date, the LSP will notify the LSC and the LSP's service order center, or equivalent.

The point where the trunk(s) and the facilities/equipment are connected is referred to as the Point of Termination (POT). It is the responsibility of the LSC to arrange for suitable environmental requirements at the POT if requesting co-location. The space furnished shall be in a safe working area and will be accessible during normal working hours for installation and maintenance purposes. If a virtual co-location environment is requested or provided, the requesting LSC selects the equipment and the installation vendor from an approved list meeting the LSP's requirements for installation at the POT. The requesting LSC is responsible for training, spares, equipment and alarm monitoring. The LSP should provide an approved equipment and vendor list, arrange for suitable environmental and space requirements. The LSP may perform installation, maintenance or service hours (a time and material basis) upon request. Mutually agreed upon access to the location may be provided on a prearranged basis as determined by the LSC and the LSP.

8.1 Pre-Service Testing

Pre-Service Tests are basic tests performed to ensure that the trunk(s) have been designed, installed, and aligned. These tests are performed at the direction of the LSP.

Pre-Service Testing should be completed no later than the Plant Test Date.

In those cases where automatic testing or access to test lines is available, these methods will be used in lieu of more labor-intensive methods. The LSP must verify that the LSC has made its portion of the circuit available for Pre-Service Testing.

8.2 Acceptance Testing

Acceptance Testing must be completed prior to the turn up of service (Due Date).

Acceptance Testing may involve both LSP and LSC personnel and will be based on local tariffs or negotiated contracts to verify proper trunk(s) installation.

Prior to the Due Date, the LSP will contact the LSC to determine when the trunk(s) will be ready for Acceptance Testing. The LSC has the option of accepting the trunk(s) with or without Acceptance Testing. A mutually agreeable date and time will be established to coordinate any basic and/or Additional Cooperative Acceptance Testing (ACAT).

Either the LSC or the LSP may perform additional operational and/or transmission tests by utilizing terminating test lines at the distant end of the circuit.

The LSC has the option of turning up the trunk(s) for traffic prior to the Due Date if the installation work is completed by the LSP and acceptance testing is completed or waived by the LSC.

If the LSC requests turn-up of a trunk(s) prior to the Due Date, the LSP must verify that the LSC accepts any applicable billing coincident with turn-up of the trunk(s). Upon turn-up of the trunk(s) the order(s) will be processed per industry agreements.

If the LSC decides to delay billing until the Due Date, the trunk(s) should be made busy to ensure it is not used until billing begins. On the Due Date, the trunk(s) will be turned-up for service and the order(s) will be processed per industry agreements.

Where the Pre-Service Test results indicate the trunks(s) is within Acceptance Limits, the LSP will offer the LSC a copy of those test results in lieu of performing cooperative Acceptance Testing. The LSC has the option of accepting the service based on the Pre-Service Test results or by requesting a combination of basic and/or ACAT. If the LSC accepts the service based on the Pre-Service Test results, the LSP will forward a copy of the results to the LSC upon request.

The results of the Acceptance Tests must be within the Acceptance Limits for the service provided. Once the circuits are verified to be within the allowable range, additional time will not be spent making additional adjustments or retests. If the LSC requests that the LSP's technician stay on the line to make subsequent tests or optimize circuit adjustments, etc., this may be treated as billable.

If Acceptance Testing is performed and the test results are not within Acceptance Limits, sectionalization must be performed to determine where the problem is located.

Once the Acceptance Tests have been completed and accepted by the LSC, the LSP will make the trunk(s) busy to prevent selection and/or false seizures until the LSC requests service turn up.

If the LSC is not available to perform Acceptance Tests at the scheduled appointment time, the following alternatives are applicable:

- The LSC may reschedule the Acceptance Testing
- The LSC may waive Acceptance Testing and accept the trunk(s). Any tests desired by the LSC at a time later than the Due Date and after acceptance of the trunk(s) will be arranged by contacting the LSP and may be billable as Non-Scheduled Testing
- The LSC may request additional Stand-By Time from the LSP. This additional time is at the discretion of the LSP and is subject to the availability of scheduled personnel
- The LSC may change the Due Date
- The LSC may cancel the access order

If the LSC is unable to accept the trunk(s) within thirty (30) calendar days of the original Due Date, the LSC has the choice of either canceling the Service Order or getting billed for the service starting on the 31st day. The circuits shall be left in a make-busy state.

Any testing requested by the LSC after billing has commenced will be arranged for by the LSP and may be billable.

The LSC has the responsibility to determine Glare Master based on the following alternatives:

- LSC as Glare Master (default)

- LSP as Glare Master
- Trunk Circuit Identification Code (TCIC) where interconnecting companies' technology exists:
    - The LSC is Glare Master for odd-numbered circuits (SS7 only)
    - The LSP is Glare Master for the even-numbered circuits (SS7 only)

Implementation of the hunting methodology to mitigate the occurrence of Glare should take into account the differing options, their compatibility and efficiency, and should be based on local negotiations.

Where digital equipment is used, synchronization/loop timing options should be verified. Where synchronization problems are encountered, both the LSP and the LSC should work cooperatively to resolve the trouble. Synchronization problems that cannot be resolved by internal organizations should be referred to each carrier's Synchronization Coordinator or appropriate organization.

8.3 Additional Cooperative Acceptance Testing

Any requested transmission measurements or signaling tests that are not covered in the Basic Acceptance Testing tariffs or negotiated contracts shall be considered ACAT and may be billable.

Trunk(s) are designed to meet ordered transmission parameters. If it is determined that the trunk(s) do not meet the ordered parameter requirements, the LSC will not be billed for the tests that failed on a per trunk(s) basis. The LSP must determine whether the problem is due to an improper design or trunk trouble. The problem must be corrected prior to trunk turn-up or order completion reporting. If the LSC requests a retest of the repaired trunk, the initial retest will be non-billable. Subsequent re-tests will be billed as ACAT if the trunk meets designed parameters.

8.4 Traffic Routing and Billing Acceptance Testing

Outlined below are guidelines associated with Call Through Testing to provide assurance for the appropriate routing and generation of billing records.

When establishing a new trunk group or engaging in a rearrangement of an existing trunk group, the LSC shall perform, at a minimum, a call through test to a number furnished by the LSP. The switch supporting the furnished telephone number shall provide answer supervision.

The LSC shall initiate test call(s) to ensure that correct AMA recording and routing occurs. The scheduling of this call(s) shall be negotiated by the interconnecting companies, so that the ASP can validate that the correct AMA recording and routing has taken place for the trunk group under test. The validation results, or the acknowledgment that routing and recording is functioning, shall be provided to the LSP upon request.

When establishing a new trunk group or engaging in a rearrangement of an existing trunk group, the LSP shall perform, at a minimum, a call through test. The switch supporting the furnished telephone number used for testing purposes shall provide answer supervision.

Upon completion of the call through test(s), the LSP shall validate that this call(s) was recorded for billing purposes. In addition, the LSP shall ensure that the call is routed over the correct trunk group. The validation results, or the acknowledgment that routing and recording is functioning, shall be provided to the LSC upon request.

8.5 Completion

Service Order completion is contingent on the LSC accepting the service as requested on the Service Order.

Upon completion of the Service Order, the following information will be recorded:

- Name of the LSC representative accepting the service
- Basis of the acceptance
    - Test results
    - Test waived

8.6 Expedites

The Tariff, or negotiated contract for trunk(s), may provide an ordering option to request service with less than standard order intervals. These shortened-interval orders are referred to as "Expedites". Expedites may carry additional charge(s).

8.7 Trunk Disconnects

Before either the LSP or LSC disconnects a trunk(s), they will contact the interconnected company to coordinate the activity.

If the disconnect order is canceled or changed by the LSC, the LSC must then contact the LSP to avoid service disruptions.

8.8 Trunk Rearrangements

Rearrangements of a trunk(s) include changes in equipment, software assignments or facilities, and can be accomplished individually or cooperatively. Rearrangements may require a Service Order and coordination.

Requests for Trunk Make Busy and Non-Scheduled Testing should be referenced in cases where rearrangements to trunks do not require both the LSP and the LSC to be involved.

When a rearrangement requires a change to the trunk(s), the requesting LSP or LSC will contact the interconnected company and negotiate when the rearrangement, testing, and restoral will take place.

When a rearrangement potentially affects a transmission parameter, the LSC and the LSP may cooperatively test and verify that the trunk(s) are within Acceptance Limits.

Upon completion of the rearrangement, the initiating LSC or LSP will coordinate any testing necessary to ensure the rearrangement was performed satisfactorily.

Rearrangements may be billable.

8.9 Coordinated Conversion

Coordinated conversions are processes that may be used to facilitate changes requested by one interconnecting company that involve the reuse of portions of the former interconnected company's equipment and/or facilities previously assigned. Coordinated conversions require the issuance and processing of related disconnect and connect orders and the coordination of these orders throughout the entire conversion process.

The requesting interconnecting company is expected to bear full responsibility for the overall coordination of the various service orders associated with the conversion activities involved with its end-to-end service.

Where a coordinated conversion involves a change of service from one interconnecting company to another, the requesting interconnecting company will establish and coordinate conversion activities with other interconnecting companies and the End User when required. Those activities will include, but are not limited to:

- Completion Testing and Notification
- Requests for Continuation of Service
- Conversion Timing
- Circuit Release
- Circuit Conversion Sequence

Every effort must be made jointly by the new ASC and the ASP to successfully complete the conversion. If the new ASC encounters difficulties in activating end-to-end service following acceptance testing on the ASP provided

facilities, the new ASC may negotiate and coordinate continuation of the use of the previous arrangement with the ASP and former ASC, and the restoral procedure should commence.

Since continuation of the former ASC service does not automatically defer the due date of the disconnect order, the new ASC must request the former ASC to contact the ASP ICSC, or equivalent, to request a due date change in order to prevent the disconnect of the former ASC service. This must take place prior to the disconnect due date.

It is the responsibility of the ASP to inform the new ASC that all work involved in restoring the former ASC service and subsequent cut-over activities of the new ASC facilities is above and beyond that required for normal coordinated conversion cut-overs. This work may result in appropriate additional labor charges.

9 Trunk Maintenance

Maintenance of trunk(s) is based on the premise that each company has the responsibility for monitoring the performance of all trunks under its control. However, the company detecting trunk trouble or service impairment will take corrective action as outlined below. This does not include any responsibility for sectionalization beyond the POT or the repair of equipment or facilities owned by the other company.

Investigation of chronic trunk failures will involve the exchange of information between interconnected companies relative to the chronic failure. A detailed investigation should be made to determine the cause of the trouble condition. This activity may involve cooperative testing and may be handled as an impaired trunk trouble report.

All trunk(s) failing Maintenance Limits or Immediate Action Limits per GR-334, *Switched Access Service: Transmission Parameter Limits and Interface Combinations* will be restored to within Acceptance Limits.

9.1 Trouble Detection Responsibilities

When LSC personnel become aware of an inoperative trunk(s) (See Note 1), LSC personnel will ensure that the trunk(s) is removed from service. When LSP personnel become aware of an inoperative trunk(s), the LSC will determine the action to be taken. The above actions should be performed immediately after identification of the inoperative condition to prevent service failures.

NOTE 1: Inoperative trunks are those that do not work in service.

When LSP personnel become aware of an impaired trunk(s) (See Note 2), the LSC will determine the action to be taken. If maintenance is to be delayed, a mutually agreed upon time will be negotiated for removal from service and trouble sectionalization.

NOTE 2: Impaired trunk(s) are those that exhibit intermittent failures or degraded transmission performance. Impairment includes improper synchronization that can cause slips and chronic trunk/facility failures.

It is recommended that all routine and scheduled maintenance activities be performed during low traffic periods and not during Network Modification Suspension Periods to minimize the impact to the least number of customers. If customer service is affected by a trouble condition during periods of heavy calling, the minimum work activity to restore the service to a stable performance state should be undertaken and complete service recovery activities scheduled for a period of lighter traffic.

Where available, Automatic Trunk Testing (e.g., Automatic Progression Trunk Testing) may be performed. This capability can be configured to perform "operational" tests (e.g., 102 milliwatt or 103 synchronous) on a recurring basis. Compatible testline access is required in order to implement/continue such testing. The trunks that fail such testing should be removed from service and repaired.

9.2 Sectionalization

Sectionalization is a joint responsibility of the LSC and the LSP, with control for sectionalization under the direction of the LSC. It is anticipated that sectionalization may involve cooperative testing; both entities are expected to participate in this activity when requested.

9.3 Trouble Reporting

The NGIIF recommends immediate reporting of non-circuit specific troubles via telephone in order to facilitate the rapid restoral of service.

Each company will provide a 24-hour, 7-day point of contact and telephone number for Trouble Reporting.

The LSC will be responsible for the acceptance of trouble reports from their end user. The LSC should first test to determine if a trouble is in their network. If the trouble is found in their network, the LSC will clear the trouble and no referral to the LSP is necessary. If the trouble is sectionalized by the LSC towards the LSP, the trouble report will be referred to the LSP. The LSP will clear the trouble or will work cooperatively with the LSC to sectionalize the trouble where necessary.

The following information should be exchanged when handing off or referring the trouble:

- Trouble report number or equivalent
- Contact telephone number
- Contact ID (i.e., name or initials)
- Time and date report was received from LSC
- LSC testing information (if requested by LSP)
- Circuit ID (41-Character CLCI MSG Code)
- Non-Circuit specific (Circuit ID may not be appropriate)
- Trouble reported
- Other information that may be of assistance (e.g., history, subsequent reports)
- Dispatch Authorization

9.4 Repair Verification

When a trouble has been closed out by the LSP, the LSC may perform a repair verification test. If the repair verification test identifies a trouble condition(s), cooperative repair verification tests may be performed when requested.

The dispatch of an employee to make verification tests when a trouble has been cleared without dispatching will not normally take place. Requests for dispatch that result in a no trouble found condition may result in additional charges.

To perform repair verification tests, it may be necessary for the trunk to be made busy. Make-busy requests will be handled in accordance with established procedures.

9.5 Non-Trunk Specific Troubles

Non-trunk specific troubles are those that are not directly attributable to a given trunk. Non-trunk specific troubles generally fall into the following categories:

- Reorder
- No Ring
- Wrong number or misdirected
- Transmission Impairment
- Cut-off
- No answer supervision
- Other

When the non-trunk specific trouble has been detected and sectionalized, the trouble report will be referred to the appropriate company's trouble reporting center or equivalent.

9.6 Trouble Report Clearing Information

When the trouble has been cleared by either the LSP or the LSC, the trouble report will be closed out with the originating company and the following information will be exchanged:

- Trouble report number or equivalent
- Date and time cleared
- Trouble status (temporary or permanent repair)
    - If temporary, estimated time for restoral
- Contact name or initials and telephone number of the persons closing out the report
- Type & nature of trouble found and action taken
- Testing information (if requested)
- Trunk ID (if applicable)

All SS7 ISUP trunk and non-trunk specific troubles are covered in ATIS-0300013, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part III, Installation, Testing and Maintenance Responsibilities for SS7 Links and Trunks Attachment B ISUP Compatibility Tests*.

9.7 Priority of Restoration

Trouble reports on trunk(s) will be given equal treatment by maintenance forces. However, in cases where one or more trunk(s) are out of service within a group and causing the group to overflow, such trouble reports may be given a higher priority for restoral.

9.8 Make-Busy Procedures

On any request for make-busy, the receiving company will initiate a trouble report or utilize the trouble report number provided by the initiating company. The trouble report will be an information report and will be used for future reference.

Make-busy procedures must be followed to ensure that the LSC or LSP request is properly and expeditiously handled. The company requesting the make busy of the trunk(s) or trunk group will contact the interconnected company with the necessary information at the time of the request.

Where a request is made to make busy a trunk or group of trunks for activities other than trouble resolution (e.g., routine maintenance, network management request), the previously outlined procedures shall be followed.

Conditions may exist where trunks/trunk groups are required to be made busy or released manually as soon as possible. If the request cannot be handled immediately, the LSP will inform the LSC of the nature of the delay and the ticket number. The request will be handled as soon as possible or based on local negotiations.

Interconnecting companies will inform each other if this activity is billable. Upon authorization, all time spent on the trunk /trunk group Make-Busy and its restoration may be billable.

9.9 Restoration

The LSCs and LSPs must ensure that trunk(s) and trunk group(s) made busy are in proper operating condition before returning them to service.

9.10 Hold and Trace Trouble Isolation

It may be necessary to request a Hold and Trace to resolve a difficult trouble that cannot be identified by conventional testing. Information should be exchanged between the LSP and the LSC when the request for Hold and Trace is made. The interconnecting companies will hold the trunk and release the end users. The trouble will be sectionalized and repaired.

9.11 Call Traces

The objective of emergency call tracing is to identify the source of an in-progress call for urgent assistance in the case of life threatening situations or property damage. In the case of non-emergency traces (e.g., Toll Fraud, computer hacking), the following processes still apply. These traces may require the involvement of many interconnecting companies. Any interconnecting company receiving such a request will initiate the trace on an expedited basis recognizing the emergency situation.

Requests for trace should come from a company's security organization in compliance with their security guidelines. The exchange of information relative to these traces will be handled according to local security guidelines.

The originator of an emergency call trace assumes responsibility for the validity of a trace request and also is the controlling entity. When an emergency trace is passed to another interconnecting company, they will trace the call to the distant interconnected company and provide them with information to continue the trace. After completion of the trace, the distant interconnected company will provide the information to the originator, either directly or via another interconnected company. The controlling entity may remain online throughout the trace.

The information to be exchanged should include the following:

- Circuit identification (41-character Common Language Message Trunk Circuit Code (CLCI MSG Code) of the trunk under trace
- Called or Calling Number
- Employee name, call back telephone number, and the name of the controlling entity originating the trace
- Any additional information or instructions

If there will be any delay in completing the trace, such as when a dispatch to an unattended office is required or when personnel are not available, the reporting office will advise the originator of the reason for the delay and its expected duration.

9.12 Network Modification

A Network Modification is any type of planned equipment, software, trunk or facility activity that has the potential to significantly affect interconnected networks (e.g. rearrangement of existing network elements, switch homing arranges, SS7 rehoming)

The NGIIF has developed the following guidelines outlining the medium by which internetwork affecting maintenance activity notification will be provided to the interconnected company and the time frame prior to the planned activity:

- Notification when possible should be made at least 5 working days prior to the planned change activity.
- Notification should be made in the form of:
    - E-Mail (recommended where available)
    - FAX
    - Telephone call
- Notification should be provided to the affected company's appropriate notification center. Contact information is included in the NGIIF Service Provider Contact Directory. An example of a notification form

is located in ATIS-0300026, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part VI, Network Management Guidelines*.

When network modifications are scheduled that could significantly affect traffic between directly interconnected networks, it is recommended that the affected LSPs and LSCs will notify each other prior to the event.

The following information should be exchanged at the time of notification:

- Originator (company name/contact number)
- Affected network element
- Date and time of the change
- Expected duration
- Traffic types affected during change
- Description of the work to be completed.

9.12.1 Network Modification Suspension Periods

Due to the volumes of traffic and the potential for negative impacts to the Network, the following table identifies when Network Modifications should not be performed.

Table 9.1- Network Modification Suspension Periods

Event	Start of Suspension Period (Inclusive)	End of Suspension Period (Inclusive)
Mothers Day	SATURDAY	MONDAY
Fathers Day	SATURDAY	SUNDAY
Thanksgiving (US Only)	WEDNESDAY	MONDAY
Christmas	12/22	12/26
New Years	12/31	1/1

Network modifications (e.g. Generic Changes, Parameter Changes, Switch Rehomes) will not occur during the above-mentioned time periods unless agreed to by the LSP and LSC.

Emergency exceptions should be coordinated.

9.13 LEC-LEC Non-Trunk Operational Agreements

9.13.1 Line Identification/Verification

The Automatic Number Announcement Circuit (ANAC) provides the capability to dial a number to identify a local loop that a field technician is working on. Where there are multiple local service providers and facilities are shared, there may be instances of each service provider having a different number to be dialed to access the ANAC. It is preferable to have a single number within a geographic area in order to alleviate any confusion on the part of the maintenance field forces. In the event that a universal number cannot be agreed upon, then the service providers shall negotiate and exchange ANAC access numbers.

The FCC requires the linking of the calling number and calling name such that the presentation status is either "presentation allowed" or "presentation restricted". In order to reduce unnecessary queries to the calling name (CNAM) database, the carrier should rely on the Calling Party Number Parameter field in the IAM to control whether or not the name and number be delivered to the called party. If the presentation status in the IAM is set to "presentation allowed", the carrier may reveal both the calling number and the calling name to the called party. If the presentation status in the IAM is set to "presentation restricted", the carrier will not reveal the caller's number or name to the called party. No calling name in the CNAM database should be preset to "private" or "public".

10 Exceptions

The following information is provided in an effort to assist LSPs and LSCs in the resolution of trouble reports that fall outside of the normal ticket resolution flow, once the original ticket has been closed out.

10.1 Line Identification/Verification

The ANAC provides the capability to dial a number to identify a local loop that a field technician is working on. Where there are multiple local service providers and facilities are shared, there may be instances of each service provider having a different number to be dialed to access the ANAC. It is preferable to have a single number within a geographic area in order to alleviate any confusion on the part of the maintenance field forces. In the event that a universal number cannot be agreed upon, then the service providers shall negotiate and exchange ANAC access numbers.

10.2 Calling Party Number (CPN), Calling Party Name (CNAM)

10.2.1 Calling Party Number (CPN)

The NGIIF recommends that the Calling Party Number field should be populated, by the originating network, with a valid 10-digit NANP subscriber line number or directory number.

10.2.2 Linking CPN & CNAM

The FCC requires the linking of the calling number and calling name such that the presentation status is either “presentation allowed” or “presentation restricted”. In order to reduce unnecessary queries to the calling name (CNAM) database, the carrier should rely on the Calling Party Number Parameter field in the IAM to control whether or not the name and number be delivered to the called party. If the presentation status in the IAM is set to “presentation allowed”, the carrier may reveal both the calling number and the calling name to the called party. If the presentation status in the IAM is set to “presentation restricted”, the carrier will not reveal the caller’s number or name to the called party. No calling name in the CNAM database should be preset to “private” or “public”.

11 Escalations

Escalation is a means of bringing problems to the attention of individuals who have the responsibility and authority to expedite corrective action.

When either the LSP or the LSC experiences installation or maintenance difficulties and progress toward resolution is not satisfactory, either company may contact the other company for escalation to a higher level of management.

The rate at which a problem is escalated through successive levels of management should allow each level a reasonable period of time to resolve the problem before it is presented to the next level for action.

Escalation procedures and contacts are based on local negotiations.

12 Test Lines

It is the recommendation of the NGIIF that all companies provide test lines and test line information to facilitate installation testing and trouble resolution.

Access should be provided to the terminating test lines in the interconnected companies' end offices and/or Access Tandems, a listing of the available test line numbers can be obtained from the Test Line Coordinator of each company. Trouble Reporting/Repair Contact Information is listed in the NGIIF Service Provider Contact Directory.

Any problems associated with test lines/numbers should be referred to the appropriate company's trouble reporting center.

13 Additional Billing

This Clause describes the scenarios under which additional billing may take place.

Provisions have been made for additional billing in the following categories:

- Overtime for Installation and Repair
- Additional Cooperative Acceptance Testing
- Non-Scheduled Testing
- Maintenance of Service Charge
- Stand-By Time
- Other Labor

Accurate records regarding the work performed for additional billing purposes must be retained, which includes identification of personnel engaged in these work activities. It is the responsibility of the billing company to determine when additional billing applies and document the name of the person authorizing the additional billing.

Overtime is the time spent by personnel doing the installation and repair functions outside their normal working hours. Overtime installation and repair charges are based on individual company tariffs.

13.1 Billable Overtime Installation and Repair

Billable overtime must be authorized by the LSC.

Billable overtime hours begin at the start time requested and end when the work is completed or suspended. This includes travel time to and from a home or work location.

If applicable, a minimum charge for a call out may be applied.

13.2 Additional Cooperative Acceptance Testing (ACAT)

Time required to perform ACAT may be considered billable to the LSC.

13.3 Non-Scheduled Testing

When the LSC determines a need to test its services, they will contact the LSP to perform non-scheduled testing.

13.4 Maintenance - Service Charge

The LSC may be responsible for a service charge whenever the trouble/problem is not in the LSP's network and/or is isolated back to the LSC's network or end user's equipment/facility.

If trouble is subsequently found to be in the LSP's equipment or facilities and a Maintenance Service Charge has been applied, the charge will be canceled or adjusted.

13.5 Stand-By Time

Stand-By Time in excess of one half (1/2) hour authorized by the LSC may be billable and is predicated on local negotiated agreements and shall be documented by both the LSP and LSC.

13.6 Other Labor

As agreed to by the LSC and the LSP, other labor is anything not identified in the above billing Clause.

14 Local Recorded Announcements

14.1 Mandatory 10 Digit Local Dialing

In areas where 10-digit dialing is mandatory to complete local calls, the following wording is recommended for the announcement to be played if a customer dials only a 7 digit local number without an area code:

"We're sorry. When placing a local call, it is now necessary to dial an Area Code followed by the 7-digit number. Please hang-up and redial using the complete 10-digit number."

14.2 Intercept Number Announcement - Ported Numbers

Intercept Treatment should be provided by the recipient's switch where the ported number has been disconnected and is aging the number. Release With Cause should not be used during the aging period. At the end of the aging period, the disconnected number should snapback to the Code Holder for that code. The Code Holder for that code is then responsible for providing the Intercept Treatment. Any subsequent call to the disconnected number (after snapback) misrouted to the recipient switch should be given Cause Code 26 treatment.

15 Local Number Portability

15.1 Local Number Portability

In a local number portability environment, the Jurisdictional Information Parameter (JIP) in the SS7 ISUP Initial Address Message (IAM) should be populated at each call origination per T1.TRQ.02-2001, *Number Portability Switching Systems (Revision of T1.TRQ.2-1999).*

15.2 Default Routing Translations

All interconnecting parties, for LNP purposes, should agree on having "Default Routing Translation" in place prior to implementation of LNP. Acceptance of inter-network LNP queries should be locally negotiated.

Carriers may block default routed calls in specific circumstances when failure to do so is likely to impair network reliability.

If the N-1 carrier experiences LNP database congestion and receives a 10-digit Automatic Code Gap (ACG) from its database, it should gap the queries to its LNP database for that 10 digit DN and abort the call. If the N-1 switch receives a 3 or 6-digit ACG from its database, it should gap such queries to its LNP database and default route the call. If the database fails to respond to a query from the N-1 switch, the call is default routed.

If the default carrier experiences LNP database congestion (e.g. - the default switch receives an Automatic Code Gap (ACG) from its database), it should gap the queries to its LNP database and abort the call.

15.2.1 Background

If a carrier cannot successfully query an LNP database, it should default route the call based on the dialed digits to the default carrier.

A “default routed call” situation may occur in a LNP environment when a call is made to a telephone number in an exchange with any ported numbers, and the N-1 carrier (or its contracted entity) queries a Number Portability database to determine if the called number has been ported. If the N-1 carrier fails to perform the query, the call is then routed by default to the service provider that originally serviced the telephone number. The original service provider, which may or may not still be serving the called number, should try to complete the call which may include an LNP database query.

15.3 Handoff of Terminating

In an LNP environment, the N-1 Carrier is responsible for making sure that calls to numbers in portable NPA NXXs have an LNP query performed.

If the N-1 carrier arranges with another entity to perform some or all of the LNP queries on their behalf, the N-1 carrier should make sure that proper trunking (e.g., meet-point billing trunks) and billing mechanisms to the recipient service provider are in place. This will ensure that the calls will complete and access billing will work properly.

16 Common Channel Signaling System 7 (CCS7)

ATIS-0300011, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part III, Installation and Maintenance Responsibilities for SS7 Links and Trunks,* describes the responsibilities for the installation and maintenance of SS7 Links and Trunks.

In the case of a LEC to LEC interconnection, where the term ASP is used in the above-mentioned ATIS-0300011, the term LSP may be substituted. Where the term ASC is used in the above-mentioned ATIS-0300011, the term LSC may be substituted.

17 Installation, Testing & Maintenance of Transport Facilities

ATIS-0300030, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part IX, Installation, Testing and Maintenance Responsibilities of Facilities*, describes the responsibilities for the installation and maintenance of facilities.

18 Network Management Guidelines

ATIS-0300026, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part VI, Network Management Guidelines*, describes responsibilities associated with network management.

In the case of a LEC to LEC interconnection, where the term ASP is used in the above-mentioned ATIS-0300026, the term LSP may be substituted. Where the term ASC is used in the above mentioned ATIS-0300026, the term LSC may be substituted.

19 Special Services

ATIS-0300009, *Next Generation Interconnection Interoperability (NGIIF) Reference Document: Part I, Installation and Maintenance Responsibilities Special Access Services, WATS Access Lines and Switched Access Services Feature Group A*, describes responsibilities for the installation and maintenance of Special Services.

20 Security

LEC-LEC Security Guidelines are outlined in ATIS- 0300033, *Part X, Interconnection Between LECS Operations Handbook – Local Interconnection Service Arrangement, Attachment A, Security Guidelines*.