Solveig Multimedia
AVI Trimmer Component

Developer Reference Manual

Notices

For information contact Solveig Multimedia: info@solveigmm.com
For Technical Support, contact Solveig Multimedia: support@solveigmm.com
More information can be found at http://www.solveigmm.com

Version

Software version - 1.00 beta;
Document version - 1;
Document date - 2005.12.23;

Introduction

SolveigMM AVI Trimmer Component is an engine designed for nonlinear editing of AVI files, implemented as COM object based on Microsoft® DirectShow®. Version 1.0 allows cutting the part of an input AVI file with specified start/stop time positions and save it to an output AVI file.

Features

- Provides special methods to control the trimmer COM object settings (file names, start/stop positions, etc.)
- Supports native DV AVI format (both Type 1 and Type 2 in Microsoft® terms)
- Supports AVI with any video/audio content
- Does not involve decoding/encoding procedures
- Performs the trimming process starting with K frame

Using SolveigMM AVI Trimmer engine

The **SolveigMM AVI Trimmer Application** sample code provides the main guidelines for using SolveigMM AVI Trimmer engine.

The DirectShow® Filters, which are obligatory necessary for the functioning of the engine: **SolveigMM AVI Trimmer Filter**, **SolveigMM AVI File Writer**. Others necessary filters must be shipped with DirectX 8.0 or higher: **File Source (Async.)**, **AVI Splitter**, **DV Splitter**, **AVI Mux**, and **File Writer**.

To create SolveigMM AVI Trimmer object, call **CoCreateInstance**.

CLSID	**CLSID_TrimmerObjControl** {B61C3708-CAA8-48CA-9D9C-682D0A5A3852};
Interfaces	**ITrimmerObjControl**
Executable	**AVITrimmerCOM.dll**

ITrimmerObjControl interface

The *ITrimmerObjControl* interface is a specific to the SolveigMM AVI Trimmer engine. The *ITrimmerObjControl* interface is exposed by the SolveigMM AVI Trimmer object and provides methods to set filter parameters (file names, start/stop positions, callback interface, etc.).

IID of ITrimmerObjControl interface is:
IID_ITrimmerObjControl
{46357DCD-97E4-4947-B5BC-FFC1DC974C34);

Methods description

IUnknown methods	Are defined by COM documentation.
IDispatch methods	Are defined by COM documentation.
ITrimmerObjControl methods	Description
put_InputFN	Specifies an input filename of AVI to be processed
put_OutputFN	Specifies an output AVI filename

put_StartPosition	Specifies a start time position of AVI part to be trimmed
put_StopPosition	Specifies a stop time position of AVI part to be trimmed
SetCallback	Specifies ITrimmerObjControlCB callback interface
Start	Starts a trimming process
Stop	Stops a trimming process
get_InputFN	Retrieves an input filename of AVI to be processed
get_OutputFN	Retrieves an output AVI filename
get_StartPosition	Retrieves a current start time position of AVI part
get_StopPosition	Retrieves a current stop time position of AVI part
get_Status	Retrieves a percentage of a trimming performance
get_StreamLength	Retrieves a duration of the first stream in an input AVI file

ITrimmerObjControl::put_InputFN

ITrimmerObjControl interface

The **put_InputFN** method specifies an input filename of AVI to be processed.

Syntax

```
HRESULT put_InputFN (
BSTR newVal
);
```

Parameters

newVal
[in] –Source filename.

Return Value

Returns S_OK;

ITrimmerObjControl::put_OutputFN

ITrimmerObjControl interface

The **put_OutputFN** method specifies an output AVI filename.

Syntax

```
HRESULT put_OutputFN (
BSTR newVal
);
```

Parameters

newVal

[in] – File name for a destination AVI.

Return Value

Returns S_OK:

ITrimmerObjControl::put_StartPosition

ITrimmerObjControl interface

The **put_StartPosition** method specifies a start time position of AVI part to be trimmed.

Syntax

```
HRESULT put_StartPosition (
double newVal
);
```

Parameters

newVal

[in] – Start time position for AVI part to be trimmed in seconds.

Return Value

Returns S_OK;

Remarks

Milliseconds are specified after the decimal point. For example the value 1234.25 means 1234 seconds and 25 milliseconds. SolveigMM AVI Trimmer engine Version 1.0 starts the trimming process from the K frame. If a K frame time position does not match with newVal, then resulting AVI will be started with a previous K frame. For more information, see **SolveigMM AVI Trimmer User Guide**.

ITrimmerObjControl::put_StopPosition

ITrimmerObjControl interface

The **put_StopPosition** method specifies a stop time position of AVI part to be trimmed.

Syntax

```
HRESULT put_StopPosition (
double newVal
);
```

Parameters

newVal

[in] – Stop time position for AVI part to be trimmed in seconds.

Return Value

Returns S_OK;

Remarks

Milliseconds are specified after the decimal point. For example the value 1234.25 means 1234 seconds and 25 milliseconds.

ITrimmerObjControl::SetCallback

ITrimmerObjControl interface

The **SetCallback** method specifies ITrimmerObjControlCB callback interface.

Syntax

```
HRESULT SetCallback (
ITrimmerObjControlCB * pITrimmerCallback
);
```

Parameters

pITrimmerCallback

[in] – Pointer to an ITrimmerObjControlCB interface containing the callback method.

Return Value

Returns an **HRESULT** value. The possible values are as follows:

Value	Description
S_OK	Success.
E_POINTER	NULL pointer argument.

Remarks

If you do not need the callback, you do not need call this method.

ITrimmerObjControl::Start

ITrimmerObjControl interface

The **Start** method starts a trimming process.

Syntax

```
HRESULT Start ();
```

Parameters

This method takes no parameters.

Return Value

If the method succeeds, it returns S_OK. If it fails, it returns an error code.

Remarks

Call this method after all parameters will have been set. If callback method has been set, ITrimmerObjControlCB::OnError method will be called if an error occurs while Start method executing.

ITrimmerObjControl::Stop

ITrimmerObjControl interface

The **Stop** method stops a trimming process.

Syntax

```
HRESULT Stop ();
```

Parameters

This method takes no parameters.

Return Value

If the method succeeds, it returns S_OK. If it fails, it returns an error code.

ITrimmerObjControl::get_InputFN

ITrimmerObjControl interface

The **get_InputFN** method retrieves an input filename of AVI to be processed

Syntax

```
HRESULT get_InputFN (
BSTR *pVal
);
```

Parameters

pVal
[out] –Pointer to a variable that receives the file name.

Return Value

Returns following **HRESULT** values:

Value	Description
S_OK	Success.
E_POINTER	NULL pointer argument.

ITrimmerObjControl::get_OutputFN

ITrimmerObjControl interface

The **get_OutputFN** method retrieves an output AVI filename.

Syntax

```
HRESULT get_OutputFN (
BSTR *pVal
);
```

Parameters

pVal

[out] – Pointer to a variable that receives the file name.

Return Value

Returns following **HRESULT** values:

Value	Description
S_OK	Success.
E_POINTER	NULL pointer argument.

ITrimmerObjControl::get_StartPosition

ITrimmerObjControl interface

The **get_StartPosition** method retrieves the current start time position of AVI part.

Syntax

```
HRESULT get_StartPosition (
double *pVal
);
```

Parameters

pVal

[out] – Pointer to a variable that receives the start time position.

Return Value

Returns following **HRESULT** values:

Value	Description
S_OK	Success.
E_POINTER	NULL pointer argument.

ITrimmerObjControl::get_StopPosition

ITrimmerObjControl interface

The **get_StopPosition** method retrieves the current start time position of AVI part.

Syntax

```
HRESULT get_StopPosition (
double *pVal
);
```

Parameters

pVal

[out] – Pointer to a variable that receives the stop time position.

Return Value

Returns following **HRESULT** values:

Value	Description
S_OK	Success.
E_POINTER	NULL pointer argument.

ITrimmerObjControl::get_Status

ITrimmerObjControl interface

The **get_Status** method retrieves the percentage of a trimming process.

Syntax

```
HRESULT get_Status  (
long *pVal
);
```

Parameters

pVal

[out] – Pointer to a variable that receives the percentage of a trimming process.

Return Value

Returns an **HRESULT** value. The possible values are as follows:

Value	Description
S_OK	Success.
E_POINTER	NULL pointer argument.

ITrimmerObjControl::get_StreamLength

ITrimmerObjControl interface

The **get_StreamLength** method retrieves the duration of the first stream in an input AVI file.

Syntax

```
HRESULT get_StreamLength (
double *pVal
);
```

Parameters

pVal

[out] – Pointer to a variable that receives the duration of the stream, in seconds

Return Value

Returns an **HRESULT** value. The possible values are as follows:

Value	Description
S_OK	Success.
E_POINTER	NULL pointer argument.

ITrimmerObjControlCB interface

The *ITrimmerObjControlCB* interface is specific to the SolveigMM AVI Trimmer engine. *ITtrimmerObjControlCB* interface provides callback methods for the application that must implement this interface if it calls ITrimmerObjControl::SetCallback method.

IID of ITtrimmerObjControlCB interface is:
IID_ITtrimmerObjControlCB
{33968711-8887-46D4-A71B-9B1B061EEDCA};

Methods description

IUnknown methods	Description
QueryInterface	Retrieves pointers to supported interfaces.
AddRef	Increments reference count.
Release	Decrements reference count.
ITtrimmerObjControlCB methods	Description
OnStart	Called after the trimming process has actually been started
OnStop	Called after the trimming process has actually been finished
OnError	Called if a significant error occurs in the trimmer object

ITrimmerObjControlCB::OnStart

ITrimmerObjControlCB interface

The **OnStart** method informs the application that the trimming process has been successfully started.

Syntax

```
HRESULT OnStart ();
```

Parameters

This method takes no parameters.

Return Value

Returns an **HRESULT** value.

Remarks

SolveigMM AVI trimmer COM object v.1.0 does not process HRESULT value being returned by this method.

ITrimmerObjControlCB::OnStop

ITrimmerObjControlCB interface

The **OnStop** method informs the application that the trimming process has been successfully stopped.

Syntax

```
HRESULT OnStop ();
```

Parameters

This method takes no parameters.

Return Value

Returns an **HRESULT** value.

Remarks

SolveigMM AVI trimmer COM object v.1.0 does not process HRESULT value being returned by this method.

ITrimmerObjControlCB::OnError

ITrimmerObjControlCB interface

The **OnError** method informs the application that Error has been occurred.

Syntax

```
HRESULT OnError(
HRESULT hr,
BSTR Val
);
```

Parameters

hr

[in] – An error code.

Val

[in] –An error text description.

Return Value

Returns an **HRESULT** value.

Remarks

SolveigMM AVI trimmer COM object v.1.0 does not process HRESULT value being returned by this method.