

Introduction

CMPUT 299

Fall 2005

Thursday September 8

Commercial Games

- Games are BIG business!
- \$10B US last year in North America alone
 - Hardware (consoles, I/O devices)
 - Software products
- Surpassed Hollywood in sales
 - But lags behind in spin-off revenue

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Top 10 Facts for 2004 (www.theesa.com)

1. U.S. computer and video game software sales grew 4% to \$7.3 billion US – a more than doubling of industry software sales since 1996.
2. More than 248 million computer and video games were sold, almost two games for every household in America.
3. 75% of American heads of households play computer and video games.

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Top 10 Facts (Reduced to 8)

4. The average game *player* is 30 years old and has been playing games for 9.5 years.
5. The average game *buyer* is 37 years old.
6. 83% of all games sold in 2004 were rated "E" for Everyone or "T" for Teen.
7. 43% of all game players are women.
8. 19% of Americans over the age of 50 played video games, up from 9% in 1999.

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Canadian Scene

- \$700M US market
- Expected to grow to \$1.2B US by 2007

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Canadian Industry (1)

- Game-related companies (2003): 17 major, over 300 in total
- Employment (2003): 3,000
- Growth in the next 3 years (2004-2006): 1,500
- Roughly 15% of commercial games sales world-wide originate in Canada

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Canadian Industry (2)

- Electronic Arts
 - World's biggest
 - Main studio in Vancouver
 - New studio in Montreal
 - 1,500 people in Canada
 - Strength is sports games



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Canadian Industry (3)

- BioWare (Edmonton), role-playing games
- Radical (Vancouver), racing games
- Relic (Vancouver), real-time strategy games
- UbiSoft (Montreal), military



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Product Differentiation (1)

- Until recently, computer graphics was the major product differentiator
 - Rate of advances have slowed
 - Graphics cards leveled the playing field
- Graphics attracted people to a game, but game-play keeps them playing (and buying sequels)

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Product Differentiation (2)

- Many factors are now important:
 - Game play
 - Story telling
 - Realism
 - Artificial intelligence
- Games must do more than just look good!

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Sports Games (1)

Flyers Knock Off Sharks in Finals

After overcoming a major scare in the conference finals, the Philadelphia Flyers dropped the San Jose Sharks in a crisp five games in the Stanley Cup finals, according to a simulation run by EA SPORTS™.

The Flyers, who survived a massive comeback by Tampa Bay in the Eastern Conference finals -- winning four games to three after taking the first three contests -- were put to the test by the Sharks, who also took a 4-3 win in the Western Conference against Calgary after bolting to a 3-0 series lead.



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Sports Games (2)

- Critical to create “realism”
 - Team – lots of stats
 - Player – look and perform like the real person
 - Action – use motion capture

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Role-Playing Games (1)



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Role-Playing Games (2)

- Story-line and plot
- Create a world that is consistent
- Want the user to suspend disbelief
- Autonomous characters
- Conversations

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Real-Time Strategy (1)



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Real-Time Strategy (2)

- Multiple (thousands) of agents requiring real-time responses
 - Individuals, units, divisions
- Game needs compelling challenge, intricate strategies, quick thinking

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Other Genres

- First-person shooter
- Racing games
- Children's games
- Educational games
- Classic games

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Biggest Sellers (Genre) 2004

- | Consoles | Computer |
|--------------------------|---------------------------|
| ▪ Action (30.1%) | ▪ Strategy (26.9%) |
| ▪ Sports (17.8%) | ▪ Children/Family (20.3%) |
| ▪ Shooting (9.6%) | ▪ Shooting (6.3%) |
| ▪ Children/Family (9.5%) | ▪ Role-playing (10.0%) |
| ▪ Racing (9.4%) | ▪ Adventure (5.9%) |
| ▪ Role-playing (9.0%) | ▪ Sports (5.4%) |
| ▪ Fighting (5.4%) | ▪ Action (3.9%) |

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But if You Play Online...

- Puzzle/Board/Card/Trivia games (56.8%)
- Action/Sports/Strategy/Role-Play (19.0%)
- Browser-based mini games (9.5%)
- Persistent multi-player universes (9.1%)

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Game Ratings

- Entertainment Software Rating Board
(www.esrb.com)



Childhood (≥ 3)

Everyone (≥ 10)

Mature (≥ 17)



Everyone (≥ 6)

Teens (≥ 13)

Adults only (≥ 18)

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Biggest Sellers (Console) 2004

1. Grand Theft Auto: San Andreas (PS2 -- M)
2. Halo 2 (Xbox -- M)
3. Madden NFL 2005 (PS2 -- E)
4. ESPN NFL 2K5 (PS2 -- E)
5. Need for Speed: Underground 2 (PS2 -- E)
6. Pokemon Fire Red (GBA -- E)
7. NBA Live 2005 (PS2 -- E)
8. Spider-Man 2 (PS2 -- T)
9. Halo (Xbox -- M)
10. ESPN NFL 2K5 (Xbox -- E)

Football is also
#12 and 13!

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Biggest Sellers (Computer) 2004

1. The Sims 2 (T)
2. Doom 3 (Xbox -- M)
3. World of WarCraft (PS2 -- E)
4. Half-Life 2 (PS2 -- E)
5. The Sims 2 Special Edition (PS2 -- E)
6. The Sims Deluxe (GBA -- E)
7. Battlefield Vietnam (PS2 -- E)
8. Call of Duty (PS2 -- T)
9. Roller Coaster Tycoon 3 (Xbox -- M)
10. Zoo Tycoon: Complete Collection (Xbox -- E)

Also #13

BioWare's
KOTOR
is #17

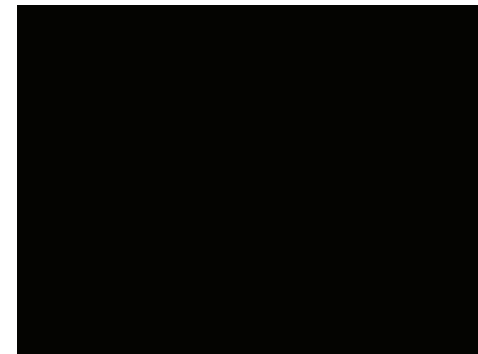
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Games and Movies

- Game production is moving more towards the Hollywood model
- Big productions and hyped titles
 - \$20M is not uncommon for an anticipated game
 - And it is growing!

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Star Wars



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“Computer” Games

- Computer refers to the playing tool
 - PC
 - Internet
 - Console
 - Cell phone

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Game Development

- NOT just computer programming!
- For a typical big-budget title, roughly 25% of the team are programmers
- Who are the rest?
 - Writing, audio, musicians, art, testing, human-computer interaction, marketing, financial, lawyers, management, ...
- Games are a multi-disciplinary endeavor!

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- Reflects the way industry is going
- NOT a programming course
- It is all about getting a team of people with different expertise together to work on a common project
- This much better mirrors the reality of game development

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Instructors

- Lecturers
 - Sean Gouglas (History)
 - Jim Hoover (CS)
 - Jonathan Schaeffer (CS)
 - Finnegan Southey (CS)
 - Nathan Sturtevant (CS)
 - Ghassan Zabaneh (Industrial Design)
- TAs
 - Matt Bouchard
 - Hector Perez

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Guest Lecturers

- BioWare
- Electronic Arts
- Surprises?

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Lectures

- Thursday: CSC B-02 11-12:30
- Tuesday: CSC 333 11-12:30
Might have to move some weeks
- Labs:
 - CSC 1-21
 - Need to set lab times: 2 2-hour times

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Marking Scheme

- 50% - Project - Multi-disciplinary teams
 - Details in next Tuesday's lecture
- 10% - Midterm Lab Exam
- 10% - Tutorial Labs
- 10% - Assignment Labs
- 20% - Short-Answer Midterm
- 10% - Bonus for exceptional performance in any aspect of the course

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Socializing

- Project social for forming teams on Thursday September 15, 5:00-7:00 in Heritage Lounge

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Caveat!

- Experimental course!
- We appreciate your patience
- Please offer constructive feedback as to how to improve this course