

# Computer Games 2012 Introduction

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## Motivation



"Games are a prosthesis for imagination" (Will Wright)



## Agenda



- Business of Games
- Age ratings
- Game Taxonomy



## **Gaming Business**



#### **AAA Games**

- Considered as premium game projects
- Big budget, broad market, high quality
- Large teams, exhaustively tested, etc.



## **AAA Games - Examples**



- Assassins Creed
  - Ubisoft, Ubisoft Montreal
  - Action adventure
  - http://assassinscreed.us.ubi.com
- Need for Speed: Hot Pursuit
  - EA, Criterion
  - Racing
  - http://hotpursuit.needforspeed.com/



## **Gaming Business**



#### **Indie Games**

- Independent video games
- Created without (financial) support of publishers
- Typically relies on digital distribution



## Indie Games - Examples



- World of Goo (2D Boy)
  - http://www.worldofgoo.com/
  - on site, Steam, Wii Ware, Mac Games Store, ...
- Braid (Number None)
  - http://www.braid-game.com/
  - Xbox, Steam, ...
- Flower (thatgamecompany)
  - http://thatgamecompany.com/games/flower/



## **Gaming Business Models**



	Kunden	Entwicklungskosten	Kosten Kundenerwerb	Umsatz	Trend
Konsole	200 Mio.	10+ Mio \$	Werbung	100 Mio. \$	>
Facebook	600 Mio.	100.000+\$	1,20\$	100+ Mio. \$	Z
Internet	1,6 Mrd.	100.000+\$	1,40 \$	100+ Mio. \$	Z
Mobile	4,5 Mrd.	10.000+\$	< 0,1 \$	10 Mio.+ \$	Z



## **Gaming Business**



### Roles in the Games Development Process

- Game Studio
  - creates the game
- Publisher
  - production & QA
- Distributor
  - digital, on media



## Game Studio - Examples



- Harmonix
- Naughty Dog
- Bungie
- EA Sports
- People Can Fly



## Publisher - Examples



- Electronic Arts
- Capcom
- Konami
- MTV Games



## Distributor - Example



- EA Distribution
- Valve
- Sony
- Microsoft
- GOG



## **Distribution Media**



## Digital distribution

- Typically means "online" distribution
   Digital media based distribution
- Blue-Ray, DVD, UMD, cartridge, etc.
   Hybrid methods
- DVD with online registration
- Codes, cards, etc.



### **Distribution - Steam**



Created & maintained by Valve



- Supports indie games to AAA
- Includes community features
- Manages DRM (one online client)



# Distribution - Xbox Marketplace



 Focus on indie, arcade and classic games



- Supports on demand downloads
- Based on virtual money (MS Points)
- Includes community features
- Manages DRM (one Xbox)



## **Distribution - PSN**



- Focus on "smaller" games
  - indie, arcade, minis, PSP, etc.



- Supports on demand downloads
- Includes community features
- Manages DRM (one online, 3 installations)



### **Distribution - GOG**



Provides "old" games

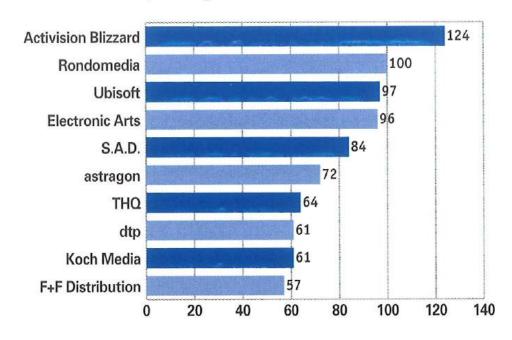
gog.com

- Working digital copies
- DRM free
- No community features
  - besides rating, collaborative filtering & comments





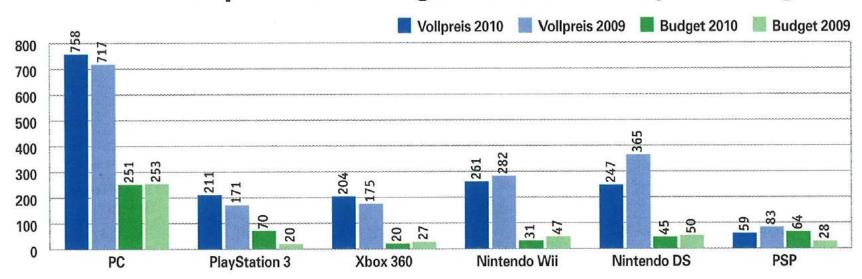
# Die aktivsten Publisher (Vollpreistitel 2010)





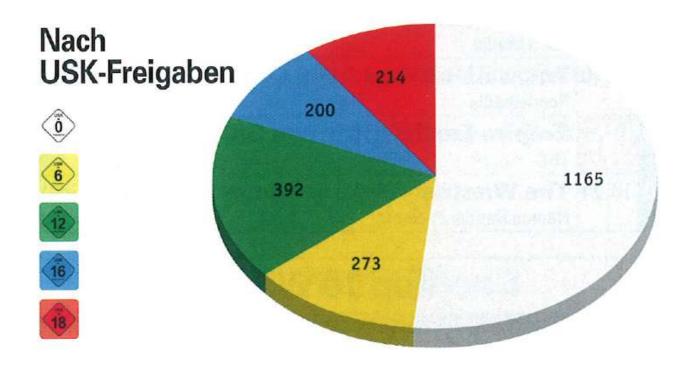


#### Vollpreis- und Budgetreleases im Vorjahresvergleich



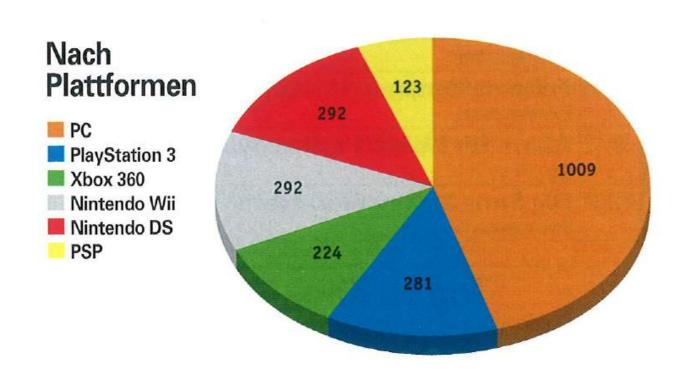








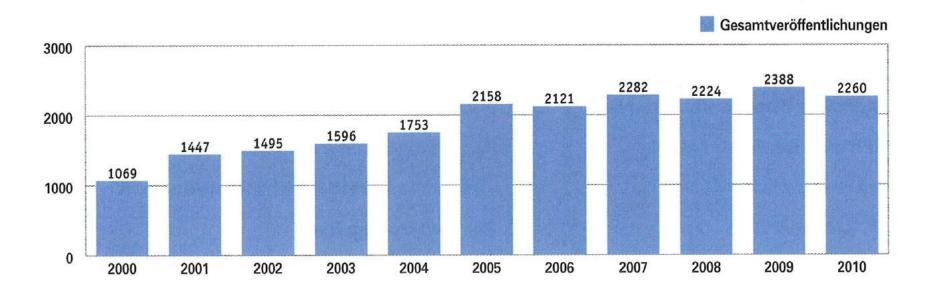








#### Gesamtzahl Releases 2000-2010

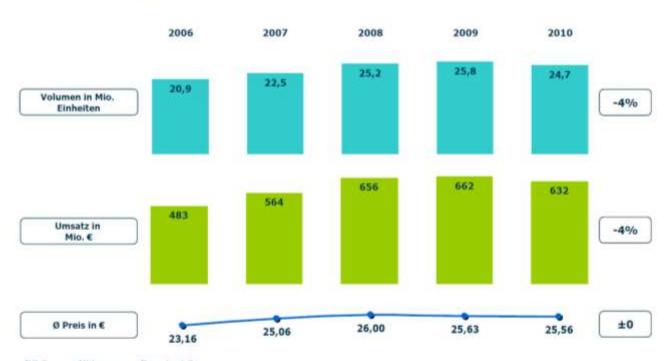








#### Spielesoftware: Marktentwicklung



PC Games + Videogames + Download Games Januar-Juni 2010

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		2009	2010	10 vs 09
	Volumen in Mio. Einheiten	25,8	24,7	-4%
GAMES TOTAL	Umsatz in Mio. €	662	632	-4%
	Ø Preis in €	25,63	25,56	0%
	Volumen in Mio. Einheiten	12,2	11,5	-6%
PC	Umsatz in Mio. €	202	197	-2%
	Ø Preis in €	16,60	17,20	4%
	Volumen in Mio. Einheiten	8,6	9,2	7%
Konsole	Umsatz in Mio. €	323	334	3%
	Ø Preis in €	37,66	36,39	-3%
	Volumen in Mio. Einheiten	5,1	4,1	-19%
Handheld	Umsatz in Mio. €	136	102	-25%
	Ø Preis in €	26,92	24,71	-8%

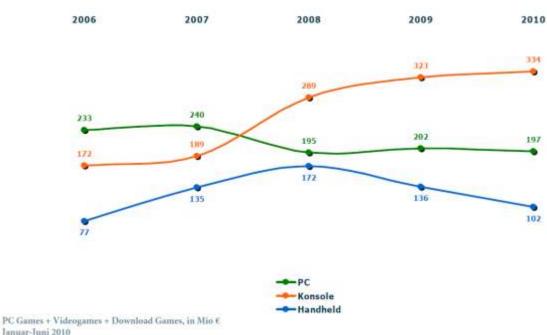
PC Games + Videogames + Download Games Januar-Juni 2010

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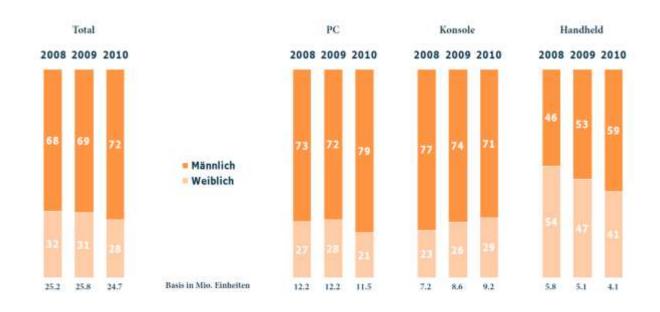
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PC Games + Videogames + Download Games, Angaben in % Januar bis Juni

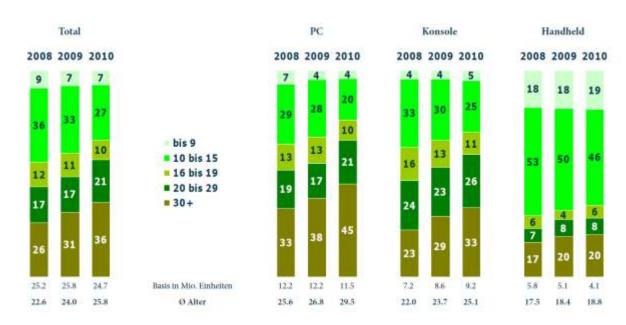
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#### Altersdurchschnitt steigt auf 25,8 Jahre



PC Games + Videogames + Download Games, Angaben in % Januar bis Juni

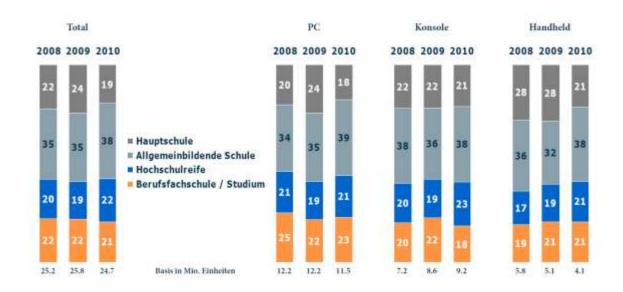
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#### Bildungsniveau bleibt konstant hoch



PC Games + Videogames + Download Games, Angaben in % Januar bis Juni

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## The Gamer

#### 34YRS

The average age of a gamer

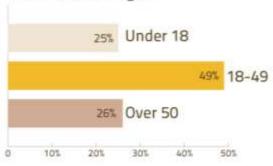
#### 39YRS

The average age of most frequent game purchaser

#### 12YRS

Average number of years adult gamers have been playing computer/video games

#### 2010 Gamer Ages



67% of US households play video games

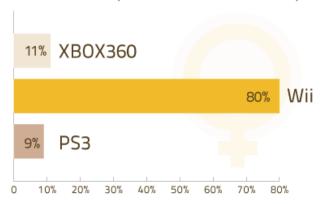




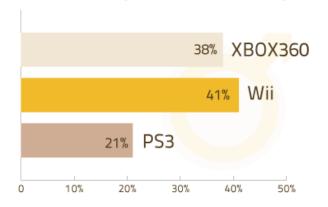
The 2010 average gamer spends 8 hours a week playing video games







#### 2008 Primary Console Male Players<sup>6</sup>









40% of all gamers are female

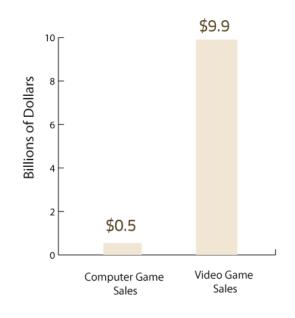




## The Industry

According to data compiled by the NPD Group, a global market research company, and released by the Entertainment Software Association, the computer and video game industry sold 273 million units in 2009 leading to an astounding<sup>3</sup>

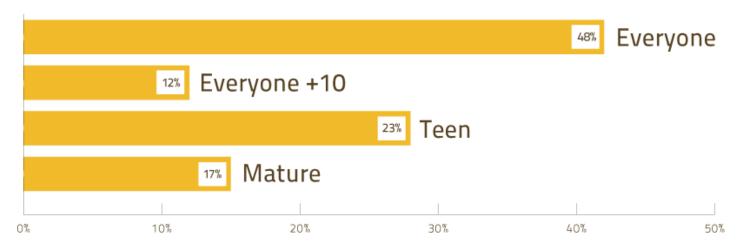
\$10.5 billion in revenue







#### 2009 Computer and Video Game Sales By ESRB Rating



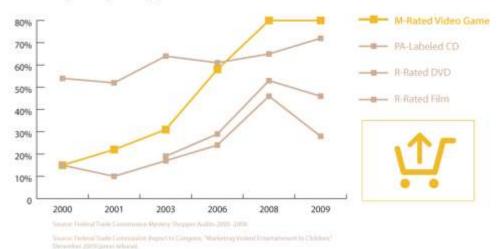




#### FTC Mystery Shops

The FTC also periodically conducts nationwide undercover shops of movie theaters and movie, music, and video game retailers. Their most recent survey found that 80% of individuals under the age of 17 were turned away when trying to purchase or rent M-rated games."

#### FTC Mystery Shopper Audits: 2000 - 2009





## NDP Data Oct. 2010



- May-Aug. 2010:
  - 42 million units (consoles & handhelds)
  - avg. price 35\$
- Late Aug.-Sept.
  - release of Madden NFL
  - 43\$ per unit
  - 40% more revenue



## NDP Data Oct. 2010



Top 10 Games at U.S. Retail October 2011					
Rank	Title	Platforms			
1	Battlefield 3**	360, PS3, PC			
2	Batman: Arkham City**	360, PS3			
3	NBA 2K12	360, PS3, PSP, Wii, PS2, PC			
4	Rage	360, PS3, PC			
5	Just Dance 3	Wii, PS3			
6	Dark Souls**	PS3, 360			
7	Madden NFL 12**	360, PS3, Wii, PS2, PSP			
8	Forza Motorsport 4**	360			
9	Gears of War 3**	360			
10	FIFA Soccer 12	360, PS3, Wii, PSP, PS2, 3DS			
* Inclu	des special editions	Source: The NPD Group			

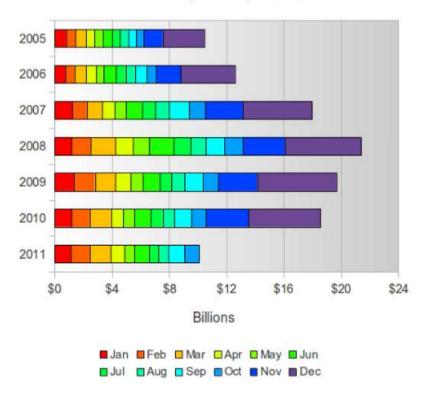


#### NDP Data Oct. 2010



#### Industry Revenue, 2005 - 2011

Subdivided by Monthly Revenue





#### NDP Data Oct. 2010



#### Nintendo's decline

- Jan. 2009: Nintendo claims to be responsible for 90% of the market growth
- 2010-2011 Nntendo is main contributor to loss
- PSP & PS2 looses too
- MS stays flat

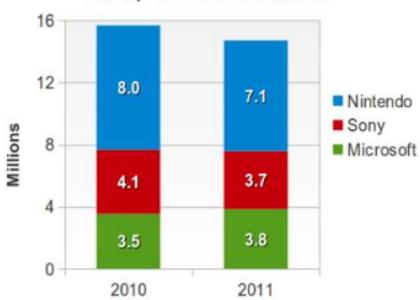


#### NDP Data Oct. 2010



#### Estimated U.S. Hardware Sales

January - October 2010 and 2011





## NDP Data Oct. 2010 Nintendo platform



#### Jan.-Sept. 2011 U.S. Software Top 20 Chart

RANK	TITLE	PUBLISHER	FORMAT
1	JUST DANCE 2	UBISOFT	With
2	POKEMON WHITE VERSION	NINTENDO	D5
3	GEARS OF WAR 3 MICROSOFT		360
4	POKEMON BLACK VERSION NINTEN		DS
5	ALL OF DUTY: BLACK OPS ACTIVISION BLIZZARD		360
6	ZUMBA FITNESS: JOIN THE PARTY	MAJESCO	
7	MADDEN NFL 12	ELECTRONIC ARTS	360
8	CALL OF DUTY: BLACK OPS	ACTIVISION BLIZZARD	PS3
9	MADDEN NFL 12	ELECTRONIC ARTS	PS3
10	NEW SUPER MARIO BROS DS	NINTENDO	DS
11	MICHAEL JACKSON THE EXPERIENCE	UBISOFT	WII
12	NBA 2K11	2K SPORTS	360
13	LA NOIRE	ROCKSTAR GAMES	360
14	DANCE CENTRAL	MTV GAMES	360
15	MORTAL KOMBAT	WARNER BROS. INTERACTIVE	P53
16	MORTAL KOMBAT	WARNER BROS. INTERACTIVE	360
17	HOMEFRONT	THQ	360
18	KINECT SPORTS	MICROSOFT	360
19	NCAA FOOTBALL 12	ELECTRONIC ARTS	360
20	NEW SUPER MARIO BROS. WII	NINTENDO	WIII

Source: NPD



# NDP Data Oct. 2010: Digital vs. Retail



#### Global TTM 3rd Party Publisher Revenue by Channel

Activision Blizzard, Electronic Arts, and Ubisoft





## NDP Data Oct. 2010: Handhelds



#### Global TTM 3rd Party Revenue - Handhelds

Activision Blizzard, Electronic Arts, Take 2, THQ, and Ubisoft



Twelve Month Period Ending

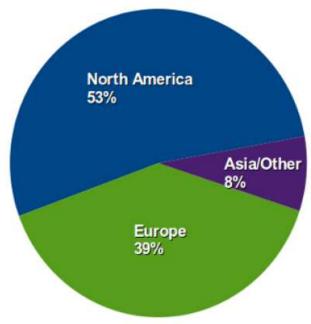


## NDP Data Oct. 2010: 3rd Publisher Markets



#### Content Revenue Marketshare by Region

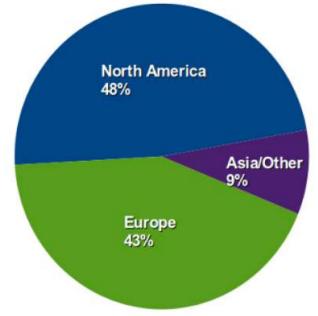
Activision Blizzard, Electronic Arts, Take 2, THQ, Ubisoft



October 2009 - September 2010

#### Software Revenue Marketshare by Region

Activision Blizzard, Electronic Arts, Take 2, THQ, Ubisoft



October 2010 - September 2011





- Online Browser Games
  - Bigpoint.com biggest German gaming portal
  - In the top 3 gaming portals world wide
- Publisher
  - Development (bigpoint.com & selbst), licensing
- Content Provider
  - e.g. Sevengames
- Developer
  - own game studio







- More than 65 browser games
- More than 160 million gamers
- Selling virtual goods
  - Micropayment





















(c) 2011 Bigpoint GmbH | Impressum | AGB | Status & Vorteilspakete | Support | Promocode aktivieren | Tulpgulden tauschen









#### Demo: Die Siedler Online







#### **Business Model: Gameloft**



- Publisher and developer
  - mobile games
  - console games



- Java, Brew, Symbian
- WiiWare and DS
- Microsoft's Xbox LIVE Arcade and PC
- Apple's iPod, iTouch and iPhones





#### **Business Model: Gameloft**



- 6 major studios
  - US, Canada, Romania, France, China and Japan
- 2,400 in-house developers
- 900 models of cell phones are supported
  - 4 billion game enabled handsets expected in 2012
- 122 million € sales in 2009
- Sales offices and partner in 80+ countries



#### Business Model: CryTek



- "From AAA Retail to AAA Online"
- Product: Box vs. Service
- Gamers: Who will pay?
- Process: Gold Master vs. Open Beta+



## AAA Online: Product Characteristics



- Communication is key issue
  - The community is always right
  - responsiveness
- Iterate forever (almost)
- Path to fun is critical
  - Instant fun vs. learning curve
- Virtual goods vs. boxed game



## AAA Online: Gamers



- SHEEP (90-95 of 100)
  - Love shiny content, enjoy game horizontally
  - Do not dig deep into levels, features or difficulty
  - Make up the community both in demographic and size
- WOLVES (4-9 of 100)
  - Fans, dig vertically into game & appreciate depth
  - Enjoy online games in the same way as box buyers
  - Spend money to save time, not to dress up
- WHALE (0-1 of 100)
  - Wealthy, spends \$\$\$ per month to show off
  - Wants to get everything quick, spends also to speed up
  - Buys everything contributes most to avg. revenue / user (ARPU)





## AAA Online: The Process



- Stricter time budgets vs. "It is never good enough"
  - Put features online
- Keep people entertained and maintain community
  - Frequent updates are expected (cp. TF2, Siedler Online)
- Iterate forever
  - create dev-test-deploy cycle on a monthly rhythm



# Why should AAA Developers move to F2P?



According to C. Yerli: "Future of AAA on PC = AAA F2P on PC"

- Quality & quantity are crucial for long-life cycle success for AAA online gaming
- Apply experienced AAA team to achieve AAA quality content
- Invest in AAA 100% real-time technology with easy-to-use tools, quickly push out high quantity & AAA quality content



#### Where to go?



#### According to C. Yerli:

- Almost every AAA retail game can be transformed into a F2P game, in-game economics
- If not from scratch F2P, establish hybrid solutions now
- The minimum: Prepare your retail release for a follow up F2P release



## CryTek's Commitment



Warface (see video)



## Agenda



- Business of Games
- Age ratings
- Game Taxonomies



# Entertainment Software Rating Board (ESRB)



- For interactive entertainment industry
  - North America
  - Non-profit, self-regulatory
- Goals
  - Assignment of ratings
  - Enforcement of adverting guidelines
  - Help in ensuring online privacy practices





#### **ESRB Ratings Process (1)**



- Ratings Process
  - in final stages of development
  - prior to a game being released
- Publishers submit
  - responses to ESRB questionnaire
  - supplementing with lyric sheets, scripts, etc.





### **ESRB Ratings Process (2)**



- Submission is checked for completeness
  - involves ESRB staff members playing a beta or alpha version of the game
- Video footage is reviewed
  - by at least three specially trained game raters
  - full time job, adults, experience with children
- Each rater recommends
  - appropriate rating category
  - content descriptors



### **ESRB Ratings Process (3)**



- Raters deliberate about rating
  - review of prior ratings of similar games
  - consensus on final rating
- ESRB staff members
  - check parity & consistency between ratings
  - issue certificate & rating report for publisher



### **ESRB Ratings Process (4)**



- Publishers may appeal an ESRB rating
  - to an Appeals Board of publishers, retailers and other professionals
- Otherwise complete rating information is posted on the ESRB website
  - rating category, content descriptors, & rating summary
  - 30 days following the assignment of the rating



### **ESRB Ratings Process (5)**



- Prior to release game is sent to ESRB
  - game packaging is reviewed to make sure the rating information is displayed accurately and in accordance with ESRB requirements.
  - play-test are conducted on the final version of a variety of games to verify that materials provided during the rating process were accurate and complete.



# ESRB Ratings Process - Result



#### ESRB Game Ratings



Search Results

Your search by title 'world of goo' returned 2 Game Ratings.

Title	Publisher	Rating	Content	Platforms	
World of Goo	Microsoft	Everyone	Comic Mischief	Windows PC	
World of Goo is point-and-click puzzle game in which players guide goo-like creatures to level goals. Players can create support structures and bridges from the goo creatures to navigate hazards. Some levels require setting the [More]					
World of Goo	2D Boy	Everyone	Comic Mischief	Macintosh, Windows PC, Wii	

1 - 2 of 2



## ESRB Ratings Process - Criteria



#### Consideration of

- the most extreme content of the game
  - in terms of relevant rating criteria such as violence, language, sexuality, gambling, and alcohol, tobacco and drug reference or use
- the final product as a whole
  - demonstrating the game's context (such as setting, storyline and objectives) and relative frequency of extreme content.



# ESRB Ratings Process - Ratings



- eC (= early Childhood)
- E (= Everyone)
- E10+ (= Everyone 10+)
- T (= Teen; 13+)
- M (= Mature; 17+)
- AO (= Adults Only; 18+)
- RP (= Rating Pending)

















#### **ESRB Content Descriptors**



- Alcohol Reference Reference to and/or images of alcoholic beverages
- Animated Blood Discolored and/or unrealistic depictions of blood
- Blood Depictions of blood
- Blood and Gore Depictions of blood or the mutilation of body parts
- Cartoon Violence Violent actions involving cartoon-like situations and characters.
- Comic Mischief Depictions or dialogue involving slapstick or suggestive humor
- Crude Humor Depictions or dialogue involving vulgar antics, including "bathroom" humor
- Drug Reference Reference to and/or images of illegal drugs
- Fantasy Violence Violent actions of a fantasy nature, involving human or non-human characters in situations easily distinguishable from real life
- Intense Violence Graphic and realistic-looking depictions of physical conflict. May involve extreme and/or realistic blood, gore, weapons and depictions of human injury and death
- Language Mild to moderate use of profanity
- Lyrics Mild references to profanity, sexuality, violence, alcohol or drug use in music
- Mature Humor Depictions or dialogue involving "adult" humor, including sexual references
- Nudity Graphic or prolonged depictions of nudity
- Partial Nudity Brief and/or mild depictions of nudity



#### **ESRB Content Descriptors**



- Real Gambling Player can gamble, including betting or wagering real cash or currency
- Sexual Content Non-explicit depictions of sexual behavior, possibly including partial nudity
- **Sexual Themes** References to sex or sexuality
- Sexual Violence Depictions of rape or other violent sexual acts
- Simulated Gambling Player can gamble without betting or wagering real cash or currency
- Strong Language Explicit and/or frequent use of profanity
- Strong Lyrics Explicit and/or frequent references to profanity, sex, violence, alcohol or drug
  use in music
- Strong Sexual Content Explicit and/or frequent depictions of sexual behavior, possibly including nudity
- Suggestive Themes Mild provocative references or materials
- Tobacco Reference Reference to and/or images of tobacco products
- Use of Drugs The consumption or use of illegal drugs
- Use of Alcohol The consumption of alcoholic beverages
- Use of Tobacco The consumption of tobacco products
- Violence Scenes involving aggressive conflict. May contain bloodless dismemberment
- Violent References References to violent acts



# Pan European Game Information (PEGI)



- European "ESRB"
- Fully supported by the European Union
- Focus on protection of minors
  - Does not rate challenge or educational value





# **PEGI Ratings**

















# Unterhaltungssoftware Selbstkontrolle (USK)



- German institution
  - based on the law on protection of minors
  - very strict in Germany (e.g. mail order)
- Games w. USK rating are sold in AT & CH
  - Although PEGI is used there
  - Just one version with German translation





## USK & BPjM



- Games considered "jugendgefährdend"
  - Are not rated by the USK but by the "Bundesprüfstelle für jugendgefährdende Medien"
  - Get on a list of media harmful for minors
  - Cannot be advertised in stores and media or sold to minors

#### Criteria

"... vor allem unsittliche, verrohend wirkende, zu Gewalttätigkeit, Verbrechen oder Rassenhass anreizende Medien sowie Medien, in denen (1) Gewalthandlungen, insbesondere Mord- und Metzelszenen selbstzweckhaft und detailliert dargestellt werden oder (2) Selbstjustiz als einzig bewährtes Mittel zur Durchsetzung der vermeintlichen Gerechtigkeit nahe gelegt wird."



# USK & BPjM: Examples



- Return to Castle Wolfenstein
  - was on the "Index"
  - censored version for Germany
  - also because of the "Verbotsgesetz 1947"
- Gears of War
  - was not published in Germany
- Quake, Doom, etc.



# Agenda



- Business of Games
- Age ratings
- Game Taxonomies



# Game Taxonomies: Scientific Discussion



#### Classification of games on 4 levels

- Platform
  - hardware: PC, Wii, PS3, etc.
- Milieu
  - visual genre: fantasy, scifi, horror, etc.



# Game Taxonomies: Scientific Discussion



#### Mode

- "How the game world is experienced ..."
- single-player, multi-player, MMO
- rails, tunnel, or open world
- competitive or coop

#### Genre

- Problems with definition and classification
- Understanding as "category"?





#### Simulation

- sports, flying, driving, dynamics of cities, communities, etc.
- "laws of physics" vs. "laws of play"
  - cp. Gran Turismo & Super Mario Cart





## Strategy

- Real time vs. turn based
- Integrity is complicated
  - Many games require strategic play (Sim City, Battlefield, Blur, etc.)





#### Action

- First Person vs. Third Person
  - From camera perspective (film)
- Player performs a desired action by selecting the correct inputs
  - In contrast to selecting desired actions and the computer will determine the performance





## Role-playing

- Playing a role in a predefined world
- Transforming the role of a character within the game



# Conclusion on Apperley (2006)



- Game genres are not very well defined
- They are not mutually exclusive
- People do not agree on a taxonomy



# A Game Taxonomy (Crawford, 1982)



#### **Skill-and-Action Games**

- Combat Games
- Maze Games
- Sports Games
- Paddle Games
- Race Games
- Misc. Games

#### **Strategy Games**

- Adventures
- D&D Games
- Wargames
- Games of Chance
- Educational Games
- Interpersonal Games



## Conclusion on Crawford (1982)



- Crawford considers Donkey Kong
  - Classified as "misc. game"
  - Like a race game with intelligent obstacles
- Paddle games are a dedicated class
  - Nowadays we'd add this to "arcade games"
- Many current categories are missing
  - First person shooters, online games, arcade, casual games, AAA games, etc.



### Wisdom of the crowds?



- 84 genres
- Wikipedia
- merged de+en

AAA game Action game

Action role-playing game Action-adventure game

Adventure game

Arcade game

Art game

Artillery game

Beat 'em up

Belt scroll

Bishojo game

Browser game

Business simulation game

Casual game

Cinematic platformer

City-building game

Collectible card game

Combat flight simulator

Console game

Construction and

management simulation

Core game

Danmaku

Dating sim

Dota (genre)

Dungeon crawl

Escape the room

Fighting game

First-person shooter

God game

Government simulation

game

Grand Theft Auto clone

Graphic adventure game

Interactive movie

Japanese adventure

Jump and run

Life simulation game

Light gun shooter

Massively multiplayer

online game

Massively multiplayer online role-playing game

Maze Minigame

Mobile game

MUD

Music video game

Non-game

Nonviolent video game

Otome game
Platform game

Programming game Puzzle video game

Racing video game

Rail shooter

Railroad game

Real-time strategy

Real-time tactics

Retro game

Rhythm game

Roguelike

Role-playing video game

Shoot 'em up Shooter game

Sim racing

Simulation video game

Social simulation game

Space flight simulator game

Sports game Stealth game

Strategy video game

Survival horror

Tactical role-playing game

Tactical shooter

**Text Tiles** 

Third-person shooter

Tower defense
Traditional game
Turn-based strategy

Turn-based tactics

Vehicle simulation game Vehicular combat game

Wargame



## **Meta Sites**



#### **Metacritics**

- Action
- Action Adventure
- Adventure
- Driving, Racing
- Music
- Puzzle
- RPG
- Shooter
- Sports
- Strategy

#### Gamerankings

- Action
- Action Adventure
- Adventure
- Driving
- Misc.
- Role-playing
- Simulations
- Sports
- Strategy

