Profile SDK 5.1 Release Notes

These release notes assume that you understand basic Profile Video File Server and Profile XP Media Platform operations and that you are already familiar with the following resources:

- The *Profile Installation Manual* and the *Profile User Manual.* These manuals contain essential information on the installation and operation of your Profile video server.
- The *Profile XP Installation Guide*, *Profile XP System Guide*, and *Profile XP User Manual*, containing essential information on properly configuring a Profile XP Media Platform for your environment.
- The **Vdr Panel** application, which provides much of the API functionality. Playing and recording test clips from **Vdr Panel** can be a useful tool for the Profile developer.

In addition to these *Release Notes,* the following documentation is provided with this release:

- The *Profile Software Development Kit Reference Manual* which describes the complete Application Programming Interface (API). The *SDK Reference Manual* alphabetically lists all commands. The appendix to this manual lists the serial specifications by function with references to the equivalent API commands.
- The *Profile Software Development Kit User Manual* which offers a conceptual overview of the Profile programming model. The *SDK User Manual* reviews the eight command libraries included with this release and provides sample applications for programming your Profile.

Software version limitations

This Profile Software Development Kit documentation package applies *specifically* to Profile system software version **5.0**. Although you may use this documentation to help develop applications that run with earlier releases, keep in mind that not all features described here are supported on these earlier versions.

The table below should give you an idea of which feature-specific commands are supported for your software version. You may use the SDK--with these exceptions--to write applications for the following Profile system software versions.

Table 1: Feature support matrix

Profile software version	Media Area Network support	MPEG support	Fibre Channel support	DVCPRO (25 & 50) support
5.1	YES	YES	YES	YES (PVS 1100, SDTI In)
5.0	YES	YES	YES	YES (PVS 1100)
4.0	*NO*	YES	YES	*NO*
3.2	*NO*	*NO*	YES	YES PDR 400
2.5.x	*NO*	YES	YES	*NO*
Profile PRO Series 1.1.x	*NO*	YES	*NO*	*NO*

Note that DVCPRO support is available in version 3.X on the PDR 400 and 5.X on the PVS 1100 *only*. Do not implement any DVCPRO-specific features if you are developing applications to run on other versions. Also, be sure to use the appropriate SDK files, available on the Profile developer's FTP site, to develop applications for versions other than 5.X.

Additions and recent changes to the Profile SDK

The 4.0 release supports the Profile XP Media Platform only. The PVS 1000 introduces new hardware and software features unique to this product.

• Central Resource Management, which uses channels created in Configuration Manger to assign resources to applications.

• GPI support, allowing you to control events from an external triggering mechanism.

PdrExtensions allow you to store additional user data with a PDR Movie. These functions are supported in versions 2.5, 3.X, and 4.0.

New commands in the 5.1 SDK

The following commands are new to the 5.1 SDK. Refer to the *Profile Software Development Kit Reference Manual* and the *Profile Software Development Kit User Manual* for more information on these new functions.

• PdrFindFirstMediaUsage

• PdrFindNextMediaUsage

• VdrGetStateChangeLatency

Using other Win32 systems

All the new libraries are remotable. This means that an application can run on any connected Win32 system and communicate with one or more Profiles. The only requirement on the Profile side is that the **PortServer** application be running. Applications should run without change either locally or remotely from the Profile they are controlling; the only consideration is the additional communication time of the remote connection.

VDR Latency in the PVS 1100

Overview

The PVS 1100 incorporates a new video processor board that supports DVCPRO 25, DVCPRO 50, and MPEG-2 4:2:0 and 4:2:2 long GoP compression. This compression is accomplished with C-Cube codecs. These codecs exhibit several differences in behavior compared to previous codecs, encoders, and decoders used by Grass Valley. The most notable change introduced by the use of C-Cube based codec hardware is additional latency in the VDR system.

New VDR latency = 7 frames.

This is an increase of 6 frames from previous PVS/PDR products.

Impact

The latency is determined by the encoders and decoders in the system when it was started. A new API call, VdrGetStateChangeLatency, must be used to obtain the actual cue state change latency, expressed as a number of fields. This call is also available in the Profile serial protocol.

- The system latency value returned by VdrGetStateChangeLatency applies to the following API commands: VdrJog, VdrShuttle and VdrIdle, VdrCuePlay and VdrCueRecord. Thus, the states affected are: Jog play, Jog record, Shuttle play, Shuttle record, Cue play, Cue record, and Idle.

- The latest time that VdrShuttleAtGenTc and VdrStateEventAtGenTc can be issued must be the system latency plus one frame prior to the desired action time. Thus, these commands must be issued no later than 8 frames prior to the desired action time.

Please consult the *Profile SDK Reference Manual* for complete details on the use of these commands.

Command changes and workarounds

Some network transfer options from the Profile SDK are no longer supported for release 2.5 and above (local transfers still apply). These changes apply to the following commands:
- VfsCopySegment
- PdrCopyMovie

VfsCopySegment

The API call **VfsCopySegment** no longer supports network copies; this call, however, continues to support LOCAL copies.

The **VfsCopySegment** code is based on a proprietary Tektronix protocol called MTP that travels over Fibre Channel. Usage of **VfsCopySegment** with MTP required sending Fibre Channel frames with some extra "TAG" bits in the framing header. This forced the Fibre Channel driver on the receiving side to bypass normal IP protocols.

Under release 2.5 and beyond, we now support generic Fibre Channel headers to allow interoperability with other Fibre Channel vendors, including switch vendors. The MTP protocol is now obsolete.

PdrCopyMovie

PdrCopyMovie is not supported in Profile System Software version 5.0 or higher.

Workarounds

There are two approaches you can use. One method is to transfer the complex clip across the network and leave the result as a complex clip; this only transfers the usable data. This approach involves using the following API call:

```
XfrRequest(LOCAL_CONNECTION, pSrcUml, 1, pDstUml[0])
```

The second approach is to use two steps before transferring across the network. This would entail doing a copy segment locally then transferring the result across the network using the following API call:

```
PdrCopyMovie (LOCAL_CONNECTION,  pSrcMovieName, LOCAL_CONNECTION, pDestMovieName,
              PdrCopyRendered);
              XfrRequest(LOCAL_CONNECTION, pSrcUml, 1, pDstUml[0]);
```

Question mark (?) not allowed in clip names

You may not use the question mark character (?) in clip or complex movie names. The ? character is used to signal options to the UML when invoking streaming transfers of material.