

Virtual Worlds from the Other Side of the World: The tourism and educational virtual worlds of Singapore

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Why Singapore?

- ICA 2010: held in Singapore
 - Explicit conference subfocus on role of virtual worlds in modern communication
- Singapore Government: InfoComm Development Authority of Singapore
 - Heard at Metaverse 2.0 of state sponsored R&D
- Singapore Academic Contact: National Institute of Education
 - Caroline Ho, contacted via researcher who presented at ECREa divisional conference on school children and virtual worlds

June 2010: ICA and IDA

- ICA Panel about researching virtual worlds
 - Four researchers discussing different methods/methodologies for studying and understanding virtual worlds
 - <http://worlds.ruc.dk/archives/2925>
- Meeting with InfoComm Development Authority of Singapore
 - <http://www.ida.gov.sg/home/index.aspx>
- Goal of IDA
 - Singapore seeking to position itself in Asia and on global level as model nation for 21st century
 - Sees investing in infocomm technologies and economies as central to that positioning
- Why investing in virtual worlds
 - Sees virtual worlds as one of the major new technologies and economic markets of the coming decades
 - Desires to become Asian destination for producing virtual worlds

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Meeting in Singapore

- Meeting organized by Jonathan Tan, IDA
 - Manager, Virtual Worlds Department, Consumer Infocomm Division, Industry Development Group
 - With him discussed Singapore 2010 Odyssey, a virtual world constructed for first Youth Olympic Games
- Also in attendance, representing local schools experimenting with virtual worlds
 - Theresa Thang Tze Yian, Institute of Technical Education
 - Dr. Tay Lee Yong, Beacon Primary School

Today's Presentations

- Mikala Hansbøl will discuss the pursuits of Beacon Primary School and ITE
 - Also relating to her own work using virtual worlds for educational purposes
 - Discussion focusing on augmenting the reality of physical schooling with virtual schooling
- CarrieLynn D. Reinhard will discuss tourism virtual world: Singapore 2010 Odyssey
 - Focusing on intention, design and positioning of the virtual world
 - Discussion focusing on augmenting the reality of tourism and education relating to a specific international event

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Singapore

- As a tourism destination for Southeast Asia and Australia
- Tourism figures
 - January-July 2010: over 5 million visitors
 - When we were there, June: 950,000, highest recorded visitor arrivals for that month
 - Singapore ended the year 2008 with record high tourism revenue of S\$15.2 billion – that's roughly 65 billion DKK

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Singapore: Physical World



Twinity: Mirror World

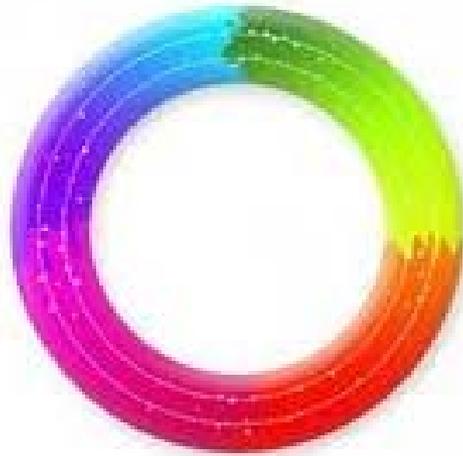


Singapore in Twinity

- Not main discussion at meeting with IDA
- Project represented by IDA, but not Tan's department.
 - Supported by cross government agency grouping called the [Interactive Digital Media Programme Office](#)
 - Contracted Twinity's Metaversum to represent Singapore virtually
- According to [Twinity website](#), main drive is virtual tourism
 - To explore, shop, see the sights, "live, work, play there"

But main focus today...

Singapore 2010 Odyssey



SINGAPORE 2010
ODYSSEY

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Today's Discussion

- What is Singapore 2010 Odyssey?
- Who designed it?
- What were their intentions?
- What does the virtual world feature?
- Who are its users?
- How is the virtual world positioned amongst subtypes of virtual worlds?
- Is this the future of virtual worlds?

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Youth Olympic Games: Physical World

- August 14-26, 2010: First of its kind
 - <http://www.olympic.org/en/content/YOG/>
 - <http://www.singapore2010.sg/public/sg2010/en.html>
- Participants
 - 3,531 athletes aged 14-18 from 204 countries
 - Competed in 26 sports, including swimming, archery, equestrian, boxing, judo, handball, cycling, football, table tennis, wrestling
- Singapore spent on preparations approximately S\$390 million (1.6 billion DKK)
 - Ticket and merchandise sales revenue, perhaps total S\$7 million
 - About S\$245 million of budget to local businesses
- IDA's virtual world "Singapore 2010 Odyssey" was part of the bid that won Singapore the privilege to host the inaugural games.

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Youth Olympic Games: Virtual World

- [Singapore 2010 Odyssey](#)
- Providing virtual space to experience the Olympic Games
 - Sports: virtual stadiums
 - Camraderie: virtual Olympic Village
- Framed with narrative of being set in 3010, with humans as underdogs
 - [Opening movie](#)

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Actors of the Design

- Those whose requirements and suggestions were used as input in the design.
 - Youth Olympics Committee
 - InfoComm Development Authority
 - ST Electronics
- Discussion of actors, design, purpose comes from Jonathan Tan
 - During the meeting, in follow-up questions

What did the actors require,
suggest?

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Youth Olympics Committee

”An objective of the virtual world is to teach users the **Olympic Values** of Friendship, Excellence and Respect, as well as to **provide information** about the 26 sports participated in the Singapore 2010 Youth Olympic Games, and also to **share about the culture** of the 205 National Olympic Committees or territories.”

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Youth Olympics Committee

”With [with the requirements of the Youth Olympic Committee] in mind, we incorporated the **education content** in the form of information boards, and tying some of the info to quests where the user [has] to answer multiple choice questions based on the various themes, in order to get experience points and sports credits rewards if answered correctly.”

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InfoComm Development Authority

According to Tan, they also “intend to allow normal everyday non-Olympian users to enjoy, participate and have a feel of the spirit of the Games virtually, allowing those who do not have the opportunity to physically come down to Singapore, **to have a peek of some of the landmarks** we have here.”

Part of IDA’s argument for this design was **to help prepare** the Olympians, their family and friends, and the spectators for what they would experience when in the city and the country.

ST Electronics

”The futuristic world was proposed by ST Electronics, our vendor, in their tender proposal. We thought that it would be an **interesting concept for the youth**, as it seemed like a creative approach to take in the design of the virtual world. It takes advantage of the inherent benefit of virtual worlds being able to take on any environment limited by one’s imagination, without being restricted to that of a mirror world replica.”

Designed, developed and operate the virtual world on the [Hipihi](#) virtual world platform from a Chinese developer

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Who are the users?

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The Users

- Main target audiences:
 - Visitors and games participants
 - Non-visitors but interested in games
 - School children in Singapore
- Approximately 300,000 registered users, but significantly less logins
- Reasons:
 - Disruptions downloading installation package
 - Incompatibility between program, computer
 - Users unaware of installation steps
- Singapore has high bandwidth infiltration into households

SIGN UP FOR FREE

DOWNLOAD ODYSSEY

NEWBIE GUIDE



DOWNLOAD

STEP 01: Download the game.

To start your Singapore 2010 Odyssey, please download and install the client



	Minimum System Requirments	Recommended System Requirements
OS	Windows XP or better	Windows XP or better
CPU	Intel(R) Dual Core	Intel(R) Dual Core
RAM	1GB	4GB
GRAPHICS	Intel GMA 945	ATI Radeon HD3450 512MB
DISPLAY RESOLUTION	1024 x 768	1024 x 768
BANDWIDTH	Broadband Connections	Broadband Connections

STEP 02

This window will pop up. Click on 'Save As' and choose the location or folder that you would like to download the file to. Wait for your file to finish downloading. Download speed will vary according to your internet speed.



For Novices, Too.

”We also wanted **non-virtual world users** to have a go at it, and so we made it an effort to make the **user interface and gameplay as simple** [as] we could, and not make it too convoluted as to not put off non-virtual world users. This can be seen from simple keys, space bar and arrow keys for most of the 3D sports games, making it more **casual game-like** rather than [hard]core game controls.”

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On User-Driven Innovation

”Unlike Second Life, users can’t dynamically create content and publish in real time. However, through their schools [they] can submit their **content to ST Electronics**, the vendor managing the project, who will screen, upload and publish the content back-end if cleared.”

Only basic 3D modeling, not as advanced design tools as in Second Life, not working with prims

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What is the design of Singapore
2010 Odyssey?

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Features

- Basic controls
 - Arrow keys, F1
 - Mouse scroll, look
 - "M" for map, teleport
- Chat
 - Public messages
 - Private conversations
 - Club messages
- Modifiable avatars
 - Presets
 - Basic advanced
- Inventory
- Information kiosks
 - Video
 - Text
- 3D models of sporting equipment
- Sightseeing without traveling
- Game elements
 - 3D sports games
 - Multiplayer, competition with others/self
 - Spectatorship
 - Flash games
- Quests
- Skills

What then is Singapore 2010 Odyssey?

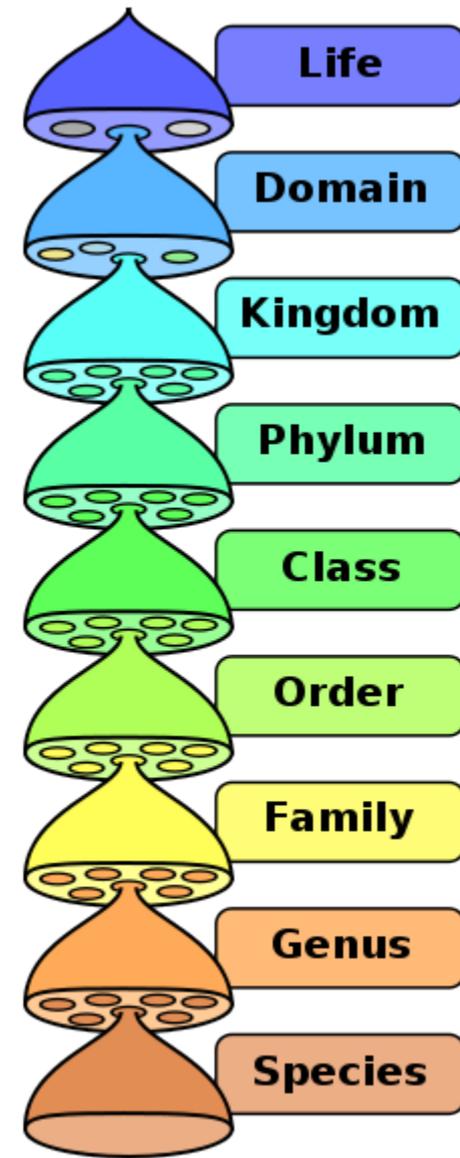
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Positioning Singapore 2010 Odyssey

- Working on/from a taxonomical understanding of virtual world technologies
- “Virtual World” genera
 - Gaming worlds
 - Social worlds
 - Educational worlds
 - Mirror worlds



Odyssey as Mirror World

“...we also included some 2010 world venues as a **mirror world component**, to meet the objective of showing users a glimpse of the building structures we have here in present day Singapore.”

Represented areas of Singapore for visitors of games “to get an idea of what we have here”

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Odyssey as Serious Game

”Yes, I would consider Singapore 2010 Odyssey having **serious game elements**, as it is a platform providing games for entertainment, at the same time delivering educational content which the user can learn while playing the games and engaging in the activities available in the virtual world.”

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Odyssey as Serious Game

”The 3D and flash sports games, together with the gallery displays, introduce the 26 sports to the users. With this, you can see our attempt to tie in the serious games concept to our design, for users to hopefully **learn some things through fun and games.**”

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Odyssey as Gaming World

”We have incorporated the **earning of experience points** through playing 3D sports games and following the quests, where the experience points are used to **’level up’** the user’s avatar, just like any MMORPG gamers are familiar with. The user levels up via the accumulation of experience points, and the user’s avatar increases in power and **improves their performance** in the 3D games they take part in.”

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Odyssey as Gaming World

”Besides earning experience points for leveling through the 3D sports games and quests, they also earn ‘sports credits’ which is the in-game currency used to **purchase virtual items** for their avatar such as costumes, accessories, food items. The costumes and accessories, besides looking fancy and cool, also **improve their performance** in the 3D games. The food items are used to recharge their ‘stamina’ to play more 3D sports games. Such a system is quite typical for the MMORPG’s out there in the market.”

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Odyssey as Social World

”...besides users being able **to chat** and **form clubs**, they are also able to **compete against each other** in the 3D games, which allows 10 players to play against each other at a time. Top 3 players will obtain gold, silver and bronze medals, and experience points and sports credits are also awarded based on their position for each game competed. Users can also **cast votes** on each other on the Olympic values of Excellence, Friendship and Respect. Users can **hold discussions** on the content through chat as in any how other virtual worlds allow.”

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Odyssey as Hybrid World

”Although [social interaction] may interest some, we thought that it would be beneficial to incorporate game elements like that of MMORPG’s to increase the **’sticky’ factor**, to be able to engage users and entice them to keep returning to the virtual world.”

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Odyssey as Hybrid World

”This we thought would be especially useful for our target age group which are largely youths, who would be **familiar with such game concepts** through the online games they are exposed to and have been playing. So with the users returning, we hoped to have the community grow, and at the same time provide them the **opportunity to interact with each other** and be **exposed to the educational content** provided in the virtual world.”

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Conclusion

- Singapore 2010 Odyssey positioned as a hybrid world
- Gaming worlds
 - Competition with self, others
 - Leveling system through experience points
 - Increases in performance
- Educational worlds
 - Information through kiosks, models, games
 - Quizzes for earning points
- Social worlds
 - Chat with friends, strangers
 - Clubs for collaboration, sharing the experience
 - Content creation (approved by designers)
- Mirror worlds
 - Virtual representation of physical world landmarks, buildings

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Conclusion

- Idea of multiple pathways means having built in suggestions for what users can do inworld
 - With more types of things to do, accommodates wider variety of motivations
 - No overall game objective, still requires exploration motivation to find the gaming, social, educational, mirror potentialities
- Is this the future of virtual worlds for augmenting reality? To accommodate all the potentialities of reality?

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0/100
0/100

3010 World

Where are the 26 Sports Halls?





0/100
0/100

X:7 Y:0 Z:-795



jenikeane



Chat

Public Chat

Private Chat

Club Chat

Me: Hello out there!

Send







0/100
0/100



jenikeane

CLICK TO EXIT

Inventory

Outfit Accessory Energy Quest Item



Mum Day Suit

Sports Credits
0

Use Remove Recycle





0/100
0/100

Where are the 26 Sports Halls ?

Step 1
Press M for map

Step 2
Click a green teleport point

- Aquatic: Canoeing, Rowing, Sailing
- Archery, Shooting, Cycling, Equestrian, Hockey, Triathlon
- Baseball, Badminton, Tennis, Handball, Volleyball, Table Tennis
- Athletics, Football, Modern Pentathlon
- Boxing, Fencing, Judo, Taekwondo, Wrestling, Weightlifting, Gymnastics

If you are lost, feel free to ask the Security Moderator for help.



Reception Room

↑ Gateway

jenikeane



jenikeane
 5200/5200
 500/500

X:948 Y:0 Z:754

Next > ARCHERY

RULES & REGULATIONS



For the Singapore 2010 Youth Olympic Games, the tournament will be held in an open field. The distance for men is 90m and 70m and women at 70m and 60m (with a target face size of 122cm), 50m and 30m (with a target face size of 80cm).

In the individual category, archers shoot 4 ends of 3 arrows in the elimination and final rounds.

In the team category, the team shoots 4 ends of 4 arrows (2 arrows per team member) in all rounds.

ARCHERY

Click for more info



jenikeane
5200/5200
500/500

RECURVE BOW
STABILIZER
SIGHT
ARROW REST

RULES & REGULATIONS





jenikeane
5200/5200
500/500

Set: 1/2 Arrow: 1/10 Time: 565 Ring: 7

X:113 Y:74 Z:777



jenikeane

Incoming Message
A(Aim Left) D(Aim Right) W(Aim Up) S(Aim Down) Space(draw and release)

Archery - Range 1 Hide

Medals, sports credits and experience points will only be awarded if there are more than 3 competitors.

Set Arrow Ring

Lane 01	jenikeane*	1/2	1/10	7	--
Lane 02					--
Lane 03					--
Lane 04					--
Lane 05					--
Lane 06					--
Lane 07					--
Lane 08					--
Lane 09					--
Lane 10					--

Watch

Return To Hall

Open Map To Exit



jenikeane
 5200/5200
 500/500

Set: 1/2 Arrow: 7/10 Time: 424 Ring: 47

X:113 Y:74 Z:177



jenikeane

Archery - Range 1
 Medals, sports credits, and experience points will only be awarded if there are more than 3 competitors.
 Set Arrow Ring

Lane 01	jenikeane*	1/2 7/10 47	--
Lane 02		--	--
Lane 03		--	--
Lane 04		--	--
Lane 05		--	--
Lane 06		--	--
Lane 07		--	--
Lane 08		--	--
Lane 09		--	--
Lane 10		--	--

Watch
 Return To Hall
 Open Map To Exit

Incoming Message
You have been awarded 8 points.





0/100
0/100

MACKEE'S CAFE

Visit Me To Replenish Your Vitality and EE!

Step 1
Press M for map and click Dining Area hotspot point

Step 2
Click door to enter cafe

Step 3
Click on chair for food order

DINING AREA

Mackee's Cafe offers the cheapest way for Vitality and EE recovery

Treasure Hunt

Help me find the 26 treasure chests and be rewarded!

This alien is at the Gateway

Press M for map and click Gateway hotspot point

Items redeemed from the alien can be recycled for a lot of Sports Credits





0/100
0/100



Skill

Sportsman Medical Coach Volunteer

Name: Sportsman Soul || Skill Point required: n.a. || EE consumption: 100 || Cooldown: 10sec || Effect: (Active)Strength and Speed +20% for 3sec

↓	↓	↓	↓

Skill Points Reset

