



1200 G Street, NW
Suite 500
Washington, DC 20005

P: +1 202-628-6380
W: www.atis.org

April 16, 2015

Via Email

Ann Stevens (Ann.Stevens@fcc.gov)
Deputy Division Chief
Competition Policy Division
Wireline Competition Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: CC Docket No. 95-155
Toll-Free Numbering Resources

Dear Ms. Stevens:

The Alliance for Telecommunications Industry Solutions (ATIS) SMS/800 Number Administration Committee (SNAC) is writing to provide additional information regarding some of the topics discussed in SNAC's November 14, 2013, letter regarding toll-free numbering resources. Below is additional information regarding: (1) the need to accommodate geographic routing during the PSTN transition; (2) the need to clarify the application of the CPNI rules to toll-free services; and (3) industry efforts to standardize processes surrounding the use of Letters of Agency (LOA).

The Need to Accommodate Geographic Routing. The November 2013 ATIS SNAC letter notes that **there is, and will continue to be, a need for location-based routing during the PSTN transition.**¹ As ATIS explained in its August 19, 2013, comments in response to Commission's examination of its long-term approach to numbering resources,² one of the key roles of geographic numbering relates to the routing of toll-free calls. Routing features allow subscribers to provide efficient and effective services to their customers, streamline business operations, and provide quick and effective response in the case of emergencies, including natural disasters.

Many toll-free service providers rely upon the calling party number as an indicator of the geographic location of the caller in order to provide least-cost network and multi-carrier routing, time-of-day routing, and other special routing features, by

¹ ATIS SNAC Letter at p. 2 (emphasis added).

² Reply Comments of the Alliance for Telecommunications Industry Solutions, filed August 19, 2013, in response to *Notice of Proposed Rulemaking, Order and Notice of Inquiry*, FCC 13-51 (released April 18, 2013).

virtue of having complete and accurate knowledge of the geographic origination. Toll-free subscribers can also route their calls to one of many stores or service locations based upon the location and time zone of the caller. Moreover, shared-use toll-free businesses route calls to licensees who have subscribed to receive all calls originated from specific, defined territories.

Routing of calls based on the caller's location is important to many uses of toll-free service. For example, a business may wish to have calls routed to its premises closest to the caller or to a call center designated to handle calls from a particular area. Alternatively, a toll-free subscriber may not wish to accept calls from outside of the area where it does business. Toll-free subscribers may also want to select a toll-free service provider to carry their calls based on originating location so as to minimize their costs.

Current procedures for routing toll-free calls rely on the caller's telephone number to determine originating location. The originating service provider's switch queries a toll-free Service Control Point (SCP) for routing instructions, including the toll-free number and the caller's telephone number (TN) in the query. The SCP returns the Carrier Identification Code (CIC) of the selected toll-free service provider and optionally translates the toll-free number based on logic downloaded from SMS/800. Both CIC and number translation may depend on the location indicated by the caller's telephone number. The prevalence of wireless roaming, *de facto* non-geographic assignment practices for new telephone numbers, and nomadic VoIP has rendered this approach significantly less effective and the toll-free industry has expressed its concern about the pace at which the effectiveness of the current TN-based routing methodology continues to erode.

For wireless calls, the originating service provider may have more accurate information about the caller's location, including, for example, the cell site from which the call originated. This information, however, is not in a form that can be used by the existing toll-free SCP query. To make use of this information, changes would be required in switch software, toll-free SCP logic, and SMS/800. Given that many of the switching platforms and some SCPs have been manufacturer-discontinued and carriers are planning to replace them as they transition to IP, such significant changes may not be cost-justified. The situation is further complicated because some wireless carriers do not perform their own toll-free queries but hand off toll-free calls to an access tandem or an aggregator for such processing. In this case, changes to the SS7 protocol and corresponding switch software would also be required.

Location information based on cell site or even GPS is sometimes used by the toll-free service provider or toll-free subscriber. This information is used after the initial routing to a selected toll-free service provider and not is provided in the signaling stream that sets up the toll-free call (for the reasons discussed above) but through independent commercial arrangements.

It has sometimes been suggested that the Jurisdiction Information Parameter (JIP) be used in place of the caller's telephone number to provide location information. While JIP

can identify the originating switch, there are several issues with its use for location based toll-free routing. First, the JIP is 6 digits in length rather than 10 digits; thus, changes in switch software would be required to use JIP rather in place of the caller's telephone number. Second, JIP is not populated by all switch platforms. Third, JIP may not always provide better location information. While JIP may provide better information in certain circumstances, such as in the case of wireless roaming to another state, it may not when a switch that services multiple rate centers, LATAs, or states may have only a single JIP.

While identifying the correct originating location and providing that information to toll-free carriers is difficult in the current PSTN/TDM network, a long-term solution must be integrated into the planning for the IP/SIP transition. Certain resellers and non-telecommunication companies currently face onerous business challenges due to this issue. In some cases, these companies may be forced out of business between now and the time new location technologies are implemented. Ongoing industry efforts seek to alert the Commission to the severity of this issue and to press for workable methods to accurately identify the toll-free callers' location to assist these companies during the planning and implementation of the PSTN to IP transition.

Even after the transition from TDM networks to next generation networks, there will remain a need for location-based routing for toll-free calls. The accurate routing of the calls will still require that the caller's approximate location be identified. In the developing IP/SIP environment, as opposed to the existing TDM/SS7 PSTN, it will be possible to develop effective location-based routing of toll-free calls. The industry will need to pursue this opportunity.

The NANC's Future of Numbering Working Group prepared and approved a white paper "Geographic Routing of Toll-Free Services" to address the roadblocks to toll-free location-based routing caused by ongoing and anticipated changes to the numbering plan, geographic number portability, consolidation of rate centers, etc. The white paper provides suggestions for supporting toll-free routing by originating location without encumbrances, unnecessary call delay, or privacy (CPNI) concerns. This white paper was recently circulated to NANC members and presented to the NANC at its December 2014 meeting. More information is available on the NANC website <http://nanc-chair.org/docs/documents17-2014.html>.

CPNI Rules and Toll-Free Services. In its November 2013 ATIS SNAC letter, ATIS noted that there is need for further clarity surrounding the application of the Commission's customer proprietary network information (CPNI) rules to toll-free numbers.³ ATIS SNAC explained that there is uncertainty among some carriers as to whether the provision of location information, which is necessary for the accurate billing of toll-free numbers, can be provided under the Commission's CPNI rules. Clarification from the Commission will help resolve this uncertainty.

³ ATIS SNAC Letter at p. 2.

We note that Part 64, Subpart P, of the Commission's rules states, "The terminating carrier must act in accordance with the privacy indicator unless the call is made to a called party that subscribes to an ANI or charge number based service and the call is paid for by the called party."⁴ This section deals with "transmit[ing] for all PSTN Traffic the telephone number received from or assigned to or otherwise associated with the calling party to the next provider in the path from the originating provider to the terminating provider." While this does not explicitly address the disclosure of originating location information from sources other than what can be inferred by the telephone number itself, it does explicitly exempt from privacy restrictions those calls to numbers for which the calling party is charged for the call, including toll-free numbers.

The ANI (even when blocked by the calling party) is used specifically to provide location information for the purpose of screen pops, identifying the customer, and to: (a) rate calls (rates were originally based on distance); (b) route calls to the proper carrier/destination in accordance with the directions of the Service Subscriber to the toll-free number; and (c) allow for proper taxation (i.e., to determine whether calls were intra or interLATA, and which the state, city, etc. the call originated from/terminated to). The ANI is provided for the purpose of identifying the location of the caller to the serving wire center. Because originating carriers are already required by statute to provide the calling party's TN for reverse-toll service, and because it is incumbent upon originating carriers to pass to downstream carriers the information necessary to properly route calls, originating carriers similarly should provide the caller's (approximate) location information now that TNs no longer effectively fill that role.

While the cellular carrier has access to location information on all of their customer's calls, a toll-free provider has access to only a small percentage of the customer's toll-free calls; receiving only one data point about a caller's location that is retained for a very short period of time. Interconnecting carriers operate under the same CPNI rules as the cellular carriers, and there is no reason why toll-free carriers should be viewed as less trustworthy in maintaining the privacy of that information. Originating location information is required for toll-free carriers to provide service to the caller and to the party they are calling – and is not used to sell additional products or services. The amount of data disclosed to the toll-free carrier provides no significant danger to a caller's privacy, and in any event the carrier is subject to CPNI restrictions.

Letter of Agency. In its November 2013 letter, ATIS SNAC suggested that the Commission consider mandating the use of industry developed standardized LOA forms and/or mandating that the database administrator implement the procedures outlined on the new standardized form(s).⁵ ATIS SNAC notes that the SMS/800 is developing an online RespOrg change system that may address this topic. Successful implementation of this system may eliminate the need for the Commission to mandate use of standardized LOA forms.

⁴ Title 47: Telecommunication PART 64—MISCELLANEOUS RULES RELATING TO COMMON CARRIERS Subpart P—Calling Party Telephone Number; Privacy; Section 64.1601.

⁵ Id. at p. 3.

ATIS SNAC would be happy to provide additional information about these issues or to set up time to discuss these matters. If there are any questions, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas Goode". The signature is fluid and cursive, with the first name "Thomas" being more prominent than the last name "Goode".

Thomas Goode
ATIS General Counsel