



VCD 3118
Computer Animation &
3D Modelling

Who is Çetin Tüker

1992 (BA) METU Faculty of Architecture

1996 (MA) METU Faculty of Architecture

2004 – today Post Graduate MSGSU

Teaching in Mimar Sinan Fine Arts University,
Department of Graphic Design since 2002.

- Interactive Multimedia
- Motion Graphics

Interested in character animation, game design,
computer programming and experience design.

Professional Experience

Architectural Design (1991 – 1996)

3D Architectural Modelling & Visualisation (1992-...)

Web Design (1998-...)

Interactive Multimedia (1997-...)

Game Design and Development (2000-...)

Professional Experience

PUSU (2001-2004) FPS game.

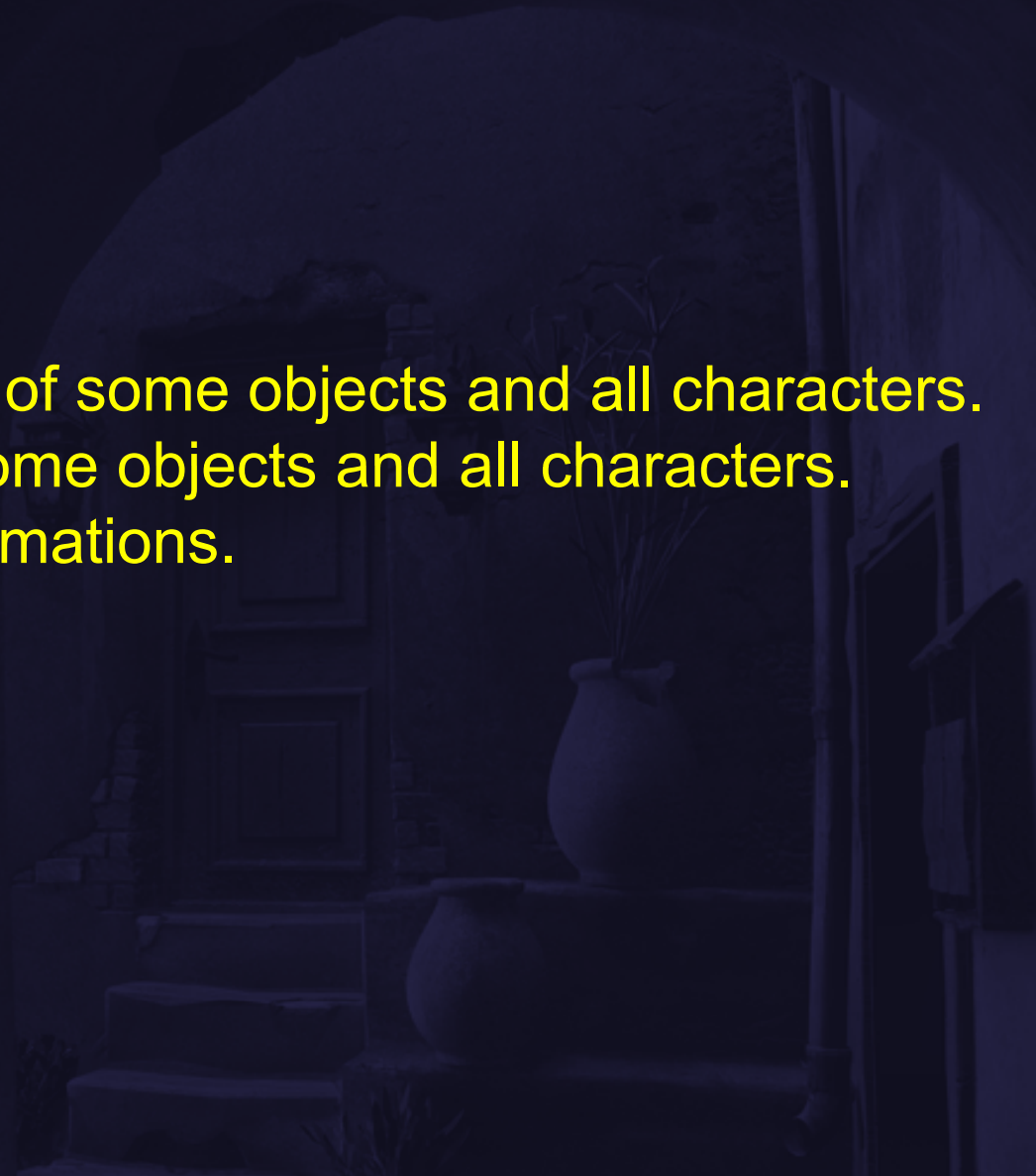
ETI YAMI (2005) Game style animated commercial

KENT TOYBOX (2005)

LIPTON ICE TEA (2004) liquid dynamics

SAD STREET (2005) personal work

3D Modelling of some objects and all characters.
Textures of some objects and all characters.
Character animations.



PUSU

1350 Triangles Model (Father of Fatih)



PUSU

1350 Triangles Model (Turgut – Bad Man)

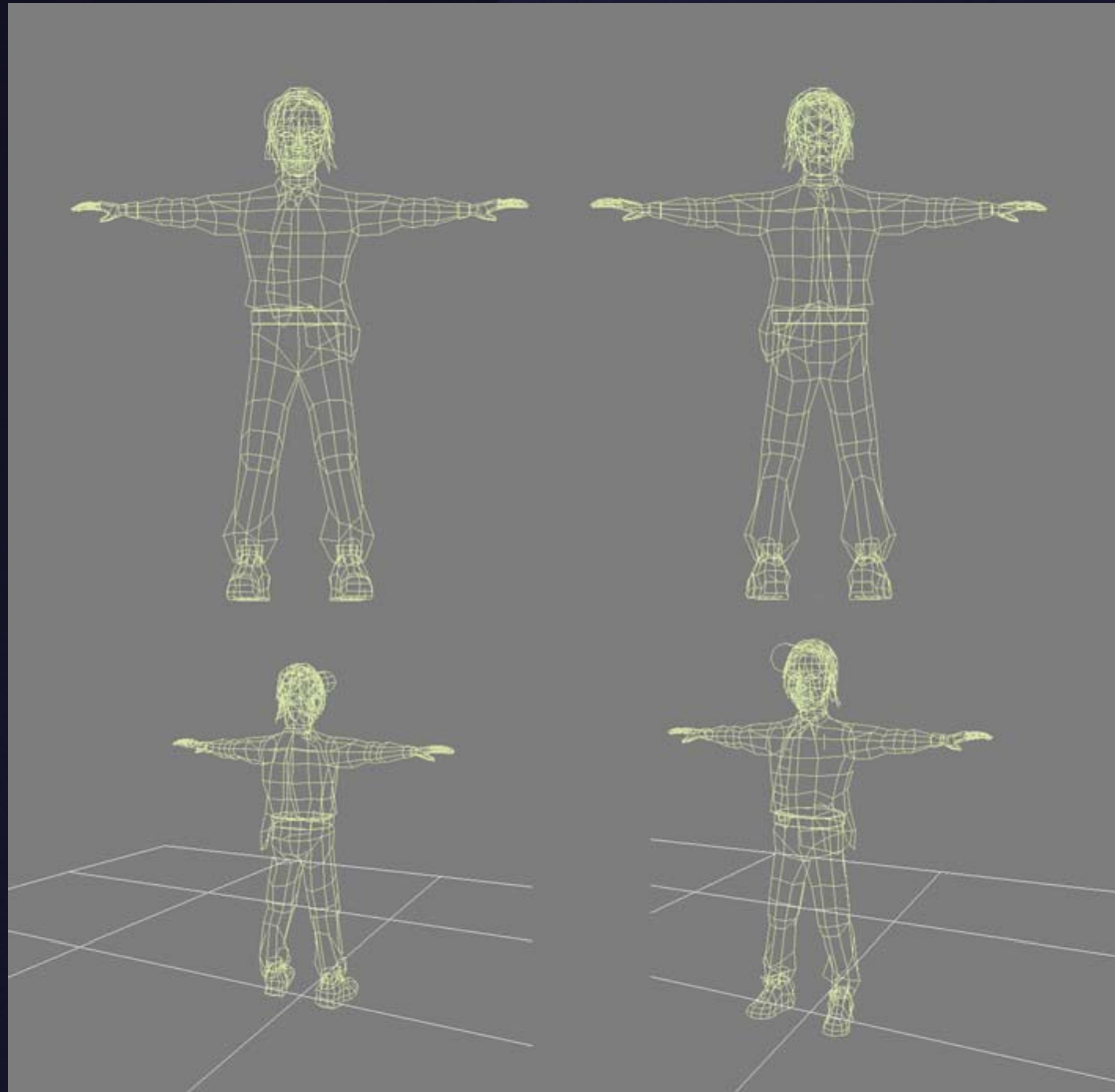


YAMi

2500 Triangles Model / Solid (Sinan)

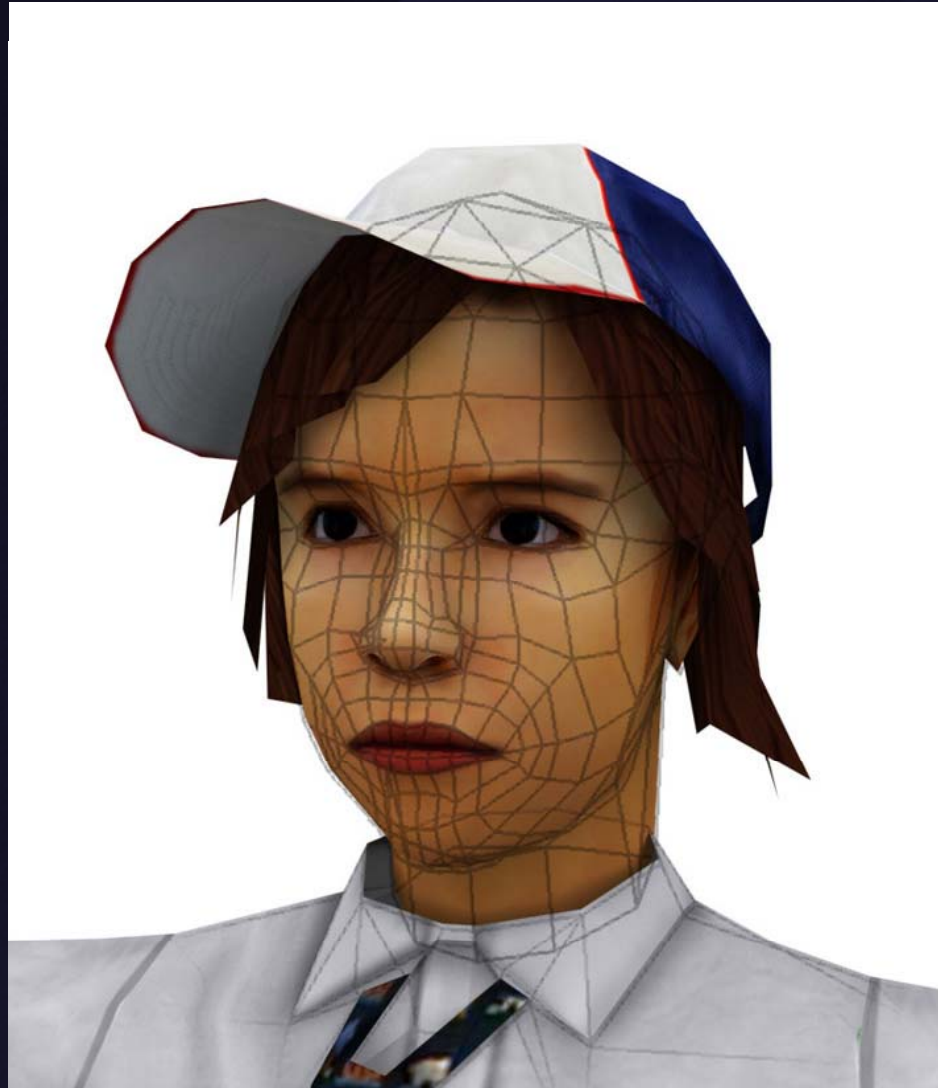


2500 Triangles Model / Wireframe (Sinan)



YAMi

2500 Triangles Model / Head Detail (Sinan)



YAMi

Pre-model reference photography (Sinan and Sinan)



Pre-model reference photography



YAMI



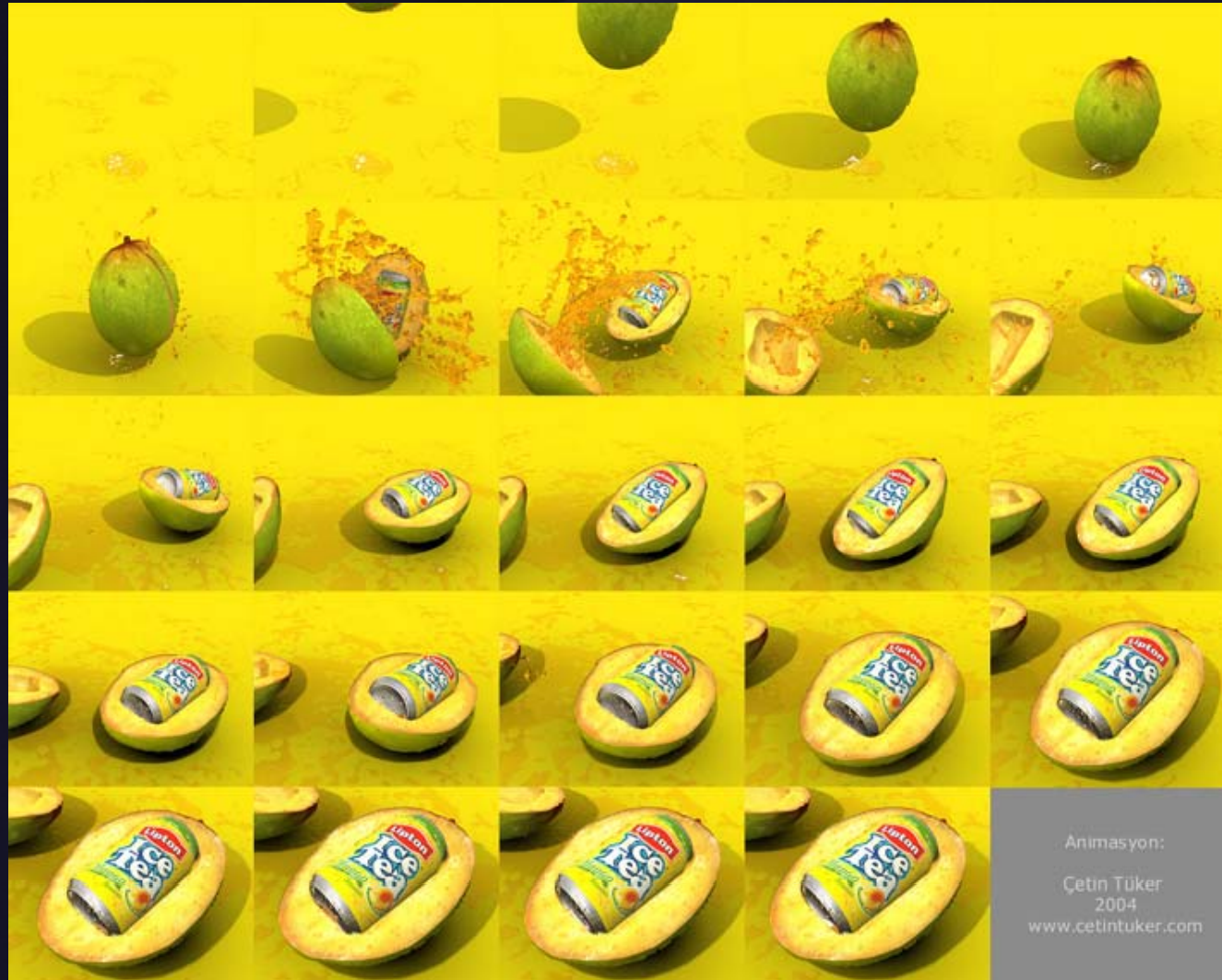
LIPTON ICE TEA

Liquid Dynamics with 3D MAX and GLU 3D



LIPTON ICE TEA

Liquid Dynamics with 3D MAX and GLU 3D



Animasyon:
Çetin Tüker
2004
www.cetintuker.com

Sad Street

Personal work in 2005



Related article in:
http://features.cgsociety.org/story_custom.php?story_id=3026&page=

What is Computer Animation

A part of CGI

What is CGI (Computer Generated Imagery)

2D Bitmap (Photosop, photo editing softwares)

2D Vector (Vector based softwares like Illustrator and Freehand)

2D Hybrid (Vector and Bitmap like Flash)

3D Vector (3D MAX, MAYA, XSI, LW)

3D Hybrid (Z-Brush)

CGI (Common Gateway Interface) in WEB design

What is Computer Animation

Computer animation can be in 2D or 3D.

2D Animation Softwares MOHO, Flash, After Effects etc.

3D Animation Softwares 3D MAX, MAYA, XSI, LW etc.

Which Software to Use

3D

MAX, MAYA, XSI, LW, MODO

Texture

Photoshop, paint etc.

2D vector

Freehand, illustrator

2D animation

Flash, moho

Editing

Premeiere, Final Cut, Avid

Compositing

After Effects, Flint, Flame, Combustion etc.

Bonus

AutoCAD, Z-brush, Poser, Vue 5



What is 2D and 3D



2D is made of pixels

Picture

x

Element

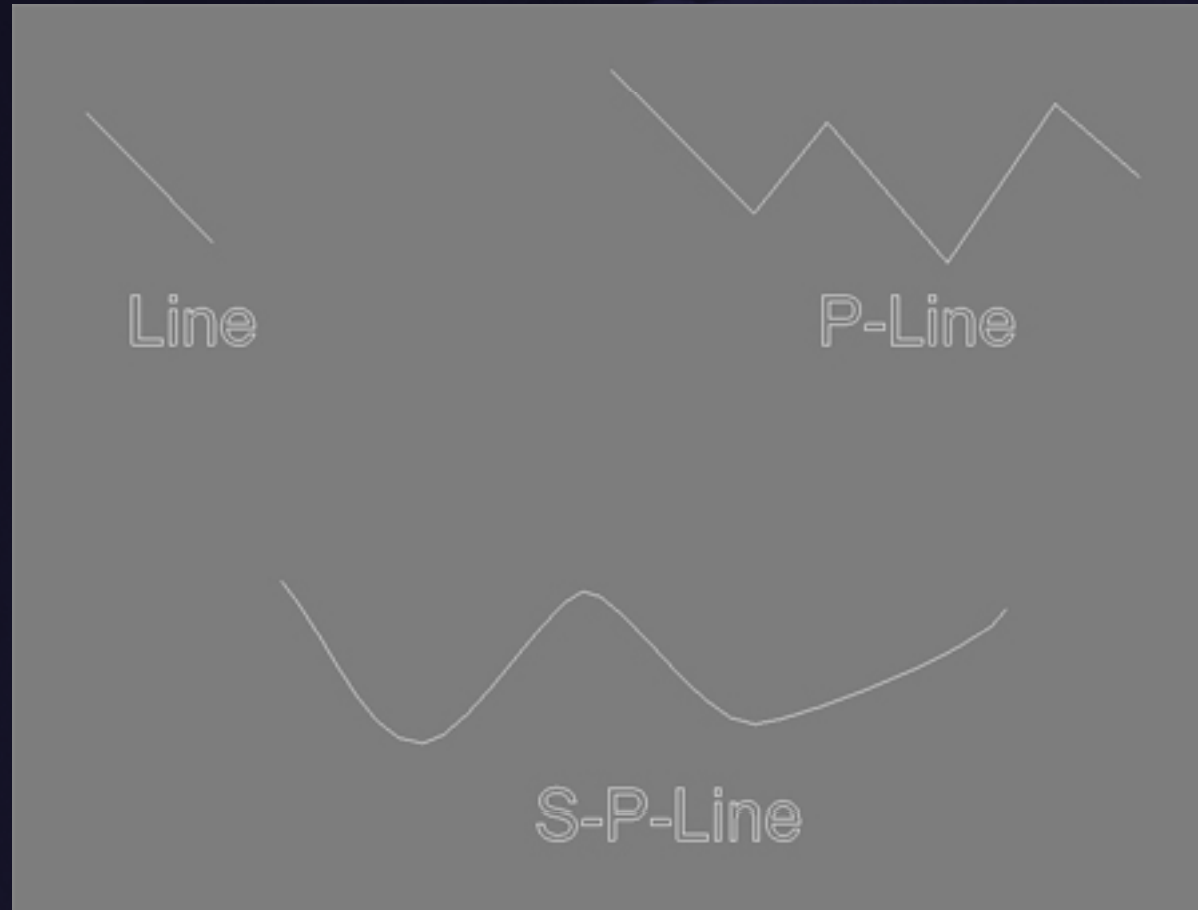
< or >

$A(x_1, y_1)$

$B(x_2, y_2)$

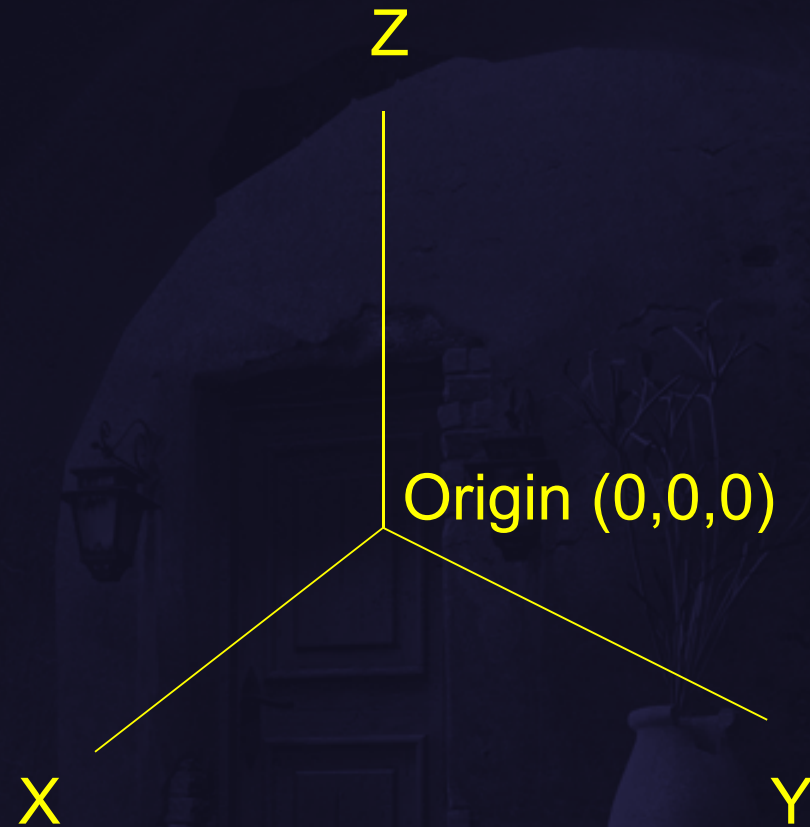
2D Vectors

What is 2D and 3D



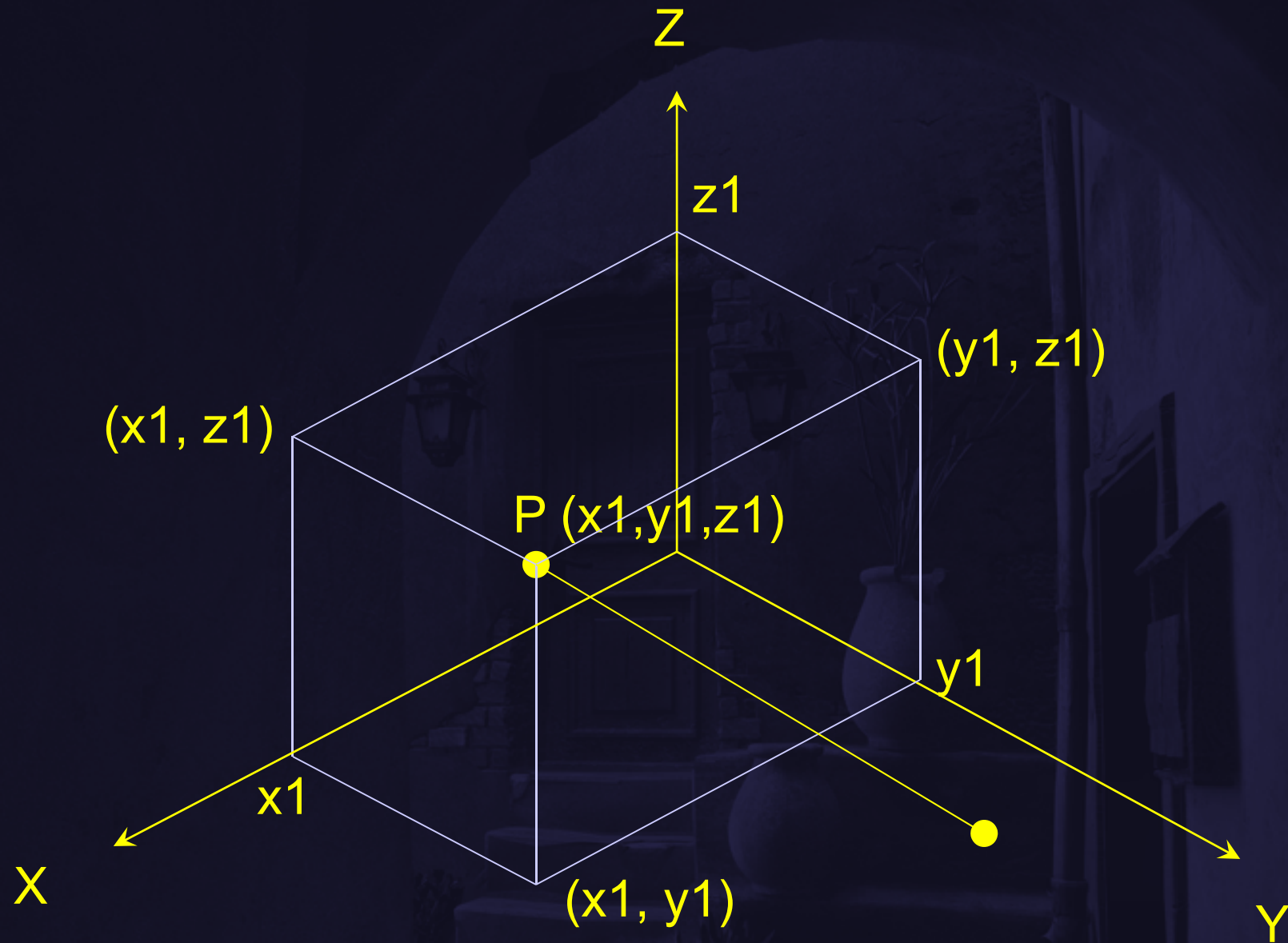
2D Vectors

What is 2D and 3D

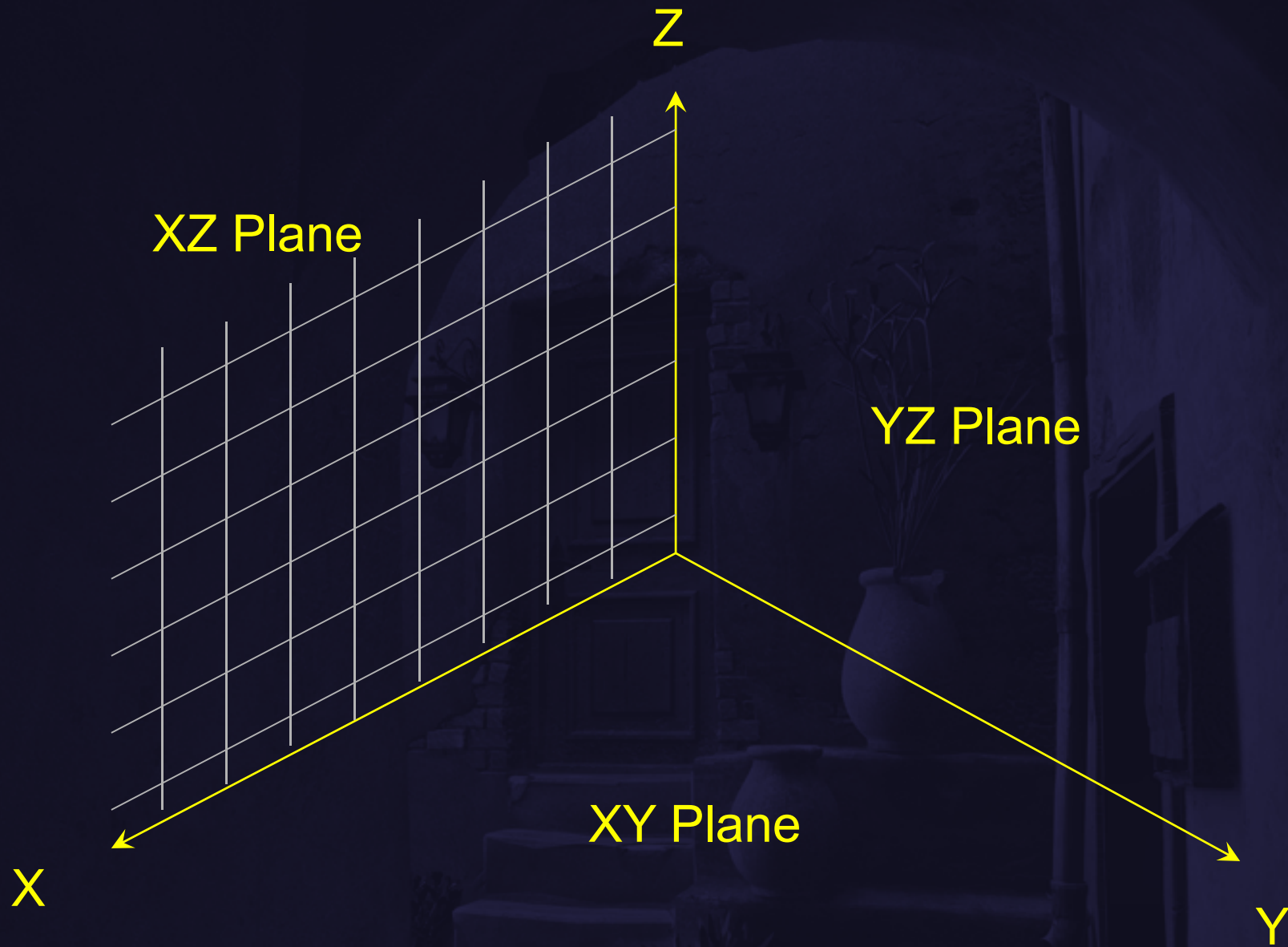


3D is made of 3D vectors and surfaces without tickness
(2D-3D object- non renderable)

A point in 3D



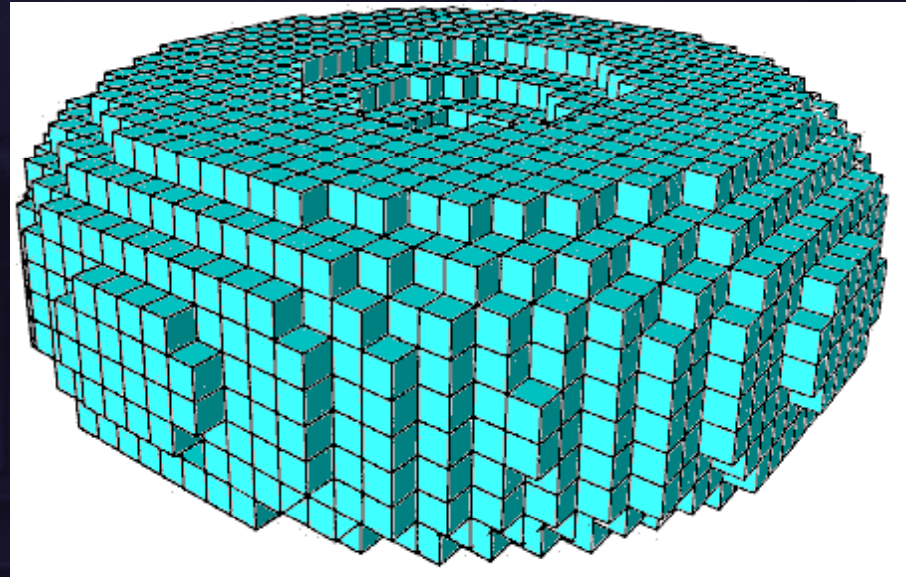
3D Planes



3D Vo X EI

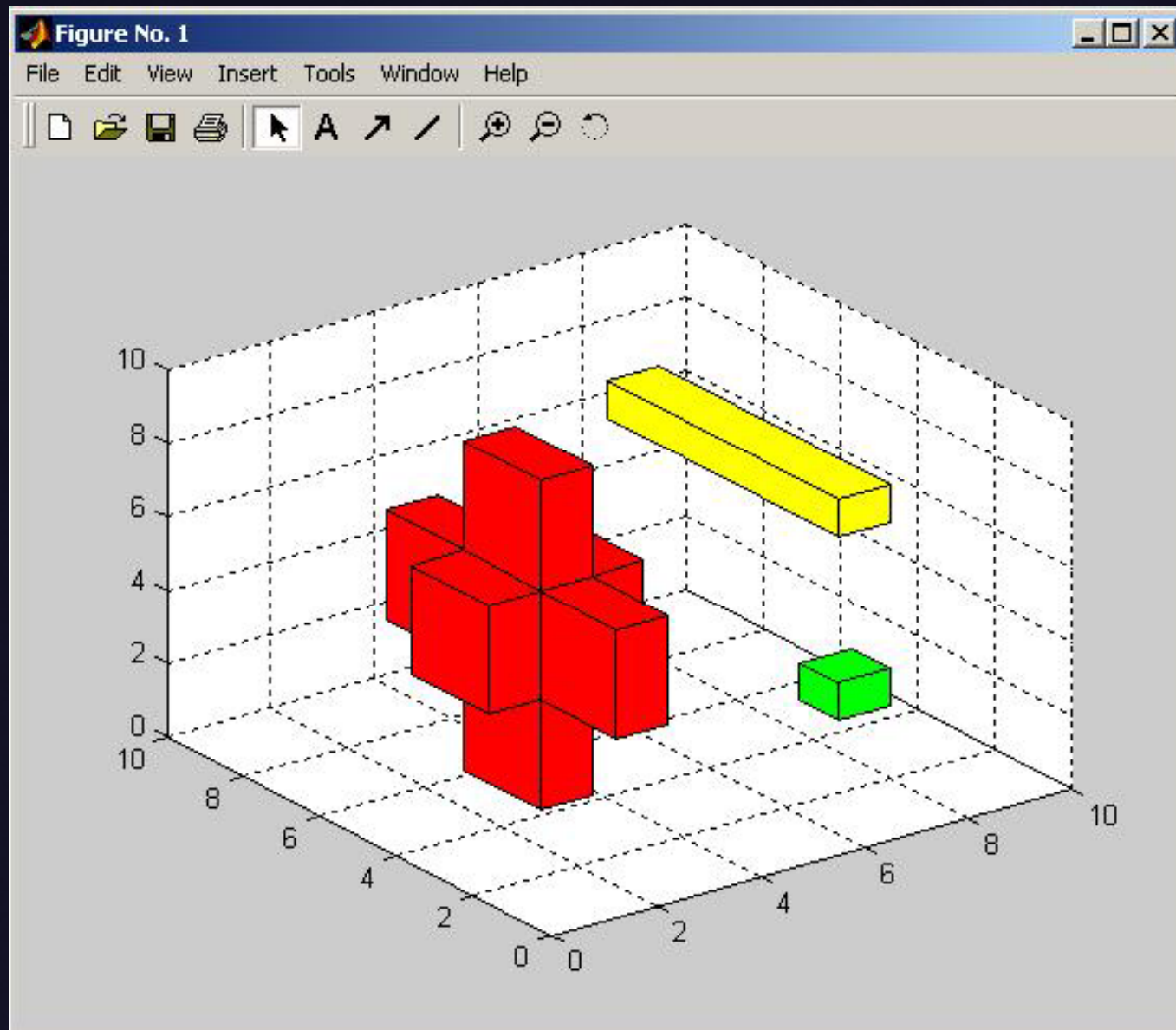


Famous Tea Pot



torus

3D Vo X EI



Quick Basics of 3D Objects

3D

Vertex

Edge

Face

Polygon

2D

Vertex

Segment

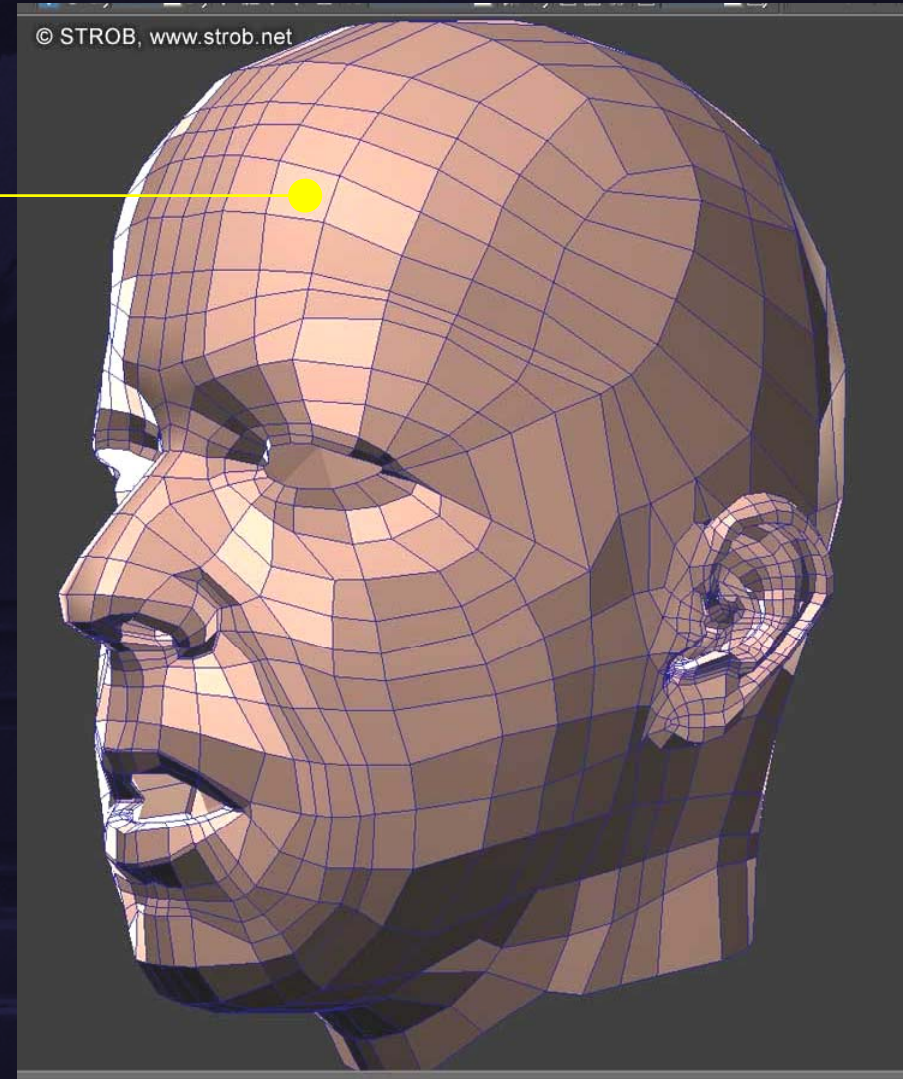
Spline



Quick Basics of 3D Objects

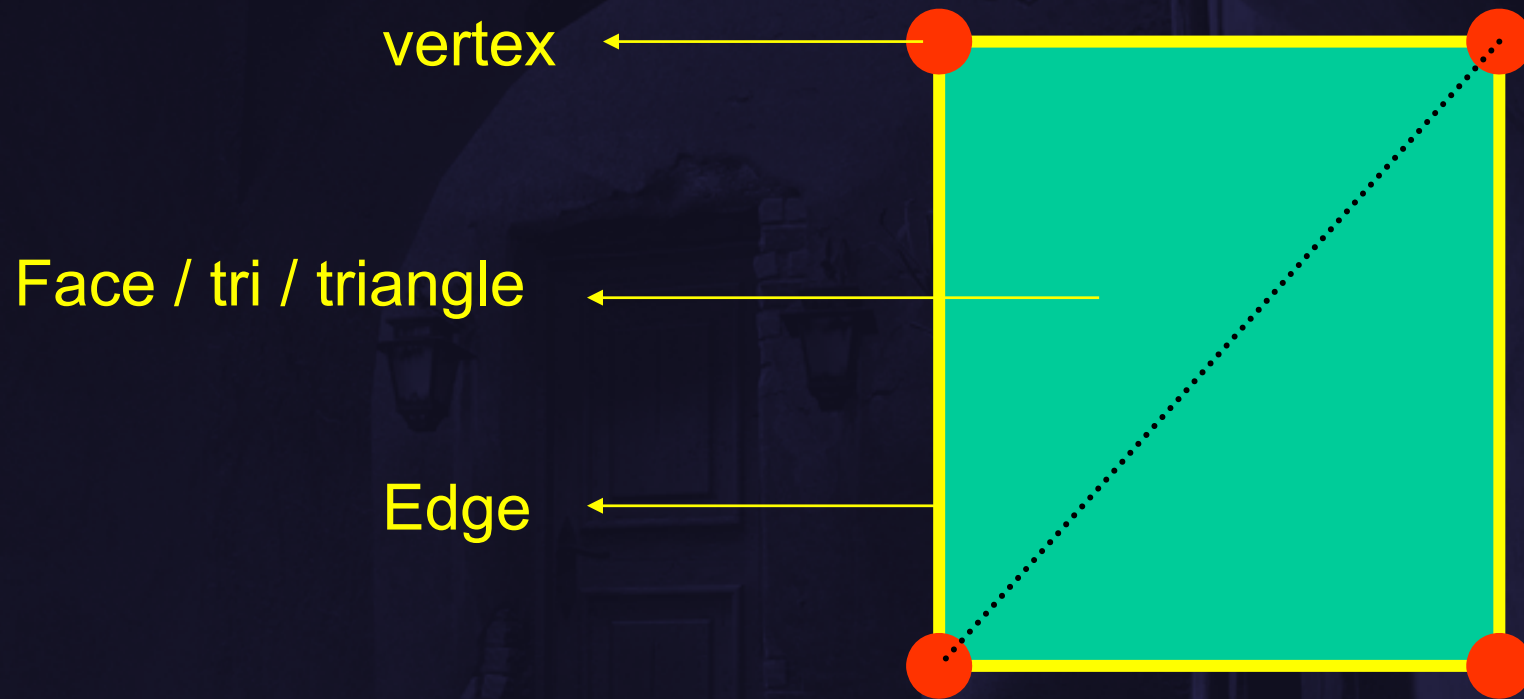
A Polygon

(3D 3D object - renderable)



Anatomy of 3D Objects

A Polygon



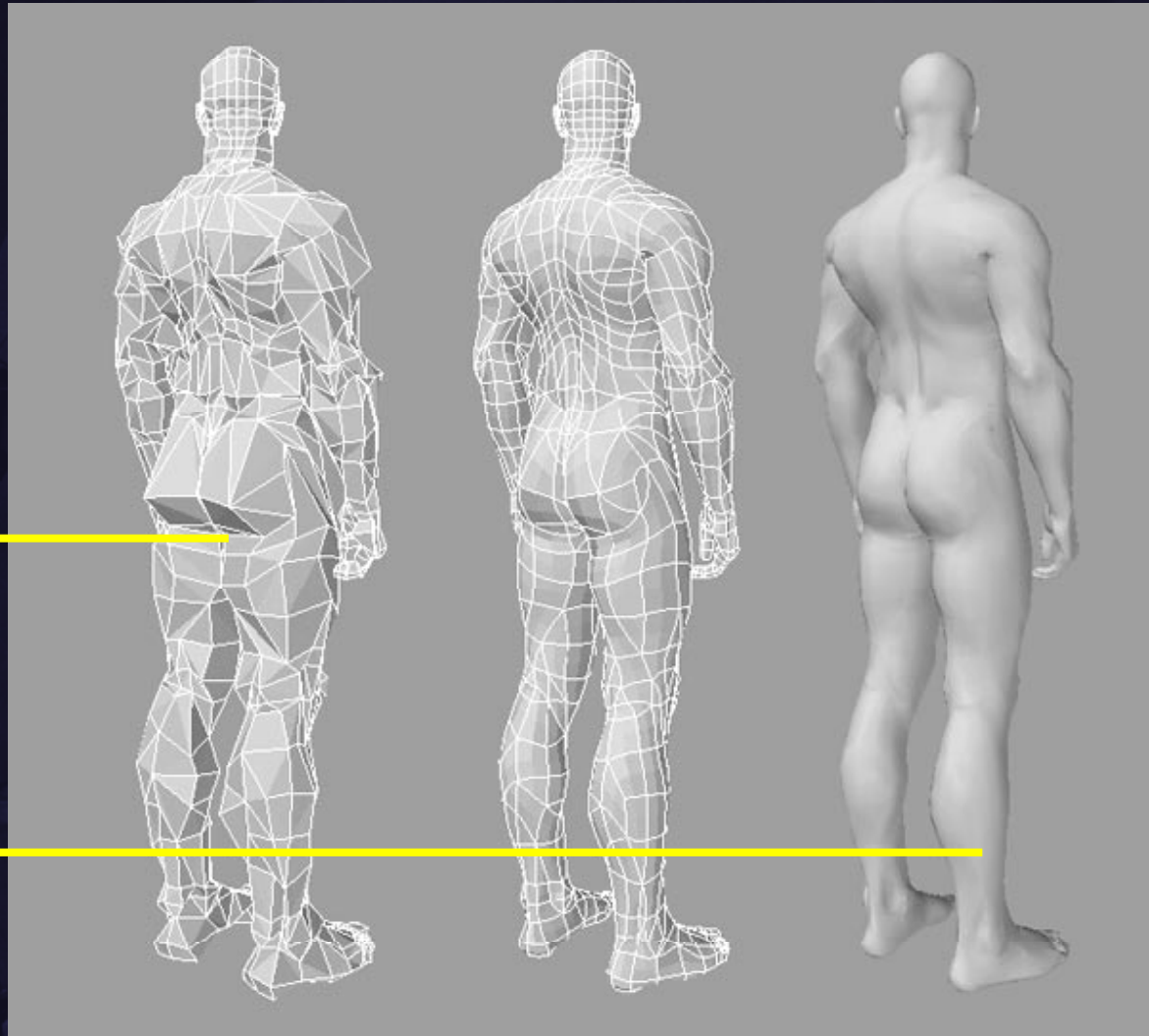
Anatomy of 3D Objects

A Character / organic Model

Solid view with
wires on

controlling mesh

surface smoothed

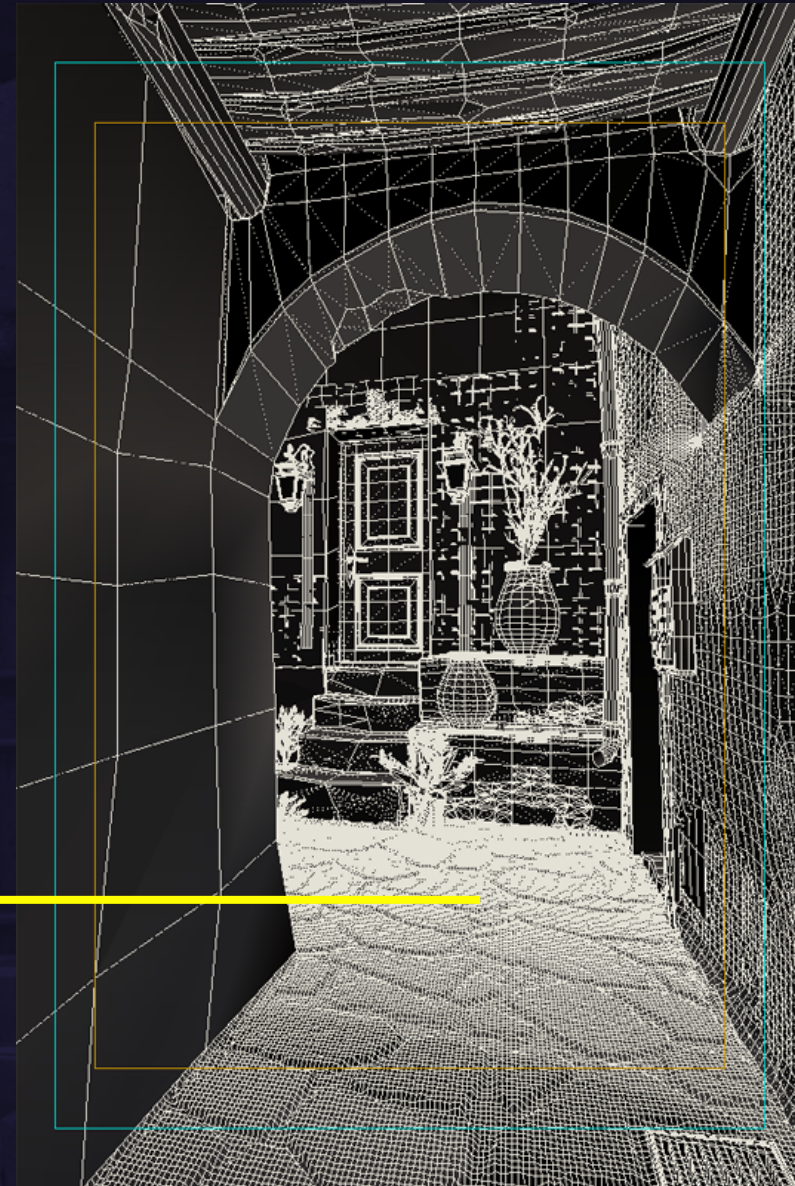


Anatomy of 3D Objects

An Architectural Model

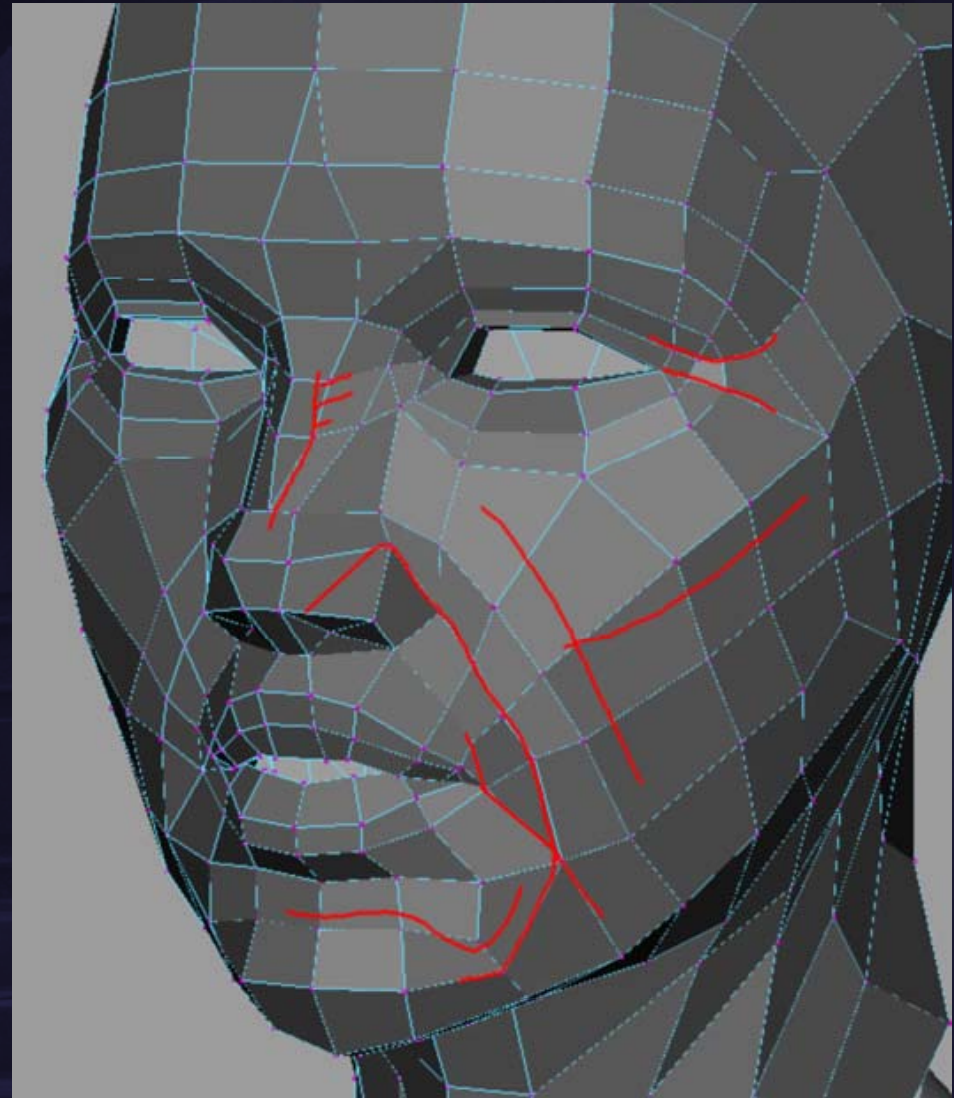
Solid view with
wires on

Displacement mapping
applied



Surface Topology

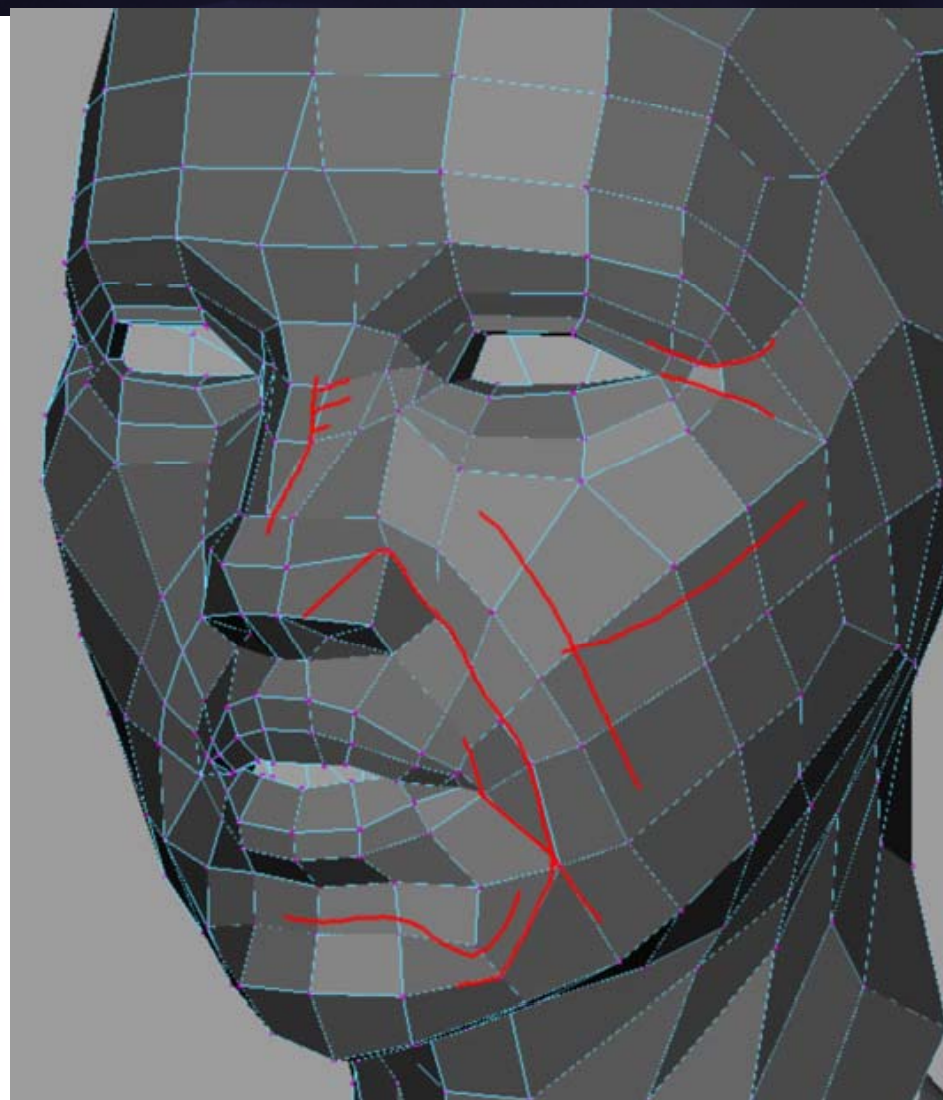
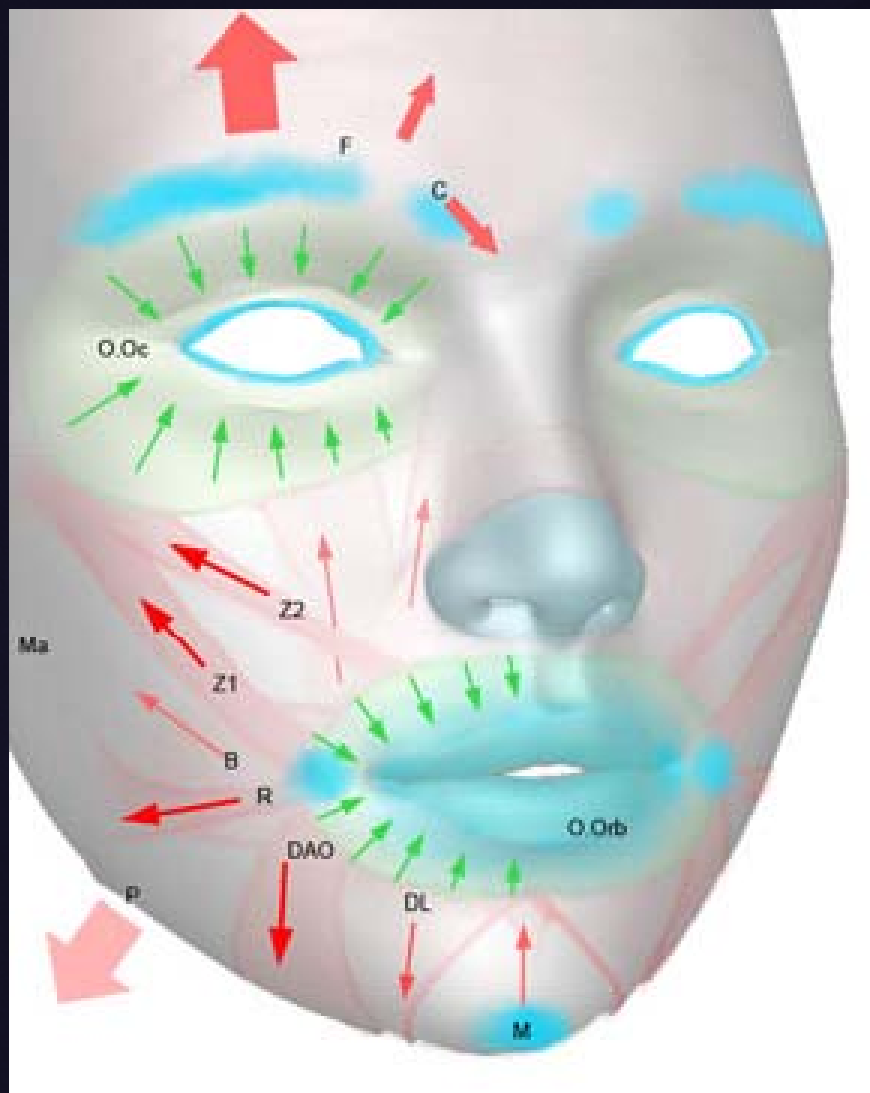
Topology is the logical relationships between connecting or adjacent coverage features (eg, arcs, nodes, polygons, and points).



Surface Topology



Surface Topology



Texture Mapping

Same Architectural Model
With Texture Mapping



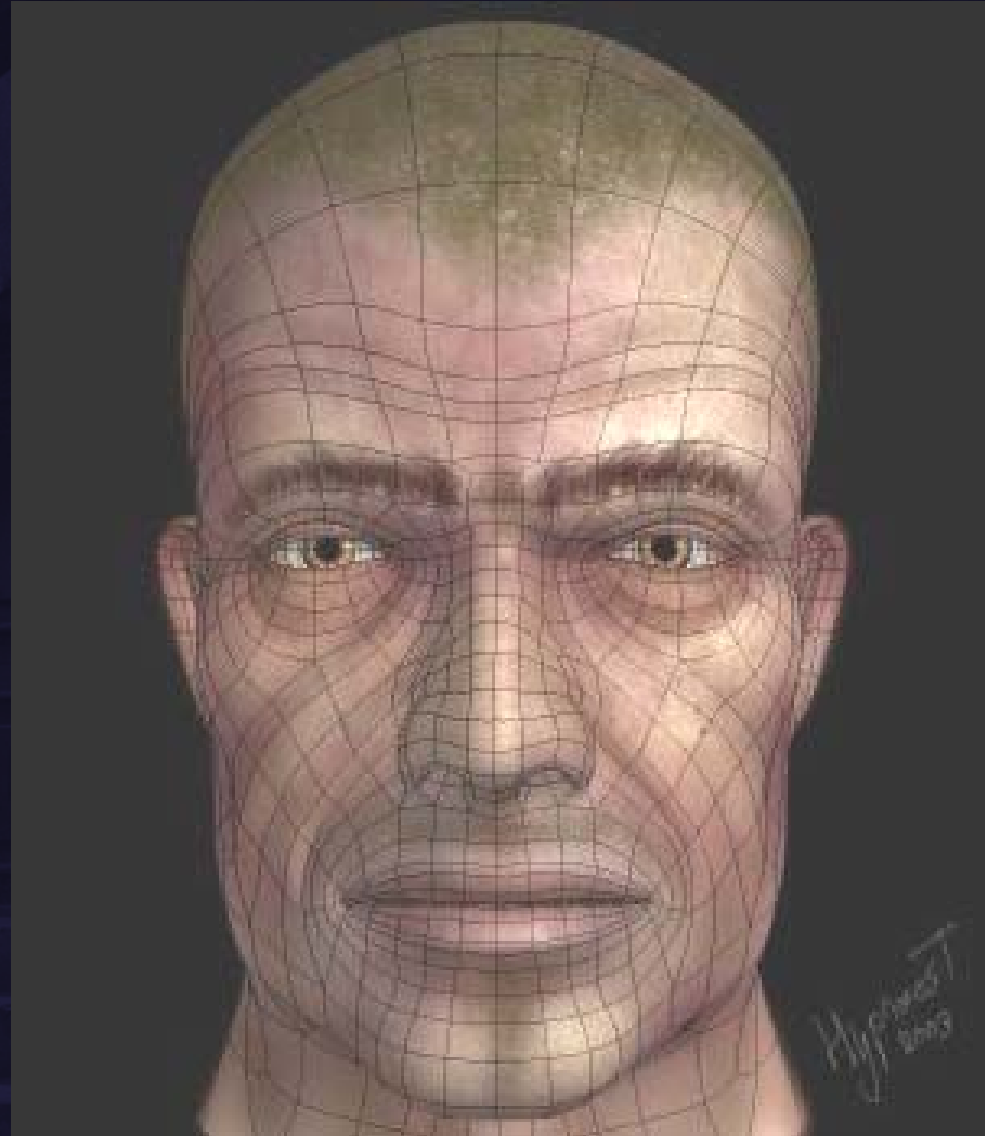
Texture Mapping

Mapping is the process of placing a bitmap image, or texture, on a surface during rendering.



Texture

Texture the surface quality or physical feel of an object examples are flat, prickly, bumpy, rough, smooth, shiny etc.



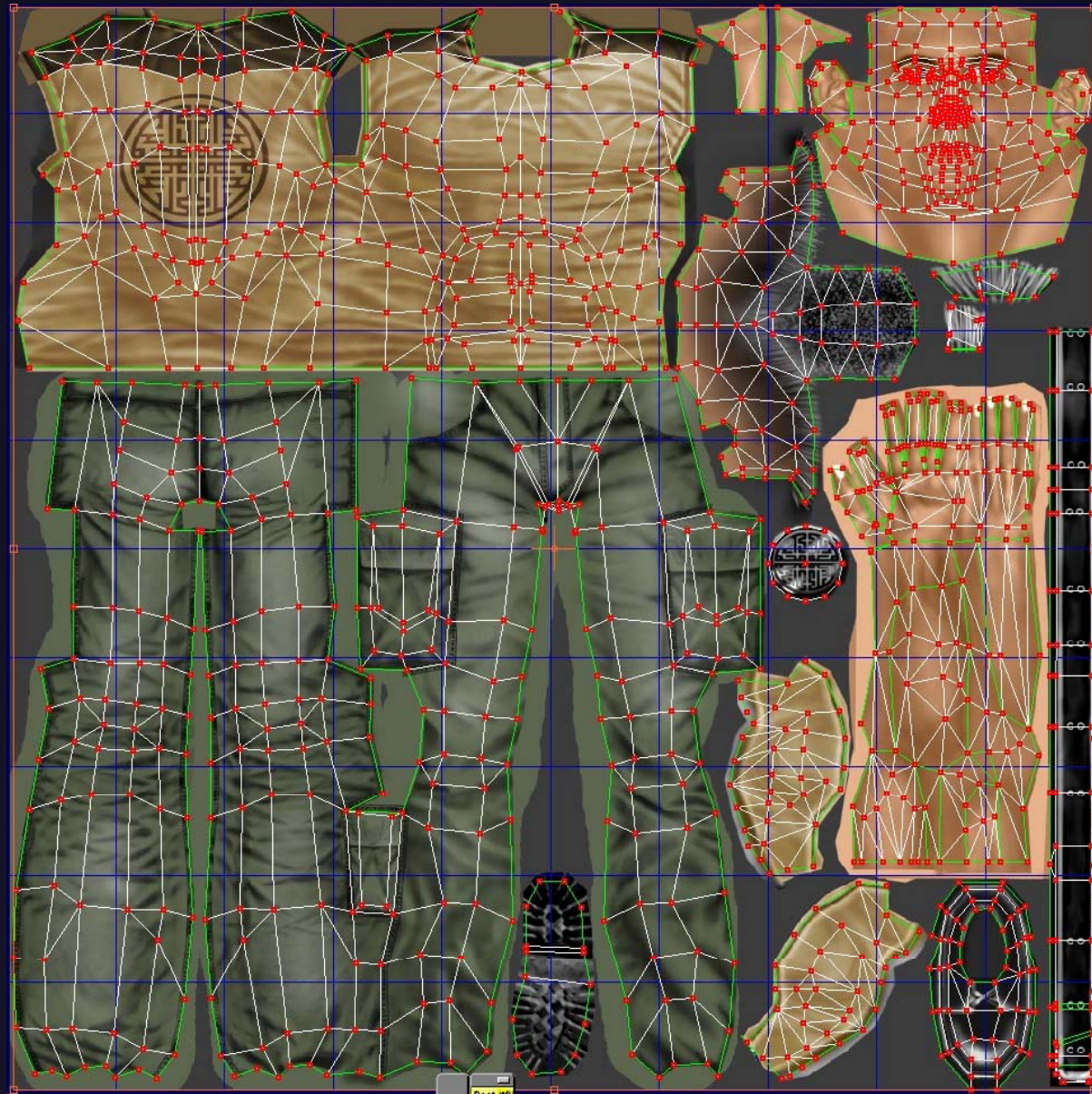
Texture

The character



Texture

Unwrapped
Texture



Posing



Posing

LUNA

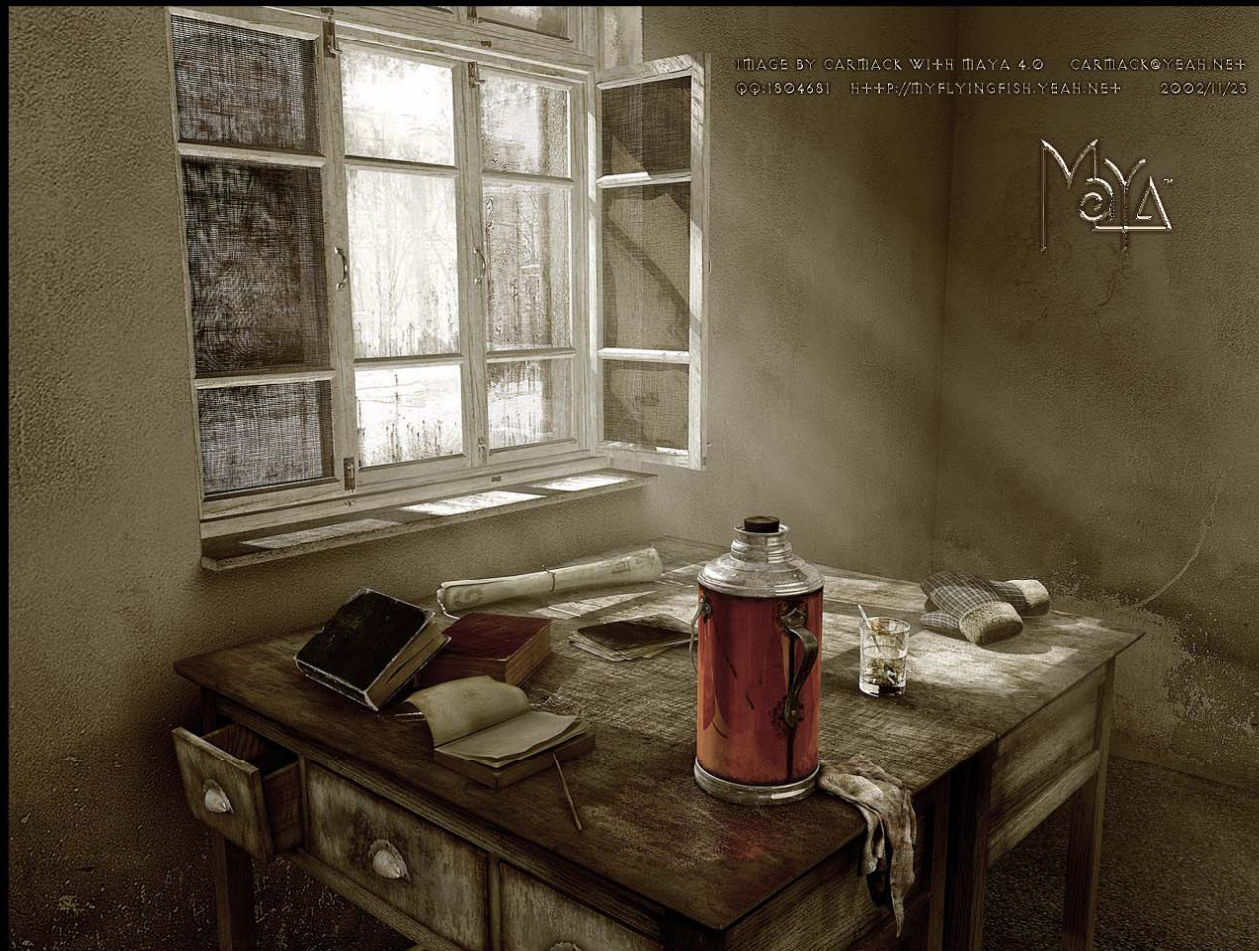
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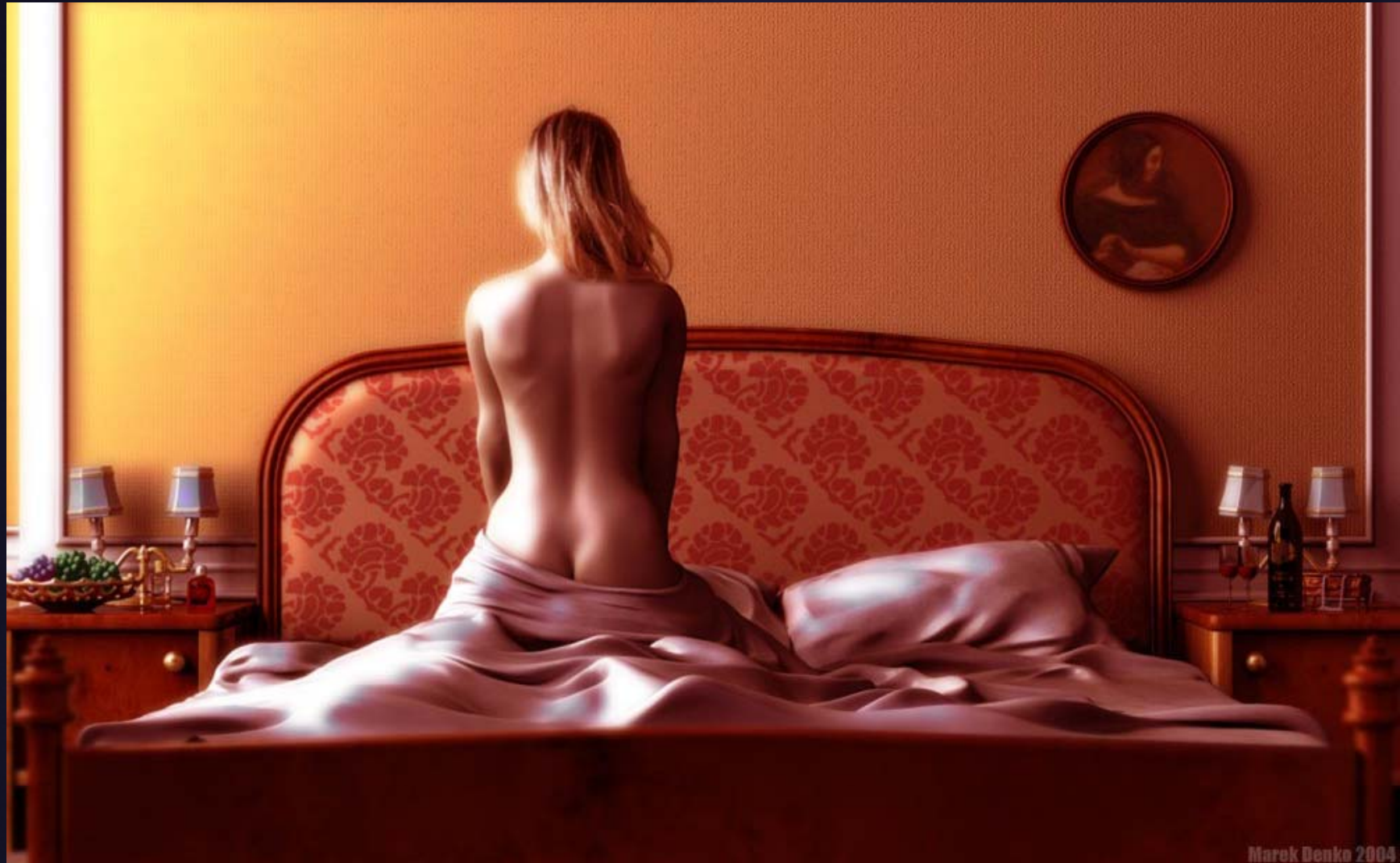
Posing



Lighting



Lighting



Marok Denko 2004

Lighting



© Juan Siquier 2004

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Image submitted for critique - CGNetworks.com | CGTalk.com

Animation



Where is 3D Used?

1. CAD / CAM

2. Real time simulation material in military and medical simulators

3. Industrial design and production

4. Architecture and interior design

5. Stage design

6. Computer games

7. Cinema, visual effect.

8. Animation films

9. As an art itself

Relations With Arts

1. Sculpture

2. Painting

3. Photography

4. Architecture

5. Cinema

6. Animation

7. Music

8. Dance

9. Literature

Relations With Science and Technology

1. Mathematics
2. Computer Programming
3. Hardware
4. Anatomy
5. Physics

Learning Duration of 3D

It takes a life time

A dark, atmospheric 3D rendered scene of a traditional building entrance. The scene is dimly lit, with a stone archway leading to a doorway. A set of stone steps leads up to the entrance. To the right, a large, rounded vase sits on a ledge, containing a tall, thin plant. The overall mood is quiet and contemplative.

Reference WEB Sites

1. www.cgsociety.org

2. www.3dtotal.com

3. www.gamasutra.com

4. <http://forum.arkitera.com/showthread.php?t=5822>



Questions

DO ask anything you want to learn

STUDY at least 2 hours a day

WATCH animation films and PLAYgames

DO search on google

DO read books about arts

First WTM Assignment

Watch the movie and write down what you understand



Contact

www.cetintuker.com
msu.cetintuker.com (class material)

cetin_tuker@yahoo.com