Linking Third Party Client Software with Medmont Studio Version 6 Software

Medmont Studio 6 provides a link mechanism whereby data and/or print output images can be automatically exported from Medmont Studio to third party client software. Data can be transferred either using the MS Windows standard DDE (Dynamic Data Exchange) mechanism or can be passed as command-line argument. The actual data is exported in a standard XML file format and/or standard image file formats (for print output).

When properly setup Medmont Studio adds an icon tool in the Links section of its main toolbar, which can then be used to export the data.

Third party client software interested in such a data exchange has to fulfil two tasks:

1. Provide Medmont Studio a minimal set of user interface information, information about the client software and the actual data that it is interested in.
2. Should implement code in their own software to receive the data via DDE or command-line and handle the data as needed.

This document describes details of these tasks.

The client software provides information about itself to Medmont Studio via a standard XML file. This XML file must:

1. Have an extension of .LinkSettings and
2. Should be placed in the Links sub-directory of Medmont Studio install directory.
   "[MEDMONT STUDIO INSTALL LOCATION]\Medmont\Medmont Studio 6\Links".

A template for .LinkSettings file is installed by Medmont Studio installation process in the Links directory (Readme.txt). The elements of the .LinkSetting XML file are as follows:

<LinkType> defines the type of data to be exported. Must be one of the following:
- Xml (default if LinkType element is missing)
- Image
- XmlAndImage

<DDEApplication> name of the application – if this entry is blank then studio will not use DDE, instead a new instance of client software will be launched via command line.

<DDETopic> the DDE topic as set in your program. This is just a string identifier of the data exchange conversation and should be set

to “Main”, unless “Main” is already used in the client software.

<DDEMessage> the DDE message to send. %f is used as a placeholder for the exported data file name in your message list.

<Command> the shell command to run the client program. This element can accept either an absolute path or a path relative to the Medmont Studio execution directory. Should be the same as DDEApplication if specified.

<Arguments> list of arguments to be passed to the client software from command line. %f and %i are used as placeholders for the exported XML and Image file names respectively in your arguments list. Eg an email client may accept arguments like “recipient %f message”, where %f is the attachment to the email.

<ExportPath> absolute path where the exported data file is stored.

<ExportName> name of the exported data file name.

The string “{GUID}” can be used here instead of a fixed file name. In this case the software will automatically generate a unique GUID filename. Please be aware that if using this option it is the responsibility of the third party application to delete the export file once completed. If this is not done it could result in an accumulation of export files eventually filling the hard drive and impacting on system performance.

<ExportFormat> the format of the exported XML file - one of the following

- UTF8 - uncompressed UTF8 (default) - .mxf
- UTF16 - uncompressed UTF16 - .muf
- CompressedUTF8 - XMill compressed UTF8 - .mcf
- CompressedUTF16 - gzip compressed UTF16 - .mzf

<ImageFormat> the format of the exported image file - one of the following

- Jpeg (default value)
- Gif
- Bmp
- Png

<ImageResolution> determines the resolution of the output image (for LinkType = Image). A value of 100 gives roughly screen resolution. The default value is 200 (roughly twice screen resolution).

<Text> Caption for the icon tool to be displayed in the Medmont Studio Links toolbar.

<ToolTip> Tooltip for the icon tool to be displayed in the Medmont Studio Links toolbar.

<IconFile> Icon for the icon tool to be displayed in the Medmont Studio Links toolbar. If left blank the client software's icon is automatically used.

<ExportableItems> determines which types of nodes in the explorer pane support the link. If this is not set then the link is always enabled. The following are the current node names

Export Type

Patient
E300Exam
E300ContactLens
E300CalibrationImage
E300Calibration
M700Exam
M700BinocularExam
DV2000Exam
DV2000Frame
DV2000FrameVersion

All the supported nodes must be enclosed in a <ExportType> element within the <ExportableItems> element.

<AllowMultipleItems> determines if the link menu will be enabled if multiple items are selected. Set this to False if your application does not handle XML files containing a multiple items

<Flags> Flags are used to control export of optional items. This element includes a list of <Flag> elements. Each <Flag> element has a pair of Key/Value elements to enable/disable the optional parts.

Medmont Studio currently only supports one such flag to decide whether E300 Bitmaps are exported. Eg

```
<Flags>
  <Flag>
    <Key>ExportE300Bitmaps</Key>
    <Value>false</Value>
  </Flag>
</Flags>
```

The client software receives a XML file containing the actual data, which it should parse to retrieve the data.

A Visual Basic 6 project accompanies this file, which demonstrates how client software can perform this task. Unzip the files in a directory and run the project. The demo project parses the included export.mxf file containing data for an E300 exam and displays the information about the exam.

To test the functionality of this demo, copy the LinkSample.LinkSettings file to the Links sub-directory of Medmont Studio install directory. Copy the LinkSample.exe to the root directory of C:\. VB6 runtime libraries must be installed for this demo to work.

Start Medmont Studio and select an E300 exam. Click on ‘Links > Medmont Demo’ tool. Since the LinkSample application is not running, the demo starts this application via command line. For all the subsequent clicks it uses DDE to display information about the E300 Exam.