MOI-File Structur

of the JVC Everio HDD Camcorder (PAL)

Hex-Adress	Data Type	Value (Hex)	Meaning
0x0000	2 Byte ASCII	"V6"	Container Name
0x0002	4 Byte Unsigned Integer		Total size of MOI-file
0x0006	Unsigned Short		Year
0x0008	Unsigned Byte	01 – 0C	Month 1 - 12
0x0009	Unsigned Byte	01 – 1F	Day 1- 31
0x000A	Unsigned Byte	00 – 17	Hour 0-23
0x000B	Unsigned Byte	00 – 3B	Minute 0-59
0x000C	2 Byte Unsigned Short	0 – E678	Milliseconds 0-59000
0x000E	4 Byte Unsigned Integer		Video Length in ms multiple of 480ms (=12 Frames)
0x0012	2 Byte Unsigned Short	Always 1	??
0x0013 to 0x007E	108 Bytes	0	Blank Block of 108 Bytes
0x007F	Unsigned Byte	04	??
0x0080	Unsigned Byte	 51 55	Aspect Ratio 4:3 16:9
0x0081	1 Byte	00 or 18	Quality: N, F or UF Quality: Economy
0x0082	4 Bytes	01 00 00 C1	??
0x0086	1 Byte	 05 09 0B	Perhaps Audio Quality: 128kbps 256kbps 384kbps
0x0087 to 0x00D9	83 Bytes	0	Blank Block of 83 Bytes
0x00DA	2 Byte Unsigned Short	 E5 1A 5A DC 81 3D 58 96	Quality: Econ. (1,5Mbps VBR) Norm. (4,2Mbps VBR) Fine (5,5Mbps CBR) UltraF. (8,5Mbps CBR)
0x00DC	2 Byte Unsigned Short	0	Blank
0x00DE	4 Byte Unsigned Integer		Video Length proportional + Offset VL[s]*3600*25(Frames?) + 23.260 Offset
0x00E2	4 Byte Unsigned Integer	0	Blank
0x00E6	2 Byte Unsigned Short	same as at Adr. 0x00DA	Quality
0x00EA	4 Byte Unsigned Integer	same as at Adr. 0x00DE	Video Length proportional + Offset
0x00EE	4 Byte Unsigned Integer		Number of 7-Byte Blocks (=N)
0x00F2	2 Byte Unsigned Short		Number of 3-Byte Blocks (=n)
0x00F4 to 0x0105	18 Bytes	0	Blank
0x0106	N * 7 Byte		7-Byte Blocks
0x0106 + N*7	n * 3 Byte		3-Byte Blocks

7-Byte Blocks

Each Block contains 2 numbers:

1) 24bit number (first 3 Bytes)
   Block 0: 256
   Block 1: 5396
   Block 2: 10768
   Block 3: …

   From Block 1 on it's a constant step of +5372
   It's independent of bit rate (Quality), or file size.

2) 32bit number (last (remaining) 4 Bytes)
   This number counts from 0 upwards in different step widths depending on the bit rate (Quality):

Quality	Step width	Standard deviation	kBit/s	Byte/s
Economy	1127	150	1818	232710
Normal	3024	250	4844	620049
Fine	3736	1,5	5984	765932
Ultra Fine	5606	1,5	8946	1145103

   The ratio of step width and byte/s is nearly constant!
   So the 32-bit number seams to be a kind of pointer to MPEG file positions in a distance of 10 seconds.

3-Byte Blocks

Actually, I do not have any idea what these data means…

I only know, that every 12 frames one 3-Byte block is written to the MOI file.
The first Byte is between 06hex and 16hex.
The second Byte is nearly all the time 60hex and very rarely 61hex.
And the third byte is approximately between 27hex and 5Bhex.