BINUS UNIVERSITY

People. Innovation. Excellence.

Seminar Peminatan Interactive Multimedia

Genap 2012/2013

D4740 - Rhio Sutoyo

Agenda

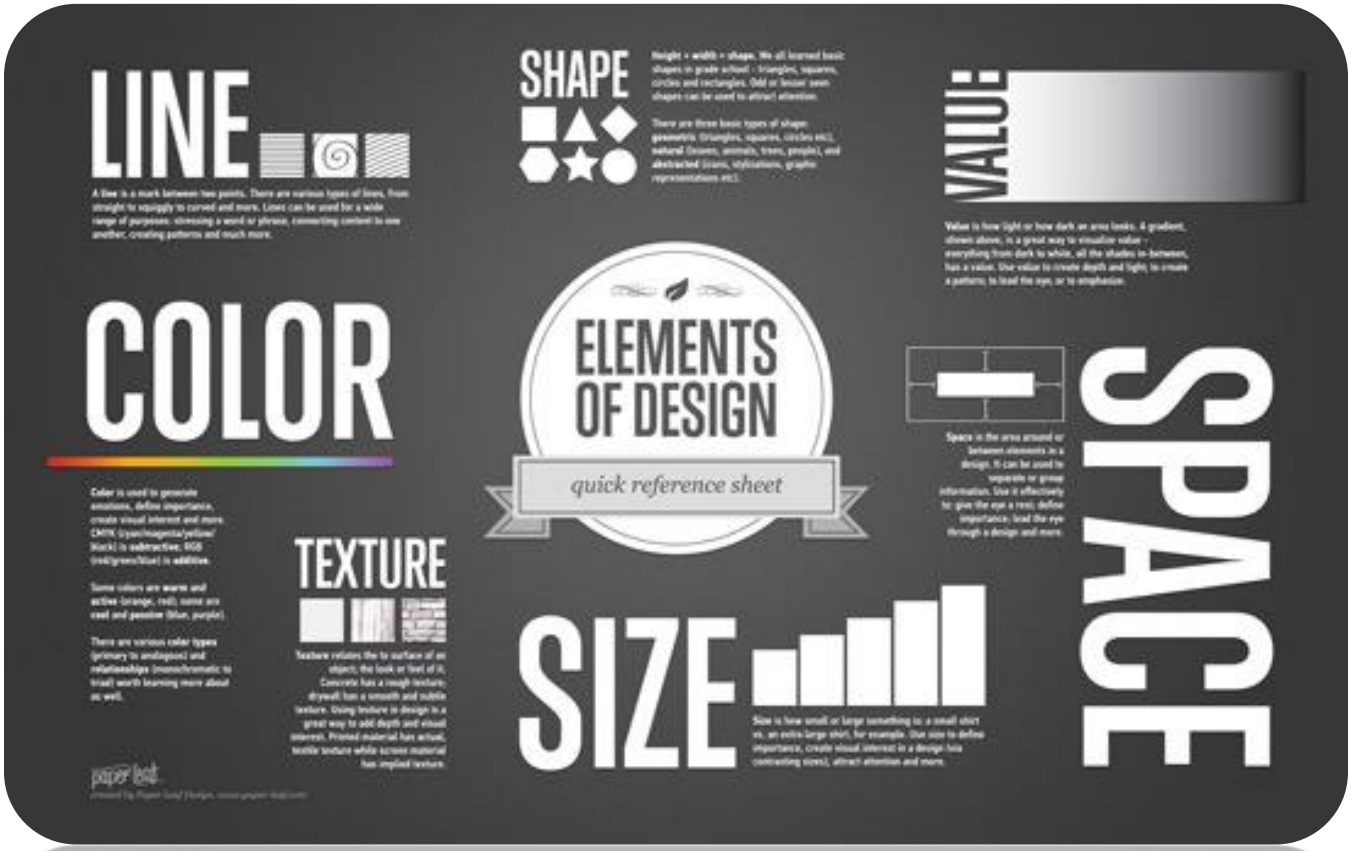
- Multimedia Programming Foundation
- Game Design and Programming
- Multimedia 3D Modeling and Animation
- Current Popular IT V
- Products of Interactive Multimedia
- Potential Research in Interactive Multimedia
- Career Opportunities

MULTIMEDIA PROGRAMMING FOUNDATION

Learning Outcomes

1. Compare formats in multimedia elements
2. Use formats in multimedia elements
3. Select multimedia elements builder

Multimedia and GUI



Color In Image

Color Processing

- Color and Tristimulus Theory
- Color Model, Gamut, and Color Space
- Digital Image and Image Compression

Image File Format and Manipulation

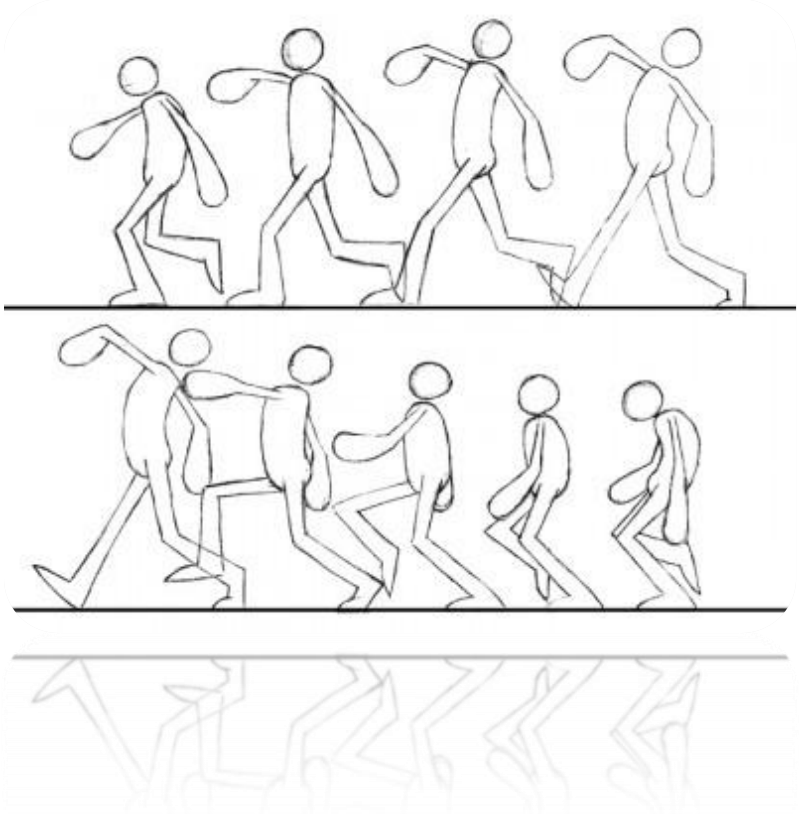
Graphics 2D

Introduction to Graphics 2D

- Graphics
- Stroke
- Composite
- Antialiasing

Animation in Graphics 2D

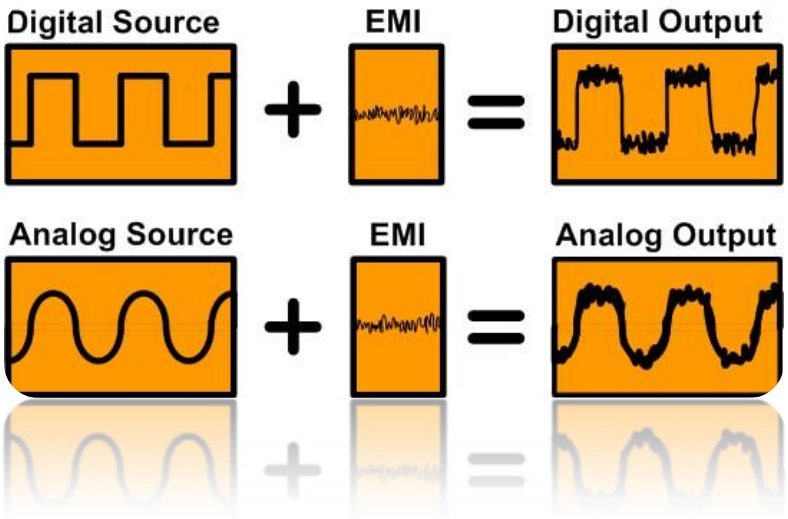
- Frame and Cast Based Animation
- Frame Rate
- Transparency
- Animation Process



Audio File Format

Audio Processing

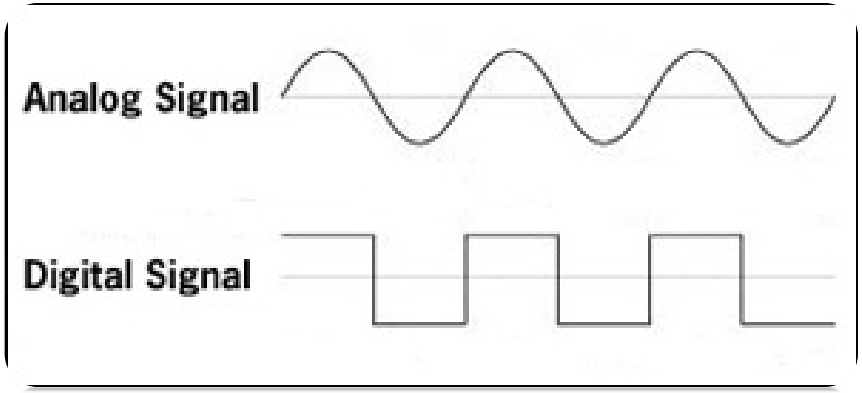
- Audio Architecture
- Audio Digitization
- Audio Compression

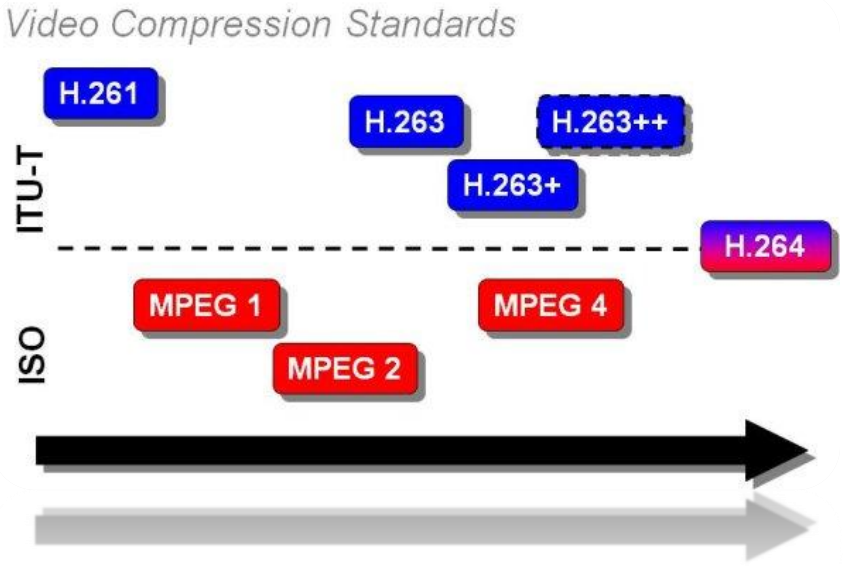


Fundamental Concepts in Video

Fundamental Concepts in Video

- Analog Video vs Digital Video
- Digital Video Compression
- Video Transmission





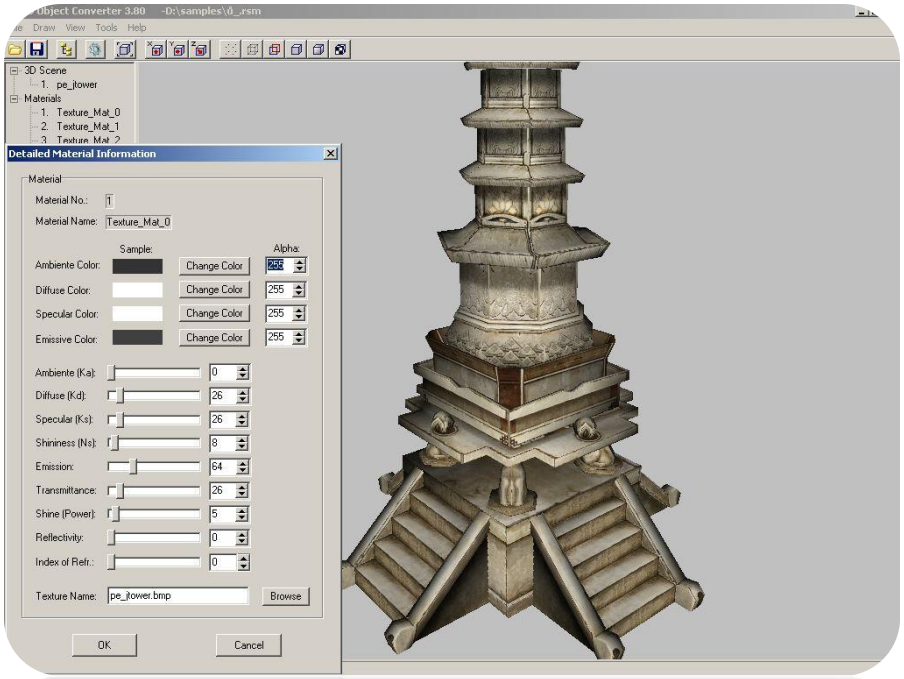
Current Popular Multimedia

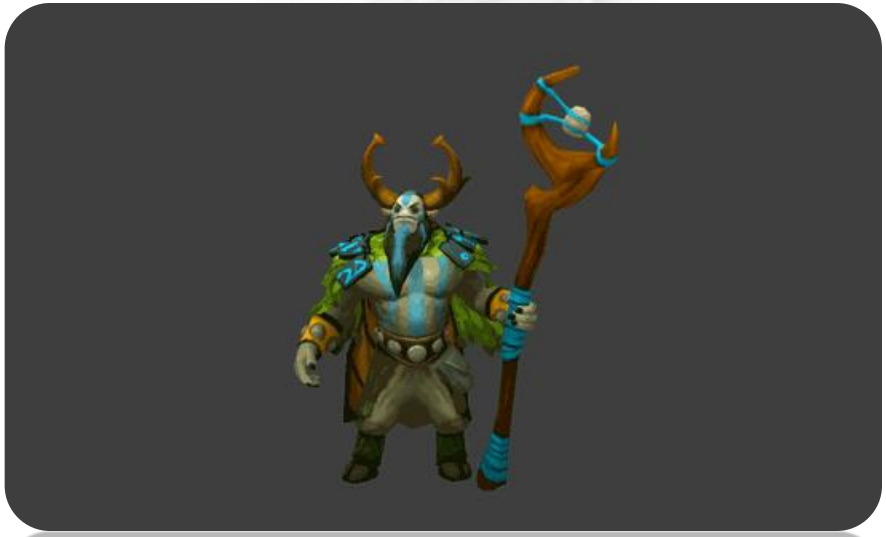
COMPACT disc

DVD™

Blu-ray Disc™

Introduction to 3D Objects





GAME DESIGN AND PROGRAMMING

Learning Outcomes

1. Explain general game theories
2. Explain game development process
3. Create game design documentation
4. Create an appropriate game design
5. Create a simple game based on the design

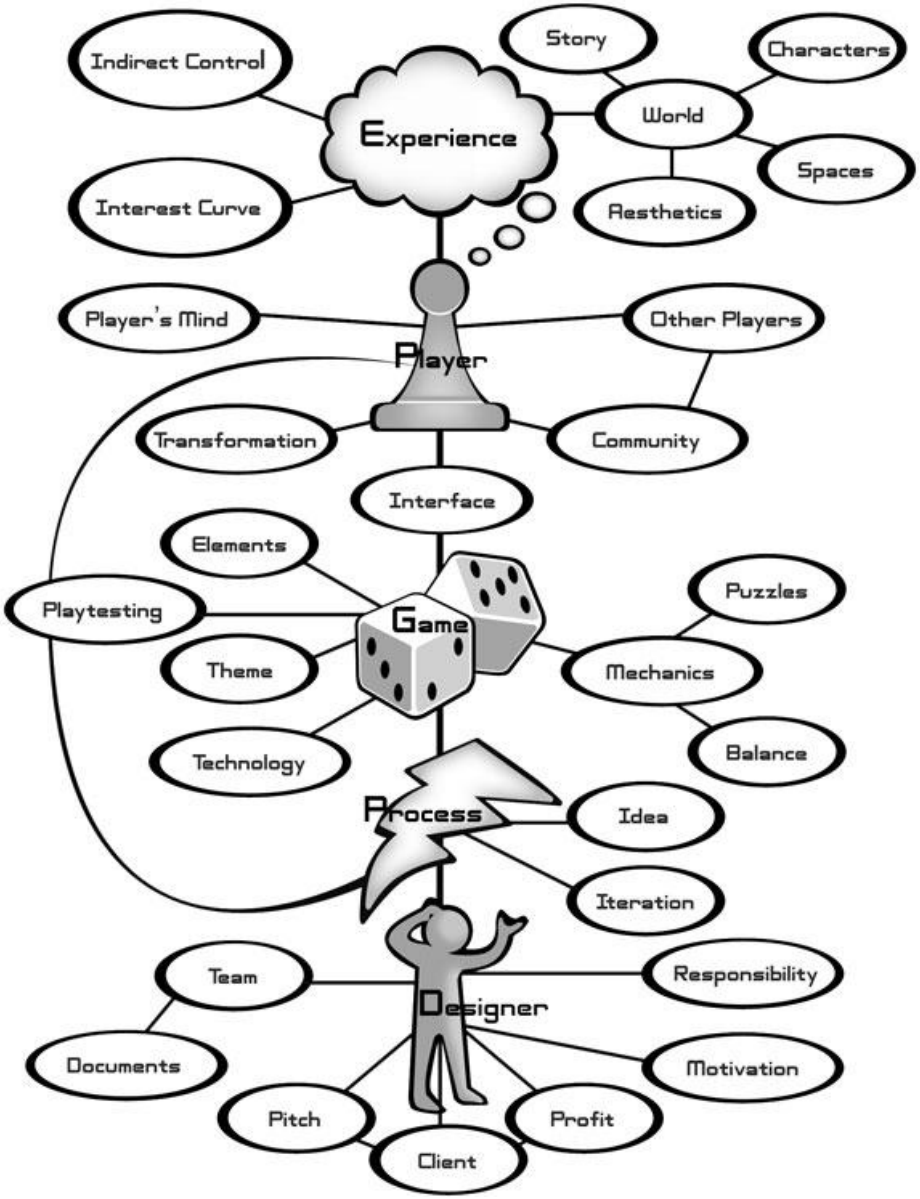
Game Genres

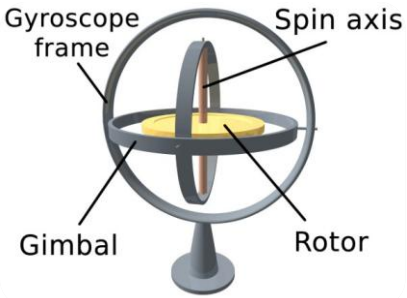
MUSIC
VEHICLE SIMULATION
FAMILY/PUZZLE
SIMULATION
FIGHTER
SPORTS
REAL-TIME STRATEGY
TURN-BASED STRATEGY
ACE
AE
AC
ASE
ASC
SE
SCE
SC
ACTION
STRATEGY
EXPLORATION
CONFLICT

Game Genres

The Evolution of Game Videos Genres

Design Component and Process





Game Concept

How to create a game concept?

- Game idea
- Choosing the genre
- Target audience
- Types of game mechanics

Character Development

A Field Guide to Angry Birds

Games that lodge in the brain often have comical stars

The chubby white bird drops an egg bomb when players tap the screen after launching the creature from the slingshot.

Black birds act as bombs, which explode once they've landed on a target, obliterating pigs and buildings around them.

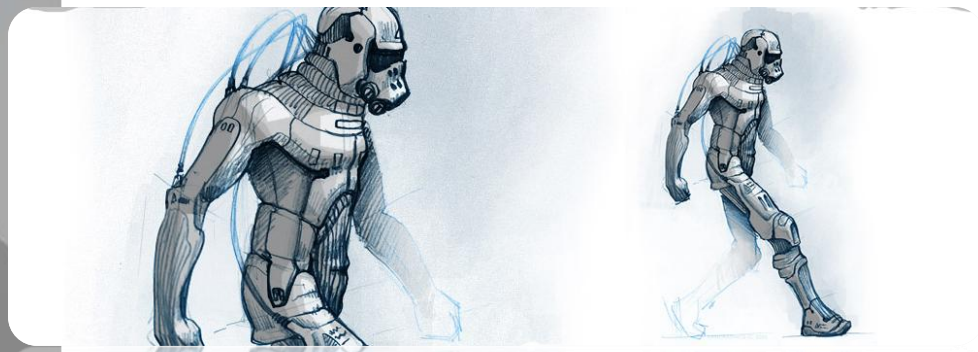
The first avian missile players encounter when they start the game, **the red bird** follows a simple trajectory when launched.

The blue bird splits into three smaller versions in mid-air when the screen is tapped.

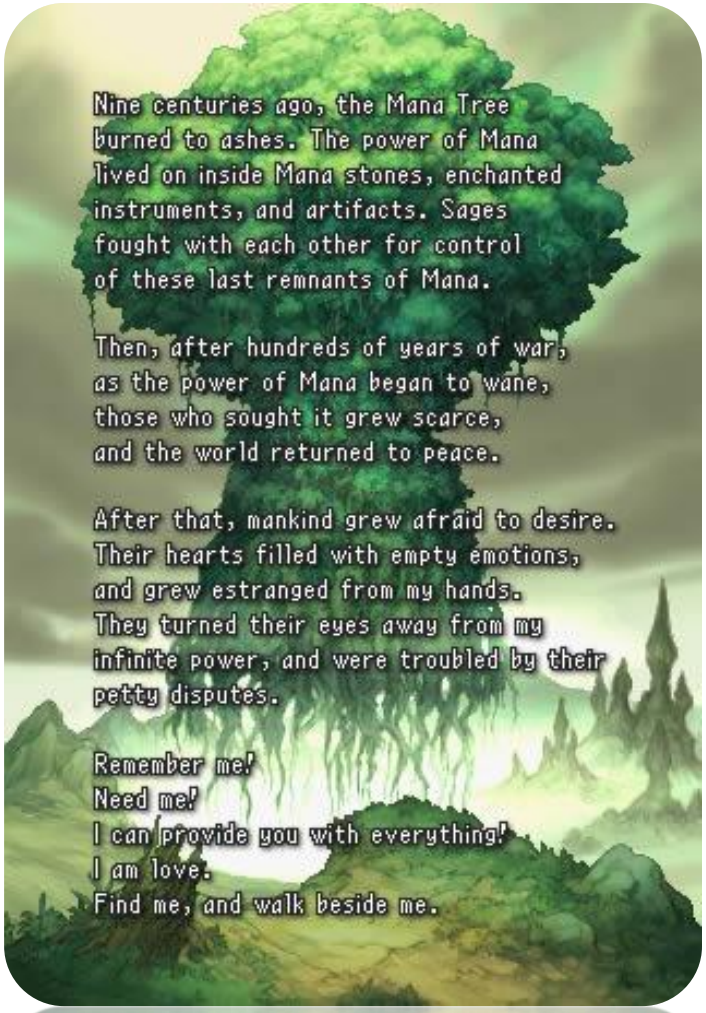
Tapping the screen after launching **the yellow bird** gives the critter a speed boost that makes it more deadly.

The green bird turns into a boomerang that doubles back to strike targets in otherwise protected locations.

The big red bird is a flying wrecking ball that causes more damage than his smaller red cousin.



Storytelling and Narrative



User Interface

Consoles

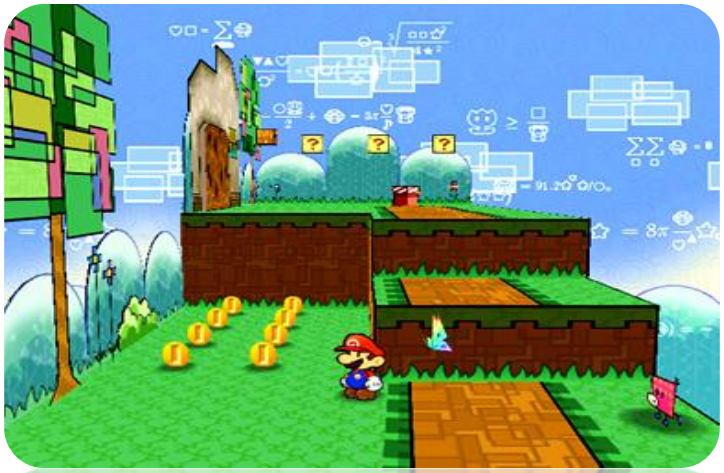
Mobile Phones

Game Play

Paper Mario: The Thousand-Year Door (2004)

Paper Mario: Sticker Star (2012)

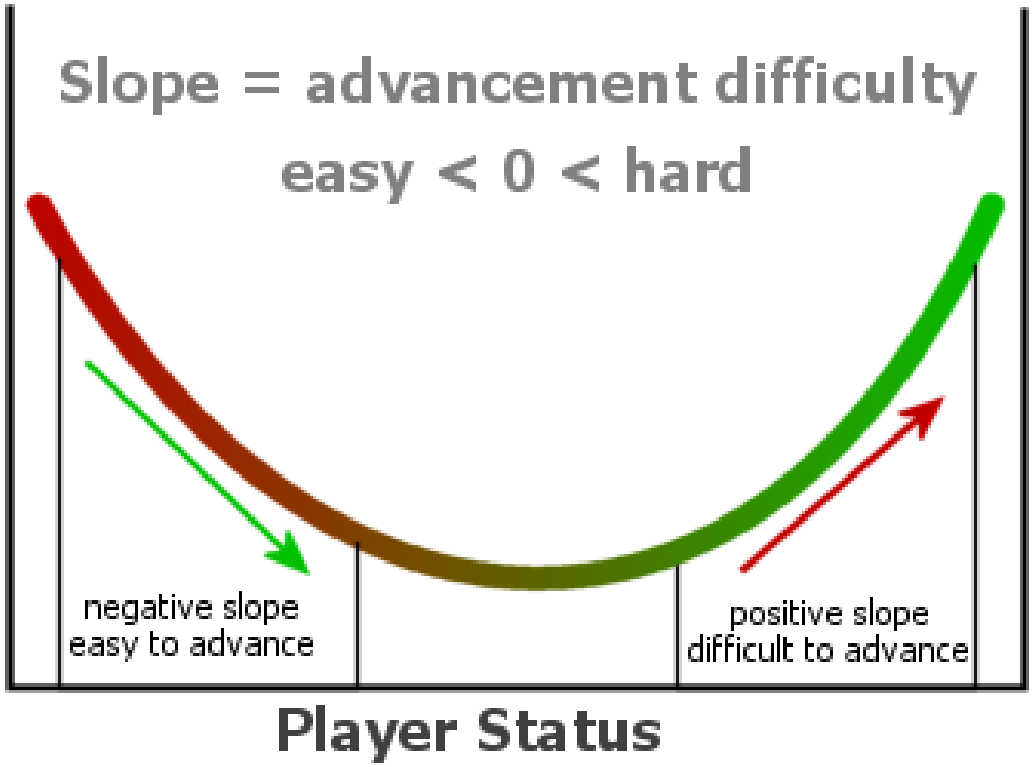
Super Paper Mario (2007)



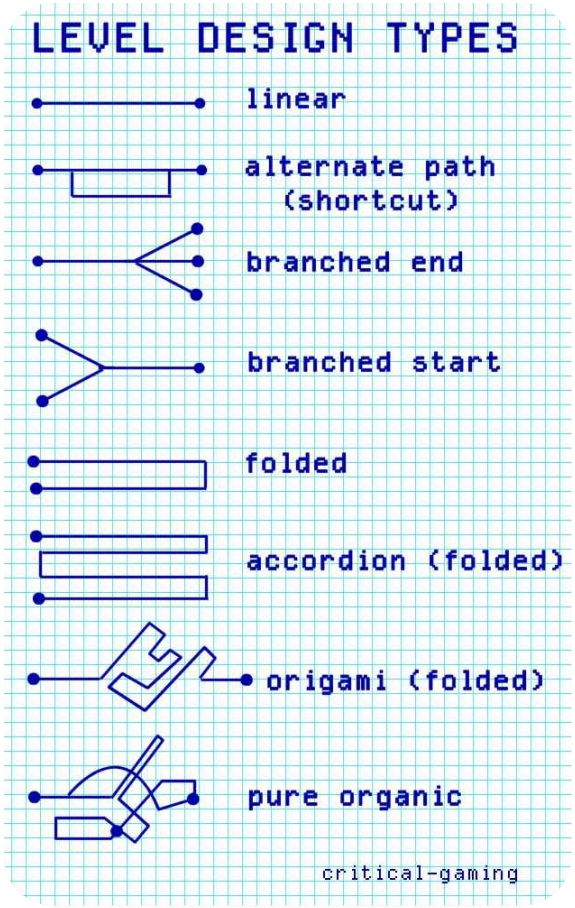
Game Balancing

Game Balancing (cont.)

Game Balancing (cont.)



Level Design

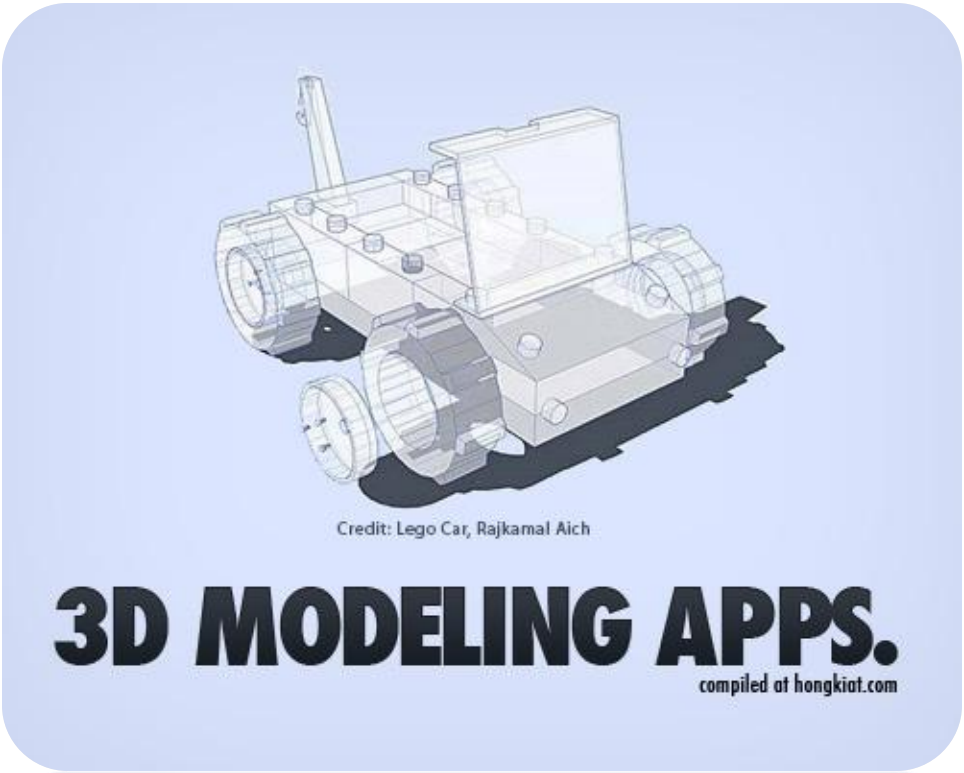


MULTIMEDIA 3D MODELING AND ANIMATION

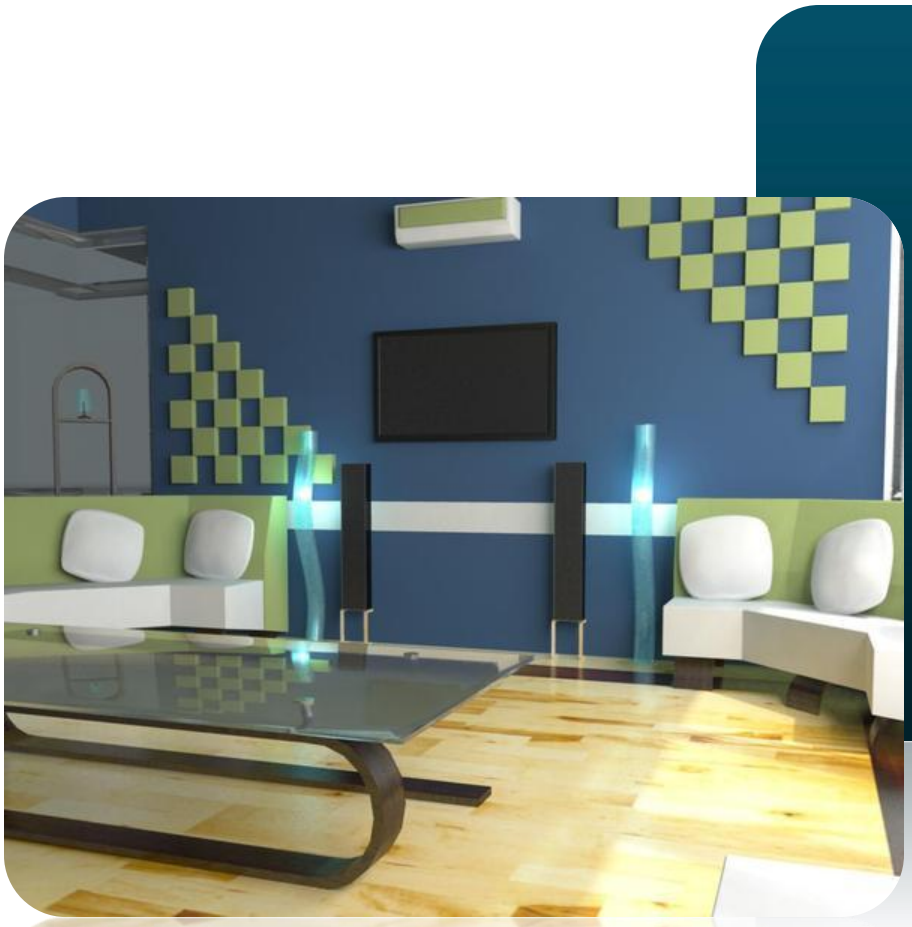
Learning Outcomes

1. Construct a simple 3D model
2. Apply motions to a 3d model
3. Modify settings for material and lighting
4. Apply additional effects to enrich the scene

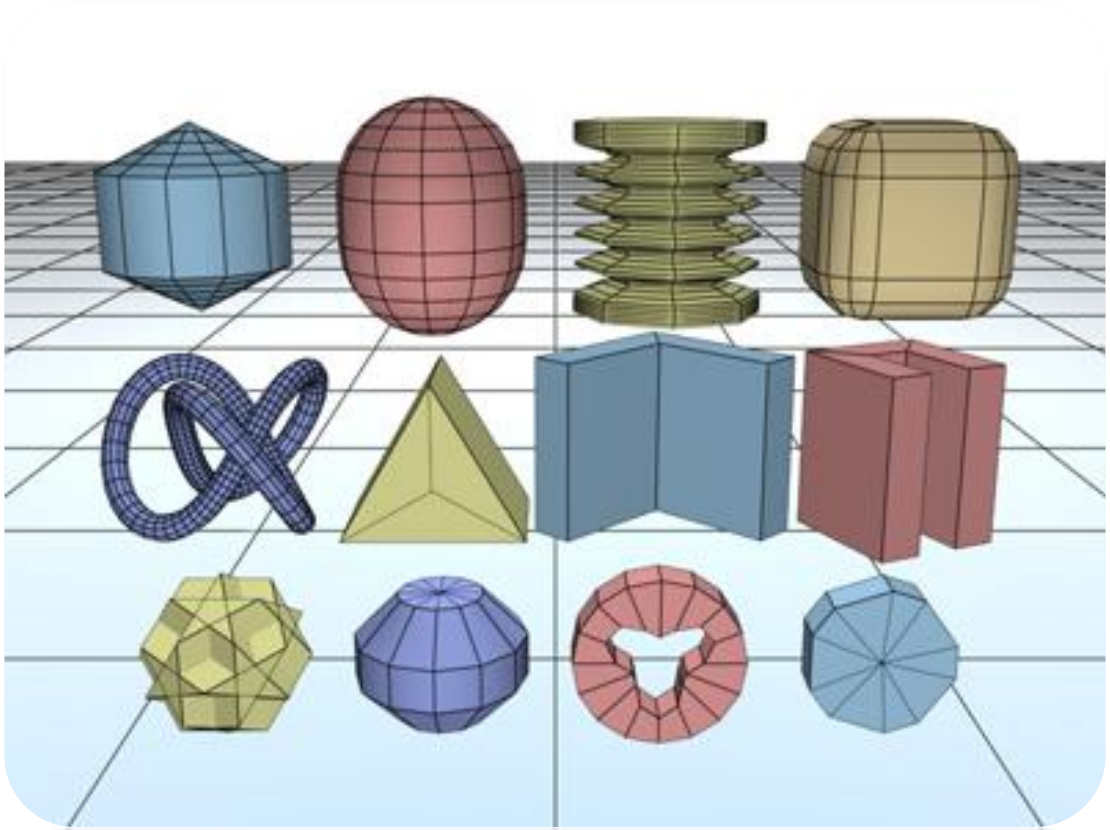
3D Modelling and Animation



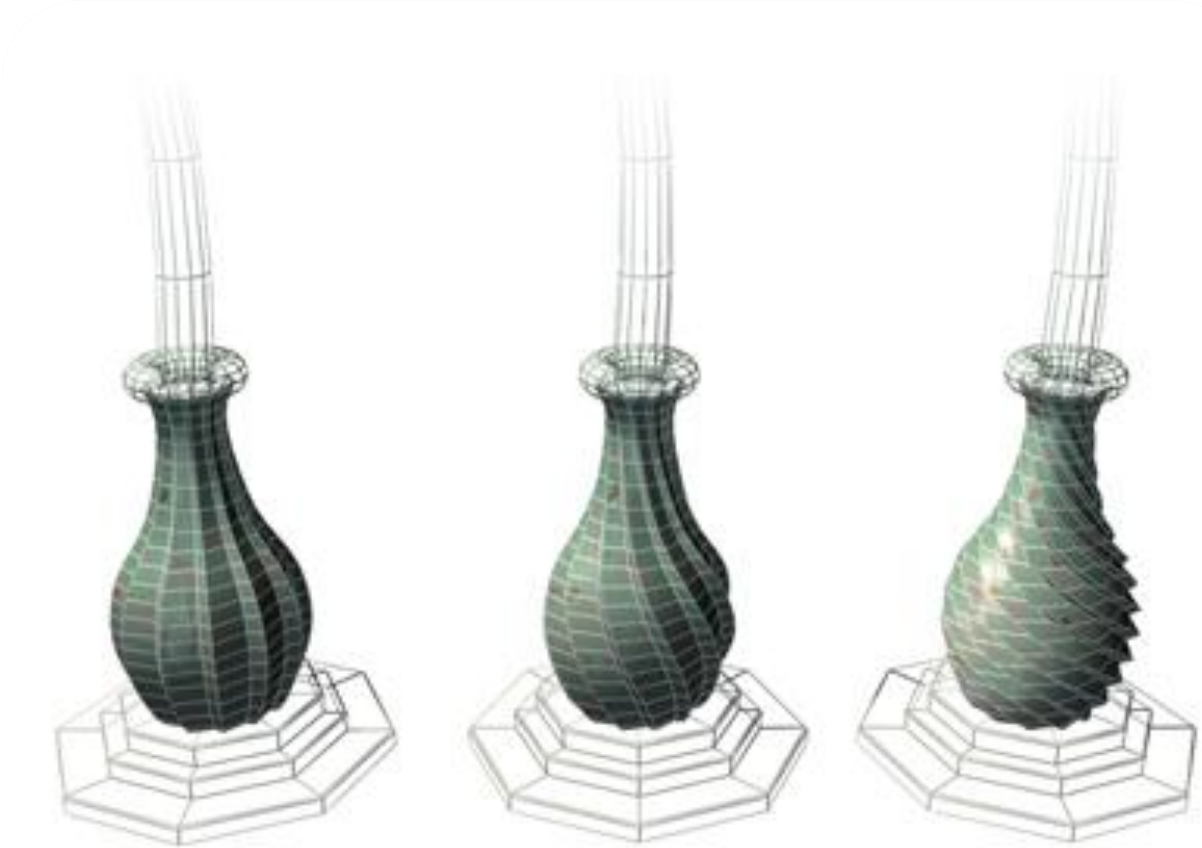
3D Modelling and Animation



Objects

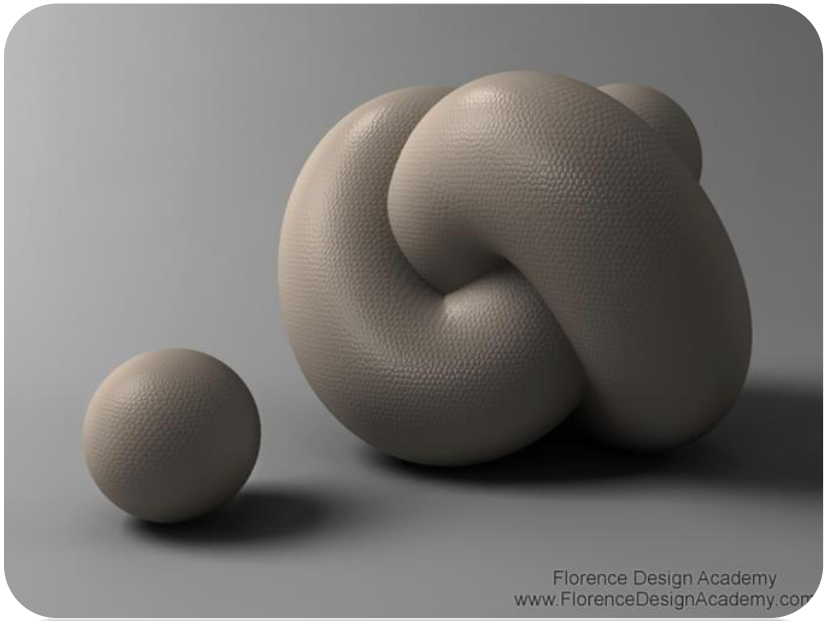


Modifiers



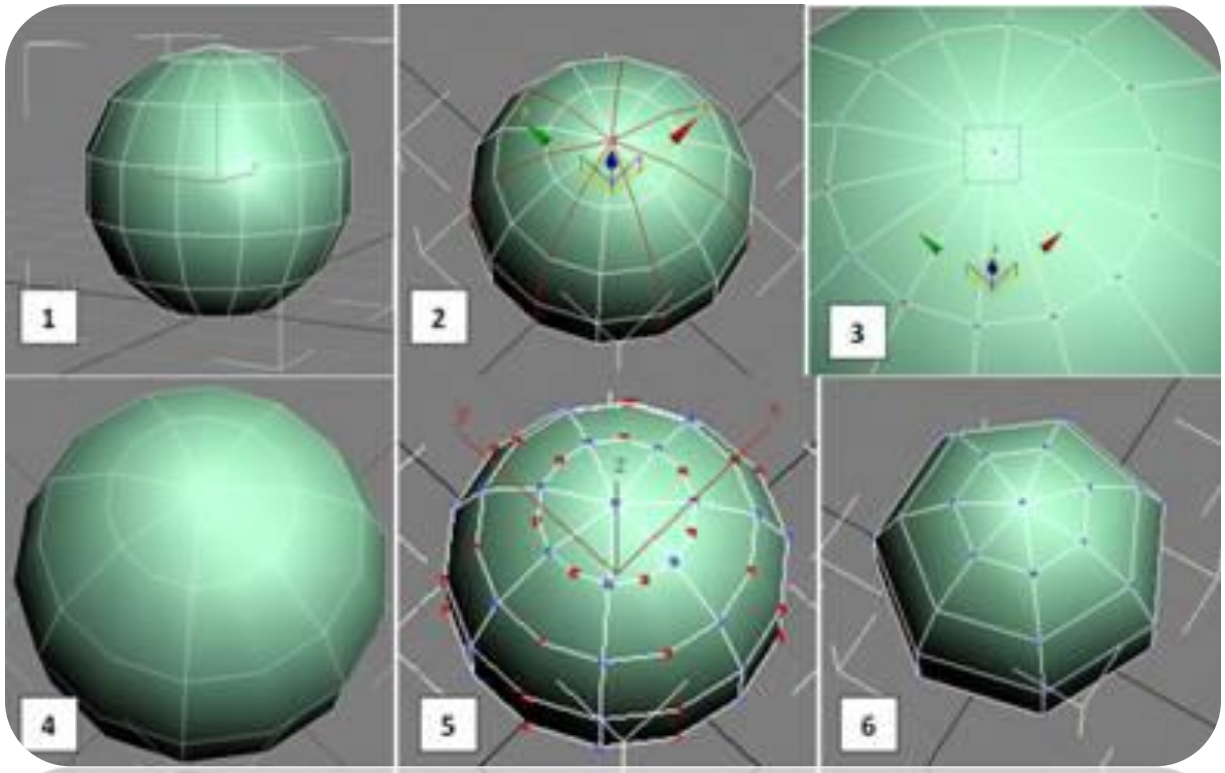
Twist Modifiers

Materials

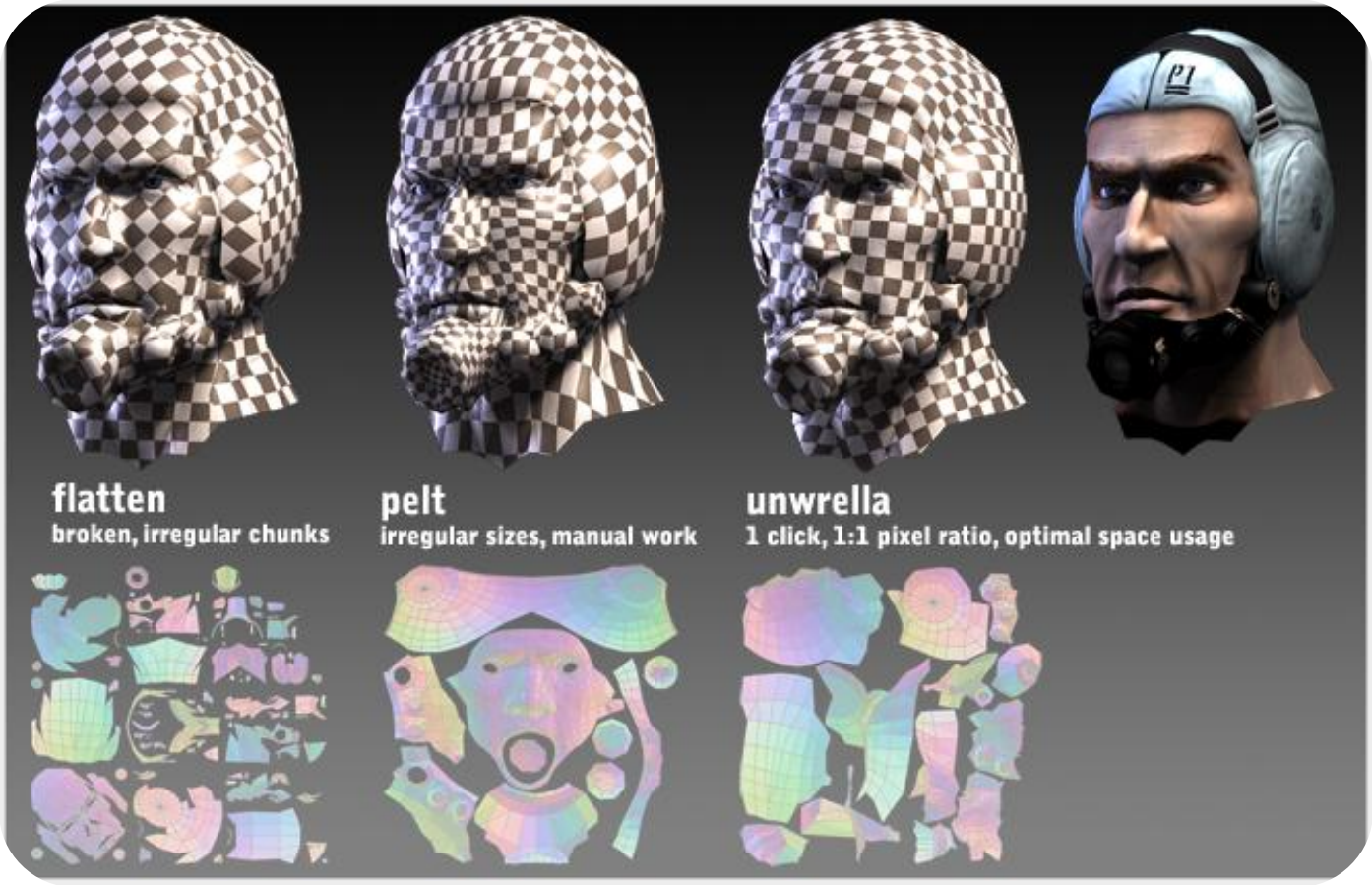

Florence Design Academy
www.FlorenceDesignAcademy.com

Florence Design Academy
www.FlorenceDesignAcademy.com

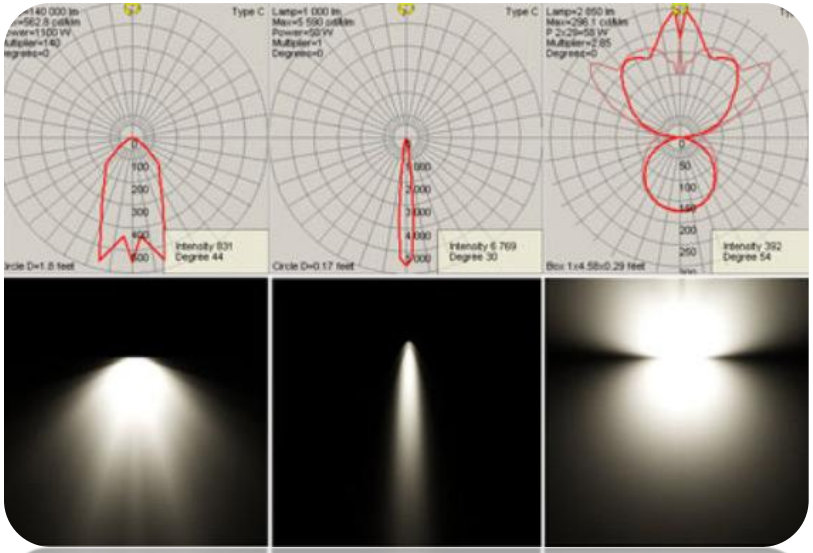
Polygon Editing



UV Mapping


flatten
broken, irregular chunks
pelt
irregular sizes, manual work
unwrella
1 click, 1:1 pixel ratio, optimal space usage

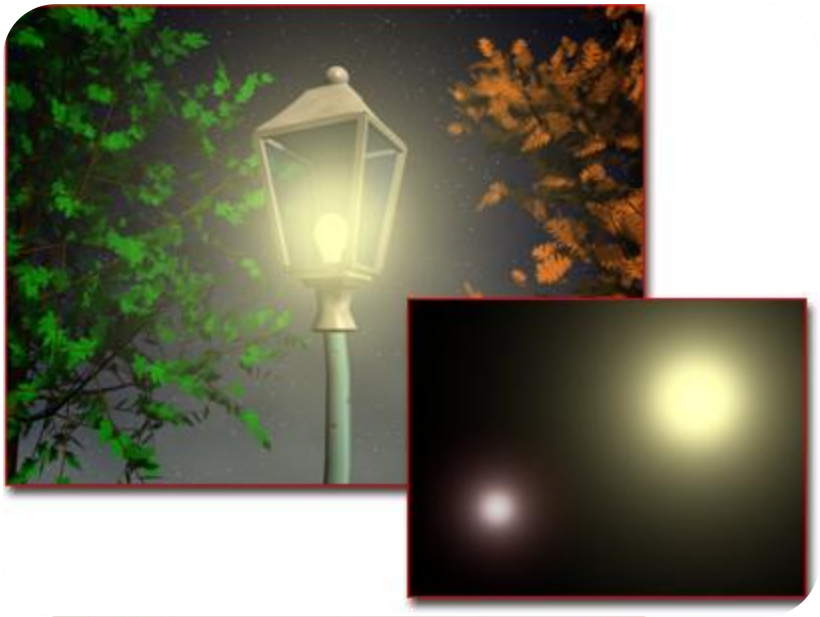
Lights



Environmental Effects

Fog Environmental Effects

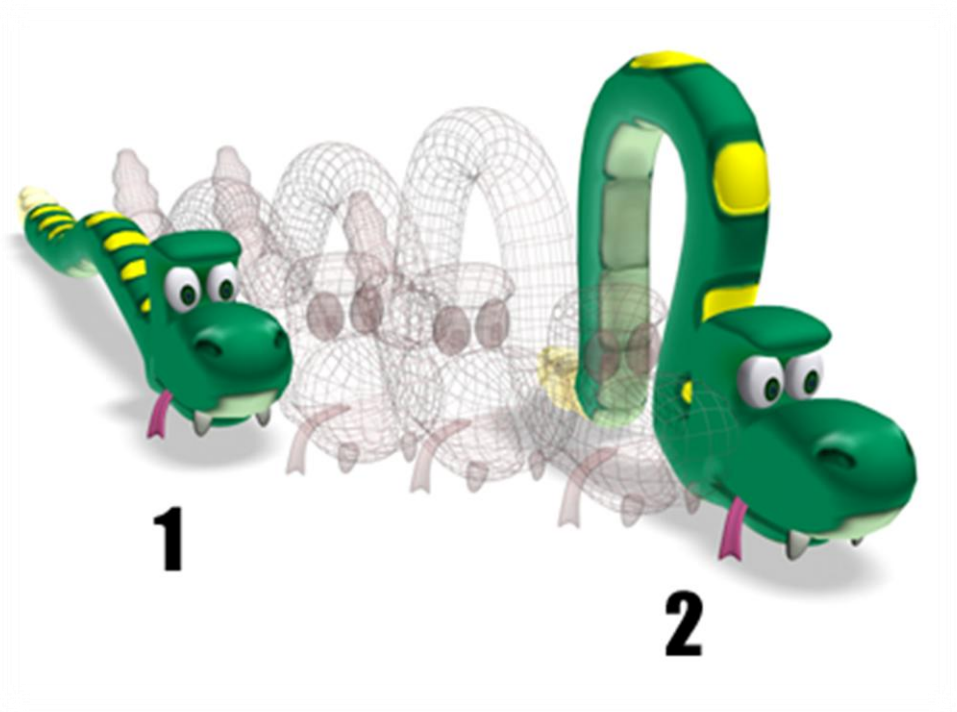
Lens Effects



Glow Lens Effect

Rendering

Motion



The object's position at 1 and 2 are the keyframed models at different times. The computer generates the in-between frames.

CURRENT POPULAR IT V

Learning Outcomes

1. Apply the suitable design principles when developing multimedia application
2. Explain different instructional design strategies and related theories of learning
3. Analyze effective design principles on different multimedia environments
4. Design and develop an effective multimedia application

Basic Concepts of Information and Instructional Design

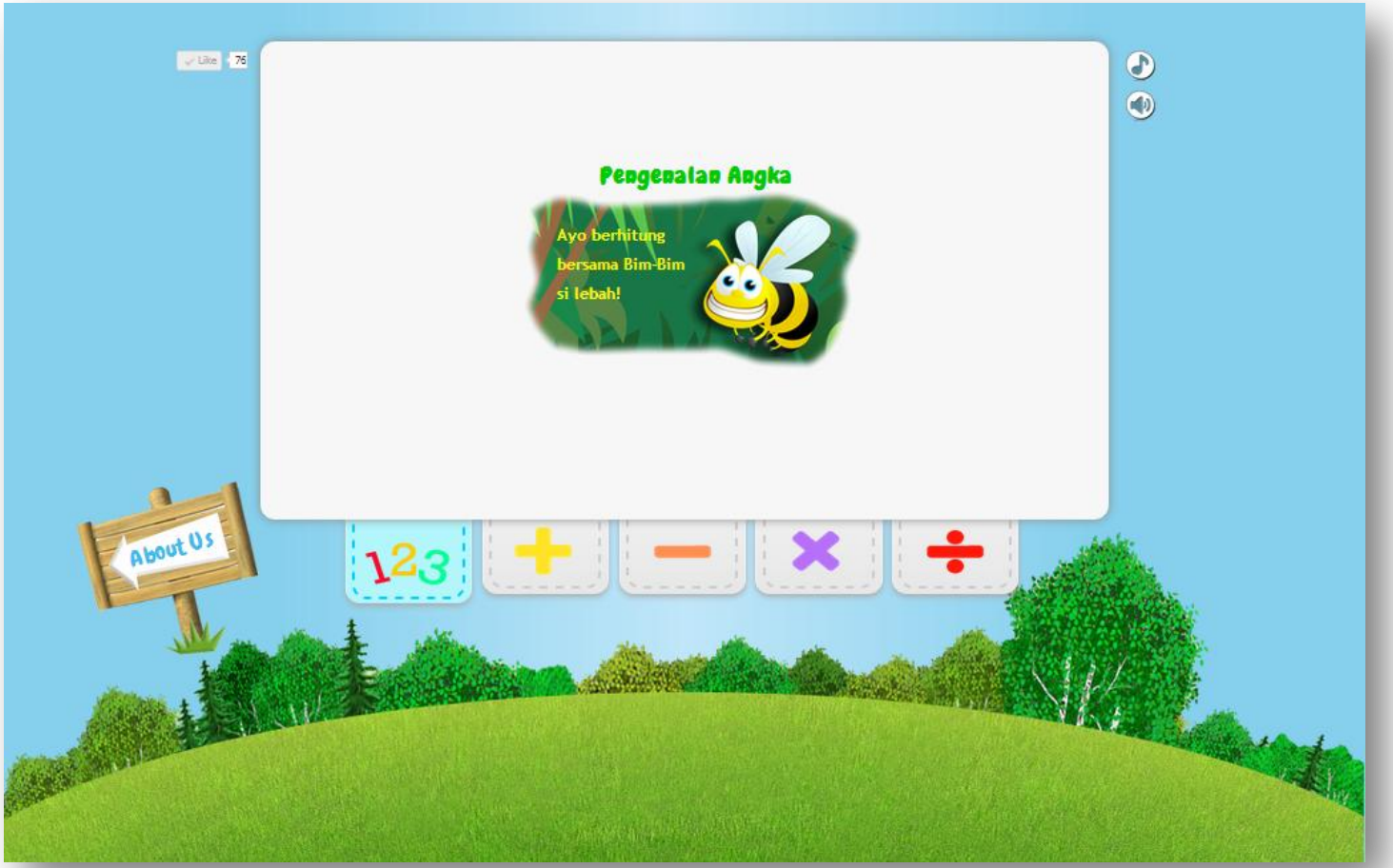
Instructional Design Process

PRODUCTS OF INTERACTIVE MULTIMEDIA

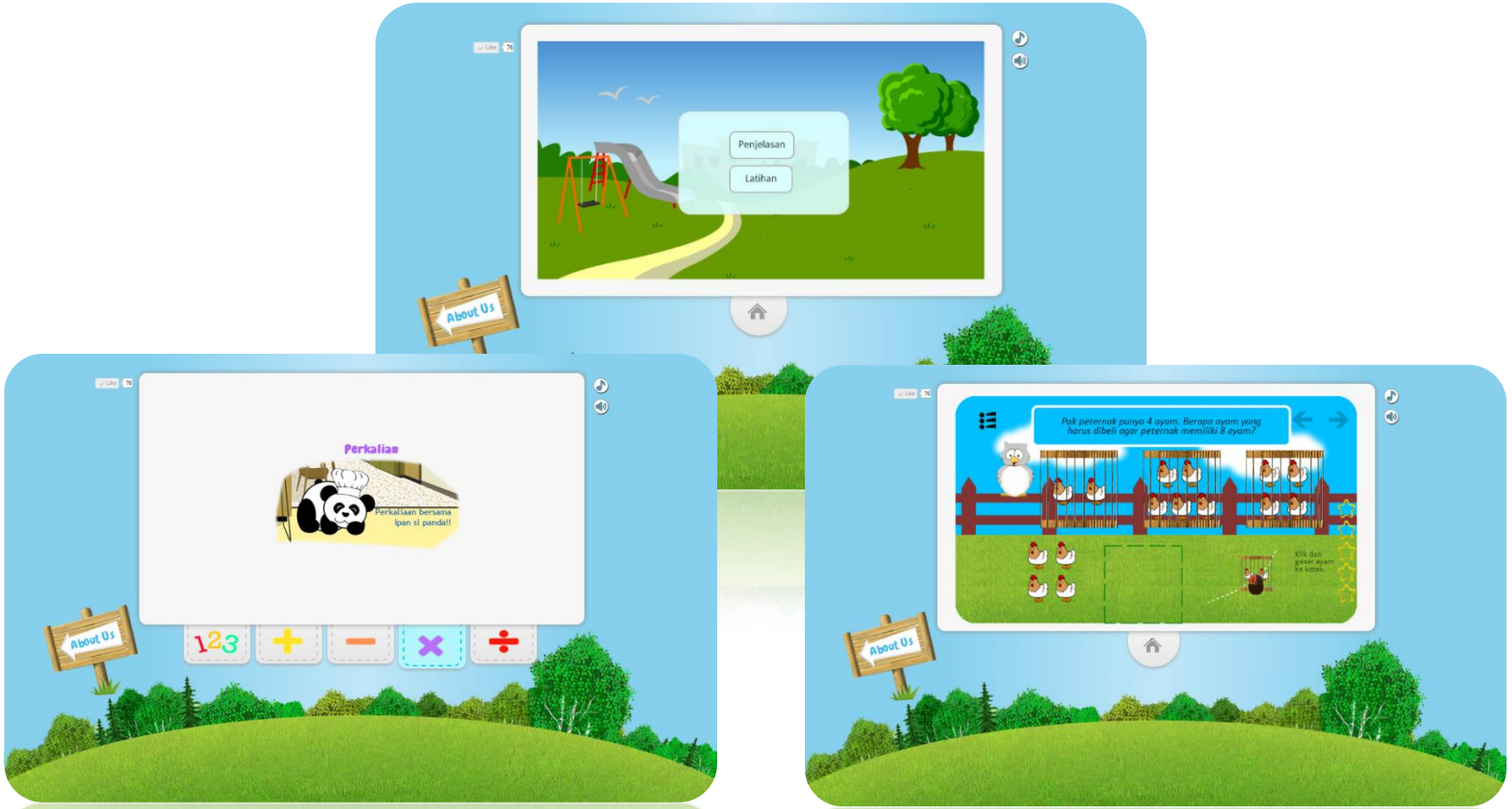
Gatot Kaca

Demo

Garuda Kids


Like 76
Pengenalan Angka
Ayo berhitung
bersama Bim-Bim
si lebah!
About Us
123

Garuda Kids


Penjelasan
Latihan
About Us
Perkalian
Perkalian bersama Ipan si panda!!
123
About Us
Pak peternak punya 4 ayam. Berapa ayam yang harus dibeli agar peternak memiliki 8 ayam?
About Us

Xivaria Wars

Video

Tetra Termino Tetris

Video

Touch Pet

Video

Binusian Life

Video

POTENTIAL RESEARCH IN INTERACTIVE MULTIMEDIA

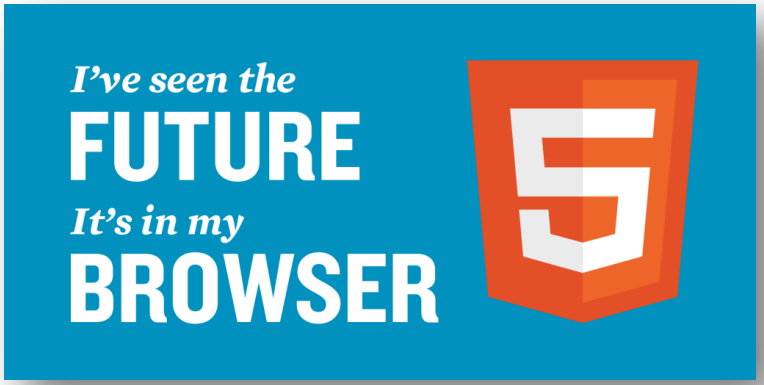
Augmented Reality

[Yelp Monocle]

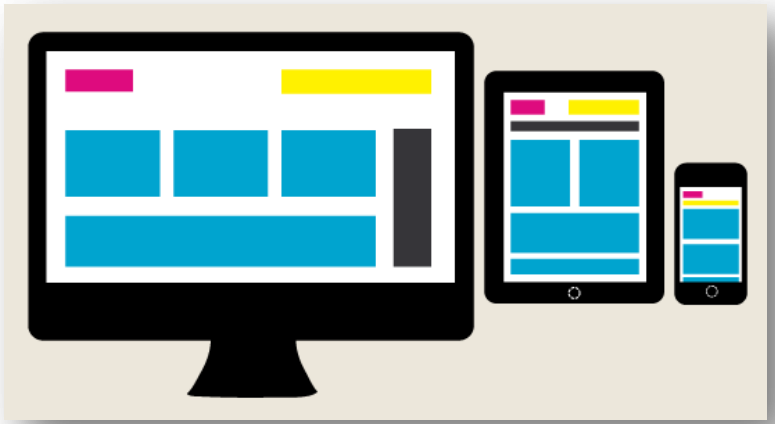
[Ray Ban Augmented Reality]

The Future Technologies

HTML 5



Responsive Web Design



Augmented Reality

Multimedia Tools

CAREER OPPORTUNITIES

Career Opportunities

Careers	
Animator	Art Director
Game Designer	Graphic Designer
Interactive Writer	Interface Designer
Sound Producer	Video Producer
Web Content Producer	Web Developer
Webmaster	Presentation Artist

Career Opportunities

Markets	
Publishing	Media Companies
Advertising	Software Startups
Software	Advertising
Education	

Career Opportunities

Multimedia Uses	
Online games	CD-ROM games
Corporate website design	Personal websites
Reference Materia	ATM's/Kiosks
lProduct introduction	Technical Training
Arcade games	Marketing
Edutainment	Trade Shows

Career Opportunities

Companies
PhaseDev
Agate Studio
AR & CO
Chowdown Games
Joyverter Entertainment
Any companies that needs publishing and advertising
Etc.

Career Opportunities

Entrepreneurship
Indie Game Developer
Indie Website Designer