

Development of Games

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Colloquium 1

Visualization and Virtual Reality in Games

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Motivation

- Tasks and challenges of visualization in Games
- Tendencies of development of virtual reality
- Positive influence of games
- Dangers of progress and expansion of Games

Tasks of visualization in Games

- Give information for decision making
 - Available resources and actions
 - States of gameplay
 - Control of gameplay
- Give esthetic pleasure
 - Nice realistic or like-realistic pictures
- Give basic for feelings
 - Realistic of feeling and behavior of characters

Two opposite trends

- More detail information for decision making
- More realistic nice information for fine and feeling

The background is a smooth blue gradient, transitioning from a lighter blue at the top to a darker blue at the bottom. A bright sun flare is visible on the left side, creating a horizontal band of light across the middle of the image.

Examples of visualization



Aug, Year 1

Guest 202



0.00 / 268.04

Arien

Knight-Lieutenant

#: 72/80 K: 171 KB: 3 D: 6
 GYD: 0 TA: 0 TD: 0
 Honor: 1976 Last Kill: 19

Kortben

Sindarelle

Dionysius
Offline

Shalevar

Group 2	Group 1	Group 3
Khelder DEAD	Rithius DEAD	Morghanth OFFLINE
Mageking DEAD	Morganthisis	Pusser
Snakebite DEAD	Yorgj	Tand DEAD
Jolly	Barkartum	Moncheri DEAD
		Stumpy

Arch Druid Renfrel

60

Sergeant Hirske
<Silveraxe Iron Militia>

Private Nephilin
<Haven>

Arch Druid Renfrel

Sergeant Morganthisis
<Haven>

Master Sergeant Toxi
<Drepan>

Master Sergeant Havoc
<The Enclave>

Corporal Rinoa
<Neverwinter Slayers>

Knight-Lieutenant Shalevar
<Valhall>

Field of Strife

23 m

[60] Alterac Valley Graveyards
- Graveyard Assaulted: 0/1

[60r] Korrak the Bloodrager
- Korrak the Bloodrager slain: 0/1

[60] Prov Emergency Monitor

Azite -597

Fraggle -468

Moncheri receives loot: [Runecloth].

[Raid] [Goatfoo]: ignore the base

[Raid] [Goatfoo]: get our summon out

[Raid] [Tand]: we need this summon or we die

[Raid] [Hirske]: Hs hurry

[Raid] [Maldari]: we cant kill ice man we need the lv 62 man in base

[Raid] [Lembit]: were are u?

[Tajk] has come online.

Fluff is afflicted by Frost Nova.

Siltz gains Battle Stance.

Bumper begins to perform Shoot Gun.

Fluff begins to perform Shoot Bow.

Bumper's Shoot Gun hits Rinoa for 97.

Fluff's Shoot Bow missed Betija.

Fluff is afflicted by Fireball.

Kortben begins to cast Immolate.

51 8 5 Help Kort

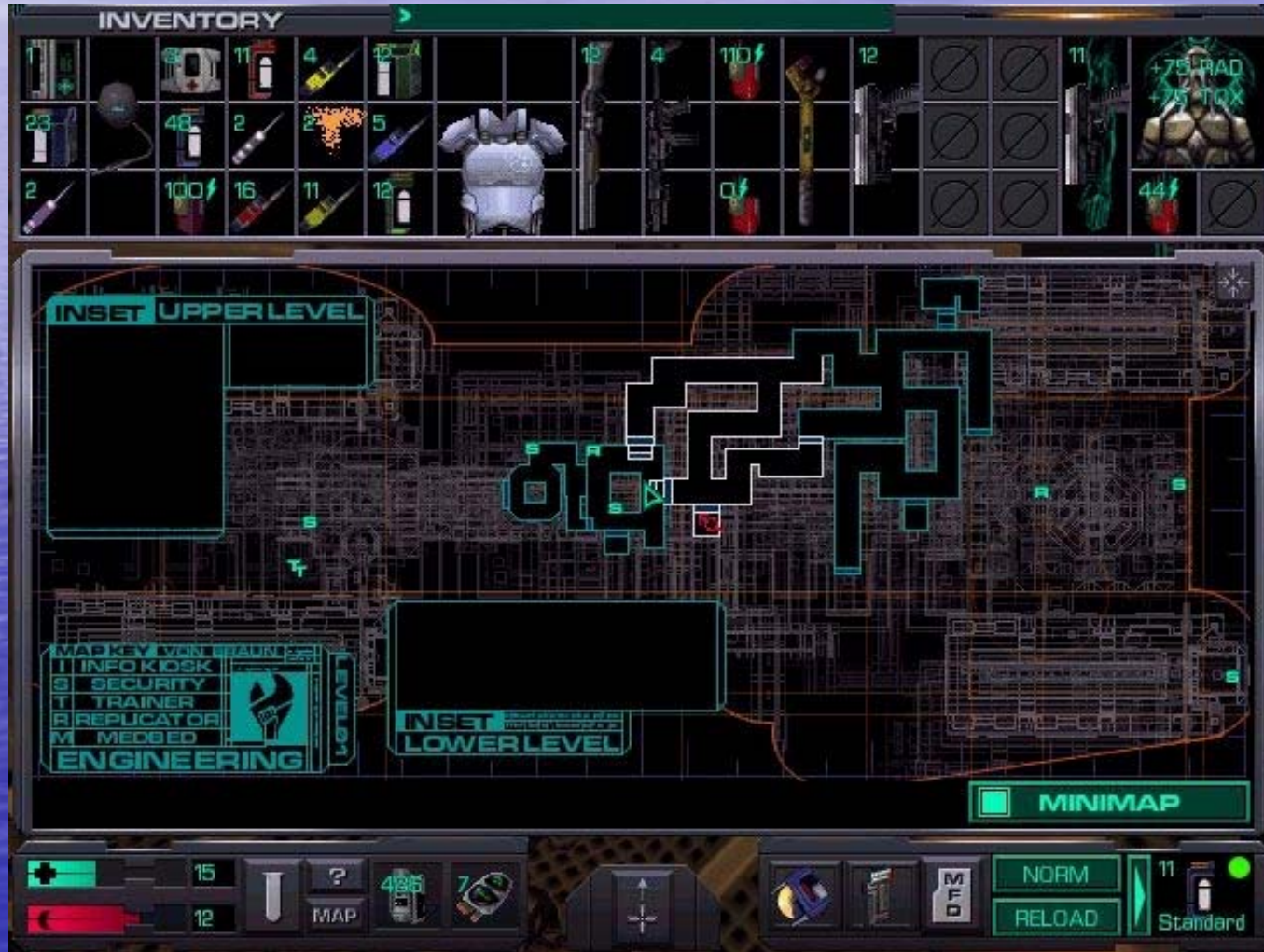
Automap, Overlay, Health, etc.



Occlusion and Transparency



Maps, Inventory, Stats



Main aims of Games

- Entertainment
- Serious games
 - Education
 - Decision making in economy, policy, military
- Lower is true as for games as for movies

Positive influence of games

- More easy and fast learning of different subjects
- Sometimes useful for Health

Digital games in health

- Examples of use:
 - Pain relief and distraction
 - Rehabilitation
 - Surgery skill increase
 - Diabetes awareness
 - Easing carpal tunnel syndrome
 - Mental health and sharpness (Brain Train!)
 - Acting out domestic and social situations
 - Social and communication development
- www.gamesforhealth.org

Tendencies in Games

- More and more realistic simulation of reality
 - More realistic graphics
 - More realistic behavior of artificial characters
 - More realistic feeling of Player
 - Naturalistic scenes aiming to stimulate real feeling
 - More direct interaction between player and game
 - Control of game by brain
 - Perceive of game's world by brain (predicted by S.Lem in 1967)
- Creative artificial reality very similar to our life but different
 - Similar physical laws (may be another but believable)
 - Very perfect graphics
 - Perfect simulation provides believable dreams and fiction

Dangers. In entertainment

- Children can not recognize what is reality and what is fantasy
 - Belief in magic and magic personages
- Children study how and what to do in artificial reality and became not adopted to real life
 - Ethics in game, harm of cruel games
- Games may cause spend much time instead useful activity
- In contrast to books games and movies don't train imagination (needed for creativity) (my opinion)
- Virtual reality may be narcotic
 - (experiments with stimulation of pleasure centre of rats)

It is needed limit of access to games for children depending of age

Dangers.

In serious games

- Realistic simulation causes belief that all existing in game is true and right
 - games can simulate simplified versions of reality
- This may cause to wrong decisions in policy and military plans with hard consequences
- If game for education has false it may cause that children studies incorrect performance. This effect is existing in traditional education but in games and movies it may be very stronger
- Very much responsibility of developers

1 P

Tesla

COM

Henman

evian
Games

SCORE	15	0
D. TESLA CRO	15	0
T. HENMAN GBR	30	0

OPEL

Australia
Challenge

OPEL

evian
Games

evian

OPEL

OPEL

OPEL

evian



COM 30

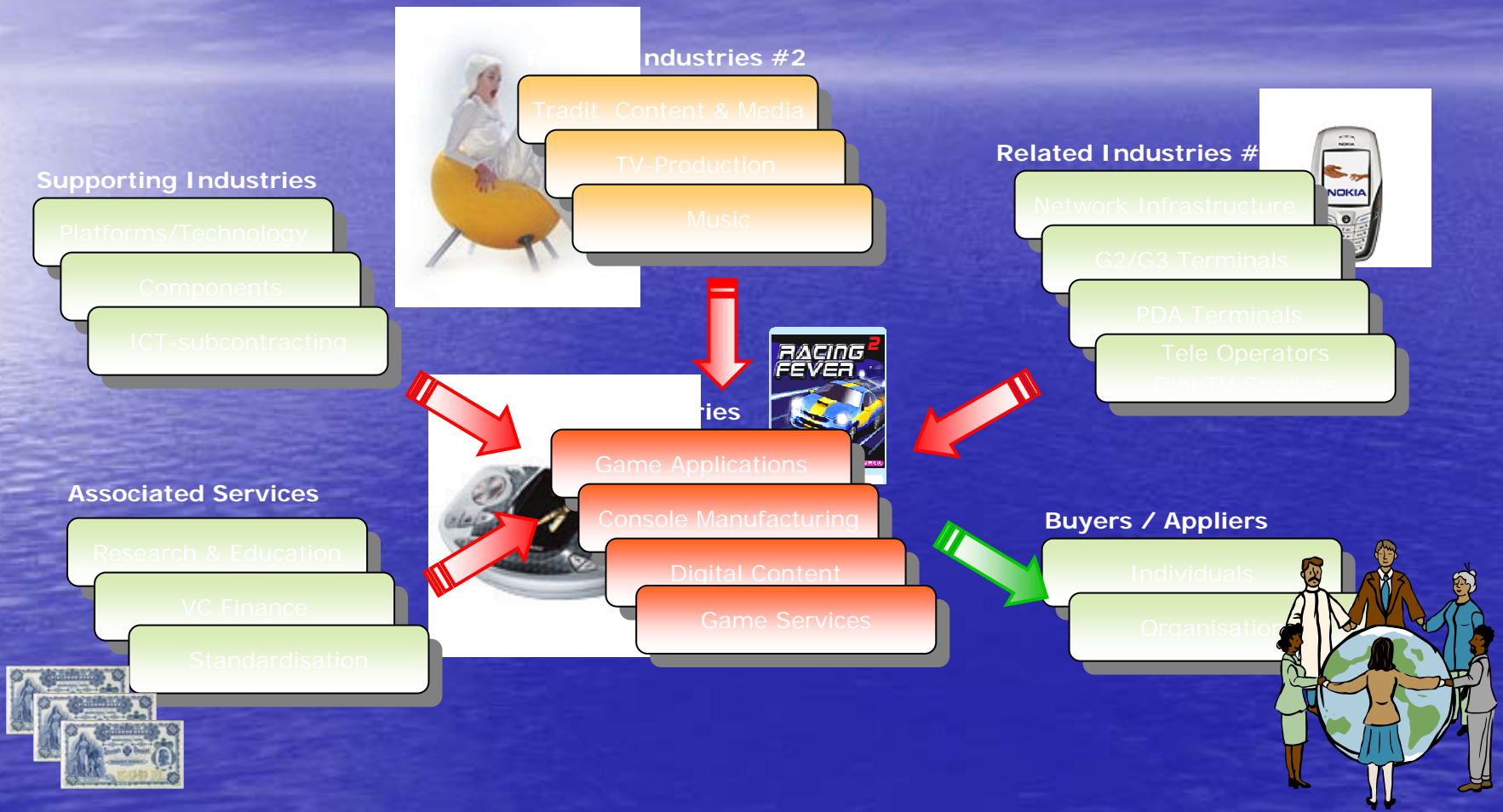
• 1 P 15

0 km/h



Where We Are?

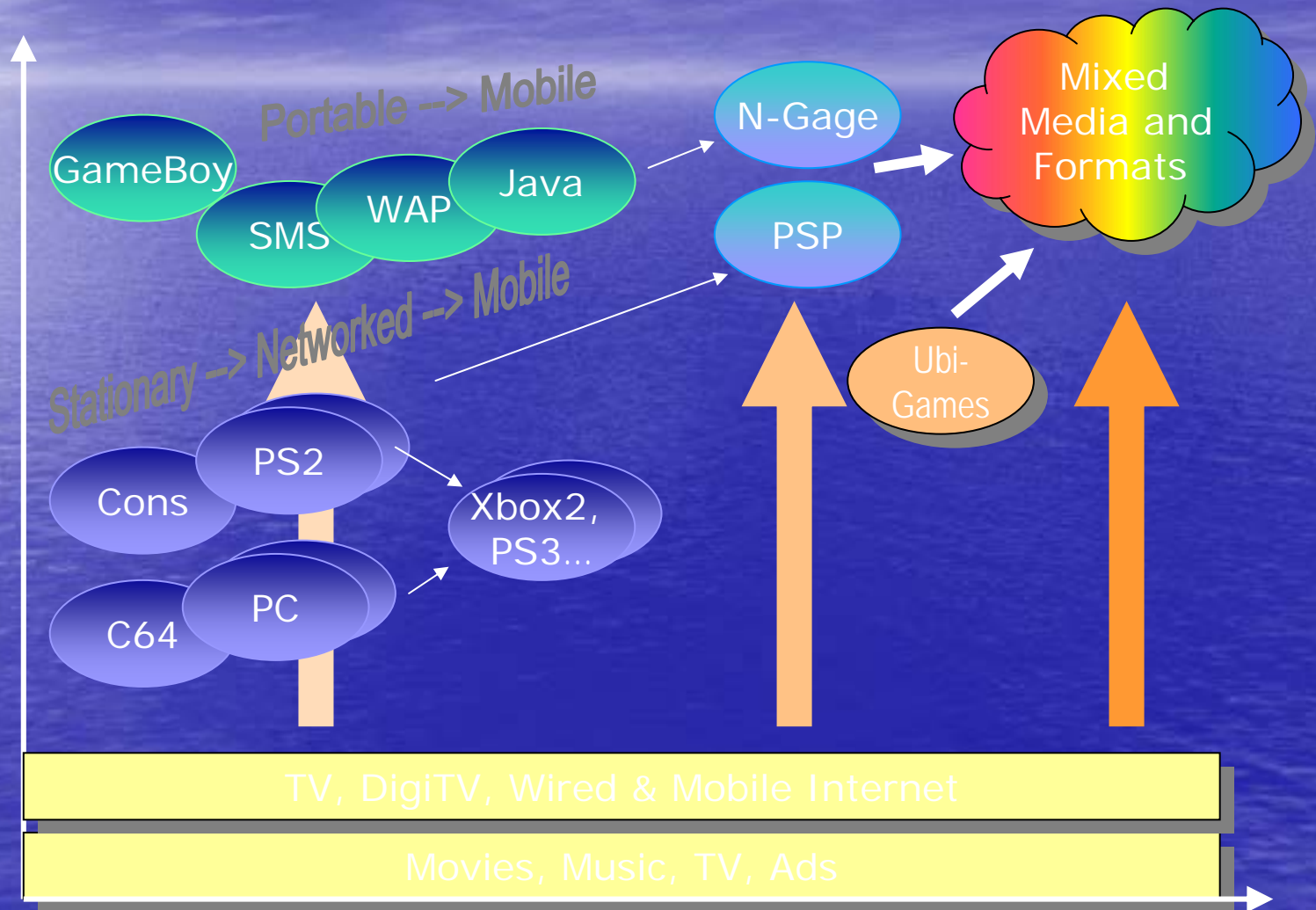
The Finnish Game Industry Cluster



GAMES & INTERACTIVE CROSS MEDIA + GAME-ALIKE APPS
 120 organizations, 40 members (19.4.2004)

Where is the Industry Heading to?

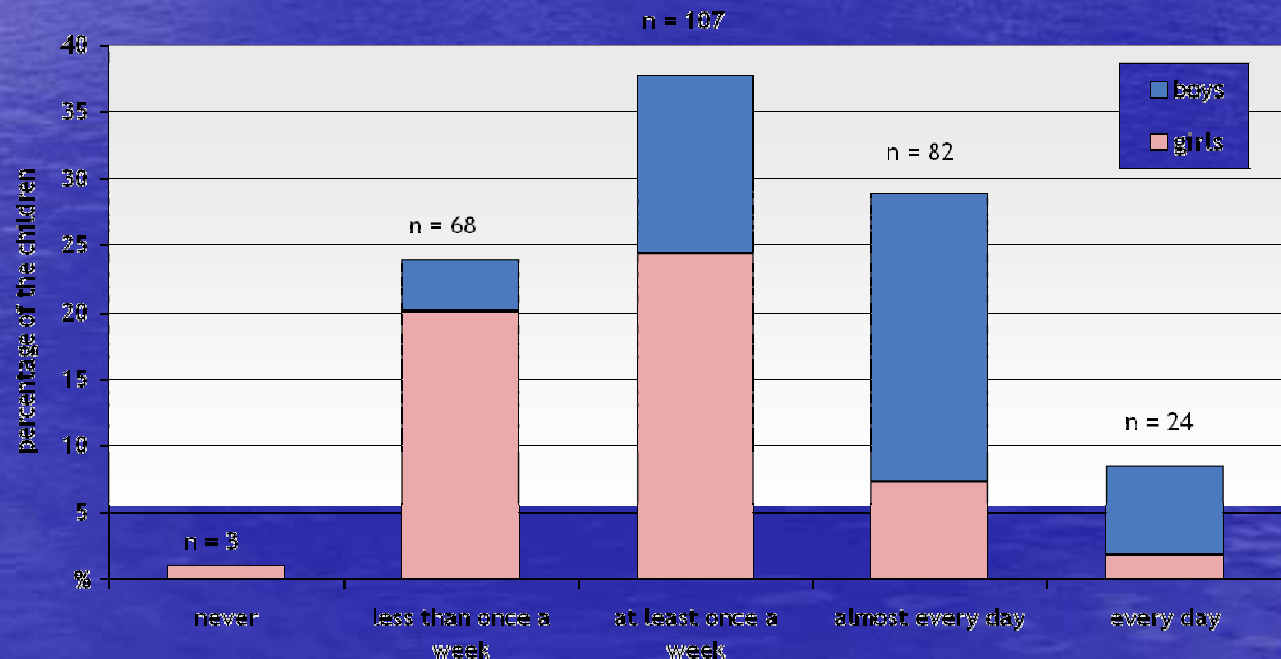
A Game Convergence Roadmap



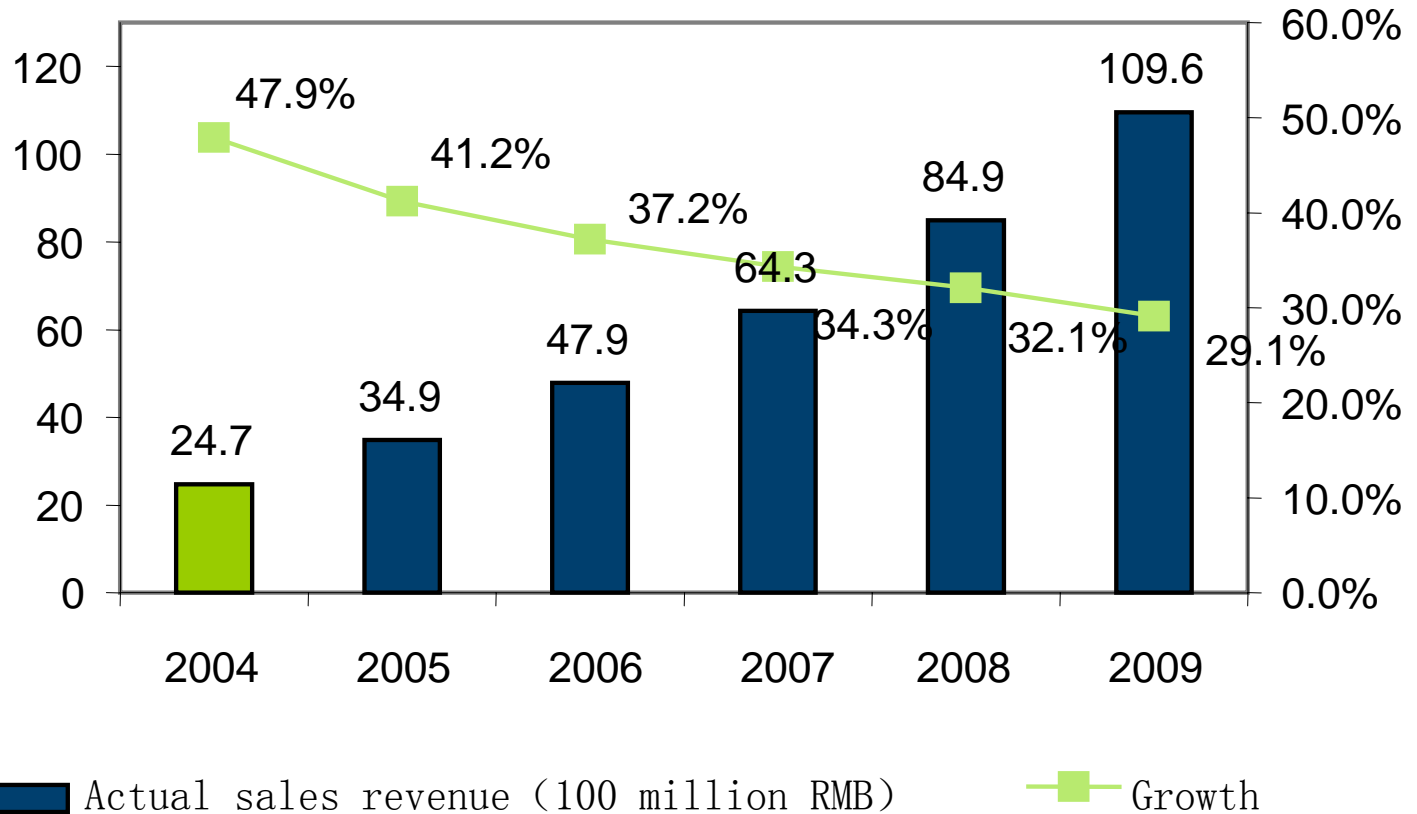
The Future Is in Games, the Future is Now

- Rise of games as: 1) Form of Expression, 2) Mainstream Entertainment Business, 3) Driver of Media Technology, 4) Way of Socializing, 5) Tool for Learning → a *language* for an entire generation

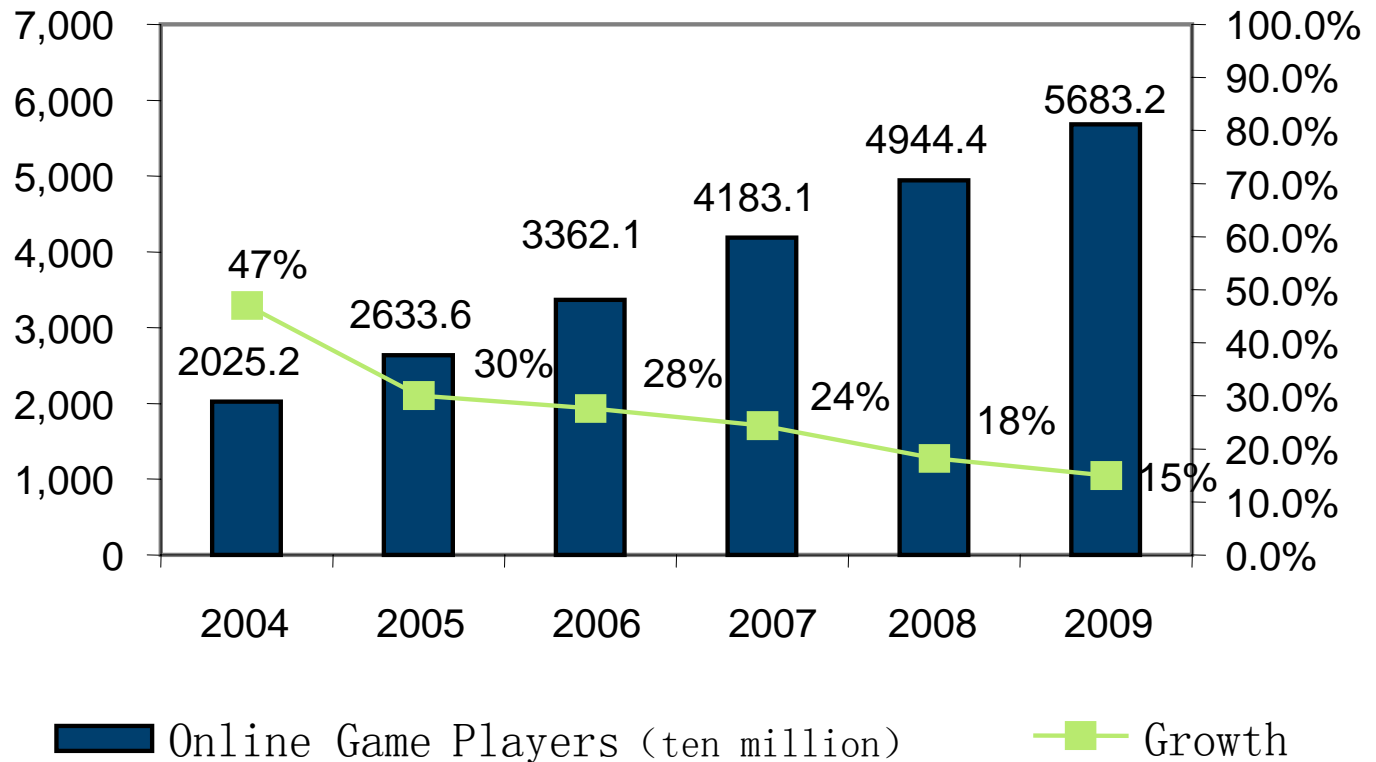
Ermi – Heliö – Mäyrä – Mäyrä: Pelien voima ja pelaamisen hallinta. Lapset ja nuoret pelikulttuurien toimijoina. HyperMedialaboratorion verkkojulkaisuja 6. Tampereen yliopisto, 2004.



Online Game Industry in China Became the Pioneer of Internet Content Industry



Number of China Online Game Players in 2004--2009



Questions

