



Correct PSIP Operation

Overview

Introduction

Program and System Information Protocol (PSIP) is a protocol of system information (SI) that is delivered inband with MPEG content. Cable-ready digital devices (Hosts) use PSIP to receive navigation and guide information for unencrypted digital channels. The September 2003 FCC Report and Order requires that PSIP be carried inband to enable PSIP navigation for Hosts that do not have a PowerKEY® CableCARD™ module, or point-of-deployment (POD) module, installed.

PSIP support is only required for unencrypted content; PSIP is not used to carry SI for encrypted content. Cable-ready Hosts equipped with a PowerKEY CableCARD module can decrypt content and are required to receive out-of-band (OOB) SI data in order to navigate and display encrypted MPEG content.

Purpose

This document addresses concerns of system operators regarding the proper system configuration for the generation of complete PSIP data. According to the system release supported on the headend, PSIP must be defined in either the Host Default Channel Map or the Default Channel Map of the Digital Network Control System (DNCS). When PSIP is not defined properly, the Host may be unable to associate an unencrypted digital source with a channel number.

Audience

This document is written for system operators of the Digital Broadband Delivery System (DBDS). Support engineers who help system operators manage and troubleshoot the DBDS may also find this information to be useful.

Document Version

This is the second release of this document.

PSIP and the Channel Maps

PSIP data is generated by the DNCS for Cisco QAM modulators, that are not in pass-through mode, for any content that is not encrypted. Depending upon the DNCS system release, either the Default Channel Map or Host Default Channel Map is used to associate a channel number with the content in the PSIP data. If these channel maps are not populated, depending upon the system release, the DNCS will either use zero (0) for the channel number, or not supply the PSIP data at all.

The following information describes how PSIP must be defined in the various system releases.

System Release 4.0 and Earlier

For System Release (SR) 4.0 and earlier, a clear digital program must be saved in the Default Channel Map in order for its PSIP data to be complete. Clear digital programs not saved in the Default Channel Map will have their minor channel number and short name values set to zero (0). The Host may attempt to process whatever PSIP data it has, but results are unpredictable.

Note: The Host Default Channel Map does not yet exist in SR 4.0 and earlier.

System Release 4.2

For SR 4.2, both the Host Default Channel Map and the Default Channel Map exist. A clear digital program must be saved in the Host Default Channel Map in order for its PSIP data to be complete. Clear digital programs not saved in the Host Default Channel Map will have their minor channel number and short name values set to zero (0). The Host may attempt to process whatever PSIP data it has, but results are unpredictable.

Notes:

- From this point forward, the Default Channel Map is not used to define PSIP data.
- After an upgrade to SR 4.2 or later, from a system release earlier than SR 4.2, the Host Default Channel Map appears empty and must be populated by the system operator in order for PSIP to be configured properly.

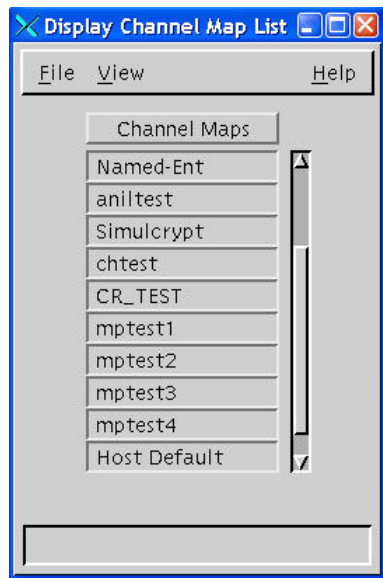
System Release 4.3

A clear digital program must be saved in the Host Default Channel Map in order for any of its PSIP data to be created. If a clear digital program is not saved in the Host Default Channel Map, the PSIP data for that clear digital program is not created at all.

Saving an Unencrypted Digital Source to a Channel Map

The following instructions describe how to save an unencrypted digital source to a channel map. For purposes of illustration, this procedure uses the Host Default Channel Map. System operators at sites that support software earlier than SR 4.2 will need to save unencrypted digital sources to the Default Channel Map.

- 1 From the DNCS Administrative Console, select the **Application Interface Modules** tab.
- 2 Click **Channel Maps**. The Display Channel Map List window opens.



- 3 Scroll down the list, if necessary, and double-click on **Host Default**. The Set Up Display Channel Map window opens.

Note: For sites running software earlier than SR 4.2, double-click **Default**, instead.
- 4 Scroll down the **Available Services** column and identify the unencrypted digital source that you want to add to the Host Default Channel Map.
- 5 Select the **Channel Slot** into which you want to place the unencrypted digital source. The Channel Slot becomes highlighted.
- 6 Select the unencrypted digital source in the **Available Services** column and then click **Add**. The unencrypted digital source moves from the Available Services column to the Channel Slot column.
- 7 Repeat steps 3 through 6 for any additional unencrypted digital sources that you want to place into the Host Default Channel Map.
- 8 Click **Save** on the Set Up Display Channel Map window.
- 9 Close the Set Up Display Channel Map window and the Display Channel Map List window.



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August 2012 Printed in USA

Part Number 4024313 Rev B