NUMBERING OF SIGNALLING POINT CODES *

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LIST OF FIGURES

NUMBERING OF SIGNALLING POINT CODES *

1. INTRODUCTION

This Recommendation describes the numbering scheme of signalling point codes for Signalling System No. 7 networks. The technical aspects of the signalling networks are specified in Recommendation Q.705. *

The worldwide signalling network is structured into functionally independent levels, namely the international and national levels. This structure makes possible a clear division of responsibility for signalling network management and allows numbering plans of signalling points of the international network and the different national networks to be independent of one another.

It is also noted that the point code is intended to be processed within the Message Transfer Part of each signalling point or signalling transfer point, so that there is no direct relationship to the telephone, data, or ISDN numbering.

2. NUMBERING OF INTERNATIONAL SIGNALLING POINTS

(not applicable)

2A. NUMBERING OF SIGNALLING POINTS IN UNITED STATES NETWORKS *

2A.1 A 24-bit binary code is used for the identification of signalling points. *

2A.2 A signalling point code should be assigned to each signalling point which belongs to the United States signalling networks. * *

2A.3 All signalling point codes should consist of three fields as indicated in Figure 1A/Q.708. The most significant field of 8-bits should identify a signalling network. The next field of 8-bits should identify a cluster in a specific network. The least significant field of 8-bits should identify a member (i.e., signalling point) of a specific cluster. * * * *

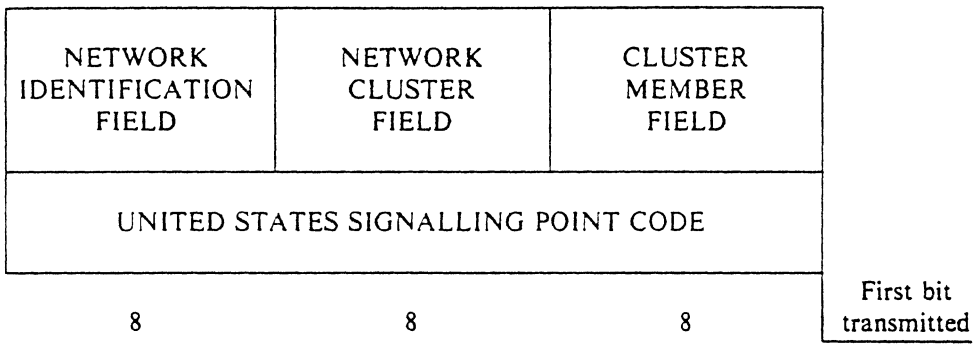

Figure 1A/Q.708 - Format for United States signalling point codes *

A '*' indicates a change from the CCITT Red Book Vol. VI which is specific to United States networks.

NUMBERING OF SIGNALLING POINT CODES *

2A.4 *

The network identification field codes (network codes) will be administered and the guidelines for * their assignment and administration is provided in Annex 1. For some network identification field * codes, their associated network cluster field codes will be administered and assigned as network * codes for small networks. *

2A.5 Any United States CCS network may be assigned a network code. North American CCS * networks should follow the same rules as United States CCS networks. *

2A.6 Four of the network identification field codes, namely codes 1, 2, 3, and 4 are reserved. Their * associated network cluster field codes will be assigned as network codes for small networks. *

2A.7 The network code of 0 (0000 0000) will not be used. The network code of 255 (1111 1111) * will be reserved for future use. When the network cluster field is used to identify small networks, * the network cluster code of 0 will not be used. *

2A.8 The system of network codes will provide for $250 + 4 \times 255$ (1270) network codes. The * system of signalling point codes will provide for $[250 \times 256 \times 256] + [4 \times 255 \times 256]$ (16,645,120) * signalling point codes. *

2A.9 Each CCS network may be assigned up to 2 network codes, except for small networks which * may be assigned up to 4 "small" network codes. *

2A.10 Lists of network codes assigned to United States CCS networks is given in Annex 2 to this * Recommendation. These lists will be update in future issues of this Recommendation. *

2A.11 The assignment of cluster and member codes (only member codes for small networks) will be * made by the individual networks.

ANNEX 1

CCS NETWORK CODE ADMINISTRATION GUIDELINES

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NUMBERING OF SIGNALLING POINT CODES *

ANNEX 1 *

CCS NETWORK CODE ADMINISTRATION GUIDELINES *

A1.1 ELIGIBILITY FOR NETWORK CODE ASSIGNMENT *

A1.1.1 Any United States CCS (SS7) network may be assigned a network code. *

A1.1.2 It is assumed that other North American CCS networks will follow the same rules as United States CCS networks. * *

A1.1.3 A CCS network is defined as a set of signalling points (including STPs) which are commonly administered, maintained and/or controlled. * *

A1.1.4 Only CCS networks will be assigned network codes. Firms or groups of firms that are associated with CCS networks (e.g., own, share or lease) are not eligible for network code assignments. The intent is to assign network codes to CCS networks and not to a firm or group of firms associated with a CCS network. * * * *

A1.1.5 A single signalling point or group of signalling points without an STP (or STP functionality) is not considered a network and will not be eligible for a unique network code assignment. * *

A1.2 ADMINISTRATION OF NETWORK CODE ASSIGNMENTS *

A1.2.1 There will be no advance reservation process for code assignments. Codes will be assigned as the indication of building and operating a CCS network is given to the administrator of the network codes. * * *

A1.2.2 The plan is to assign unique network codes that will be used anywhere in the United States (and North America). * *

A1.2.3 A CCS network which will initially provide signalling for more than 75 signalling points (belonging to the network), or over the first 5 years provide signalling for 150 signalling points, will be assigned a large network code. Other CCS networks will be assigned a small network code. * * *

A1.2.4 The first code assigned will be called the "primary" code. Additional codes will be called "supplemental" codes. * *

A1.2.5 Large CCS networks have the potential of being assigned one supplemental code (under extreme circumstances a large CCS network may be assigned two supplemental codes). Small CCS networks will have the potential of being assigned up to 3 supplemental codes. * * *

A1.2.6 A valid request is required (which establishes a need for an additional code such as a new serving area that cannot be covered by the existing codes already assigned) for each supplemental code. * *

A1.2.7 The network code of 0 (0000 0000) will not be used. The network code of 255 (1111 1111) is reserved for future use. The network codes 1 (0000 0001), 2 (0000 0010), 3 (0000 0011), and 4 (0000 0100) are reserved for small network code assignments using the network cluster field. When using the network cluster field to assign network codes, the network (cluster) code of 0 (0000 0000) will * * * *

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Exceptions to these guidelines will be considered by the administrator when submitted in writing.

A "*" indicates a change from the CCITT Red Book Vol. VI which is specific to United States Networks.

A "†" indicates a change from the previous issue.

not be used. *

A1.2.8 Large networks will be assigned network codes starting with 254 (1111 1110) and decrementing. * Small networks will be assigned network codes starting with network identification field code 1 * (0000 0001) and cluster field code 1 (0000 0001), and incrementing. *

A1.3 PROCEDURE FOR REQUESTING A CODE ASSIGNMENT *

A1.3.1 It is required that the administrator of the CCS network desiring a code assignment contact the * administrator of the network codes (see below). *

A1.3.2 When requesting a code assignment, the administrator of the CCS network must provide an * exact corporate name and address, and list all of the firms associated with the CCS network. It must * also inform the administrator of the network codes of any previously assigned codes. Exact spelling, * capitalization, hyphenation, etc., is necessary. *

A1.3.3 A CCS network requesting a primary code assignment will be given the next code which is * available. *

A1.3.4 When requesting a code assignment, the administrator of the CCS network must give some * justification for the assignment of the code (see Sections A1.2.3 and A1.2.7). *

A1.3.5 The administrator of the CCS network must write a letter to the administrator of the network * codes requesting a network code assignment. *

A1.3.6 Assignment of network codes will be on a first-come-first-served basis. *

A1.3.7 When a new code is assigned, the administrator of the network codes will notify T1 (i.e., the * chairperson of the T1X1.1 working group) and provide a written confirmation to the administrator of * the CCS network. *

A1.4 RECLAIMING ASSIGNED NETWORK CODES *

A1.4.1 Assigned codes will remain in effect as long as the CCS network is in operation. If a CCS * network is no longer in operation the administrator of the CCS network agrees to relinquish their codes * in 60 days. *

A1.4.2 Network codes are not transferable from one CCS network to another. Such codes will be * reclaimed and will become available for reassignment after a 6 month transition period (if required). *

A1.4.3 If a number of firms merge and a consolidated operation of their CCS networks results, the new * consolidated CCS network may choose which code(s) is to be retained for operation. The code(s) which * is not retained will become available for reassignment after a 6 month transition period (if required). *

A1.4.4 If a number of firms merge and separate network operations are maintained, the code(s) may be * retained by the individual CCS networks. *

A1.5 CONSERVATION OF NETWORK CODES *

Initially only one code will be assigned to a CCS network. *

It is the responsibility of the administrator of the network codes to continually monitor the assignment of * the network codes and the potential for their exhaust. The administrator is to inform T1 (i.e., the * chairperson of the T1X1.1 working group) if there is a potential of exhaust and what conservation action * has been put into effect. *

A1.5.1 Conservation of large network codes *

A1.5.1.1 If the assignment of codes reaches the 70% level (175 large network codes) then no extra * supplemental codes (beyond one) will be assigned. *

A1.5.1.2 If the assignment of codes reaches the 80% level (200 large network codes) then no * supplemental codes will be assigned. *

A1.5.1.3 If the assignment of codes reaches the 90% level (225 large network codes) then an attempt will be made to reclaim any supplemental codes assigned. It is hoped that the industry would cooperate and voluntarily offer to release minimally used codes. If the industry does not offer to release the codes then steps will be taken to recover the codes to avoid the otherwise necessary expansion of the signalling point code structure in the signalling protocol. *

A1.5.2 Conservation of small network codes *

A1.5.2.1 If the assignment of codes reaches the 70% level (714 small network codes) then the first course of action would be to reserve an additional large network code. If the assignment of large network codes has reached the 80% level then a large network code will not be reserved. Instead, the number of supplemental codes that a small CCS network can be assigned will be reduced from 3 codes down to 1 code. *

A1.5.2.2 If the assignment of codes reaches the 80% level then no supplemental codes will be assigned. *

A1.5.2.3 If the assignment of codes reaches the 90% level then an attempt will be made to reclaim any supplemental codes assigned. It is hoped that the industry would cooperate and voluntarily offer to release minimally used codes. If the industry does not offer to release the codes then steps will be taken to recover the codes to avoid the otherwise necessary expansion of the signalling point code structure in the signalling protocol. *

A1.6 ADMINISTRATOR OF THE NETWORK CODES *

A1.6.1 The administrator is given the full authority by T1 and the companies supporting T1 to carry out and enforce these guidelines. *

A1.6.2 It has been recommended that Bell Communications Research, Inc. be appointed as the administrator of the network codes. Contact the T1 Secretariat to obtain the current administrator contact. *

ANNEX 2

LISTS OF CCS NETWORK CODES

CONTENTS

LIST OF TABLES

NUMBERING OF SIGNALLING POINT CODES *

ANNEX 2 *

LISTS OF CCS NETWORK CODES *

TABLE A2-1. LIST OF SMALL NETWORK CODES *

SMALL NETWORK CODE		SIGNALLING NETWORK	*
NETWORK IDENTIFICATION FIELD	*NETWORK CLUSTER FIELD*		* *
1	0	NOT USED	*
1	1	Allnet Communication Services, Inc.	|
1	2	Cincinnati Bell	|
1	3	SPARE - UNASSIGNED	*
:	:	:	*
1	255	SPARE - UNASSIGNED	*
2	0	NOT USED	*
2	1	SPARE - UNASSIGNED	*
:	:	:	*
2	255	SPARE - UNASSIGNED	*
3	0	NOT USED	*
3	1	SPARE - UNASSIGNED	*
:	:	:	*
3	255	SPARE - UNASSIGNED	*
4	0	NOT USED	*
4	1	SPARE - UNASSIGNED	*
:	:	:	*
4	255	SPARE - UNASSIGNED	*

NUMBERING OF SIGNALLING POINT CODES *

TABLE A2-2. LIST OF LARGE NETWORK CODES

NETWORK CODE *NETWORK IDENTIFICATION FIELD*	SIGNALLING NETWORK
255	RESERVED - FUTURE USE
254	AT&T Communications
253	US SPRINT
252	BellSouth Services
251	Pacific Bell
250	Ameritech
249	Southwestern Bell Telephone
248	Bell Tri-Co Services
247	NYNEX Service Co.
246	Bell Atlantic
245	Telecom Canada
244	MCI Telecommunications Corp.
243	Southern New England Telephone
242	SPARE - UNASSIGNED
:	:
5	SPARE - UNASSIGNED
4	RESERVED FOR
:	SMALL NETWORKS
1	SEE TABLE A2-2
0	NOT USED

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