

Game Dev is more than moving a ball on screen

Techniques and Tools

Game dev

- ◆ is more than moving a ball on screen

Early games

- CPU – 2 - 200 MHz
- RAM – 64kb – 16mb
- HDD – 64kb – 100mb
- VRAM – none – 2mb
- Multiplayer - split-screen

Modern games

- CPU - up to 2GHZ
- RAM - 64 – 512mb
- HDD - up to 1 DVD
- VRAM - required 3d card
up to 256mb
- Multiplayer - must

ZX Spectrum games (~1978-1988)

- ◆ Games stored in cassette tapes
- ◆ Loading a game was up to 5 minutes
- ◆ 64kb of ram (or 128kb)
- ◆ Max of 16 colours
- ◆ A screen square could have only 2 colours at one time
- ◆ Best games written :)

R-type

Into the eagle's nest

Modern games

- ◆ Graphics – D3D(DirectX), OpenGL, SDL
- ◆ Audio – DirectSound(DirectX), OpenAL, FMOD
- ◆ Network – SDLnet, DirectPlay(DirectX)
- ◆ Input - DirectInput(DirectX),SDL

DirectX – only win32 platform

OpenGL, SDL, FMOD – cross platform

Kanga racer

My car tutorial

Game components (systems)

- ◆ Physics ,Collision (ogre – bsp collision, demo terrain)
- ◆ Rendering (ogre – demo bsp)
- ◆ Audio
- ◆ Input
- ◆ Networking

A system:

- › is a collection of classes which work to achieve a common goal
- › has a more or less defined interface

Physics/ collision systems

- ◆ Novodex (chained cow, character)
- ◆ Ode (test – box stack, test crash)
- ◆ ODF rocket
- ◆ Havok

Rendering and 3d systems

- ◆ DirectX
- ◆ OpenGL
- ◆ Ogre 3d (FlyToMe)
- ◆ Power Renderer
- ◆ Java3d, JOGL (uses OpenGL)
- ◆ ...

Integrated solutions – game dev platforms

- ◆ ODF Rocket
- ◆ Torque (torque game engine demo)
- ◆ Crystal Space
- ◆ Reality Factory
- ◆ JME
- ◆ Realm Forge GDK
- ◆ OpenSceneGraph
- ◆ Axiom
- ◆ The Nebula Device 2
- ◆ Genesis 3d

More game systems

- ◆ AI system
- ◆ Scripting system
- ◆ NPC conversation engine
- ◆ Reputation system

Game tools

3D object modeling

- › 3DMax
- › Maya 3d
- › LightWave
- › Softimage

3d environment modeling

- › DeleD 3d (show)
- › Terragen (show)
- › Aztec 3d tools

links

- Arklys Studios - <http://www.arklysstudios.tk>
- 3d engine list - http://cg.cs.tu-berlin.de/~ki/3del_1419_api_all.html
- 3d engine database - <http://www.devmaster.net/engines/>
- Terragen - <http://www.planetside.co.uk/terrigen/>
- DeleD 3d editor - <http://www.delgine.com/>
- Aztec 3d tools - <http://aztec.sourceforge.net/>
- Genesis 3d - <http://www.genesis3d.com/>
- Ogre3d - <http://www.ogre3d.org/>

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