This document outlines how to configure the Ultrix Routed Tally Mode to associate a tally state for an Ultrix router source to ultimately reach the on-air path of a Ross Carbonite switcher.

**Overview**

Consider an Ultrix feeding signals to a Ross Carbonite switcher; the switcher can assert tally messages based on which signals are contributing to those outputs, but the switcher has no knowledge of how Ultrix has routed its inputs to the outputs.

The **Routed Tally Mode** associates a tally with a specific Ultrix destination. Ultrix knows which input is routed to that output, and so can assert tally indicators wherever the input signal is displayed in an UltriScape PiP.

In **Figure 1**, Tally ID 3 is associated with Ultrix destination 11. When the switcher asserts Tally ID 3 (based on its own configuration rules), Ultrix looks up the input connected to destination 11 (source 19 - Cam 1). UltriScape will then assert the same tally data as received wherever source 19 - Cam 1 is displayed. Cam 2 has a different tally asserted because Cam 2 (source 20) is routed to destination 12 which is associated with Tally ID 4.
Application

In the following application, the Routed Tally Mode would enable the PIP tally to accurately reflect the tally state when a different source is routed to a Carbonite switcher input:

1. The Carbonite generates a tally (e.g. program or preview) with an assigned Carbonite Tally ID.
2. The Ultrix looks up which router source is currently connected to the router destination associated with that Carbonite Tally ID.
3. The Ultrix then determines if that source is currently displayed on any Ultriscape PIPs, and if so, asserts the appropriate Ultriscape PiP tally.

Setting up the Routed Tally Mode

Before configuring the Routed Tally Mode on the Ultrix router, you must first set up communications between the Carbonite switcher and the Ultrix router.

Carbonite Requirements

This section outlines how to configure the Carbonite to communicate with the Ultrix router UMD service using specific TSL UMD ethernet protocol settings.

To set up tally communications between Carbonite and the Ultrix UMD

1. On the Carbonite panel menu system, press `MENU > SYSTEM > NEXT > NEXT > Device Config`.
2. Press `Add`.
3. Use the `Slot` knob to select an ethernet connection (Slot #).
4. Use the `Type` knob to select `SerialTally`.
5. Press `NEXT`.
6. Use the `SubType` knob to select `TSLUMD_1.0`.
7. Press `NEXT`.
8. Enter the IP address of your Ultrix:
   a. Use the `Field` knob to select the segment of the IP address you want to edit.
   b. Use the `Value` knob to enter the IP address of your Ultrix.
10. Use the `Option` and `Value` knobs to complete the setup as outlined in the following table.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>Set to <strong>5727</strong> if you are using the default value that Ultrix requires for TSL V3.1 over TCP/IP communication. Set to <strong>4490</strong> for UDP communication.</td>
</tr>
<tr>
<td>Transport</td>
<td>Select <strong>TCP</strong> if the Port is set to 5727. Select <strong>UDP</strong> if the Port is set to 4490.</td>
</tr>
</tbody>
</table>

11. Press the `Option` knob and `Confirm` to add the Ultrix as a new device.
Ultrix Requirements

To configure the Ultrix router you will need to:

1. Set the switcher’s primary input number in the Tally column of the Destinations table of the router database.
2. Set the Tally mode to Routed.
3. Assign the Tally IDs to PiPs.

   This can be any ID as long as it is not used by your destinations that feed your Carbonite inputs. To make it simple, in the following example the user started at 201, this would be a recommended value that should not conflict with anything else.
4. Set the Tally mode to Normal for any Ultriscape PIP destination that is expected to show the UMD tally for sources that are also routed to a switcher source.

To specify the switcher's primary input number for a router destination

1. Double-click the Destinations node located under the Database node. The Destinations tab opens.
2. In the table of the Destinations tab, locate the Tally ID column.
3. Enter the switcher's primary input number for each required destination.
To set the Tally Mode to Routed
1. In the table of the Destinations tab, locate the Tally Mode column.
2. Select Routed for each required destination connected to the Carbonite switcher.

To assign the UltriScape PiP IDs
1. In the table of the Destinations tab, locate the first destination assigned to an UltriScape PiP.
2. In the Tally column of the first PiP destination, assign an ID of 201 (or any unique number).
3. Assign the remaining PiP IDs in numerical order.
To set the Tally Mode to Normal for the Ultriscope PiP destinations

1. In the table of the **Destinations** tab, locate the **Tally Mode** column.

2. Select **Normal** for each required PiP destination.

To configure the Ultriscope Tally bits assignments

1. Double-click the Ultrix router in the Basic Tree View of DashBoard.
2. Expand the UltriScape node.
3. Double-click the **Configuration** node.
   
   The **Layout Editor Settings** tab displays in the right side of the DashBoard window.

4. Select the **Tally Settings** sub-tab.
5. Locate the **Tally Lamp Color** area.
6. Set **Tally 0** to **Green**.
7. Set **Tally 1** to **Red**.