

Game Design

- Game Development Software -

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Dark Basic Professional

"No matter what type of game you plan to make, by providing rapid development solutions, Dark Basic Professional has the power to handle them all.

It does all this and remains the easiest programming language available."

- ☐ e.g. support for
 - fps (first-person shooter) games
 - multi player games
- ☐ simple programming language (Basic)
 - but not Visual Basic!
 - how to integrate with .Net ?
- ☐ Import of 3D worlds
 - support for Quake 3 (BSP) files
 - how to import a 3DS Max word?
- ☐ not freeware (30 day trial)



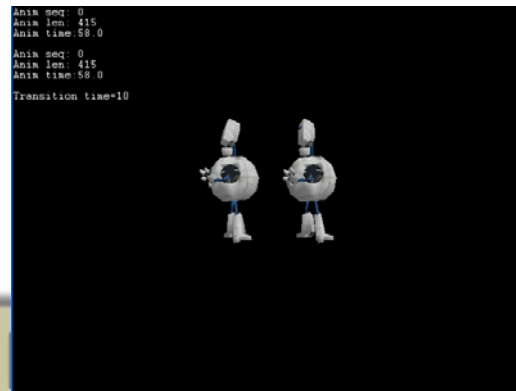
start editor

Blitz3D Game Engine

- ❑ Programming
 - Blitz Basic (not .NET VB)
 - Networking (sockets)
- ❑ Model & animation import
 - 3DS Studio Max
 - Quake 2, 3
- ❑ not freeware (30 day trial)



start editor



```
Blitz3D - C:\Program Files\Blitz3D Demo\samples\anim\anim.bb
File Edit Program Help
Help anim.bb createanim.bb

Global info1$="Anination demo"
Global info2$="Hold down <return> to run"
Global info3$="Hit <space> to toggle transitions"

Include "../start.bb"

mesh_3ds=LoadAninMesh( "nakbot\nak_robotic.3ds" ) ;anim seq 0
LoadAninSeq mesh_3ds,"nakbot\nak_running.3ds" ;anim seq 1
PositionEntity mesh_3ds,-15,-15,0

mesh_x=LoadAninMesh( "nakbot\nak_robotic.x" ) ;anim seq 0
LoadAninSeq mesh_x,"nakbot\nak_running.x" ;anim seq 1
PositionEntity mesh_x,+15,-15,0

pivot=CreatePivot()
cam=CreateCamera( pivot )
PositionEntity cam,0,0,-100

lit=CreateLight()
RotateEntity lit,45,45,0

Animate mesh_3ds,2 ;start ping-pong anims...
Animate mesh_x, 2

trans=10

While Not KeyHit(1)
  If KeyHit(57)
    trans=10-trans
  EndIf

  If KeyDown(28)
    If AninSeq(mesh_3ds)=0 Animate mesh_3ds,1,.5,1,trans
    If AninSeq(mesh_x )=0 Animate mesh_x, 1,.5,1,trans
  Else
    If AninSeq(mesh_3ds)=1 Animate mesh_3ds,2,1,0,trans
    If AninSeq(mesh_x )=1 Animate mesh_x ,2,1,0,trans
  EndIf

  If KeyDown(30) MoveEntity cam,0,0,10
  If KeyDown(44) MoveEntity cam,0,0,-10

  If KeyDown(203) TurnEntity pivot,0,3,0
  If KeyDown(205) TurnEntity pivot,0,-3,0

  UpdateWorld
  RenderWorld
  Text 0,FontHeight()#0,"Anin seq: "+AninSeq( mesh_3ds )
  Text 0,FontHeight()#1,"Anin len: "+AninLength( mesh_3ds )
  Text 0,FontHeight()#2,"Anin time: "+AninTime( mesh_3ds )

  Text 0,FontHeight()#4,"Anin seq: "+AninSeq( mesh_x )
  Text 0,FontHeight()#5,"Anin len: "+AninLength( mesh_x )
  Text 0,FontHeight()#6,"Anin time: "+AninTime( mesh_x )

  Text 0,FontHeight()#8,"Transition time="+trans
  Flip
Wend

End
```

Irrlicht Game engine

- ❑ Programming
 - C++ (Visual Studio & Linux)
- ❑ Modeling
 - Quake 3 import
- ❑ open source / freeware



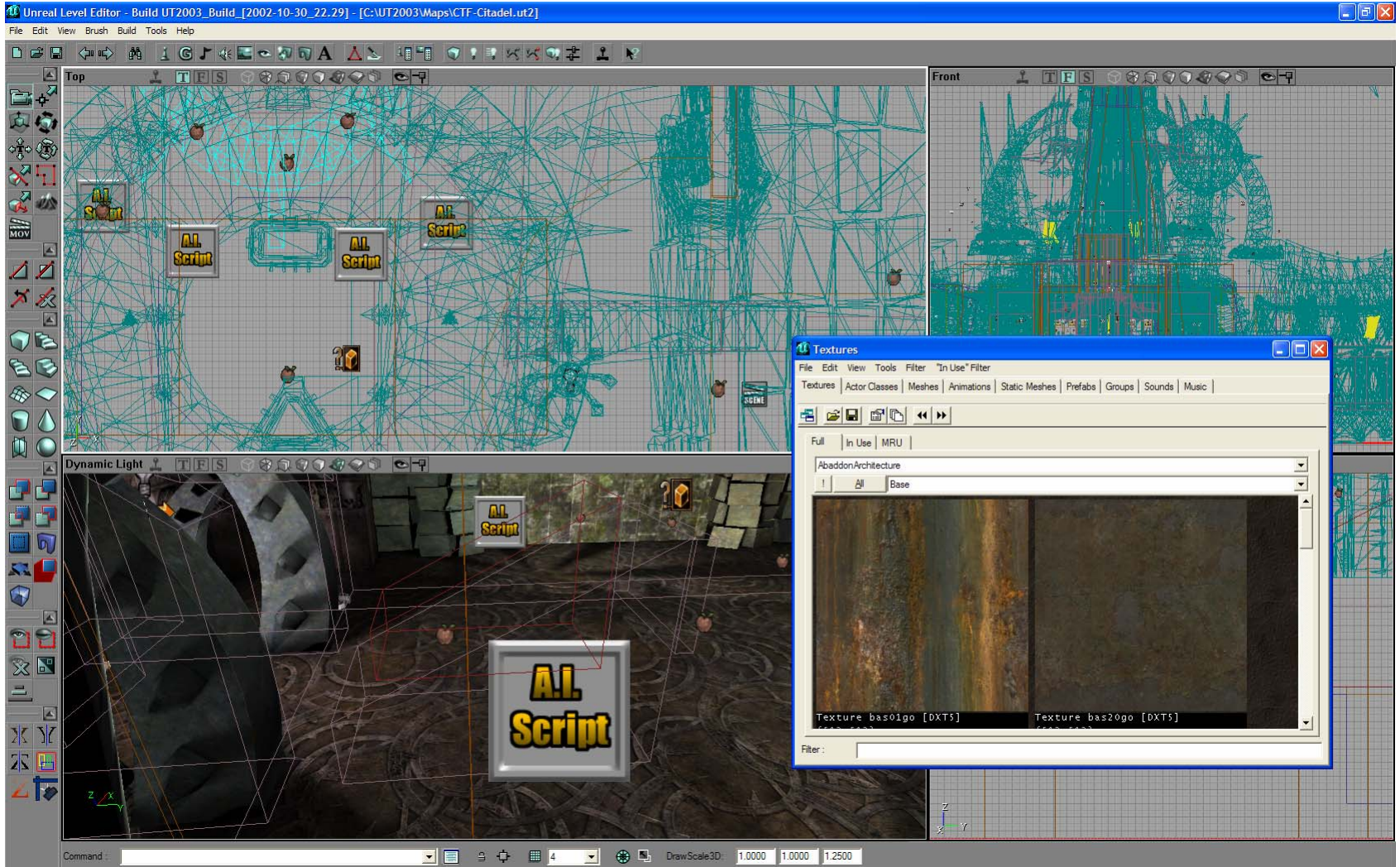
open root directory

Unreal Game Engine

- ❑ Unreal Tournament
 - popular fps game
- ❑ Unreal game engine
 - used in many games
 - physics engine
 - character animation with skinning
 - multi player support (server/clients)
- ❑ World modeling
 - Unreal editor
 - 3DS Max import (?)
- ❑ Version
 - UT 2004: latest version, €€€
 - UT 2003: ca. 15€
 - UT Runtime: free (how complete?)



Unreal Editor



Unreal Game Engine (cont'd)

□ Programming

- UnrealScript
- supports network communication

```
function RestartPlayer( Controller aPlayer )
{
    if(aPlayer.IsA('RemoteBot')) {
        if(aPlayer.IsInState('Dying')) {
            log("BOTRESTRTPAYER");
            SpawnPlayer(RemoteBot(aPlayer));
        }

        } else {

            log("RESTARTPLAYER");
            Super.RestartPlayer(aPlayer);

        }
    }
}
```

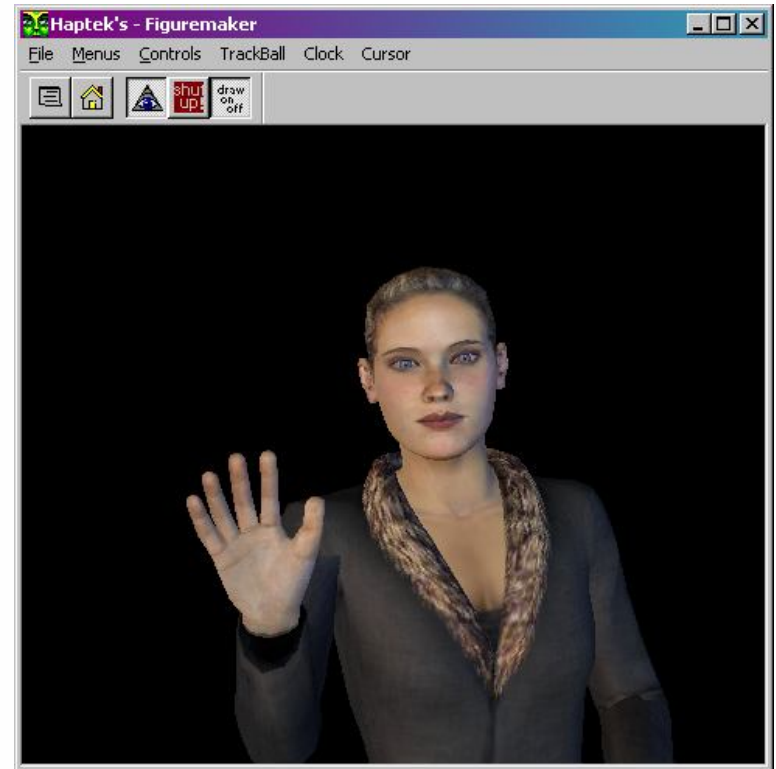
Haptek People Putty

- ❑ actually not a 3D game engine
 - but creation of animations is easy
- ❑ Modeling
 - in PeoplePutty
 - just heads, no bodies
 - no import of 3D worlds
- ❑ Programming
 - Java Script (in web browser)
 - can integrate with .Net
 - Visual Basis, C#, ...



Haptek FigureMaker

- ❑ Haptek half and full body models
 - 4 characters only
 - no modeling tools other than for animation
- ❑ Easy to design custom animations
 - emotional facial expression
 - hand gesture
- ❑ Programming
 - same as PeoplePutty



start editor