Technical Bulletin

March 2002

Implementing Music Choice Format Changes in the DBDS

Overview

Introduction

Music Choice is a 24-hour music service that provides commercial-free music to more than 50 cable TV channels for listeners of all ages and interests. The current Music Choice service displays a blue screen that lists the name of the album, artist, and the title of the music playing.

Music Choice has changed its format to create a more engaging and interactive relationship with subscribers. The new service is called Music Choice Interactive. Music Choice Interactive displays still video images that provide information about the album and song playing. In addition, Music Choice Interactive displays advertisements, entertainment news, shopping information, and consumer opinion polls.

The new service adds low bit-rate MPEG-2 video still components to over 40 of the 53 digital audio channels. This addition of the video components has increased the required session bandwidth for the service, a factor that may also impact multiplexing rates. For additional information, see the **Music Choice Set Up Requirements** section, next in this technical bulletin.

Purpose

This technical bulletin describes the process for setting up your Music Choice Interactive service. More specifically, this technical bulletin provides instructions for verifying the session settings, tearing down sessions, and restarting sessions. This technical bulletin also provides instructions for modifying the Service Application Manager (SAM) configuration to use the correct service application that displays video for the new Music Choice Interactive service.

Note: The previous Music Choice service application was **music**, and the new Music Choice Interactive service application is **watchtv**.

Audience

This technical bulletin is written for operators of Scientific-Atlanta's digital cable television systems who use the Scientific-Atlanta Resident Application. Scientific-Atlanta field service and on-site engineers who help system operators manage and troubleshoot their systems may also find the information in this technical bulletin useful.

Related Documents

Refer to the *Grooming Broadband Integrated Gateway (BIG) Installation and Operation Guide*, part number 593508, for information on configuring the Scientific-Atlanta Grooming BIG.

System Release Compatibility

The procedures in this technical bulletin are for systems operating at System Release (SR) 1.2.9 and SR 1.4 or later.

In This Technical Bulletin

This technical bulletin contains the following topics.

Document Version

This is the first release of this technical bulletin.

Music Choice Set Up Requirements

Introduction

When setting up the new Music Choice Interactive service, you must have the appropriate firmware installed on your headend. You must also ensure that the appropriate Digital Network Control System (DNCS) session bandwidth and the SAM service universal resource locator (URL) are configured for the new service.

This section describes the firmware and DNCS configuration requirements for displaying the new music service on the Music Choice channels.

Also included in this section is the description of the impact on the DHCT when tuned to a channel carrying the new Music Choice Interactive service.

Firmware Requirements

To ensure proper operation of the new audio/video service, system operators must ensure that all multiplexer devices such as the Grooming BIG, BitMizer, Cherry Picker, or RateMux have the correct software version installed.

In the event that you transport the Music Choice stream to the Quadrature Amplitude Modulator (QAM) through a multiplexing device such as a Grooming BIG, BitMizer, Cherry Picker, RateMux, or Big Band BMR, you must confirm that the device is configured to carry the full 13.5 MB stream. Due to the complexity of these configurations, Scientific-Atlanta recommends that you contact the vendor of the device you are using to obtain the proper reconfiguration procedures.

You must also allocate the appropriate session bandwidth on all the new music channels to accommodate 0.3 Mbps per stream, for a total of 13.5 Mbps for all streams.

When configuring the service on the DNCS, you must choose the correct service application on the SAM configuration so that the service displays the screens properly.

The following table provides the minimum software requirements for each device and who to contact for upgrades.

Device Name	Required Software Version	Contact for Upgrade
Terayon Cherry Picker	2.02.C	• For Scientific-Atlanta headends, contact Terayon • For Motorola headends, contact Motorola
Cisco RateMux	2.6	Cisco
Big Band BMR 100	2.2	Big Band

DNCS Configuration Requirements

With most systems already providing the Music Choice service, this technical bulletin does provide instructions for adding or configuring service sources and source definitions for Music Choice. However, system operators must check the sessions for their Music Choice service to ensure that the sessions are set to the required data rate. It is likely that with the new Music Choice Interactive service, the sessions are set to a data rate lower than required. This technical bulletin provides instructions for checking and modifying session settings on the systems.

In addition, system operators must also check the SAM service configuration to ensure it is set at the appropriate URL to display the new Music Choice service. Instructions on how to **Modify the SAM Service Configuration** are included later in this technical bulletin.

Note: The process for checking session bandwidth varies for systems operating at SR 1.2.9 and SR 1.4 or later. This technical bulletin describes the process for checking and modifying the session on each system version separately.

Impact on DHCT Function

Test results of several Music Choice data streams indicate that when a subscriber tunes to a Music Choice channel, the DHCT may display a black screen without audio for up to 8 seconds. After this delay, a Music Choice background appears with the title, track, and artist information accompanying the corresponding audio content. Although considered normal, Scientific-Atlanta and Music Choice are investigating ways to eliminate this DHCT behavior.

Note: The images that appear on the screen change frequently to prevent screen burn-in.

Verify Session Settings

Introduction

The required session bandwidth for the new Music Choice format is 300,000 bps or 0.3 Mbps. Each QAM or MPEG source must carry the service data at the required bandwidth. When verifying session settings, you must first determine the session IDs of all source definitions for the Music Choice sources. After determining the session IDs for the source definitions, you use the session IDs to verify that the sessions are set for the required bandwidth. This section provides instructions for determining the session IDs for the source definitions and verifying the session settings for each session ID.

Determining Session IDs

Complete these steps to determine the session IDs for each Music Choice source definition.

Use the **Worksheet** in the back of this technical bulletin to record the session IDs.

Important: Repeat these steps for each Music Choice source.

1. On the DNCS tab of the DNCS Administrative console, click the **System Provisioning** tab.

2. Click **Source**.

   Result: The Source List window opens.

3. Select a Music Choice source as shown in the following example.

Continued on next page

Verify Session Settings, Continued

4. From the File menu, choose **Source Definitions**.

    Result: The Source Definition List window opens and displays the source name.
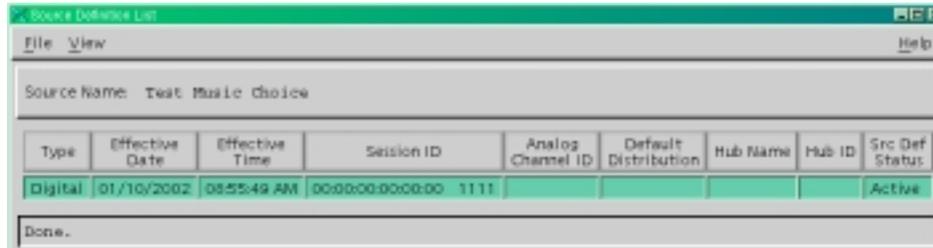
5. Click the **Session ID** column to sort the source definitions by Session ID.

6. On the **Worksheet** at the end of this technical bulletin, write down the unique Session ID number only for the Music Choice source.

7. From the File menu, choose **Close** to exit the Source Definition List window and return to the Source List window.

8. Repeat steps 3 to 7 for all Music Choice sources.

9. From the File menu, choose **Close** to exit the Source List window.

Verify Session Settings, Continued

Verifying Session Settings

After determining the session IDs, your next step is to verify the session settings to ensure that the bandwidth for the QAM modulator or MPEG source carrying the service data is set at the required bandwidth of 300000 bps or 0.3 Mbps.

Use the **Worksheet** in the back of this technical bulletin to record the bandwidth rate for the sessions you are verifying.

Complete these steps to verify the session settings.

1. On the DNCS tab of the DNCS Administrative Console, click the **Utilities** tab.

2. Click **Session List**.

    Result: The Session List window opens.

Session ID		Type	State	VASP Name	QAM Name	DHCT MAC Address	Start Time
00:00:00:00:00:00	2	Continuous Feed	Active	Broadcast File System	BFSQAM		03/12/2001 10:07:48
00:00:00:00:00:00	4	Continuous Feed	Active	Broadcast File System	BFSQAM		03/23/2001 13:15:29
00:00:00:00:00:00	6	Continuous Feed	Active	Broadcast File System	BFSQAM		03/23/2001 13:15:59
00:00:00:00:00:00	8	Continuous Feed	Active	Broadcast File System	BFSQAM		03/23/2001 13:15:59
00:00:00:00:00:00	10	Continuous Feed	Active	Broadcast File System	BFSQAM		03/23/2001 13:15:59
00:00:00:00:00:00	12	Continuous Feed	Active	Broadcast File System	BFSQAM		03/23/2001 13:16:29
00:00:00:00:00:00	14	Continuous Feed	Active	Broadcast File System	BFSQAM		03/23/2001 13:16:29
00:00:00:00:00:00	16	Continuous Feed	Active	Broadcast File System	BFSQAM		03/23/2001 13:16:29
00:00:00:00:00:00	18	Continuous Feed	Active	Broadcast File System	BFSQAM		03/23/2001 13:16:59
00:00:00:00:00:00	20	Continuous Feed	Active	Broadcast File System	BFSQAM		03/23/2001 13:16:59

Session List — Number of Sessions Displayed: 30   Number of Active Sessions: 30

3. Scroll through the list and select the session ID number you recorded earlier.

4. From the File menu, select **Show Details**.

   Result: The Session Details window opens.
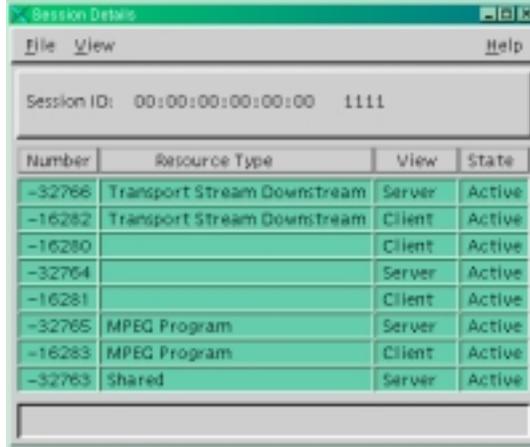
5. In the Resource Type column, double-click the **Transport Stream Downstream** row that also displays "Server" in the View column.

   Result: The Transport Stream Downstream window opens and displays the session bandwidth.
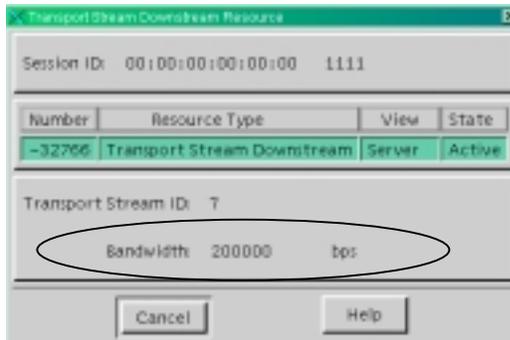
6. Does the Bandwidth field display 300000 bps?

   • If **yes,** click **Cancel** to return to the Session Details window and go to step 7.

   • If **no**, record the session ID and bandwidth for this session ID on the worksheet; click **Cancel** to return to the Session Details window; and then go to step 7.

7. From the File menu, choose **Close** to exit the Session Details window and return to the Session List window.

8. Repeat steps 2 to 7 for any other session IDs that you want to verify.

Verify Session Settings, Continued

9. Do you have any session settings to correct?

   - If **yes**, go to **Correct Session Settings**, next in this technical bulletin.
   - If **no**, go to step 10.

10. From the File menu, choose **Close** to exit the Session List window.

11. Your next step is to modify the SAM service settings. Go to **Modify the SAM Service Configuration**, later in this technical bulletin.

Correct Session Settings

Introduction

When you discover an incorrect bandwidth for a session, you must correct the session settings by completing the following tasks:

1. Identify (or locate) the session MPEG program number and QAM name

2. Tear down the session

3. Restart the session

Tearing down and restarting sessions is done differently for systems operating at SR 1.2.9 and SR 1.4 or later. This section provides separate instructions for tearing down and restarting sessions on systems operating these system releases.

Locating the Session MPEG Program Number and QAM Name

The first step in correcting your session settings is to locate the session MPEG program number and the QAM name.

Note: Use the **Worksheet** in the back of this technical bulletin to record the MPEG program number and QAM name for the session you want to correct.

Complete these steps to identify or locate the session MPEG program number and QAM name.

1. On the Session List window, select the row with the session ID number for the session you want to correct.

2. From the File menu Select **Show Details**.

   Result: The Session Details window opens.

3. On the Session Details window, double-click the **MPEG Program** row that also displays "Server" in the View column.

   Result: The MPEG Program Resource window opens and displays the MPEG program number.
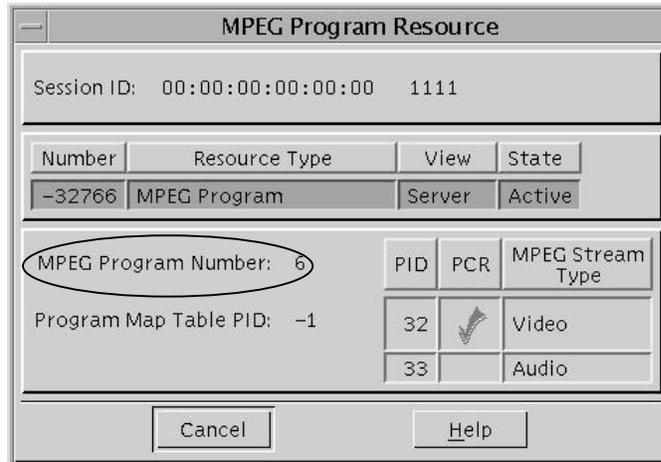
4. Write down the MPEG program number on the worksheet.

5. Click **Cancel** to return to the Session Details window.

6. From the File menu, choose **Close** to exit the Session Details window and return to the Session List window.

7. Write down the QAM name of the session on the worksheet.

8. Repeat Steps 1 through 7 to locate the MPEG program numbers and QAM names of all the sessions that you want to correct.

9. Your next step is to tear down the session. Go to **Tearing Down Sessions for SR 1.2.9**, next in this section.

Correct Session Settings, Continued

Tearing Down Sessions for SR 1.2.9

After locating the session MPEG program number and QAM name, your next step to is to tear down the session.

For instructions on tearing down and restarting sessions on a system operating at SR 1.4 or later, go to **Tearing Down and Restarting Sessions for SR 1.4 or Later**, later in this section.

Note: Your service will be interrupted during the process of tearing down the session.

Complete these steps to tear down the sessions of a Music Choice source on a system operating at SR 1.2.9.

1. On the Session List window, select the session(s) that you want to tear down.

2. From the File menu, choose **Teardown**.

   Result: The Teardown Session window opens.
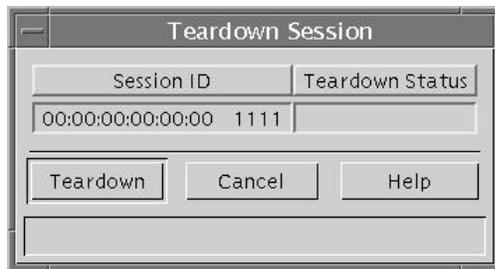
3. Click **Teardown**.

   Result: When the tear down process is complete, the Cancel button changes to Close.

4. Click **Close** to return to the Session List window.

5. From the File menu, choose **Close** to exit the Session List window.

6. Your next step is to restart the session. Go to **Restarting Sessions for SR 1.2.9**, next in this section.

# Correct Session Settings, Continued

Restarting Sessions for SR 1.2.9

After you tear down the session, the next step is to restart it. Use the information you wrote down on the **Worksheet** to restart the session.

Complete these steps to restart a session on a system operating at SR 1.2.9.

1. On the System Provisioning tab of the DNCS Administrative Console, click **Session**.

   Result: The Set Up CF Session window opens.
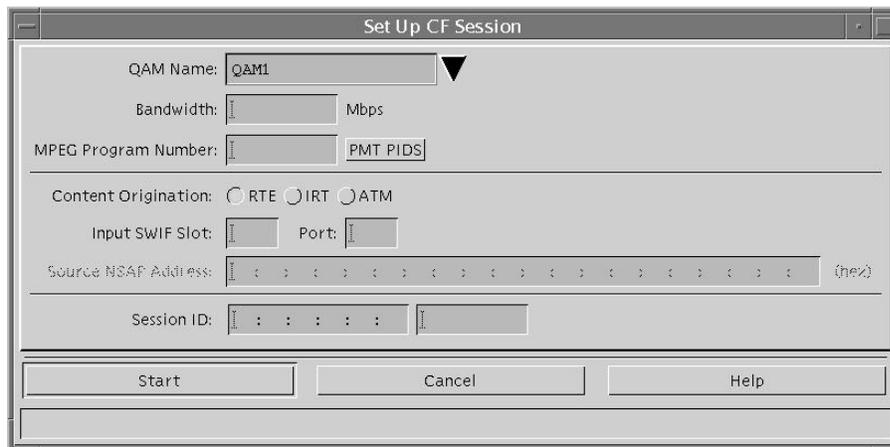
2. In the QAM Name field, click the arrow and select the QAM name you wrote down on the worksheet for the session you want to restart.

3. In the Bandwidth field, type **0.3**.

4. In the MPEG Program Number field, type the MPEG program number you wrote down on your worksheet for the session you want to restart.

5. For Content Origination field, choose an option that specifies the device from which the service content originates.

   Note: Typically, the Music Choice source uses an IRT.

6. If you chose RTE in step 5, type the Input SWIF slot number, and Port number in their respective fields. Otherwise, go to step 7.

7. In the session ID field, type the session ID for the session you want to restart.

8. Click **Start**.

   Result: The message **Session Started** appears in the status bar at the bottom of the window.

9. Click **Cancel** to close the Set Up CF Session window.

10. Your next step is to verify and modify the SAM service settings. Go to **Modify the SAM Service Configuration**, later in this technical bulletin.

Correct Session Settings, Continued

Tearing Down and Restarting Sessions for SR 1.4 or Later

Complete the following steps to tear down and restart the sessions on a system operating at SR 1.4 or later.
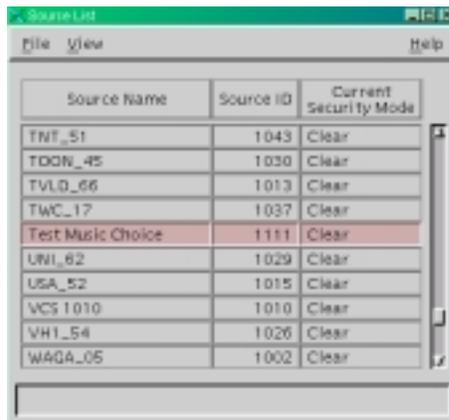
Notes:

- Your service will be interrupted during the process of tearing down the session.

- Repeat these steps for each Music Choice source whose sessions need correction.

1. On the DNCS tab of the DNCS Administrative console, click the **System Provisioning** tab.

2. Click **Source**.

   Result: The Source List window opens.

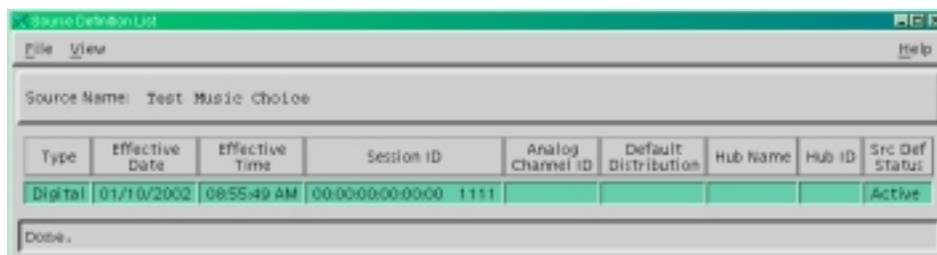3. Select the Music Choice source with the session settings you want to correct.

4. From the File menu, choose **Source Definitions**.

   Result: The Source Definition List window opens listing the source definition(s) for the particular source.

   Important: For sources with multiple source definitions, you must complete steps 5 through 12 for each source definition.

5. On the Source Definition List window, select the source definition.

6. From the File menu, choose **Open**.

   Result: The Set Up Source Definition window opens and displays information about the source definition, session, and MPEG.
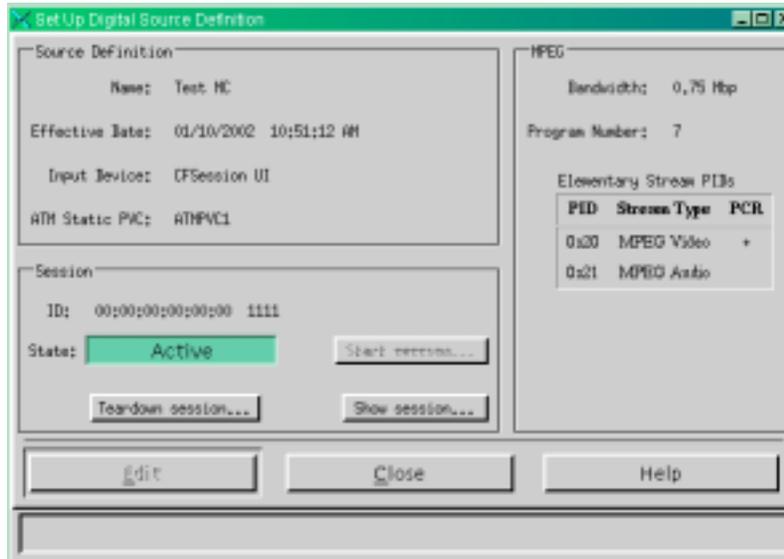
7. In the MPEG area, choose one of the following options:
   - If the MPEG area appears blank, go to **Verify Session Settings**, earlier in this technical bulletin.
   - If the bandwidth displayed is 0.3 Mbp, click **Close** to return to the Source Definition List window; and then go to step 14.
   - If the bandwidth displayed is not 0.3 Mbp, go to step 8.
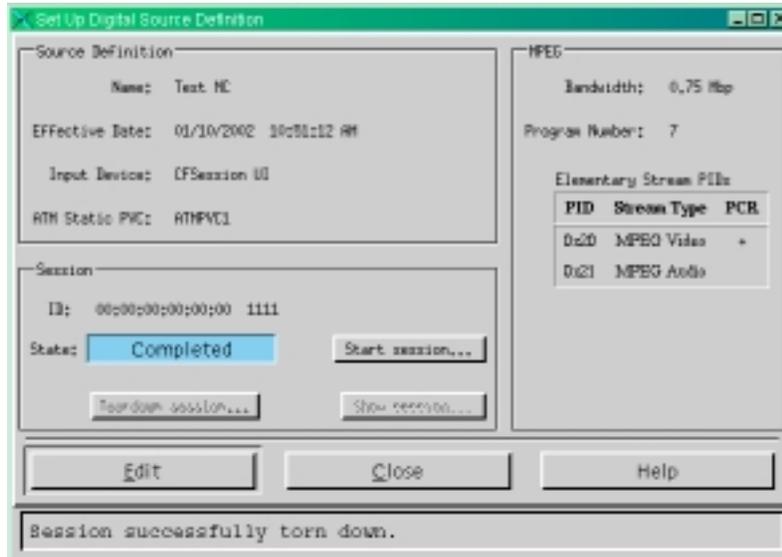
8. In the Session area, click **Teardown session**.

   Result: A prompt appears with the question **Are you sure you want to teardown this active session**?
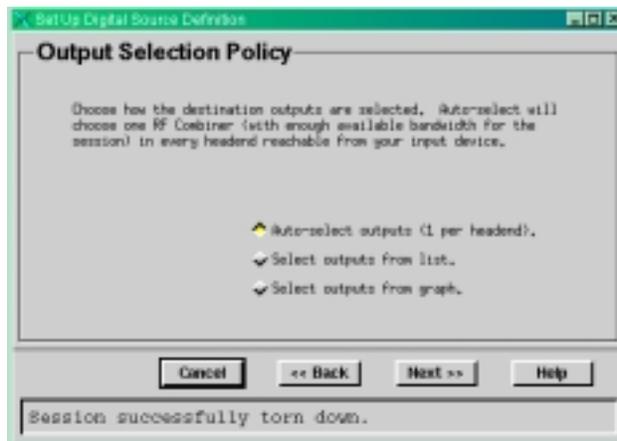
9. Click **Yes**.

    Result: The message **Session successfully torn down** appears in the status bar at the bottom of the window, and the State changes to **Completed**.

10. Click **Start session**.

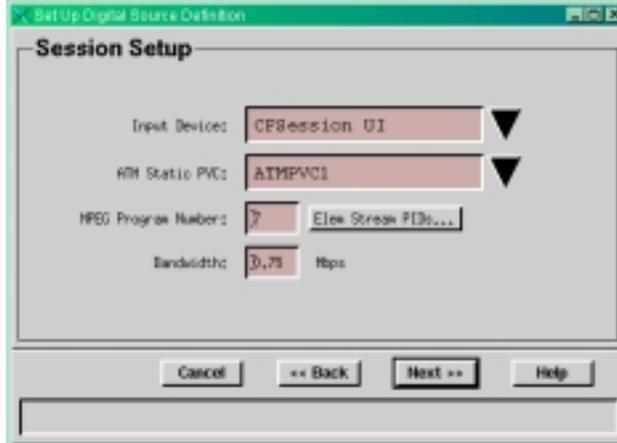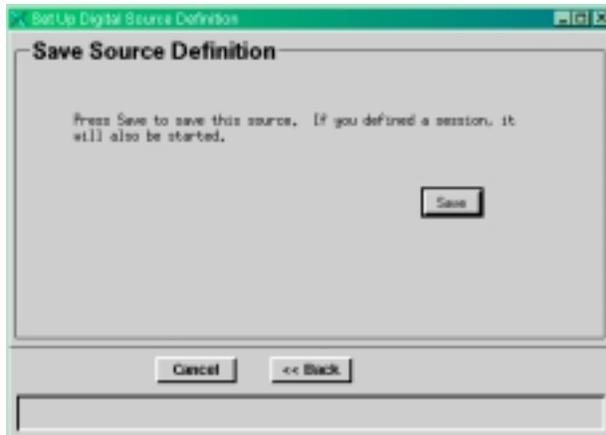   **Result:** The Output Selection Policy window opens.

11.   Click **Back**.

      Result: The Session SetUp window opens.

12.   In the Bandwidth field, change the bandwidth to **0.3,** then click **Next** until the Save Source Definition window appears.

13.   Click **Save**.

      Result: The system saves the source definition, starts the session, and returns to the Source Definition List window.

14.   From the File menu, choose **Close** to exit the Source Definition List window and return to the Source List window.

15.   Repeat steps 3 to 14 for each Music Choice source.

16.   Your next step is to verify and modify the SAM service settings. Go to **Modify the SAM Service Configuration**, next in this technical bulletin.

Modify the SAM Service Configuration

Introduction

Because this document assumes that most systems are already operating the Music Choice service, it does not describe how to register the Music Choice service with the SAM. However, this section does provide instructions for modifying your SAM service configuration to ensure that you use the correct service application URL to display your new Music Choice Interactive service on the Music Choice channels.
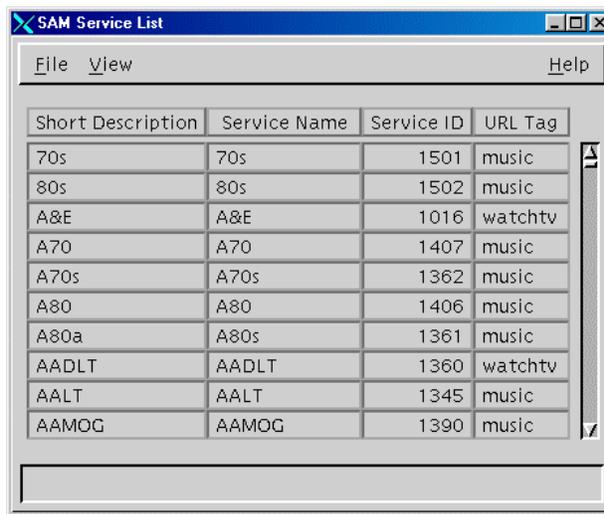
The assigned service application URL used for the new Music Choice Interactive service is **watchtv**. If your SAM service is not properly configured, a DHCT that is tuned to the Music Choice stream cannot associate the appropriate application to display the service to subscribers.

Modifying the SAM Service Configuration

Complete these steps to modify your SAM Service configurations.

1. On the DNCS Administrative Console, click the **Application Interface Modules** tab.

2. Click **SAM Service**.

    Result: The SAM Service List window opens.

3. Highlight the Music Choice service you want to modify.

4. From the File menu, choose **Open**.

    Result: The Set Up SAM Service window opens. The following example shows that the application URL used is **bfs://resapp/music**.
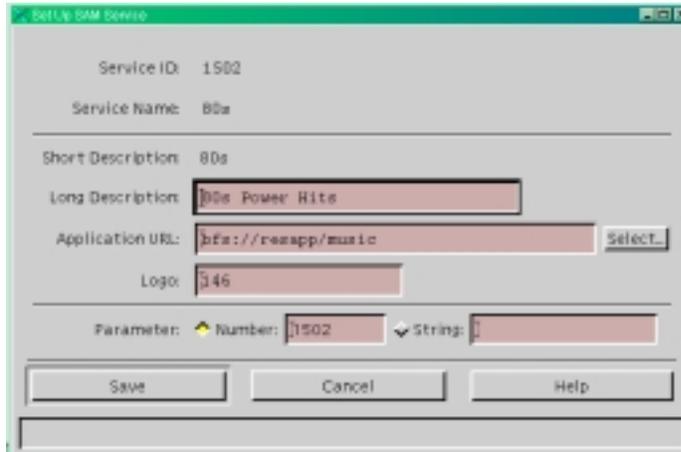
5. Click the **Select** button next to the Application URL field to select the appropriate URL for the new Music choice service.

    Result: The Application URL Selection window opens.
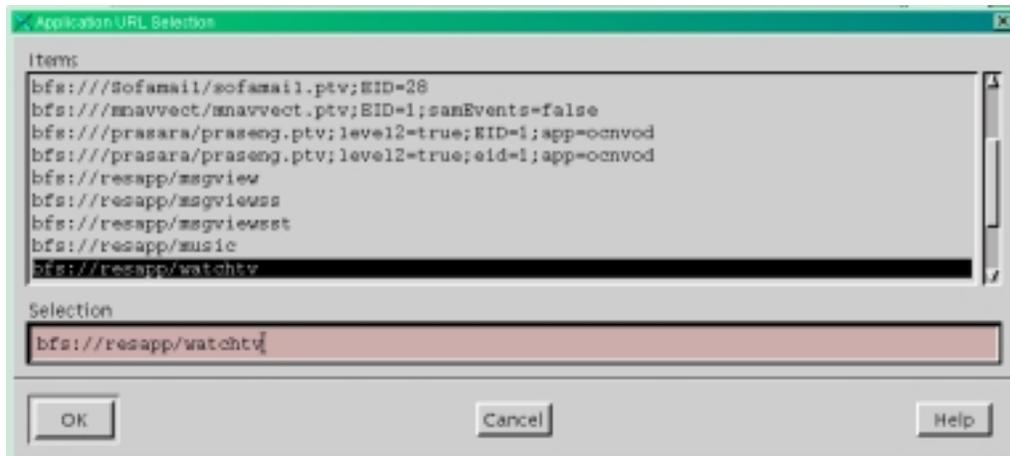
6. Scroll through the list and select **bfs://resapp/watchtv.**

7. Click **OK**.

    Result: The application URL appears in the Application URL field.

Modify the SAM Service Configuration, Continued

8. Click **Save**.

   Result: The system saves the service information in the DNCS database and closes the Set Up SAM Service window. The SAM Service List window updates to include the new service with its system-assigned service ID and application URL tag.

9. Repeat steps 3 through 8 for each of the Music Choice services.

10. From the File menu, select **Close** to close the SAM Service List window and to return to the DNCS Administrative Console.

Worksheet

Introduction

This worksheet is provided to facilitate the process as you verify the sessions of your Music Choice sources.

Use this worksheet to record the session IDs, MPEG program numbers, QAM names, and bandwidths of any sessions that you want to tear down and/or restart.

Session ID	MPEG Program Number	QAM Name	Bandwidth OK?

For Information

If You Have Questions

If you have technical questions, call SciCare™ Broadband Services for assistance. Follow the menu options to speak with a service engineer.

Use the following table to find the center in your area.

Region	Assistance Centers	Telephone and Fax Numbers	
North America South America Central America	Atlanta, Georgia United States	• For Technical Support for *digital* products only, call: Toll-free Local Fax	1-800-283-2636 770-236-2200 770-236-2488
		• For Technical Support for all products *other than* digital, call: Toll-free Local Fax	1-800-722-2009 770-236-6900 770-236-5748
		• For *customer service* questions, call: Toll-free Local Fax	1-800-722-2009 770-236-6900 770-236-5748
Europe	England	Telephone Fax	+44-(0)-1923-271420 +44-(0)-1923-269018
Asia-Pacific	Hong Kong, China	Telephone Fax	011-852-2522-5059 011-852-2522-5624
Australia	Sydney, Australia	Telephone Fax	011-6129-452-3388 011-6129-451-4432
Japan	Tokyo, Japan	Telephone Fax	011-81-3-5322-2067 011-81-3-5322-1311

Additional Information

To view or order additional technical publications, access your company's extranet site. For accessing instructions, contact your Scientific-Atlanta marketing manager. Check your extranet site often as the information is updated frequently.

Want **MORE**? www.scientificatlanta.com

Now **TALK** to someone

United States
  Scientific-Atlanta, Inc., 5030 Sugarloaf Parkway, Box 465447, Lawrenceville, GA 30042; Tel: 770.236.5000
Europe
  Scientific-Atlanta Europe GmbH, Westerbachstrasse 28, 61476 Kronberg, Germany; Tel: 49.6173.928.000
Asia-Pacific
  Scientific-Atlanta (Singapore) Pte. Ltd., 1 Claymore Drive, #08-11 Orchard Towers, Singapore 229594; Tel: 65.733.4314
Latin America
  Scientific-Atlanta Argentina S.A., Carlos Pelligrini 1149, Piso 11⁰, Capital Federal C1009ABW, Buenos Aires, Argentina; Tel: 54.11.4325.2800