# JJ-70.11

# Digital Mobile Communication Network Inter-Node Interface for CDMA Cellular System

Remarks

## Application level of English description

Application level    E3

English description is included in the text and figures of main body, annexes and appendices.

## Relationship with international recommendations and standards

This standard is standardized based on ANSI-41-D, which was standardized by ANSI in Dec. 1997, with some modifications applied in Japan.

## Departures from international recommendations

3.1 Selection of optional items

   None

3.2 Items of national matter

   None

3.3 Changes to original standard

   (1) Standards referred to in the original standard, which are replaced by TTC/ARIB standards.

      Refer to Table 1.

   (2) Items added to the original standard

      Refer to Table 2.

    Those are marked by with * in the main body.

   (3) Items deleted from the original standard

      Refer to Table 3.

    Those are marked by with # in the main body.

   (4) Items changed from the original standard

      Refer to Table 4.

    Those are marked by with      in the main body.

3.4 Difference in chapter ordering from the original standard.

   There is no difference in chapter ordering from the original standard.

3.5 Other

   (1)  TIA/EIA-41 described in this standard are replaced by JJ-70.11.

   (2)  This standard utilizes MTP/SCCP in TTC standard and TC in ANSI standard. If it is necessary to interact between this standard and other TTC standard in the future, this standard will be examined to apply JT-Q77X series.

   (3)  The addition related to Interconnection charge billing system is included in this standard.

Change history

| Revision | Date | Contents |
|---|---|---|
| V.1 | Apr. 22, 1999 | Newly standardized |
| V.2 | Mar. 31, 2000 | Addition related to Interconnection charge billing system. |

IPR

There is no specific description about IPR in this standard.

Reference
- TTC STANDARDS（1987）
  JT-Q702
- TTC STANDARDS（1990）
  JT-Q701, JT-Q707
- TTC STANDARDS（1992）
  JT-Q704
- TTC STANDARDS（1997）
  JT-Q711, JT-Q712, JT-Q714
- TTC STANDARDS（1998）
  JT-Q713
- ANSI STANDARDS（1988）
  T1.111, T1.112, T1.114
- ANSI STANDARDS（1989）
  T1.611
- ANSI T1 STANDARDS（1991）
  T1.209
- ANSI/TIA/EIA STANDARDS（1989）
  ANSI/TIA/EIA-553
- ANSI/TIA/EIA STANDARDS（1996）
  ANSI/TIA/EIA-660, ANSI/TIA/EIA-664
- TIA/EIA STANDARDS（1992）
  IS-54-B
- TIA/EIA STANDARDS（1993）
  IS-88, IS-124
- TIA/EIA STANDARDS（1994）
  IS-97, IS-91, IS-136
- TIA/EIA STANDARDS　1995
  IS-95-A, IS-637
- ITU STANDARDS　1988
  T.50
- ARIB STANDARDS　1998
  STD-T53 1.1

Table 1　Replaced standards referred

| original standard | replacement |
|---|---|
| ANSI STANDARDS T1.111<br><br>Title : Signaling System Number 7- Message<br><br>Transfer Part | TTC　STANDARDS　JT-Q701,　JT-Q702,　JT-Q703,<br><br>JT-Q704, JT-Q707 |
| ANSI STANDARDS Chapter T1.111.1<br><br>Title : Functional Description of the Signaling System | TTC STANDARDS JT-Q701<br><br>Title : Message Transfer Part, Functional Description of<br><br>the Signaling System |
| ANSI STANDARDS Chapter T1.111.2<br><br>Title : Signaling Data Link | TTC STANDARDS JT-Q702<br><br>Title : Message Transfer Part, Signaling Data Link |
| ANSI STANDARDS Chapter T1.111.3<br><br>Title : Signaling Link | TTC STANDARDS JT-Q703<br><br>Title : Message Transfer Part, Signaling Link |
| ANSI STANDARDS Chapter T1.111.4<br><br>Title : Signaling Network Function and Messages | TTC STANDARDS JT-Q704<br><br>Title : Message Transfer part, Signaling<br><br>Network Functions |
| ANSI STANDARDS Chapter T1.111.7<br><br>Title : Testing and Maintenance | TTC STANDARDS JT-Q707<br><br>Title : Message Transfer Part, Testing and Maintenance |
| ANSI STANDARDS T1.112<br><br>Title : Signaling System Number 7- Signaling<br><br>Connection Control Part (SCCP) | TTC　STANDARDS　JT-Q711,　JT-Q712,　JT-Q713,<br><br>JT-Q714 |
| ANSI STANDARDS Chapter T1.112.1<br><br>Title : Functional Description of the Signaling<br><br>Connection Control Part | TTC STANDARDS JT-Q711<br><br>Title : Functional Description of the Signaling<br><br>Connection Control Part(SCCP) |
| ANSI STANDARDS Chapter T1.112.2<br><br>Title : Definitions and Functions of SCCP messages | TTC STANDARDS JT-Q712<br><br>Title : Definitions and Functions of SCCP messages |
| ANSI STANDARDS Chapter T1.112.3<br><br>Title : SCCP Formats and Codes | TTC STANDARDS JT-Q713<br><br>Title : SCCP Formats and Codes |
| ANS STANDARDS Chapter T1.112.4<br><br>Title : SCCP Procedures | TTC STANDARDS JT-Q714<br><br>Title : Signaling Connection Control Part Procedures |
| TIA/EIA/IS-95-A(CDMA)<br><br>　Title : Mobile Station - Base Station<br><br>　Compatibility Standard for Dual-Mode Wideband<br><br>　Spread Spectrum Cellular System | ARIB STD-T53 1.1<br><br>　Title : CDMA Cellular System |

| TIA/EIA/IS-97(CDMA)                                                                                                          | ARIB STD-T53 1.1              |
| --------------------------------------------------------------------------------------------------------------------------- | ----------------------------- |
| Title : Recommended Minimum Performance Standards for Base Station Supporting Dual-Mode Wideband Spread Spectrum Cellular Mobile Station | Title : CDMA Cellular System |

Table 2    Added items

| chap | section | item added | reason |
| --- | --- | --- | --- |
| 1 | 4 | SS7 in SYMBOLS AND ABREVIATIONS | To make TTC expression. |
| 3 | 4.9.1 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.9.1 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.9.2 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.9.2 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.11.1 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.11.1 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.17.1 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.17.1 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.17.1 | MobileAdditionalParty'sCategory3 is added. | Added for interconnection charge billing system. |
| 3 | 4.17.6 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.17.6 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.17.6 | MobileAdditionalParty'sCategory3 is added. | Added for interconnection charge billing system. |
| 3 | 4.18.1 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.18.1 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.18.2 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.18.2 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.19.1 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.19.1 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.20.2 | MobileAdditionalParty'sCategory3 is added. | Added for interconnection charge billing system. |
| 3 | 4.21.2 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.21.2 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.21.2 | MobileAdditionalParty'sCategory3 is added. | Added for interconnection charge billing system. |
| 3 | 4.24.1 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.24.1 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.26.1 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 3 | 4.26.1 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | 4.26.1 | MobileAdditionalParty'sCategory3 is added. | Added for interconnection charge billing system. |

| 3 | 4.29.1 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
|---|---|---|---|
| 3 | 4.29.1 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 3 | Annex J.1 | Initial MS Registration in New serving System flow is added. | Added for interconnection charge billing system. |
| 3 | Annex J.2 | CD Invocation to an Idle, Local MS flow is added. | Added for interconnection charge billing system. |
| 3 | Annex J.3 | CD Invocation to an Idle MS on Another MSC flow is added. | Added for interconnection charge billing system. |
| 3 | Annex J.4 | CFB Invocation flow is added. | Added for interconnection charge billing system. |
| 3 | Annex J.5 | CFB Invocation with Call Collision flow is added. | Added for interconnection charge billing system. |
| 3 | Annex J.6 | CFNA Invocation with No Answer or No Response Page flow is added. | Added for interconnection charge billing system. |
| 3 | Annex J.7 | CFU Invocation flow is added. | Added for interconnection charge billing system. |
| 5 | 6.4.2.13 | ChargingAreaInformation is added in Table 35. | Added for interconnection charge billing system. |
| 5 | 6.4.2.13 | CarrierIdentificationCode is added in Table 35. | Added for interconnection charge billing system. |
| 5 | 6.4.2.13 | Note J1 is added to ChargingAreaInformation, CarrierIdentificationCode in Table 35. | Added for interconnection charge billing system. |
| 5 | 6.4.2.21 | ChargingAreaInformation is added in Table 52. | Added for interconnection charge billing system. |
| 5 | 6.4.2.21 | CarrierIdentificationCode is added in Table 52. | Added for interconnection charge billing system. |
| 5 | 6.4.2.21 | Note J1 is added to ChargingAreaInformation, CarrierIdentificationCode in Table 35. | Added for interconnection charge billing system. |
| 5 | 6.4.2.27 | ChargingAreaInformation is added in Table 64. | Added for interconnection charge billing system. |
| 5 | 6.4.2.27 | CarrierIdentificationCode is added in Table 64. | Added for interconnection charge billing system. |
| 5 | 6.4.2.27 | MobileAdditional-Party'sCategory3 is added in Table 64. | Added for interconnection charge billing system. |
| 5 | 6.4.2.27 | Note J1 is added to ChargingAreaInformation, CarrierIdentificationCode, MobileAdditionalParty'sCategory3 in Table 64 | Added for interconnection charge billing system. |
| 5 | 6.4.2.29 | ChargingAreaInformation is added in Table 66. | Added for interconnection charge billing system. |
| 5 | 6.4.2.29 | CarrierIdentificationCode is added in Table 66. | Added for interconnection charge billing system. |

| 5 | 6.4.2.29 | Note J1 is added to ChargingAreaInformation, CarrierIdentificationCode in Table 66. | Added for interconnection charge billing system. |
|---|---|---|---|
| 5 | 6.4.2.30 | ChargingAreaInformation is added in Table 68. | Added for interconnection charge billing system. |
| 5 | 6.4.2.30 | CarrierIdentificationCode is added in Table 68. | Added for interconnection charge billing system. |
| 5 | 6.4.2.30 | Note J1 is added to ChargingAreaInformation, CarrierIdentificationCode in Table 68. | Added for interconnection charge billing system. |
| 5 | 6.4.2.31 | Note J1 is added to Profile in Table 70. | Added for interconnection charge billing system. |
| 5 | 6.4.2.32 | Note J1 is added to Profile inTable 73. | Added for interconnection charge billing system. |
| 5 | 6.4.2.35 | ChargingAreaInformation is added in Table 78. | Added for interconnection charge billing system. |
| 5 | 6.4.2.35 | CarrierIdentificationCode is added in Table 78. | Added for interconnection charge billing system. |
| 5 | 6.4.2.35 | Note J1 is added to ChargingAreaInformation, CarrierIdentificationCode in Table 78. | Added for interconnection charge billing system. |
| 5 | 6.4.2.37 | ChargingAreaInformation is added in Table 82. | Added for interconnection charge billing system. |
| 5 | 6.4.2.37 | CarrierIdentificationCode is added in Table 82. | Added for interconnection charge billing system. |
| 5 | 6.4.2.37 | Note J1 is added to ChargingAreaInformation, CarrierIdentificationCode in Table 82. | Added for interconnection charge billing system. |
| 5 | 6.4.2.37 | Note J1 is added to Profile in Table 83. | Added for interconnection charge billing system. |
| 5 | 6.4.2.40 | ChargingAreaInformation is added in Table 89. | Added for interconnection charge billing system. |
| 5 | 6.4.2.40 | CarrierIdentificationCode is added in Table 89. | Added for interconnection charge billing system. |
| 5 | 6.4.2.40 | Note J1 is added to ChargingAreaInformation, CarrierIdentificationCode in Table 89. | Added for interconnection charge billing system. |
| 5 | 6.5.1.2 | Add National Network Use area in Parameter Identifier Code. | Premise to make it use in Japan. |
| 5 | 6.5.2.97 | ChargingAreaInformation is added in Table 105. | Added for interconnection charge billing system. |
| 5 | 6.5.2.97 | CarrierIdentificationCode is added in Table 105. | Added for interconnection charge billing system. |
| 5 | 6.5.2.97 | MobileAdditionalParty'sCategory3 is added in Table 105. | Added for interconnection charge billing system. |

| 5 | 6.5.2.97 | Note J1 is added to ChargingAreaInformation, CarrierIdentificationCode, MobileAdditionalParty'sCategory3 in Table 105. | Added for interconnection charge billing system. |
|---|---|---|---|
| 5 | 6.5.2.J1 | ChargingAreaInformation is added. | Added for interconnection charge billing system. |
| 5 | 6.5.2.J2 | CarrierIdentificationCode is added. | Added for interconnection charge billing system. |
| 5 | 6.5.2.J3 | MobileAdditionalParty'sCategory3 is added. | Added for interconnection charge billing system. |
| 5 | 6.5.2.5 | Note1, Note2 and Note3 are added to the tone and also announcement in Table117. | Premise to make it use in Japan. |
| 5 | 6.5.2.5 | NDC is added after NPA during Table117. | Premise to make it use in Japan. |
| 5 | 6.5.2.93 | The explanation with regard to Point Code. | Premise to make it use in Japan. |
| 5 | 6.5.3.2 | The explanation with regard to Point Code. | Premise to make it use in Japan. |

Table 3  Deleted items

| chap | section | item deleted | reason |
|---|---|---|---|
| 1 | 2 | Items in the REFERENCES that are not used in this standard. | North America individual terminology. |
| 1 | 7 | GENERAL BACKGROUND AND ASSUMPTIONS. | The information in U.S. |
| 3 | 4.17.2 | inter-LATA in Notes. | North America individual terminology. |
| 3 | 4.17.3 | inter-LATA in Notes. | North America individual terminology. |
| 3 | 4.17.5 | inter-LATA in Notes. | North America individual terminology. |
| 5 | 6.5.2.58 | NANP in Notes. | North America individual terminology. |
| 5 | 6.5.2.76 | inter-LATA in Notes. | North America individual terminology. |
| 5 | 6.5.2.89 | NPA-NXX in Note and NPA-NXX-XXXX. | North America individual terminology. |
| 5 | 6.5.2.90 | Inter-LATA Toll and also inter-LATA in Table115. | North America individual terminology. |
| 5 | 6.5.2.98 | a. in Notes. | North America individual terminology is included. |
| 5 | 6.5.2.113 | NANP in the explanation. | North America individual terminology. |
| 5 | 6.5.2.113 | f. In Notes. | Premise to make it use in Japan. |
| 5 | 6.5.2.140 | Inter-LATA Toll and inter-LATA Toll in Table177. | North America individual terminology. |
| 5 | 6.5.3.2 | Inter-LATA Toll and inter-LATA Toll in Table196. | North America individual terminology. |
| 5 | 2.1 | Inter-LATA and LATA in the explanation. | North America individual terminology. |
| 5 | 3.2.3 | Inter-LATA and LATA in the explanation. | North America individual terminology. |

Table 4　Modified items

| chap | section | item modified | reason |
|---|---|---|---|
| 1 | 5 | 5.1.5 ISDN terminology explanation | ANSI, to combine TTC standard. |
| 1 | 5 | 5.1.9 PSTN terminology explanation | ANSI, to combine TTC standard. |
| 3 | 4.20.2 | NPA-NXX and NPA-NXX-XXXX in Notes are modified to NDC-X1~Xn. | Premise to make it use in Japan. |
| 5 | 6.4.2.31 | NPA-NXX and NPA-NXX-XXXX in Table70 Notes are modified to NDC-X1~Xn. | Premise to make it use in Japan. |
| 5 | 6.4.2.32 | NPA-NXX and NPA-NXX-XXXX in Table73 Notes are modified to NDC-X1~n. | Premise to make it use in Japan. |
| 5 | 6.4.2.37 | NPA-NXX and NPA-NXX-XXXX in Table 83 Notes are modified to NDC-X1~Xn. | Premise to make it use in Japan. |
| 5 | 6.5.2.58 | The expression in Note from North America peculiar terminology. | Premise to make it use in Japan. |
| 5 | 6..5.2.76 | The expression in Note from North America peculiar terminology. | Premise to make it use in Japan. |
| 5 | 6.5.2.89 | The expression in Note from North America peculiar terminology. | Premise to make it use in Japan. |
| 5 | 6.5.2.89 | 911and*-911 in Note to 3digits for emergency call | Premise to make it use in Japan. |
| 5 | 6.5.2.93 | ANSI SS7 Point Code to SS7 Point Code. | Premise to make it use in Japan. |
| 5 | 6.5.2.93 | Figure101 | Premise to make it use in Japan. |
| 5 | 6.5.2.97 | The NPA number format in Figure105t to the NDC number format. | Premise to make it use in Japan. |
| 5 | 6.5.2.123 | The title ANIS SS7 Point Code of Figure134 to SS7 Point Code. | Premise to make it use in Japan. |
| 5 | 6.5.2.123 | Figure134 | Premise to make it use in Japan. |
| 5 | 6.5.3.2 | The title ANIS SS7 Point Code of Figure187 to SS7 Point Code. | Premise to make it use in Japan. |
| 5 | 6.5.3.2 | Figure187 | Premise to make it use in Japan. |
| 5 | 6.5.3.2 | ANSI SS7 Point Code in Table196 to SS7 Point Code. | Premise to make it use in Japan. |
| 6 | 4.32.2 | NPA-NXX in explanation to NDC-X1~Xn. | Premise to make it use in Japan. |
| 6 | 4.33.3 | NPA-NXX in explanation to NDC-X1~Xn. | Premise to make it use in Japan. |
| 6 | 4.33.4 | NPA-NXX in explanation to NDC-X1~Xn. | Premise to make it use in Japan. |