

Release Notes – Version 2.0.4.2

Summary

number	created_on	Summary
344	25/8/2014	Allow accessing object data when order of elements in file is wrong
347	10/9/2014	Add support for MPEG2 and MPEG4 Conversion to DICOM

Detailed Release Notes

344 – Allow accession object data when order of elements in file is wrong

According to the DICOM standard, when serializing DICOM object into a file or network stream, the elements should be sorted in increasing tag number order.

Some DICOM applications don't comply with the standard in this aspect and save DICOM files where the elements are not sorted in increasing tag order.

When attempting to read such DICOM files, RZDCX DICOM SDK returns an error (or throw exception in .NET). This happens in DCXOBJ.openFile method and in DCXIMG.LoadFile.

In order to keep backwards compatibility while still allowing to work with such files, the new version still throws the same exception but, if some of the file was read, it is accessible through the DCXOBJ API. The exception notifies the caller that there was an error in reading the file and maybe not all data was loaded but the caller may decide to continue to work with the object.

Here is a short code snippet to demonstrate the use of this enhancement:

```
//Read file to DCXOBJ instance
```

```
tmp = new DCXOBJ();
try
{
    tmp.openFile(file);
}
catch (Exception ex)
{
    // If at least sop class is there then it may be ok
    // Otherwise, an exception will be thrown here and the
    // file will be skipped
    tmp.getElementByTag((int)DICOM_TAGS_ENUM.sopClassUid);
}

//Create DICOMBin instance by DICOM data
newBin = this.GetInfoFromDICOMObject(tmp);
```

347 – Add Support for MPEG2 and MPEG4 Conversion to DICOM

The new method `DCXOBJ.SetVideoStream` converts MPEG files to DICOM. See the example code below. Detailed discussion of this feature will be available on our blog. The properties of the encapsulated video should be provided by the caller.

Sample C++ code

```
/// Create a DCXOBJ

IDCXOBJPtr obj(__uuidof(DCXOBJ));

/// Provide the properties of the video stream

rzdcxLib::ENCAPSULATED_VIDEO_PROPS videoProps;

videoProps.width = 352;
```

```
videoProps.Height = 288;

videoProps.PixelAspectRatioX = 4;

videoProps.PixelAspectRatioY = 3;

videoProps.FrameDurationMiliSec; // 40 msec = 25 FPS

videoProps.NumberOfFrames = 1600; // 1600 frames

videoProps.VideoFormat = rzdcxLib::MPEG2_AT_MAIN_LEVEL;

obj->SetVideoStream(filename.c_str(), videoProps);
```

Sample C# Code

[Test]

```
public void Test_ConvertMpegToDICOM()

{

    DCXOBJ obj = new DCXOBJ();

    ENCAPSULATED_VIDEO_PROPS props;

    props.FrameDurationMiliSec = 40;

    props.Height = 360;

    props.width = 640;

    props.NumberOfFrames = 1600;

    props.PixelAspectRatioX = 1;

    props.PixelAspectRatioY = 1;
```

```
    props.VideoFormat = VIDEO_FORMAT.MPEG4;  
    obj.SetVideoStream(@"test.m4v",props);  
    obj.Dump(@"test.m4v.txt");  
    obj.saveFile(@"test.m4v.dcm");  
}
```