SAMPLE

Transcode with VQ (Windows Store)

1 Introduction

This sample demonstrates how to build the transcode pipeline using AMD's hardware-accelerated Media Foundation Transforms (MFTs) on Windows 8/8.1. This sample also demonstrates how to use AMD's Video Quality (VQ) filter to enhance the video quality in the transcoding pipeline.

2 Using the sample

2.1 Location

`$<installDirectory>\samples\mediaFoundation\transcodeVqWinStore\`

2.2 Contents

Package contents

Folder: `$<installDirectory>\samples\mediaFoundation\transcodeVqWinStore\`

File name	Description
`transcodeVqWinStore.sln`	Solution file for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`transcodeVqWinStore.vcxproj`	Project file for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`transcodeVqWinStore.vcxproj.filters`	The file with filter settings for the Transcoding with VQ Sample using Microsoft Windows 8 UI project
`Package.appxmanifest`	Contains information that describes properties for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`App.xaml`	The markup file for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`MainPage.xaml`	The markup file for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`App.xaml.cpp`	Source file for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`MainPage.xaml.cpp`	Source file for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`App.xaml.h`	Header file for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`MainPage.xaml.h`	Header file for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`pch.h`	Precompiled header files for the Transcoding with VQ Sample using Microsoft Windows 8 UI
`common.cpp`	Source file for VQ Helpers functionality
`common.h`	Header file for VQ Helpers functionality
`HardwareCheck.xaml`	Markup file for hardware checking
`HardwareCheck.xaml.cpp`	Source file for hardware checking
`HardwareCheck.xaml.h`	Header file for hardware checking
`BuildingCachePage.xaml`	Markup file for building cache pages

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File name	Description
BuildingCachePage.xaml.cpp	Source file for building cache
BuildingCachePage.xaml.h	Header file for building cache
transcodeVqWinStore_TemporaryKey.pfx	Personal Information Exchange file for storing the certificate and the public and private keys

Folder:
$<*installDirectory*>\samples\mediaFoundation\transcodeVqWinStore\Assets\

File name	Description
Logo.png	Resource file
SmallLogo.png	Resource file
SplashScreen.png	Resource file
StoreLogo.png	Resource file

Folder:
$<*installDirectory*>\samples\mediaFoundation\transcodeVqWinStore\Common\

File name	Description
StandardStyles.xaml	Resource file

Folder:
$<*installDirectory*>\samples\mediaFoundation\transcodeVqWinStore\docs\

File name	Description
MediaSDK_MFT_transcodeVqWinStore.pdf	Documentation

2.3 Compile

1. Ensure that the following tools and SDKs are present:
   - Microsoft Visual Studio 2012 on Windows 8/8.1
     If Windows Software Development Kit (SDK) is not installed, install it from http://msdn.microsoft.com/en-us/library/windows/desktop/hh852363.aspx.
2. Open the following solution file:
   <*installDirectory*>\samples\mediaFoundation\transcodeVqWinStore\transcodeVqWinStore.sln
3. Build the sample:
   - Using Microsoft Visual Studio 2012 Professional Edition, open the transcodeVqWinStore.sln solution file.

     The following project is available:
     transcodeVqWinStore.vcxproj, for building the transcoding application
   - To build the solution, select Build > Build Solution.
     The executable transcodeVqWinStore.exe is created in the following folder for 32-bit builds:
     <*installDirectory*>\samples\mediaFoundation\transcodeVqWinStore\

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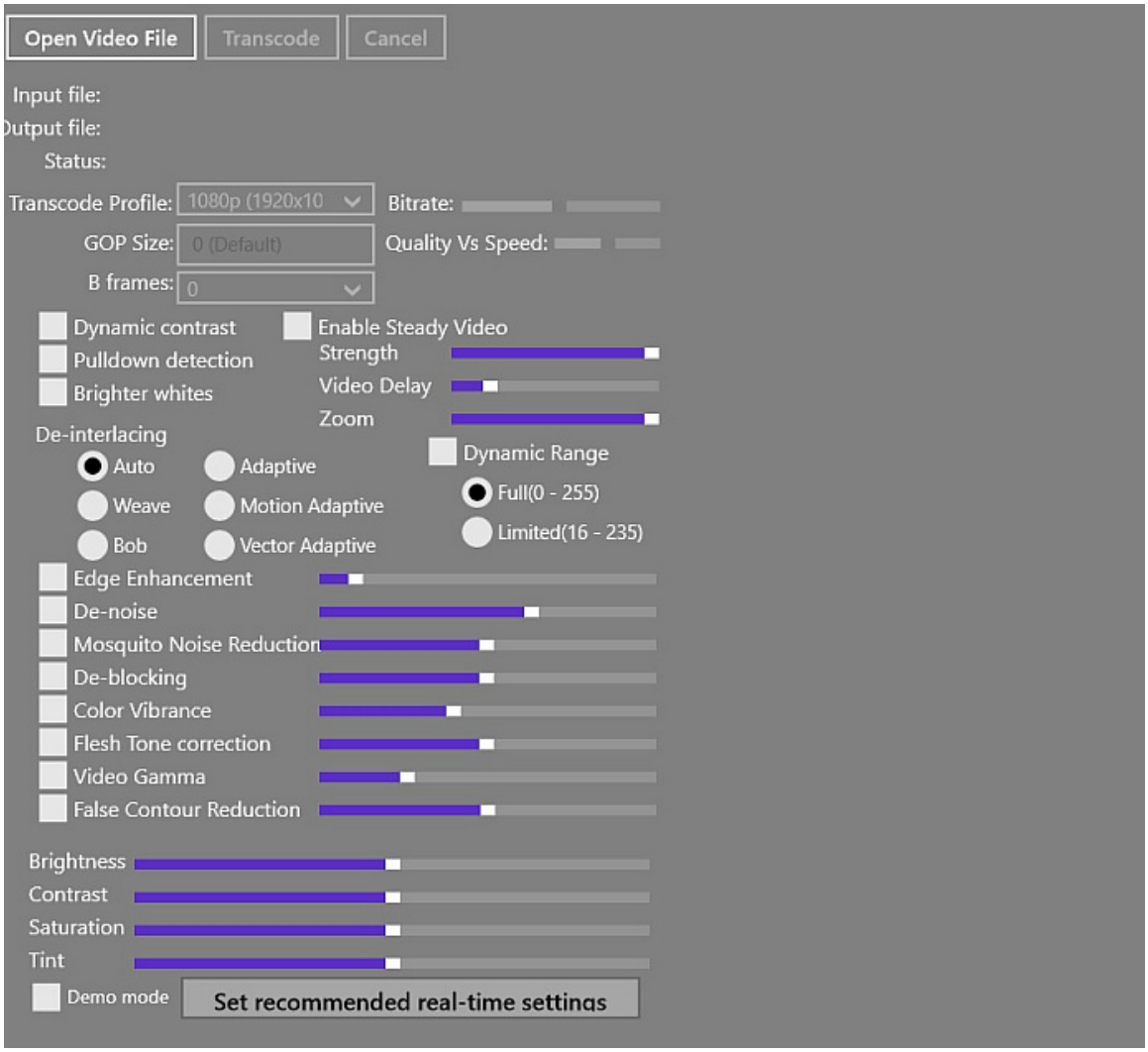
`Win32\Debug\TranscodeVqWinStore\`
The executable `transcodeVqWinStore.exe` is created in the following folder for 64-bit builds:
`<installDirectory>\samples\mediaFoundation\transcodeVqWinStore\x64\Debug\TranscodeVqWinStore\`

3 Run

The sample can be executed on a Windows 8/8.1 device using an AMD platform that includes the VCE and UVD hardware blocks. To deploy and run the sample, a developer license from Microsoft is required.

To run the sample, press Ctrl+F5.
The following screen is displayed.



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- `Open Video File`: Use this option to browse an input media file (for e.g. AVI, MP4, WMV, ASF, MPG, MPEG)
- `Transcode`: Use this option to start the transcoding of the input media file.
- `Input file`: The path of the input media file is displayed here.
- `Output file`: The path of the transcoded file is displayed here.
- `Status`: The running status of transcoding is displayed here.

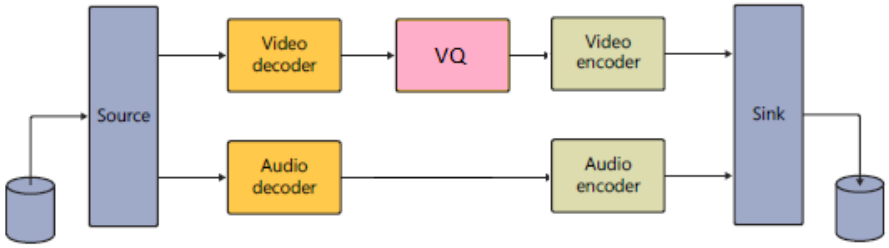
Before transcoding, you must set the appropriate `Resolution`, `Bitrate`, `GOP Size`, `Quality Vs Speed`, and `B frames` settings. Otherwise, the default values are used for transcoding. Similarly, you must set the appropriate VQ effects options. Otherwise, the default values are used for VQ effects.

The status of the input media file playback is displayed bottom right corner of the display. During transcoding, the playback is paused and continues after the transcoding is complete.

For additional information about using the Windows 8 UI, see the Windows 8 User Experience Guidelines.

4 Implementation Details

The sample implements the following transcode pipeline:



Note: The Video Quality filter is supported on only the Southern Islands (SI) and later GPU families. If a different platform/family is used, then the output of the decoder is directly connected to the renderer, bypassing the Video Quality filter. The VQ controls in the user interface are also disabled.

5 Supported formats

The following file formats are supported:

- Input file/container formats: .avi, .mp4, .wmv, .mpg, .mpeg, .asf
- Video decoders supported: H264, MPEG4 part II ,VC1
- Output file/container format .mp4
- Video encoder supported: H264

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6 Known limitations

The sample is currently supported on the following platforms:

- Windows 8
- Windows 8.1

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