

VIRTUAL ASSETS, REAL VALUE

An introduction to virtual worlds, virtual assets and the results of some research carried out in the MC2 project

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AGENDA

- I. Terms and context: “Virtual worlds”**
- II. Real-money trade (‘RMT’) of virtual assets**
- III. MC2 research: User perceptions of RMT**
- IV. MC2 research: New strategies for virtual world operators**
- V. News from Korea**
- VI. Some implications**

I. TERMS AND CONTEXT

- **Massively Multiplayer Online Games (MMOG, MMORPG)**

- Ultima Online, EverQuest, World of Warcraft, Lineage, Ragnarok...

- **Social environments**

- Habbo Hotel, The Sims Online...

⇒ **Scholars refer to the above as “virtual worlds”**

- Shared characteristics: numerous users, real-time interaction, geometric space, avatars, persistency



I. TERMS AND CONTEXT

- **Users can ‘own’ various assets in virtual worlds** (e.g. Lastowka & Hunter 2004)

- **Five categories of “virtual assets” can be identified:**

- 1. currency** (money, gold)
- 2. realty** (land, buildings)
- 3. personal property** (items, clothes)
- 4. avatar attributes** (skills, levels)
- 5. securities** (shares, options)



I. TERMS AND CONTEXT

- **Players can trade assets inside a virtual world**
 - For example, one player can purchase a virtual castle from another player for a sum of virtual gold coins
- **Trade takes place in bazaars, auction houses and other marketplaces depending on the design of the virtual world**



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I. TERMS AND CONTEXT

- **In addition to player-to-player (P2P) transactions, there are also player-to-environment (P2E) transactions**
 - Computer-controlled salespersons and vending machines
 - Harvesting minerals and other raw materials from the nature
 - Hunting and fishing
- **These networks of virtual transactions can be called “virtual economies”**



II. REAL-MONEY TRADE OF VIRTUAL ASSETS

- In 1999, some players began putting virtual assets on auction at eBay for real money

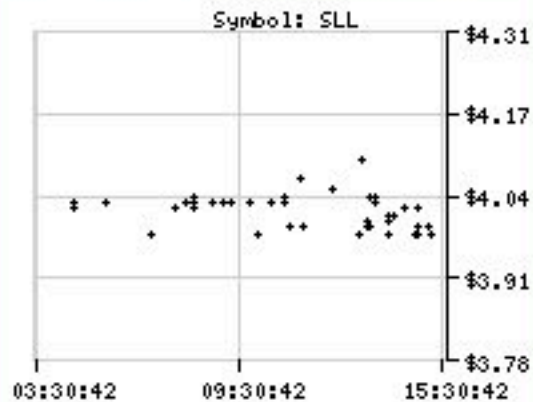
Item Title	PayPal	Price ▼	Bids	Time Left
SWG Jedi Knight Corbantis JTL Rifle/Sword + Doc/Merch 5mil+ Rebel, alt Swords/Rifle also bonus doc/merch acct		\$455.00	15	2h 33m

II. REAL-MONEY TRADE OF VIRTUAL ASSETS

- **Today, this “secondary market” is huge**
 - There are numerous marketplaces such as eBay, PlayerAuctions, Open Gaming Market
 - Dozens of companies operate in the market, buying and selling virtual assets
 - Trade volume is estimated at USD 100 M - 1 Bn
 - It is possible to determine a fair market price for virtual assets, e.g. a nice castle in a good neighbourhood with services nearby = 1 100 USD
 - It is possible to determine an exchange rate for virtual currencies, e.g. 1 USD = 2.16 Gold Coins

Daily summary:

Last trade:	\$3.98
Change:	-\$0.05
Best selling price:	\$3.98
Best buying price:	\$4.00
Blocks traded:	866
Open:	\$4.03
Yesterday's close:	\$4.03
Daily high:	\$4.29
Daily low:	\$3.98
Today's average:	\$4.0217
Best selling rate:	251 / \$
Best buying rate:	250 / \$



Symbol: SLL

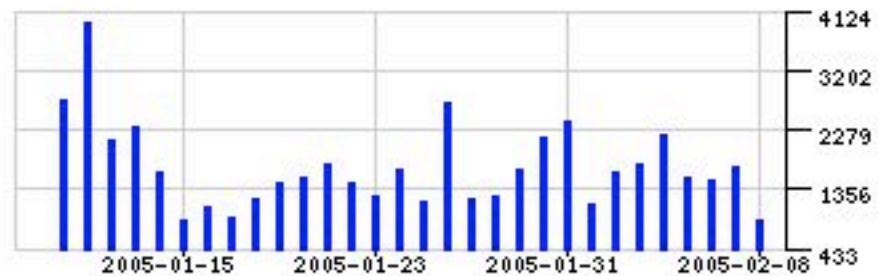


Chart Types

[Closing Price] [OHLC] [Candlestick]

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II. REAL-MONEY TRADE OF VIRTUAL ASSETS

- **Are these people crazy?**
 - “The value of objects does not depend on their characteristics or their components, but rather on their contribution to the well-being of the people who use them” (Castronova 2002)



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III. USER PERCEPTIONS OF REAL-MONEY TRADE

- **“RMT breaks the magic circle”**
- **“RMT is cheating in a competition”**
- **“RMT violates the achievement hierarchy”**
 - ⇒ Analogies to sports, board games

Lehdonvirta, Vili. Real-Money Trade of Virtual Assets: Ten Different User Perceptions. Proceedings of DAC 2005, IT University of Copenhagen, 1-3 December 2005.

III. USER PERCEPTIONS OF REAL-MONEY TRADE

- **“RMT allows me to skip the boring grind”**
- **“RMT allows me to keep up with my friends”**
- **“RMT allows me to fit my avatar with gear that suits my style”**
- **“I worked for those assets, therefore I may sell them if I wish”**
 - ⇒ *A Lockean theory of virtual property*

III. USER PERCEPTIONS OF REAL-MONEY TRADE

- **Various different perceptions of RMT**
- **Reflecting a multitude of views on what constitutes legitimate play/participation in a given virtual world**
- **What views are there / how can they be categorised?**

Typologies of play

- **Caillois (1962): *Fundamental categories***
 1. Agôn: competition and competitive struggle
 2. Alea: submission to the fortunes of chance
 3. Mimicry: role-playing and make-believe play
 4. Ilinx: vertigo and physical sensation



Typologies of play

- **LeBlanc (2002)**

1. Sensation: game as sense-pleasure
2. Fantasy: game as make-believe
3. Narrative: game as drama
4. Challenge: game as obstacle course
5. Fellowship: game as social framework
6. Discovery: game as uncharted territory
7. Expression: game as self-discovery
8. Submission: game as masochism

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Typologies of play

- **Bartle (1997): *Player types***
 1. Achievers: like to reach defined objectives and achieve a high formal status
 2. Explorers: revel in discovering new things about the world and its logic
 3. Socialisers: enjoy interacting with other players
 4. Killers: derive pleasure from demonstrating superiority over others

Typologies of play

- **Yee (2005): *Player motivations***

Achievement	Social	Immersion
Advancement progress, power, accumulation, status	Socialising casual chat, helping others, making friends	Discovery exploration, lore, finding hidden things
Mechanics numbers, optimisation, templating, analysis	Relationship personal, self-disclosure, find and give support	Role-Playing storyline, character history, roles, fantasy
Competition challenging others, provocation, domination	Teamwork collaboration, groups, group achievements	Customisation appearances, accessories style, colour schemes
		Escapism relax, escape from RL, avoid RL problems

III. USER PERCEPTIONS OF REAL-MONEY TRADE

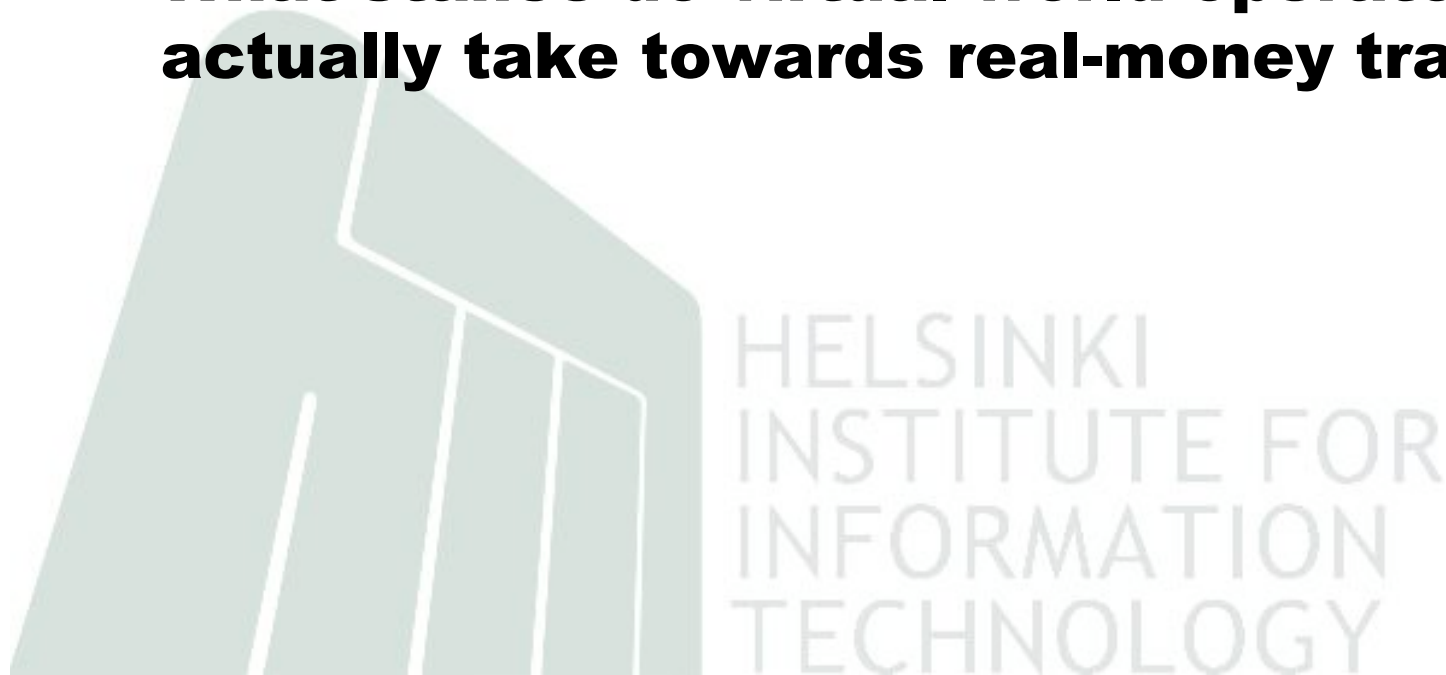
User motivation vs. user reaction towards RMT

Achievement	Social	Immersion
Advancement If RMT enables rewards to be bought, it violates the achievement hierarchy	Socialising RMT allows players to express themselves through their buying behaviour	Discovery RMT breaks the magic circle, but gives more choice over which content to experience
Mechanics RMT makes it easier to obtain different asset configurations to examine	Relationship RMT allows those with less time to catch up and play together with their friends	Role-Playing RMT allows players to obtain the props that are needed for their chosen fantasy
Competition RMT is cheating if it can be used to obtain competitive advantages	Teamwork RMT provides objectives for teamwork and motivation for effective organisation	Customisation RMT makes it easier to obtain a set of assets that correspond to player's taste
		Escapism RMT breaks the magic circle, introducing real-life worries into the virtual world

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III. USER PERCEPTIONS OF REAL-MONEY TRADE

- **To a virtual world operator, the desirability of RMT depends on which user segments you wish to cater for**
- **What stance do virtual world operators actually take towards real-money trade?**



IV. NEW STRATEGIES FOR VIRTUAL WORLD OPERATORS

- **Companies operating virtual worlds reacted to the secondary market phenomenon in different ways**
 - EA: Ultima Online players are **free to buy and sell** their virtual assets on eBay and elsewhere
 - SOE: EverQuest EULA **forbids eBaying**, accounts may be frozen
- ⇒ **Debate: RMT YES vs. RMT NO - which strategy is correct?**
 - Castronova, Bartle, Ondrejka, ...

IV. NEW STRATEGIES FOR VIRTUAL WORLD OPERATORS

- **Some operators got actively involved in RMT**

- E.g. Habbo Hotel's business model is based on selling virtual furniture to its users
- Project Entropia guarantees a fixed currency exchange rate of 1 USD to 10 Project Entropia Dollars, profits from transaction fees
- EA later started selling UO avatar skills

⇒ **There is a variety of different strategies available towards RMT**

⇒ Not simply **YES** or **NO**

IV. NEW STRATEGIES FOR VIRTUAL WORLD OPERATORS

		<i>Buyers</i>		
		All parties	Non-operator	Operator None
<i>Sellers</i>	All parties	Project Entropia	Ultima Online avatar skills	
	Non-operator	-	Ultima Online other assets	-
	Operator		Habbo Hotel	
	None			Ever-Quest

IV. NEW STRATEGIES FOR VIRTUAL WORLD OPERATORS

		<i>Buyers</i>			
		All parties	Non-operator	Operator	None
<i>Sellers</i>	All parties	Price window	Price ceiling		
	Non-operator	Price floor	Perfect competition	Mono- psony	
	Operator		Monopoly		
	None				No market

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IV. NEW STRATEGIES FOR VIRTUAL WORLD OPERATORS

Seven generic strategies towards RMT

<i>Laissez-faire</i>	Operator is not involved in real-money trade
<i>Price ceiling</i>	Operator enters the market as a supplier
<i>Price floor</i>	Operator enters the market as a buyer
<i>Price window</i>	Operator enters the market as a supplier and a buyer
<i>Monopoly</i>	Operator seeks to be the sole supplier
<i>Monopsony</i>	Operator seeks to be the sole buyer
<i>Embargo</i>	Operator seeks to prevent all real-money trade

Lehdonvirta, Vili. Real-Money Trade of Virtual Assets: New Strategies for Virtual World Operators. Proceedings of Future Play 2005, Michigan State University, 13-15 October 2005.



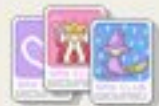
패션잡화
(551)



헤어샵
(321)



성형외과
(20)



매직아이템
(9)



게임아이템
(0)

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V. NEWS FROM KOREA

***“Korean computer game research group
GameStudy.org”:***

- **Online game market: 1 - 1.4 Bn USD**
- **RMT market: 0.7 - 1 Bn USD, 85.1% familiar**
- **Chinese gold farming sweatshops: 100 M USD**



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BBC Technology News 2005

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VI. IMPLICATIONS: LEGAL IMPACT?

- **Are virtual assets property in the legal sense?**
 - If yes, then who owns them, user or operator?
 - EULA validity?
- **Is the operator liable for losses due to bugs, hacking, or adjusting?**
 - Can the operator ever close down the service?
- **Banking law, gambling law, consumer protection law? How about taxes?**
- **Intellectual property rights vs. virtual assets?**

VI. IMPLICATIONS: BUSINESS IMPACT?

- **Virtual asset trade is a growing section of the real economy**
 - Largely a grey market due to legal uncertainty
- **Virtual asset revenue logic is also applied outside actual virtual worlds**
 - E.g. Korea: Cyworld.com, Finland: Aapeli.com
- ⇒ **Unbundling of content into smaller, tradeable units?**
- ⇒ **Or forget about selling “content” and sell “control”?**

VI. IMPLICATIONS: SOCIETAL IMPACT?

- **To what extent could “virtual consumption” substitute more tangible forms of consumption?**
- **“Habbo Hotel is the most significant *inadvertent environmental feat of the decade*”**
 - Dodo ry, July 2005

Relevant research

- **A recent stream initiated by economist Edward Castronova (2001; 2002) examines virtual worlds through economic theory**
 - Nash & Schneyer (2004), Yamaguchi (2004)
- **A growing number of scholars apply legal theory and philosophy to discuss the legal status and ownership of virtual assets**
 - Balkin (2004), Bradley & Froomkin (2004), Jenkins (2004), Lastowka & Hunter (2004), Taylor (2002)
- **Book (2004a; 2004b) and MacInnes (2004) touch on business issues**
- **Our next project: Virtual Consumerism**

SUMMARY

I. Terms and context: “Virtual worlds”

- MMORPGs, Habbo Hotel, ...

II. Real-money trade (‘RMT’) of virtual assets

- eBaying, virtual currency exchange, ...

III. MC2 research: User perceptions of RMT

IV. MC2 research: New strategies for virtual world operators

V. News from Korea

- RMT of virtual assets a 1 Bn business??

VI. Some implications

- Legal, business, societal