ATIS-0300046

ATIS Standard on -

Recommended Notification Procedures to Industry for Changes in Network Routing Architecture

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Recommended Notification Procedures to Industry for Changes in Network Routing Architecture

Alliance for Telecommunications Industry Solutions

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Abstract

This document provides recommended procedures for all Service Providers (SPs) to provide timely notification to the industry of changes in their network routing architecture

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 topics associated with emerging technologies. Specifically, it develops operational procedures that 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 that 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 a 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:

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Karen Riepenkroger, Sprint

Trademark Acknowledgements

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Recommended Notification Procedures to Industry for Changes in Network Routing Architecture

1 Scope, Purpose, Application

This document contains recommended procedures for all Service Providers (SPs) to provide timely notification to the industry of changes in their network routing architecture.

2 Informative References

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

[Ref 1] FCC 96-333, CC Docket No. 95-185, 2nd Report and Order, *Second Report and Order In the Matter of Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers.*[1]

[Ref 2] ATIS-0300008, *Next Generation Interconnection Interoperability (NGIIF) Reference Document,* December 2011.[2]

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

ACD	Assigned Code Record
ATIS	Alliance for Telecommunications Industry Solutions
BIRRDS	Business Integrated Routing and Rating Database System
CLEC	Competitive Local Exchange Carrier
EN	Emergency Notification
FCC	Federal Communications Commission
HTOC	Homing Tandem Operating Company

[1] This document is available from the Federal Communications Commission, 445 12th Street, SW, Washington, DC 20554, at: < http://www.fcc.gov >.

[2] This document is available from the Alliance for Telecommunications Industry Solutions, 1200 G Street, NW Suite 500 | Washington, DC, 20005, at: < https://www.atis.org/docstore/ >.

ILEC	Incumbent Local Exchange Carrier
INC	Industry Numbering Committee
LERG™	iconectiv® LERG™ Routing Guide
NANPA	North American Numbering Plan Administration
NPA	Numbering Plan Area
NXD	NPA-NXX Block Record
SP	Service Provider
TRA	Telecom Routing Administration

4 Introduction

The following are recommended procedures for all SPs to provide timely notification to the industry of changes in their network routing architecture.

Wireline and wireless carriers, VoIP providers, Competitive Local Exchange Carriers (CLECs), Rural LECs, Incumbent LECs (ILECs), etc. follow the industry standard procedures for the Business Integrated Routing and Rating Database System (BIRRDS) /LERG™ to report numbering assignments, related network configuration, and ongoing network changes such as:

- Tandem homing arrangements
- Switch reconfigurations and replacements
- NXXs, NXX-Xs assignments and routing
- Numbering Plan Areas (NPAs)
- Rate Centers.

These procedures apply to situations where an SP initiates a network reconfiguration or other network modification that affects another SP or other interconnected party. It is intended to be a living document to aid operations work forces. It does not replace nor supersede tariffs, contracts, or any other legally binding documents. This document does not override any reporting/notification requirements that an SP may need to meet as mandated by state and federal regulatory agencies.

The flow chart below outlines the notification steps:

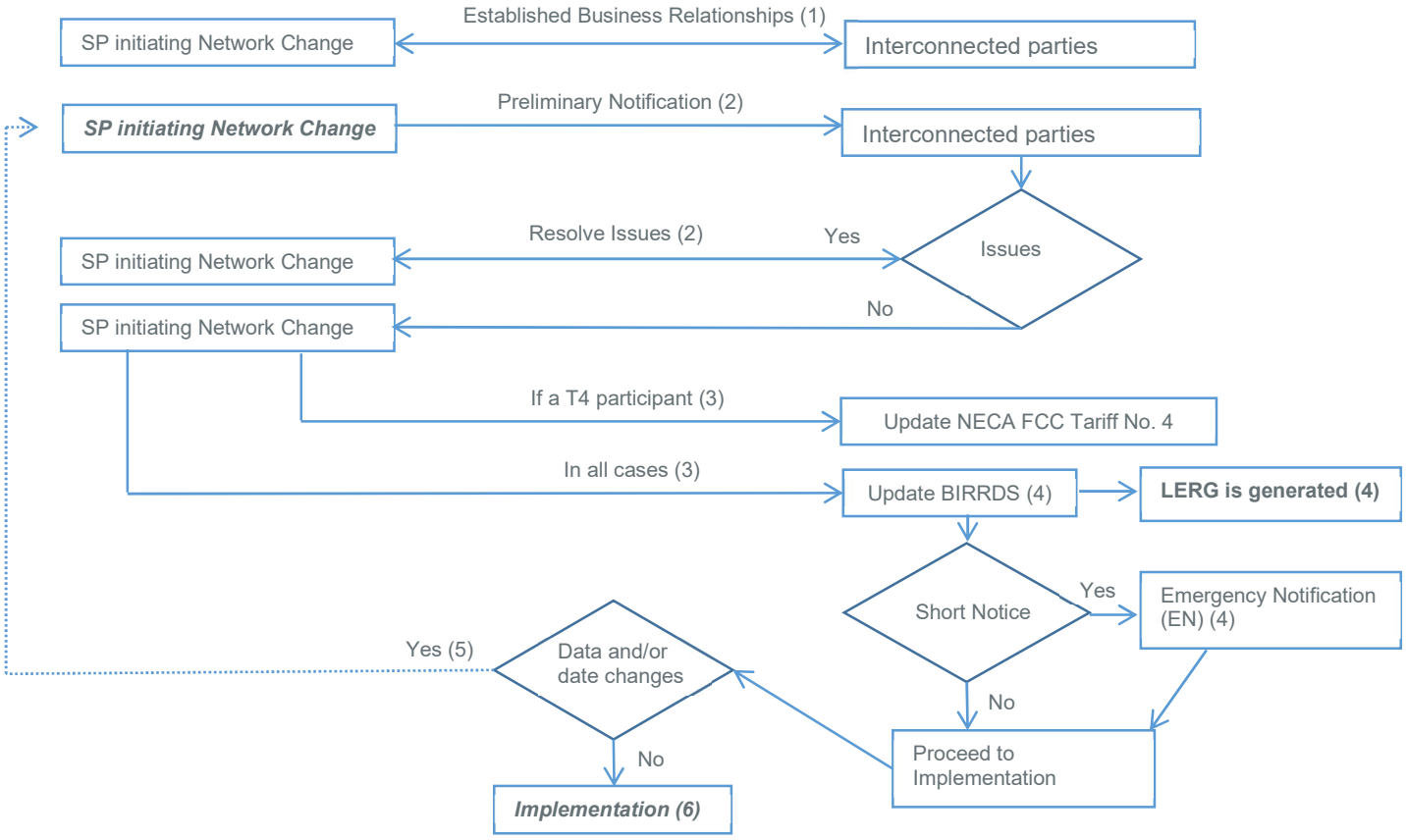

Figure 1: Flow Chart of Notification Steps

5 Business Relationships

All SPs should have an established business relationship or agreement with parties that interconnect with them. The SP initiating the change is responsible for timely notification (as outlined in this document) and to the industry of changes to its network routing architecture.

6 Notification Process

At the time a decision is made by an SP to initiate a routing impacting network change, the initiating SP should inform interconnected parties on a preliminary basis of its planned changes. This would include the type of change(s) and expected effective date(s).

Within a reasonable period, depending on the time and extent of changes, interconnected parties should inform the initiating SP of any potential issues it may have with the changes and/or dates. Should issues exist that involve technical, contractual, regulatory or any other matters, impacted parties should negotiate an acceptable resolution that is satisfactory to all parties.

Minimum time intervals for entering data into BIRRDS associated with such network changes are included in Attachment A. These time intervals begin from the point in time the proposed changes are entered into BIRRDS, through the effective date of the change. Initial and any negotiated/changed dates should use Attachment A as a guide.

On occasion, there may be an exception situation that does not allow the minimum activation interval to be met. For exceptions, see Attachment A, paragraph 6.

There are Federal regulatory directives that address notification intervals. These directives may not apply to all companies. Such directives take precedence over notification intervals noted in the rest of this document. For example:

FCC MANDATE FOR NOTICE OF PUBLIC CHANGE (NETWORK DISCLOSURE)

The Federal Communications Commission's (FCC) Second Report and Order in Docket 96-333 sets some of the rules for certain ILECs in the local competitive environment. The following summarizes pertinent timeline aspects of this Report and Order:

One of the mandates is Public Notice of Network Changes which required ILECs to provide public notice of network changes that could impact the ability of competing telecommunications and information service providers, such as CLECs, to provide service or impact the interoperability of the ILEC network with networks of other service providers.

The order defines two types of notices: Public Notice of Network Changes under rule 51.329(a) and Short-Term Public Notice under rule 51.333(a). ILECs must determine which notice is required based on the interval between the date of notice and the date of project implementation. If the interval is six months or more, the Public Notice of Network Change should be filed. However, if the interval is less than six months, the Short-Term Public notice must be filed.

Additional details regarding the notification process can be found by reviewing the Second Report and Order in Docket 96-333 itself [Ref 1].

7 BIRRDS and NECA Tariff FCC No. 4 Update Responsibility

Following are the activities that occur once effective dates of the routing change have been agreed to:

1) BIRRDS

This notification is accomplished through updates to the iconectiv® BIRRDS database, from which the iconectiv LERG Routing Guide is generated. The initiating SP is responsible for updating BIRRDS, via direct access or a third-party, in sufficient time to meet the minimum intervals outlined in Attachment A. The data required to be placed into BIRRDS is outlined in ATIS Industry Numbering Committee (INC) numbering assignment guidelines. Placing data into BIRRDS does not preclude notification processes that may exist due to other factors (regulatory, contractual, company policy, etc.) and which may be dependent on the specific type of change.

2) NECA Tariff FCC No. 4

If the initiating SP participates in NECA Tariff FCC No. 4, it should update the Tariff to reflect changes in wire center data (including NPA NXX changes) and, if applicable, billing percentage information resulting from network rearrangements. Tariff updates should coincide as closely as possible with the effective dates input to BIRRDS.

8 Formal BIRRDS/LERG Change Notification to SPs and Access Customers

Network change information is available via access to BIRRDS or the LERG (BIRRDS output) via:

1) On-line access to BIRRDS (limited to companies that input into BIRRDS).

2) iconectiv LERG Routing Guide that is issued monthly.

3) LERG daily download available from iconectiv Telecom Routing Administration (TRA) for subscribers to the monthly LERG.

Emergency Notifications (ENs) are available through iconectiv TRA for situations such as when notification of a new Code, routing changes, and rating changes, must be made in less than 45 days, or less than other intervals, as may apply in Attachment A. ENs can also serve as a vehicle to alert EN subscribers of problematic network situations. ENs are issued on an as-needed (minimum weekly) basis and distributed to all EN subscribers via e-mail.

9 Problem Resolution

When problems that would delay the effective dates for proposed changes occur after dates and the network changes have been entered into BIRRDS, the following steps should be taken:

1) The initiating SP and impacted interconnecting parties should discuss the problem to determine the resolution.
2) If a change in the effective date or any other aspects of the change be necessary, the notification procedures described in the preceding sections should be repeated.
3) Changes made to network configurations, supporting data, and/or effective dates from what was originally notified to the industry via BIRRDS/LERG, should be reflected/updated in BIRRDS/LERG as soon as possible once the changes have been confirmed.
4) For network rearrangements, this may include negotiating temporary alternate routing schemes on an individual case basis where equipment, facilities, or other problems are encountered. Further explanation pertaining to problem resolution can be found in the ATIS-0300008, *Next Generation Interconnection Interoperability (NGIIF) Reference Document* [Ref 2], Parts I and II.
5) Depending on the particular situation, consideration should also be given to issuing an EN.

10 Implementation of Routing Changes

It is expected that all SPs and access customers will implement the changes that were notified by the processes described in this document.

Attachment A – Recommended BIRRDS Minimum Time Intervals

This information outlines the recommended minimum BIRRDS effective date intervals assuming appropriate network infrastructure (i.e., there should be an understanding that any necessary interconnection arrangements and facilities are, or will be, in place prior to the effective date of the establishment, modification, or disconnection of Central Office Codes, establishment and changes to homing arrangements, etc.). Such arrangements are outside the scope of these guidelines.

1) BIRRDS is updated at least six months in advance of the LERG Effective Date for the following scenarios:

   - A new or discontinued NPA or a change in the present boundaries of an existing NPA.
   - A tandem provider, activation of a new tandem [i.e., Feature Group D (Access) Tandem, Feature Group B Tandem, IntraLATA Tandem, Local Tandem, Operator Services Tandem]. The LERG Effective Date is the date by which all applicable traffic must be routing via the tandem.
   - Replacement or consolidation/decommission of end offices that will require other interconnected companies to make changes in their network i.e., CLLI™ Code changes directly associated with NPA NXX Codes, such as:
     - Consolidating a remote(s) into its host.
     - Consolidating some/all end offices under one tandem into a single (or fewer) existing or new end office(s).
     - Replacing a remote or end office CLLI Code with a POI CLLI Code.
     - Switch equipment changes that require a CLLI Code change.
   - Rural exceptions may exist regarding notification intervals when any of the above changes occur due to copper replacement.
   - Changes in homing arrangements that will require interconnected companies to make changes in their network may include:
     - STPs.
     - Trunk gateways, packet end office.
     - Call agents (if call agent has a point Code that will change).
     - Hosts, remotes.
     - 800 SSP.
     - Network tandem re-configurations (e.g., rehoming subtending end offices from FG D tandem A to an already established FG D tandem B).

2) At least three months in advance of the LERG Effective Date:

- Modifications to the switch office functions of a tandem, e.g., removal or addition of a Feature Group service, Local tandem functions, IntraLATA functions, Operator Services, or SS7.
- All BIRRDS activity (e.g., Rate Center / Locality relationships) associated with newly established Rate Centers or Rate Center consolidations unless utility commission lead time is less than the recommended interval.
- All BIRRDS activity associated with Rate Center data (e.g., V&H) but not associated with a Rate Center consolidation unless utility commission lead time is less than the recommended interval.
- NPA NXXs (non-pooled/non-portable CO Codes) moving from one Rate Center to another when not associated with Rate Center consolidation activity.

3) At least 45 days in advance of the LERG Effective Date:
   - NPA NXX changes, i.e., modifications, disconnection, or establishment of new NPA NXXs, except activity listed in Item 2 above (3 months) and Item 4 below (activity involving multiple changes) for the following fields:
     - NPA/NXX
     - OCN
     - TD-EO / TD-AT (when not associated with area code relief activity)
     - Switch
     - SHA Ind
   - Switch Homing Arrangement changes, for the following fields:
     - Actual Switch (for a POI)
     - Tandem Switch(es) (emergency exceptions apply)
4) Activity that is reported in less than the above timeframes should be avoided and may result in call failure and/or network blockages.
5) On occasion, an overall network change may involve several of the network activities noted in this attachment. Thus, several of the noted recommended timeframes may apply. The farther out timeframe should serve as the base timeframe for the overall network change. Activities that may involve shorter timeframes should be reported, at minimum within their respective recommended timeframes. However, the overall network change should be treated as an integrated process. Should dates, details of the

changes, etc., be modified at any point, all associated timeframes within the overall network change should be reviewed and addressed appropriately.

6) Expedites of BIRRDS Minimum Time Intervals

- Expedites for the establishment of new Central Office Codes:

  The minimum Code Activation Interval for the establishment of new Central Office Codes is 45 calendar days. The Code Activation Interval is the interval between the date Code information is entered into BIRRDS and the date that Code will be effective in the LERG. On an exception basis, if a Code Activation Interval less than 45 calendar days is requested, the Code Applicant's Part I request must be accompanied by documentation from the Homing Tandem Operating Company (HTOC) stating that the HTOC can meet an expedited Code Activation Interval. If this documentation is not provided with the Code Applicant's Part 1 request, the request for a shorter interval will be denied by NANPA. A Code Activation Interval of less than 30 calendar days will not be granted except in emergency situations, i.e., natural disasters[3].

  The documentation from the HTOC should include an "Expedite Timeframe" (in number of days) that establishes the expedited Code Activation Interval (between 30 and 44 calendar days) to which the HTOC is agreeing. When making the Code assignment, NANPA will enter this data in the Expedite Timeframe field that has been added to the Assigned Code Record (ACD) screen in BIRRDS. When establishing the Code LERG Effective Date on the ACD screen, NANPA will use this Expedite Timeframe, along with the time interval (between 1 and 7 calendar days) that has been agreed upon for the Code Assignee to enter (or to have entered by its AOCN) the Code assignment data into BIRRDS. It is the Code Assignee's responsibility to ensure that the Code assignment data is entered on the NPA-NXX Block Record (NXD) in BIRRDS so that the resulting Code Activation Interval allows for the Expedite Timeframe set on the ACD screen in BIRRDS by NANPA CO Code Administration. If the Code assignment data is entered into the NXD record in BIRRDS so that the resulting Code Activation Interval is shorter than the Expedite Timeframe set on the ACD screen, then an NXD edit

[3] See TBCOCAG Section 5.3.8

built in BIRRDS will automatically reschedule the LERG Effective Date to allow for the Expedite Timeframe.

NOTE: Please see BIRRDS Release dated February 8, 2002 for additional details concerning the NXD/ACD Automatic effective date (EFFDATE) reschedule feature in BIRRDS.

- Expedites for the Modification and Disconnection of Central Office Codes:

  The Code assignee may request an expedite for a Code modification that requires the direct involvement of NANPA (for example, changes to the Code assignment data on the ACD screen before the Code is placed in service).

  NANPA can grant expedite requests for Code modifications and disconnects that require their direct involvement, per Thousands Block and Central Office Code Assignment Guidelines (TBCOCAG), without having to get the concurrence of the HTOC or any other party. This differs from the case for a Code opening expedite request. This action can only be taken when the Code modification or disconnect expedite request is for a 30-44 day interval between the date Code information is entered into BIRRDS for an expedited modification or disconnect and the date that modification or disconnect will be effective in the LERG. Under no circumstances should a modification or disconnect interval of less than 30 calendar days be granted, except in emergency situations, i.e., natural disasters[4].

  There are also situations when the Code assignee has a business need to modify information associated with its assigned NXX Code and this Code modification does not require the direct involvement of NANPA. The interval for such modifications should not be less than 30 days.

  In all situations the Code assignee has the responsibility to allow adequate time for other SPs impacted by the Code modification to implement the Code modification in their networks. The Code assignee assumes the risk of the Code modification not being completed by the requested LERG Effective Date if the interval for the modification is less than 30 days.

[4] See TBCOCAG Section 5.3.8

7. Rescheduling/Canceling

- Rescheduling the LERG Effective Date (into the future from the initially reported date) of a network activity (e.g., due to trunking not yet established) as initially reported may be necessary.
- If rescheduling the LERG Effective Date includes modifications to the network impacting data that was originally reported, the appropriate timeframe for the activity noted in other sections of this document should then be followed.
- Rescheduling/canceling the LERG Effective Date that impacts routing (e.g., trunking, translations, etc.) which is not changed from what was originally reported, and where the original LERG Effective Date is less than 45 days from the current date, should be supported by additional notification (in addition to LERG) such as direct contact with impacted interconnecting companies, the TRA generated Emergency Notification (EN) (not all carriers may subscribe), etc.