MIDWAY
GAMES INC.

2009

MATT BOOTY – PRESIDENT AND CEO

Midway Games

www.midway.com

Midway Line-up

Established Franchises

High-Potential New IP/Licenses

MORTAL KOMBAT

BLITZ THE LEAGUE II

WHEELMAN

Unreal TOURNAMENT III

GAME PARTY 2

TNA iMPACT! TOTAL NONSTOP ACTION WRESTLING

TouchMaster 2

THIS IS VEGAS

Above timeline (left to right):

PONG
Pong Released by Atari Games

Midway #1 US Coin-Op Manufacturer

Midway IPO

ATARI GAMES
Atari Games Acquisition

Midway is 2nd Largest Independent Home Videogame Publisher

NHL HITZ 20-02
NHL Hitz First XBox Title Released

XBOX

MORTAL KOMBAT DEADLY ALLIANCE
MKDA released 1 Million units sold in 1.5 Months

BLITZ THE LEAGUE
Blitz: The League First Xbox360 Title Released

Timeline years:

1976 | 1988 | 1992 | 1995 | 1996 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2006

Below timeline (left to right):

Williams Acquires Bally Midway
Williams Williams Entertainment Inc.
Bally / MIDWAY

Midway Enters Home Videogame Market

Mortal Kombat #1 Home Videogame
MORTAL KOMBAT

Spin-Off from WMS

First PS2 Title Ready 2 Rumble Top 10 Launch
READY 2 RUMBLE BOXING

Exit Coin Op Business

NHL Hitz First GameCube Title Released
NHL HITZ 20-02

Midway Acquires Austin Studios
AREA-51

Midway Acquires LA Moorpart Studios
MORTAL KOMBAT SHAOLIN MONKS

Midway Acquires Seattle Studios
THE SUFFERING TIES THAT BIND

Video Game Revenue Outpaces Other Entertainment Media

2007 Entertainment Media Sales Results

Data source: NPD Group; ESA; MPAA; BoxOfficeMojo.com; RIAA; IFPI; IDG
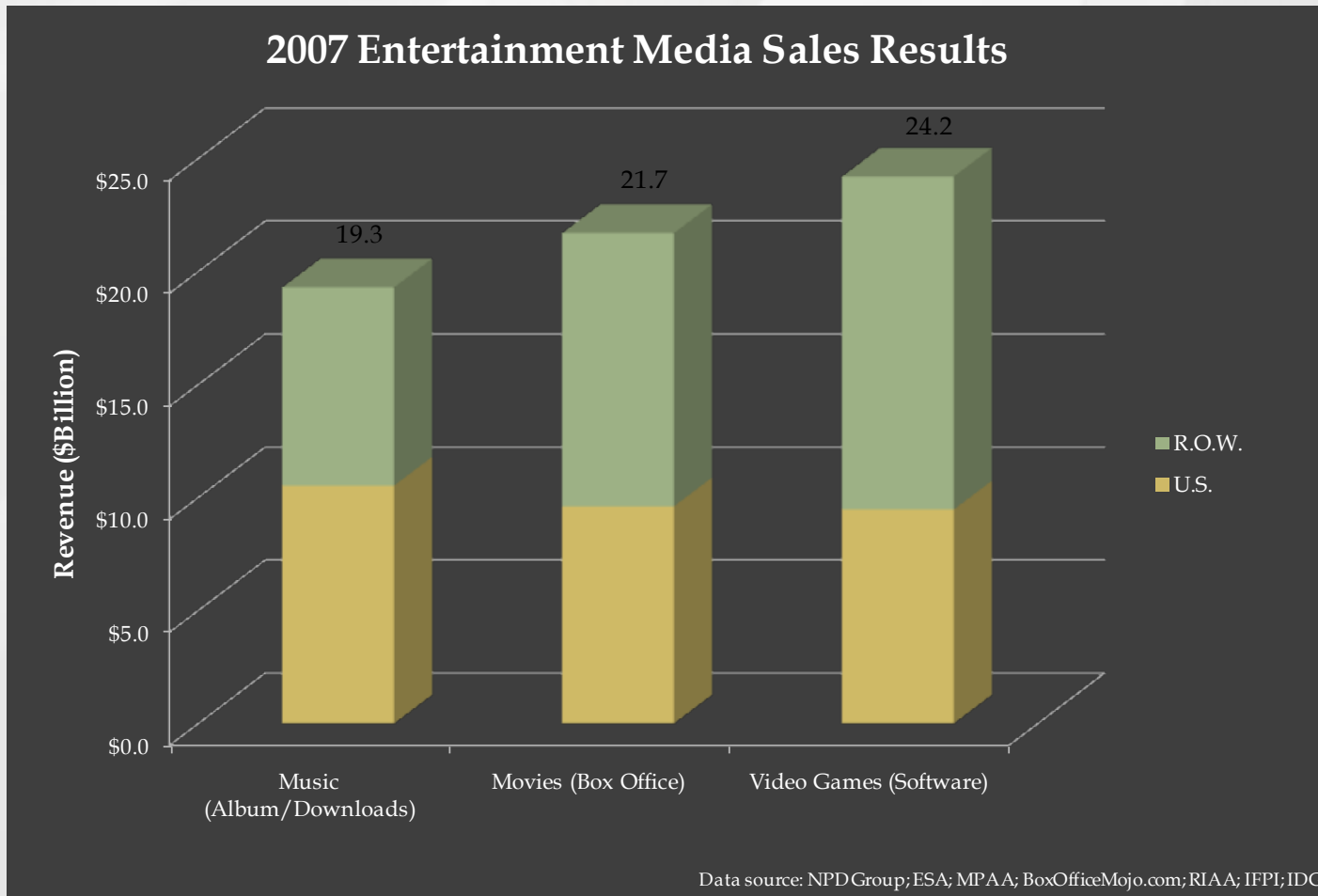
Video Games Are Growing Faster Than Other Entertainment Media

US music, movie, and gaming revenues — 2002-07
$ Billions

Music

2006-07 growth: -10.0% (est.)

Movies

2006-07 growth: 1.8%

Games

2006-07 growth: 28.4%
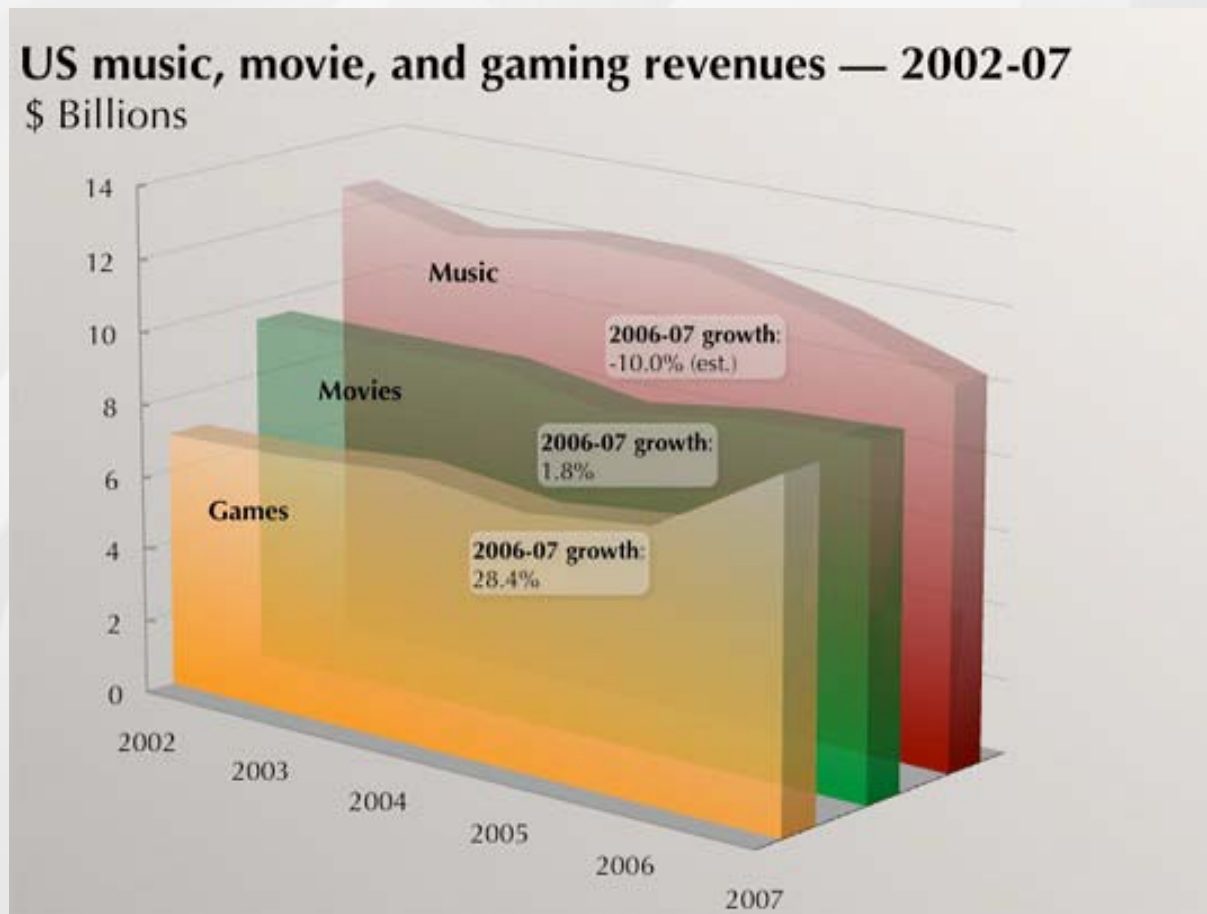
Data source: NPD Group; ESA; MPAA; BoxOfficeMojo.com; RIAA; IFPI

20% of games make up 80% of the market
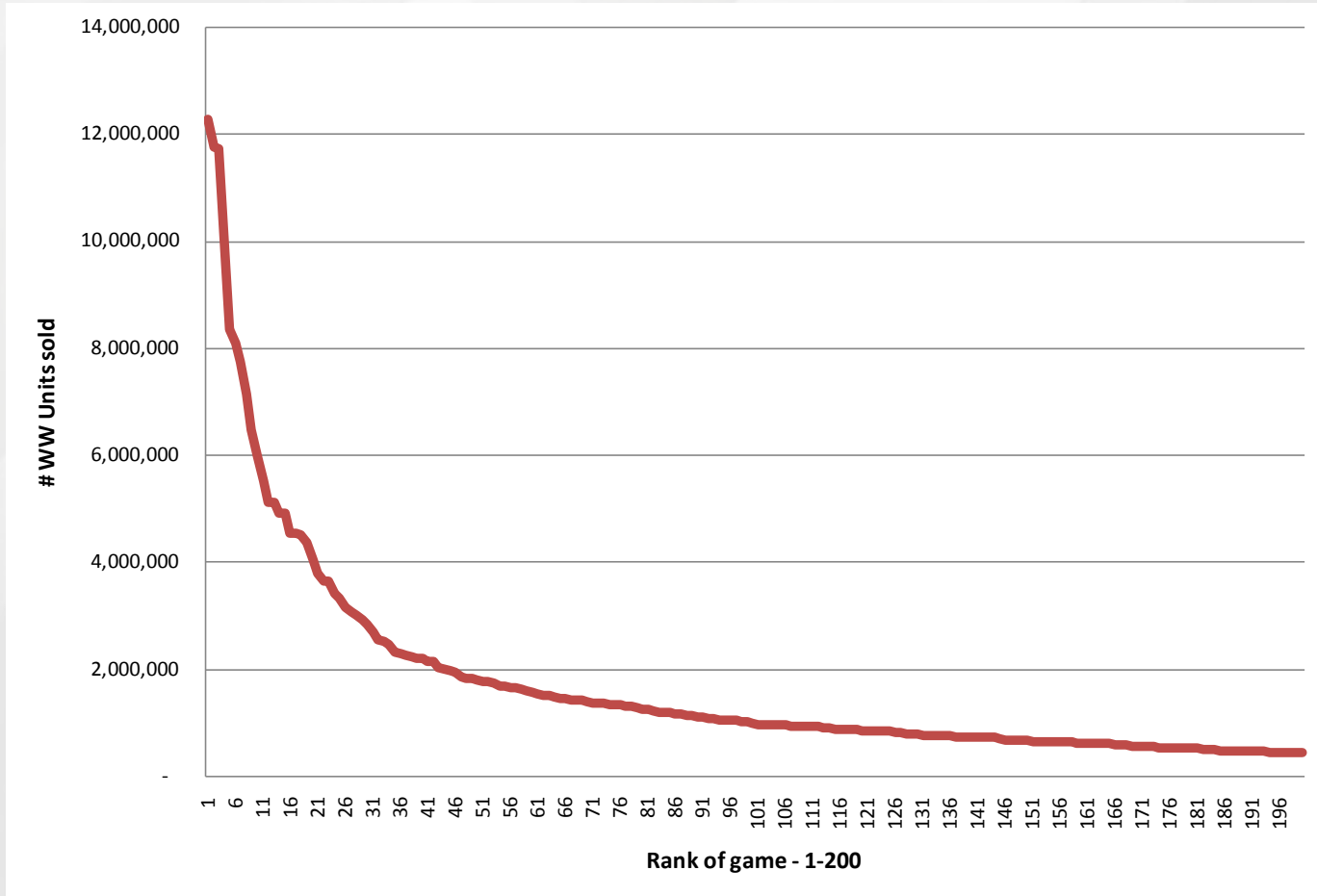
2007 Top 20 Titles

These games accounted for 20% of all units and 30% of all dollars

2007 US VIDEO GAME SALES (ALL PLATFORMS)

	TITLE	PUBLISHER	REL DATE	2007 UNITS	2007 DOLLARS
1	GUITAR HERO III: LEGENDS OF ROCK	ACTIVISION BLIZZARD	Oct-07	5,927,947	491,378,832
2	MADDEN NFL 08	ELECTRONIC ARTS	Aug-07	5,744,380	269,877,961
3	HALO 3	MICROSOFT	Sep-07	4,862,071	323,577,730
4	CALL OF DUTY 4: MODERN WARFARE	ACTIVISION BLIZZARD	Nov-07	4,430,672	243,256,655
5	PLAY W/ REMOTE	NINTENDO	Feb-07	4,125,325	204,549,900
6	GUITAR HERO 2	ACTIVISION BLIZZARD	Nov-06	3,422,400	265,146,591
7	ASSASSIN'S CREED	UBISOFT	Nov-07	2,657,337	155,589,385
8	SUPER MARIO GALAXY	NINTENDO	Nov-07	2,531,534	123,390,100
9	POKEMON DIAMOND VERSION	NINTENDO	Apr-07	2,486,913	85,774,150
10	WORLD OF WARCRAFT: BURNING CRUSADE XP	ACTIVISION BLIZZARD	Jan-07	1,912,437	73,093,381
11	SPIDER-MAN 3	ACTIVISION BLIZZARD	Apr-07	1,837,872	73,738,640
12	MARIO PARTY 8	NINTENDO	May-07	1,821,915	90,045,020
13	POKEMON PEARL VERSION	NINTENDO	Apr-07	1,758,361	60,862,400
14	NCAA FOOTBALL 08	ELECTRONIC ARTS	Jul-07	1,674,161	81,892,703
15	LEGO STAR WARS II: THE ORIGINAL TRILOGY	LUCASARTS	Sep-06	1,652,033	40,803,093
16	WWE SMACKDOWN VS. RAW 2008	THQ	Nov-07	1,620,141	78,621,728
17	TRANSFORMERS: THE GAME	ACTIVISION BLIZZARD	Jun-07	1,488,104	60,619,861
18	NEW SUPER MARIO BROS	NINTENDO	May-06	1,485,078	50,633,100
19	LEGEND OF ZELDA: TWILIGHT PRINCESS	NINTENDO	Nov-06	1,380,408	68,378,100
20	MADDEN NFL 07	ELECTRONIC ARTS	Aug-06	1,343,768	47,239,946
			TOTAL	265,394,721	9,451,512,135

Midway is a Top Publisher

Top 20 Publishers of 2008

1. Nintendo
2. Electronic Arts
3. Activision
4. Ubisoft
5. Sony Computer Entertainment
6. Take Two
7. Sega of America
8. THQ
9. Microsoft Game Studios
10. Square Enix
11. Konami
12. Vivendi Games
13. Namco Bandai Games
14. Capcom
15. NCSoft
16. Disney Interactive Studios
17. LucasArts
18. Codemasters
19. Eidos Interactive
20. **Midway**

Rankings by Game Developer Magazine based on a wide-ranging reputation survey alongside revenue, average review, and anonymous partner feedback

Recent Releases - 2006

Recent Releases - 2007

Famous Franchises

Programming for Video Games: Misconceptions and Facts

Fun and Games

- Myth:
  - Play games all day

- Facts:
  - It's a very hard job
    - Requiring many hours of hard work
    - Requiring continuing learning and education
  - Work on the same project day-in, day-out isn't all fun and games
    - Devil in the details
    - Every interaction, effect needs to be implemented

One Person Show

- Myth:
  - Programmers make the game

- Fact:
  - Actually it takes a team of 40-60
    - 15 programmers
    - 20 artists
    - 10 designers
    - 10-20 additional people from central teams
      - Specialize artists
      - System programmers
      - Sound Composers

Cooking from Scratch

- Myth:
  - Programmers write and design a lot of code

- Facts:
  - Companies have large established code bases
    - Many problems or systems have been implemented before on previous titles
    - It's inefficient to re-implement new technology
  - Many companies license specialized systems
    - Rendering engines
    - Physics engines
    - AI systems
    - Audio systems

Graphics and A.I.

- Myth:
  - I would like to implement the next graphics system

- Facts:
  - Most of the work deals with optimization
    - Graphics programming deals more with data layout, cache misses and bus stalls
  - Graphics is becoming a commodity item
    - ATI, Nvidia have many shader fragments to use
    - Following the trend of Audio
  - Taking an OpenGL or Direct X class gives a false sense of security of knowledge
    - Many things are abstracted from the user
    - Clipping, transformations, coordinate systems

Getting in the Game

- Myth:
  - Need to have a demo game to get into this industry

- Facts:
  - How do you do that if you don't work for a game company?
    - Work on open source projects
    - Demonstrate problem solving skills or expert knowledge
  - Specialize in an area that is related to the game industry
    - Low-Level optimization
    - Multi-processor development
    - Networking

Division of Labor

- Game Team Programming
  - Creating the game using tools and systems that exist
  - Rapid development for specific game use

- Technology Systems & Tools
  - Create OS enhancements to engines
  - Low-level / High-level systems
  - Pipeline tools for artists and developers

Advanced Technology Group (ATG)

- Central Technology Team
  - Not physically on a specific game team
    - Instead work with game teams
    - Supply Technology to game teams
  - Local support to Chicago
  - Large system development across different Studios

- 3 Roles
  - Engine Development
  - Tools Development
  - Consulting to teams

- Outsourcing
  - Leadership and architecture direction
  - Increase engineering output

ATG Recent Development

- Game development (Stranglehold):
  - Networking
  - Audio
  - Graphics
  - Optimizations
  - Physics
  - Data conversion
  - Cinematics
  - Dynamic Advertisement
  - Movie Player

- Studio Wide
  - Cinematics
  - Physics
  - Audio
 - Movie Player
  - UI

Embedded Systems

- Consoles are embedded systems; not PCs

- Embedded issues are:
  - Memory
  - Cache
  - Buses
  - Alignment
  - Performance
  - Data Streaming

Consoles vs. PCs

- Xbox 360
  - CPUs
    - Custom PowerPC CPU
    - 3 symmetrical cores at 3.2 GHz
    - 2 hardware threads / core
    - 1 MB L2 cache
  - RAM
    - 512 MB (unified)
    - 10 MB embedded video buffer
  - Graphics
    - ATI Shader 3 (DX-9)
    - 500 MHz ATI

- PS3
  - CPUs
    - 1 - IBM PowerPC
      - 3.2 GHz
      - 512 KB L2 cache
    - 7 – SPE
      - 3.2 GHz
      - 256 KB per SPE
  - RAM
    - 256 MB system
    - 256 MB video
  - Graphics
    - Nvidia Shader 3 (DX-9)
    - 550 MHz

Software Architect Skills
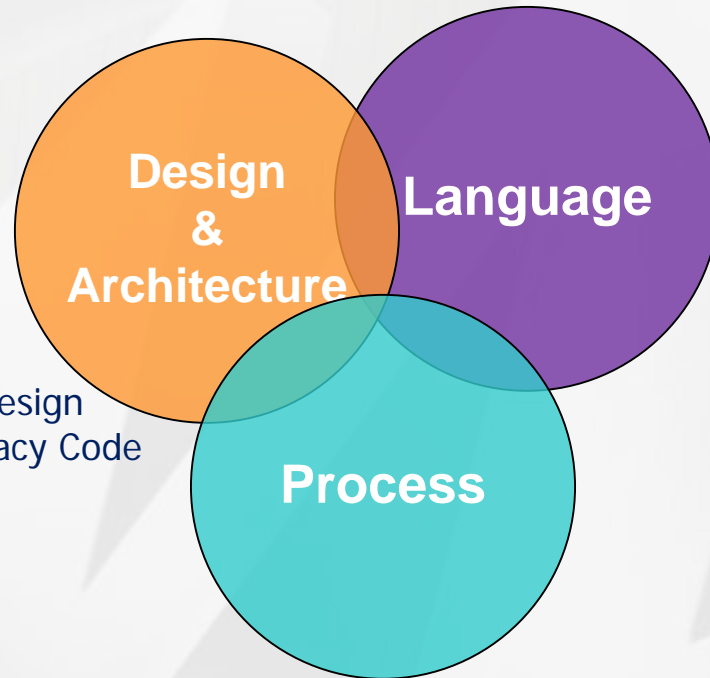
Refactoring
Refactoring to Patterns
Designs Patterns
UML Distilled
Domain Design
Fundamentals of OO Design
Large Scale C++ Software Design
Working Effectively with Legacy Code

Design & Architecture

Language

Process

Effective C++
More Effective C++
Effective STL
Expert C
C++ Templates
C++ Strategies and Tactics
Exceptional C++
More Exceptional C++
Exceptional C++ style
Efficient C++
Modern C++
STL Tutorial and Ref Guide
C++ Gotchas

Pragmatic Programmers
XP extreme programming
Agile process
Code Complete
Writing Solid Code

Mythical Man Month
Test Driven Development
Death March
Performance Solutions
Software Craftsmanship

Desired Skills

- Mastery of C++
  - Dynamic Memory Usage
    - New, Delete
    - Fix Memory pools
  - STL (Standard Template Library)
    - Containers
      - Vector, Map, Queue, List
    - Iterators
    - Generic Algorithms
  - Template Programming

- Embedded Software
  - Restrictions / Constraints
  - Debugging
  - Understanding memory layout
  - Language side effects

Desired Skills

- Working with Legacy Code
  - Understand a lot code not written by you
  - Refactoring
    - Modifying and extending existing code

- Object Oriented Design
  - Fundamentals of OO
    - Inheritance
    - Overloading
    - Encapsulation
    - Polymorphism
  - Design Patterns

Programming Trends

- Scripts
  - Easy to create
  - Decoupled from low-level details
  - Data driven and downloadable
  - 90 – 10 rule
    - 90% of the game is going through10% of the code

- Graphical programming
  - Enable designers and artists to create more complex behavior through a visual model

- Multi-processor / Multi-threaded
  - Fighting physics on a silicon level
  - Add more threads and more processors to increase performance

What we are looking for?

- Teamwork, Community, Culture
- Smart
  - Ability to understand and work on hard concepts

- Aggressive
  - The resolve to stay with a problem
  - Investigate, experiment, drive towards the end result

- Responsible
  - Takes ownership of the outcome
  - Taking responsibility into systems that affect your result
  - Stand behind the work

- Problem Solvers
  - Solves the correct problem, hopefully only once!
  - Lets data drive toward real issues not emotions

Take Away

- Most software development is refactoring
  - Write software with maintenance issues in mind
    - Create robust, clean modular code that can be easily understood by your peers

- Care about your craft
  - Continue to read, learn and experiment
  - It's never over…

Headcount - ~550 employees

Department	Percent of Workforce
Product Development	74%
Sales and Marketing	9%
Finance and Accounting	7%
Other Corporate and Ops	10%
Total	**100%**

STUDIO LOCATIONS

Chicago – Worldwide Headquarters

Seattle, WA

Newcastle, UK

San Diego, CA