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February 3, 1999

EX PARTE FILING

Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Cellular Telecommunications Industry Association's Petition for
Forbearance from Commercial Mobile Radio Services Number
Portability Obligations, WT Docket No. 98-229; CC Docket No. 95-116 ✓

Dear Ms. Salas:

By this letter, AT&T Wireless Services, Inc. ("AWS") responds to the submission of the Telecommunications Resellers Association ("TRA"), filed November 24, 1998, regarding an alleged "alternative method for achieving wireless number portability within the March 31, 2000 time frame mandated by the FCC at a reasonable cost to the industry."^{1/}

As described below, TRA's "LRN Relay" approach is nothing new; it was considered and rejected by the industry because it is based on faulty assumptions and technical misunderstandings, and will not accomplish the Commission's, the industry's, or even TRA's goals. The Commission should reject TRA's petition and, instead, allow the industry to concentrate its efforts on resolving the still outstanding technical issues associated with the industry-approved solution.

^{1/} See Letter to William E. Kennard, Chairman, FCC, from David Gusky, Vice President, TRA, at 1 (Nov. 24, 1998), and attached report: "Wireless Number Portability, The Case for LRN-Relay" (Nov. 24, 1998) ("TRA Proposal").



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TRA's New LRN-Relay Solution is Unworkable

When TRA first advanced its proposal several months ago, it was premised on the use of Global Title Translation ("GTT"). GTT is a feature on the Signaling System 7 ("SS7") network^{2/} that permits the destination addressing of a message at a point other than the switch. With GTT, a switch does not need to know the address of a subscriber's Home Location Register (HLR) in order to route a registration message to that HLR. A Signaling Transfer Point (STP) with GTT can instead address the registration message bound for the HLR based on, for example, the first 6 digits of a Mobile Directory Number (MDN) (i.e., the telephone number).^{3/} Although the advantage of GTT is that not all switches need to be provisioned with all HLR addresses (for example, only the STP nodes that carry the messages need to be provisioned, and there are fewer STPs, typically, than switches), many wireless networks are not yet GTT-capable today.^{4/} Therefore, virtually all registration messages continue to be addressed directly at wireless switches.^{5/}

TRA's updated proposal, which it calls "LRN Relay," does not obviate the need for GTT and is in many ways more unworkable than TRA's original solution. Pursuant to LRN Relay, the registration message for a ported subscriber would be routed to the recipient network HLR by way of the donor network. According to TRA, the serving network may not need to upgrade to support number portability, but could instead rely on the donor network, which obviously is GTT-capable, to route the registration message. This reliance is misplaced. If the serving carrier does not have the HLR address, it must

^{2/} The signaling network is created via Signaling Transfer Points ("STP") that carries ANSI-41, for example, messages from one network element to another.

^{3/} 10-digit GTT refers to the need to determine the HLR address based upon all 10 digits of a telephone number. With 6-digit GTT, the HLR address can be determined by analysis of only the first 6 digits of the telephone number. While the GTT example set forth above involves the routing of registration messages, GTT can be extended to many service message routing needs.

^{4/} It is likely that the switches for which the MIN/MDN separation proves difficult will not be easily upgraded to accommodate GTT either.

^{5/} The wireline industry has implemented a 10-digit Message Relay Service (MRS) to route Calling Name (CNAM) messages in a ported environment. A query to a CNAM database (to obtain a calling name to display to the called party) for an NPA-NXX open to portability requires a 10-digit analysis in order to find the right database address. This 10-digit addressing for ported numbers is provisioned via the Number Portability Administration Center Service Management System (NPAC SMS).

mark the message for GTT before it passes it on to the donor network. To mark the message properly, however, the serving carrier must be GTT-capable. Accordingly, the central premise of TRA's proposal – that wireless LNP with nationwide roaming could be accomplished without the need for nationwide network upgrades – is simply incorrect.^{6/} This in turn calls into question TRA's conclusion that its approach would be less costly and easier to implement than the industry-developed solution.

Moreover, to route calls properly, TRA suggests that the donor network STP query an LNP database to determine the recipient network address and thus the home HLR. This is not possible. STPs are not capable of launching queries to external databases. The only way for the STP to analyze and determine routing information is: (a) via the data provided in the message (i.e., the address is provided by the switch); or (b) via GTT. In any event, an LNP database query is nothing more than a 10-digit analysis of the telephone number. When a switch queries an LNP database, the switch provides the 10 digit telephone number. The database analyzes all 10 digits of that telephone number and provides in response the appropriate routing data. Therefore, a 10-digit analysis is still being performed, whether it be via GTT or a query/response.

TRA's LRN Relay solution is also misguided because it puts a burden on the donor network – which has lost the subscriber – to continue to provision and care for that subscriber in order to route registration messages. The FCC has ruled in similar situations that solutions that rely on the donor network are unfair and inconsistent with LNP performance criteria. For example, the Query on Release ("QOR") solution proposed by various wireline carriers was found to be unacceptable as a long-term number portability method.^{7/} The Commission stated that QOR would result "in a degradation of service by imposing post-dial delay only on calls ported to new carriers," and that any network reliability problems caused by QOR "would disproportionately affect customers who port their numbers."^{8/} In addition, the Commission noted that claims of great cost savings associated with QOR were unreliable and, in any event, the harm that QOR causes competitors and the increased costs placed on the donor carrier outweigh any short-term savings that might be gained.^{9/} Nor was the Commission

^{6/} See TRA Proposal at 20 ("Under the LRN-Relay solution, only carriers with operations within the 100 largest MSAs initially must upgrade their own networks to perform the signaling functions needed for wireless number portability.")

^{7/} See Telephone Number Portability, CC Docket No. 95-116, RM-8535, First Memorandum Opinion and Order on Reconsideration, FCC 97-74, at ¶ 1 (rel. March 11, 1997).

^{8/} Id. at ¶ 20.

^{9/} Id. at ¶¶ 33, 38-42, 47.

persuaded by contentious that number portability could be deployed much more rapidly under a QOR regime. It stated that the industry had already undertaken important steps toward implementation of another method and that reversing course in midstream would likely cause more disruption than efficiency.^{10/}

The Commission's concerns about wireline LNP solutions that proposed to rely on the donor network are equally valid in connection with TRA's proposal. Ported customers who roam would likely experience dialing delays and other service degradations and the donor carrier's recurring costs will increase as it is forced to stay involved in transactions on behalf of customers who no longer provide it with any revenue. In light of the minimal (if any) cost advantages of TRA's solution and the possible implementation delays it will cause, it does not appear to make sense to pursue this course.

The Industry's MIN/MDN Separation Solution is Preferable

Independent of whether 10-digit GTT or LRN Relay is the right approach for routing registration messages, there still exist overwhelming reasons why MIN/MDN separation is a better approach than porting the MIN.

First, the ANSI-41 based wireless industry is moving toward international and GSM roaming, which would require use of an alternative Mobile Station Identifier (MSID). The International Mobile Station Identifier (IMSI) is used today by GSM carriers (domestic and international) as an identifier separate from the telephone number. To roam between technologies, the introduction of IMSI is already being designed in the TDMA and CDMA technology standards groups. Introduction of IMSI requires a separation of the telephone number and the mobile identifier, making MIN/MDN separation inevitable.

Second, registration messages account for considerably more than 50 percent of all ANSI 41 messages routed in wireless networks today. The industry solution for MIN/MDN separation was based on protecting the routing of registration messages in order to cause less burden on networks and on the provisioning of the addresses for registration. Routing registration messages across service provider network boundaries is the base on which subscribers can roam. Porting the MIN puts an enormous burden on networks because it requires additional analysis and provisioning for the vast majority of traffic (i.e., registration messages) on each system. In contrast, porting a separated MDN does not disturb current registration routing and only requires such analysis and provisioning for other messages.

^{10/} Id. at ¶¶ 45-46.

Finally, when a subscriber roams onto another carrier, that carrier must route its billing records back to the home provider to obtain appropriate compensation for serving that subscriber. MIN/MDN separation allows the clearing houses and billing systems to identify carriers for roaming subscribers based on a 6-digit analysis of the MIN. If the wireless industry were to port the MIN without separation, every carrier would be required to establish a post-processing database that contains every wireless telephone number and associated carrier in order to send the roamer records to the subscriber's carrier. This database would need to be updated in near real-time to keep up with porting demands. Such a database would be unprecedented and extremely costly.

CONCLUSION

For the foregoing reasons, AWS urges the Commission not to expend any more resources on pursuing TRA's misguided proposal. TRA had ample opportunity over the past several years to participate in multiple industry fora on wireless LNP standards and requirements, which were established to ensure impartiality and efficiency. Had TRA done so, it would have learned why its solution does not satisfy FCC performance criteria and why its cost-saving and ease of implementation claims are unrealistic.

Please contact the undersigned with any questions about this matter.

Sincerely,

Handwritten signature of Douglas I. Brandon in cursive, with a vertical line to the right and the initials 'SFS' at the bottom right.

Douglas I. Brandon

cc: Thomas Sugrue
Jeanine Poltroniere
David Furth