Introduction to Mobile Games
In this session....

★ Definition & Overview of the Industry
★ Past, Present & Feature
★ Evaluation of Platform, Device & Mobile Technology
★ Medium, Style and Genre
★ Content Delivery Mechanisms
★ Value chain and Motivations

Source: Gamesoft.com
Mobile content industry

- Ring tones
- Wallpaper
- Applications
- Songs (mp3)
- Video
- Advertisements
- ......

Computer game publishing

- Games
- Advertisements
- ....

Mobile game industry

Mobile Game Business

Computer Game Publishing
Mobile phones (as a game media)...

★ ... are, in most of the features, an inferior platform for console/pc games. (eg. features: screen size, processing power)
★ ... are always connected to a network.
★ ... are highly personal devices that cannot be exchanged between owners.
★ ... are carried and used in a completely different context than other devices. (still major use is communication/telephony)
★ ... are ubiquitous – always on, always with user
★ ... are usable anywhere
★ ... are having built in camera, video
★ ... are repository for users’ personal information (phone book, calendar)
Games (Design variables): Rules, Play and Culture

★ A game is a system of rules.

– Game is a System. Rules are the formal structure of a game.
  – Variable and quantifiable outcome, player puts efforts and he/she is attached to outcome
  – Game entities, mechanics and interaction
  – Negotiable consequences
  – Controls (UI related rules)

– System. Examples from traditional games
– Rules. Examples from traditional games
Games (Design variables): Rules, Play and Culture

- **Play** begins when a human enters the system and activates the rules.
  - Question to ponder: “Complex rules are required to produce complex games” (T/F).
  - Compare CHESS and GO – Complexity?
  - Play is an Experience beyond the formal complexity and rules of the game. Everything that happens to the mind and body of the player when he is engaged in the system. (aesthetics and style, story and setting, character)
  - open, creative, improvisational, challenge, scoring, reward
Games (Design variables): Rules, Play and Culture

A game is a cultural artifact.

- Relationship with the world. (Precedent, Environment, Audience)

- What kind of people play and why?
  » Source: Frank Lantz & Eric Zimmerman
  » Further reading: www.ericzimmerman.com

- Eg. Monopoly
  - is a representation of 1930s Atlantic City, a Depression-era.
  - real estate fantasy.
  - a miniature meditation on capitalism.
  - Small property deeds to total market domination.
Mobile phone culture

✦ Snake is the precedent, not Mario
  – Simple rules and controls
✦ Constant movement through unpredictable environments, opportunistic desires
  – Quick, short gaming sessions
  – Casual games
  – Minimum-key strokes
  – Played while commuting
✦ Not your usual video game audience
Games – Common Genres (kind, class)

<table>
<thead>
<tr>
<th>Action</th>
<th>Simulation</th>
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<tbody>
<tr>
<td>Strategy (RTS)</td>
<td>Puzzles</td>
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<tr>
<td>Adventure</td>
<td>Racing/Driving</td>
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<td>Role Playing Games (RPG)</td>
<td>Educational</td>
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<td>Sports</td>
<td>Traditional games</td>
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<tr>
<td>Fighting</td>
<td>– Board games</td>
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<tr>
<td>Shooting FPS, TPS</td>
<td>– Card games</td>
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Games database: [http://www.mobygames.com](http://www.mobygames.com)
Game Style

★ Style of playing refers to the way the character is expected to act and react within the genre of the game to ensure the desired end result. It is a tool for the game master and an instruction for a player. On the other hand styles are not genre specific, but they can be applied to any setting.

★ A collection of game mechanics that together create compelling experiences.

★ Eg. Card games:
  – Card games of combination (eg. Poker)
  – Trading card game (eg. Magic)

★ Game mechanics: - set of laws, rules or guidelines of the play.
Game Style
★ Think of the entire game space. Most of the games in that space are not interesting. Why?
  – Only one out of 10 titles becomes profitable
  – There are well established styles (local maxima)
  – Most games are variations on an understood style
★ Innovation is driven by discovering new maxima

New Game Styles
★ Driven by technology
★ Driven by society & culture
★ ....
Mobile Game (as a new Genre):

- Mobile game: A game that takes changing relative or absolute position/location into account in the game rules.
  - Question to ponder: Are all mobile phone games are mobile games?

Other Genres that have close relations with mobile games:

- Location based game: A game that uses relative or absolute but static position/location information in the game rules.
- Ubiquitous game: Uses the computational and communications infrastructure embedded within our everyday lives.
- Augmented Reality Game: Integration of virtual and physical elements in the game world.

» Source & Further Reading: “Theory of Pervasive Gaming” - B K Walther

Course focus: networked mobile phone games; loosely speaking: networked mobile games
Mobile Games
★ Provide a collection of game mechanics that, together, produce pleasing experiences for players...
★ Some, but not necessarily all, of which would depend on the unique characteristics of the mobile device.
★ Some, but not necessarily all, of which, already exist in current games.
★ Some of which involve imaginative leaps we cannot realistically predict.
Mobile Games - Success Factors

- New game style (new maxima) (new concept)
  - Innovative game concepts seems to be arising from Asian markets (source: www.acten.net, e-content report 3)
- Usage of unique characteristics of the mobile devices
- Cross-vendor, cross-operator, OS independent
- Produce for larger market (new features are not available in all phones)
- Simple rules and controls (casual)
- Networking, multi-device/multi-platform
  - Online ranking-list, winning in tournaments etc...
  - Combination with television shows. Eg trivia and quiz shows
Past, Present and Future (mobile games)

★1980s: Nintendo’s portable LCD games series. [Source: Gamesoft.com]
- Nintendo’s portable LCD games series.
  - 70 different kinds of LCD games. [www.gameandwatch.com](http://www.gameandwatch.com)
  - [www.gameandwatch.com](http://www.gameandwatch.com)

★1990s: Nintendo’s GameBoy (portable game console).
- Several LCD game manufacturers

★1997: Games on Mobile Phone
- Nokia’s *Snake* game in 1997.

★End 1990s: WAP-games. Slow connection speed, not successful (too much hype)
- in Japan (i-mode network based)
- In Europe Nokia 7100
Past, Present and Future (mobile games)


- 2006 onwards: High speed Network, GPU in Phones (h/w accelerated 3D graphics) with OPENGL ES, Scalable Vector Graphics (SVG), SVG Basic, SVG Tiny, MMOG, Pervasive Games, Portable consoles with communication capabilities. [eg h/w accelerated 3D: Nokia N93, SE P990, M600, W950i, HTC-DVB H TV, Samsung SGHP910]

- Mainstream mobile gamer will soon no longer be the “young, male, tech-savvy” and high frequent gamers. Middle-aged, male and female, non-tech –person will be requiring different types of casual games. (source: www.acten.net, e-content report 3)
OMAP2420 in Nokia N93

Source: www.symbian-freek.com
Why mobile games? (The market)

★ 2006 onwards:

- The global mobile games market is ready to take off, according to a new report coming out of Juniper Research. With casual games acting as a market driver, mobile games are expected to generate $17.6 billion in revenue by 2011.

- The firm is forecasting 2006 revenue totals of $3.1 billion. If the $17.6 billion prediction comes to pass, the industry will produce a cumulative revenue stream of $57 billion over the next six years. Market dominance will continue to hail from the Asia-Pacific region, which is expected to contribute 38 percent of cumulative revenue through 2011. By comparison, Europe and North America will contribute 31 percent and 22 percent respectively.

Why mobile games? (The market)

-starburst

2006 onwards:

- Mobile online gaming will amount to a $714 million market in China by 2008, more than a sevenfold increase from 2004, a new study by a Beijing research firm concludes.


- The casual mobile game market will be worth more than $1 billion by 2007, exceeding spend on high-end feature-rich titles. Puzzle and quiz games are most popular amongst mobile gamers in Japan, with 60% of gamers playing this genre. source: www.w2forum.com
Why mobile games? (The market)

🌟 Bestselling PC game franchise
  - The Sims, 54 million units
🌟 Bestselling console game franchise
  - Mario, 184 million units
🌟 Bestselling mobile game franchise
  - Snake, 350 million units
Jamba (German Mobile Portal)

- **300,000 Java Application downloads/month**
  - **80% are mobile games**

Paradox Studios, India

- has grown at a hectic pace since its inception in 2001.
- over a massive **750,000 games downloaded per day**
  on the Reliance India Mobile Network. The company clearly stands today as India’s largest game developer.
2006 World Mobile Phone Penetration Rate

Singapore: 90%, China: 30%, India: 9%, Japan: 82%, Aust: 86%, Malaysia: 68%, Indo: 28%, Taiwan: 91%

source: www.w2forum.com
Mobile Phone and Network – Evaluation

- 1980’s Voice only (Circuit-switched network, AMPS)
- 1990’s GSM, CDMA, Voice & Data (SMS) ➔ Simple standalone games, SMS games.
- 2000 GPRS, WAP Phones ➔ WAP Games.
- 2001 WCDMA, CDMA2000 3G Phones, Bluetooth phones, GPS enabled Phones, Cell-Id ➔ Bluetooth Games, Networked Mobile Games, 3D games, Location Based....
- 2005 HSDPA for WCDMA, CDMA2000 for EV-DO RFID, Smart Sensors
Mobile Game Development Platforms

★ J2ME --- Platform independent, Java based, Deployment content aggregators, operators, developers’ sites. (java.sun.com)
★ BREW --- Native code, C++ based, deployment through operators in partnership with Qualcomm (www.qualcomm.com)
★ Symbian --- Native code, C++ based
  – Features (Symbian,J2ME,BREW): High/low level UI, Data Persistence, Access to Personal info (calendar, phone book), networking, 3D, Multimedia, Location Info, Web Services, Security, SVG)
★ Flash Lite --- Action Script (Features: Flash Player 7 Based, Dynamic XML Data, Persistent Data, Powerful and Dynamic Media, Text Enhancement, Shape Drawing ActionScript API, Action Script 2.0 Support, Synchronized Device Sound, Compressed SWFs)
★ Microsoft Windows Mobile 5.0 --- Native code, C++ based
★ Maphun, ExEn and other...
Symbian OS Release

★ 8  http://www.symbian.com/symbianos/releases/v80/productsheet.html
★ 8.1 http://www.symbian.com/symbianos/releases/v81/productsheet.html
★ 9.2 http://www.symbian.com/symbianos/releases/v92/productsheet.html


★ 2005:  Symbian 51%, Linux 23 %, Microsoft 17%
★ 2004:  Symbian 56%, Linux 11.5%, Microsoft 12.6%
- Will Symbian hold its lead?
- Success factors for Windows and Linux?
- How about the Industrial Devices and M2M arena?
  (proprietary OS’s, Various (huge) classes of devices)
Major Device Classes/Platforms (For developers to focus on mass market)  
[vendor specific platforms]

- Nokia Series 60
- Nokia Series 80
- Nokia Series 40
- UIQ Phones (User Interface for Symbian) (www.uiq.com). Release 1,2,3 : Flexible platform allowing licensees to differentiate and create diversified phones, still based on one single codeline.
  - Eg UIQ Phones: Sony Ericsson W950, Sony Ericsson M600, Sony Ericsson P990, Motorola A1000, Sony Ericsson P900

Know your platform......

UIQ: 208*320
Series 60: 176*208
Series 40: 128*128
UIQ3 (also new Series40): 240 * 320
Mobile Game Value Chain

source: www.actten.org
Game distribution and marketing business
(20-25% total revenues)

✦ Revenue sources
  - Direct sales to consumers (flat fee)
  - Subscription-based fees (e.g. monthly)
  - Additional feature sales (e.g. extra levels)
  - Game rentals (pay-per-play)
  - Advertising & Sponsoring
  - Network access and transfer fees (for Telco operators)

✦ Costs items
  - Personnel costs
  - Marketing campaigns (planning + media)
  - Infrastructure building and operation costs (distribution platforms, servers, mobile network operation)
  - Licence fees to publishers
Publishers (50-60 % of total revenues)

Revenue sources
- Wholesale game revenues (flat fees/per sales/per usage)
- Subscription fees from consumers (e.g. to online communities)
- Advertising & sponsoring, e.g. (to include branded content in the game)

Costs items
- Personnel costs
- Licence fees brand owners
- Licence fees to console manufactures
- Payments to developers
Mobile game developers
(10-15% of total revenues)

★ Revenue sources
  – Flat fee payments from publishers
  – Commissions per mobile game usage/sales

★ Costs items
  – Personnel costs
  – Game development software licences and costs
  – Game development hardware costs
  – Licence fees to brand owners
Mobile game console/phone manufacturers (%??)

🌟 Revenue sources
- Mobile console sales
- (Subscription fees to online communities)

🌟 Costs items
- Personnel
- R&D costs
- Marketing costs
- Distribution costs
Mobile game production process

**DEVELOPERS**
- Mobile game development
  - Programming
  - Design
  - Sound
  - Visual arts
  - Writing
- Mobile game production
  - Production management
  - Quality assurance
  - Customer support
- Mobile game business development
  - Sales
  - Distribution
  - Corporate development

**PUBLISHERS**
- Mobile Game Publishing
- Partnerships
- Sales
- Marketing

**OPERATORS**
- Mobile Game Distribution
- Partnerships
- Sales
- Marketing
- Infrastructure operations
Business Model

🌟 Revenue by: Consumer payment, Advertising and Sponsorship

- Publishers: 50% - 60%
- Mobile operators: 20% - 25%
- Licensors: 15% - 20%
- Game developers: 10% - 15%

🌟 Movie: Director, Producer, Distribution.
- What is the share?
Introduction

Mobile game business

Game industry
★ High production cost (Minimum 2-4 million USD)
★ Long development time (12-24 months to develop)
★ Long time reach to distribution networks/chains
★ Long life time
★ Profit by game s/w sales (not h/w)

Mobile Game
★ Less capital investment than traditional games (few hundred thousands of USD)
★ 2-4 months for simple and 4-6 months for complex mobile games development
★ Short life time
★ Distribution through operators. Fast and efficient global reach.
★ Profit by long term contract with the customers. Mobile game as a value-add service
Top companies

1. Electronic Arts (USA), 2482 $Bn
2. Sony Computer (JP), 2180 $Bn
3. Nintendo (JP), 2128 $Bn
4. Activision (JP), 864 $Bn
5. VivendiUniversal Games (USA), 832 $Bn
6. Take-Two (USA), 793 $Bn
7. Atari (FRA), 761 $Bn
8. Konami (JP), 740 $Bn
9. Microsoft Game Studios (USA), 614 $Bn
10. Sega (JP), 563 $Bn
11. Square Enix, 526 $Bn
12. Unisof (FRA), 494 $Bn
13. THQ (USA), 480 $Bn
14. Capcom (JP), 407 $Bn
15. Bandai (JP), 372 $Bn
16. Namco (JP), 360 $Bn
17. Acclaim (USA), 269 $Bn
18. Koei (JP), 224 $Bn
19. Eidos (UK), 197 $Bn
20. Midway Games (USA), 190 $Bn

Game: Main markets
   USA, Japan, Korea

Mobile Game: Main markets
   Europe, Japan, Korea

source: game developer’s magazine
Local Game Industry

★ IDA, MDA, SEDB initiatives
★ Electronics Arts (usa-game publishing)
★ Techwah online www.techwah.com. [game room Eden II: www.edenii.com, @netCafe’s ]
★ System at Work. www.sysatwork.com [prepaid master card]
★ Digipen Institute. First game training institute in SG
★ Tentacle studio
★ Boom Zap (Casual games company) http://www.boomzap.com/aboutus.htm (IGDA Singapore Chapter)
Mobil Game Revenue Life Cycle

Key risk elements:
- 1/10 game titles make profits
- Production costs for more complex games higher than for simple downloadable games
- Lower quality productions may deteriorate the price consumers are willing to pay for titles

Production costs carried out by publishers and developers
Marketing & distribution costs carried out by publishers and mobile operators
Revenues collected and distributed by mobile operators

Development time 2-4 months
Mobile game life cycle 6-12 months

Revenues
Profits created by the game sales
Break-even point

Costs

Source (modified): www.actten.org
Mobile Games Challenges

- Porting Challenges: [http://j2me-device-db.sourceforge.net](http://j2me-device-db.sourceforge.net) (Microcode)
  - Different screen sizes
  - Varying sound solutions
  - OS differences
  - Memory shortages

- Game piracy and intellectual property rights
  - Device to device copy

- Life time of games

- It is a value added service. People don’t buy phone for games as a primary feature.

- Networks & Location-based? network speed, technology, services, QoS....

- UI – screen size, key pad...

- ........