PVRTune

Quick Start Guide for Android

Filename	:	PVRTune.Quick Start Guide for Android
Version	:	PowerVR SDK REL_18.1@5080009a External Issue
Issue Date	:	31 May 2018
Author	:	Imagination Technologies Limited

Contents

List of Figures

1. Introduction

1.1. Document Overview

The purpose of this document is to provide an overview of the fundamental steps required for running PVRTune on Android devices.

1.2. Software Overview

PVRTune is a performance analysis tool for the PowerVR series of graphics accelerators. It uses counters captured by the graphics hardware and driver software to provide real-time data on the performance of an application running on a PowerVR graphics core. PVRTune receives performance data from either PVRPerfServer or PVRHub application running on the target device. PVRTune is divided into two components, namely:

- **PVRPerfServer**: this is an application that runs on the PowerVR device. It retrieves the graphics core performance data and sends it over the network.
- **PVRTune GUI**: this is a graphics core profiling tool that runs on Linux, OS X or Windows computer. It connects to the device through PVRPerfServer and displays the graphics core performance data in a comprehensive way.

1.3. Prerequisites

The prerequisites to being able to use PVRTune on an Android device are as follows:

- The PowerVR Graphics SDK needs to be installed.
- The target device should have a PowerVR graphics core.

2. Installation and Profiling

2.1. Install PVRHub

PVRHub is the Android application used for PVRTune profiling and allows the installation of the PVRTrace Recording Libraries on a device. It can be installed using ADB:

```
adb install /<Path_to_PowerVR_SDK>/PVRHub/Android/PVRHub.apk
```

2.2. Click Android USB Device in PVRTune GUI

Launch PVRTune GUI from the PC on which PVRTune is installed (Figure 1). PVRTune will automatically broadcast servers on the subnet and list them in the area of the interface identified in Figure 1a. From PVRTune GUI, click the button labelled `Android USB device` (Figure 1b).

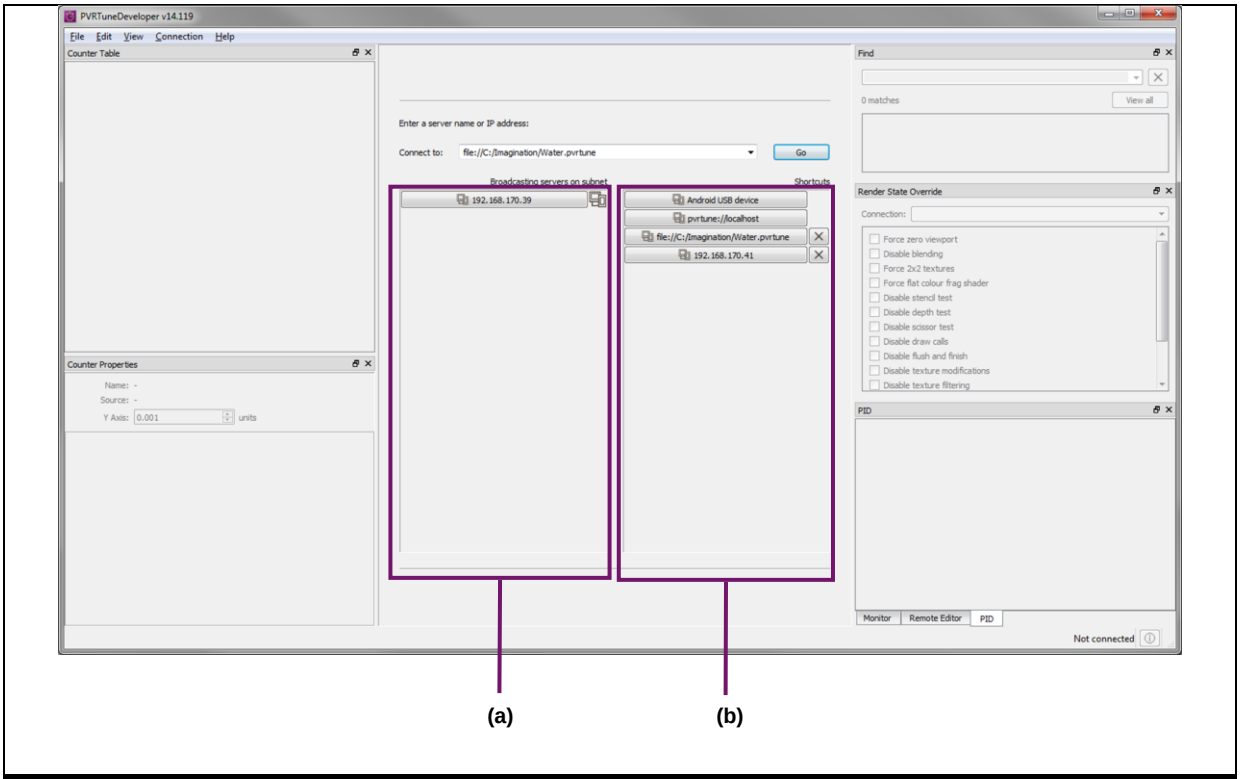

Figure 1. Launching PVRTune GUI

Note: If ADB is not in the path, then forward the data through ADB to connect with PVRPerfServer over USB instead of over Wi-Fi:

```
path/to/adb forward tcp:6520 tcp:6520
```

2.3. Start PVRTune Profile

To profile an application, PVRHub is started on the device and the option `Start PVRTune` is selected (Figure 2a). This starts PVRPerfServer in PVRHub. If the PVRTrace libraries are installed, PVRPerfServer is capable of sending software counter data, override the Render State and display OpenGL ES timing data, amongst others. For more information, see the “PVRTune User Manual”.

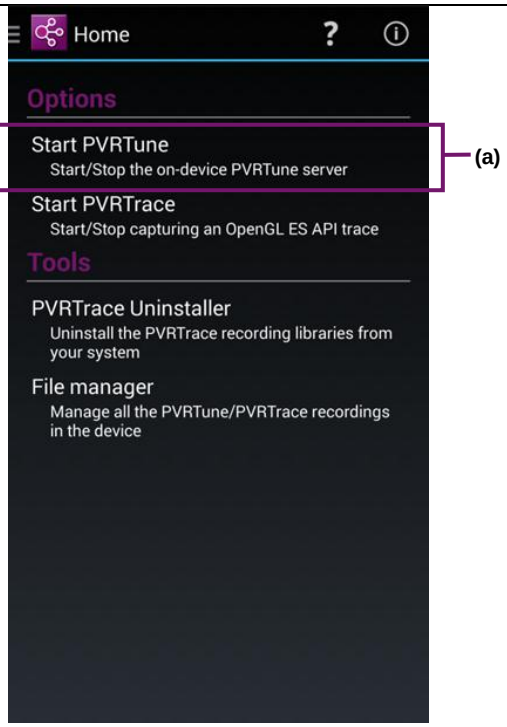

Figure 2. Start PVRTune Profile

Note: Various other options are available in PVRHub, with their corresponding explanatory notes given in PVRHub itself, as can be seen in Figure 2.

2.4. Launch an Application

The application to be profiled can then be launched, e.g., the Water demo in the PowerVR Graphics SDK (Figure 3).

Figure 3. Launching an application

2.5. Analyse Profiling Information

Use PVRTune GUI to view and analyse real-time profiling information. For more information about PVRTune GUI, consult the “PVRTune User Manual”.

3. Contact Details

For further support, visit our forum:
http://forum.imgtec.com

Or file a ticket in our support system:
https://pvrsupport.imgtec.com

To learn more about our PowerVR Graphics SDK and Insider programme, please visit:
http://www.powervrinsider.com

For general enquiries, please visit our website:
http://imgtec.com/corporate/contactus.asp