

8.5 Character String Data Frame

name [Character String Data Frame]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|----------------------------|---------|----------------|
| 1 | 0 | B1 | | String Distribution Header | | a |
| 2 | O1 | B2 | | Character String Data List | | c |

8.5.1 String Distribution Header

name [String Distribution Header]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|--------------------------------------------------------------|---------|----------------|
| 1 | 0 | 2 | SWS | Size of the String Distribution Header | | a |
| 2 | 2 | 2 | N | Number of Character String Data Management Information Items | | a |
| 3 | 4 | | | A Sequence of Character String Data Management Information | | b |

8.5.1.1 Character String Data Management Information

name [Character String Data Management Information]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|------------------------------------------|---------|----------------|
| 1 | 0 | 2 | D | Offset to the Character String Data List | (1) | a |
| 2 | 2 | 2 | N | Number of Character String Data Records | (2) | a |

(1) Offset to the Character String Data List

This field describes the displacement from the beginning of the character string data frame to the beginning of the character string data list.

(2) Number of Character String Data Records

This field describes the total number of character string data records constituting the character string data list. If there is no entity, the size is 0.

8.5.2 Character String Data List

name [Character String Data List]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|---------------------------------------------|---------|----------------|
| 1 | 0 | B1 | | A Sequence of Character String Data Records | | |

8.5.2.1 Character String Data Record

name [Character String Data Record]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|----------------------------------------------|---------|----------------|
| 1 | 0 | 2 | SWS | Size of the Character String Data Record | (1) | c |
| 2 | 2 | B1 | M | Language-specific Offset Pointer Table | | c |
| 3 | O1 | B2 | M | Language-specific Character Information List | | a |

(1) Size of the Character String Data Record

This field describes the size of the entire relevant character string data record. It is omitted when one type (simple language) of the language-specific character information is specified.

8.5.2.1.1 Language-specific Offset Pointer Table

name [Language-specific Offset Pointer Table]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|-----------------------------------------------|---------|----------------|
| 1 | 0 | 2 | D | Language-specific Offset Pointer (Language 1) | | c |
| 2 | 2 | 2 | D | Language-specific Offset Pointer (Language 2) | | c |
| 3 | | | | * | | c |
| 4 | | 2 | D | Language-specific Offset Pointer (Language n) | | c |

This field indicates the displacement from the beginning of the character string data record to the beginning of each language-specific character information item.

The number of storage languages, types, and the arrangement order are described in the META file.

Notes 1. If one type of storage language (simple language: for example, Japanese only) is used, the relevant language-specific offset pointer table is deleted.

2. The same language character information can also be indicated with a different language-specific offset pointer.

8.5.2.1.2 Language-specific Character Information List

name [Language-specific Character Information List]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|------------------------------------------------------|---------|----------------|
| 1 | 0 | B1 | M | Language-specific Character Information (Language 1) | | c |
| 2 | O1 | B2 | M | Language-specific Character Information (Language 2) | | c |
| 3 | | | | * | | c |
| 4 | O2 | B3 | M | Language-specific Character Information (Language m) | | c |

8.5.2.1.2.1 Language-specific Character Information

name [Language-specific Character Information]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|-------------------------------------------|---------|----------------|
| 1 | 0 | 4 | | String Attribute Header | | a |
| 2 | 4 | B1 | CC | Display String | | c |
| 3 | O1 | B2 | C | Pronunciation String | | c |
| 4 | O2 | B3 | | A Sequence of Accent Information Records | | c |
| 5 | O3 | 10 | | Information related to Natural Voice Data | | c |

8.5.2.1.2.1.1 String Attribute Header

name [String Attribute Header]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|-------------|---------|----------------|
| 1 | 0 | 2 | B::SWS | Attribute 1 | (1) | a |
| 2 | 2 | 2 | SWS:N | Attribute 2 | (3) | a |

(1) Attribute 1

| No. | bit | Description | | | | |
|-----|----------|-----------------------------------|-------|------------------------------|-------|--------------------------------|
| 1 | 15 to 13 | Pronunciation String Type | bit15 | bit14 | bit13 | Meaning |
| | | | 0 | 0 | 0 | (RESERVED) |
| | | | 0 | 0 | 1 | Reading kana type |
| | | | 0 | 1 | 0 | Pronunciation symbol type |
| | | | 0 | 1 | 1 | (011(2) and after not defined) |
| 2 | 12 | Natural Voice Data Existence Flag | bit12 | Meaning | | |
| | | | 0 | No natural voice data | | |
| | | | 1 | Natural voice data available | | |
| 3 | 11 to 8 | (RESERVED) | | | | |
| 4 | 7 to 0 | Display String Size (2) | | | | |

(2) Display String Size

This field describes the size of the display string, word by word. If the number of string bytes is odd, 00(16) is accommodated at the end of the string as the dummy data.

(3) Attribute 2

| No. | bit | Description |
|-----|---------|------------------------------------------|
| 1 | 15 to 8 | Pronunciation String Size (4) |
| 2 | 7 to 0 | Number of Accent Information Records (5) |

(4) Size of the Pronunciation String Size

This field describes the size of the pronunciation string, word by word. Only one-byte code is used. Therefore, if the number of characters is assumed to be n, the number of string bytes is n/2 words. (If the number of string bytes is odd, 00(16) is accommodated at the end of the string as dummy data.)

(5) Number of Accent Information Records

This field describes the number of relevant accent information records. The value can be between 0 and 254.

8.5.2.1.2.1.2 Accent Information Record

name [Accent Information Record]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|---------------------------|---------|----------------|
| 1 | 0 | 1 | N | Accent Insertion Position | (1) | a |
| 2 | 1 | 1 | N | Accent Code | (2) | a |

(1) Accent Insertion Position

This field describes the location in which an accent is used in the pronunciation string, with the number of characters counted from the beginning of the string. The value can be between 0 and 254.

(2) Accent Code

This field describes the accent code to be set in the relevant accent insertion position. The value range is from 0 to 254.

8.5.2.1.2.1.3 Information related to Natural Voice Data

This information depends on the setting status of the natural voice data existence flag in the string attribute header. If the natural voice data existence flag indicates that there is no natural voice data, this information related to natural voice data does not exist.

name [Information related to Natural Voice Data]

| No. | offset | Data length | Data type | Item name | Remarks | Classification |
|-----|--------|-------------|-----------|---------------------------------------------------|---------|----------------|
| 1 | 0 | 2 | | (RESERVED) | | a |
| 2 | 2 | 2 | B:B | Speaker Code + Regeneration Method Identification | (1) | a |
| 3 | 4 | 4 | DSA | Natural Voice Data Address | | a |
| 4 | 8 | 2 | BS | Natural Voice Data Size | | a |

(1) Speaker Code + Regeneration Method Identification

| No. | bit | Description |
|-----|---------|------------------------------------|
| 1 | 15 to 8 | Speaker Code |
| 2 | 7 to 0 | Regeneration Method Identification |

(2) Speaker Code

This field describes the identification code that identifies each speaker when multiple natural voices are consecutively announced.

(3) Regeneration Method Identification

| Value | Meaning |
|----------------|-------------------------------------------------|
| 0001h | CD-DA |
| 0002h to 000Fh | (Reserved) |
| 0010h | CD-I ADPCM Class A mono |
| 0011h | CD-I ADPCM Class A stereo |
| 0012h | CD-I ADPCM Class B mono |
| 0013h | CD-I ADPCM Class B stereo |
| 0014h | CD-I ADPCM Class C mono |
| 0015h | CD-I ADPCM Class C stereo |
| 0016h | Navigation Research 2.2S full-rate ADPCM mono |
| 0017h | Navigation Research 2.2S full-rate ADPCM stereo |
| 0018h | Navigation Research 2.2S half-rate ADPCM mono |
| 0019h | Navigation Research 2.2S half-rate ADPCM stereo |
| 001Ah to 001Fh | (Reserved) |
| 0020h | MPEG audio |
| 0021h to 002Fh | (Reserved) |
| 0030h | Dolby AC-3 |
| 0031h to 003Fh | (Reserved) |
| 0040h | Linear PCM full-rate |
| 0041h | (Reserved) |
| 0042h | Linear PCM half-rate |
| 0043h to 00FFh | (Reserved) |

