

Getting Started with Message Coder

How to analyze L3 Messages

MD8480C
W-CDMA Signalling Tester

Getting Started with Message Coder

How to analyze L3 Messages

Version 1.0
Anritsu Corporation



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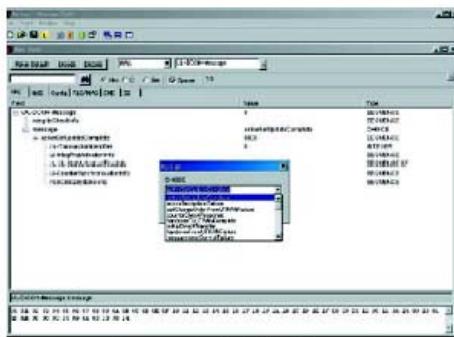
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What is Message Coder?

What is Message Coder?

Message Coder^{*1} is a software tool for creating and analyzing higher-layer messages exchanged between GSM/WCDMA base stations and mobile terminals.

^{*1:} The MD8480C includes this message encode/decode tool for scenario creation and analysis.



Message Coder Main Screen

• Supported Messages

Category	Message	Reference Spec. ^{*1}
RRC	RRC Layer	3GPP TS25.331
NAS	NAS Layer	3GPP TS24.007, TS24.008
Config	Layer 1, Layer 2 Control	-
RLC/MAC Control	RLC/MAC Control	3GPP TS04.60
SS	Supplementary Service	3GPP TS24.080
SMS	SMS (SM-RL/SM-TL)	3GPP TS23.040
CBS	CBS	3GPP TS23.041, TS25.324
Layer 3 Messages ^{*2}		Reference Spec. ^{*1}
CC	Messages for Circuit-switched Call Control (35)	3GPP TS24.008, 9.3
MM	Messages for Mobility Management (22)	3GPP TS24.008, 9.2
GMM	GPRS Mobility Management Messages (23)	3GPP TS24.008, 9.4
SM	GPRS Session Management Messages (16)	3GPP TS24.008, 9.5
SMS	Messages for Short Message or Notification Transfer on CM (3)	3GPP TS24.001, 7.2
RR	Messages for Radio Resource Management (82)	3GPP TS04.18, 9.1
SS	Messages for Supplementary Services Control (3)	3GPP TS24.080, 2.2

^{*1:} Bundled RRC and NAS definition files are standardized by 3GPP in June 2001 (R99), March 2002 (R99), December 2002 (R99), and December 2005 (Rel. 5). RRC definition files standardized in June 2006 (Rel. 6) are also bundled.

^{*2:} High-layer protocols in messages are not supported.

Analyzing RRC Messages from Trace Window

Analyzing RRC Messages from Trace Window

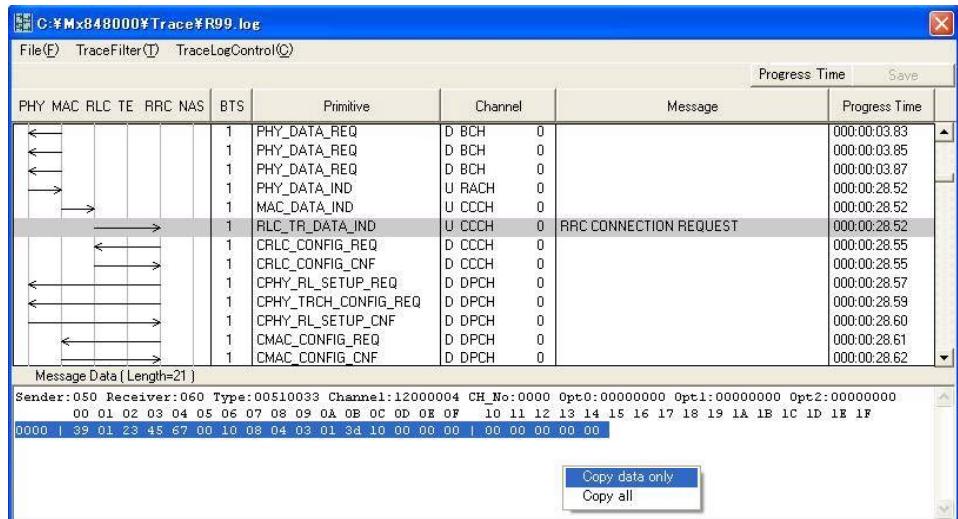
Message Coder decodes RRC Messages from the following messages on the Trace window.

**Uplink CCCH (U_CCCH-U_RACH): rrcConnectinRequest
Downlink CCCH (D_CCCH-D_FACH): rrcConnectinSetup
Uplink DCCH (U_DCCH-U_DCH): rrcConnectinSetupComplete
Downlink DCCH (D_DCCH-D_DCH): rrcConnectinRelease**

Procedure

- Select the target message in the Trace window.
- Copy message data from the primitive details partition in the Trace window.
- Paste the data to the Message View Area in Message Coder.
- Press the Decode button in Message Coder.
- View the message details in the Tree View Area in Message Coder.

Trace: U_CCCH (RRC CONNECTION REQUEST)



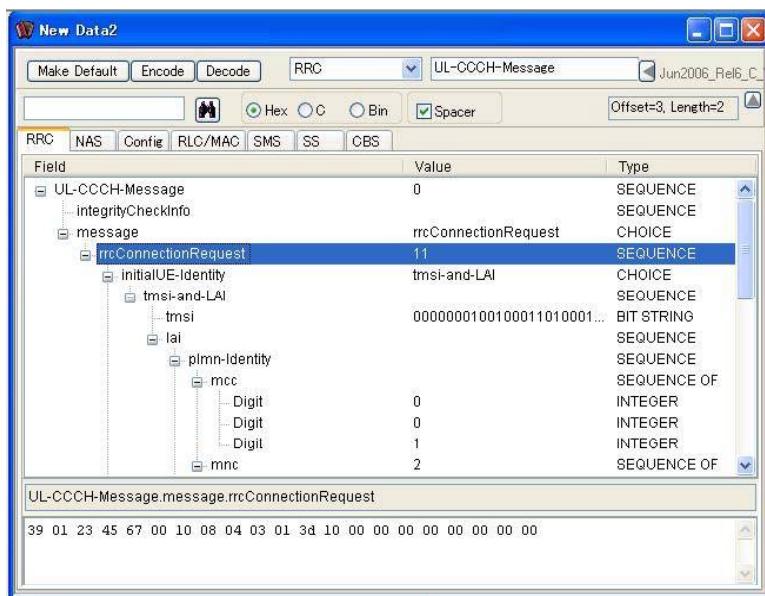
- Select **RRC CONNECTION REQUEST**.
- Right-click and select **Copy data only**.

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Message Coder: RRC (UL-CCCH-Message)



- Setup:
RRC
UL-CCCH-Message
Hex
Spacer
- Paste the data.
- Press **Decode**.

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Trace: D_CCCH (RRC CONNECTION SETUP)

- Select **RRC CONNECTION SETUP**.
 - Right-click and select **Copy data only**.

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Message Coder: RRC (DL-CCCH-Message)

Field	Type	Value
DL-CCCH-Message	SEQUENCE	0
integrityCheckInfo	SEQUENCE	
message	CHOICE	
rrcConnectionSetup	CHOICE	
r3	SEQUENCE	r3
0	SEQUENCE	0
rrcConnectionSetup-r3	SEQUENCE	0011100111
initialUE-Identity	CHOICE	trnsi-and-LAI
trnsi-and-LAI	SEQUENCE	
tmsi	BIT STRING	0000000100100011010001...
lai	SEQUENCE	
pimn-Identity	SEQUENCE	
mcc	SEQUENCE OF	
Digit	INTEGER	0
Digit	INTEGER	0

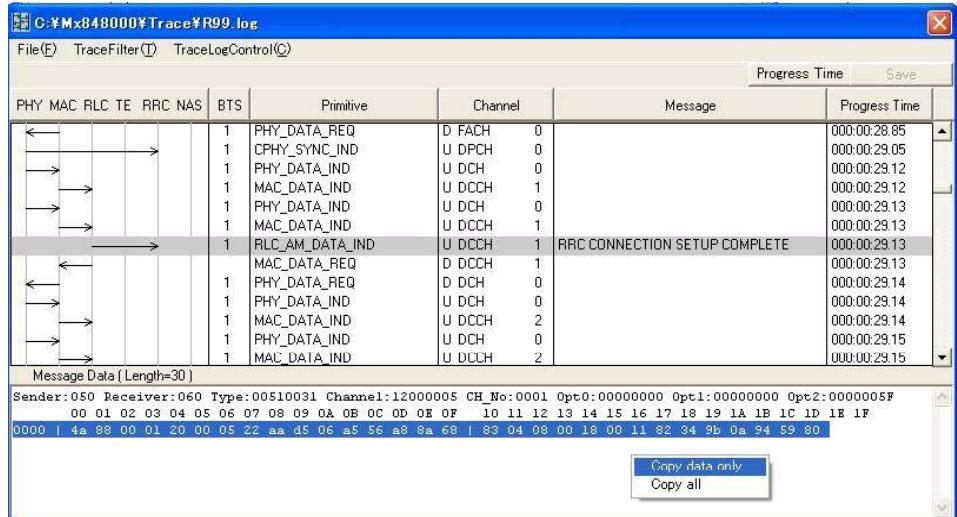
- Setup:
RRC
DL-CCCH-Message
Hex
Spacer
 - Paste the data.
 - Press **Decode**

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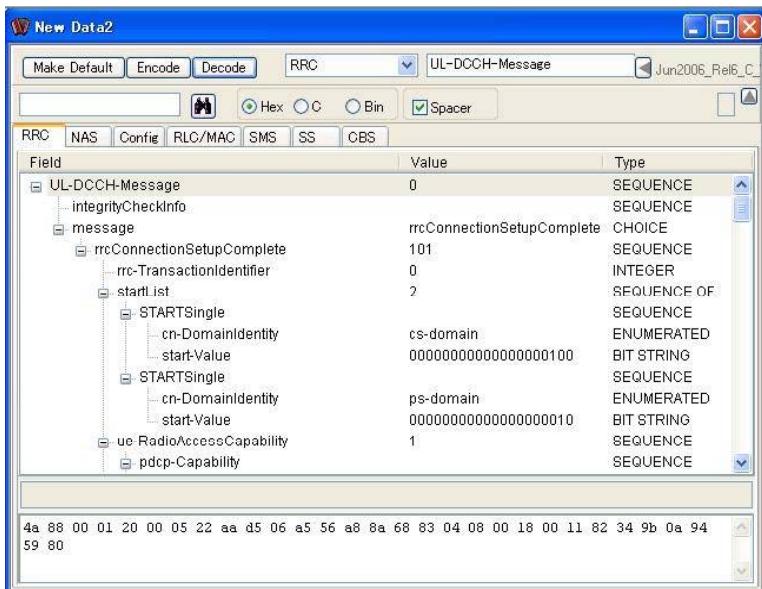
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Trace: U_DCCH (RRC CONNECTION SETUP COMPLETE)



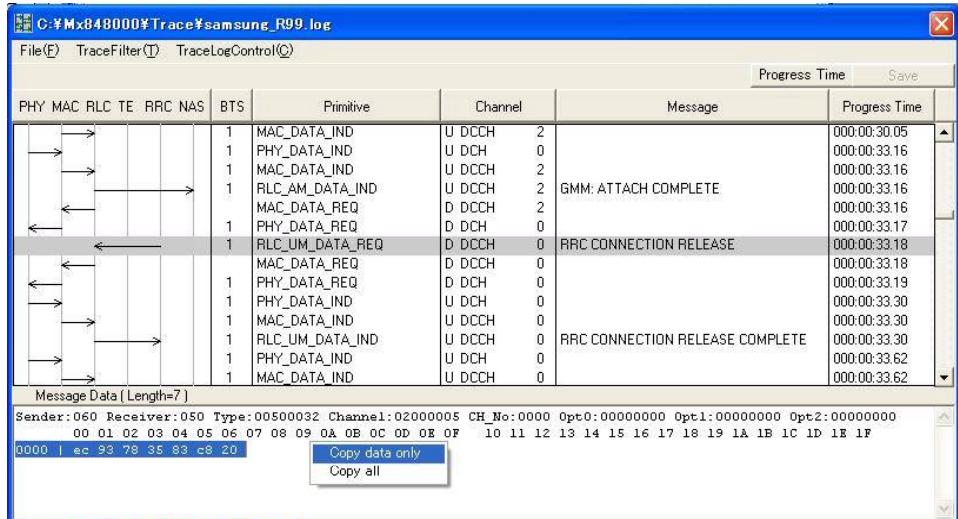
- Select **RRC CONNECTION SETUP COMPLETE**.
- Right-click and select **Copy data only**.

Message Coder: RRC (UL-DCCH-Message)



- Setup:
RRC
UL-DCCH-Message
Hex
Spacer
- Paste the data.
- Press **Decode**.

Trace: D_DCCH (RRC CONNECTION RELEASE)



- Select **RRC CONNECTION RELEASE**.
- Right-click and select **Copy data only**.

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Message Coder: RRC (DL-DCCH-Message)

The screenshot shows the Anritsu Message Coder interface for the DL-DCCH-Message. The message structure is defined with fields like integrityCheckInfo, messageAuthenticationCode, rrc-MessageSequenceNumber, message, rrcConnectionRelease, and releaseCause. The 'releaseCause' field is currently selected. The bottom pane shows the hex dump of the message structure.

- Setup:
RRC
DL-DCCH-Message
Hex
Spacer
- Paste the data.
- Press **Decode**.

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Analyzing NAS Messages from Trace Window

Analyzing NAS Messages from Trace Window

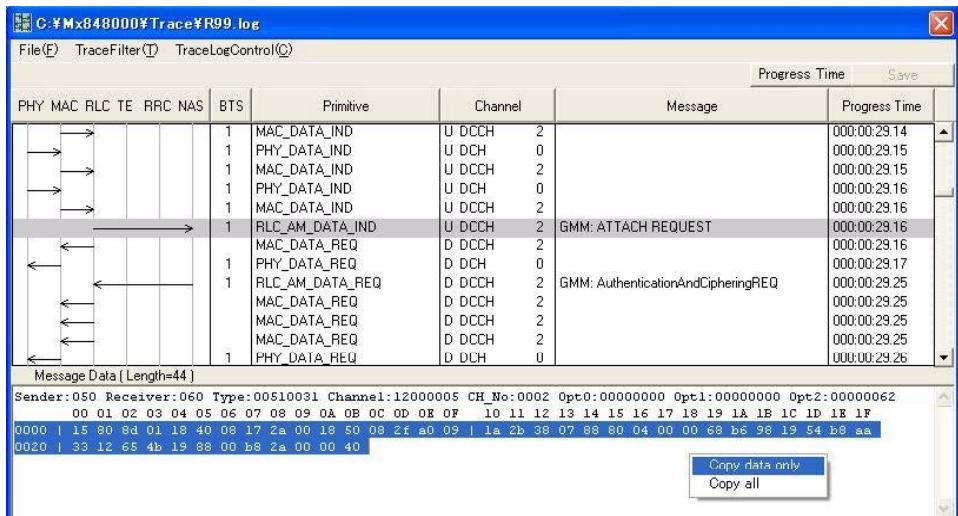
Message Coder decodes NAS Messages from the following messages on the Trace window.

**Uplink DCCH (U_DCCH-U_DCH): GMM, AttachRequest
Downlink DCCH (D_DCCH-D_DCH):
GMM, AuthenticationAndCipheringRequest**

There are two steps to analyze NAS messages.

- First, analyze in the same way as RRC messages.
- Next, extract the NAS message from the decoded RRC message and decode the NAS message.

Trace: U_DCCH (GMM:ATTACH REQUEST)



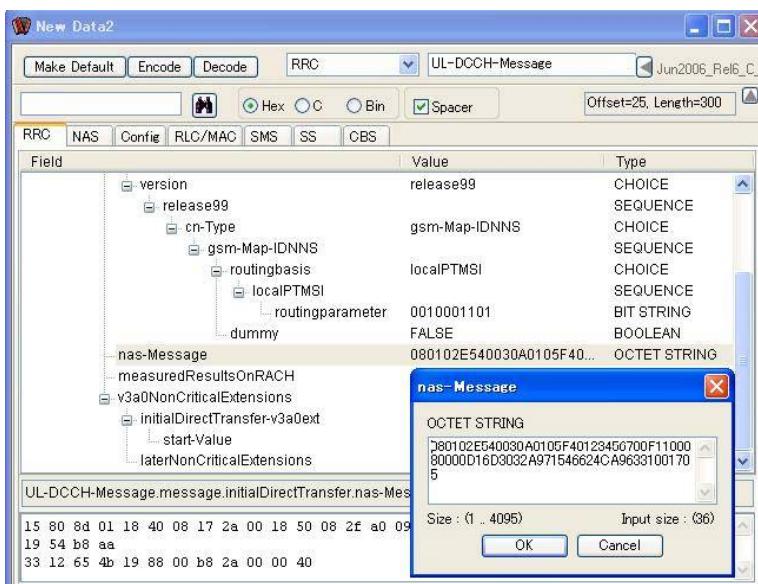
- Select **GMM: ATTACH REQUEST**.
- Right-click and select **Copy data only**.

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Message Coder: RRC (UL-DCCH-Message)



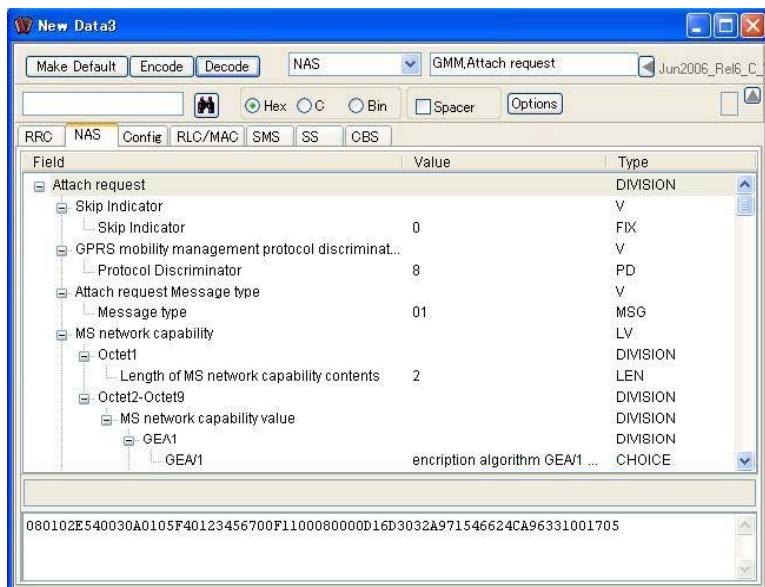
- Setup:
RRC
UL-DCCH-Message
Hex
Spacer
- Paste the data.
- Press **Decode**.
- Double-click **nas-Message**.
- Copy entire the **OCTET STRING** data.
- Press **Cancel**.

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Message Coder: NAS (GMM, Attach request)



- Setup:
NAS
GMM,Attach request
Hex
No Spacer

- Paste the data.

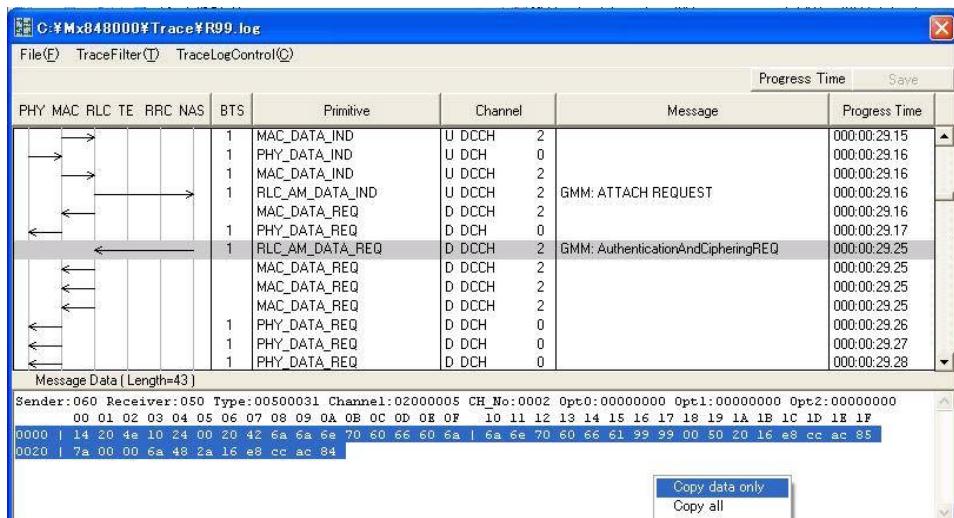
- Press **Decode**.

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Trace: D_DCCH (GMM, AuthenticationAndCipherREQ)



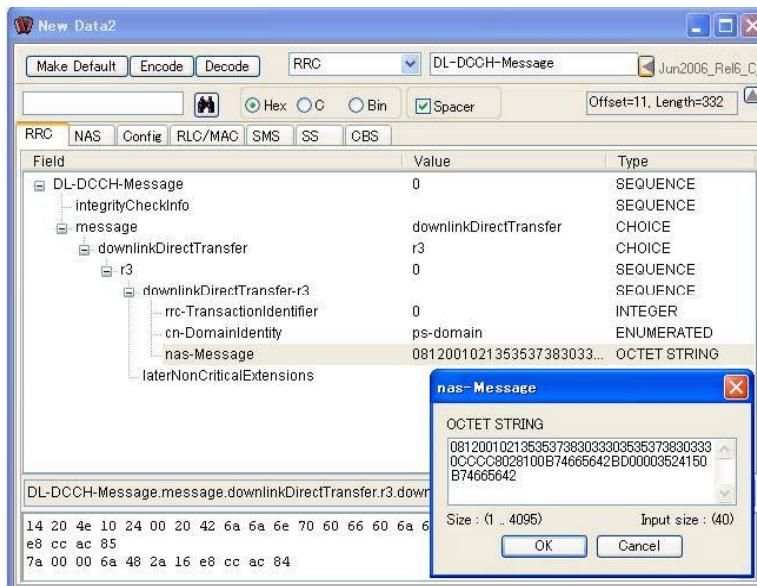
- Select **GMM: AuthenticationAndCipheringREQ**.
- Right-click and select **Copy data only**.

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Message Coder: RRC(DL-DCCH-Message)



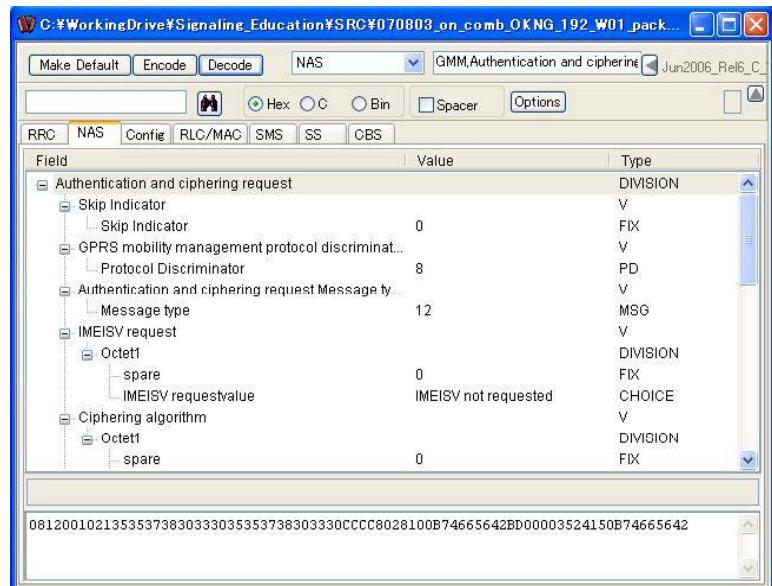
- Setup:
RRC
DL-DCCH-Message
Hex
Spacer
- Paste the data.
- Press **Decode**.
- Double-click **nas-Message**.
- Copy the entire **OCTET STRING** data.
- Press Cancel.

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Message Coder: NAS (GMM, Authentication and ciphering)



- Setup:
NAS
GMM, Authentication and ciphering
Hex
No Spacer
- Paste the data.
- Press **Decode**.

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Analyzing System Information from Trace Window

Analyzing System Information from Trace window

Message Coder decodes System Information from the following messages on the Trace window.

Downlink BCCH (D_BCCH-D_BCH): MasterInformationBlock

Downlink BCCH (D_BCCH-D_BCH): SystemInformationBlockType5

There are two steps to Analyze System Information.

- First, analyze in the same way as RRC messages
- Next, extract the System Information from the decoded RRC message and decode the System Information.

If the System Information is segmented, it must be combined.

Trace: D_BCCH (SYSTEM INFORMATION-BCH) MasterInformationBlock

PHY	MAC	RLC	TE	RRC	NAS	BTS	Primitive	Channel	Message	Progress	Time
										Progress	Time
							1	CRLC_CONFIG_REQ	D PCCH	0	000:00:03.54
							1	CRLC_CONFIG_CNF	D PCCH	0	000:00:03.54
							1	RLC_TR_DATA_REQ	D BCCH	0	SYSTEM INFORMATION-BCH
							1	MAC_DATA_REQ	D BCCH	0	000:00:03.61
							1	RLC_TR_DATA_REQ	D BCCH	0	SYSTEM INFORMATION-BCH
							1	RLC_TR_DATA_REQ	D BCCH	0	000:00:03.62
							1	MAC_DATA_REQ	D BCCH	0	000:00:03.62
							1	RLC_TR_DATA_REQ	D BCCH	0	SYSTEM INFORMATION-BCH
							1	PHY_DATA_REQ	D BCH	0	000:00:03.63
							1	MAC_DATA_REQ	D BCCH	0	000:00:03.63
							1	RLC_TR_DATA_REQ	D BCCH	0	SYSTEM INFORMATION-BCH
							1	MAC_DATA_REQ	D BCCH	0	000:00:03.64
							1	RLC_TR_DATA_REQ	D BCCH	0	SYSTEM INFORMATION-BCH
							1	PHY_DATA_REQ	D BCH	0	000:00:03.65
							1	MAC_DATA_REQ	D BCCH	0	000:00:03.65
							1	RLC_TR_DATA_REQ	D BCCH	0	SYSTEM INFORMATION-BCH
							1	PHY_DATA_REQ	D BCH	0	000:00:03.65
							1	MAC_DATA_REQ	D BCCH	0	000:00:03.65

- Select **SYSTEM INFORMATION-BCH**.
 - Right-click and select **Copy data only**.

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Message Coder: RRC (BCCH-BCH-Message) 1 MasterInformationBlock

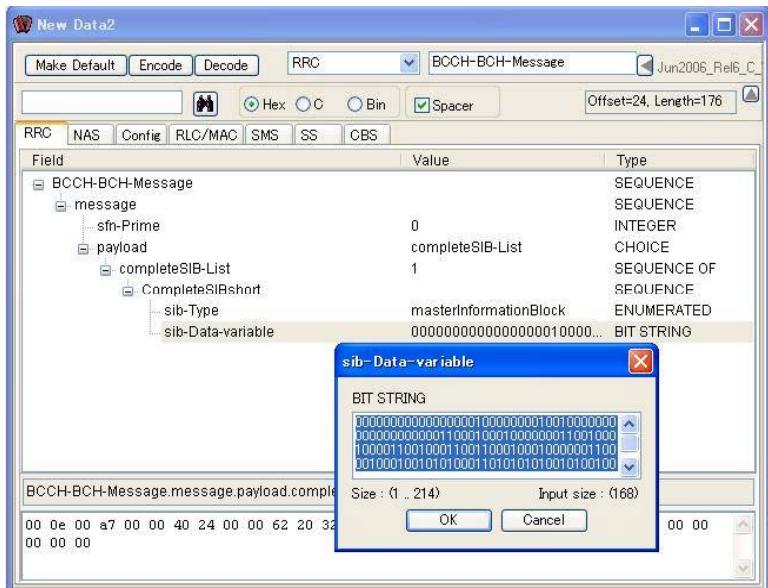
- Setup:
RRC
BCCH-BCH-Message
Hex
Spacer
 - Paste the data.
 - Press **Decode**.

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Message Coder: RRC (BCCH-BCH-Message) 2 MasterInformationBlock



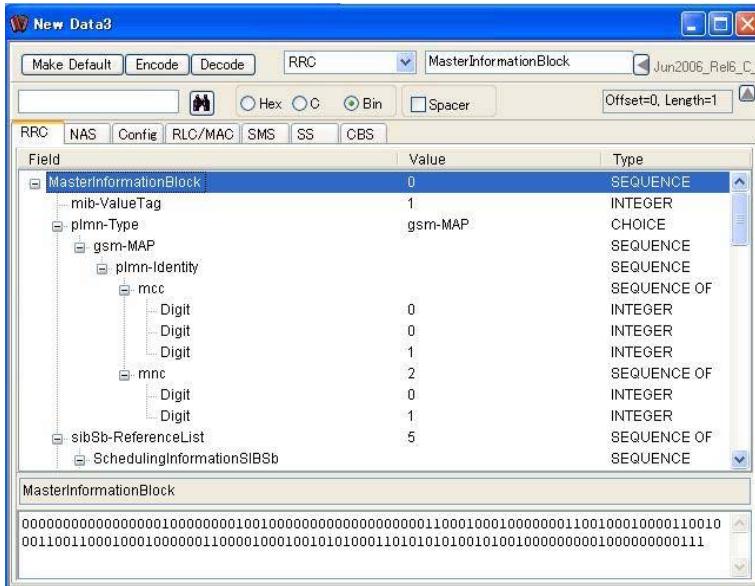
- Double-click the **sib-Data-variable**.
 - Copy the entire **BIT STRING** data.
 - Press Cancel.

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Message Coder: RRC MasterInformationBlock



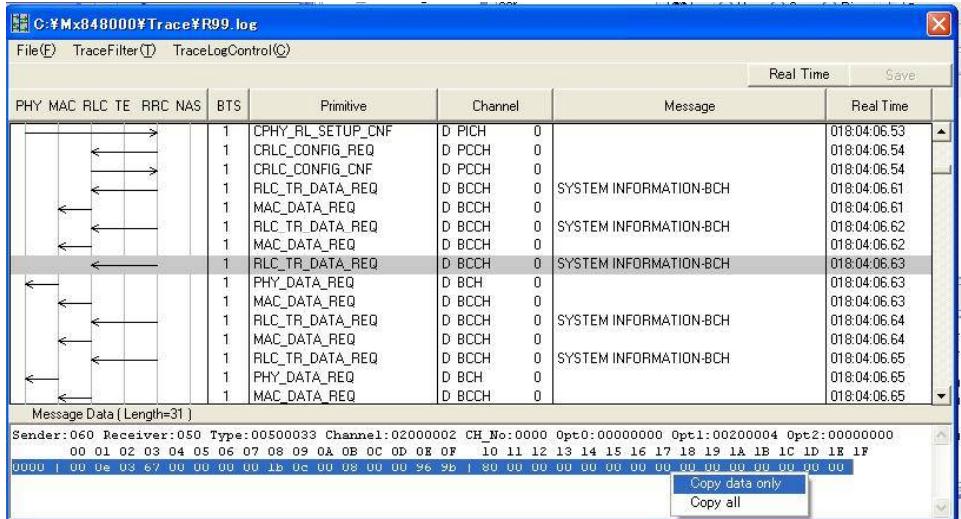
- Open a new MDI window.
 - Setup:
RRC
MasterInformation-Block
Bin
No Spacer
 - Paste the data.
 - Press **Decode**.

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Trace: D_BCCH (SYSTEM INFORMATION-BCH) SystemInformationBlockType5 firstSegment



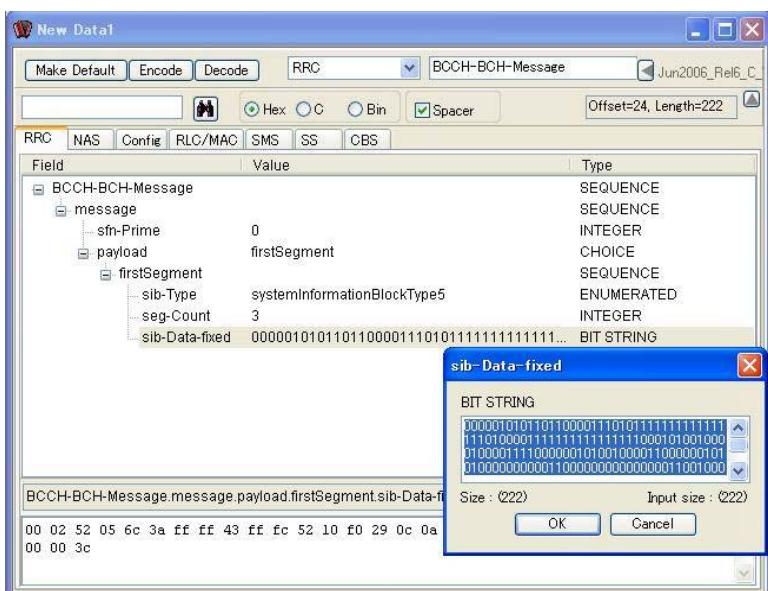
- Select **SYSTEM INFORMATION-BCH**.
 - Right-click and select **Copy data only**.

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**Message Coder: RRC (BCCH-BCH-Message)
SystemInformationBlockType5 firstSegment**



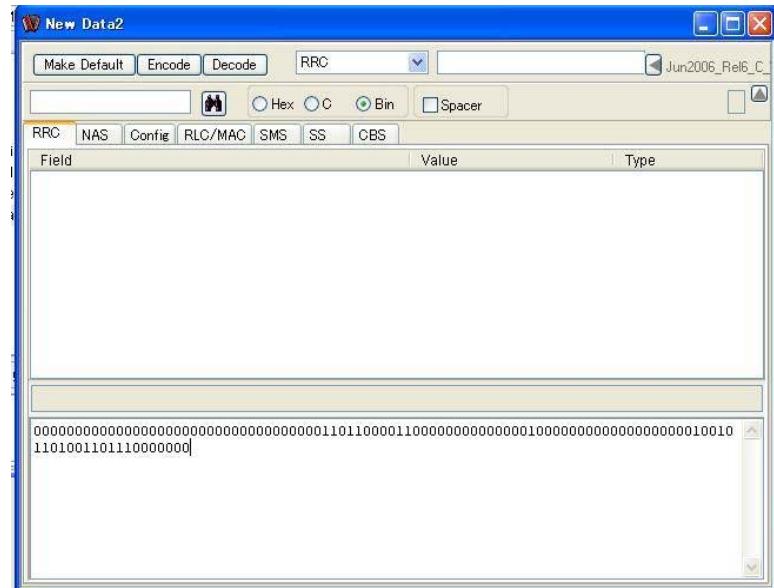
- Setup:
RRC
BCCH-BCH-
Message
Hex
Spacer
 - Paste the data.
 - Press **Decode**.
 - Double-click the
sib-Data-variable.
 - Copy the entire
BIT STRING data.
 - Press Cancel.

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Message Coder: RRC SystemInformationBlockType5 firstSegment



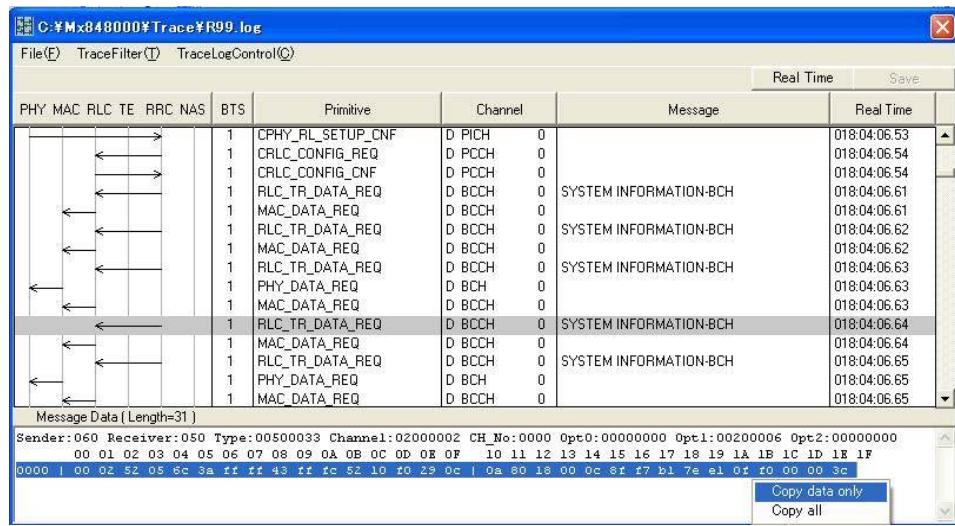
- Open a new MDI window.
- Setup:
RRC
Bin
No Spacer
- Paste the data.

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Trace: D_BCCH (SYSTEM INFORMATION-BCH) SystemInformationBlockType5 subsequentSegment



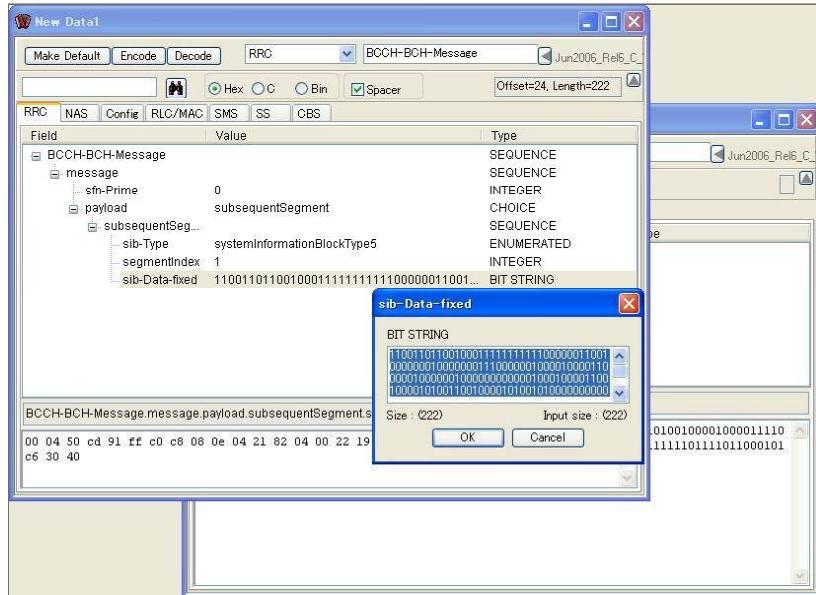
- Select **SYSTEM INFORMATION-BCH**.
- Right-click and select **Copy data only**.

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Message Coder: RRC (BCCH-BCH-Message) SystemInformationBlockType5 subsequentSegment

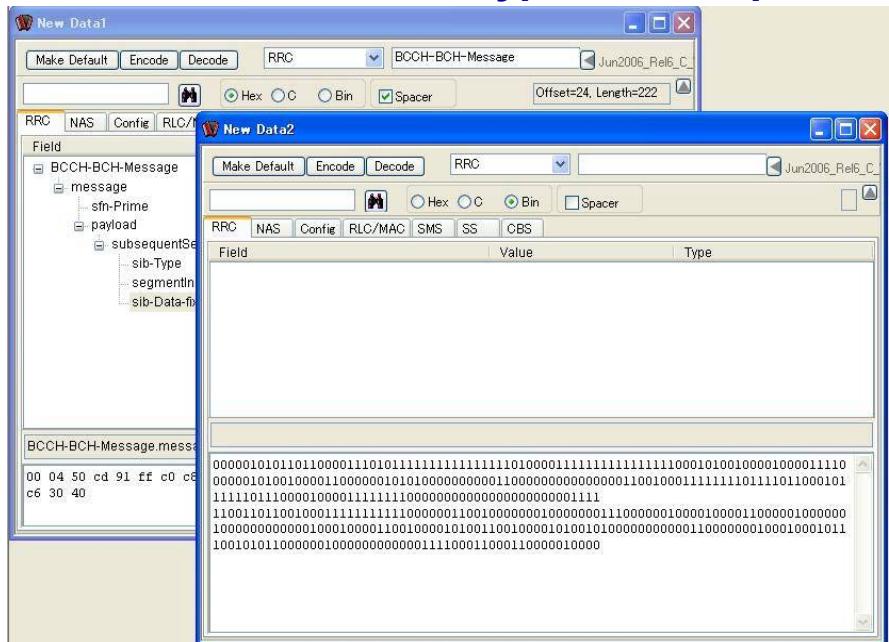


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Message Coder: RRC SystemInformationBlockType5 subsequentSegment



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Trace: D_BCCH (SYSTEM INFORMATION-BCH) SystemInformationBlockType5 lastSegmentShort

PHY	MAC	RLC	TE	RRC	NAS	BTS	Primitive	Channel	Message	Real Time
							1 CPHY_RL_SETUP_CNF	D PICH	0	018:04:06.53
							1 CRLC_CONFIG_REQ	D PCCH	0	018:04:06.54
							1 CRLC_CONFIG_CNF	D PCCH	0	018:04:06.54
							1 RLC_TR_DATA_REQ	D BCCH	0	018:04:06.61
							1 MAC_DATA_REQ	D BCCH	0	018:04:06.61
							1 RLC_TR_DATA_REQ	D BCCH	0	018:04:06.62
							1 MAC_DATA_REQ	D BCCH	0	018:04:06.62
							1 RLC_TR_DATA_REQ	D BCCH	0	018:04:06.63
							1 PHY_DATA_REQ	D BCH	0	018:04:06.63
							1 MAC_DATA_REQ	D BCCH	0	018:04:06.63
							1 RLC_TR_DATA_REQ	D BCCH	0	018:04:06.64
							1 MAC_DATA_REQ	D BCCH	0	018:04:06.64
							1 RLC_TR_DATA_REQ	D BCCH	0	018:04:06.65
							1 PHY_DATA_REQ	D BCH	0	018:04:06.65
							1 MAC_DATA_REQ	D BCCH	0	018:04:06.65

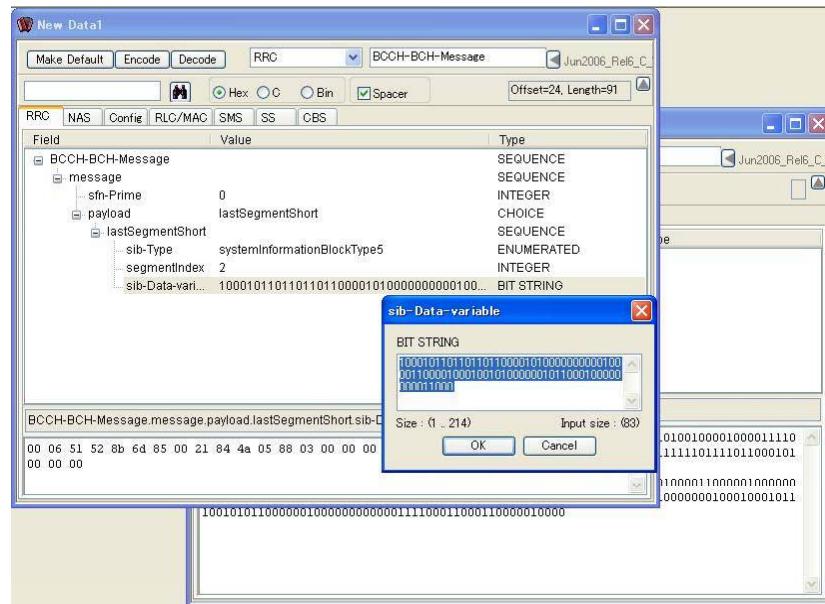
Message Data (Length=31)

```
Sender:060 Receiver:050 Type:00500033 Channel:02000002 CH_No:0000 Opt:0:00000000 Opt1:0020000A Opt2:00000000
 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 10 11 12 13 14 15 16 17 18 19 1A 1B 1C 1D 1E 1F
0000 | 00 04 50 cd 81 ff c0 c8 08 0e 04 21 82 04 00 22 | 13 0a 64 29 40 05 02 22 e5 60 40 03 c6 30 40
```

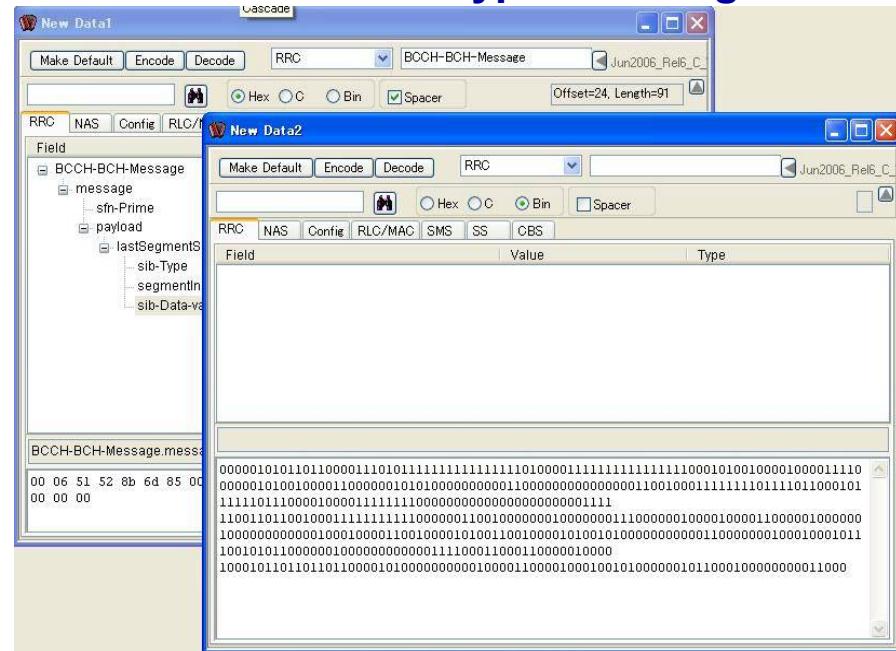
[Copy data only](#)
[Copy all](#)

- Select **SYSTEM INFORMATION-BCH**.
- Right-click and select **Copy data only**.

Message Coder: RRC (BCCH-BCH-Message) SystemInformationBlockType5 lastSegmentShort



Message Coder: RRC SystemInformationBlockType5 lastSegmentShort



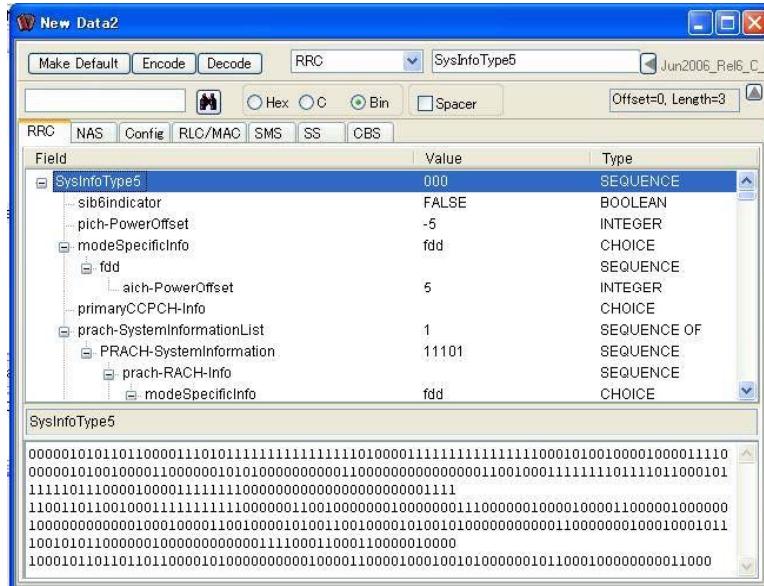
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Message Coder: RRC SystemInformationBlockType5

Press Decode.



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Checking and Modifying Byte Array Message in C-Scenario

Checking and Modifying Byte Array Message in C-Scenario

Steps:

- Copy the byte array message from the C-Scenario
- Paste it into Message Coder
- Decode
- Check the Value, Offset, and Length message items
- Modify the message items
- Encode
- Copy the message data to the C-Scenario

Visual Studio: Copy byte array message radioBearerSetup

```
W01_voice_MD8480.c W01_packet_MD8480.c
/* Send Message: Radio Bearer Setup */
{
    UCHAR SndData[] =
    {
        0x38, 0x20, 0x4A, 0xAF, 0x04, 0x00, 0x01, 0x70, 0x23, 0x3C,
        0xB4, 0x9C, 0x83, 0x4F, 0x05, 0xE2, 0x71, 0x85, 0xDE, 0x17,
        0x20, 0x40, 0x98, 0x24, 0x52, 0x49, 0x34, 0xA2, 0x55, 0x2C,
        0x97, 0x4C, 0x26, 0x4A, 0x3C, 0x0B, 0xC4, 0x09, 0x00, 0x88,
        0xE7, 0xD4, 0xE2, 0x0A, 0x11, 0x08, 0x08, 0x82, 0x88, 0xE8,
        0x40, 0x81, 0x80, 0x08, 0x86, 0x42, 0x88, 0xE0, 0x4A, 0x86,
        0x19, 0xEB, 0xD5, 0xCB, 0x80, 0x14, 0x22, 0x8C, 0x11, 0x4D,
        0x51, 0x36, 0xBA, 0xE9, 0xA0, 0x00, 0x0A, 0x00, 0x00, 0x00,
        0x17, 0x89, 0x00, 0x3A, 0x00, 0x01, 0x00, 0x48, 0x00, 0x00,
        0x68
    };
    CHAR buff[4];
    CFN = ( ( BitsReadCFN( UNIT_BTS1, NO_TIMEOUT ) + 150 ) % 256 ) & ( short )(

        Int2MsbIE( CFN, buff, 8 );
        ReplaceIE( SndData, buff, 34, 8 );
        Int2MsbIE( Nsapi, buff, 8 );
        ReplaceIE( SndData, buff, 50, 8 );

        RlcMUI = 1;
        RlcCNF = 1;

        SndMessageIntegrity( UNIT_BTS1, RLC_AM_DATA_REQ, D_DCCH, 1, SndData, 728 );
        RlcCNF = 0;
        SequenceDisp( " send 'Radio Bearer Setup'" );
    }
}
```

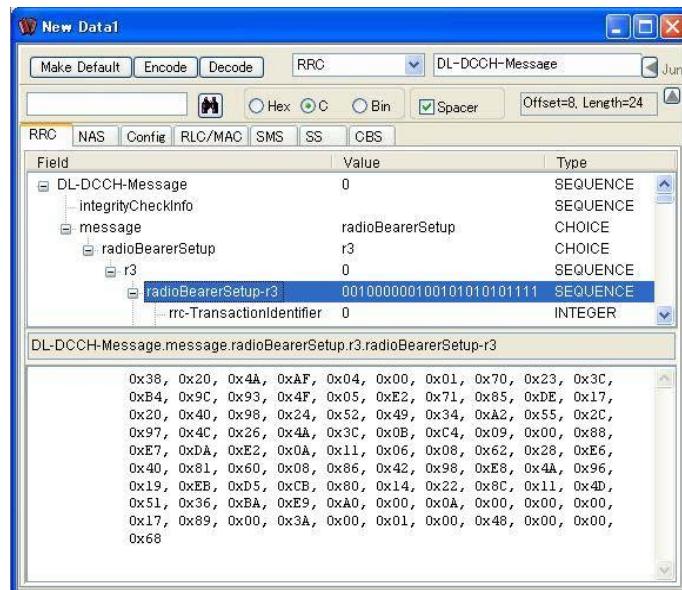
- Select the entire byte array message.
- Copy it.

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Message Coder: RRC (DL-DCCH-Message) radioBearerSetup



- Setup:
RRC
DL-DCCH-Message
C
Spacer

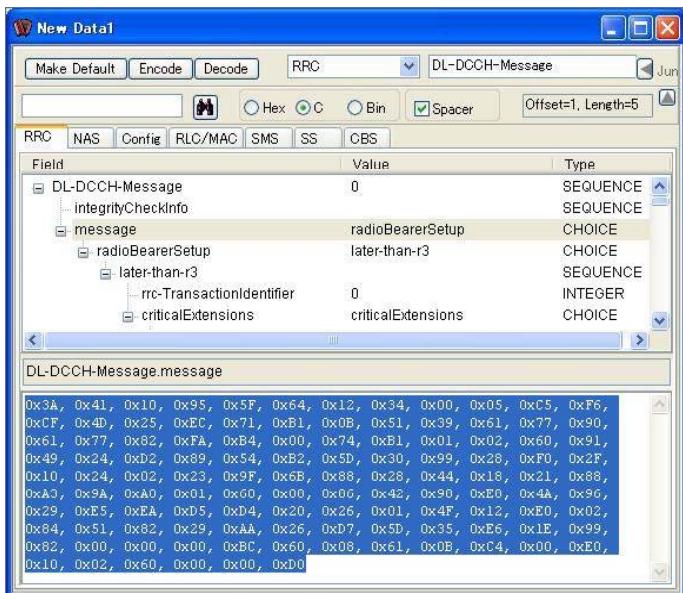
- Paste the data.
- Press **Decode**.

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Message Coder: Encode radioBearerSetup



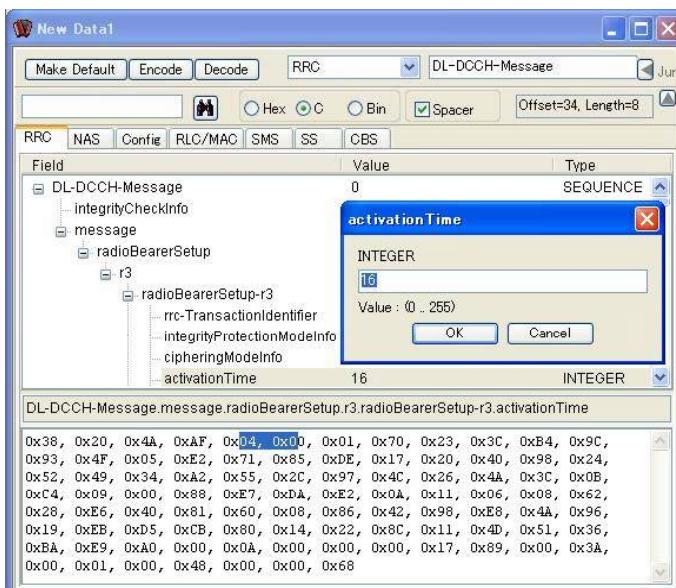
Press Encode.

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Message Coder: Check activationTime Offset and Length radioBearerSetup



Check the source code.

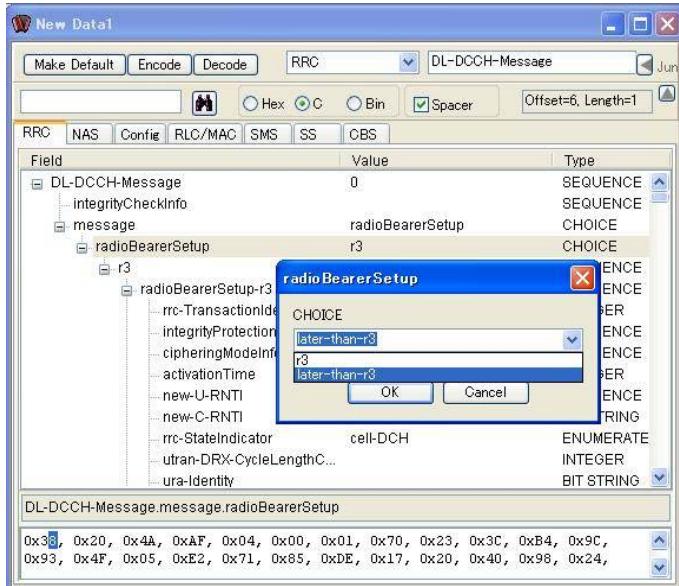
- Offset = 34
- Length = 8

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Message Coder: Modify 1 radioBearerSetup



Modify the message item.

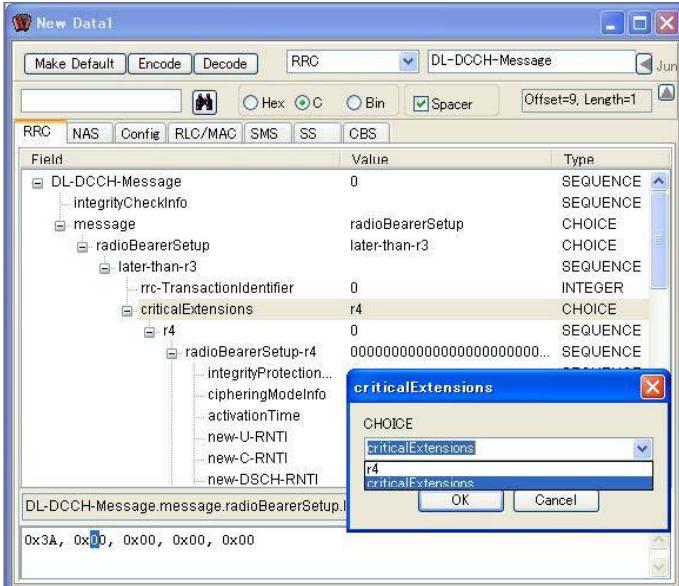
Example:
CHOICE type item

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Message Coder: Modify 2 radioBearerSetup



Modify the message item.

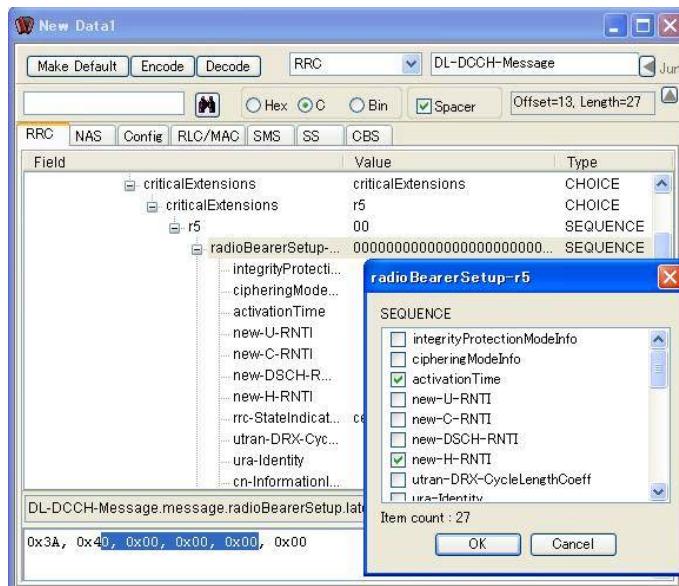
Example:
CHOICE type item

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Message Coder: Modify 3 radioBearerSetup



Modify the message item.

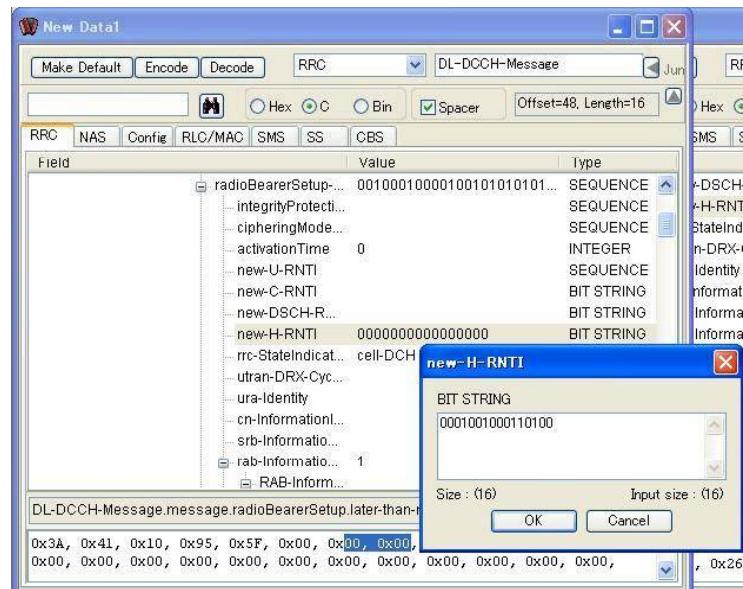
Example:
SEQUENCE type item

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Message Coder: Modify 4 radioBearerSetup



Modify the message item.

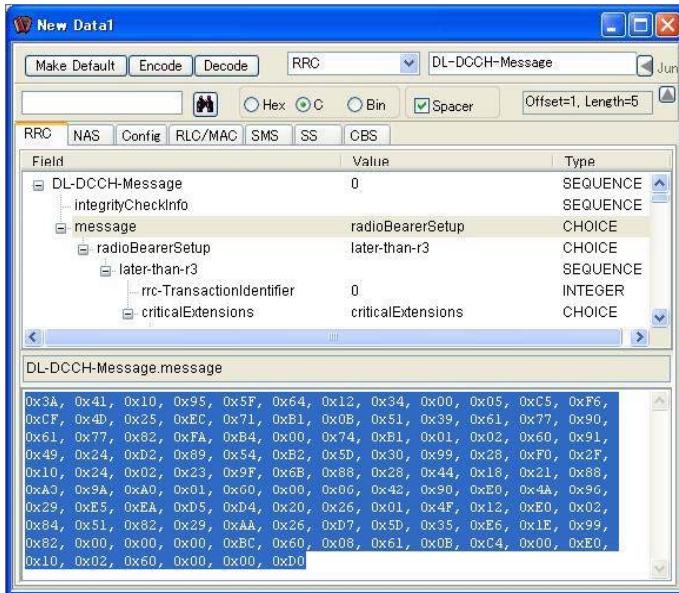
Example:
BIT STRING type item

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Message Coder: Final Encode and Copy radioBearerSetup



After all modifications:

- Press **Encode**.
- Copy the entire message data.

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Visual Studio: Paste and Replace byte array radioBearerSetup

```
W01_voice_MD8480.c W01_packet_MD8480.c*
/* Send Message: Radio Bearer Setup */
{
    UCHAR SndData[] = {
        0x3A, 0x41, 0x10, 0x95, 0x5F, 0x64, 0x12, 0x34, 0x00, 0x05, 0xC5, 0xF6,
        0xCF, 0x4D, 0x25, 0xEC, 0x71, 0xB1, 0x0B, 0x51, 0x39, 0x61, 0x77, 0x90,
        0x61, 0x77, 0x82, 0xFA, 0xB4, 0x00, 0x74, 0xB1, 0x01, 0x02, 0x60, 0x91,
        0x49, 0x24, 0xD2, 0x02, 0x89, 0x54, 0xB2, 0x5D, 0x30, 0x99, 0x28, 0xF0, 0x2F,
        0x10, 0x24, 0x02, 0x23, 0x9F, 0xE8, 0x88, 0x28, 0x44, 0x18, 0x21, 0x88,
        0xA3, 0x9A, 0xA0, 0x01, 0x60, 0x00, 0x06, 0x42, 0x90, 0xE0, 0x4A, 0x96,
        0x29, 0xE5, 0xEA, 0xD5, 0xD4, 0x20, 0x26, 0x01, 0x4F, 0x12, 0xE0, 0x02,
        0x84, 0x51, 0x82, 0x29, 0xAA, 0x26, 0xD7, 0x5D, 0x35, 0xE6, 0x1E, 0x99,
        0x82, 0x00, 0x00, 0x00, 0xBC, 0x60, 0x08, 0x61, 0x0B, 0xC4, 0x00, 0xE0,
        0x10, 0x02, 0x60, 0x00, 0x00, 0x00, 0x0D
    };
    CHAR buff[4];

    CFN = ( ( BtsReadCFN( UNIT_BTS1, NO_TIMEOUT ) + 150 ) % 256 ) & ( short )( ~
        Int2MsbIE( CFN, buff, 8 );
        ReplaceIE( SndData, buff, 34, 8 );
        Int2MsbIE( Nsapi, buff, 8 );
        ReplaceIE( SndData, buff, 50, 8 );

        RlcMUI = 1;
        RlcCNF = 1;

        SndMessageIntegrity( UNIT_BTS1, RLC_AM_DATA_REQ, D_DCCH, 1, SndData, 728 );
        RlcCNF = 0;
        SequenceDisp( " send 'Radio Bearer Setup'" );
    }
}
```

- Paste and replace.

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Visual Studio: Reformat radioBearerSetup

```
DCH_HSDPA.cpp W01_voice_MD8480c W01_packet_MD8480.c*
/* Send Message: Radio Bearer Setup */
{
    UCHAR SndData[] = {
        0x3A, 0x41, 0x10, 0x95, 0x5F, 0x84, 0x12, 0x34, 0x00, 0x05,
        0xC5, 0xF6, 0xCF, 0x4D, 0x25, 0xED, 0x71, 0xB1, 0x0B, 0x51,
        0x89, 0x81, 0x77, 0x80, 0x81, 0x77, 0x82, 0xFA, 0xB4, 0x00,
        0x14, 0xB1, 0x01, 0x02, 0x80, 0x81, 0x48, 0x24, 0x02, 0x89,
        0x84, 0xB2, 0x5D, 0x30, 0x88, 0x28, 0xF0, 0x2F, 0x10, 0x24,
        0x02, 0x23, 0x9F, 0x8B, 0x88, 0x28, 0x44, 0x18, 0x21, 0x88,
        0xA3, 0x9A, 0xA0, 0x81, 0x80, 0x08, 0x86, 0x42, 0x98, 0xE8,
        0x4A, 0x86, 0x29, 0xE5, 0xEA, 0xD5, 0xD4, 0x20, 0x28, 0x01,
        0x4F, 0x12, 0xE0, 0x02, 0x84, 0x81, 0x82, 0x28, 0xA4, 0x28,
        0xD7, 0x5D, 0x35, 0xE6, 0x1E, 0x89, 0x82, 0x00, 0x00, 0x00,
        0xBC, 0x60, 0x08, 0x81, 0x0B, 0xC4, 0x00, 0xE0, 0x10, 0x02,
        0x60, 0x00, 0x00, 0xD0
    };
    CHAR buff[4];
    CFN = ( ( BtsReadCFN( UNIT_BTS1, NO_TIMEOUT ) + 150 ) % 256 ) & ( short )( ^
        Int2MsbIE( CFN, buff, 8 );
        ReplaceIE( SndData, buff, 40, 8 ); // 34=>40
        Int2MsbIE( Nsapi, buff, 8 );
        ReplaceIE( SndData, buff, 72, 8 ); // 50=>72
    );
    RicMUI = 1;
    RicCNF = 1;
    SndMessageIntegrity( UNIT_BTS1, RLC_AM_DATA_REQ, D_DCCH, 1, SndData, 812 );
    // 728=>812
    RicCNF = 0;
    SequenceDisp( " send 'Radio Bearer Setup'" );
}
```

- Reformat.
- Adjust the message length **in bits** (SndMessageIntegrity).
- Adjust the **Offset** and **Length** message items if necessary.

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Analyzing MD8480C Configuration Primitive from Trace Window

D S_CCPCCH channel: CPHY_RL_SETUP_REQ primitive
D S_CCPCCH channel: CPHY_TRCH_SETUP_REQ primitive
D S_CCPCCH channel: CMAC_CONFIG_REQ primitive

Analyzing the MD8480C configuration primitive is the same as analyzing the RRC message.

Trace: CPHY_RL_SETUP_REQ (D S_CCPCCH)

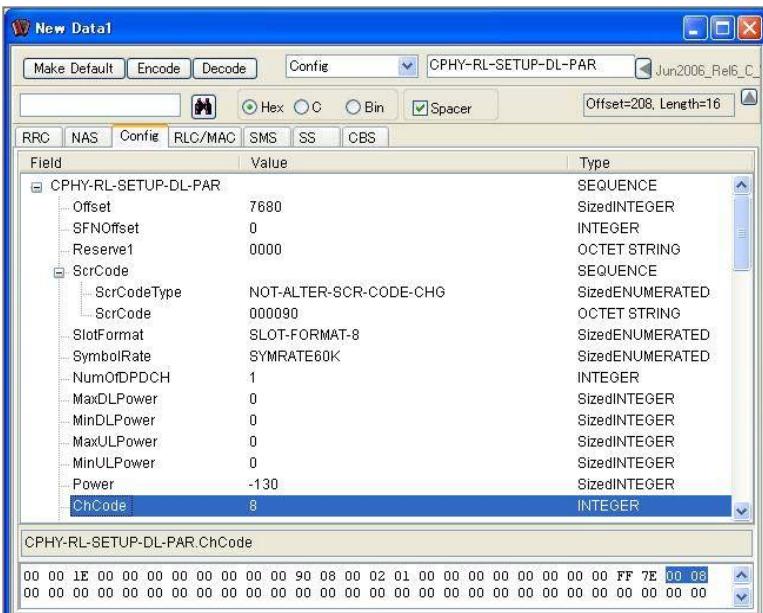
PHY	MAC	RLC	TE	RRC	NAS	BTS	Primitive	Channel	Message	Real Time
←						1	CPHY_RL_SETUP_REQ	D S_SCH	0	018:04:06.25
→						1	CPHY_RL_SETUP_CNF	D P_SCH	0	018:04:06.26
←						1	CPHY_RL_SETUP_REQ	D P_CCPCCH	0	018:04:06.27
→						1	CPHY_RL_SETUP_CNF	D S_SCH	0	018:04:06.28
←						1	CPHY_TRCH_CONFIG_REQ	D P_CCPCCH	0	018:04:06.29
→						1	CPHY_RL_SETUP_CNF	D P_CCPCCH	0	018:04:06.30
←						1	CMAC_CONFIG_REQ	D P_CCPCCH	0	018:04:06.31
→						1	CMAC_CONFIG_CNF	D P_CCPCCH	0	018:04:06.32
←						1	CPHY_TRCH_CONFIG_CNF	D P_CCPCCH	0	018:04:06.32
→						1	CPHY_RL_SETUP_REQ	D P_CCPCCH	0	018:04:06.33
←						1	CPHY_RL_SETUP_CNF	D S_CCPCCH	0	018:04:06.35
→						1	CPHY_RL_SETUP_REQ	D P_CCPCCH	0	018:04:06.36
←						1	CPHY_RL_SETUP_CNF	D P_CCPCCH	0	018:04:06.37
→						1	CPHY_TRCH_CONFIG_REQ	D S_CCPCCH	0	018:04:06.38
←						1	CPHY_RL_SETUP_CNF	D S_CCPCCH	0	018:04:06.39
→						1	CMAC_CONFIG_REQ	D S_CCPCCH	0	018:04:06.39

Message Data (Length=97)
Sender:060 Receiver:030 Type:10300024 Channel:00000006 CH_No:0000 Opt0:00000000 Opt1:00000000 Opt2:FFFFFFF
00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 10 11 12 13 14 15 16 17 18 19 1A 1B 1C 1D 1B 1F
0000 | 00 00 1e 00
0020 | 00
0040 | 00

Copy data only Copy all

- Select CPHY_RL_SETUP_REQ and D S_CCPCCH.
- Right-click and select Copy data only.

Message Coder: Config CPHY-RL-SETUP-DL-PAR



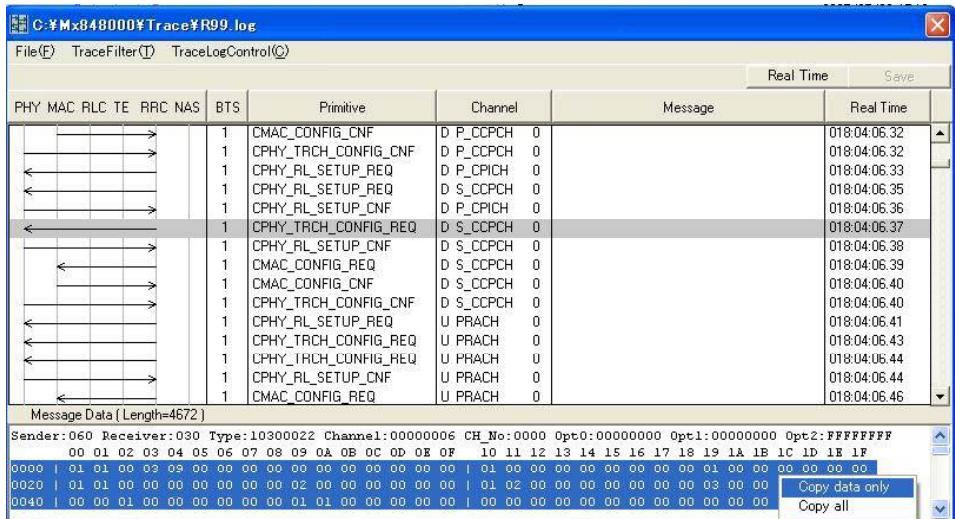
- Setup:
Config
CPHY-RL-SETUP-
DL-PAR
Hex
Spacer
 - Paste the data.
 - Press **Decode**.

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Trace: CPHY_TRCH_SETUP_REQ (D S_CCPCPCH)



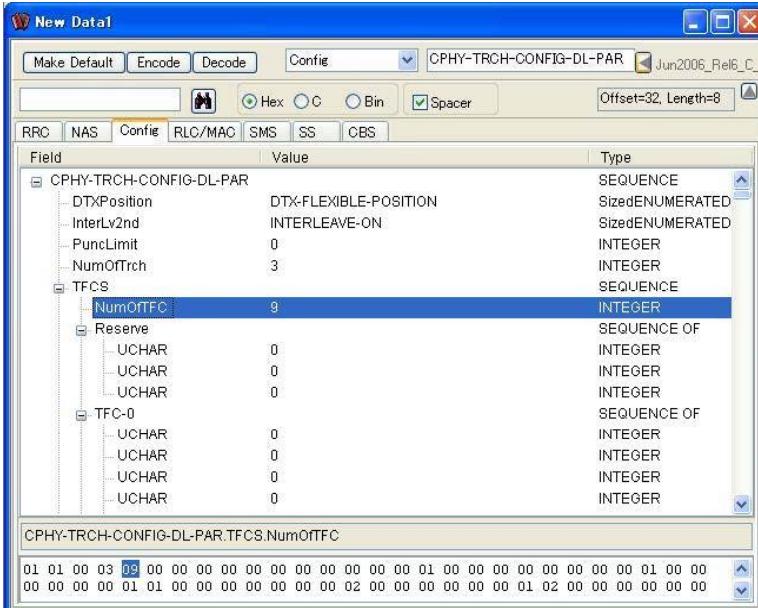
- Select **CPHY_TRCH_SETUP_REQ** and **D_S_CCPCH**.
 - Right-click and select **Copy data only**.

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Message Coder: Config CPHY-TRCH-SETUP-DL-PAR



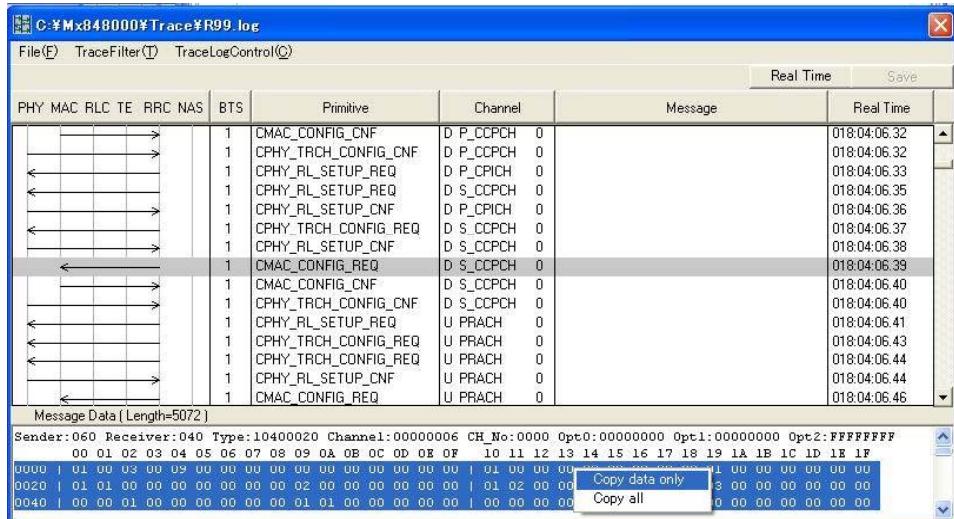
- Setup:
Config
CPHY-TRCH-
SETUP-DL-PAR
 - Hex
Spacer
 - Paste the data.
 - Press Decode.

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Trace: CMAC_CONFIG_REQ (D S CCPCH)



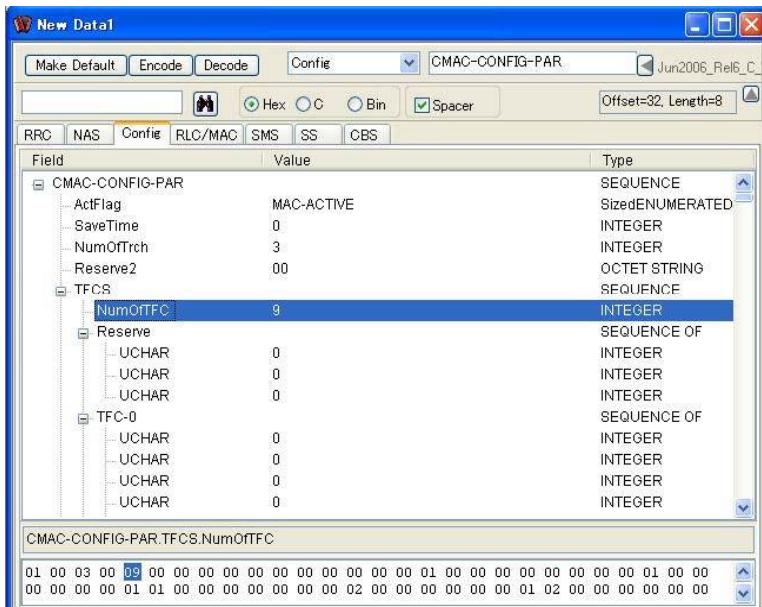
- Select **CMAC_CONFIG_REQ** and **D_S_CC_PCH**.
 - Right-click and select **Copy data only**.

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Message Coder: Config CMAC-CONFIG-DL-PAR



- Setup:
**Config
CMAC-CONFIG-DL-PAR
Hex
Spacer**

- Paste the data.
- Press **Decode**.

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Definitions Setup

Message Coder requires matching versions for target message and Definitions Setup.

Correct:

Rel. 5 HSDPA radioBearerSetup message with Rel. 6 Definitions Setup.

Incorrect:

Rel. 5 HSDPA radioBearerSetup message with **Rel. 99 Definitions Setup**.

Correct:

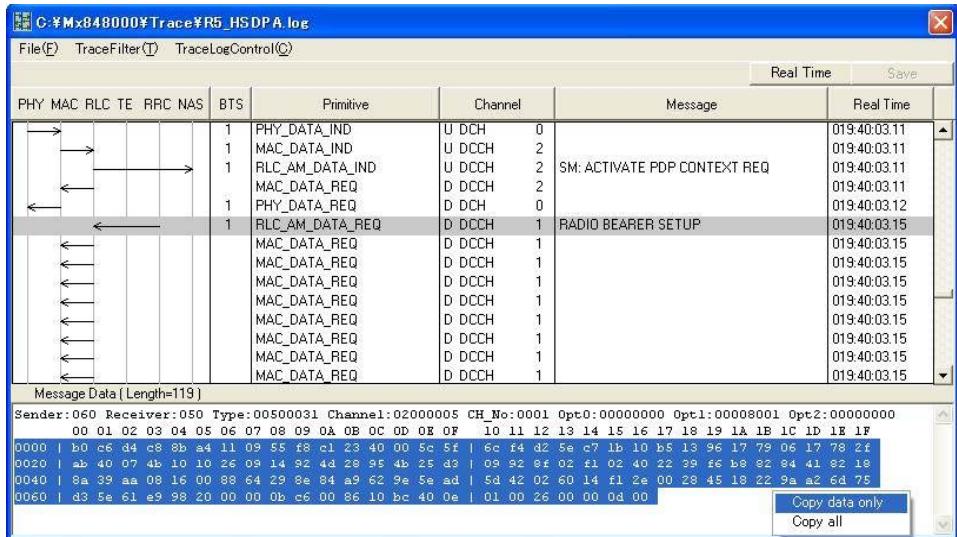
Rel. 99 radioBearerSetup message with Rel. 99 Definitions Setup.

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Trace: Rel. 5 HSDPA radioBearerSetup message



- Select **RADIO BEARER SETUP**.
- Right-click and select **Copy data only**.

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Message Coder: Rel. 5 HSDPA radioBearerSetup message with Rel. 6 Definitions Setup 1

The screenshot shows the 'Definitions Setup' dialog box. It has a 'Reference Standard/Version:' dropdown set to 'Selected Version' and a list box showing 'Jun2006_Rel6_C_V560'. Below this is a scrollable list of 'Version Name' entries, including 'Mar2002_AB_V560', 'Jun2001_AB_V560', 'Dec2002_AB_V560', 'W02_AB_V560', 'Mar2002_C_V560', 'Jun2001_C_V560', 'Dec2002_C_V560', 'W02_C_V560', 'Dec2005_Rel5_AB_V560', 'Dec2005_Rel5_C_V560', and 'Jun2006_Rel6_C_V560'. The main window shows the message structure for 'DL-DCCH-Message.message.radioBearerSetup' with some hex data below it.

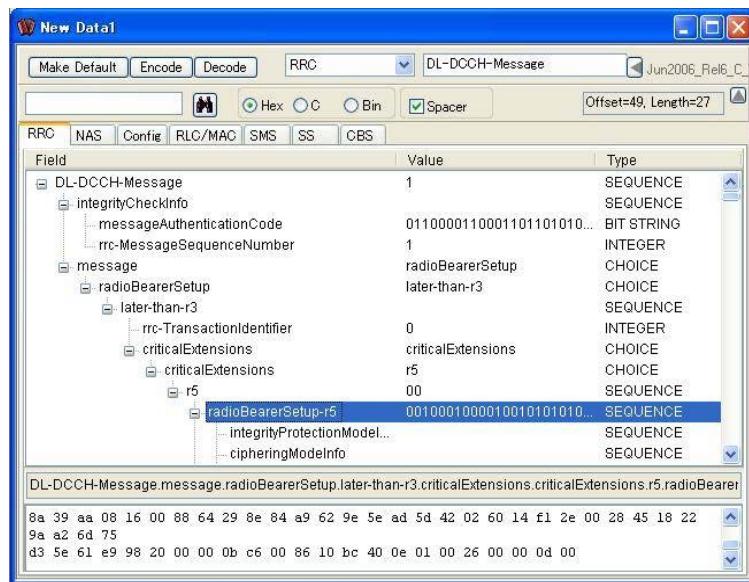
- Select **Jun2006_Rel6_C_V560**.

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Message Coder: Rel. 5 HSDPA radioBearerSetup message with Rel. 6 Definitions Setup 2



Decode the
Rel5-HSDPA
radioBearerSetup
message.

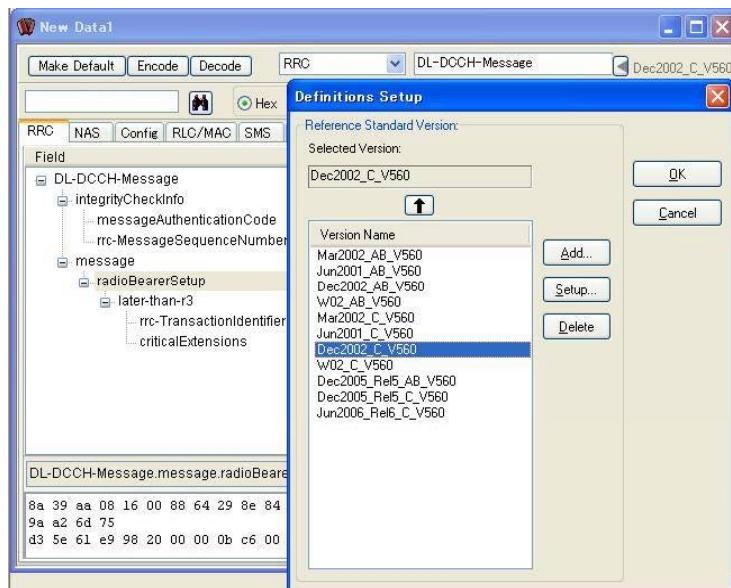
It is correct

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Message Coder: Rel. 5 HSDPA radioBearerSetup message with Rel. 99 Definitions Setup 1



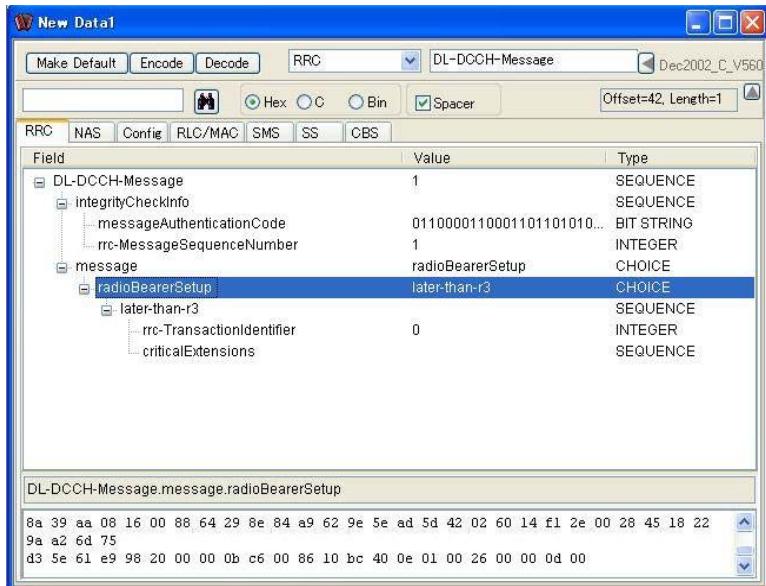
Select
Dec2002_C_V560.

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Message Coder: Rel. 5 HSDPA radioBearerSetup message with Rel. 99 Definitions Setup 2



Decode the
Rel5-HSDPA
radioBearerSetup
message.

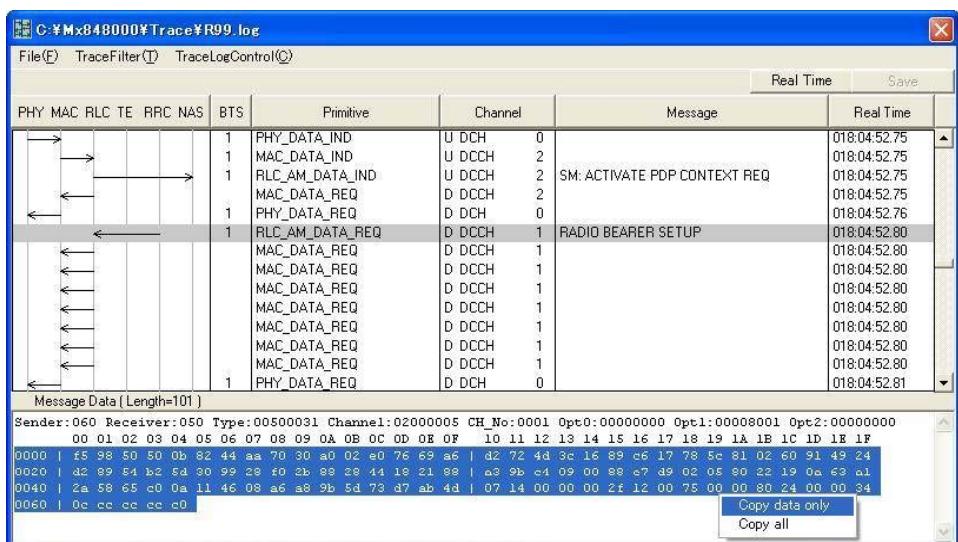
It is **incorrect**

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Trace: Rel. 99 radioBearerSetup message



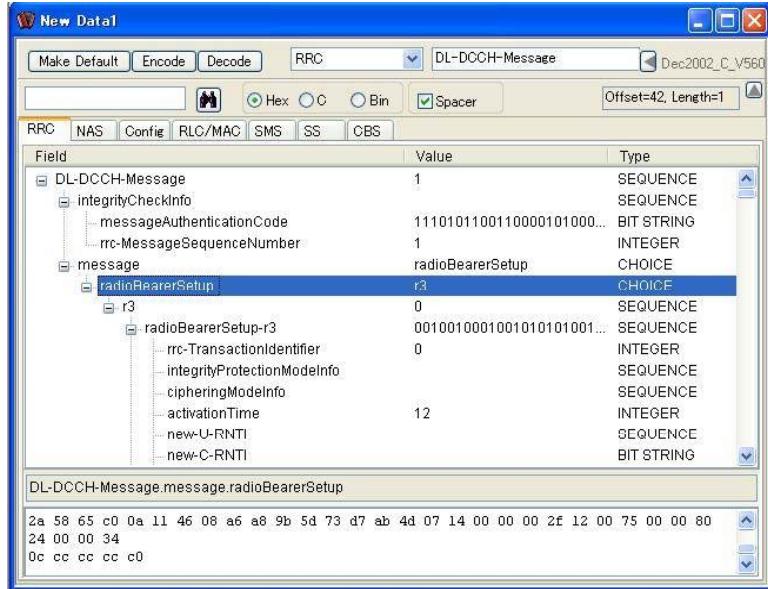
- Select **RADIO BEARER SETUP**.
- Right click and select **Copy data only**.

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Message Coder: Rel. 99 radioBearerSetup message with Rel. 99 Definitions Setup



Decode the
Rel99
radioBearerSetup
message.

It is **correct**

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