GAME DESIGN IN CONJUNCTION WITH UNION UNIVERSITY COMPUTER SCIENCE DEPARTMENT

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Introduction

- Survey to find the best game design programs teaching the basics of computer programming.

- To be used in a game design class by Dr. Kirk

- Each has strengths and weaknesses
Introduction

3 Criteria

- 1. Ability to teach programming
- 2. Ability to create 3D games
- 3. Requires no previous programming experience
Adventure Game Studio (AGS)

- Freeware game design program, interface similar to a photo editor.
- Games typically limited to point and click adventures, think early 1990’s Sierra games.
- Uses scripting, typically used for simple interactions of character to objects.

www.adventuregamestudio.co.uk
AGS’s interface.

Editing tools
Example using scripting

Example of scripting in AGS

```javascript
if (myCounter == 0)
{
    Display("You see a bookshelf.");
}
if (myCounter == 1)
{
    Display("Looking closer, you see a book called Hamlet.");
}
if (myCounter == 2)
{
    Display("There is also a book called Harry Potter.");
}
if (myCounter == 3)
{
    Display("There is nothing else of interest on the shelf.");
}
if (myCounter < 3)
{
    myCounter += 1;
}
```
Problems

- Purpose is not to teach the fundamentals of programming.

- Scripting is simplistic object oriented similar to java.

- Rarely used in typical game making

- No supported 3d capabilities
3-D Adventure Studio

- No connection to AGS
- Creation of 3-d objects.
- Interface emphasizing point and click
- Runtime engine, allows animations and interactions.

http://3das.noeska.com
Interface in Design mode
Interface using the engine.
Problems

- Weak as a game design engine, or teaching programming.
- No updates have been released since late 2004 in “Alpha” version, not bug free.
- Abstracted to point and click menu’s.
The Games Factory (TGF)

- 2-d games, some ability for 3-d sprites
- Easy creation of games
- Point and click interface

http://www.clickteam.com/eng/index.php
Games Factory “event editor”
The Games Factory
Problems

- Little crossover experience for other languages
- Limited capabilities
- Program is not free, abandoned roots as free program called “click and play.”
Promising candidates, but none stuck out.

- Randy Pausch at Carnegie Mellon University taught a game design class

- Jesse Schell now fills that role

- Recommends at Carnegie Mellon, named Alice.
Alice

Learn to Program with Interactive 3D Graphics

a free gift to you from Carnegie Mellon
Alice

- Developed to teach computer programming in a drag and drop user friendly interface.

- Easy importing of 3-D models and creation of interactive worlds

- Programming without the syntax.
Familiar programming feel, similar to almost any programming language.

Objects have preprogrammed methods, but can also be created.

Foundation is these methods, uses variables both local and global, can pass parameters, implement lists and array's.
Example world of Alice

Game Design Window

List of objects

Object properties and methods

Game Design Window

Current method details

All Alice commands are found here.
Problems

- Alice games cannot be played or viewed outside the Alice editor.
- Accurate collision detection nearly impossible
- Cannot manually set asymmetric bounds around objects. (expect to see and update in Alice 3.0)
1. Games Factory Manager, Jason Darby, on April 15th, 2007 screenshot can be freely distributed.
3. Adventure Game Studio, Screenshots taken on April 20, 2009, demonstrating AGS’s interface and scripting language.
5. Alice, Screenshot taken on April 25, 2009. Details the design interface and Alice’s drag-and-drop programming.