1 Introduction

The preview format is added to a video file. It contains some metadata from the video and a certain number of preview images with times. The file format is called "VTID" (Video Thumbnail Image Data).

2 Value types

Type	Description	Area
INT8	8Bit with sign	-128 to 127
INT16	16Bit with sign	-32.768 to 32.767
INT32	32Bit with sign	-2.147.483.648 to 2.147.483.647
INT64	64Bit with sign	-9.223.372.036.854.775.808 to 9.223.372.036.854.775.807
BYTE	8Bit unsigned	0 to 255
UINT16	16Bit unsigned	0 to 65.535
UINT32	32Bit unsigned	0 to 4.294.967.295
UINT64	64Bit unsigned	0 to 18.446.744.073.709.551.615
CHAR	8Bit character	0 to 255
WCHAR	16Bit character	0 to 65.535
FLOAT	32Bit floating point	± 1.5e-45 to ± 3.4e38
DOUBLE	64Bit floating point	± 5.0e-324 to ± 1.7e308
MEMORY	Memory in bytes	
-> {	Start of the loop	see section 2.1
} <-	End of the loop	see section 2.1
EOF	End of file	see section 2.2
...?	Jump in dependence	see section 2.3

Table 2: Value types

2.1 The loop

In a loop, the format is repeatedly run. The number of passages is specified in detail in the information and is usually a previous value.

2.2 End of file

The reading position is placed at the end of the file and reduced by the next value. The change can only be made if the file is larger than the next value.

2.3 Jump in dependence

The reading position in the file is changed. The position is detailed in the information and is usually the previous value. The jump can only be carried out if the position and the next value are within the file.

3 Description

3.1 File format

Typ	Name	Description	Info
EOF	EndOfFile		
INT64	PreviewPos	The position of the preview data is at the end of the file.	3.2
...?			
INT64	PreviewSize	The total size of the preview data in bytes.	3.3
UINT32	IDNumber	The file must have the ID number (0x44495456).	3.4
INT64	InfoDuration	The playing time of the video in 100 nanoseconds.	3.5
INT32	InfoWidth	The width of the original video image.	3.6
INT32	InfoHeight	The height of the original video image.	3.7
BYTE	InfoRotation	The rotation of the original video.	3.8
INT32	ImageCount	The number of thumbnails used.	3.9
-> {	Info		
INT32	ImageSize	The size of the image file in bytes.	3.10
INT64	VideoTime	The time position of the image in 100 nanoseconds.	3.11
} <-	Info		
-> {	File		
MEMORY	ImageFile	The memory with the image file.	3.12
} <-	File		

Table 3.1: File format

3.2 Position of the preview data

The position of the preview data is read at the end of the file. It cannot be less than 0 or larger than the file size minus 20 bytes (PreviewPos, PreviewSize and IDNumber). The reading position must be set to this value for the other file format.

3.3 Preview size

The value includes the total preview data in bytes. As a rule, the position of the preview data (see 3.2) and the preview size correspond to the file size.

3.4 Identification number

The identification number identifies the file format. ('VTID': Video Thumbnail Image Data)

3.5 Playing time

The playing time of the video in 100 nanoseconds. This value is included so that the video metadata does not have to be read. It cannot be less than 1.

3.6 Original width

The original width of the video display in pixels. It cannot be less than 1 or greater than 10,000. This value is included so that the video metadata does not have to be read.

3.7 Original height

The original height of the video display in pixels. It cannot be less than 1 or greater than 10,000. This value is included so that the video metadata does not have to be read.

3.8 Rotation

The rotation of the video display with the values: 0 - 0°, 1 - 90°, 2 - 180 ° and 3 - 270°. This value is included so that the video metadata does not have to be read.

Note: Neither the video nor the preview images have been saved rotated.

3.9 Number of preview images

The number of frames for the video preview. The value is used for the loops "Info" and "File" (see Table 3.1). It cannot be less than 0 or greater than 36.

3.10 Memory size

The value indicates the memory size of the image file (see 3.12) in bytes. If the value is 0, there is no preview image for the corresponding video time (see 3.11).

3.11 Video time

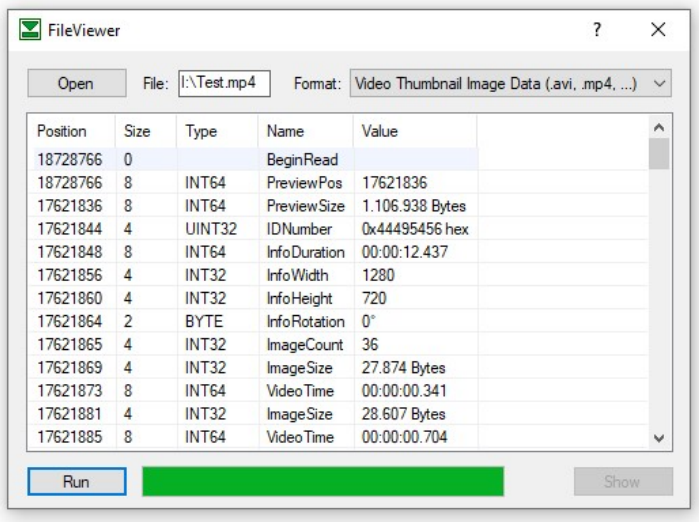
The time in 100 nanoseconds for the created preview image. The value cannot be less than 0 and must be within the playing time (see 3.5) of the video.

3.12 Image file

The memory contains the file for the preview image. The size of the file is specified in the memory size (see 3.10). Usually the file is a JPEG encoded image.

4 Program for reading out the file format

On the PanotiSoft website, there is a test program under technical documents, with which the file format can be read out in a structured manner. In addition, the program code can also be downloaded. The program was written in Visual Studio 2010 using the C # programming language.



Position	Size	Type	Name	Value
18728766	0		BeginRead	
18728766	8	INT64	PreviewPos	17621836
17621836	8	INT64	PreviewSize	1.106.938 Bytes
17621844	4	UINT32	IDNumber	0x44495456 hex
17621848	8	INT64	InfoDuration	00:00:12.437
17621856	4	INT32	InfoWidth	1280
17621860	4	INT32	InfoHeight	720
17621864	2	BYTE	InfoRotation	0°
17621865	4	INT32	ImageCount	36
17621869	4	INT32	ImageSize	27.874 Bytes
17621873	8	INT64	VideoTime	00:00:00.341
17621881	4	INT32	ImageSize	28.607 Bytes
17621885	8	INT64	VideoTime	00:00:00.704

Program: FileViewer.zip

Project file: FileViewerCode.zip

Description: FileViewer.pdf

FileViewerCode:

Format file: FileViewerFormat.cs
Format class: FileViewerVideo-ThumbnailImageData