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## NGIIF INTERCARRIER TROUBLESHOOTING QUICK REFERENCE TOOL

This reference tool was developed by the Alliance for Telecommunications for Industry Solutions Next Generation Interconnection Interoperability Forum (NGIIF) to assist in troubleshooting call terminations. These issues may include general call completion failure, poor transmission, misidentification of the calling party, network congestion, fraud or other issues.

The sections in this Quick Reference Tool align with the Intercarrier Call Completion/Call Termination Handbook (ATIS-0300106), which is publicly available on a complimentary basis from [http://access.atis.org/apps/group\\_public/document.php?document\\_id=54015&wg\\_abbrev=ngiif](http://access.atis.org/apps/group_public/document.php?document_id=54015&wg_abbrev=ngiif).

More background on ATIS and NGIIF work efforts related to Call Termination can be accessed via the following website: [https://www.atis.org/01\\_committ\\_forums/ngiif/call-completion/](https://www.atis.org/01_committ_forums/ngiif/call-completion/).

### **(7 and 7.1) Trouble Reporting**

It is imperative that a case of trouble be reported at the time or near the time a call failure occurs. Delays in reporting the case of trouble degrades the ability of the service provider (SP) to identify, isolate, and investigate the cause of the trouble reported.

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

- SPs are responsible for the acceptance of trouble reports from their end user.
- The SP accepting and responsible for the case of trouble should first test to determine if trouble is in their network.
- If the trouble is found in their network, the responsible SP will clear the trouble and no referral to other carries is necessary.
- If the trouble is sectionalized by the responsible SP to another SP, then the trouble report will be referred to that receiving SP.
- The receiving SP will clear the trouble or will work cooperatively with any other SPs to sectionalize the trouble where necessary.
- When trouble has been cleared by either SP, the trouble report will be closed out with the originating company and generic status information will be updated bearing in mind CPNI rules.

When a calling party reports a trouble case to the LEC, the terminating LEC needs to: (1) request the wireline originating caller to identify their IXC carrier by dialing 700-555-4141 from the calling TN; or (2) determine whether the originating caller used any other means to complete the call (dial-around, calling card). Once the IXC carrier with responsibility for the call has been identified, the reporting and sectionalization processes can be invoked to achieve resolution.

When calling an IXC or local service provider to hand off or refer trouble, this information should be exchanged:

- Trouble report number or equivalent
- Contact telephone number
- Contact ID (i.e., name or initials)
- Time and date report was received from the responsible SP
- Responsible SP testing information (If requested by any receiving SP(s))
- 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

### **(7.2.1 and 7.3) Test Lines**

One way in which terminating SPs may be able to expedite trouble resolution, in cases where the trouble has been reported by the called rather than the calling party, is to provide a test line number for the destination end office in their trouble report.

- *Access Service Customer (ASC):* The ASC has the overall installation and maintenance responsibility for the total service to its end user. It is responsible for the overall coordination of installation and testing of its services.
- *The Access Service Provider (ASP):* The ASP is responsible for ensuring that the Switched Access Services (SAS) furnished to an ASC are installed and function properly. In addition, the ASP should work cooperatively with the ASC in the acceptance testing of the SAS it provides.

Upon receiving a call setup time trouble report, the ASC will obtain specific information from the end user to aid in trouble analysis process. The dialogue should include, but not be limited to the following information:

- Type of Customer Premises Equipment (CPE, etc.)
- Type of access (e.g., 101XXXX, DDD)
- Directionality of the call(s) on which trouble was reported
- Calling and called telephone number
- Time of day the reported problem is experienced
- End user's estimation of call setup time
- Any other pertinent information which can be supplied by the end user

Where the ASC is unable to perform cooperative testing at its POT, the ASP will provide test results from nearest ASP test access point, toward the ASC's POT. An Access Service Provider Coordinator (ASPC) will perform the control function for the installation of FG B, C, and D SAS provided to the ASCs.

End user reported troubles of excessive call setup time, for interLATA FG-D originating and/or interLATA FG B/D terminating will be analyzed by the ASC. If the ASP receives a call setup time trouble from an end user for an interLATA call(s), the end user will be referred to the ASC.

Contributing factors to call setup time troubles could include:

- Manual/auto dialing
- Customer call forwarding options
- PBX equipment
- Dial repeating tie lines

The ASC is responsible for sectionalizing the call setup time trouble to the:

- Terminating CPE
- Terminating ASP
- ASC network
- Originating ASP
- Originating CPE

Should the sectionalization/analysis require that a test call(s) be made, it is recommended that the test call be made to the 102 type test line. Testing to a 105 type test line may distort the intended call setup time results.

Originating ASP and/or ASC test calls to the ASC's first point of switching should be placed to 700-958-1102 or 700-959-1020 as appropriate.

Access performance limits have been established based on the information contained in the Local Switching System Generic Requirements (LSSGR) and other performance criteria, to aid in the isolation of any suspected trouble associated with call setup time. The ASC should specifically identify any parameters that have been exceeded when referring the trouble. The ASP will accept a trouble report from the ASC when sectionalized to the ASP's network.

The trouble report should include, but is not be limited to, the following information:

- ASC determined ASP call setup time
- Call direction
- FG B-D
- Direct versus tandem routing
- End Office CLLI™
- Test line telephone number used

Upon receipt of the trouble report from the ASC, the ASP will initiate its own analysis and treat the report as an impaired trunk report. This analysis will include the following components as necessary:

- *Pattern analysis* – the process of analyzing known information to determine particular scenarios where certain events are repeated.
- *Translations verification* – particularly trunk group routing, timing, and overlap outpulsing operation.
- *Placing of test calls* – A description of those tests follows:
  - The ASP places a call from the line side of the originating end office to a 102 test line in the ASC Switch (first point of switching in the ASC Network). It is recommended that dialing 700-958-1102 or 700-959-1020 as appropriate to access the ASC 102 test line.
  - The ASC places a call from a test access point in the last point of switching in the ASC network to the 102 test line in the terminating ASP end office. Terminating ASC-ASP test calls should be placed to 7-digit directory number of the end office 102 test line.

If the ASP determines there is a problem in their network, they will exercise diligence in repairing the out-of-limits parameters. If the trouble cannot be found in the ASP's network, this information will be communicated to the ASC. If the ASC and ASP agree there appears to be no call setup time problem, the ASC will discuss this with the end user. If the end user is still encountering a call setup time trouble, further analysis/joint testing may be conducted between the ASC and ASP.

#### **(7.1.2.1) Checklist for Troubleshooting**

##### **SPs Generating Trouble Reports**

- Provide trained personnel.
- Advise the relevant SPs when there is a potential service affecting network failure.
- Provide contact information for trouble reporting.
- Maintain complete and accurate installation and repair records.
- Provide access to test lines where appropriate.
- Accept trouble reports from their end users.
- Accept trouble reports from other SPs.
- Ensure the test equipment used is compatible with the other relevant SP's test equipment.
- Assume control functions for maintenance of its trunk(s).
- Consult with other relevant SPs before requesting any changes, except under emergency conditions.
- Sectionalize and clear the trouble in its own network.
- Test cooperatively with other relevant SPs to identify and clear a trouble, when the trouble has been sectionalized to a 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 other SPs or analytics engine providers using the trouble reporting procedures.
- Dispatch its own maintenance forces.
- Perform verification tests to ensure that trouble has been cleared.
- Participate cooperatively with other SPs or analytics engine providers to further isolate and clear the trouble when trouble exists and cannot be sectionalized to a particular SP 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.

#### **(7.1.2.2) Carriers Receiving Trouble Reports**

- Provide trained personnel.
- Advise the relevant SPs when there is a potential service affecting network failure.
- Provide contact information for trouble reporting.
- Maintain complete and accurate installation and repair records.
- Consult with other relevant SPs before requesting any changes, except under emergency conditions.
- Provide access to test lines where appropriate.
- Notify the receiving SP of any changes affecting the service requested, including the service due date.
- Accept trouble reports from SPs generating trouble reports.
- Sectionalize and clear the trouble in its own network.
- Test cooperatively with other relevant SPs to identify and clear a trouble when the trouble has been sectionalized to the other SP's network.
- Perform cooperative analysis to determine if a trouble pattern exists.
- Refer troubles to other relevant SPs or analytic engine providers using the trouble reporting procedures.
- Dispatch its own maintenance forces.
- Perform verification tests to ensure that trouble has been cleared.
- Participate cooperatively with other SPs to further isolate and clear the trouble when trouble exists and cannot be sectionalized to a particular SP portion or involve the application of analytics.
- Provide status reports to the SP who generated the trouble report.

#### **(7.4) Contact Directories**

Any SP may request, free-of-charge, access to the following documents by completing [Contact Directory Password Request Form](#) and submitting it via email to [ngiif-admin@atis.org](mailto:ngiif-admin@atis.org).

- *Service Provider Contact Directory*: The purpose of the SPCD document is to provide contact numbers to the telecommunication industry for requesting interconnecting SP assistance on service-related situations, applying to emerging technology, consolidated centers, multiple platforms (TDM, wireless, IP), or SP specific departments.
- *National LNP Contact Directory*: The purpose of the LNP Contact Directory is to provide contact numbers to the telecommunication industry for requesting interconnecting SP assistance on service-related situations relating to LNP. Any associated LNP contact information related to TDM, wireless, or IP should be included in the LNP Contact Directory. It is a recommendation by the NGIIF that all SPs list and update their contacts on a regular basis.

These directories can be found on ATIS' website at:

[https://www.atis.org/01\\_committ\\_forums/ngiif/contact-directories/](https://www.atis.org/01_committ_forums/ngiif/contact-directories/)