

Teaching Soft-skills: Digital Game Development in a Multi-Discipline Environment

Presented at Eurographics 2008

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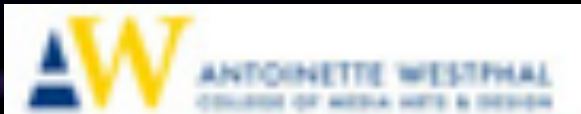
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Multi-Discipline

DOCTOR FUN

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Copyright © 1997 David Farley, d-farley@terral.com
<http://vsnultramar.vsn.ca/d-farley/fun.html>

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On the eve of opening the new paleontology wing, a fierce discussion ensues between artist and curator over the accuracy of certain details in the murals.

Multi-Discipline

- Art vs. Science
- ...Well, Computer Science anyway
- Art
- Digital Media: Art, Modeling, Animation, Music,...
- Other: Scriptwriting and Playwriting
- Engineering, Business



Drexel Gaming

- Digital Media curriculum

- Digital Art

- Photoshop, Illustrator

- Design

- Web design and development

- HTML, CSS, Flash, PHP...

- Programming

- C++, scripting

- Modeling

- Maya, 3dsMax

- Animation

- Maya, Houdini, Massive

- One 6-month Co-op

- Sleep?

- Rendering

- Renderman, shaders

- Digital Audio

- Digital Photography

- Compositing

- Theory





Drexel Gaming

- Computer Science curriculum
 - Programming
 - Programming
 - Programming
 - ...just kidding
- Three 6-month Co-ops
- Sleep?



Cross-listed Gaming Curriculum



- Game-based CS I & II
- Gaming Overview
- Computer Game Development*
- Scripting for Gaming
- Gaming Development Workshop I*
- Gaming Development Workshop II*
- Educational Game Design*
- Experimental Game Design*
- Graduate Game I & II

*CS Gaming Track

Soft Skills?



Soft Skills?

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www.glasbergen.com



"I always keep my mouth shut during meetings and don't contribute anything. That's how I won *Most Valuable Employee*."

Soft Skills?

US Secretary of Labor appointed a commission to determine the skills people need to succeed in the modern workforce.

This new framework for workplace skills was based on three components:

- **functional skills** that describe what people actually do at work (real-world)
- **enabling skills** which are specific knowledge and procedures developed through the traditional teaching and learning activities of schools
- **the scenario**, a communication device to demonstrate the way in which work integrates these skills into a productive outcome.
- The gaming curriculum assumes a foundation of enabling skills and focuses on teaching the functional **soft-skills** through the use of workplace scenarios. More on this in a moment....

Game Development Workshop

- GDW 1 (11 weeks)
 - pre-production effort
 - 4–6 person teams
 - Concept, design, prototype, sell
 - 1 page sell, 5 page executive summary, GDD
 - Instructor is External Executive Producer
 - Open “pitch” gets voted on by faculty and students

Game Development Workshop

- GDW 2 (11 weeks)
 - full-production effort
 - 10–20 person consolidated teams
 - Full GDD, Gantt charts, Project Production Journals (PPJ)
 - Multi-level game, video trailer, promotional material (i.e. poster)

GDW: Soft Skills

- Leadership
 - Team leaders
- Interpersonal communication
 - Stop the emails! Talk! Record meeting minutes
- Punctuality
 - Deductions for absence or lateness
- Respect for deadlines
 - Pay (grades) for meeting deadlines
- Working well with others
 - Conflict management
- Time management
 - Weekly assessment and pay

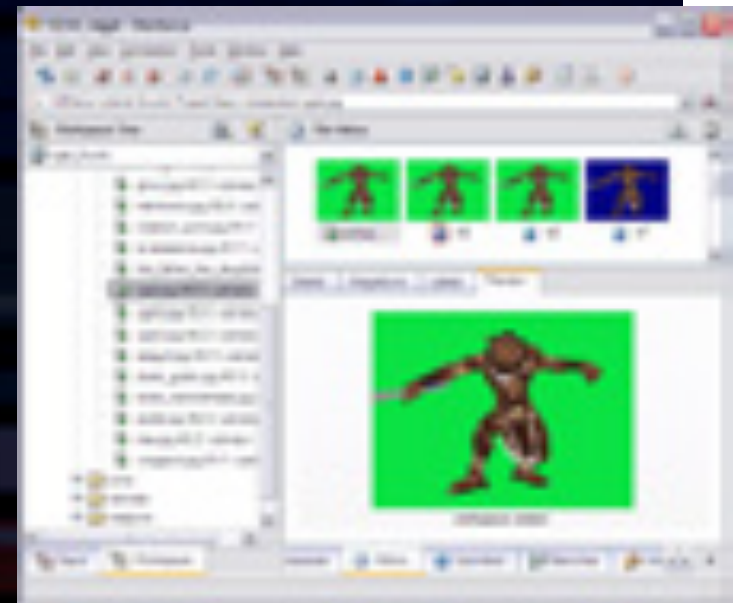
Skills: Asset Management

- Revision control
- Asset lists
- Templates
- Naming conventions
 - Or why not to name something:

Wall47.jpg

midtermWorkingMattRevis_07_csc29NORMAL.wrl

Dan_screwed_up_first_model_so_heres_mine_2.mdl



Design Skills

BRAINSTORMING



Design Skills



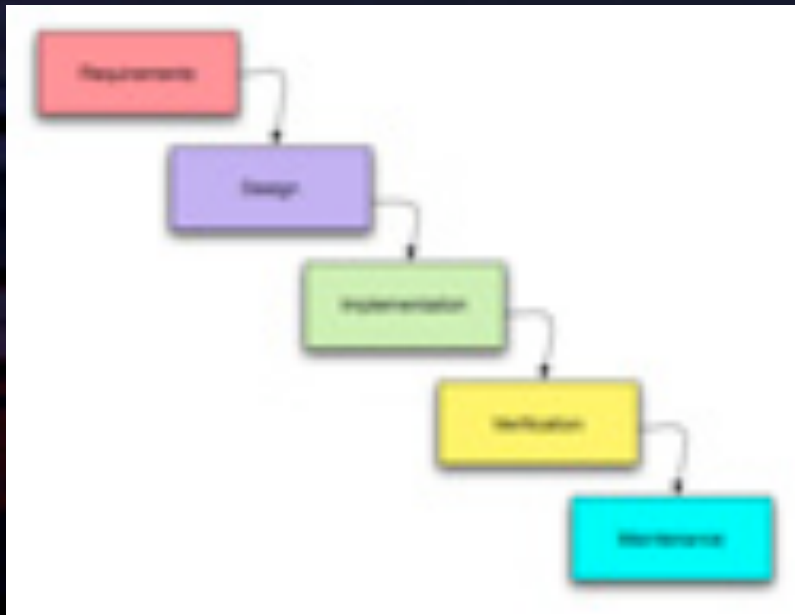
GDW: Project Management

- Mirror Industry (with caveats)
- Internal Producer
- Budget & pay for meeting milestones
- Gantt charts, Basecamp, Bugzilla, etc.
- Product Production Journals
- PPJ follows SCRUM
 - Last, analyze, next, samples



What the \$#!%@ is Scrum?

- Waterfall vs Iterative/Agile/Scrum



Relay race



Rugby scrum

Agile Development

- A pig and a chicken are walking down a road. The Chicken looks at the pig and says "Hey, why don't we open a restaurant?" The pig looks back at the chicken and says "Good idea, what do you want to call it?"
- The chicken thinks about it and says "Why don't we call it 'Ham and Eggs'?"



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- "I don't think so" says the pig, "I'd be committed but you'd only be involved"

Agile Development

- **"Pig" Roles**



- the ones committed to the project and the Scrum process; their "bacon is on the line".
- Product Owner
- Scrum Master (or Facilitator)
- Scrum Team

- **"Chicken" Roles**



- not part of the actual Scrum process, but must be taken into account. Provides feedback into the outputs for review and planning of each sprint.
- Users
- Stakeholders
- Consulting Experts
- **Scrum weekly sprints**

Project Management

- Open and Free Project Management Tools – <http://proj.chbs.dk/>
- Dot Project – <http://www.dotproject.net/>
- Poseidon for UML – <http://gentleware.com/>
- DMOZ Open Source Project Management Directory – http://dmoz.org/Computers/Software/Project_Management/Open_Source/
- Open Source Project Scheduling for Windows – <http://www.openworkbench.org/>
- Gantt Charts: <http://ganttproject.biz/>
- Online project: <http://www.basecampHQ.com/>

Development Resources

- Tackle
 - <http://www.codeplex.com/Tackle>
- ScrumProduct
 - <http://www.controlchaos.com/certifiedscrum/>
- XPlanner – pretty close to Scrum other than the "time to completion" thing
 - <http://www.xplanner.org>
- Bugzilla
 - <http://www.bugzilla.org>
- MS Project (through Drexel)
- XP Web
 - <http://xpweb.sourceforge.net/>
- http://en.wikipedia.org/wiki/List_of_project_management_software

Workshop Games





Workshop Games: Project: Bolt

3D music-based action game where the player runs down hallways smashing up waves of enemy robots to the beat of the music...



Workshop Games: Chroma Chaos

- Fight enemies based on color matching



Workshop Games: Moach Rotel

- Story-based adventure

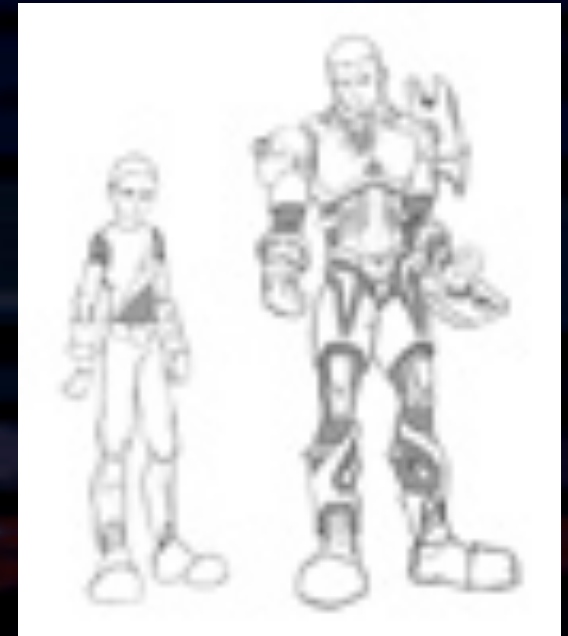




Project: Generations

more than just a name...a lineage and a history.

- Characters age and die permanently
- Must reproduce to continue family tree
 - Mendelian genetic models
- Forced to make morally ambiguous decisions
 - Do you sacrifice yourself to save your child, or turn tail and run?



- Form lasting bonds with other players that actually effect gameplay

Graduate Work:

PLANET DIGGUM



- Multi-touch God Game (feed, move, scare, etc.)
- Homemade FTIR table
 - Microsoft Surface donations welcome!!!
- Multi-user kiosk game
 - Competitive play – collect (steal) diggums
 - Cooperative play – two person slingshot or zoom
- Physical interaction between players



Digital Media

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