System Time in the RI

UTC Time

In standard cable deployments, the system UTC time used by an attached device is established by signaling available on the cable network. SCTE65 defines the System Time Table (STT) as the data format in which system time updates are provided to attached devices. The Open Cable tru2way Reference Implementation provides 2 options for establishing correct network time based on the setting of the following property in the **$OCAPROOT/bin /$OCAPTC/env/mpeenv.ini** file:

```
# Set to TRUE to enable parsing of the System Time Table. When STT
# parsing is enabled, the stack will handle the update of UTC time
# based on the STT.
# Set to FALSE to disable STT parsing. In this case the stack will
# completely rely on the implementation of mpeos_timeGetMillis()
# to return accurate network time. The native OS should not launch
# the stack until it has received its first network time update to
# prevent "jumps" in UTC time.
SITP.SI.STT.ENABLED=TRUE
```

.

UTC provided by the RI

When **SITP.SI.STT.ENABLED** is set to **TRUE**, the RI will set STT section filters, parse the STT, and update the system time returned to Java API calls. The RI implements its own "smoothing" algorithm to avoid large time jumps based on latency involved in the delivery of STT sections.

Device provides network time

When **SITP.SI.STT.ENABLED** is set to **FALSE**, the RI relies on the MPEOS port implementation of *mpeos_timeGetMillis()* to return accurate network time. For the Windows and Linux PC platforms, it relies on the system time provided by the underlying OS.

Time Zone and Daylight Savings

In order for Java to provide accurate "local time" representations to applications, the correct Time Zone and Daylight Savings time settings must be taken into consideration. The OCAP host specification indicates that these two pieces of information will be retrieved from the CableCARD generic feature resource defined in the OpenCable CableCARD Interface Specification 2.0 (CCIF) Sections 9.15.5.7.5 and 9.15.5.7.6. Only Version 2 of the Daylight Savings feature is supported by the RI.

For the PC Platform, the POD generic feature values are stored in **$RICOMMONROOT/resources/GpnvsDatabaseFile.xml**. This file is based on the XML formats exchanged between the CableCARD and the Host in the Digital Receiver Interface (DRI) specification. The two entries of concern are:

```
<Entry name="NV/Variable/time_zone"            flags="VRW"   value="/lw="/>
<Entry name="NV/Variable/daylight_savings"     flags="VRW"   value="Ajw4x2gQOgEtEA=="/>
```

The "value" attributes contain the Base64-encoded values of the raw byte formats defined in the CCIF specification for these two generic features. You can modify these values to specific time zone and daylight savings settings that are appropriate to your locale.