11. STATION MESSAGE DETAIL RECORDING SYSTEM (SMDR)

Billing information can be managed by connecting the Telephony Server and an external computer (SMDR equipment).

Note: SMDR equipment and its software must be provided by the user.

The System provides the SMDR equipment with the following information:

- Calling Party Information
- Called Party Number
- Call Start Time
- Call End Time
- Call Data
- Authorization Code/Account Code
- Trunk Arrival Time (only for Incoming Call) **Note 1**

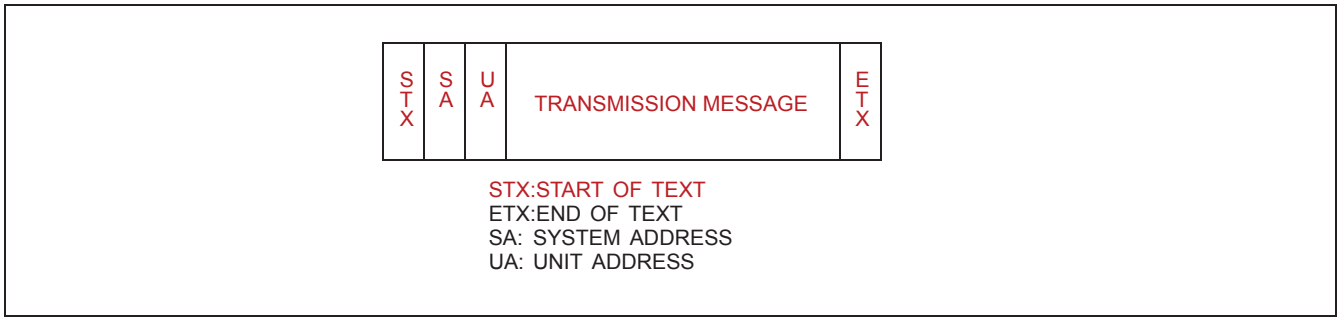
Note 1: Available in EMEA only.

Upon receiving the above information from the System, the SMDR equipment performs editing and management of the information and outputs the resulting information. This section explains the information provided to the SMDR equipment and also explains the method of controlling the interface port between the SMDR equipment and the Telephony Server.

11.1 Transmission Data to SMDR Equipment

(1) Transmission Format

As seen in the figure below, the basic information to be transmitted (Transmission Message) is a block which begins with Start of Text (STX) and ends with End of Text (ETX). When the call ends, the entire contents of this information are transmitted to the SMDR equipment.



(2) Transmission Message

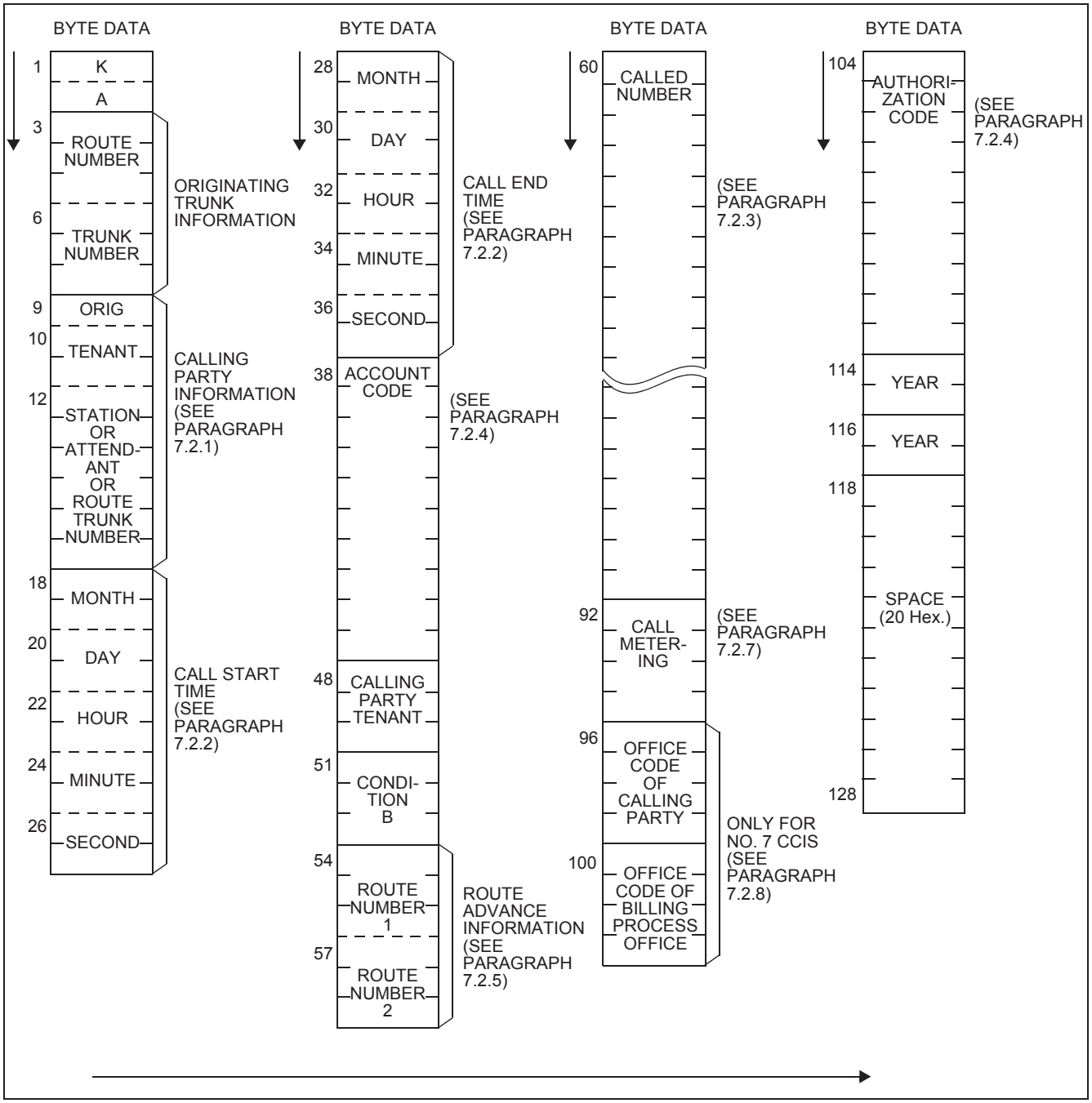
One transmission message consists of 128 bytes of data. Each byte represents by ASCII codes the data to be transmitted (Refer to Table below). The contents of the data to be transmitted vary with the kind of call, but the first byte is always transmitted by ASCII code K (4B hex.). The second byte to be transmitted is the data which specifies the kind of call.

Note: If FCCS service is involved, the message can consist of more than 128 byte data.

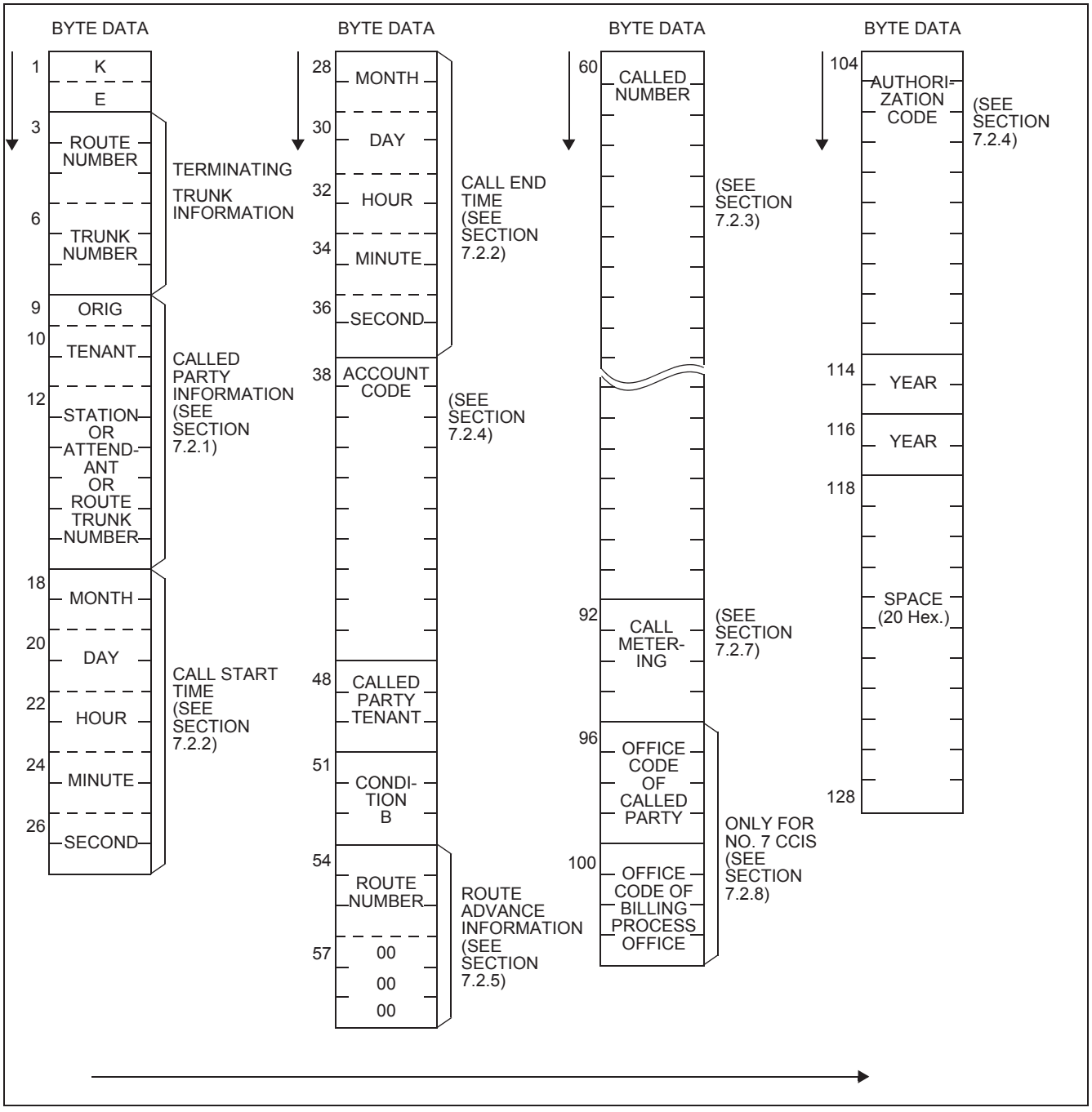
ASCII Code

CHARACTER	ASCII CODE								REMARKS
	HEX.	BINARY DIGIT							
		b7	b6	b5	b4	b3	b2	b1	b0	
0	30	0	0	1	1	0	0	0	0	
1	31	0	0	1	1	0	0	0	1	
2	32	0	0	1	1	0	0	1	0	
3	33	0	0	1	1	0	0	1	1	
4	34	0	0	1	1	0	1	0	0	
5	35	0	0	1	1	0	1	0	1	
6	36	0	0	1	1	0	1	1	0	
7	37	0	0	1	1	0	1	1	1	
8	38	0	0	1	1	1	0	0	0	
9	39	0	0	1	1	1	0	0	1	
SPACE	20	0	0	1	0	0	0	0	0	Special Characters Code
STX	02	0	0	0	0	0	0	1	0	
ETX	03	0	0	0	0	0	0	1	1	
SA	30	0	0	1	1	0	0	0	0	
UA	21	0	0	1	0	1	0	1	1	
*	2A	0	0	1	0	1	0	1	0	
#	23	0	0	1	0	0	0	1	1	

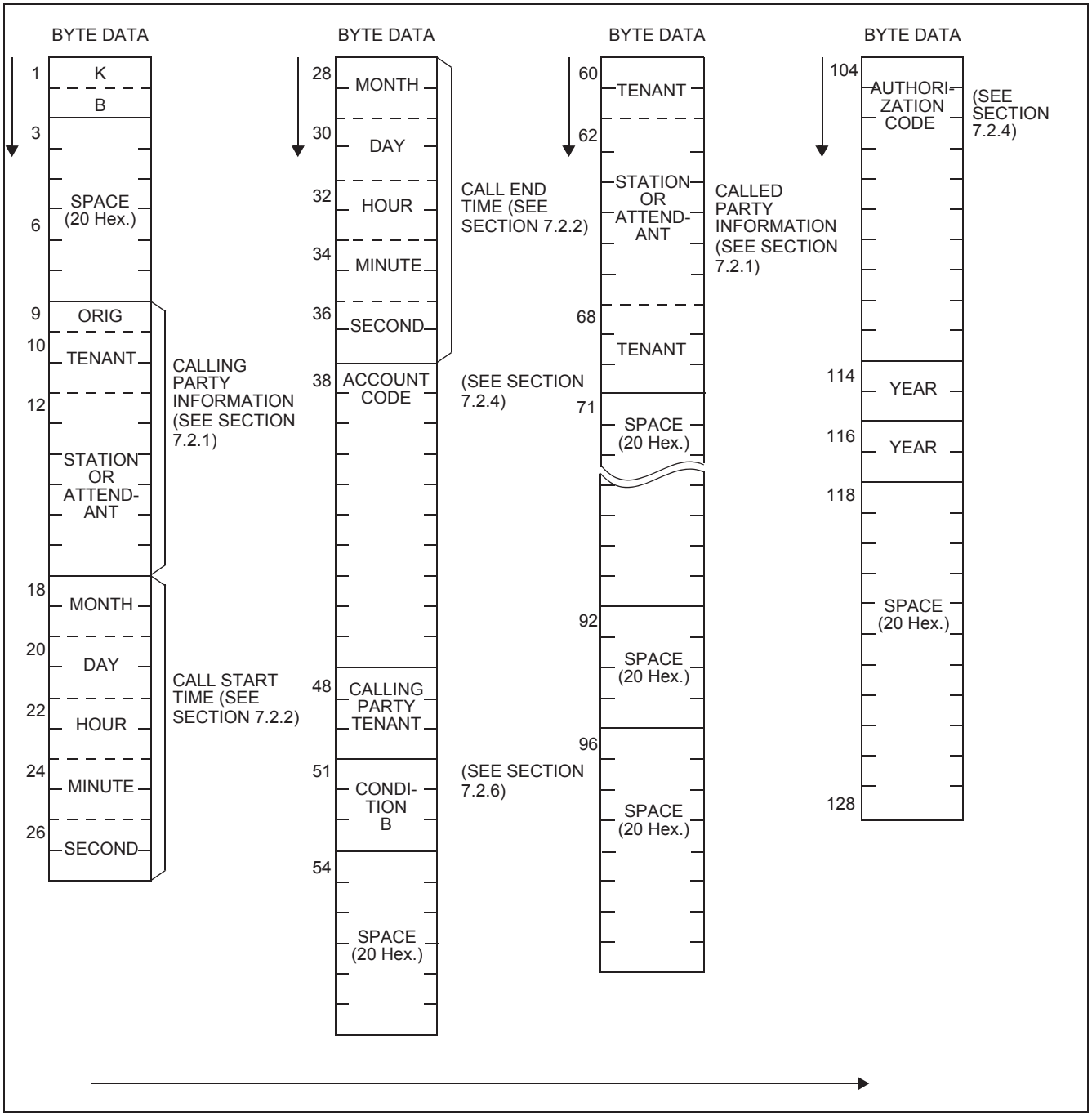
Message Format for Outgoing Call



Message Format for Incoming Call



Message Format for Station-to-Station Call



11.2 Details on Transmission Data

11.2.1 Calling Party Information/Called Party Information

- The 9th byte indicates the type of the calling (or called) party. The 10th through 17th bytes are data pertaining to this calling (or called) party.

  ORIG (Originating Source Identification):
  0 = Calling (or called) Party is a station
  1 = Calling (or called) Party is an Attendant
  2 = Calling (or called) Party is an outside (inside) party

- The contents of 12th through 17th bytes vary with the type of the calling (or called) party.

(1) For a station (ORIG = 0): Data showing station number

BYTE	DATA	EXAMPLE
12	1st DIGIT	4
13	2nd DIGIT	0
14	3rd DIGIT	0
15	4th DIGIT	1
16	5th DIGIT	SPACE
17	6th DIGIT	SPACE

(2) For an Attendant (ORIG = 1): Data showing Attendant Number

BYTE	DATA	EXAMPLE
12	1st DIGIT	1
13	2nd DIGIT	0
14	3rd DIGIT	SPACE
15	4th DIGIT	SPACE
16	5th DIGIT	SPACE
17	6th DIGIT	SPACE

(3) For a trunk (ORIG = 2): Data showing Route Number and Trunk Number

Byte	Data		Example	
12	1st DIGIT	Route Number	0	
13	2nd DIGIT		0	RT No. = 1
14	3rd DIGIT		1	
15	1st DIGIT	Trunk Number	0	
16	2nd DIGIT		5	TR No. = 50
17	3rd DIGIT		0	

11.2.2 Call Start/Call End Time Information

- The data that indicates Call Start Time is as follows:

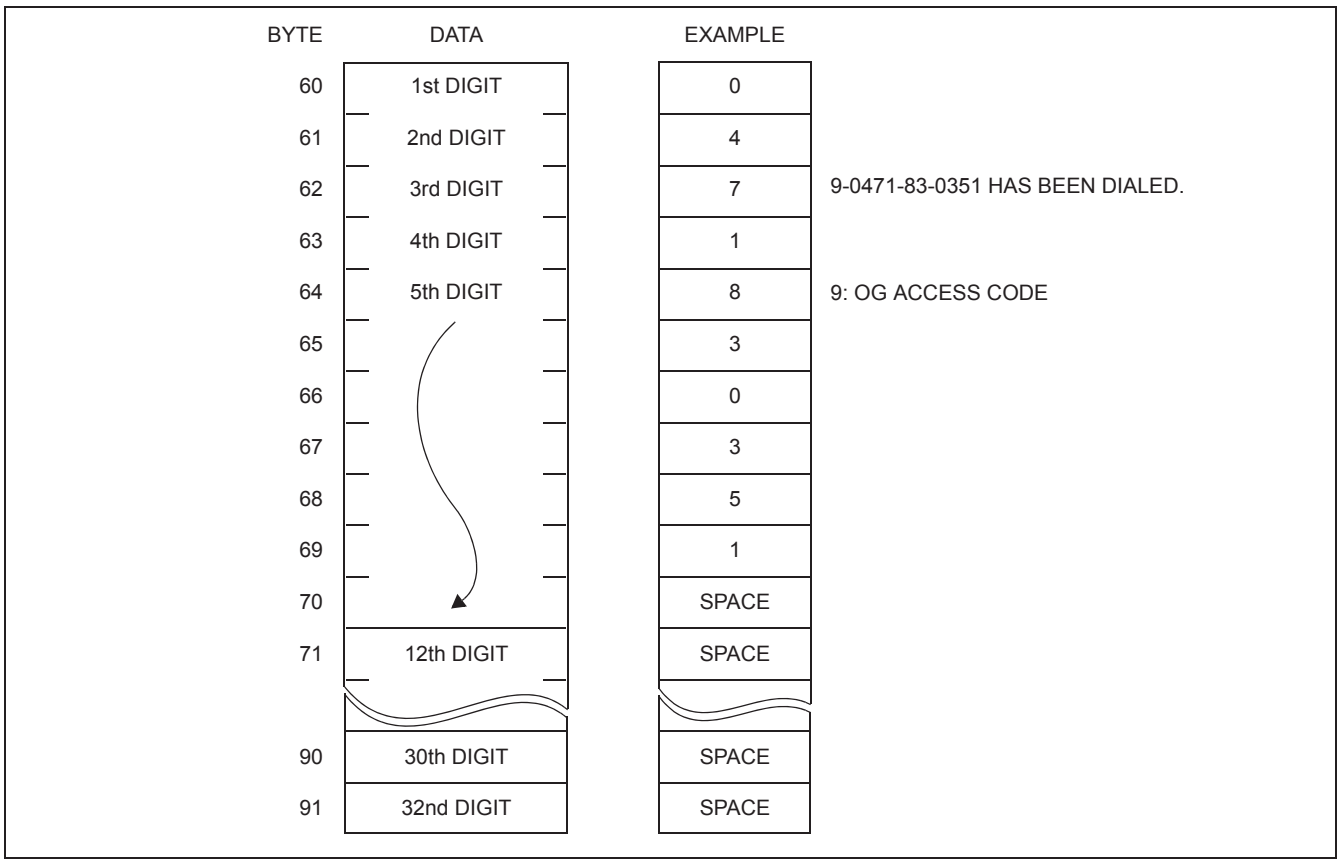
BYTE	DATA	EXAMPLE	
18	MONTH	0	
19	(01-12)	6	
20	DAY	0	
21	(01-31)	1	THIS INFORMATION SHOWS THAT THE CALL STARTED AT 1 O'CLOCK P.M. ON JUNE 1st, 2013.
22	HOUR	1	
23	(00-23)	3	
24	MINUTE	0	
25	(00-59)	0	
26	SECOND	0	
27	(00-59)	0	
114	YEAR	1	YEAR INFORMATION IS SENT OUT ONLY BY THE LAST TWO DIGITS AS IN '13 FOR 2013.
115	(00-99)	3	

- The data that indicates Call End Time is as follows:

BYTE	DATA	EXAMPLE	
28	MONTH	1	
29	(01-12)	0	
30	DAY	2	
31	(01-31)	0	THIS INFORMATION SHOWS THAT THE CALL ENDED AT 9 O'CLOCK 10 MIN. 30 SEC. A.M. ON OCT. 20, 2013.
32	HOUR	0	
33	(00-23)	9	
34	MINUTE	1	
35	(00-59)	0	
36	SECOND	3	
37	(00-59)	0	
116	YEAR	1	YEAR INFORMATION IS SENT OUT ONLY BY THE LAST TWO DIGITS AS IN '13 FOR 2013.
117	(00-99)	3	

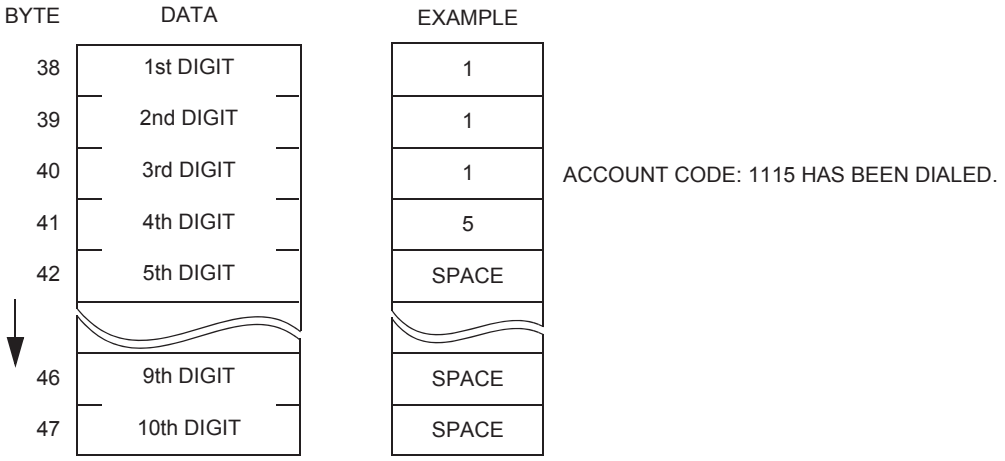
11.2.3 Called Number

- The data that indicates the Called Number is as follows:



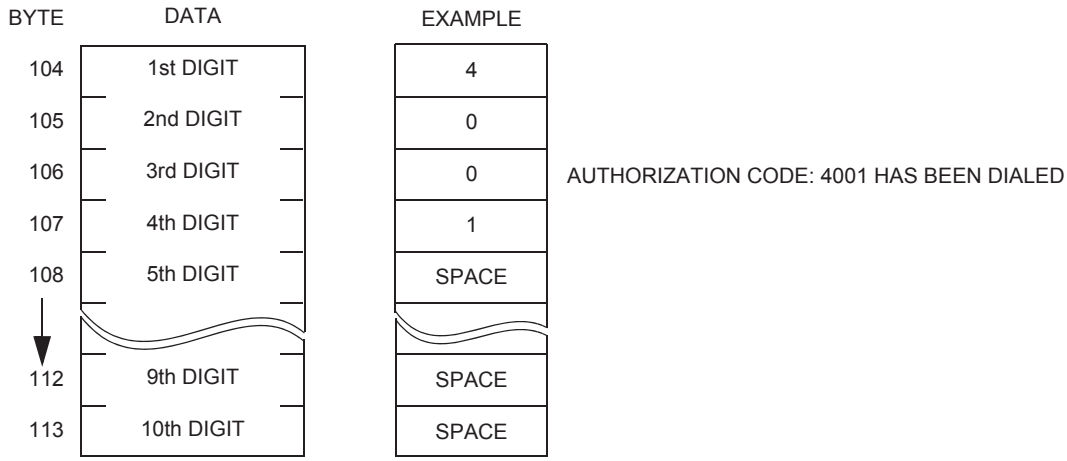
11.2.4 Account Code/Authorization Code

- The data that indicates the Account Code is as follows:



Note: An Account Code is a numerical code dialed (up to ten digits) by a station user with the capability to enter a cost accounting.

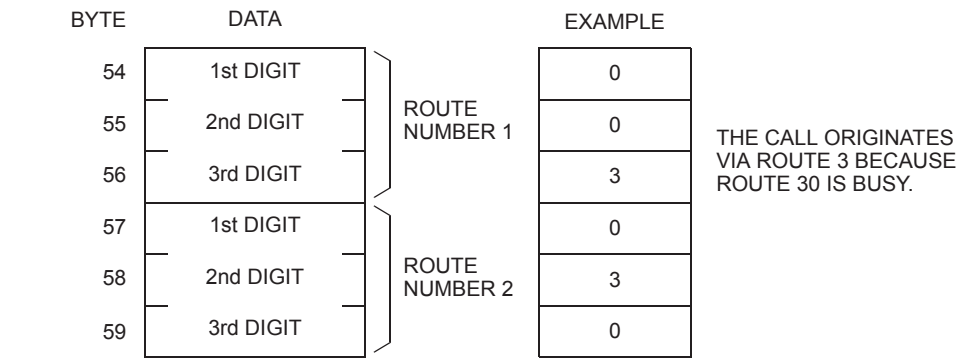
- The data which indicates the Authorization Code is as follows:



Note: An Authorization Code is a numerical code dialed (up to ten digits) by station users that will override the station's class (RSC or SFC) for facilities access restriction.

11.2.5 Route Advance Information

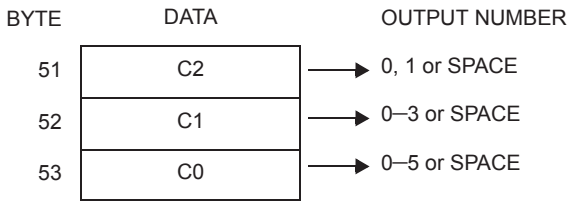
When a call has been originated by route advancing, the following data is transmitted.



ROUTE NUMBER 1: The route that was actually used.
ROUTE NUMBER 2: The route that should have been selected first.

11.2.6 Condition B Information

The 51st through 53rd bytes are Condition B Information. The Condition B Information indicates the following data:



C2: 0 = Call not transferred
1 = Call transferred

C1: 0 = Normal Call
1 = Call originated by OG trunk queuing
2 = Call originated by dialing with Account Code
3 = Call originated by OG trunk queuing and dialing with Account Code

C0: 0 = Regular Call (Direct Dialing from a station)
1 = Regular Call (Call is made through an ATTCON/DESKCON)
2 = Call through route advance (Direct Dialing from a station)
3 = Call through route advance (Call is made through an ATTCON/DESKCON)
4 = Call through Least Cost Routing (Direct Dialing from a station)
5 = Call through Least Cost Routing (Call is made through an ATTCON/DESKCON)

11.2.7 Call Metering Information

The value of call metering from the Central Office is transmitted via the data from the 92nd byte to 95th byte.

BYTE	DATA	EXAMPLE	
92	1000	5	WHEN 5200 METERING PULSES ARE RECEIVED FROM C.O.
93	100	2	
94	10	0	
95	1	0	

11.2.8 Office Code of Calling (Called) Party and Billing Process Office

The 96th byte through 99th byte indicates the Office Code of Calling (Called) Party terminated via CCIS line.

The 100th byte through 103rd byte indicates the Office Code of the office processing centralized billing for CCIS network.

Note: Office Code includes the CCIS line access code.

BYTE	DATA		EXAMPLE	
96	1st DIGIT	OFFICE CODE OF CALLING (CALLED) PARTY	8	OFFICE CODE = 812
97	2nd DIGIT		1	
98	3rd DIGIT		2	
99	4th DIGIT		SPACE	
100	1st DIGIT	OFFICE CODE OF BILLING PROCESS OFFICE	8	OFFICE CODE = 813
101	2nd DIGIT		1	
102	3rd DIGIT		3	
103	4th DIGIT		SPACE	

11.2.9 Text Format of Centralized Billing - FCCS

Below is the text format for billing information (FCCS) transmitted to the SMDR equipment.

Note: For details on the Kind of Data, see Table below.

STX : Start of Text
KK : Outgoing
KM : Extension
ETX: End of Text
KL : Incoming

Centralized Billing-CCS Kinds of Data

KIND OF DATA	CONTENTS	KK (OUTGOING)	KL (INCOMING)	KM (STATION)
00	Not Used			
01	Outgoing Trunk/Incoming Trunk Information	Provided	Provided	-
02	Calling Party Information (Station Number)	Provided	-	Provided
03	Calling Party Information (Telephone Number)	Conditionally Provided	-	Conditionally Provided
04	Called Party Information (Station Number)	-	Provided	Provided
05	Called Party Information (Telephone Number)	-	Conditionally Provided	Conditionally Provided
06	Call Start/Call End Time	Provided	Provided	Provided
07	Account Code	Conditionally Provided	Conditionally Provided	Conditionally Provided
08	Condition B Information	Provided	Provided	Provided
09	Alternate Routing Information/Incoming Route Number	Provided	Provided	-
10	Dial Code	Provided	Conditionally Provided	-
11	Office Code Information (For CCIS)	Conditionally Provided	Conditionally Provided	-
12	Authorization Code	Conditionally Provided	Conditionally Provided	-
13	Condition C Information + Billing Info/Call Metalling Info	Provided	Conditionally Provided	-

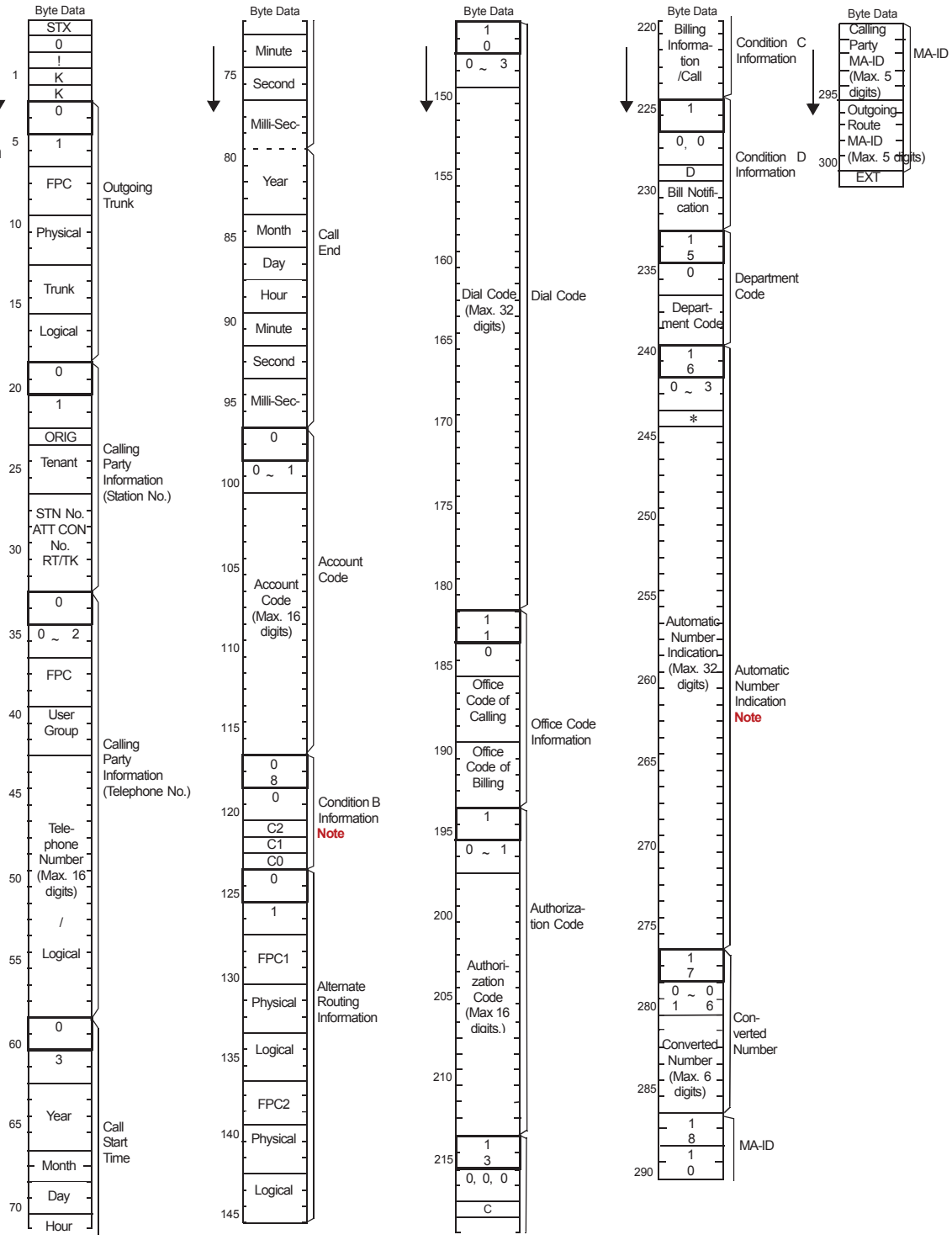
Centralized Billing-CCS Kinds of Data (Continued)

KIND OF DATA	CONTENTS	KK (OUTGOING)	KL (INCOMING)	KM (STATION)
14	Condition D Information + Bill Notification Attendant Console Number	Conditionally Provided	-	-
15	Department Code	Conditionally Provided	-	-
16	Automatic Number Indication	Conditionally Provided	Conditionally Provided	-
17	Converted Number	Conditionally Provided	-	-
18	MA-ID	Conditionally Provided	Conditionally Provided	Conditionally Provided
19	Trunk Arrival Time	-	Conditionally Provided	-
20-99	Not Used	-	-	-

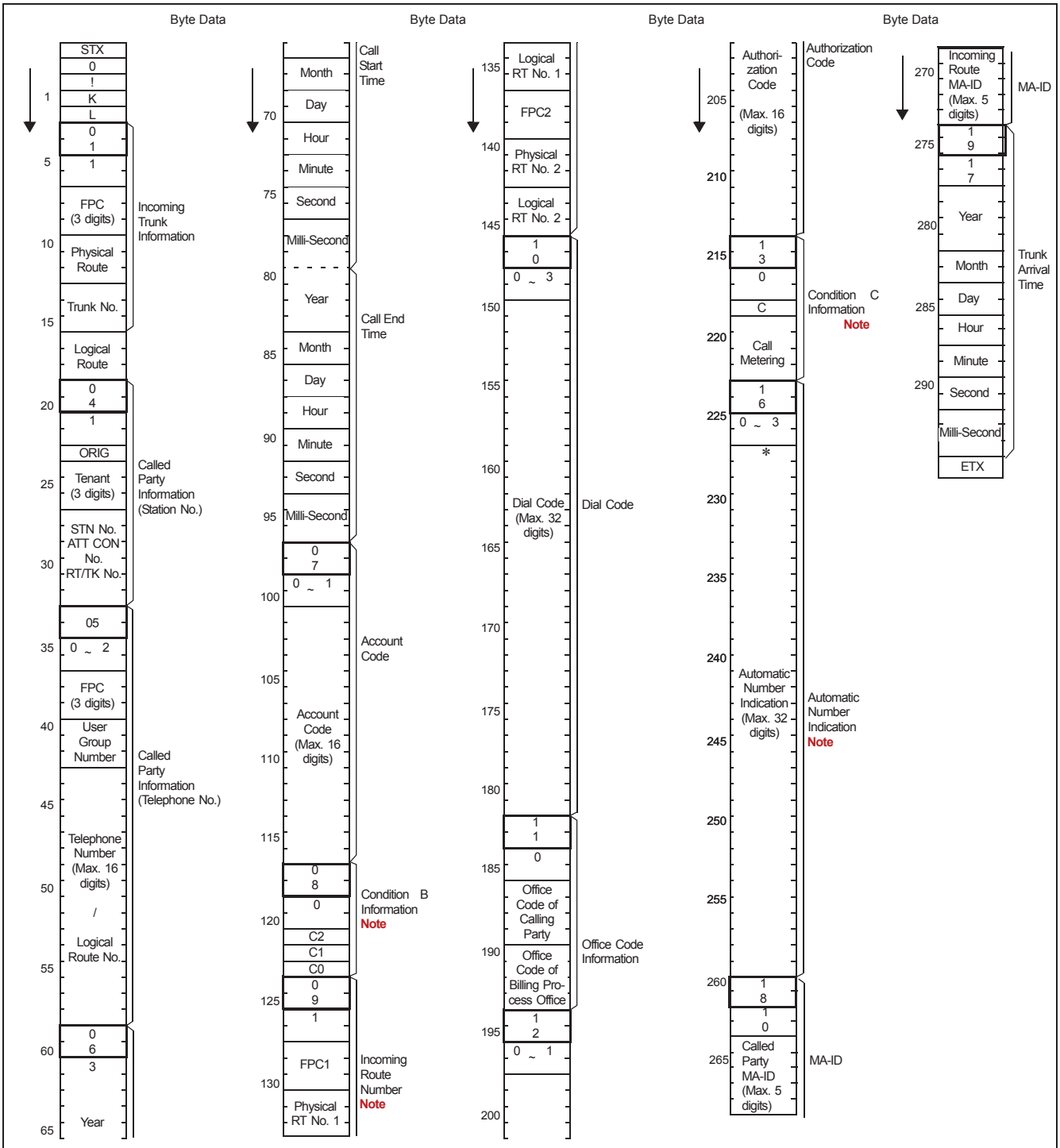
Note: Conditionally Provided: Information is provided when data is effective.
Provided: Information is provided on every call with no exception.
-: Not available.

Message Format for Outgoing Call - FCCS

For more information on the data to which the **Note** marks are attached, see Reference.

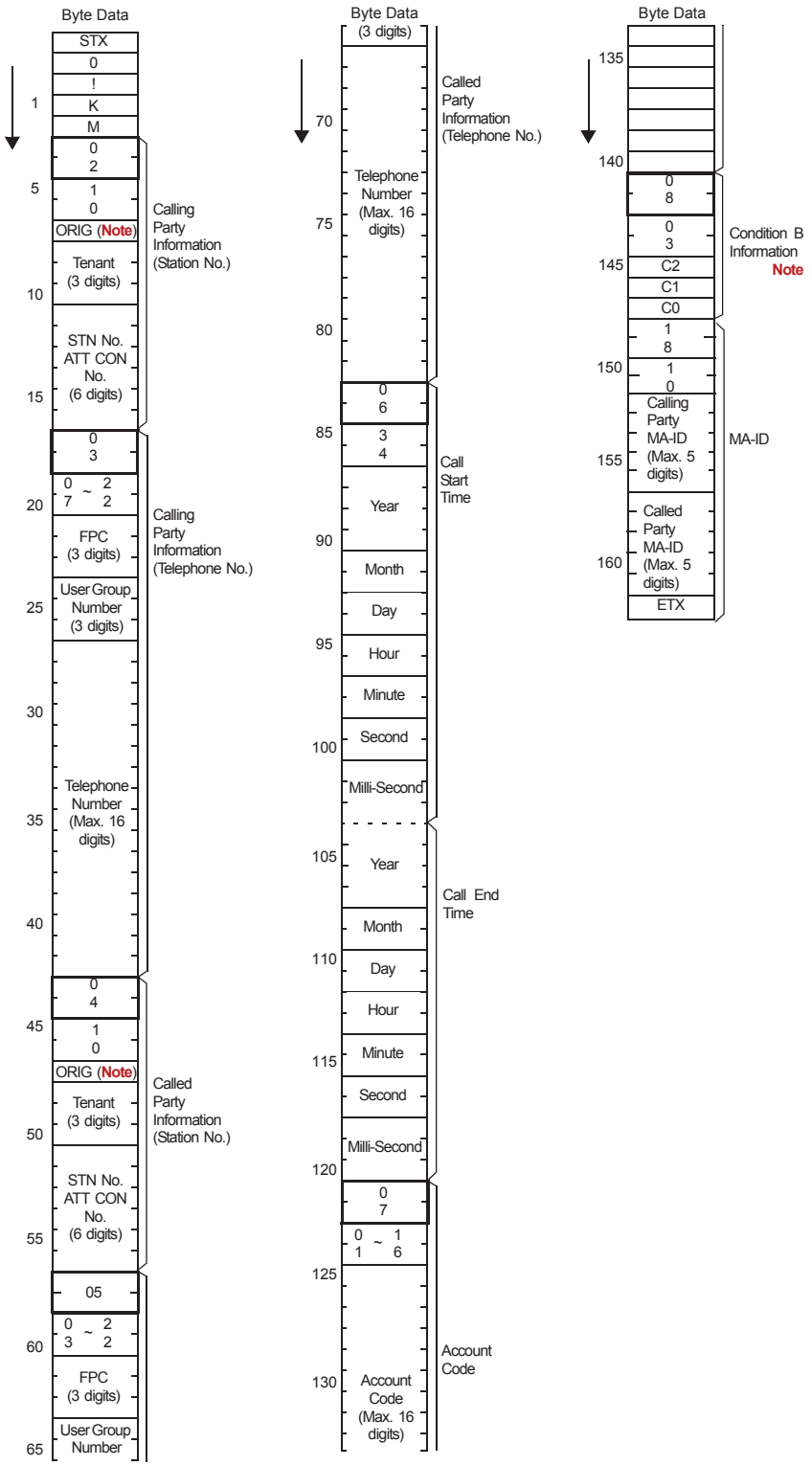


Message Format for Incoming Call - FCCS



For more information on the data to which the **Note** marks are attached, see Reference.

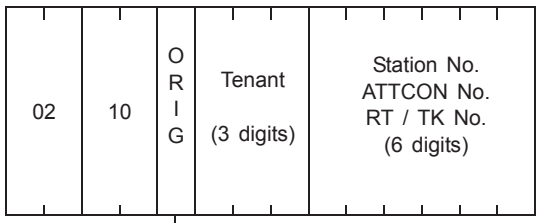
Message Format for Station-to-Station Call - FCCS



For more information on the data to which the **Note** marks are attached, see Reference.

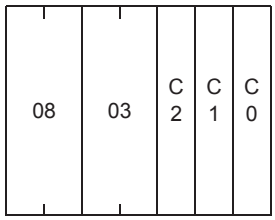
Reference

Data = 02: Calling Party Information (Station Number)



ORIG:Originating Source Identification
ORIG = 0:Transmitted data depicts information on Station
ORIG = 1:Transmitted data depicts information on Attendant Console
ORIG = 2:Transmitted data depicts information on Trunk

Data = 08: Condition B Information

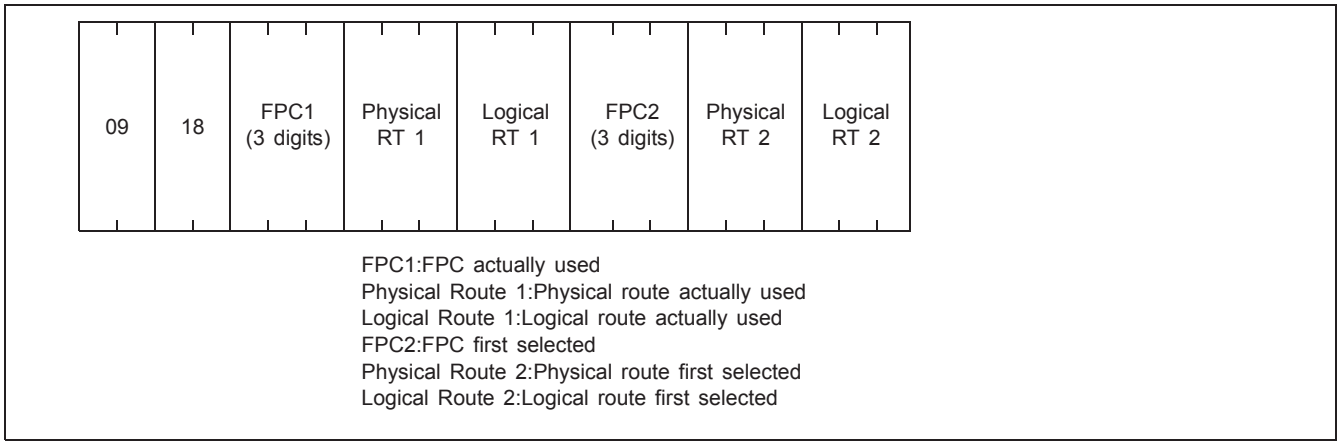


C0 = 0: Call Origination - Direct
1: Call Origination - via ATTCON
2: Call Origination - Direct (Alternate Routing)
3: Call Origination - via ATTCON (Alternate Routing)
4: Call Origination - Direct (LCR Routing)
5: Call Origination - via ATTCON (LCR Routing)
6: Call Origination - Direct (Called No. - first six digits of change code)
7: Call Origination - via ATTCON (Called No. - first six digits of change code)

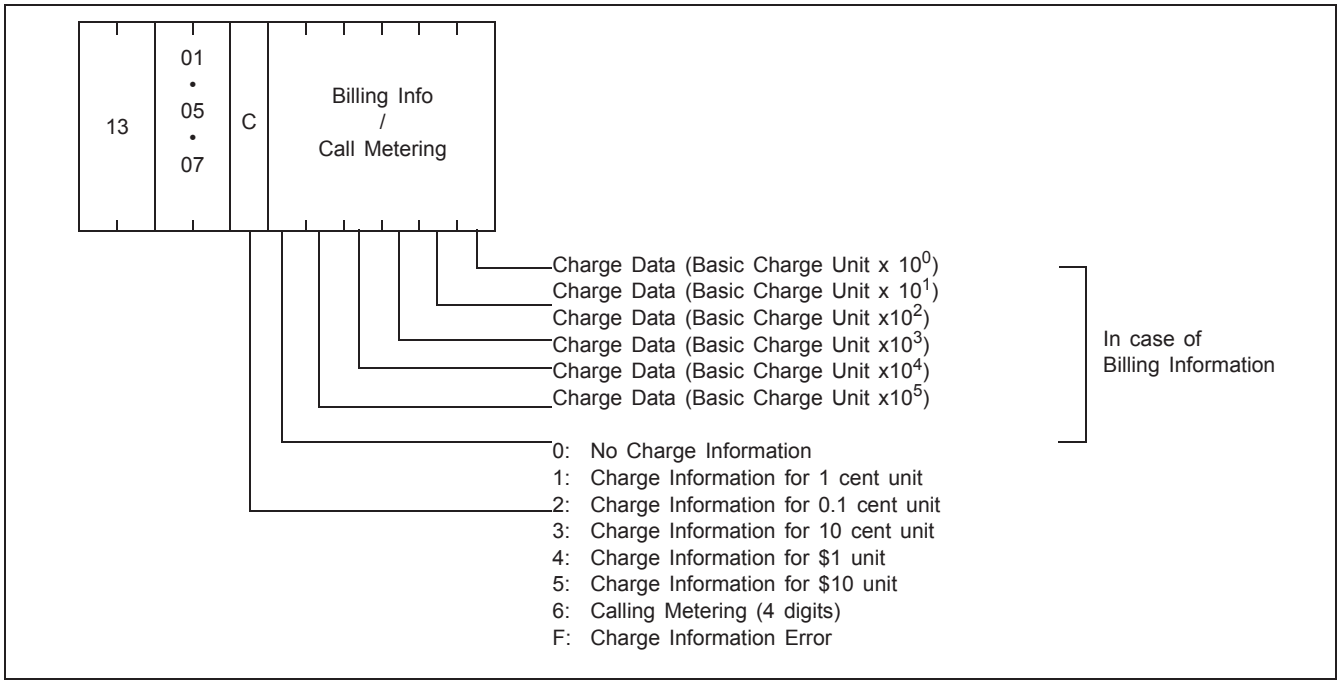
C1 =0: -
1: Call Origination by OG Queuing
2: Call Origination by dialing with accounted code
3: Call Origination by OG Queuing & dialing with accounted code
4: Call Origination by Call Forwarding Outside
5: -
6: Call Origination by Call Forwarding Outside & dialing with accounted code

C2 =0: -
1: Call was transferred
2: Billing is continued
3: Call was transferred & billing is continued
4: Call was transferred to last called party
5: Abandoned Call

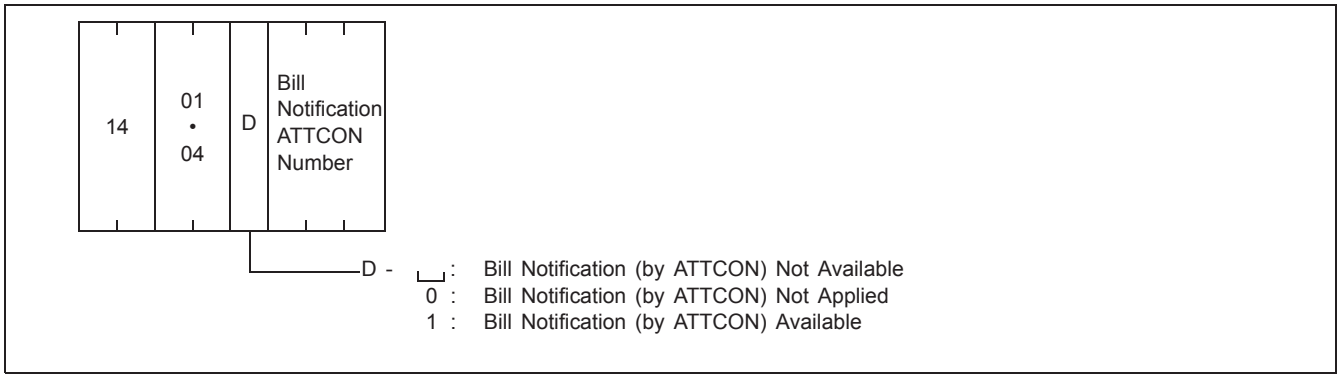
Data = 09: Alternate Routing Information (KK) / Incoming Route Number (KL)



Data = 13: Condition C Information + Billing Info / Call Metering Info.



Data = 14: Condition D Information + Bill Notification ATT CON Number



Data = 16: Automatic Number Indication