SAMPLE

Video Edit using C++ AMP (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 write and use a custom MFT for converting video to gray scale using C++ AMP.

2 Using the sample

2.1 Location

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

2.2 Contents

Package contents

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

File name	Description
`videoEditAmpWinStore.sln`	Solution file for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`videoEditAmpWinStore.vcxproj`	Project file for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`videoEditAmpWinStore.vcxproj.filters`	The file with filter settings for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI project
`Package.appxmanifest`	Contains information that describes properties for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`App.xaml`	The markup file for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`MainPage.xaml`	The markup file for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`App.xaml.cpp`	Source file for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`MainPage.xaml.cpp`	Source file for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`App.xaml.h`	Header file for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`MainPage.xaml.h`	Header file for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`pch.h`	Precompiled header files for the Transcoding with C++ AMP resizer sample using Microsoft Windows 8 UI
`certification.xml`	The markup file required for Windows Application certification
`videoEditAmpWinStore_TemporaryKey.pfx`	Personal Information Exchange file for storing the certificate and the public and private keys

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

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

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

File name	Description
StandardStyles.xaml	Resource file

Folder:
$<*installDirectory*>\samples\mediaFoundation\videoEditAmpWinStore\ampTransform\build\

File name	Description
ampTransformExt.vcxproj	Project file for custom C++ Amp MFT
ampTransformExt.vcxproj.filters	The file with filter settings for the C++ Amp MFT project

Folder:
$<*installDirectory*>\samples\mediaFoundation\videoEditAmpWinStore\ampTransform\inc

File name	Description
AmpTransform.h	Header file for custom MFT class declaration
Common.h	Header file for common functions used in custom MFT
Transform.h	Header file for Transform functions used in custom MFT
CopyRshader.h	Header file generated from HLSL compute shader
CopyRGshader.h	Header file generated from HLSL compute shader

Folder:
$<*installDirectory*>\samples\mediaFoundation\videoEditAmpWinStore\ampTransform\src

File name	Description
AmpTransform.cpp	Contains the c++ Amp transform
AmpTransform.def	Def file for C++ Amp transform
AmpTransformExt.idl	Amp Interface definition file
Common.cpp	Contains common functions used in the custom Amp MFT
CopyRGshader.hlsl	HLSL file for Compute shader
CopyRshader.hlsl	HLSL file for Compute shader
dllmain.cpp	DLL functions
Transform.cpp	Contains c++ Amp code for converting input sample to gray scale

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

File name	Description
MediaSDK_MFT_videoEditAmpWinStore.pdf	Documentation

2.3 Compile

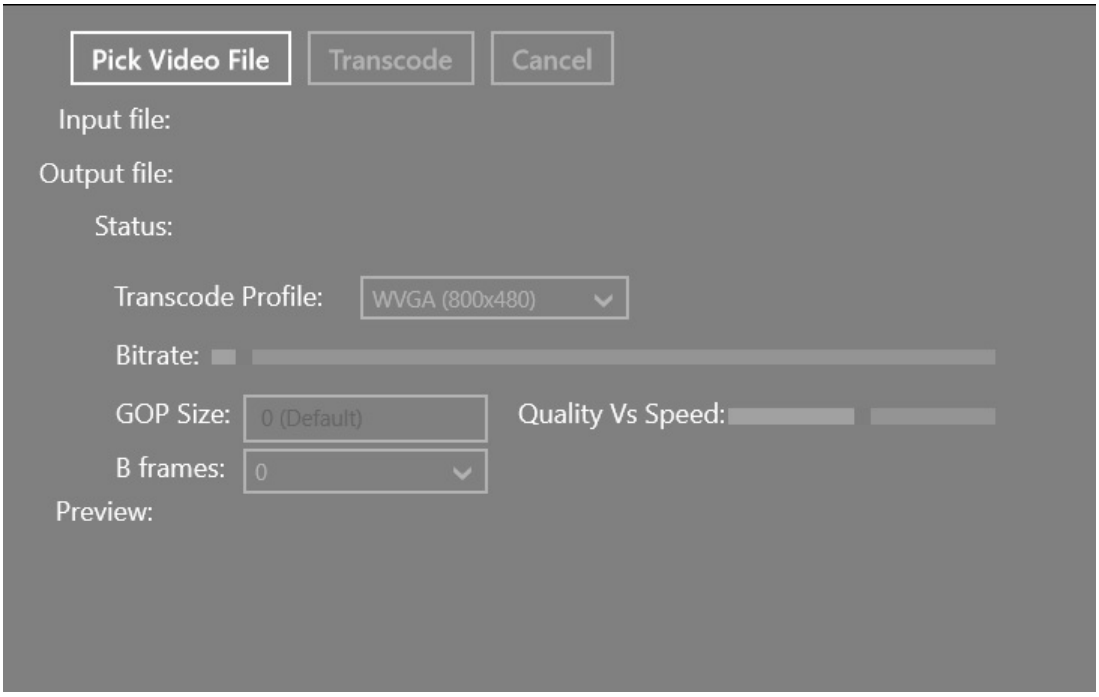
1. Ensure that the following tools and SDKs are present:
   - Microsoft Visual Studio 2012 on Windows 8/8.1
2. Open the following solution file:
   <*installDirectory*>\samples\mediaFoundation\videoEditAmpWinStore\videoEditAmpWinStore.sln
3. Build the sample:
   - Using Microsoft Visual Studio 2012 Professional Edition, open the videoEditAmpWinStore.sln solution file.
     The following two projects are available:
     ampTransformExt.vcxproj, for building the custom MFT for converting video to gray scale using C++ AMP
     videoEditAmpWinStore.vcxproj, for building the transcoding application
   - To build the solution, select Build > Build Solution.
     The custom MFT DLL ampTransformExt.dll and the executable videoEditAmpWinStore.exe are created in the following folders for 32-bit builds:
     <installDirectory>\samples\mediaFoundation\videoEditAmpWinStore\ampTransform\build\<Debug/Release>\ampTransformExt\ampTransformExt.dll
     <*installDirectory*>\samples\mediaFoundation\videoEditAmpWinStore\Win32\<*Debug/Release*>\videoEditAmpWinStore\videoEditAmpWinStore.exe

     The custom MFT DLL ampTransformExt.dll and the executable videoEditAmpWinStore.exe are created in the following folders for 64-bit builds:
     <*installDirectory*>\samples\mediaFoundation\videoEditAmpWinStore\x64\ampTransformExt\<*Debug/Release*>\ampTransformExt.dll
     <*installDirectory*>\samples\mediaFoundation\videoEditAmpWinStore\x64\<*Debug/Release*>\videoEditAmpWinStore\videoEditAmpWinStore.exe

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.

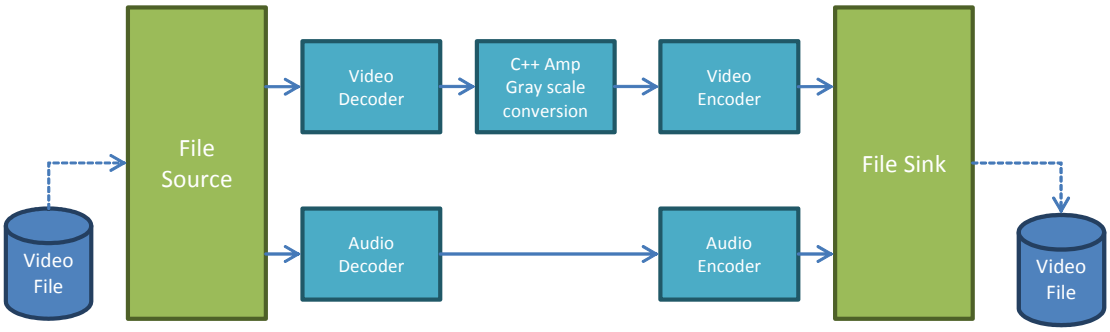


- `Pick Video File`: Use this option to browse an input media file (for e.g. AVI, MP4)
- `Transcode`: Initiates transcoding of the input media file. Before transcoding, you must set the appropriate `Transcode Profile`, `Bitrate`, `GOP Size`, `Quality Vs Speed`, and `B frames` settings; otherwise, transcoding uses the default values.
- `Preview`: Below this option, the status of the input media file playback is displayed. Playback is paused during the transcoding and continues after the transcoding is complete.
- `Output file`: Displays the path of the transcoded file.
- `Status`: Displays the running status of the transcoding.

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:



5 Supported formats

The following file formats are supported:

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

6 Known limitations

The sample is currently supported on the following platforms:

- Windows 8
- Windows 8.1

Contact

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