

# Virtual World Valuation

Accounting, valuation, taxation and legal issues in virtual worlds



November 2007

Melanie Swan  
MS Futures Group  
Palo Alto, CA  
415-505-4426  
m@melanieswan.com  
www.melanieswan.com

# Valuation summary

- Virtual worlds are becoming increasingly routine for business, academic and government use
- Financial professionals and regulators are now getting involved; there is an opportunity for a leading accountancy to define and lead virtual world accounting and valuation practices
- Demand for advisory services is growing along with strategic investment and M&A activity in all areas of the value chain
- Doing business in a virtual world is similar to doing business in a foreign country



# Agenda

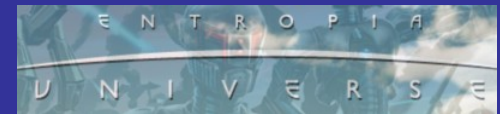
- Virtual worlds
  - What are virtual worlds?
  - Who is using virtual worlds?
  - Second Life
- Financial perspective
  - Accounting issues
  - Valuation issues
  - Tax issues
  - Legal and other issues
- Industry leadership opportunities



# What are virtual worlds?

- Definition: 3D online persistent world with a sense of presence and simultaneous experience in context
- Examples (over 30 worlds):
  - Second Life
  - ActiveWorlds
  - BrandGames
  - Entropia Universe
  - There
  - Kaneva
  - MultiVerse
  - Club Penguin (pre-teen)
  - WebKins (pre-teen)

Source: <http://www.virtualworldsreview.com>



# Virtual world vs. MMORPG



← World

← Game

Source: Linden Lab



# Who is using virtual worlds?



CBS "CSI New York"



Showtime "The L Word"



SLCN "Metanomics"



Princeton



IBM



Vodafone "Inside Out"



US Congress



Dr. Dobbs Life 2.0 Conference



International Spaceflight Museum

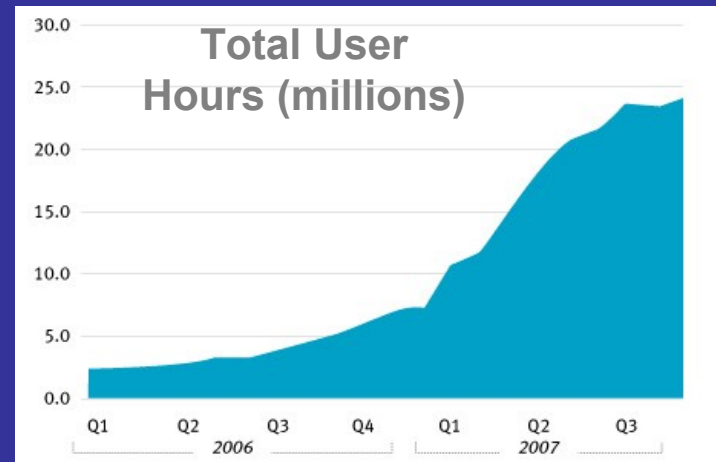
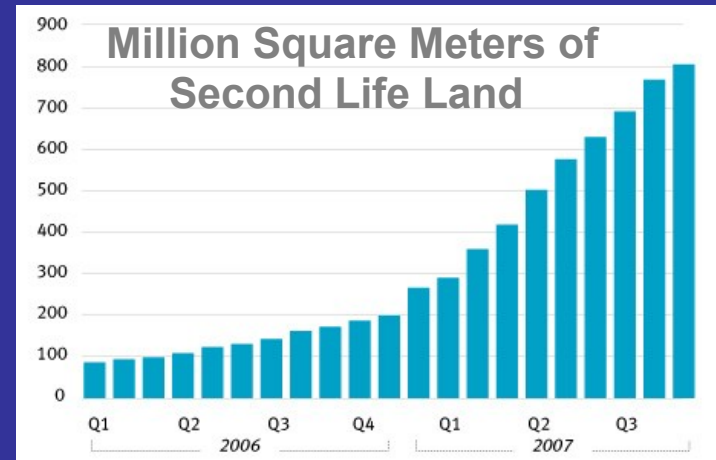


Second Health Operating Theater

# Second Life is the biggest virtual world

- 40,000 concurrency (at any time)
- 475,000 active users (last 7 days)
- 1.5 m active users (last 2 months)
- 11 m total accounts
- 2 m assets created per day
- 35 TB of user-created data
- 800,000 unique items sold or traded per month
- 500 events per day
- 15 m concurrent scripts
- 10 Gbps peak bandwidth

Source: Linden Lab



Source: <http://secondlife.com/whatis/economy-graphs.php>

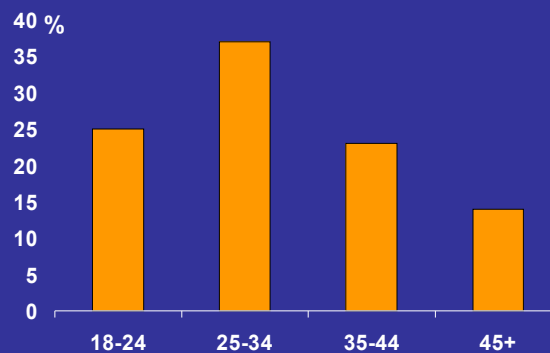
# Diverse Second Life residents

Source: Liana Holmberg, Linden Lab

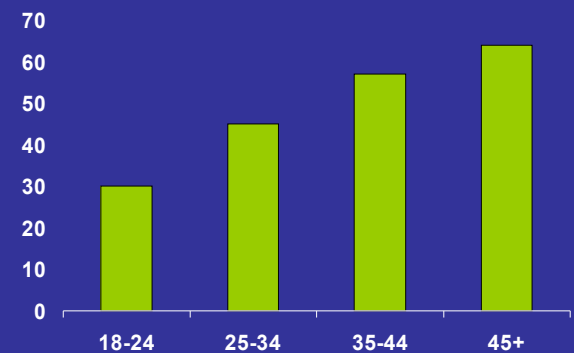


- 43% female
- 60% international
  - Top 5 countries: US, Germany, Brazil, Japan, UK

Resident market share by age tier



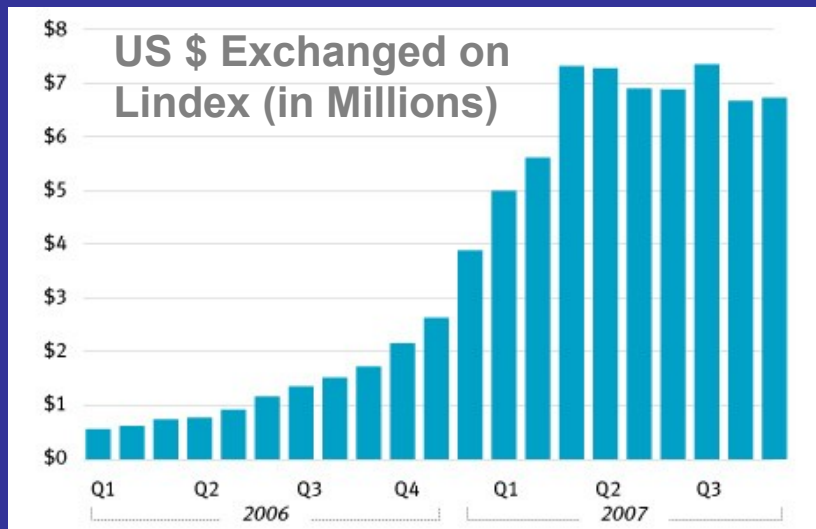
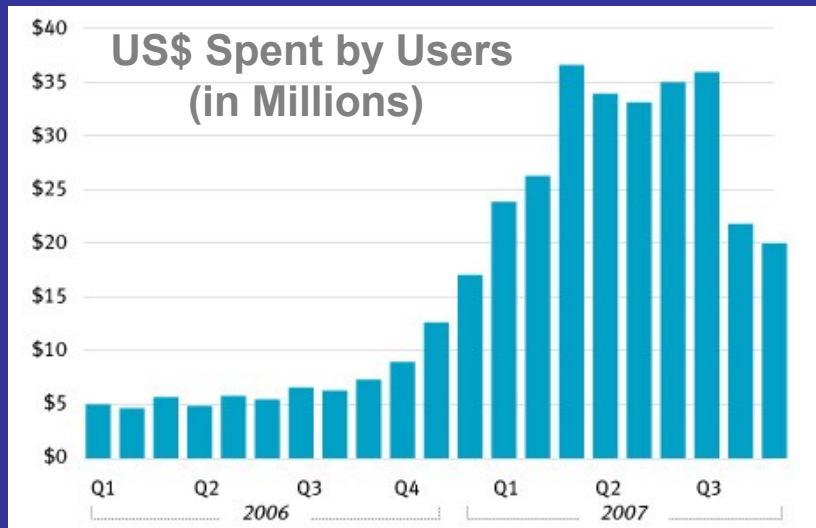
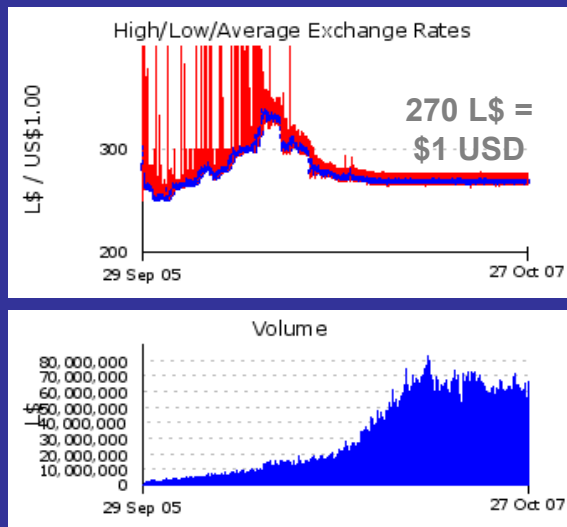
Average monthly hours by age tier





# Currency: Linden\$

- LindeX exchange operated by Linden Lab
  - Buy: USD \$.30 transaction fee
  - Sell: 3.5% transaction fee
- Monetary policy



Sources: <http://secondlife.com/whatis/economy-market.php>,  
<http://secondlife.com/whatis/economy-graphs.php>, <http://secondlife.reuters.com>

# Economy

- Reuters
- Banking and credit
- Stock markets
  - SL Capital Exchange (US, 20 listings)
  - World Stock Exchange (Australia, 15 listings)
  - VSTEX (Italy, 7 listings)
  - Ancapex (US, 3 listings)



Source: <http://secondlife.reuters.com>



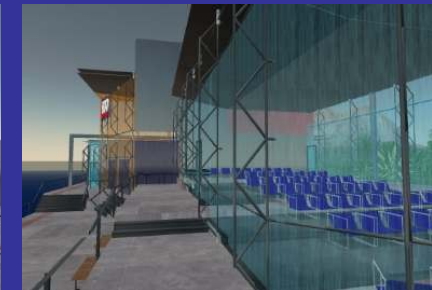
# Advisory firm presence in virtual worlds



H&R Block Island



Accenture



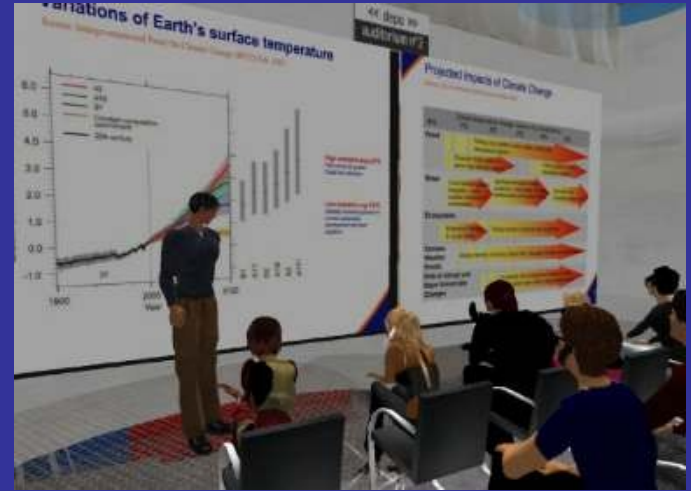
BDO Stoy Hayward Island



KAWG&F (Baltimore MD CPA firm), CPA Island

# Virtual world accounting issues

- Asset and liability accounting
  - Precedent by analogy: software and websites
- Revenue recognition
- Currency related issues
  - Revaluations and gain/loss
- International and regulatory issues



# Traditional accounting asset definitions

- Asset
  - Any item of economic value owned by an individual or corporation, especially that which could be converted to cash
- Tangible Assets
  - Assets having a physical existence, such as cash, equipment, and real estate
- Intangible Assets
  - Identifiable non-monetary assets without physical substance
  - Examples: **computer software**, licenses, patents, brands and copyrights

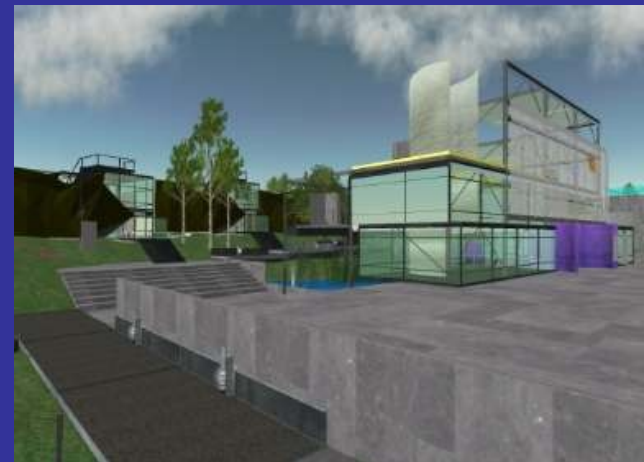


*Source: International Financial Reporting Standards (IFRS)*



# Are virtual world assets different?

- Non-physical, like software
  - Multi-state / non-persistent
- Specific risks of impairment, destruction, infringement
  - World disappearance
  - Economic disturbance
  - Ease of copying
  - International environment
  - Low transparency
    - Physical identity obscured, limited reporting infrastructure



# Virtual world asset and liability classification

- Intangible assets
  - Land and real estate
  - Objects
  - Scripts and animations
  - Intellectual property
    - Patent, trademark, copyright
- Liabilities
  - Loans payable, bonds



# Land is the most significant virtual asset

- Purchase via auction or resale
  - Premium membership required (\$9.95/mo)
  - USD \$13 + \$5 monthly for 512 sq m
  - USD \$1,675 + \$295 monthly for 65,536 sq m island

Raw  
Land



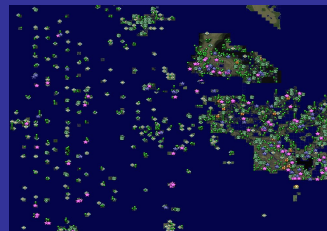
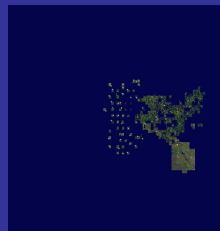
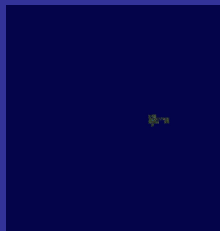
2003



2005

2007

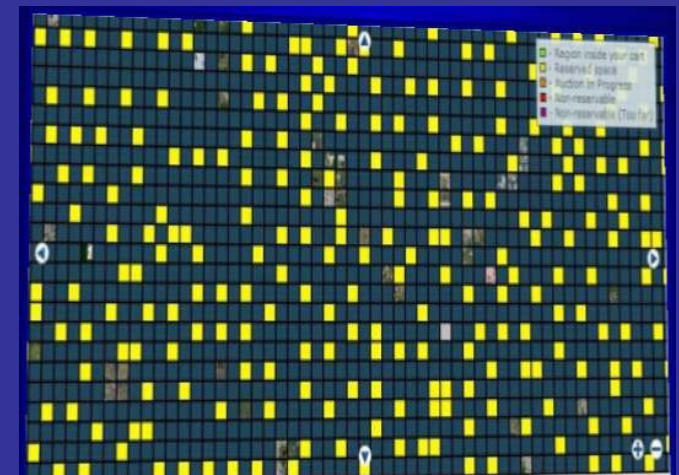
Growth of  
Second Life



Source: <http://www.secondlife.com>



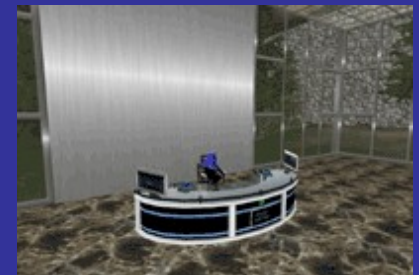
Available plots



Available island areas

# Real estate

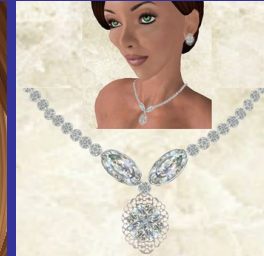
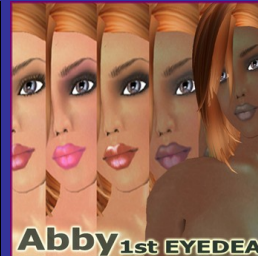
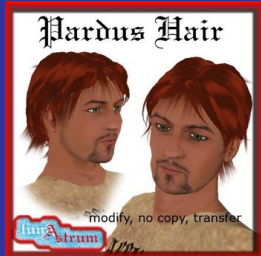
- Virtual homes, offices and meeting spaces



Anshe Chung  
Second Life real estate developer



# Objects and scripts





# Asset recognition and measurement

- An asset is recognized when it meets all of the following criteria
  - it is identifiable
  - the entity has control over the asset
  - it is probable that economic benefits will flow to the entity
  - the cost of the asset can be measured reliably
- Initial measurement at cost of generation or acquisition or other assessment of fair value



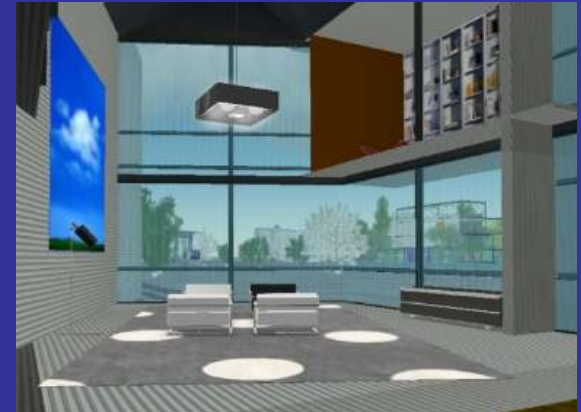
Holly Kai Golf and Country Club



Sun Microsystems Pavilion

# Asset useful life, depreciation, disposition

- Useful life
  - Shorter life
- Amortization
  - Software: purchased vs. developed
  - Non-software: amortized over useful life
- Impairment
  - More frequent reassessment
- Retirement and disposal
- Disclosure



# Revenue recognition and currency issues

- Services
  - Developer
    - Initial project
    - Maintenance / support
  - Other
- Site allowance/stipend
- Currency issues
  - Not different from high-risk international currencies



IBM's Forbidden City Sim

# Rapidly developing virtual world ecosystem

## Virtual Businesses and Brands

Anshe Chung Studios, DeCuir Creations, FairChang, Etopia, Hunter's Cove, *SL Boutique*, Preen, House of Nyla, Second Life Cable Network, Rezzable, caLLie cLine, PeoplePool, Raven Pennyfeather, Lapointe & Bastchild Designs, InStyle, Vista Animations, Chai Skins, Acedia Albion, AV Puli Animations, Reel Expression, J&S Aviation, SZ Designs, Vindy Vindaloo, Esoterica Couture



## Virtual World Developers and Agencies

Electric Sheep Company, Millions of Us, Rivers Run Red, CMP, Aimee Weber Studio, depo consulting, Forterra, Metaversatility, Wish Farmers, Virtual Worldlets, Icarus Studios, Proton Media, NGI Group 3Di, DAZ 3D, Code 4



## Virtual World Providers

*Linden Lab/Second Life*, ActiveWorlds, Entropia Universe, There, Kaneva, Muse, MultiVerse, vastpark, metaplace, Cybertown, Habbo Hotel, Whyville, Voodoo Chat, Taatu, Traveler, Sims Online, Club Penguin, WebKins, Hipihi, Uonenet, Noviking



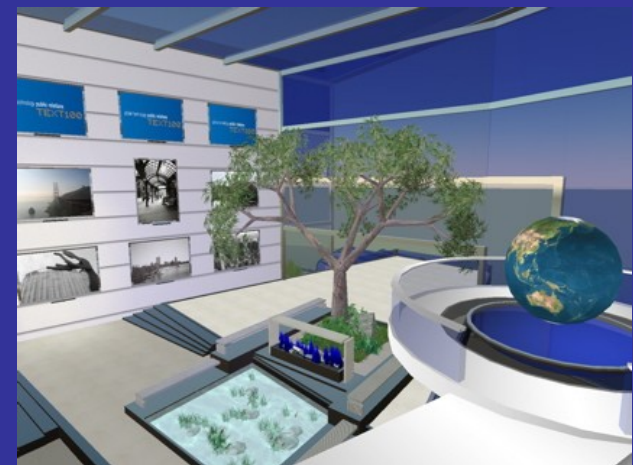
## 3D Physics Engines and 3D Modeling Platforms

Havok, Ageia PhysX, Unreal Engine, Open GL, Maya, 3D Studio, Croquet, SoftimageXSI, Form Z, Strata 3D CX, RenderMan, Blender, Wings3D



# Virtual world valuation issues

- Valuation situations
  - Asset transfer, purchase or sale
  - Internal accounting
  - Settlement: legal, estate, divorce, etc.
- Valuation considerations
  - Ownership
  - Portability to other virtual worlds
  - Virtual business risks
  - Intangibles
    - Intellectual property
    - Brand value: reputation, management, innovation and human capital





# Virtual world valuation issues

- Assets to be valued
  - In-world business: product, service
  - Brand: sim, business, avatar
  - Account: avatars/characters, assets
  - World, economy
- Valuation techniques
  - DCF: emphasize near-term flows, low TV
  - Sales comparison: Second Life classifieds, stores, eBay
  - Recent transactions
  - Multiples: assets, sales, EBITDA, trading
  - Metrics: customers, contracts, sim and web traffic, conversion



Motorati SpokesAvatar:  
caLLie cLine



Coke's virtual branding

# Virtual world tax issues

- VAT, sales tax
  - 1099 contractors
- Income tax
- Gains tax
- Challenges of levying tax
  - Identity verification
  - Identification of activity
  - Monitoring, tracking and enforcement
  - Highly international environment



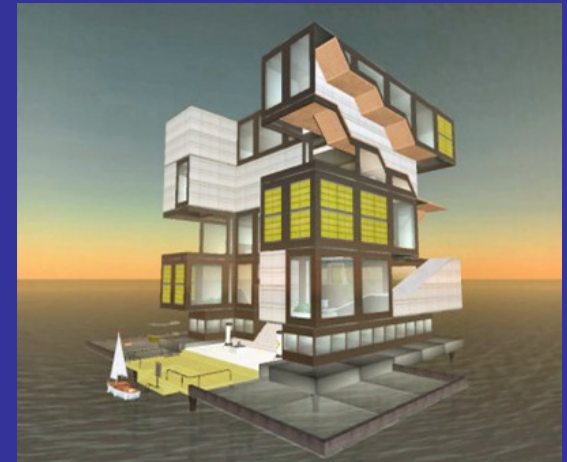
# Legal and other issues

- Key rules
  - Linden Lab: Terms of Service Agreement, Community Standards, Privacy Policy, Digital Millennium Copyright Act Policy
  - Sim covenants
- Dispute resolution
  - Metaverse Republic
- Recent cases
  - Eros, LLC v. Doe (pending)
    - Copyright infringement (US \$2,250)
  - Marc Bragg v. Linden Lab (Oct 2007)
    - Land acquisition via landbots (US \$8,000)
- Money laundering



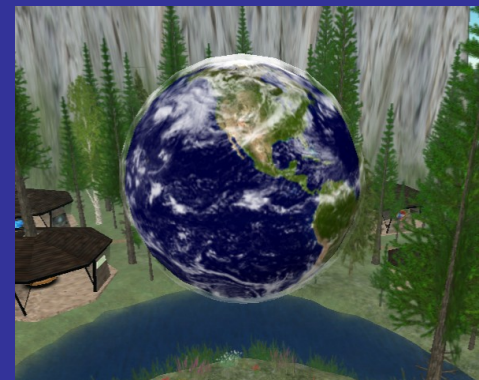
# The future of finance and virtual worlds

- Growth: participants, breadth, size
- Formalization of the financial sector
  - Stock indices and mutual funds
  - In-world stock market crash
  - Third-party audit and analyst function
- Regulatory initiatives
  - In-world GAAP
  - Explicit banking, securities and tax laws
- Technical initiatives
  - Cross-world avatar portability



# Industry leadership opportunities

- Provide industry leadership
  - Accounting and valuation white paper
  - Implement international GAAP / IFRS
  - In-world third-party audit infrastructure
  - Client earnings announcements
  - Audit, valuation, tax, SOX checklists
- Support clients in the virtual medium
  - Accounting and business advisory, virtual dispute resolution
- Facilitate internal initiatives
  - Recruiting, telepresence, collaboration





# Valuation summary

- Virtual worlds are becoming increasingly routine for business, academic and government use
- Financial professionals and regulators are now getting involved; there is an opportunity for a leading accountancy to define and lead virtual world accounting and valuation practices
- Demand for advisory services is growing along with strategic investment and M&A activity in all areas of the value chain
- Doing business in a virtual world is similar to doing business in a foreign country





# Thank you

Slides: [http://www.melanieswan.com/presentations/Virtual\\_World\\_Valuation.ppt](http://www.melanieswan.com/presentations/Virtual_World_Valuation.ppt)  
Virtual World Valuation



Provided under an open source Creative Commons 3.0 license  
<http://creativecommons.org/licenses/by-nc-sa/3.0/>

Melanie Swan  
MS Futures Group  
Palo Alto, CA  
415-505-4426  
[m@melanieswan.com](mailto:m@melanieswan.com)  
[www.melanieswan.com](http://www.melanieswan.com)

# Resources

- Getting started in Second Life
  - [http://sl.nmc.org/wiki/Getting\\_Started](http://sl.nmc.org/wiki/Getting_Started)
- Second Life SLURL Directories
  - <http://nbhorizons.com/list.htm> (companies)
  - <http://npsl.wikispaces.com/Tenant+Directory> (non-profit commons)
  - <http://edumuve.com/tour/> (international locations)
- Event listings
  - <http://secondlife.com/events>
  - <http://metaversed.com/> \*
  - <http://www.metanomics.metaversed.com/> \*
- News, blogs, etc.
  - <http://secondlife.reuters.com/> \*
  - <http://www.ugotrade.com/>
  - <http://www.virtualworldsreview.com/>
  - <http://www.metaversemessenger.com/>
  - <http://dwellonit.blogspot.com/> (most visited locations)



**\* Finance and Economics**