VGHD Data FOLDER - MODELS.LST
Another mystery solved by WyldAnimal

**********
********** NEW VERSION 1.1.0.62 - New format Version 276 **********
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models.lst structure New Version 00 00 01 14 = 276 – **Some New Stuff This Version**
start of file
4 bytes of code ? ( possibly a version number ? ) 00 00 01 14 = 276
4 bytes of code - hex - total number of cards in all collections, purchased or not, in the Models folder.
Now using Big-Endian
(Hex numbers are High byte Low byte ordered, read H1 H2 L1 L2 )

**CARDLOOP:**
loop for number of cards
Start of cards
4 bytes of code - hex - length of card name a0001 = 5
next bytes - this will be the card name, use the hex above to determine how many bytes to read.
4 bytes of code - hex - length of Model name(s)
next bytes - this is the model(s) name - number of bytes from hex above
4 bytes of code - hex - length of Outfit name
next bytes - this is the outfit name
next 4 bytes of code - this is the date the card was added to your collection - 00 25 79 25 = 10 2011 11
Only the First two bytes are used. Total number of days past 11/13/1926
- birth of Max Vernon Mathews - Father of Computer / Digital Music
7925 hex = 31,013 days added to 11/13/1926 = 10/11/2011 – **Subtract one Day so it is 10/10/2011**
4 bytes of code - card status - See *** Status codes only last two bytes used
4 bytes of code - hex - Sum Total in bytes of total size of all clips for this card *** See Duration
**New for 276**
**4 bytes of code 00 25 79 25 – Date card was last played**
**4 bytes of code ff ff ff ff - Time Card was Last played – Milliseconds Past midnight**
**1 Byte ff - don't know what it is for – Always ff**
**4 bytes of Code 00 00 00 00 - Number of times card has been played – Doesn't always get updated??**
**4 bytes of Code 00 00 00 00 – Current Card resolution Downloaded**
**4 bytes of Code 00 00 00 00 - What Resolution are Available – Bit Set**
**4 bytes of Code 00 00 00 00 – Set when a new resolution is Available**
**End of New for 276**
4 bytes of code - hex - number of clips you have rights for in this card set including demo clips

**CLIPLOOP:**
using clip (a0001_64412.vghd) for all the examples.
loop for number of clips in card
Start of Clips
4 bytes of code - hex - length of clip file name
next bytes - this is the clip filename - number of bytes from above (a0001_64412.vghd)
4 bytes of code - hex - last two digits of the clip filename  then CLIP NUMBER (0c hex or 12 dec)
4 bytes of code - hex - the clip level of explicitness from 00 to 05  (04 hex)
4 bytes of code - hex - bit sum for type of clip. add 80hex or 128dec for non-demo clip
(type 64 = c0 hex or 192 dec)
2nd byte is a 01 for new clip style (progressive hotness) - New
4 bytes of code - hex - Actual size of clip file in bytes

4 bytes of code - hex - 1st byte is clip series for the progression of erotic levels - New
(c0148_sc4_33503.vghd) the first byte would be 04 from the sc4
4 bytes 00 00 00 01 - is clip active in clip list 00 00 00 01 Active - 00 00 00 00 Not Active
**4 bytes 00 00 00 00 – card weight – last days – number of times played - ???**
Repeat C**LIPLOOP**: for all clips in this card
Repeat **CARDLOOP**: for all cards in all collections, or until end of file is found.

How to read the Models.lst file for version **00 00 01 14 = 276**
all hex numbers are in 4 byte order Big Endian
(hex numbers are High byte Low byte ordered, read H1 H2 L1 L2 )
(H1 * 2^24) + (H2 * 2^16) + (L1 * 2^8) + (L2 * 2^1)
(H1 * 16,777,216) + (H2 * 65,536) + (L1 * 256 ) + L2
Largest number is - ff ff ff ff = 4,294,967,295

Open the models.lst file in binary read only

read in 4 bytes of code = version **00 00 01 14 = 276**
read in 4 bytes of code = convert to number = Total Number of CARDS

*__Card loop__ - Repeat this loop for total number of cards
Read 4 Bytes and convert to a number = Length of card name (L)
Read in (L) Bytes = Card name in ASCII
Read in 4 Bytes and convert to a number = Length of Model name (L)
Read in (L) Bytes = Model name in ASCII
Read in 4 Bytes and convert to a Number = Length of Outfit (L)
Read in (L) Bytes = Outfit in ASCII
**Read in 4 Bytes = DATE in HEX** - when card was added to the collection
See Date Codes below for how to read it.
Read in 4 Bytes of Code = Card Status - See Status code description
Read in 4 Bytes and convert to a Number = Total Size of all clips for this card in Bytes.
**Read in 4 Bytes of Code – Date last played**
**Read in 4 Bytes of Code – Time Last played**
**Read in 1 Byte - ff**
**Read in 4 Bytes of Code – Number of times played**
**Read in 4 Bytes of Code – Current Resolution**
**Read in 4 Bytes of Code – Resolution Bits**
**Read in 4 Bytes of Code – New Resolution**
Read in 4 Bytes and convert to a Number = How man Clips there are for this card
Including Demo clips.

**__Clip loop__ - Repeat for total number of clips in this card
Read 4 Bytes and convert to a Number = Length of Clip Name (L)
Read (L) Bytes of Code = Clip Name
Read 4 Bytes = 1st byte = Clip Number (last 2 digits of clip name)
Read 4 Bytes = 1st byte = Erotic Level of Clip
Read 4 Bytes = 1st byte = Type of Clip (128 is added to Purchased clips)
2nd byte = 01 for new series with progression
Read 4 Bytes and convert to a number = Size of clip in Bytes
Read 4 Bytes = 1st byte = Progression Series number
Read 4 Bytes = 00 00 00 01 - 1st byte = card Active or Not 01=active 00=not
**Read 4 Bytes of Code - not yet sure what it is for? weight of clip? - how often it has been played?**
**End of Clip Loop**

**End of Card Loop**

End of Models.lst file
Close the File.

**********
********** END NEW VERSION 1.1.0.62 Version 276 **********
**********

**********
********** CARD STATUS BITS Version 1.1.0.62 and up **********
**********

*** Card Status codes described.
first two bytes of the 4 are used
BOLD Values are KNOWN TO BE USED. Some Bits are not yet knows or reserved use.

d1d2 c1c2 b1b2 a1a2

Shows Section

| Value | | b1 | b2 | a1 | a2 |
|---|---|---|---|---|---|
| **a1 = 0 not Active, full shows not downloaded** | **bits** | **bbbb** | **bbbb** | **0000** | **aaaa** |
| **a1 = 1 not Active, full shows downloaded** | **bits** | **bbbb** | **bbbb** | **0001** | **aaaa** |
| **a1 = 2 being downloaded- blacked out** | **bits** | **bbbb** | **bbbb** | **0010** | **aaaa** |
| a1 = 4 ? | bits | bbbb | bbbb | 0100 | aaaa |
| **a1 = 8 Active, full shows not downloaded** | **bits** | **bbbb** | **bbbb** | **1000** | **aaaa** |
| **a1 = 9 Active, full shows downloaded** | **bits** | **bbbb** | **bbbb** | **1001** | **aaaa** |

Demos / Deleted Section

| Value | | b1 | b2 | a1 | a2 |
|---|---|---|---|---|---|
| **a2 = 0 demos not downloaded** | **bits** | **bbbb** | **bbbb** | **aaaa** | **0000** |
| **a2 = 1 free demos** | **bits** | **bbbb** | **bbbb** | **aaaa** | **0001** |
| **a2 = 2 Deleted** | **bits** | **bbbb** | **bbbb** | **aaaa** | **0010** |
| a2 = 4 ? | bits | bbbb | bbbb | aaaa | 0100 |
| **a2 = 8 demos downloaded** | **bits** | **bbbb** | **bbbb** | **aaaa** | **1000** |
| **a2 = 3 Free demos not downloaded and Delete?** | **bits** | **bbbb** | **bbbb** | **aaaa** | **0011** |

Rights Section

| Value | | b1 | b2 | a1 | a2 |
|---|---|---|---|---|---|
| **b1 = 0 not purchased** | **bits** | **0000** | **bbbb** | **aaaa** | **aaaa** |
| b1 = 1 ??? | bits | 0001 | bbbb | aaaa | aaaa |
| b1 = 2 ??? | bits | 0010 | bbbb | aaaa | aaaa |
| **b1 = 4 purchased** | **bits** | **0100** | **bbbb** | **aaaa** | **aaaa** |
| **b1 = 8 Update Available** | **bits** | **1000** | **bbbb** | **aaaa** | **aaaa** |
| **b1 = 12 purchased & Update** | **bits** | **1100** | **bbbb** | **aaaa** | **aaaa** |

Favorites Section

| Value | | b1 | b2 | a1 | a2 |
|---|---|---|---|---|---|
| **b2 = 0 not favored** | **bits** | **bbbb** | **0000** | **aaaa** | **aaaa** |
| b2 = 1 ??? | bits | bbbb | 0001 | aaaa | aaaa |
| b2 = 2 ??? | bits | bbbb | 0010 | aaaa | aaaa |
| **b2 = 4 selected for favorites** | **bits** | **bbbb** | **0100** | **aaaa** | **aaaa** |
| b2 = 8 ??? | bits | bbbb | 1000 | aaaa | aaaa |

**********
********** END CARD STATUS BITS **********
**********

********** CARD STATUS BITS Version 1.0.4.x to 1.0.6.x **********

**version 1.1.0.0 added some new bits**
**I haven't taken the time to decipher their meaning yet.**

*** Card Status codes described.
first two bytes of the 4 are used

a1a2 b1b2 c1c2 d1d2

| | a1 a2 b1 b2 |
|---|---|
| a1 = 0 not checked, full shows not downloaded | bits 0000 aaaa bbbb bbbb |
| a1 = 8 checked, full shows not downloaded | bits 1000 aaaa bbbb bbbb |
| a1 = 1 not checked, full shows downloaded | bits 0001 aaaa bbbb bbbb |
| a1 = 9 checked, full shows downloaded | bits 1001 aaaa bbbb bbbb |
| a1 = 2 being downloaded- blacked out | bits 0010 aaaa bbbb bbbb |
| a1 = 4 ? | bits 0100 aaaa bbbb bbbb |
| | |
| a2 = 0 demos not downloaded | bits aaaa 0000 bbbb bbbb |
| a2 = 8 demos downloaded | bits aaaa 1000 bbbb bbbb |
| a2 = 3 Free demos not downloaded and Delete? | bits aaaa 0011 bbbb bbbb |
| a2 = 1 free demos | bits aaaa 0001 bbbb bbbb |
| a2 = 2 Deleted | bits aaaa 0010 bbbb bbbb |
| a2 = 4 ? | bits aaaa 0100 bbbb bbbb |
| | |
| b1 = 0 not purchased | bits aaaa aaaa 0000 bbbb |
| b1 = 4 purchased | bits aaaa aaaa 0100 bbbb |
| | |
| b2 = 0 not favored | bits aaaa aaaa bbbb 0000 |
| b2 = 4 selected for favorites | bits aaaa aaaa bbbb 0100 |

examples:

80 40 00 00 = need demos and full shows, checked in collection
88 40 00 00 = checked, demos downloaded, purchased, not favored
98 44 00 00 = checked, full shows downloaded, demos downloaded, purchased, on favorites list
18 40 00 00 = not checked, full shows downloaded, demos downloaded, purchased, not favored

Note - Possible bug in VGHD software
When Full Card is Downloaded before the Demos / trailers, a2 bit 3 is set, along with a1 bit 1
a2 bit 3 should not be set until the Demos / trailers are downloaded.

If a card has an error during download, reset the 4 byte pattern to 00 40 00 00
Shows not downloaded, demos not downloaded, owned, not checked, not favorite

If Shows and Demos ARE fully downloaded set the pattern to 18 40 00 00
If Demos are downloaded but full shows are needed 08 40 00 00
If Full shows are downloaded but demos needed 10 40 00 00

********** END CARD STATUS BITS **********

Known Clip types:

acccc_**0**Enn.vghd → Standing
acccc_**1**Enn.vghd → In Front of / On the Taskbar
acccc_**2**Enn.vghd → Behind the Taskbar
acccc_**3**Enn.vghd → Duo One In front, one In back of task bar Only One clip.
acccc_**4**Enn.vghd →Pole
acccc_**32**Enn.vghd → with an Accessory
acccc_**33**Enn.vghd →In Front of Taskbar + Accessory
acccc_**34**Enn.vghd → Behind Taskbar + Accessory
acccc_**64**Enn.vghd → Enter/Exit Side of Screen ( older clips it was used for any Enter/ Exit)
acccc_**66**Enn.vghd → Behind Taskbar + Enter/Exit
acccc_**68**Enn.vghd → Pole + Enter/Exit
acccc_**82**Enn.vghd →Behind Taskbar + with a Sign + Enter/Exit (Card a0002 only)
acccc_**96**Enn.vghd → Accessory + Enter/Exit
acccc_**98**Enn.vghd →Behind Taskbar + Accessory + Enter/Exit
acccc_**100**Enn.vghd → Pole + Accessory + Enter/Exit
acccc_**512**Enn.vghd → Cage
acccc_**544**Enn.vghd → Cage + Accessory
acccc_**576**Enn.vghd → Cage + Enter/Exit
acccc_**608**Enn.vghd → Cage + Accessory + Enter/Exit
acccc_**1024**Enn.vghd →Swing
acccc_**1056**Enn.vghd →Swing + Accessory
acccc_**1088**Enn.vghd →Swing + Enter/Exit
acccc_**1120**Enn.vghd →Swing + Accessory + Enter/Exit
acccc_**320**Enn.vghd --> by error – only one clip

Reserved:
acccc_**16**Enn.vghd → with a Sign not yet used
acccc_**17**Enn.vghd --> with Sign not yet used
acccc_**18**Enn.vghd --> with Sign not yet used
acccc_**20**Enn.vghd --> with Sign not yet used
acccc_**80**Enn.vghd --> with Sign not yet used
acccc_**81**Enn.vghd --> with Sign not yet used
acccc_**84**Enn.vghd --> with Sign not yet used

The type is the Sum of the following bits.

| Bits: | value | IF SET IT MEANS |
|---|---|---|
| None | 0 | Standing |
| 0 | 1 | On the Taskbar – In front |
| 1 | 2 | Behind the Task bar |
| 2 | 4 | Pole Dance |
| 3 | 8 | reserved |
| 4 | 16 | Has a Sign |
| 5 | 32 | With an accessory |
| 6 | 64 | Enter / Exit side of screen ONLY |
| 7 | 128 | Reserved – in models.lst is set if Not a Demo |
| 8 | 256 | Reserved |
| 9 | 512 | Cage Clips |
| 10 | 1024 | Swing Clips |

A Value of 0 means Full View with No Enter / Exit

What is the Enn part? New Wording Same-Level Criteria
E = Explicit level – Levels are from 0 to 5
0 = all audience – never used…
1 = No Nudity
2 = Topless
3 = Nudity
4 = Full Nudity
5 = X rated

nn = clip number of that Explicit Level.

OLD WORDING
What is the Enn part?
E = Explicit level – Levels are from 0 to 5
0 = all audience – never used…
1 = Light Sexy
2 = Topless
3 = Full Nudity / Bottomless
4 = Explicit
5 = X rated

nn = clip number of that Explicit Level.

**********
********** DATE CODES VERSION 1.0.8.x and up **********
**********

How to figure out the models.lst date codes:

For VG Models.lst version 1.0.6.4 and up use this formula:
The date the card was added to your collection 00 25 HH LL - 00 25 79 25 = 10 2011 11
Only the First two bytes are used. Total number of days past 11/13/1926
- birth of Max Vernon Mathews - Father of Computer / Digital Music
7925 hex = 31,013 days added to 11/13/1926 = 10/11/2011 **Subtract one day for Correct Date 10/10/2011**

**********
********** END OF DATE CODES VERSION 1.0.8.x **********
**********

**********
********** TIME CODES VERSION 1.1.0.62 and up **********
**********

Time is recorded as milliseconds Past midnight

**********
********** End TIME CODES **********
**********

**********
********** Clip Duration Timing **********
**********

It is now possible to Calculate Individual Clip Duration in Seconds.

You will need to Parse the Data Folder XML file and Get the Shows Duration Value.

```
<show>
 <duration>47751</duration>
```

This value is the Total number of Animation Frames for the Entire Card.
All cards recoded at Totems Paris Studio are 25 frames per second.
Note: The Cards recorded at Totems LA Studio were 24 Frames per second.

From the Models.lst file, each card ha s total Byte Size value.
And Each Clip has a total Clip size in Bytes.

To find Clip Duration in seconds.

$$\frac{\text{Total Card bytes}}{(\text{Duration} / 25)} = \text{Bytes Per Second}$$

$$\frac{\text{Clip Size}}{\text{Bytes Per Second}} = \text{Time in Seconds}$$

**********
********** End Clip Duration Timing **********
**********

**Little Endian  and Big Endian byte ordering:**

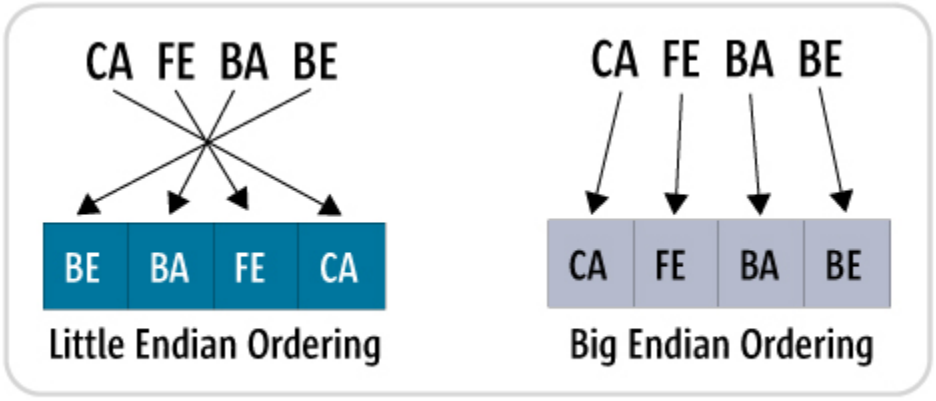


**Figure 2** Byte ordering