

# A new 3D file format

Managing assets for practical progressive enhancement

# About me...

Youri Gicquel

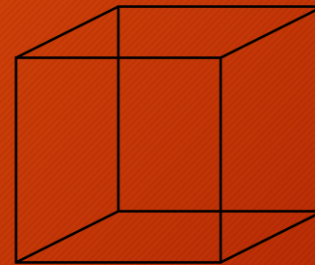
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Plugin developer in Speedernet for the authoring tool Speedernet Sphere (<https://www.sphereapp.fr/> )

I like old stuff, like C/C++, linux, and hard rock. And funny t-shirts.  
I love funny t-shirts.



# What is a 3D file format ?



## 2 List of file formats

- 2.1 3DS - 3D Studio
- 2.2 BLEN - BLENDER
- 2.3 DAE - COLLADA
- 2.4 DXF - AutoCAD
- 2.5 FBX - Autodesk exchange
- 2.6 geoTIFF
- 2.7 glTF
- 2.8 LWO - Lightwave
- 2.9 OBJ
- 2.10 OFF
- 2.11 PLY
- 2.12 PTS
- 2.13 PTX
- 2.14 SC1 - Sculptiris
- 2.15 SCL - Pro/engineer
- 2.16 SKP - Google sketchup
- 2.17 STL
- 2.18 TRI
- 2.19 V3D
- 2.20 WRL - VRML
- 2.21 X3D
- 2.22 X3DV
- 2.23 XSI - SoftImage
- 2.24 ZTL - Zbrush
- 2.25 XYZ

# First iteration

- BSON
- Really fast to read/write
- Contains only datas used in Speedernet Sphere
- Not easy to update
- No retrocompatibility

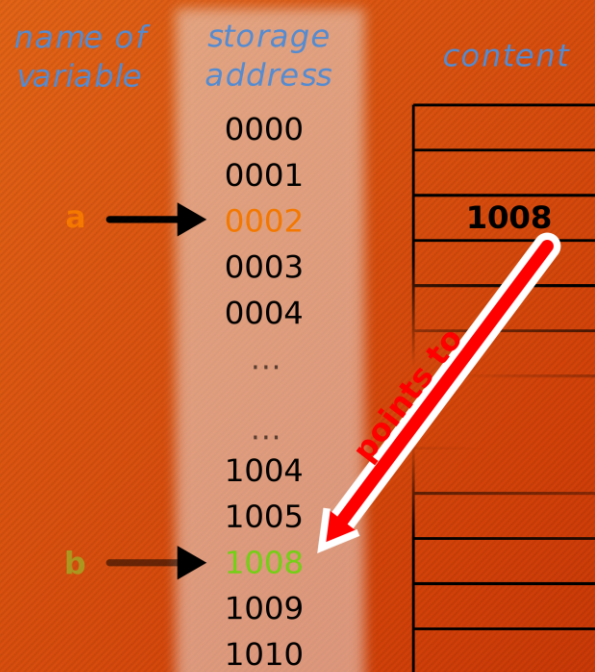
# New iteration

- Binary
- Hard to write / easy to read
- Retrocompatible with some limits
- Contains only datas used by the objects

# The navigation: The blocks

- 1°) The header:
  - Contains all informations about the file
- 2°) The lights block:
  - Contains datas about lights ()
- 3°) The textures block:
  - Contains filenames of the textures used in that scene
- 4°) The nodes:
  - Contains datas about 3D objects

# The big change: Pointers



# Why are they useful ?

- In the header:
  - Allow the reader to jump from the header to each other block with ease
- In the blocks:
  - Allow the reader to jump to any parameter of one element in the block
  - Allow the writer to not write an element in the file if it is not relevant
  - Give a lot of control to reader on how they want to read the file
  - Allow an old software to load new version of the file