Timecode in **RIFF** files

A need exists to add timecode and reel name information to AVI and WAV files that references the original source material from which the file was created. Microsoft has defined a timecode field that should be embedded in the INFO section of an AVI file, but this is inadequate for several reasons:

1. There is no provision for defining a non 30fps timecode, and no provision for documenting the reel information.

2. The INFO chunk is located near the beginning of the AVI file. Placing the INFO chunk and its information in pre-existing files would require rewriting the entire portion of the AVI file that follows the INFO section.

3. The INFO chunk is undefined in WAV files.

The LIST 'Tdat' Structure

Timecode in RIFF files will be accomplished by adding a custom LIST chunk containing time and reel information. The LIST chunk has a four character ID of 'Tdat', and may contain data in four fields. The LIST chunk can reside anywhere at the top level of the RIFF file, but for convenience is generally appended to the end of the file.

The format of the time LIST chunk is as follows:

LIST 'Tdat'	
tc_O	// original timecode, 18 bytes
tc_A	// alternate timecode, 18 bytes
rn_0	// original reelname, 40 bytes
rn_A	// alternate reelname, 40 bytes

Time and reel information is normally stored in the fields marked 'original' and duplicated in the 'alternate' fields. In some applications it may be useful to override the embedded timecode and reel name in a file while retaining the original information for reference purposes. To accomplish this, changes to the timecode or reel name in existing files should be stored in the 'alternate' timecode and reel fields, and applications reading timecode information should always get that information from the 'alternate' fields.

Timecodes

The format for the timecode information is:

Hours:Minutes:Seconds:Frames

for example:

01:20:05:12

Colons (:) are used as separators for non-drop-frame timecodes, and semicolons (;) are used for drop-frame timecodes. If the timecode refers to other than 30 frames per second, the timecode can have an optional frame rate, enclosed in brackets and separated by a space character. For example:

01:06:17:22 [25]

Except for the space between the timecode and the optional frame rate, there are no additional white-space characters in the timecode string. The string is null-terminated, and 18 bytes in length.

Reel Names

The reel name string is null terminated, and 40 bytes in length.

An Example

An AVI RIFF file example showing the timecode information chunk:

00000000	RIF	FF (00	01C38	0) '	AVI	•							
000000C	000000C LIST (000000C0) 'hdrl'												
00000018 avih (00000038)													
00000058 LIST (00000074) 'strl'													
00000064 strh (00000038)													
000000A4 strf (00000028)													
00000FF4 LIST (0001B154) 'movi'													
0001C150 idx1 (00000190)													
0001C2E8		LIST	г (000	0009	8) '	Idat	'						
0001C2F4			tc_0	(000	0001	2)							
30	31 3	3A 31	32 3A	33	33 3	A 31	30	00	00	00	00	00	'01:12:33:10'
00	00												' '
0001C30E			tc_A	·		'							
		3A 31	32 3A	33	33 3	A 31	30	00	00	00	00	00	'01:12:33:10'
00	00												''
0001C328			rn_0	•		'							
			20 37									00	'Reel 755'
		00 00	00 00			0 0 0	00	00	00	00	00	00	. '
	00 0	00 00	00 00										· · · · · · · · · · · · · · · · · · ·
0001C358			rn_A	•		'							
			20 37										'Reel 755'
		00 00	00 00		00 0	0 0 0	00	00	00	00	00	00	. ' '
00	00 0	00 00	00 00	00	00								····· ·
0001C388													