International Forum on ANSI-41 Standards Technology

Alliance for Telecommunications Industry Solutions

Memorandum

To: IFAST Membership

From: Fred Gaechter, IFAST Chairman

Date: May 22, 2001

Re: T1S1 Questions/Answers regarding International ANSI SS7 Point Code Assignments

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This document contains the eight questions developed by ANSI's T1S1.3 regarding the IFAST request for the assignment of ANSI SS7 point codes to non-NANP networks. Associated with each question is IFAST's draft answer. These answers are the result of discussion at IFAST16 with further post-meeting enhancements. It was agreed at the IFAST16 meeting that the following final draft answers be transmitted to the IFAST membership for further review and comment prior to their submittal to T1S1.3 by June 10, 2001. **Your comments, in the form of specific text changes, additions, or deletions, are requested by June 4, 2001** in order to complete this Action Item.

1. **Question:** Are there any identified reasons why these point codes could not be used in the requested manner (e.g., gateway problems)?

   Answer: *The impacted operators and service providers that have participated in IFAST's discussions of this issue (i.e., international wireless roaming service providers and wireless gateway operators), have not identified any technical, operational, or administrative reason that the ANSI point codes for international roaming could not be assigned to and work for non-NANP operators.*

2. **Question:** Please provide us information with respect to the total number of codes needed and their projected growth.

   Answer: *Currently, worldwide there are approximately 103 countries where ANSI-41 wireless technology is deployed in the public network. In most countries, where there is wireless competition, there is an average of 3-5 competing wireless service providers. However, in many countries, not all the service providers have deployed ANSI-41 technology. For example, in Malaysia there are 4 competing wireless service providers, but only 1 is ANSI-41-based and only the ANSI-41-based networks will require ANSI Point Codes.*

Despite this less than ubiquitous ANSI-41 deployment reality, if we assume the worst case scenario – 5 competing ANSI-41-based service providers in 103 countries – there would be 515 networks requiring ANSI Point Codes. If we also assume the worst case scenario, with regard to the level of assignments required, there would be a need for 515 small network codes or approximately the capacity of 2 large network codes (i.e., 512 small network codes).

The IFAST proposes that the assignment criteria currently in use for ANSI Point Code assignments, regarding the allocation of small network codes and blocks of codes, be applied to the resources assigned for use by non-North American entities. It is the IFAST's expectation that, as in the US, most networks will only qualify for a block of point codes (4). There will be no instances in which a large network would be allocated to any of these networks. This proposal significantly decreases the potential quantity of resources required.

Since the IFAST has started assigning International Roaming MINs (IRMs) to this same community of service providers, only 117 networks have applied for resources and the annual quantity of new applications has declined significantly in the last year. This tells us that we are approaching the eventual and ultimate quantity of wireless service providers intending to offer international roaming services and, therefore, the quantity of entities requiring the assignment of IRMs and ANSI Point Codes.

Based on the above points and analysis, the IFAST answer to this question is that T1S1.3 assign 1 large network code for immediate assignments and reserve an additional contiguous large network code for potential future growth. All the above projects lead the IFAST to anticipate that the reserved growth code will not be required and will be returned for North American use, at an appropriate time.

3. **Question:** Please provide us examples of typical network configurations that would use these codes (i.e., number of nodes in the network and types of nodes).

   Answer: *Three examples of typical network configurations that will use the ANSI SS7 Point Codes are attached to this document for review. IFAST representatives will describe these charts during the time allocated to the IFAST issue at the T1S1.3 meeting in Orlando.*

4. **Question:** Could you identify whether one Network ID will meet your needs or whether IFAST members will need individual assignments as currently described in T1.111.8 for North American Networks?

   Answer: *The IFAST believes that one large network code should be assigned and an additional one reserved for international applications would be the most appropriate and efficient allocation. Within the large network code(s) the same criteria currently utilized for NANP-based networks, to determine whether a small network code or a block of 4 codes should be assigned to an applicant, should be utilized for the non-NANP networks.*

5. **Question:** Are you anticipating that our current administrator manage the assignments or does IFAST desire to administer the assignments?

   Answer: *It is the IFAST's preference that the current SS7 Point Code Administrator administers these resources in the same manner as the currently authorized resources and in*

conformance with the revised Assignment Guidelines authorizing ANSI point codes for international roaming to non-NANP operators.

6. **Question:** How soon will you be requesting the first assignment?

   Answer: *Immediately after T1S1 has authorized the assignments.*

7. **Question:** Can you explain how both IFAST networks and other interconnecting networks are impacted and administered as a result of moving a point code from one network to another?

   Answer: *First, just a point on terminology: there are no "IFAST networks" – we're addressing public switched wireless networks that have deployed ANSI-41 technology.*

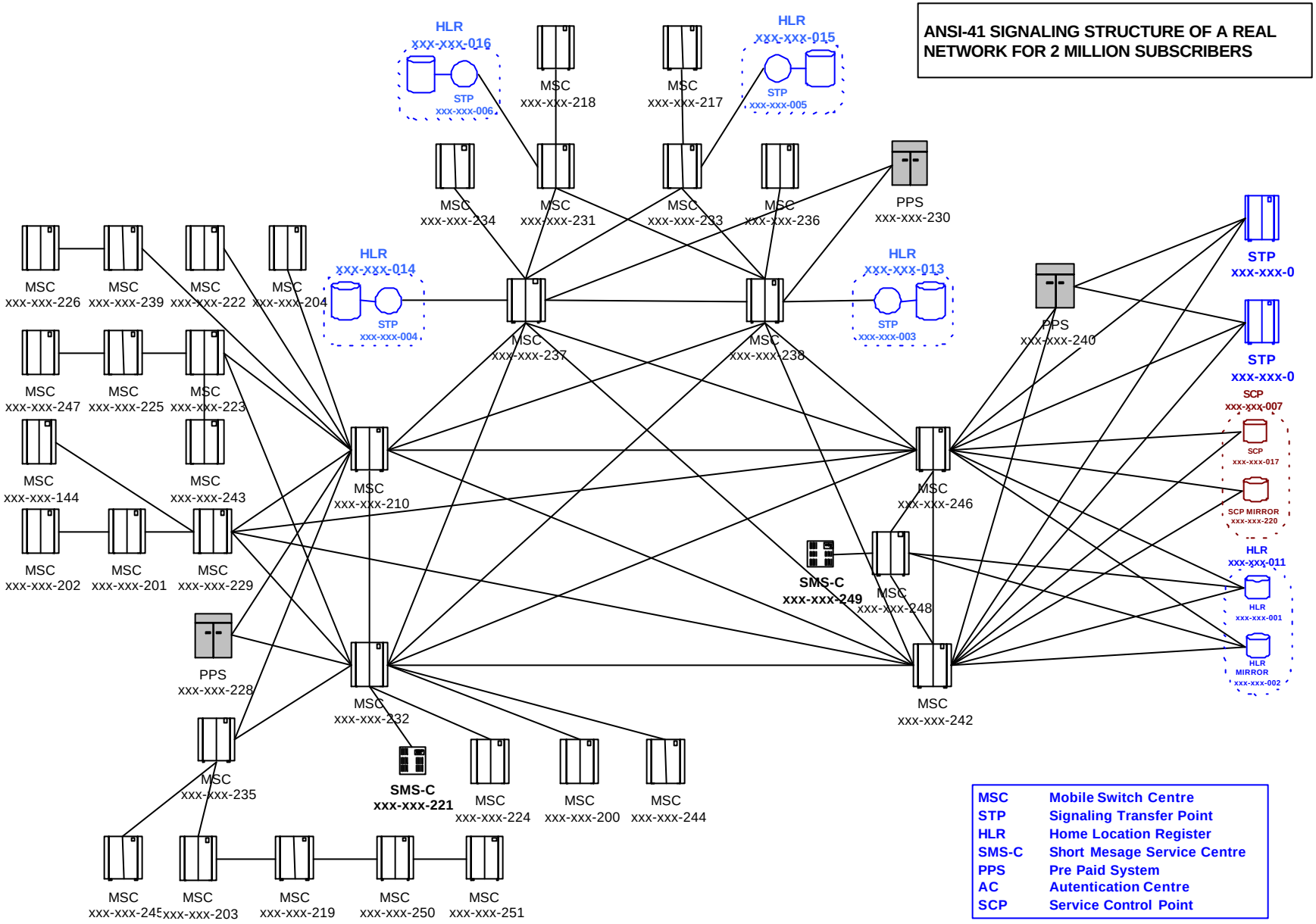
   The impact of moving a point code from one gateway operator's network to another gateway operator's network is no different than if that network were to accept a new interconnecting network as a subscriber or lose an existing subscriber network to another gateway operator. The point code of the new or departing subscribing network would be added to or deleted from, respectively, their translation tables.

   The impact on directly interconnecting networks of the non-North American networks is actually significantly better under this scenario. Today, the interconnecting networks would be asked to change their translation tables each and every time the moving network changes gateway operators, because the currently assigned point codes belong to and identify the gateway operator. Once point codes are uniquely and directly assigned to the gateway network subscribers, the interconnecting networks will be required to change their translation tables ***once*** *– when these unique codes are assigned. However, on an ongoing basis, no changes will be required when a gateway subscription is changed, because the Point Code now identifies only the network operator no matter what gateway they subscribe to.*

8. **Question:** Are there routing changes made at the gateways when moving a point code from one gateway to another.

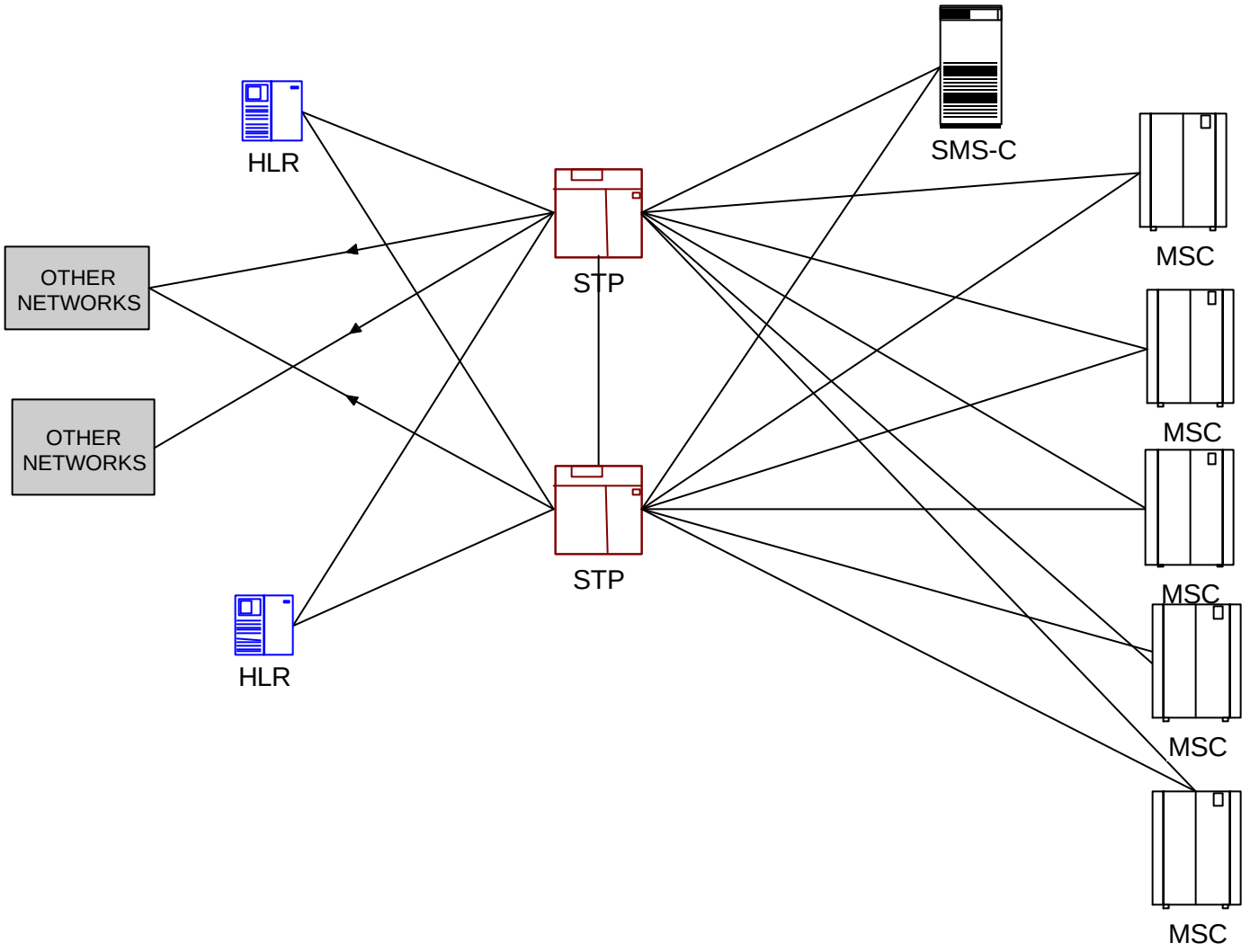
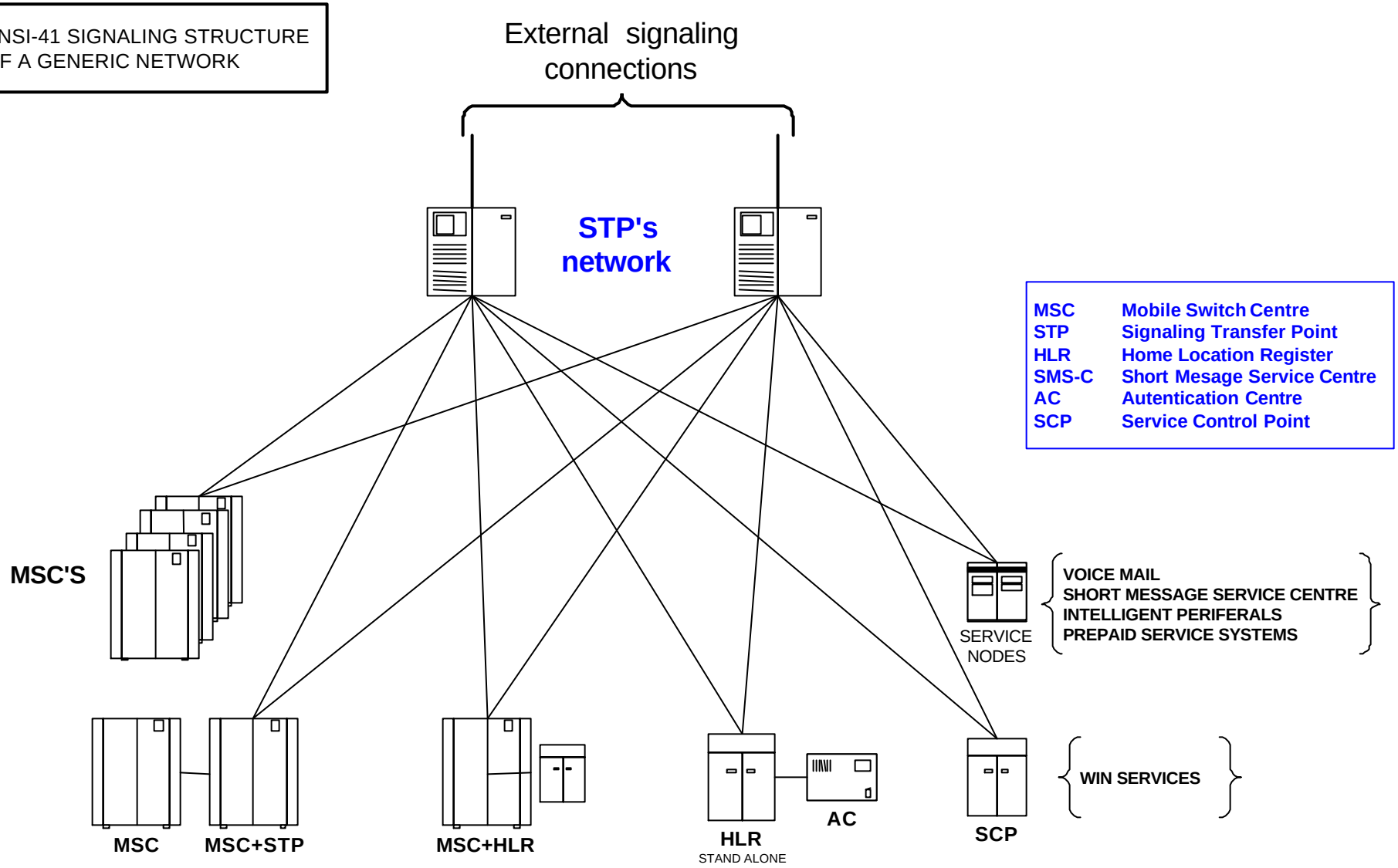
   Answer: A non-NANP network subscribes to only one gateway operator at a time. Consequently, when transferring from one gateway operator to another, while continuing to utilize the same signaling address, the new serving gateway would merely add the signaling network's identification and address of this network to its routing table. Similarly, the previous serving gateway would merely delete the previously subscribed network's identification and address from its routing tables. This process, at both gateways, is not different from when a gateway operator acquires new or loses existing gateway subscribers.

ANSI-41 SIGNALING STRUCTURE OF A REAL NETWORK FOR 2 MILLION SUBSCRIBERS



MSC	Mobile Switch Centre
STP	Signaling Transfer Point
HLR	Home Location Register
SMS-C	Short Mesage Service Centre
PPS	Pre Paid System
AC	Autentication Centre
SCP	Service Control Point

ANSI-41 SIGNALING STRUCTURE OF A SMALL NETWOK



ANSI-41 SIGNALING STRUCTURE
OF A GENERIC NETWORK