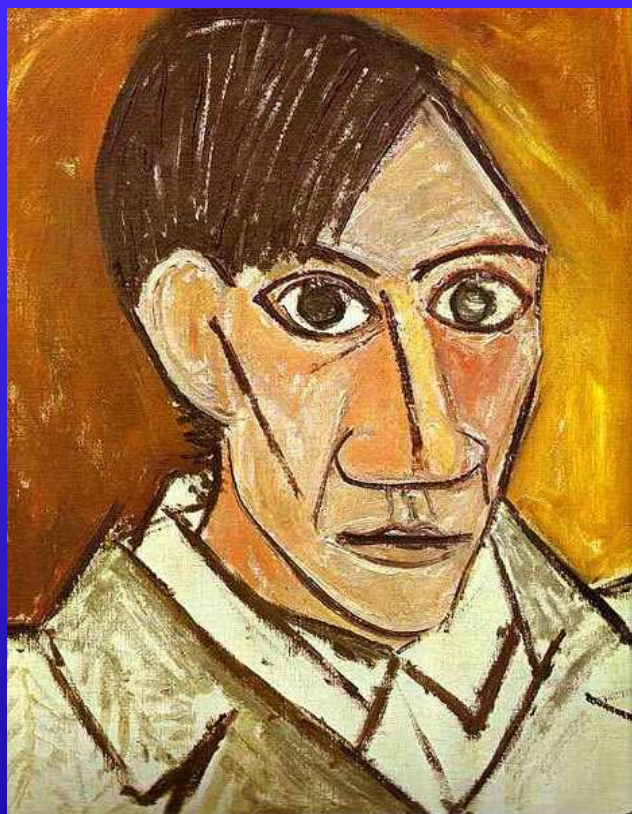


**INFORMATIONAL
MODEL OF
AUDIOVISUAL
ARTIFACTS AND
PRESERVATION
PROBLEMS**

**Kurmo Konsa, PhD
Tartu University**

Why should A/V archivists be interested in informational modelling?




“Art is the lie that helps us see the truth”

the same can be said for modelling



CONTENTS

1. Terms “preservation” “information”
2. Informational models of artifacts
(only two 😊)
3. Conclusions

PRESERVATION

- inseparable component of any information transmission process
- informational activity
- information  artefact

PRESERVATION

- retain informational integrity and availability

 - informational integrity consists of those features of artefact that distinguish it as a whole and singular object

- ?

INFORMATION

- PROCESS
- KNOWLEDGE
- ARTEFACT

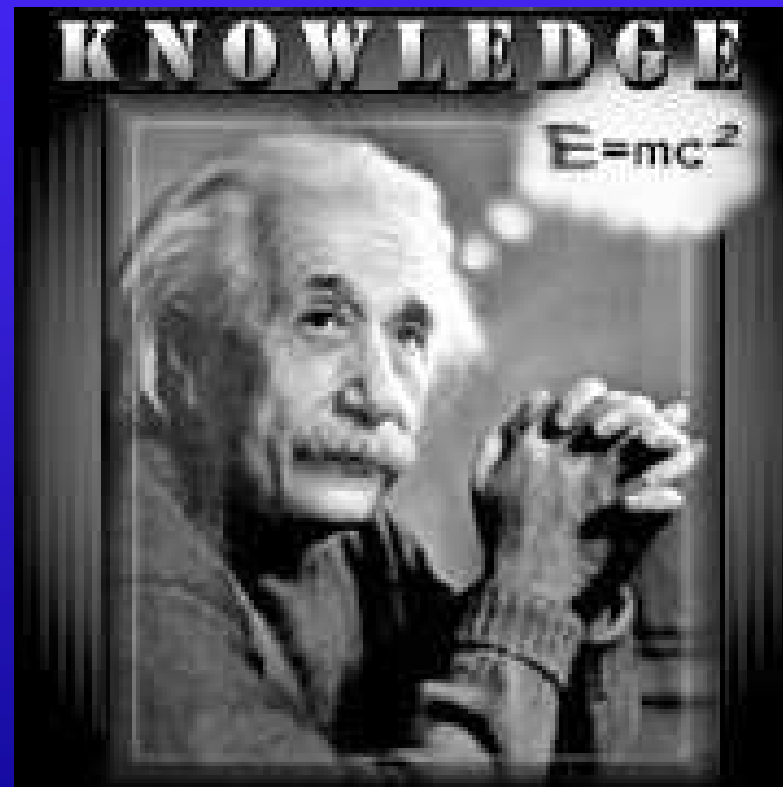
Michael Buckland



PROCESS



KNOWLEDGE



ARTEFACT



“anything which exhibits any physical attributes that can be assumed to be the results of human activity”

ARTEFACTS

Artefacts

Communicative artefacts

“The objects have inscribed in themselves the genetic code of either nature, or of civilization and culture. Every object is like the contains the character of whole.”

Tomislav Sola



MODELS OF ARTEFACTS

- 1. Dichotomous model**
- 2. Three-dimensional model**

DICHOTOMOUS MODEL

Artefact

content

carrier



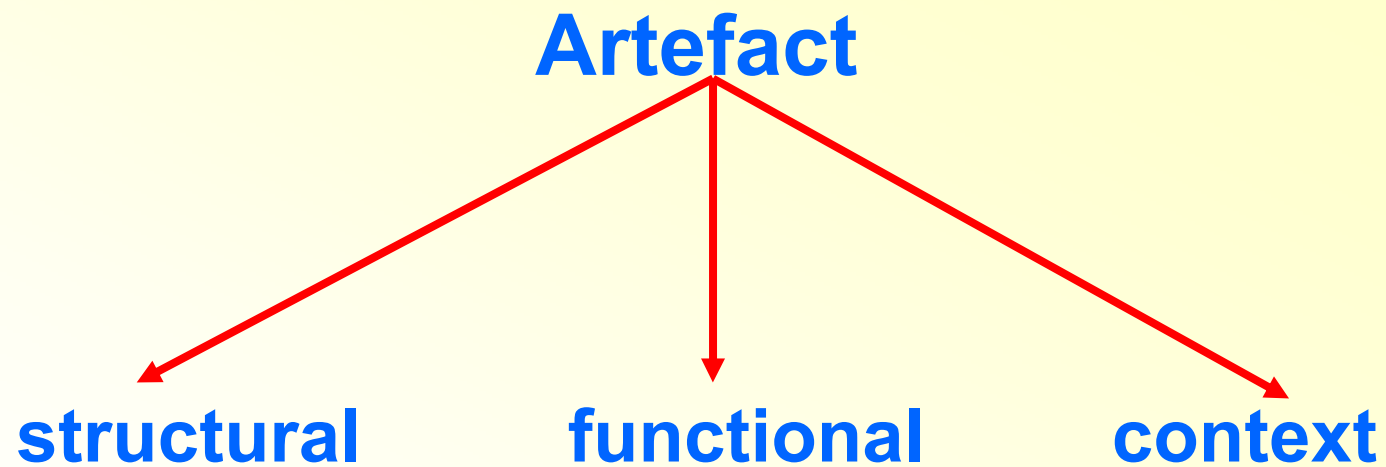
ANALOG



DIGITAL



Three level model



STRUCTURAL INFORMATION

- Material
- Construction
- Form
- Design
- Deterioration
- Indirect or non-intentional information



Structural information

MATERIALS

- plastics
- metals
- pigments
- ...

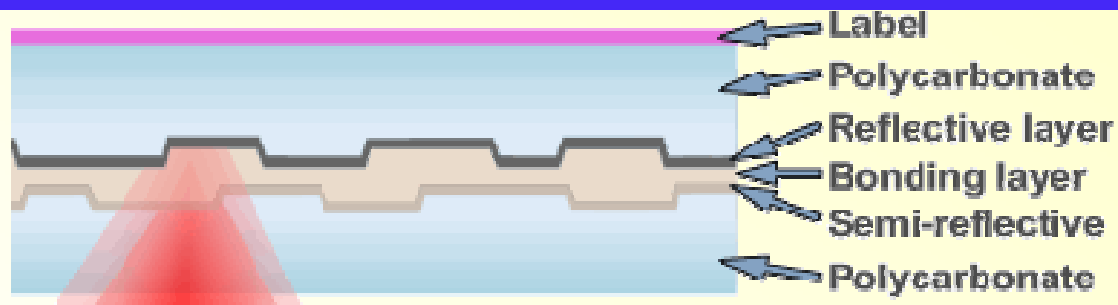


CONSTRUCTION

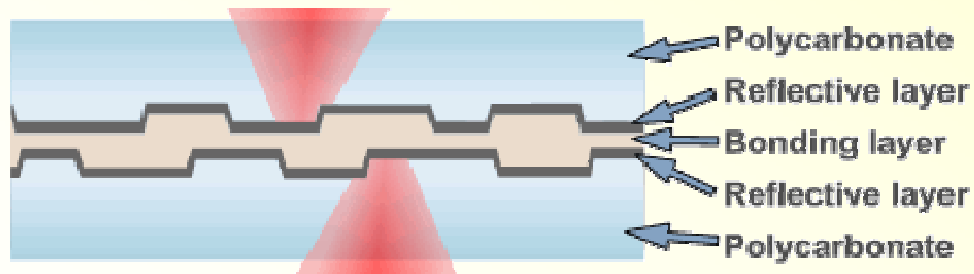
**way in which the object has been made
and the parts of which it consists.**

- **materials**
- **technologies**
- **user requirements**
- **commercial situation**

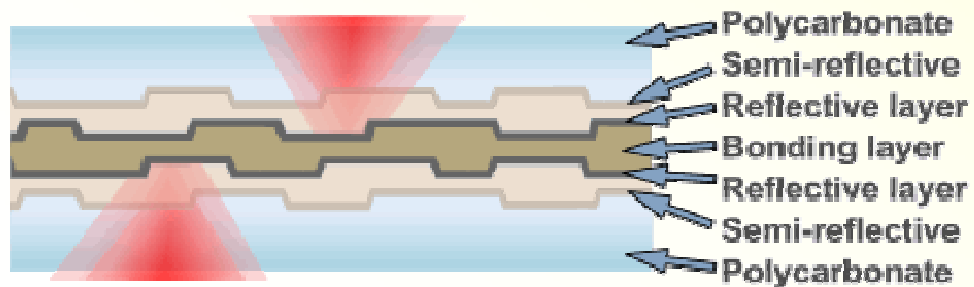
DVD constructions



DVD-9 single sided,
double layer
8,5 Gb



DVD-10,
double sided,
single layer on both
sides
9,4 Gb



DVD-18,
double sided, double
layer on both sides
17,1 Gb

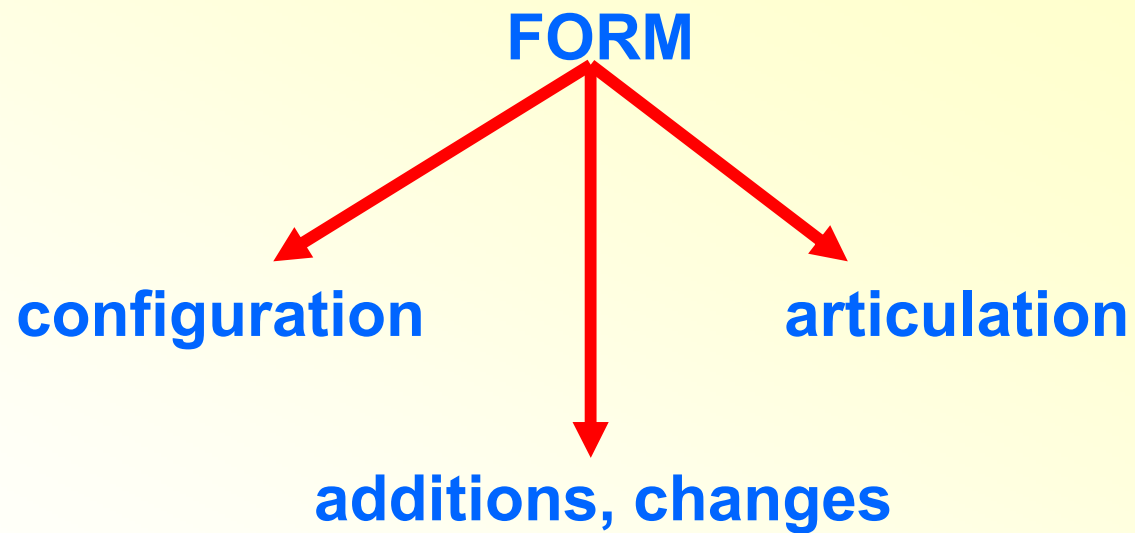
Structural information

FORM

**different ways information is presented
and structured.**

Structural information

FORM



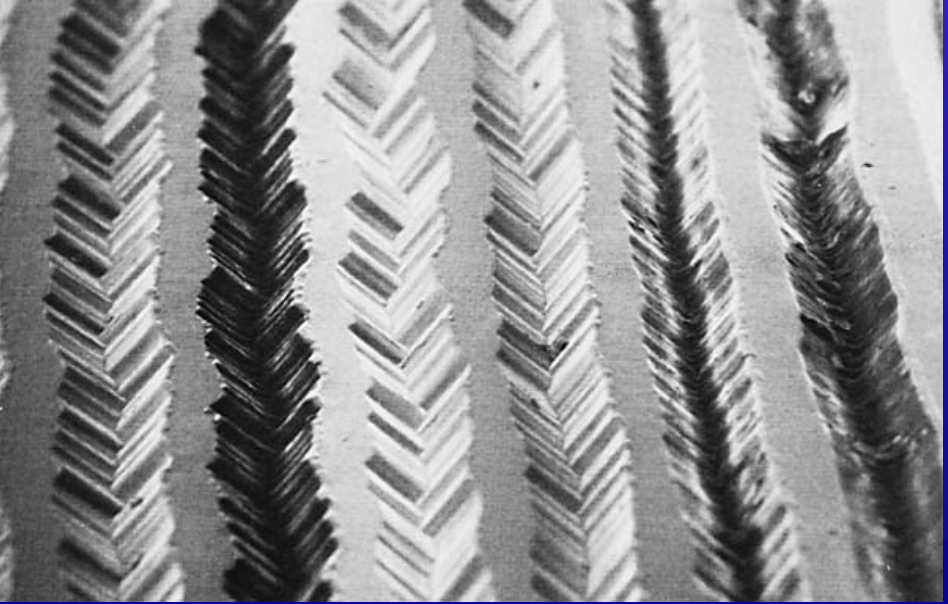
CONTENT CONFIGURATION

乾元亨利貞
 初九潛龍勿用
 九二見龍在田利見大人
 九三君子終日乾乾夕惕若厲無咎
 九四或躍在淵無咎
 九五飛龍在天利見大人
 上九亢龍有悔

```

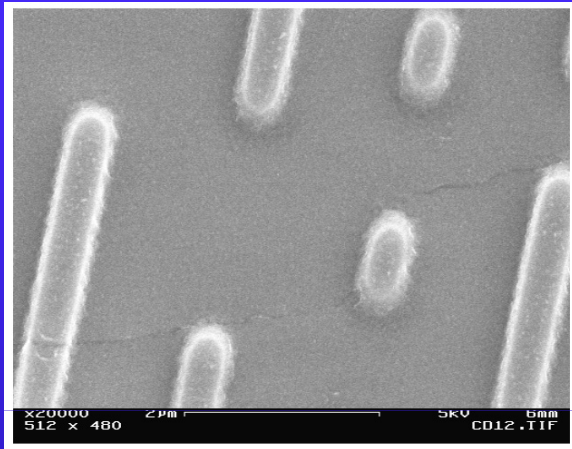
00000010101010000000000001010000010100000001001000100010001001100101100101010101010101
01010100100100000000000000000000000000000000000000000000000000000000000000000000000000000000000
00000000000000000011010000000000000000000000000000000000000000000000000000000000000000000000000
00000000000000000011000111000110001100010001000000000000000000000000000000000000000000000000000
10000110101111110111110111110111110000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
01101011111011111011111011111000000000000000000000000000000000000000000000000000000000000000000
00000001100000000000000010000011000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
00000001100010000110000000000000001100110000000000001100010000110000000001100000000011000000000110
000110000001000000010000000100000001000001000000001100000000100010000000011000000001100000000
00001000100000000010000000100000100000000000000000000000000000000000000000000000000000000000000
00110000000011000000000100011101011000000000010000000100000000000000000000000000000000000000000
1100000000000000100001011101001011011000000100111001001111111011100001110000011000001100000110
111000000000101000001110110010000001010000011111110010000001010000011000000110000001000001000
00110110000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
010101010011100000000010101010000000000000001010000000000000111110000000000000000000000000000
00000111111111000000000001100000001110000000011000000000011000000000000000000000000000000000000
000001011000001100110000000110011000010001010000010100001000010000100001000010000100001000010000
10000000010001010001000000000001000010000100000000000000000000000000000000000000000000000000000
001001010000000000001111001111101001111000
    
```

Fig.1
 The original transmission of 1679 pulses in binary code.



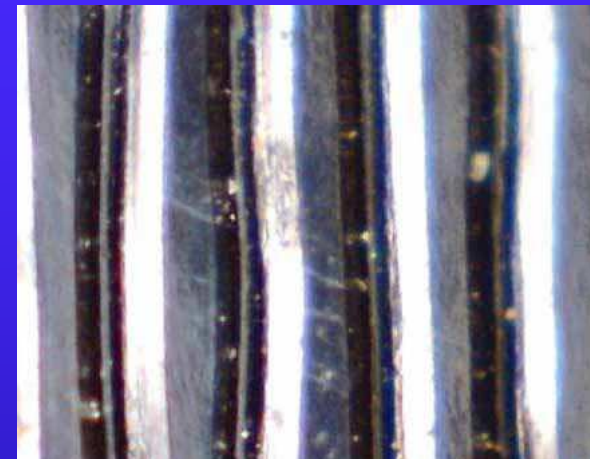
CONTENT ARTICULATION

example - sound



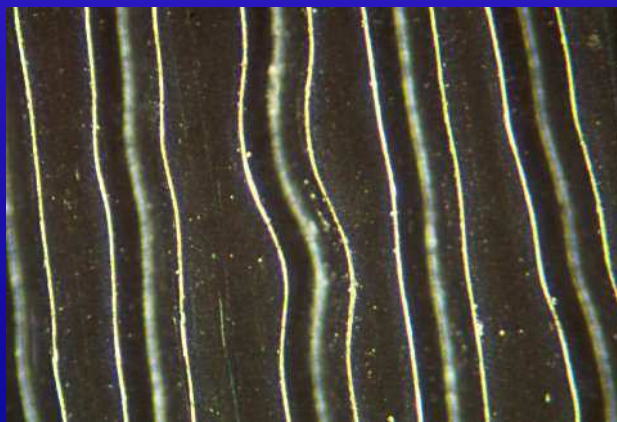
CD- pits

http://www.optics.rochester.edu/workgroups/cml/opt307/spr05/chris/mCD_1.jpg



shellak disc, 78

<http://www.videointerchange.com/images/78Grooves.jpg>



Vinyl, mono

<http://www.micrographia.com/projec/projapps/viny/viny0100/vinylr00.jpg>



Vinyl, stereo

<http://www.micrographia.com/projec/projapps/viny/viny0100/vinylr02.jpg>

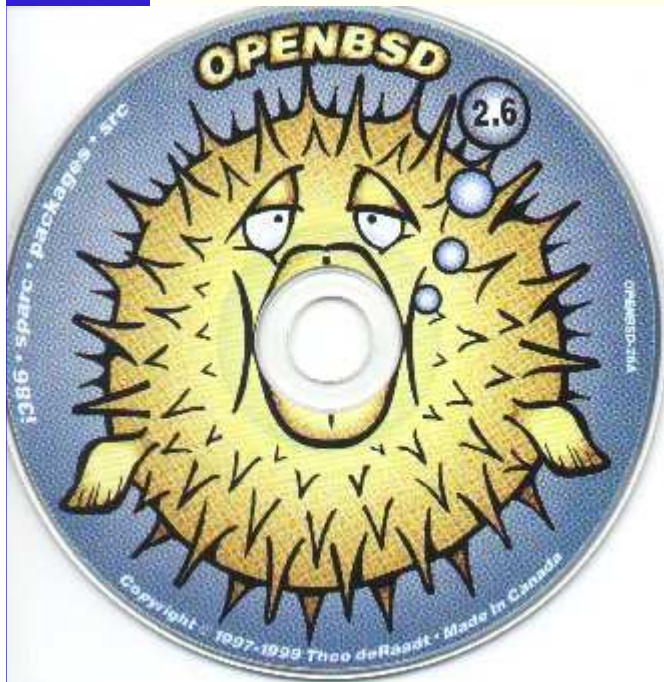
ADDITIONS, CHANGES

- **Films may be shortened or altered**
- **Films may be altered or lengthened (directors cut)**
- **Films may be re-released in a different manifestation (coloured version)**

Structural information

DESIGN

characteristics of the external appearance of the record, such as format, colors, decorations etc



FUNCTIONAL INFORMATION

- **Communicative**
 - entertainment
 - education
 - documentary
 - commemorative (home movies)
 - research
- **Esthetical**
- **Value**



"HIS MASTER'S VOICE"



CHARITY WALTZ (BAKALENIKOW)

Вальс „Пожалуй“ — Бакалейникова

Инструментальный квинтет

JAHRL'S INSTRUMENTAL QUINTETTE

INSTR.
QUINTET
(7-83080)

SPEED 78
Cat. No.
A.L.
998

Manufactured by THE GRAMOPHONE CO. LTD. Hayes, Middlesex, England

Value



CONTEXT

**relations between the object and its
environment**

- **material**
- **conceptual**

MATERIAL CONTEXT

Playback machinery

- 78s
- 45s
- LPs
- reel tape
- cassettes
- CD
- downloadable music files
- MPGs



CONCEPTUAL CONTEXT

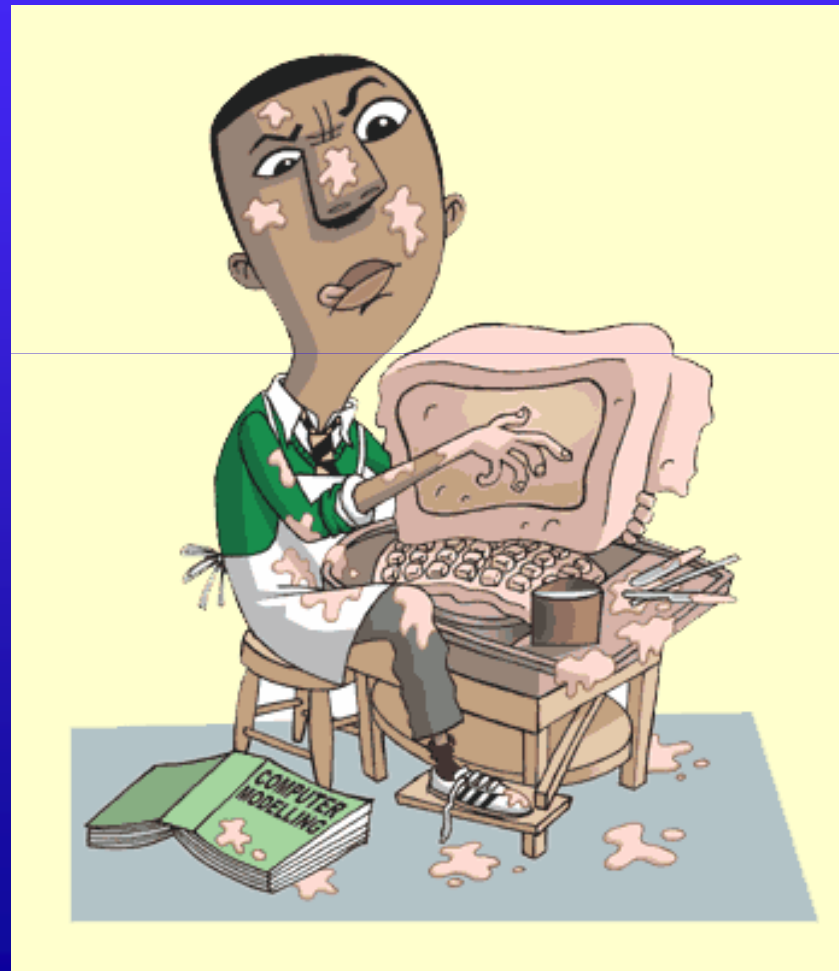
cultural and social environment to which the object is related.



CONCLUSIONS

- **informational structure of artifacts are complicated**
- **preservation influence the informational structure**
- **models are frameworks for describing, analyzing and studying artefacts**
- **quantifying the informational content**

**Thank you for you attention
and happy modelling !**



<http://www.bbc.co.uk/schools/gcsebitesize/img/ict07modelling.gif>