Briefing:
An Introduction to Gaming & MMOG
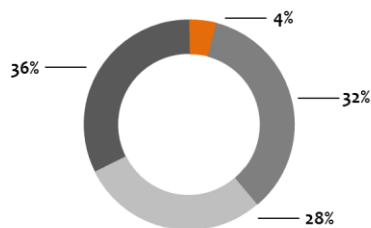
November, 2013

1. INTRODUCTION TO GAMING & MMOG

Ever since I first waited the nearly twenty minutes for the tape load to finish and the opening screen to be revealed of "Elite" (Acornsoft 1984) on my Acorn Electron I have been hooked to strategy style games. The journey to today's MMOGs, X-Box, PlayStation, Wii, online and, latterly, mobile games has been an extraordinary story of market growth.

Even back then video gaming communities were mushrooming up all over Dublin with these new exciting monster machines arriving, first into corner shops and then as dedicated video arcades. I remember fondly those halcyon carefree afternoons spent at Dave Flanagan's arcade in Malahide.

Today's video games market has surpassed, by some order of magnitude, what I then considered to be the potential for these "time wasters" (as my Dad called them!). The global video games market is now estimated to be worth an incredible $70.4Bn.
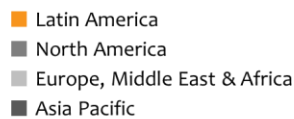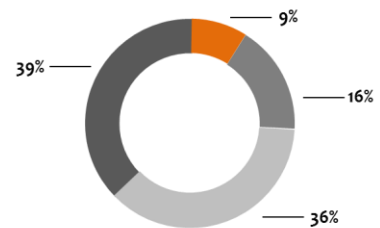
Global Markets Revenues $70Bn

4%
36%
32%
28%

Global Markets Growth

11%
10%
5%
2%
4%
11%
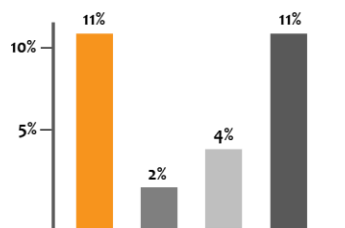
Global Markets Players 1.23Bn

9%
39%
16%
36%

■ Latin America
■ North America
■ Europe, Middle East & Africa
■ Asia Pacific

This market has expanded rapidly not least because of the ubiquity of SmartPhone & Tablet devices and their ability to deliver gaming content. It is estimated that this mobile revolution has grown to represent just over 15% of all gaming with PC's, Consoles and Online being 10.5%, 39.5% and 35% respectively.

1.1 Sources & Further Reading:

Other links to excellent introductions to gaming are:

http://www.pwc.com/gx/en/global-entertainment-media-outlook/segment-insights/video-games.jhtml

http://www.gamasutra.com/view/news/193625/

http://www.xbox.com/en-gb/#fbid=YrV9MANM07N

http://uk.playstation.com/

http://www.nintendo.co.uk/

http://en.gameforge.com/home/index

http://www.nexon.net/

http://www.perfectworld.com/

http://www.ga-me.com/

http://www.disney.co.uk/

http://www.cjii.co.id/Company/Introduce.aspx

http://www.hanbitsoft.com/Home/Home.aspx

http://bigpoint.net/

http://zynga.com/

http://www.ea.com/uk

Newman, James 'Videogames' (Routledge, 2013)

Wolf, Mark 'The Video Game Explosion' (Greenwood Press, 2008)

Egenfeldt-Nielsen, S, Smith, J & Tosca, S 'Understanding Video Games' (Routledge, 2013)

National Research Council 'The Rise of Games and High=Performance Computing for Modeling and Simulation' (National Academies Press, 2010)

2. WHY MMOGS?

It is clear that the video gaming industry is now a massive giant of economic progress and that games are ever increasing in their scale, complexity and beauty. Growing up in the depressed economic environment of the 1970s meant that there was little to do but watch TV, listen to the radio, and hang around on street corners causing consternation to those unfortunate homeowners (apologies!). The start of the 1980s saw inklings of light come through and by 1982 the BBC Micro had taken me and many of my friends by storm. Hot on its heel were the ZX Spectrum which provided colour graphics and Manic Miner. My real passion, though, remained Elite and in some ways Elite isn't a bad place to begin with MMOGs.

There are inordinate quantities of great introductions to what an MMOG is, how it evolved from the earliest single-player games, through Multiuser Domains (MUDs), into Multiplayer Online Games (MOGs) and then into the Massively Multiplayer Online Game (MMOG). For more on the specifics of its evolution:

- http://massively.joystiq.com/2011/08/10/namaste-entertainment-charts-the-history-of-mmos/

- http://venturebeat.com/2013/01/09/get-with-the-times-man/

- http://www.newzoo.com/infographics/the-global-mmo-market-sizing-and-seizing-opportunities/

- http://en.wikipedia.org/wiki/MMOG

- Rice, Robert 'MMO Evolution' (lulu.com, 2006)

- Abraham, Ajith (Editor) 'Computational Social Networks – Mining and Visualisation' (Springer, 2012)

- Nelson, Brian & Erlandson, Benjamin 'Design for Learning in Virtual Worlds' (Routledge, 2012)

- Edery, David & Mollick, Ethan 'Changing the Game' (FT Press, 2008)

- Chatfield, Tom 'Fun Inc: Why Games are the 21st Century's most Serious Business' (Virgin Books, 2010)

- El-Nasr M, Drachen A, & Canossa A 'Game Analytics – Maximizing the Value of Player Data' (Spinger, 2013)

As mentioned earlier Elite is probably not a bad place to start. This game had me trapped straight from the beginning. The notion that you could trade across the galaxy in legal or illegal goods, that you could have skirmishes with pirate space captains and you could work your way up to Elite status. You can still play this game today on Windows™. (http://www.classic-retro-games.com/Elite-The-new-kind_180.html)

The point is that from this acorn (forgive the pun) came an oak and that while, from a programming perspective Elite was a mere minnow, the thought process, the storyline ambition, the conscious construction of an altered galaxy sized reality was (whether realised at the time) to be a step of enormous significance psychologically, sociologically and anthropologically. Pandora's box was irreversibly opened!

3. THE RELEVANCE OF MMOGS?

So aside from the pure pleasure of playing these amazing games, the interest in MMOGs stems from its ceaseless, fundamental and obligatory need to be bleeding edge across all of the following (note: non-exhaustive list) domains of human knowledge:

- **Art & Graphic Design** – without astounding graphics for the infinity of input variables such as: characters, worlds, ships, cars, weapons, space craft, etc. players of the game would become bored and migrate to another provider or platform

- **Economics** – of course in a virtual economy the "central bank" can keep printing money and adding infinite resources but this can impact the reality of the situation and often removes the underlying Maslovian impetuses and behavioural motivations that people need to have to remain interested in playing, learning, and building. Managing a virtual-economy exhibits the same laws of micro and macro-economics as that of the real world. But more than this the economics involved in MMOGs is now pushing the boundaries of our knowledge of this subject:

- **Psychology & Behavioural Science** – an MMOG is designed specifically to enable collaboration, alliances, and conflicts. But these interactions are by nature random and uncontrolled and once the game is "live" they can take unexpected turns. From a design perspective goals challenges and rewards can be baked-in but the law of unforeseen consequences dictates that the behaviours of those playing will become grouped into psychologically aligned patterns based on rational and irrational human (the player) motivations. This leads the designers to a need for understanding the behavioural psychology of swarms, crowds, leadership, conditioning, reinforcement, etc.

- **Mathematics** – almost the founding basis for MMOG designers and writers. Early on in the development from single-player to Multiuser Domains (MUDs) the need arose to understand the dynamics of player interaction in a finite space. Germinating from these early algorithms an entire universe of mathematic understanding was needed to feed the appetites of players. Game theory in particular is necessary to try to statistically estimate the evolution in-game of players, NPCs, etc.

- **Literature** – MMOGs require a really well evolved and cohesive storyline. The base premise for the world, domain, universe, etc. that the designer creates must hold water. NPC identities, guilds, alliances, fiefdoms, etc. must all be thought through in minute detail in conjunction with their characteristics, such as, morality, ethics, and politics so that the underlying construct exhibits a sense of realism.

- **Education** – in some part people play games to learn, to evolve, and to grow. This could be as rudimentary as the motivation of "one-upmanship" but game designers need to carefully think through the ultimate goals of any MMOG far beyond simplistic notions – for instance, even the most obvious linear construct of going from Level 1 to Level 100 needs careful evaluation of the learning curve, the ability to fall backwards, the ability to skip ahead, the expected time taken at each increment and the embedding of a "Goldilocks" approach to each successive step. Games today are far from this embryonic example with (n) scale non-linearity's needing very deep modelling as part of the design phase

- **Sociology** – we all understand that societies develop over time but the question is how do they develop, how are we so different in 2013 from when I grew up in the 1970s? An inordinate amount of factors impact our daily lives without us even noticing. Those factors need to be mirrored by MMOG designers within the game. Thoughts and

(ultimately) programming needs to attend to incremental changes that propel forward (or regress) the society or societies in the game. Cultural factors, familial units, political faction development, gender considerations, generational & economic divides, religious implications, and many more must be considered and planned

- **Anthropology** – especially sociocultural anthropology provides input for game designers into the logic of societal developments through ethnography. Game designers can learn from the development cycles of human history and to try to extrapolate from that the expected progression of societies in their games. This is especially important when designing large scale computer generated societies which will interact with players either peripherally or directly. These societies will need to evolve in the game as much as the human players and the impact and type of interactions across thousands even millions of players needs to be understood

- **Political Science** – closely linked to many of the above areas. Depending on the type or nature of the MMOG there is a critical link to develop political ideologies for groups within the game. An obvious example is a war situation where your tribe, clan, horde, guild, nation or country is from the outset pitted against another. The automatic political allegiance story needs to make clear as to where players will fit within the political structure of the war effort, their locus standi if you like within their community and they can change this, how the war will progress, whether there are Machiavellian factions within your own side etc. This can build intrigue and interesting alliances that coalesce to make the game more enjoyable but thought needs to be given during design to the political processes, its systems, and its ideology

- **Monetization & Commercial Modeling** – in the early days of Elite and the like the monetization model for designers was prima facie with a single upfront payment delivering access to the game software. Over time and with the rise of the Internet online games monetized using a simple subscription mechanism – denoted Pay-to-Play (P2P). With the advent of SmartPhones, Tablets and casual games this P2P model metamorphosed into a Free-to-Play (F2P) model with new monetization apparatus being engaging to elicit revenues for the game designers and publishers

- **Law & Intellectual Property Rights** – finally for this diatribe is the critical area of legal rights, rights management, ownership, patents and copyrights. Collectively the area of law most affecting MMOG is that of Intellectual Property Rights (IPR). MMOGs on many fronts are forcing legislatures to break new ground. In the early stages the distribution of games clearly fit within the extant strictures of common practice International Trade. However with globalisation and the Internet new contrivances were unveiled to keep pace of cross-border players. A simple example would be the tax law implications for casino style gaming where a foreign national plays and wins – is there tax? Other significant developments are in the area of virtual building profits (whether character enhancement or virtual environment enhancements) where a player builds through many hours of play a set of features or capabilities and sells them on the secondary market for "real" money – is this taxable?

And of course the Information Technologies knowledge to realise an outcome product:

- Computer Graphics

- Engine Architecture & Parallelism

- Networking & Communications

3.1   Sources & Further Reading

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http://www.raphkoster.com/gaming/economy.shtml

http://www.wildstar-online.com/en/news/wildstars_economic_game.php

http://www.nickyee.com/daedalus/archives/02_04/Yee_Book_Chapter.pdf

http://www.asanet.org/introtosociology/documents/Field%20of%20sociology033108.htm

http://www.brianhoey.com/General%20Site/general_defn-ethnography.htm

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http://money.howstuffworks.com/personal-finance/personal-income-taxes/virtual-tax.htm