10 Managing Channels

About This Chapter

This function is performed to view or set the attributes of a channel to lock or unlock a channel. In addition, this function can be performed to test the specifications, such as the bit error ratio (BER) and transmit power. The specifications are used to check the quality of the channel.

10.1 Managing Channel Attributes

This function is performed to view or set the channel parameters, including channel combination, TSC selection, and starting frame number.

Prerequisite

You have logged in to the BTS through the Site Maintenance Terminal.

Context

The channel configuration in the BTS must be consistent with that in the BSC. **Table 10-1** lists the description of the parameter configuration.

**Table 10-1** Parameters in the Channel Attributes Management dialog box

Parameter Name	Meaning	Value Range
Channel combination	Combination type of logical channels that are carried on physical channels	- TCHFULL - TCHHALF - TCHHALF2 - SDCCH - MAINBCCH - BCCHCOMBINED - BCH - BCCHWICHCBCH - SDCCHWITHCBCH - PBCCH+PCCCH +PDTCH+PACCH +PTCCH - PDTCH+PACCH +PTCCH
Training Sequence Code (TSC)	Helps to evaluate the channel feature for the demodulation module of the baseband to correctly decode the valid information. During cell frequency hopping, the TSC should be consistent with the BCC of the cell. Otherwise, the TCHs of the cell cannot be occupied normally.	0 ～ 7
Starting frame No.	Determines the frame from which this function takes effect.	0 ～ 42431

Procedure

Step 1 In the left pane of the **Site Maintenance Terminal System** window, select **Channel**. In the right pane of the window, double-click **Channel Attributes Management**.

The **Channel Attributes Management** dialog box is displayed, as shown in **Figure 10-1**.

Figure 10-1 Channel attributes management
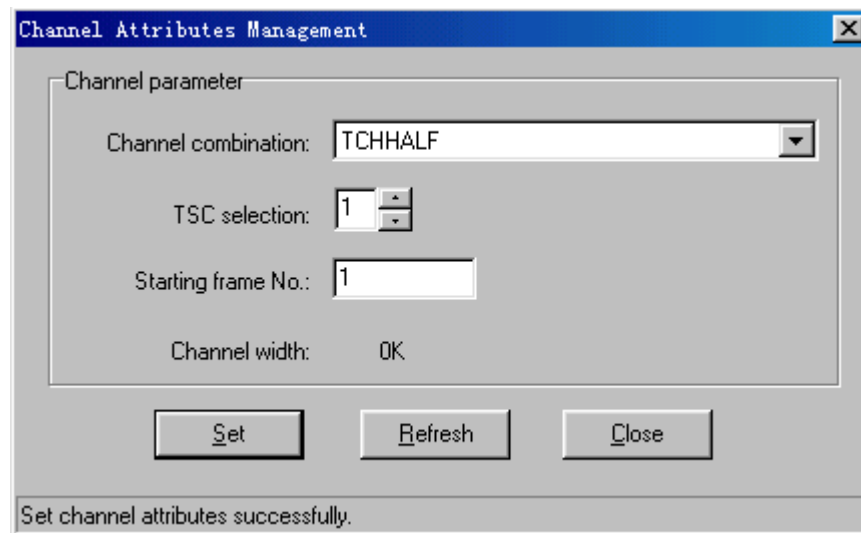
Step 2 Set the parameters.

📖 **NOTE**

The parameters displayed on the terminal are the activated parameters on the BTS. You can adjust their values.

Step 3 Click **Set**.

The attribute is set successfully. The result is displayed on the status bar in the **Channel Attributes Management** dialog box,

Step 4 Click **Refresh**.

The attribute is set successfully. The result is displayed on the status bar in the **Channel Attributes Management** dialog box, as shown in **Figure 10-1**.

📖 **NOTE**

The configure operation enables the site maintenance terminal to activate the parameters on the BTS. The refresh operation enables the site maintenance terminal to obtain the latest data from the BTS. You can perform the refresh operation to confirm the accuracy of data.

----End

10.2 Changing Channel Management States

This function is performed to lock or unlock a channel.

Prerequisite

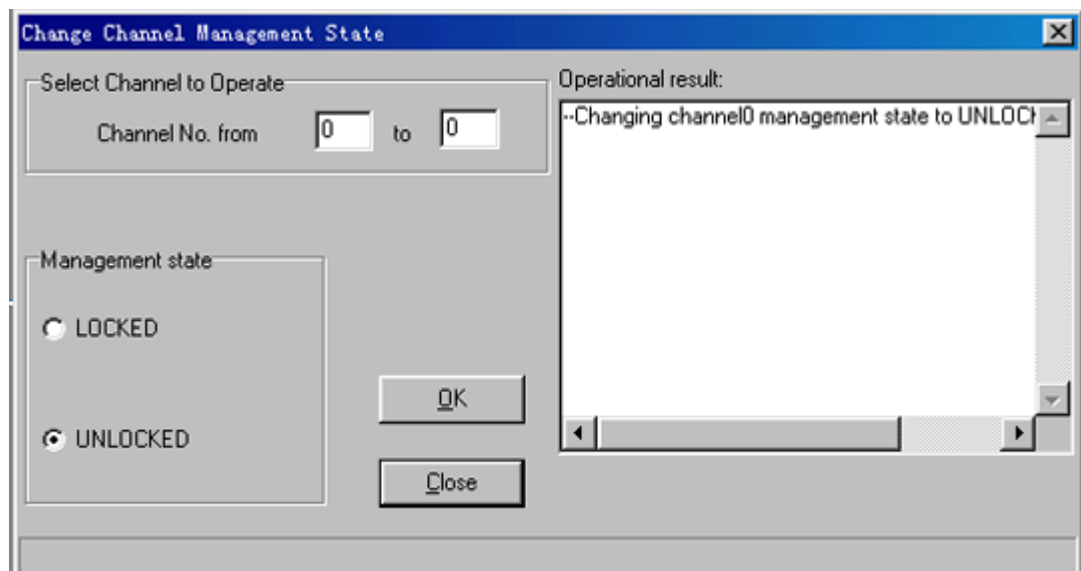You have logged in to the BTS through the Site Maintenance Terminal.

Context

⚠ **CAUTION**

When the channel management state is set to Locked, the channel is in out of service state. That is, the channel cannot provide any service. Therefore, you should perform this function carefully.

Procedure

Step 1 In the left pane of the **Site Maintenance Terminal System** window, select **Channel**. In the right pane of the window, double-click **Change Channel Management State**.

The **Change Channel Management State** dialog box is displayed, as shown in **Figure 10-2**.

Figure 10-2 Changing channel management state

Step 2 In the **Select Channel to Operate** area. enter the channel whose management state is to be changed. In the **Management state** area, select the management state.

Step 3 Click **OK**.

The channel management state is changed successfully, as shown in **Figure 10-2**. The result is displayed in the **Operational result** list box.

----End

10.3 Performing Loopback Test on Channels

This function is performed to test the specifications such as the BER and transmit power of the Double Transceivers Unit (DTRU). The specifications are used to check the quality of the channel.

Prerequisite

You have logged in to the BTS through the Site Maintenance Terminal.

Context

Table 10-2 lists the description of the parameter configuration.

Table 10-2 Parameters in the Cell Extended Attributes Management dialog box

Parameter Name	Meaning	Value Range
TRX RF self-loop test	This test is used to test the receive and transmit performance on the Um interface.	—
BIU loop test	The DTMU provides a path for the TRX to implement loop test. This test is used to test the performance of the DBUS.	—
BTS sound loop test	This test is used to test the connection of the TRX speech channel between the Um interface and the DBUS.	—
TRX sound loop test	This test is used to test the connection of the TRX speech channel between the Um interface and the Digital Signal Processor (DSP).	—
Test time	—	- TRX RF self-loop test: 5–65535 seconds - BIU loop test: 10–65535 seconds - BTS sound loop test: 10–600 seconds - TRX sound loop test: 10–600 seconds
Power level	The selection of a power level is unavailable when you perform a BIU loopback test.	$0 \sim 31$
Sub channel	You cannot set a sub-channel when you perform a TRX RF loopback test or a BIU loopback test.	- Determines the sub-channel to be tested when a half rate channel is used. - Set to **0xff** when a full rate channel is used.

Procedure

Step 1 In the left pane of the **Site Maintenance Terminal System** window, select **Channel**. In the right pane of the window, double-click **Channel Loop Test**.

The **Channel Loop Test** dialog box is displayed, as shown in **Figure 10-3**.

Figure 10-3 Loopback test
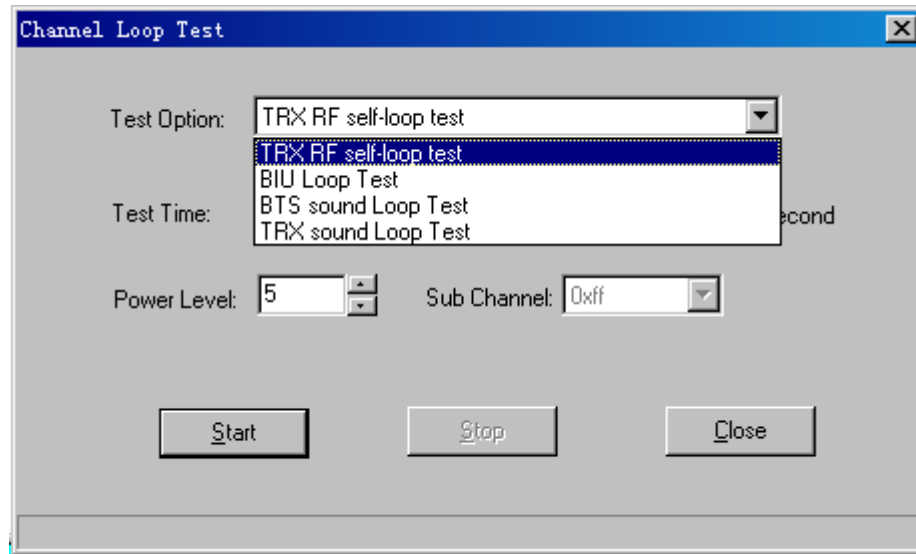
Step 2 Specify the test option, test time, power level, and sub-channel, as shown in **Figure 10-3**.

📖 **NOTE**

> The test time is related to the test option. Generally, the longer the test lasts, the stabler the performance is.

Step 3 Click **Start**.

After the test is complete, you can obtain a BER report. The result is displayed on the status bar in the **Channel Loop Test** dialog box.

📖 **NOTE**

> During the test, if you click **Stop**, the test is stopped. In addition, on the status bar of the **Channel Loop Test** dialog box, the **Stopping test successfully.** message is displayed.

----End