5 Managing Sites

About This Chapter

This function is performed to check the usage of the resources in a site, check the delay time of reporting board alarms, reset the BTS, test whether the boards in a site run normally and whether the connection of transmit links is normal, monitor and manage the environment parameters in a site, view the board parameters of the BTS, test the parameters of the RF counters, and view the configuration of parameter in a ring network and the bar codes of a site.

5.7 Testing RF Performance

The function is performed to test the RF specifications. The specifications of the receiver consist of the receiver sensitivity, GSM static L1 (first level) function, and the block test. The specifications of the transmitter consist of modulation spectrum, handover spectrum, modulation accuracy, and spurious emission.

5.8 Viewing Ring Topology Parameters

This function is performed to view the ring topology parameters, including the working direction of a site in the ring topology (Port 0 is forward link and port 1 is reverse link.) and the indication of auto rotate in the ring topology. If auto rotate is permitted, the result consists of the **Waiting Time Before Rotate** and the **Try Rotating Duration Time**.

5.9 Viewing Bar Codes

This function is performed to view the bar codes of the configured boards in the current site.

5.1 Viewing Site Resources

This function is performed to view the following site resources: CPU usage, RAM usage, busbar voltage, temperature in a cabinet, humidity in a cabinet, current of battery, temperature of battery, load current, AC voltage, and quantity of state. This function also can be performed to get board temperature.

Prerequisite

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

Context

- The BTS3012 does not support the function of viewing **board temperature**.
- The BTS3012AE does not support the function of viewing **quantity of state** and **get board temperature**.
- The BTS3006C does not support the function of viewing **temperature in cabinet**, **humidity in cabinet**, and **quantity of state**.

Procedure

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

The **View Resource** dialog box is displayed.

Step 2 In the **Select Resource Type** list box, select the resource type to be viewed, as shown in **Figure 5-1**. The result is displayed at the bottom of the **View Resource** dialog box.

Figure 5-1 Viewing resources
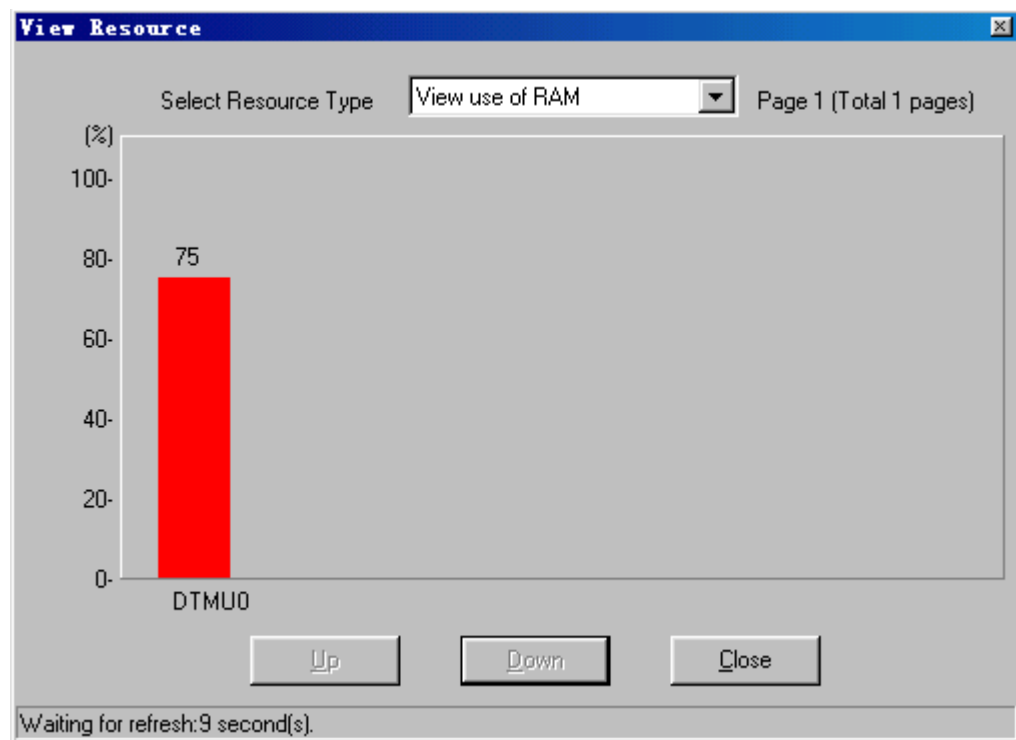
📖 **NOTE**

One page may be insufficient to display the result (such as, in combined cabinets or cabinet group situations). Click **Next Page** to view more results. The resources to be viewed are the real-time messages.

----End

5.2 Hierarchically Resetting Sites

The site reset consists of the third level reset and the fourth level reset. The third level reset and the fourth level reset are used to reinitialize the BTS, that is, to reset all the boards in the BTS and load the configuration data of the BTS from the BSC.

Prerequisite

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

Context

⚠ **CAUTION**

Be careful when resetting a site. A site reset disrupts all the services carried by all the cells under the site.

Table 5-1 lists the description of the parameter configuration.

Table 5-1 Parameters in the Site Reset Hierarchically dialog box

Parameter Name	Meaning	Value Range
Third level site reset	Based on the configuration data of the BTS stored in the memory, the BSC configures the BTS again to reset it. In the ring topology, you can change the link direction. This requires you to choose a port.	-
Fourth level site reset	Based on the data configuration stored in the database (DB), the BSC updates the data stored in the memory, and then configures the BTS again to reset it. In the ring topology, you cannot choose a port.	-
Do not select...	Non-ring topology	-
Port 0	Ring topology, the forward link	-
Port 1	Ring topology, the reverse link	-

Procedure

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

The **Site Reset Hierarchically** dialog box is displayed.

Step 2 In the **Reset Level** area, select a reset level. In the **Reset Port** area, select a port, as shown in **Figure 5-2**.

Figure 5-2 Hierarchical reset of a site

Step 3 Click **OK**.

----End

5.3 Testing Sites

This function is performed to test all the functional boards that are configured in the site, and then return the test results. If the test is successful, the boards run normally. If the test is unsuccessful, the boards run abnormally.

Prerequisite

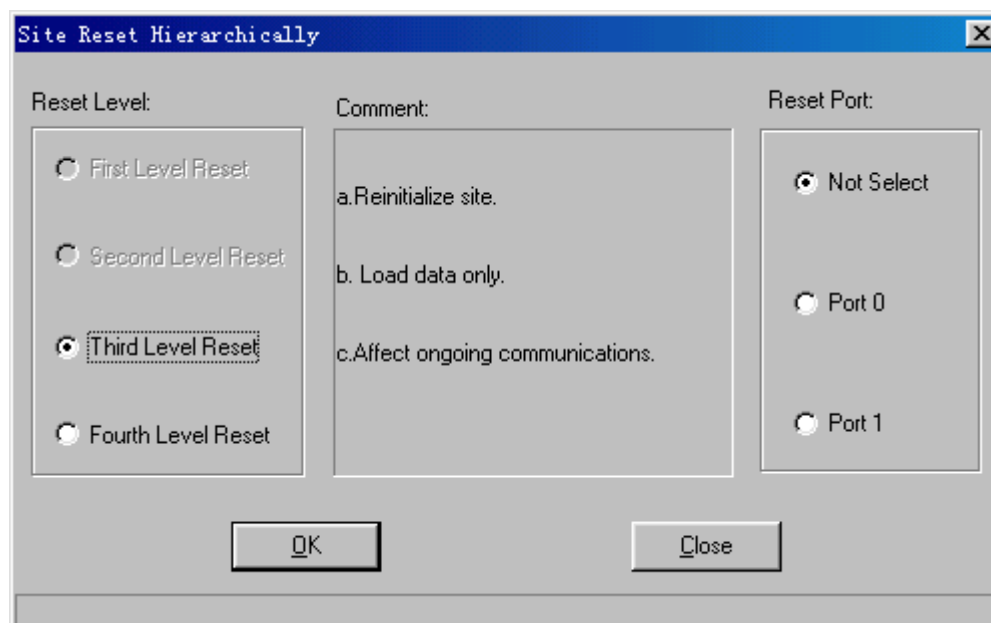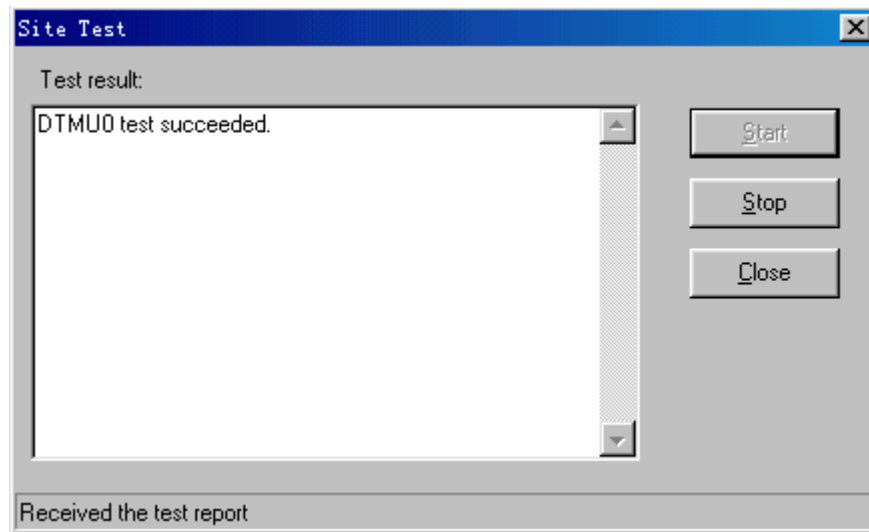You have logged in to the BTS through the Site Maintenance Terminal.

Procedure

Step 1 In the left pane of the **Site Maintenance Terminal System** window, select **Site**. In the right pane of the window, double-click **Site Test**.
The **Site Test** dialog box is displayed.

Step 2 Click **Start**. The result is displayed at the bottom of the **Site Test** dialog box, as shown in **Figure 5-3**.

Figure 5-3 Site Test dialog box

----**End**

5.4 Testing Transport Performance

This function is performed to test whether the transmission links are normal through an E1 loopback test and a timeslot loopback test.

Prerequisite

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

Context

Table 5-2 lists the description of the parameter configuration.

Table 5-2 Parameters in the Transport Performance Test dialog box

Parameter Name	Meaning	Value Range
Select TMU	The user can perform a selection based on an test object.	Active TMU, active/standby TMU, slave TMU1, and slave TMU2
Port No.	The port is selected according to the port that the E1 connects to	Port 0–port 7
Test duration	Enter the duration according to the loopback mode.	Recommended value: multiples of 10 minutes (default value: one minute)

Parameter Name	Meaning	Value Range
E1 Loopback	During an E1 loopback test, the OML is broken. You can stop the loopback test in advance by resetting the BTS. After the test is complete, the system automatically releases the loop and resets the BTS.	Test all the 32 timeslots (0–31) by default.
Timeslot Loopback	Only one timeslot can be tested once. The OML timeslots cannot be tested. In addition, only port 0 and port 1 on each DTMU can be tested. During a timeslot loopback test, the tested timeslots are unavailable. After the test is complete, the BTS cannot be reset. You can stop the loopback test in advance by clicking **Stop**. After the test is complete, the system automatically releases the loop and the tested timeslots become available. You can click **Stop** to stop the test or wait for the completion of the test duration. The timeslots in the self-loop test are recovered to be normal.	-

Procedure

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

The **Transport Performance Test** dialog box is displayed.

Step 2 In the **Select TMU** area, select a TMU. In the **Port No.** area, select a port number. In the **Loop-back Mode** area, select a loopback mode. In the **Test Duration** area, enter the test duration.

Step 3 Click **Start**.

The **Warning** dialog box is displayed.

Step 4 Click **OK**. The result is displayed on the status bar, as shown in **Figure 5-4**.

Figure 5-4 Transport Performance Test dialog box
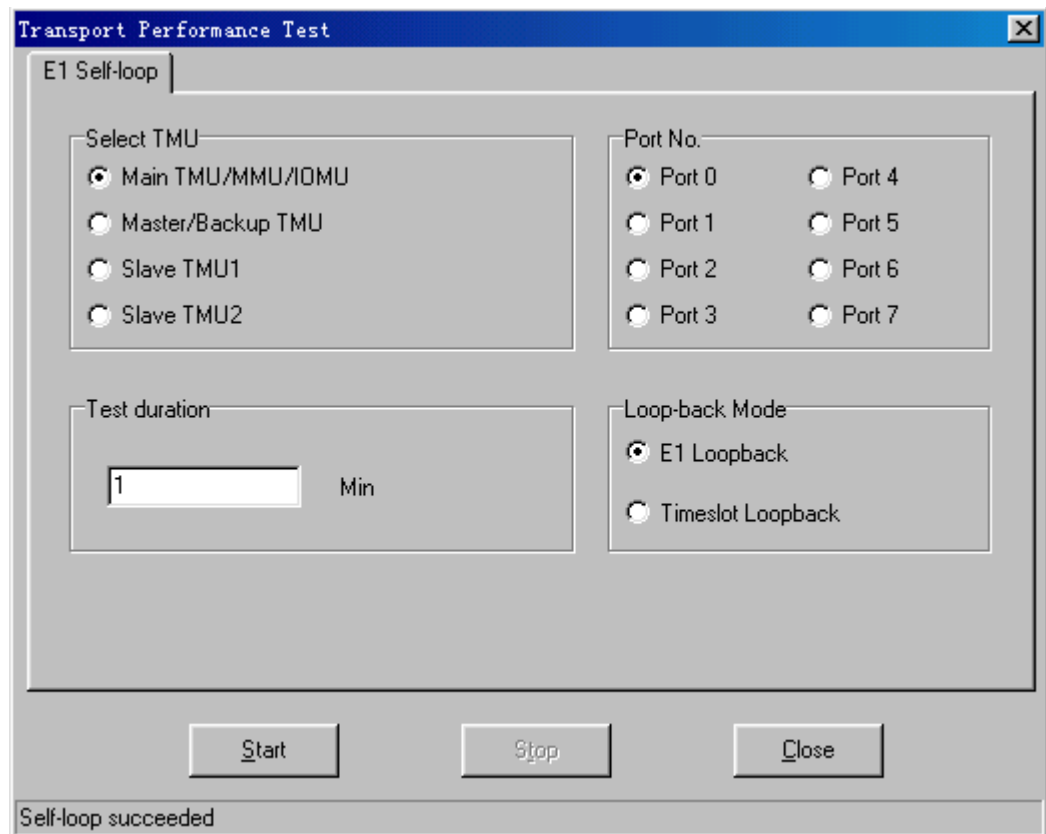
----End

5.5 Viewing Site Alarm Delay Time

This function is performed to view the site alarm delay time.

Prerequisite

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

Context

Some alarms that do not affect services are reported frequently in a short time, and then disappear quickly. Therefore, many alarms are generated and the fault alarms cannot be detected in time. By the setting of an appropriate alarm delay time, some alarms that are generated and recovered frequently in a short time can be prevented from being reported in a large quantity.

Procedure

Step 1 In the left pane of the **Site Maintenance Terminal System** window, select **Site**. In the right pane of the window, double-click **Site Alarm Delay Time Query**.

The **Query Warn Delay Time** dialog box is displayed.

Step 2 Click **Query**. The result is displayed in the **Query Warn Delay Time** dialog box, as shown in **Figure 5-5**.

Figure 5-5 Viewing site alarm delay time

☊ **NOTE**

> You can configure a specific alarm delay time through the LMT at the BSC side.

----End

5.6 Monitoring Site Environment

This function is performed to monitor and manage the environment parameters in a site. By performing this function, you can view the current temperature and humidity, set the temperature and humidity threshold, and perform the relay operation (control the state of the relay on the DEMU). The BTS can run normally in a secure and suitable site environment. You can also clear a robbery alarm or a smoke alarm and disable an EAC alarm.

Prerequisite

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

Context

Table 5-3 lists the description of the parameter configuration.

Table 5-3 Parameters in the Environment Monitor dialog box

Parameter Name	Meaning	Value Range
Clear Robbery Alarm	Clear an infrared alarm and a door status alarm of the DEMU.	-
Set Temperature and Humidity Threshold	Set the upper and lower thresholds of temperature and humidity. Based on the thresholds, the alarm box reports a temperature alarm and a humidity alarm.	-
Relay Operation	Control the state of the relay on the DEMU. The relay is used to start or close the refrigeration equipment, heating equipment, dehumidification equipment, fire-extinguishing equipment, and anti-theft equipment.	-
Disable the EAC Alarm	Disable the reporting of alarms in a short time. When the related personnel performs the maintenance of the equipment, by selecting the **Disable the EAC Alarm** option, the reporting of alarms can be disabled for ten minutes. After ten minutes, the alarms can be reported. If the maintenance of the equipment takes more than ten minutes, select this option again.	-
Get Current Temperature and Humidity	View the temperature and humidity of the current environment.	-
Clear Smoke Alarm	Clear alarms generated by smoke.	-

Procedure

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

The **Environment Monitor** dialog box is displayed, as shown in **Figure 5-6**.

Figure 5-6 Environment monitoring
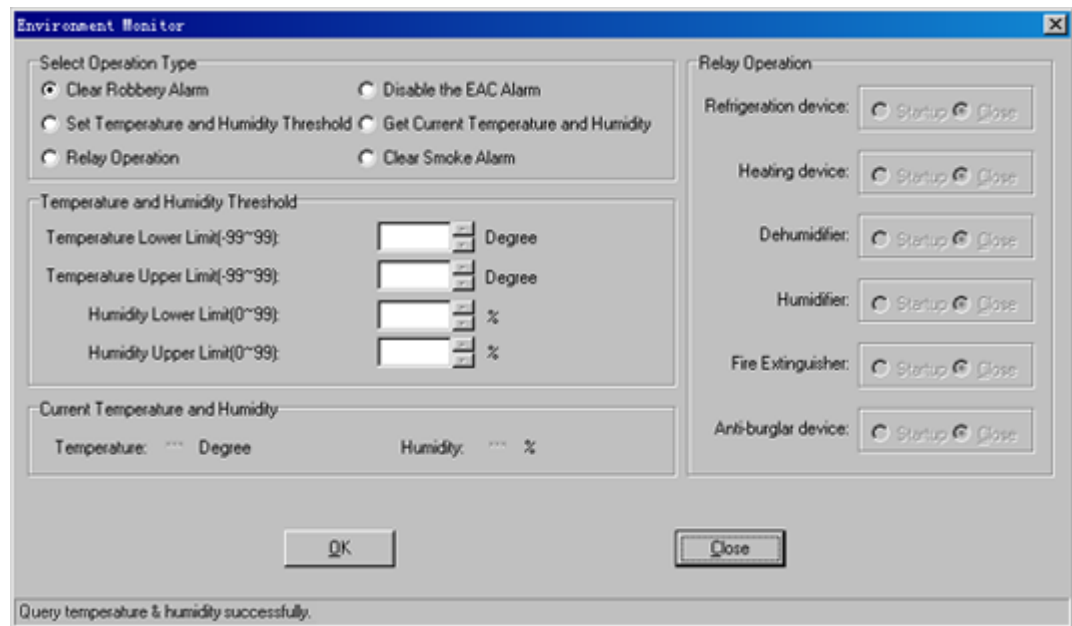
Step 2 Perform the following operations in the **Select Operation Type** area:

Select...	Then...
Clear Robbery Alarm	Go to **Step 3**.
Set Temperature and Humidity Threshold	In the **Temperature and Humidity Threshold** area, set the threshold. Then, go to **Step 3**.
Relay Operation	In the **Relay Operation** area, set the related option to start or stop the equipment. Then, go to **Step 3**.
Disable the EAC Alarm	Go to **Step 3**.
Get Current Temperature and Humidity	Go to **Step 3**.
Clear Smoke Alarm	Go to **Step 3**.

Step 3 Click **OK**.

----End

5.7 Testing RF Performance

The function is performed to test the RF specifications. The specifications of the receiver consist of the receiver sensitivity, GSM static L1 (first level) function, and the block test. The specifications of the transmitter consist of modulation spectrum, handover spectrum, modulation accuracy, and spurious emission.

Prerequisite

- You have logged in to the BTS through the Site Maintenance Terminal.
- The test device, such as a base station integrated tester, has been connected with the TX port on the DTRU.

Context

A base station integrated tester is required to test the RF specifications. Pay attention to the following points before the test:

- Before the test, you need to reset the configured RC by clicking **User-define Message**.
  - If E1 cables are connected, after the configured RC is reset, you can observe the indicators on the DTRU to check whether the DTRU runs normally. If the DTRU runs normally, you can perform the test.
  - If E1 cables are not connected, after the configured RC is reset, if the LAPD alarm is displayed on the status bar, the DTRU runs normally. Then, you can perform the test.
- In the **Frequency Hopping Mode** list box, select **Baseband hopping** or **RF hopping**. Click **Frequency hopping setup** to set the specific frequency hopping parameters.
- When testing the specifications of transmitter, you can select the modulation mode of the channel by clicking **Channel Modulation**.
- According to the configuration modes of the DTRU and the DDPU on the BTS, in the **DTRU Channel Configuration** dialog box, specify **Mode**, **Transmitter Channel**, and **Receiver Channel**.
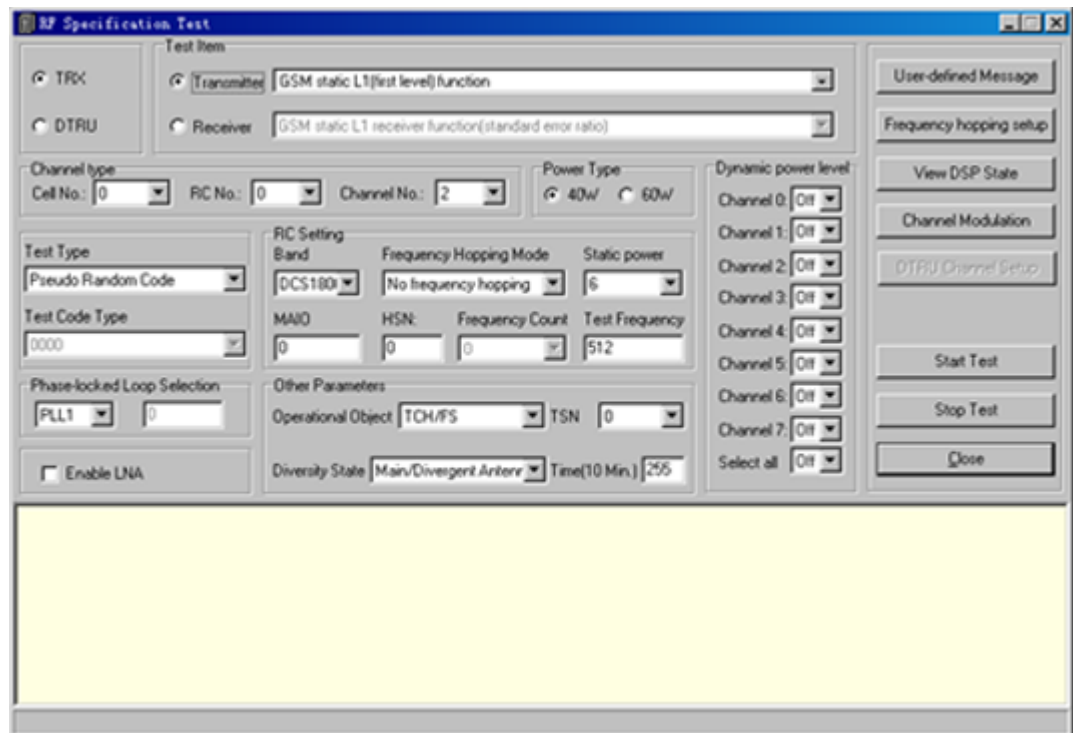
Procedure

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

The **Warning** dialog box is displayed.

Step 2 Click **OK**.

The **RF Specification Test** dialog box is displayed, as shown in **Figure 5-7**.

Figure 5-7 RF specification test

Step 3 Select **DTRU**. In the **Channel Type** area, select **Cell No.** and **RC No.**, and then click **User-define Message**.

- If E1 cables are connected, you can observe the indicators on the DTRU to check whether the DTRU runs normally. If the DTRU runs normally, you can perform the test.

- If E1 cables are not connected and if the LAPD alarm is displayed on the status bar, the DTRU runs normally.

Step 4 In the **Test Item** area, select **Transmitter** or **Receiver**. Then, select the specific specifications of transmitter and receiver to be tested.

- If the **Transmitter** option is selected, you can select the modulation mode of the channel by clicking **Channel Modulation**.

- If the **Receiver** option is selected, you need not set **Channel Modulation**.

Step 5 Select other items to be tested.

- In the **Frequency Hopping Mode** list box, if you select **No frequency hopping**, you need not set **Frequency hopping setup**.

- In the **Frequency Hopping Mode** list box, select **Baseband hopping** or **RF hopping**. Click **Frequency hopping setup** to set the specific frequency hopping parameters.

Step 6 Click **Start Test**.

The result is displayed on the test device.

----End

5.8 Viewing Ring Topology Parameters

This function is performed to view the ring topology parameters, including the working direction of a site in the ring topology (Port 0 is forward link and port 1 is reverse link.) and the indication

of auto rotate in the ring topology. If auto rotate is permitted, the result consists of the **Waiting Time Before Rotate** and the **Try Rotating Duration Time**.

Prerequisite

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

Context

If the result is **Auto Rotate Permission**, the working direction of the site in ring topology can be automatically rotated. The system displays the waiting time before rotate and the try rotating duration time. The data is configured through the Data Configuration System at the BSC side.

If the result is **Auto Rotate Not Permitted**, the working direction of the site in ring topology is unchanged. At this moment, the **Waiting Time Before Rotate** and the **Try Rotating Duration Time** are insignificant. The displayed time is 65535 seconds.

Procedure

In the left pane of the **Site Maintenance Terminal System** window, select **Site**. In the right pane of the window, double-click **Ring Topology Parameter Query**.

The **Ring Topology Parameter Query** dialog box is displayed, as shown in **Figure 5-8**.

Figure 5-8 Viewing ring topology parameters
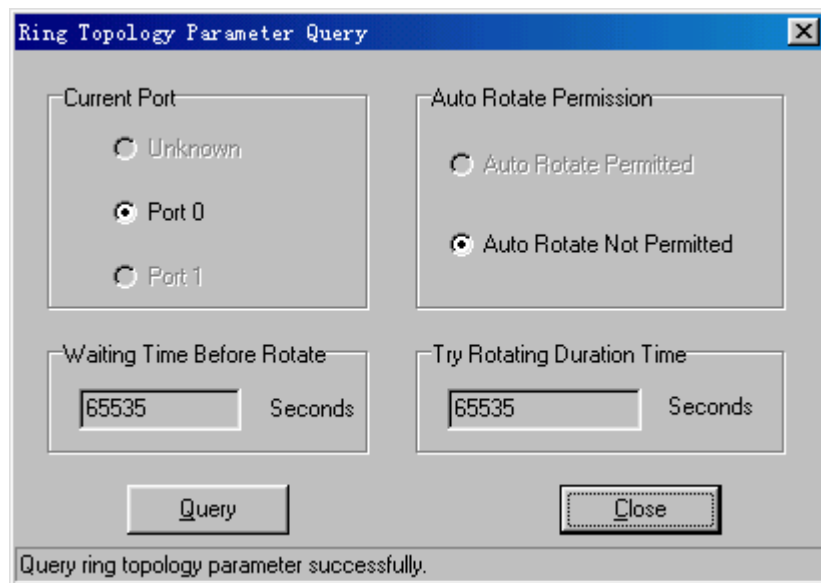
> **NOTE**
>
> if the **Ring Topology Parameter Query** dialog box is open for some time, click **Query** to refresh the dialog box.

----End

5.9 Viewing Bar Codes

This function is performed to view the bar codes of the configured boards in the current site.

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Prerequisite

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

Context

The bar codes are the basic information of the boards and identify the manufacturing information of the boards. When multiple boards are faulty, you can learn the states of the boards in batch production by viewing the bar codes. Through the Remote Maintenance Terminal System, you can view the bar codes of all the sites. Through the Site Maintenance Terminal System, you can view the bar codes of the connected sites.

- The bar code is the ASCII code.

- The bar codes of only the configured boards can be viewed.

- The boards that support reporting bar codes consist of the DTMU, the DTRU, the DDPU, the NFCB, and the DEMU.

Procedure

In the left pane of the **Site Maintenance Terminal System** window, select **Site**. In the right pane of the window, doublet-click **Bar Code Query**.

The **Bar Code Query** dialog box is displayed, as shown in **Figure 5-9**.

Figure 5-9 Viewing bar codes
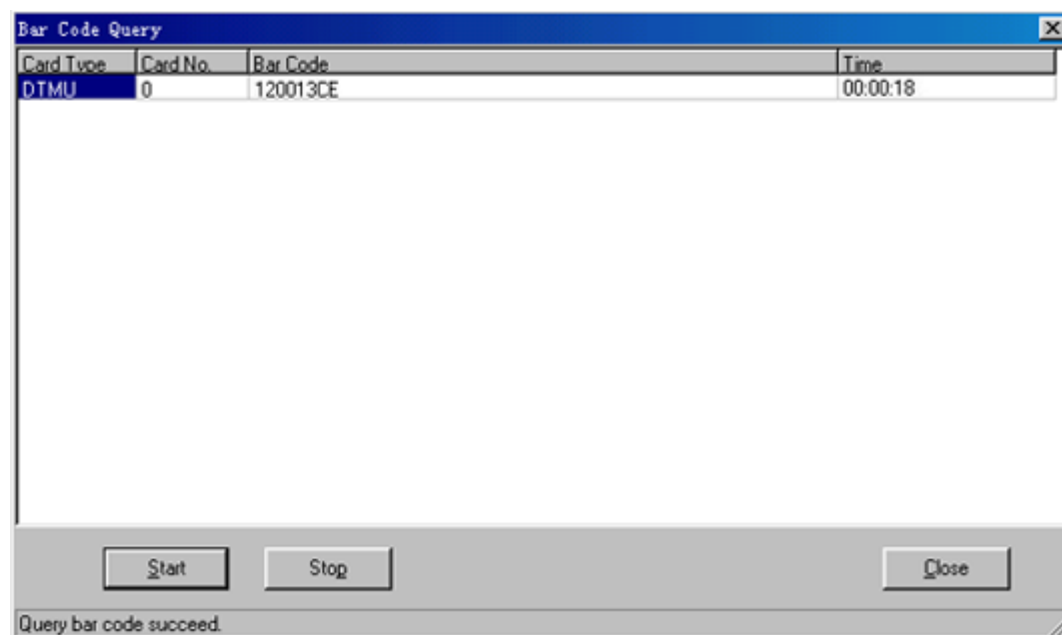
📖 **NOTE**

If the **Bar Code Query** dialog box is open for some time, click **Start** to refresh the dialog box.

----End