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1.4

# Release Notes for Generic Source Filter

**ABSTRACT:**

Release Notes for Sample Source Filter

**KEYWORDS:**

Multimedia codecs

## Revision History

VERSION	DATE	AUTHOR	CHANGE DESCRIPTION
1.0	14-July-2006	Anand Kumar Narayanan	Initial Release
1.1	21-July-2006	Raghunandan M. N	Support for AAC streams
1.2	12-December-2006	Kusuma S	Additional Output Format Type support for Video Decoder DMOs
1.3	17-May-2007	Kusuma S	Updated for VC1 Support
1.4	21-Jan-2008	Lauren Post	Updated for multiple codecs and codec launch

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# 1 Introduction

## 1.1 Purpose

The purpose of this document is to provide information on the package contents, instructions on building library and test applications and test execution for i.MX platforms using WinCE OS.

## 1.2 Scope

The scope is restricted to information on the package contents and instructions for building and testing. This document does not provide architecture or details about the APIs provided in the package.

## 1.3 Audience Description

The reader is expected to have basic understanding of Microsoft DirectShow Framework.

## 1.4 References

### 1.4.1 Freescale Multimedia References

- Source Filter Application Programming Interface – source\_filter\_api.doc
- Source Filter Release notes – source\_filter\_release\_notes.doc

## 1.5 Definitions, Acronyms, and Abbreviations

TERM/ACRONYM	DEFINITION
API	Application Programming Interface
ARM	Advanced RISC Machine
BSP	Board Support package
DMO	DirectX Media Object
FSL	Freescale
ISO	International Standards Organization
PB	Platform Builder

## 1.6 Document Location

## 2 Release History

RELEASE NUMBER	DELIVERABLES	FEATURES
1.0	<ul style="list-style-type: none"> <li>• Documentation</li> <li>• Application Interface header file</li> <li>• Source Filter with sources</li> </ul>	<ul style="list-style-type: none"> <li>• This could be used as generic source filter to connect to MP3 Decoder DMO and MPEG4 Decoder DMO.</li> <li>• Output format– compatible with MP3 Decoder DMO and MPEG4 Decoder DMO.</li> </ul>
1.1	<ul style="list-style-type: none"> <li>• Updated documents</li> <li>• Updated Interface header file</li> <li>• Updated source filter with sources</li> </ul>	<ul style="list-style-type: none"> <li>• Additional Output format support– compatible with AAC Decoder DMO</li> </ul>
1.2	<ul style="list-style-type: none"> <li>• Same as above</li> </ul>	<ul style="list-style-type: none"> <li>• Additional Output Format Type support for Video Decoder DMOs</li> </ul>
1.3	<ul style="list-style-type: none"> <li>• Same as above</li> </ul>	<ul style="list-style-type: none"> <li>• Additional Input Format Support for VC1</li> <li>• Fix for connecting directly with the Video Renderer</li> </ul>
1.4	<ul style="list-style-type: none"> <li>• Same as above</li> </ul>	<ul style="list-style-type: none"> <li>• Support for multiple codecs</li> </ul>

**Table 1. Details of the release**

### 2.1 Assumptions and Known Problems

- Source filter when used with MX31 MPEG4 Encoder must be recompiled for SINGLE\_FILE if used with single file input. Default option is multiple file input.
- Source Filter binary will also work on MX27 platforms without any changes or recompilation required.

### 2.2 Support

If you have any questions or problems concerning this release, please contact a Freescale representative. Please include release version, board version, BSP version and any other relevant information.

### 3 Source Filter Description

Source filter is implemented as a DirectShow Filter. This filter is provided so as to ease the use of other DMO filters. This could be used as a generic source filter which would provide the other DMO's and Filters with the required input data. Currently this filter supports media types required for MP3 Decoder, AAC Decoder and H264, MPEG4 and VC1 Decoders.

Following table shows the Source Filter properties:

Filter Property	Description
Output Pin Media Types	Major Type: Mediatype_Audio Subtype : MEDIASUBTYPE_MP3 OR Major Type: Mediatype_Video Subtype : MEDIASUBTYPE_MPEG4 Format Type: FORMAT_VideoInfo2 FORMAT_MPEG4Header OR Major Type: Mediatype_Video Subtype : MEDIASUBTYPE_H264 Format Type: FORMAT_VideoInfo2 FORMAT_H264Header OR Major Type: Mediatype_Video Subtype : MEDIASUBTYPE_VC1 Format Type: FORMAT_VideoInfo2 OR Major Type: Mediatype_Audio Subtype : MEDIASUBTYPE_AAC
DMO CLSID	CLSID_FSLSourceFilter

## 4 List of Deliverables

### 4.1 Documentation

**Base directory:** \fsl\_mm\_wince\Multimedia

Subdirectory	Files
docs\sourcefilter	source_filter_release_notes.pdf

### 4.2 Public Headers

**Base directory:** \fsl\_mm\_wince\Multimedia\API\_include

Subdirectory	File
API_include	FSLGuids.h

### 4.3 Binaries

**Base directory:** \fsl\_mm\_wince\Multimedia\

Subdirectory	File
bin500\libarm11\ARMV4I\retail	Source Filter DLL for WinCE 5.0
bin600\libarm11\ARMV4I\retail	Source Filter DLL for WinCE 6.0

### 4.4 Sources

**Base directory:** \fsl\_mm\_wince\Multimedia\components

Subdirectory	Files
parser	dirs
parser\sourcefilter	Source Filter C sources and header

## 5 Software Setup & Tools used

### 5.1 WINCE 5.0 for MX31 and MX32

- Build machine should be running Microsoft Win XP
- Build machine should have following installed
  - Microsoft Windows CE 5.0 with Platform Builder
  - WinCE BSP RTM14 for ADS boards
  - WinCE PDK 1.2 for 3DS boards

### 5.2 WINCE 5.0 for MX27

- Build machine should be running Microsoft Win XP
- Build machine should have following installed
  - Microsoft Windows CE 5.0 with Platform Builder
  - WinCE BSP RTM13 for ADS boards

### 5.3 WINCE 6.0

- Build machine should be running Microsoft Win XP
- Build machine should have following installed
  - Microsoft Windows CE 6.0 with Visual Studio 2005
  - WinCE BSP RTM14 or higher for ADS boards
  - WinCE PDK 1.2 for 3DS boards

## 6 Build Procedure

Source Filter would be available as Platform Builder *dirs* project in *sourcefilter* directory.

### *Steps to insert projects into PB workspace:*

- Right click on projects in the WinCE BSP Workspace, select the option 'Insert Existing Project...'
- Select the option 'Sources\Dirs Files(sources;dirs)' in dropdown menu for "Files Of Type".
- Open the "dirs" file in the folder \fsl\_codec\wince\_src\sourcefilter (PB will automatically create the sourcefilter.pbpxml).

### *Steps to build the Source Filter:*

1. Right click on sourcefilter present in the projects in PB workspace
2. Select "Clean before building"
3. Select "sourcefilter" and "Build the Current Project"

This builds the source filter dll (fsl\_src\_filter.dll) in  
\fsl\_mm\_wince\Multimedia\bin500\libarm11\ARMV4I\retail\.

## 7 Usage

The Source Filter has to be registered before using it with the test bench.

The utility for registering the dll is **regsvr32.exe** (for details regarding its build procedure refer to appendix)

Command for registering:

```
regsvr32.exe FSLSourceFilter.dll
```

## 8 APPENDIX

### 8.1 Build Procedure for regsvr32 utility

- Open the MX31 BSP Workspace in Platform Builder
- Trace the REGSVR sample project in the workspace tree structure through WINCE -> public -> dcom -> sdk -> samples
- Select REGSVR and right click on it.
- Select the option “Build Current Project”
- This builds the regsvr32.exe and will be available in the folder :  
\\WINCE500\Pbworkspaces\Mx31mobility\RelDir\MX31\_ARMV4I\_Release for the release version or  
\\WINCE500\Pbworkspaces\Mx31mobility\RelDir\MX31\_ARMV4I\_Debug for the debug version depending on the build type chosen.