

LEARNING FROM GAMES ARCHITECTURES: AN INDUSTRY AND ACADEMIA COLLABORATION

What being a gamer left me:

1. Perfect aiming
2. Great reflexes
3. History knowledge
4. English language
5. Co – op Tactics
6. Strategic planning
7. learn to never surrender
8. Save the girl
9. How to differentiate good from evil
10. Most of all hours and hours of **FUN!**

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WHAT CAN WE LEARN FROM MASSIVELY MULTIPLAYER ONLINE GAMES? (MMOGS) & ESPORTS IN A DEFENCE CONTEXT?

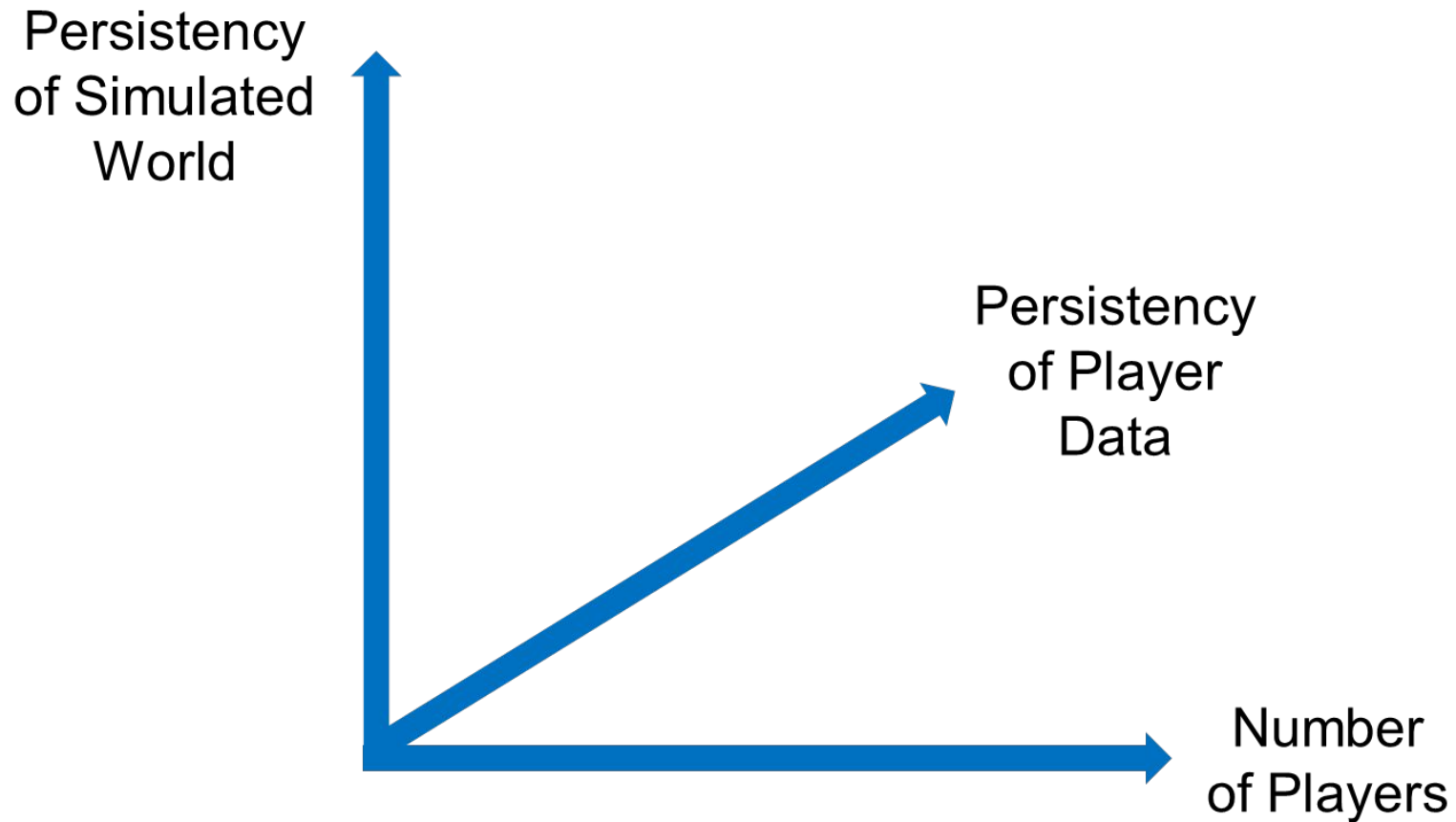


An Industry/Academia
Collaboration

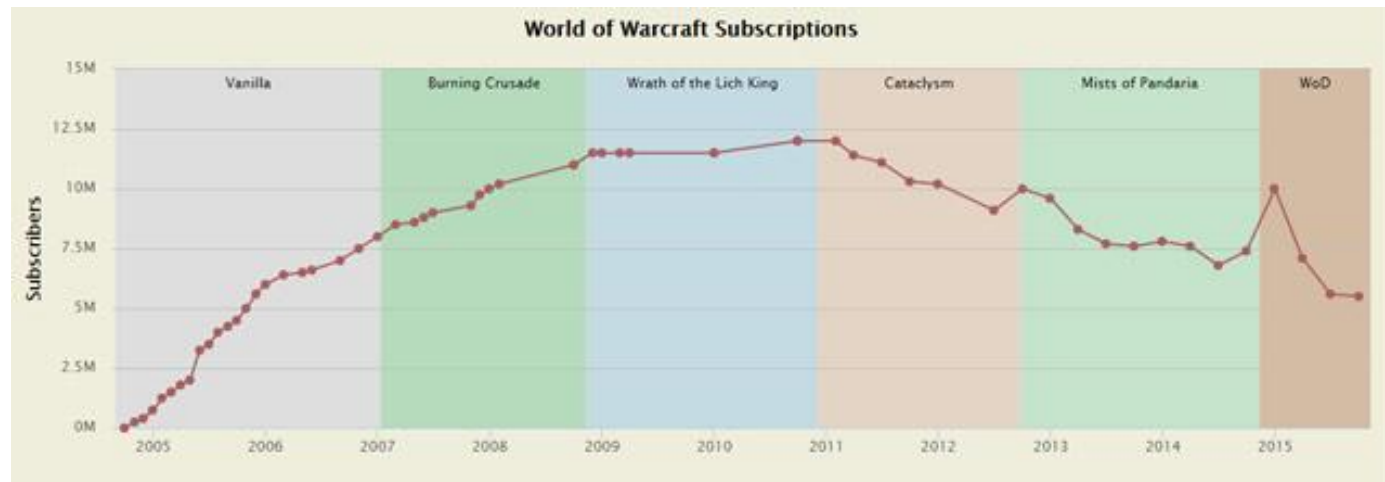


- Over the last decade Multiplayer Games & Massively Multiplayer Games and eSports have converged in terms of design, architecture & consumption.
- MMOGs - \$19.8B in 2016, 60% of digital PC game revenue.
- eSports - \$493M in 2016, 51.1% YoY growth. \$80M in 2016 annual prize pools.
- Persistency of User/Simulation Data & Community Support Architectures are of particular interest.
- The study team drew from expertise of over 100 people through interviews and questionnaires from academia, armed forces, industry, and MoD together with a comprehensive literature review.

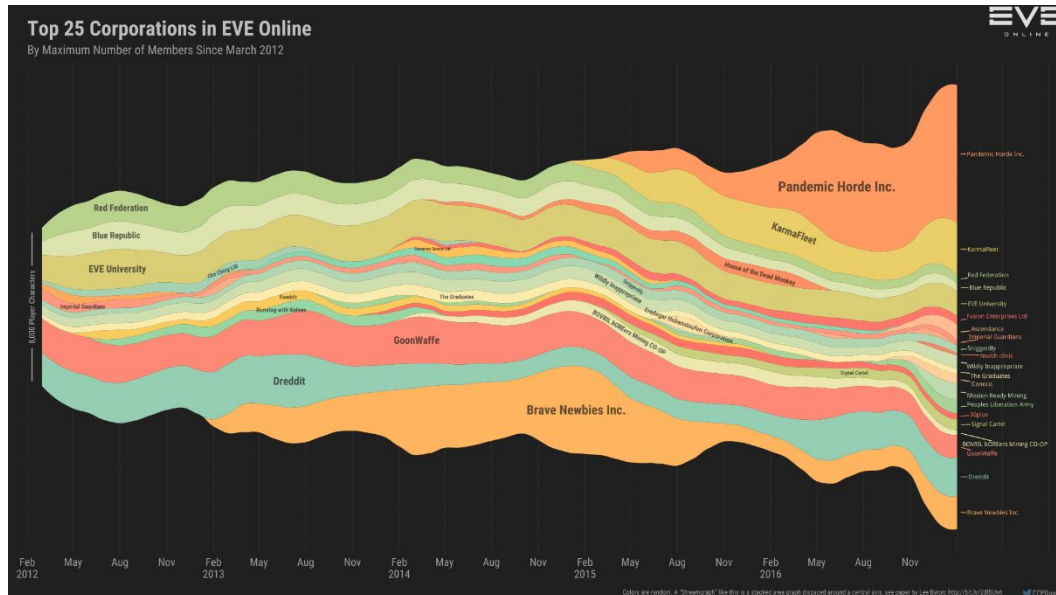
WHAT IS AN MMOG?



MMOG – WORLD OF WARCRAFT



MMOG – EVE ONLINE



ESPORTS



COUNTER STRIKE SOURCE

HOME

NEWS

SCOREBOARD

STATISTICS

FEATURES

CGS STANDINGS

NEWS ARCHIVES

NA RANKING

NEWS ARCHIVES

HOMEY LIST

DEPOS

GALLERIES

DOWNLOADS

MOVIES

FORUMS

COMMUNITY NEWS

webZone source tou...

carpon on the 26th...

document to work

complexity: episode 1

td opens case lead...

civo announces seas...

logitech case change...

sky sports signs co...

the experience 2007...

eye announces cr...

FERUM THREADS

eGaming

new pc

et legal fps config

fratic or complexity?

euro source vs. na...

legion

new to spray in source

question (frame off...

launch option for demo

fake node throw bug...

NETWORK FORUMS

online stores

GameSense 2 Beta / Events / CGS Region 1 Season 1

Home Events Matches Players Teams About

CGS Region 1 Season 1

Dates: Played June 21, 2007 through July 29, 2007

Location: Venues: CA Studios City: Los Angeles, CA

Stats: Totals: 2,367 Rounds 1,642 Frags 256 Assists

Overview Matches Players Teams

Event Overall

	F	D	A	R	ACE	FRG	ASS	AVG
1642	2851	256	2367	9	0.474	0.634	0.895	-9

Round Impact

	2F	3F	4F	ACE	DM
287	86	19	1	0.25	

Damage Factors

	DD	DA	DAR	DGP
17089	17709	75.4	106.8	

Bomb Activity

	SD	SPS	SDP	SDA	SDS	SDP
109	14	13%	34	20	59%	

Offensive Stats

	GF	CS	GR	GRD	GRFA	GRF
751	896	1085	0.636	0.634	-147	

Defensive Stats

	DF	DS	DR	DFD	DFRA	DFR
891	753	1682	1.883	0.754	-138	

Event Slices

Week	F	D	A	R	ACE	FRG	ASS	AVG
Week 1	261	233	34	360	97	194	36	1.7
Week 2	432	635	111	896	383	349	119	29
Week 3	759	763	111	1109	375	306	132	40
Total	1642	1651	256	789	751	891	287	86

Recent Matches

Date	Team 1	Team 2	Map	F	D	A	R	ACE	FRG	ASS
Jul 13, 2007	Core (10)	de_mus2	137	137	22	190	72	65		
Jul 13, 2007	China (2)	de_mus2	111	111	24	176	65	46		
Jul 11, 2007	Core (10)	de_mus2	133	133	19	190	65	46		
Jul 11, 2007	Core (10)	de_mus2	124	124	34	190	50	74		
Jul 9, 2007	Core (10)	de_mus2	124	124	27	190	64	40		
Jul 6, 2007	Core (10)	de_mus2	128	128	13	189	53	75		
Jul 2, 2007	Core (10)	de_mus2	124	124	28	179	62	42		
Jul 3, 2007	China (8)	de_mus2	126	126	24	179	62	73		
Jul 2, 2007	Core (8)	de_mus2	122	122	13	180	51	81		
Jul 2, 2007	Core (4)	de_mus2	125	125	22	180	58	67		
Jul 2, 2007	Core (5)	de_mus2	24	24	3	30	9	15		
Jul 2, 2007	China (10)	de_mus2	124	124	24	180	40	84		
Jun 29, 2007	Core (10)	de_mus2	130	131	17	180	52	79		
Jun 29, 2007	China (8)	de_mus2	121	122	17	180	45	76		
Total	1666	1679	239	171	749	305				

GameSense 2 Beta / Events / CGS Region 1 Season 1

GoFrags Promotions

GoComms Voice Servers

GoFrags Price Comparison

BOTFRAG SURVEY

Which team was the CGS Region 1 Championship?

China (China) 83%

Carolina Core 16%

Add by 7499

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HOT REMOS

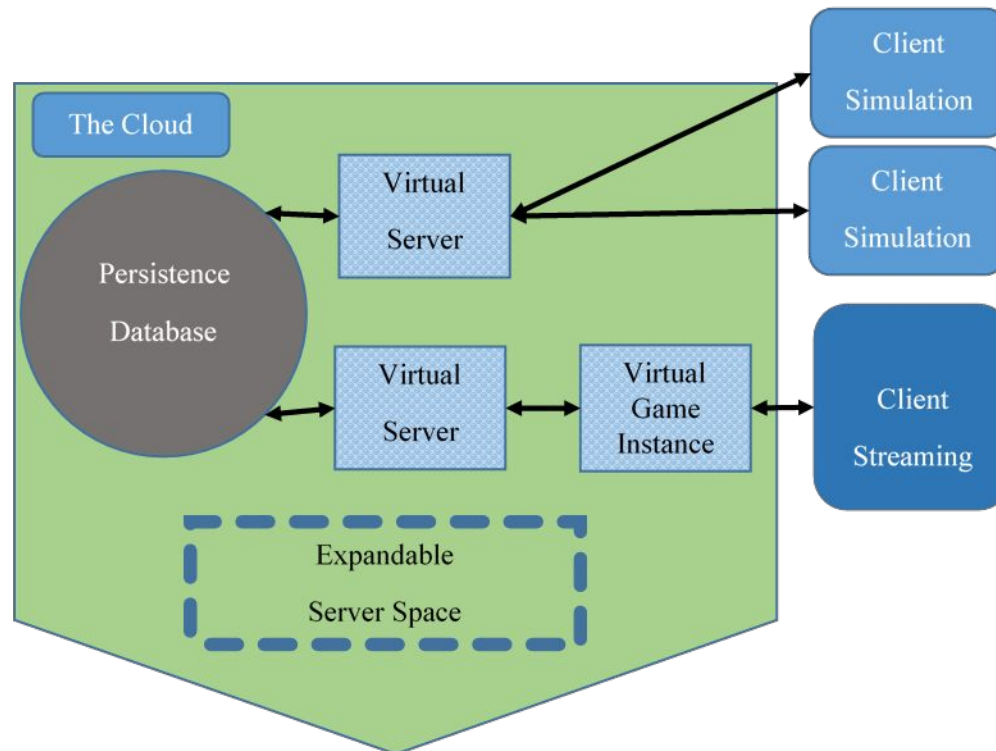
china vs core 31%

china vs core 53%

COMMUNITY SUPPORT ARCHITECTURES



CLOUD STACKS AND LEARNING PLATFORMS



BENEFITS OF MMOG-BASED APPROACH

Trainee

Trainees have a training and education environment that measures and records their performance and provides official goals to be attained.

It provides unranked environments where trainees can practice and experiment, both alone and with other users.

Training scenarios and other trainees are easy to discover.

Environments and interfaces become familiar.

Training Analyst

Training and human factor analysts can collect centrally held training data and can conduct analysis on human performance and the effectiveness of training systems and methodologies/pedagogies.

Trainer

Trainers have access to a training and education environment that is available 24/7 and is maintained and updated centrally.

An environment that can be used both to practice and experiment and for formal testing and assessment.

Training scenarios are easy to access, develop and share.

Training and exercise events are easy to schedule and set up, locally and across the defence enterprise.

Enterprise

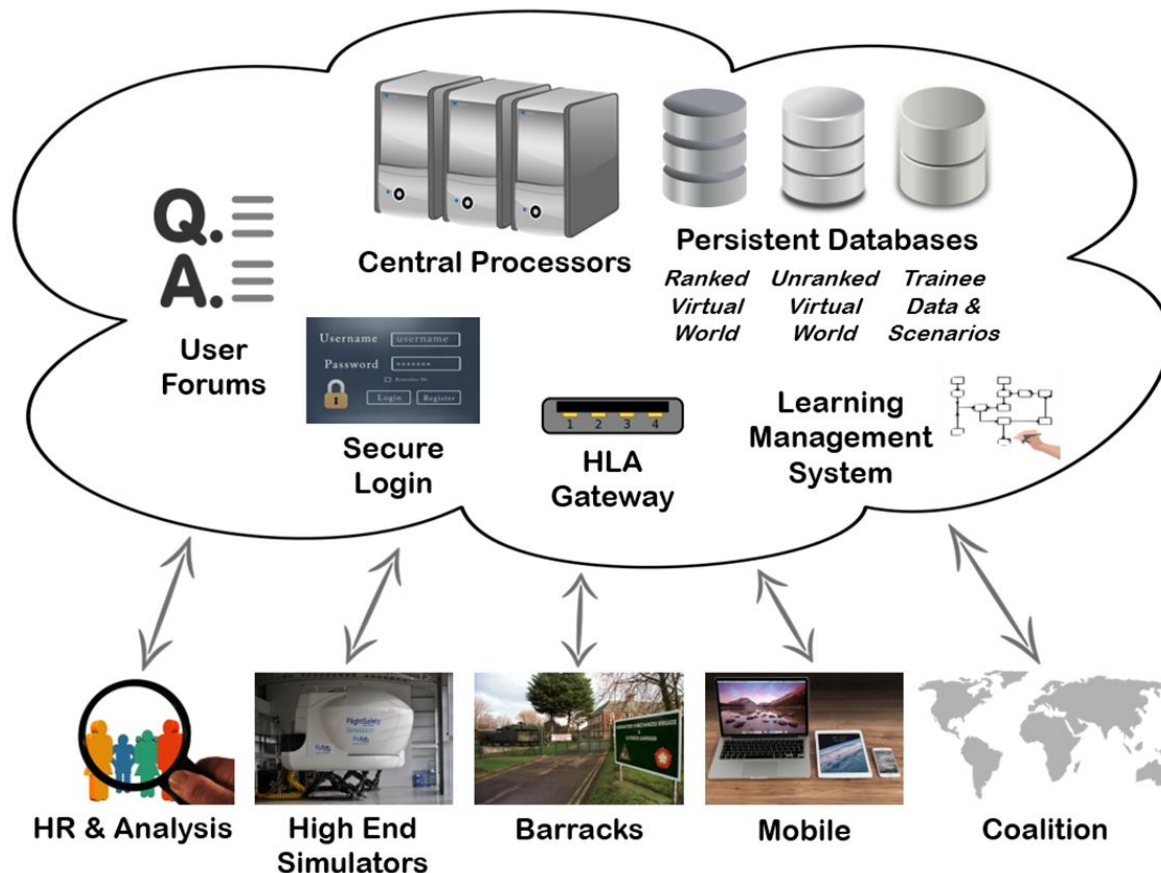
Training systems are more automated and centralised reducing running costs.

Software and data are maintained and upgraded centrally reducing costs and responding better to changing operational needs.

More diverse local training system hardware requirements can be accommodated.

Secure login from variety of locations are supported and secure data can be held and controlled centrally as necessary.

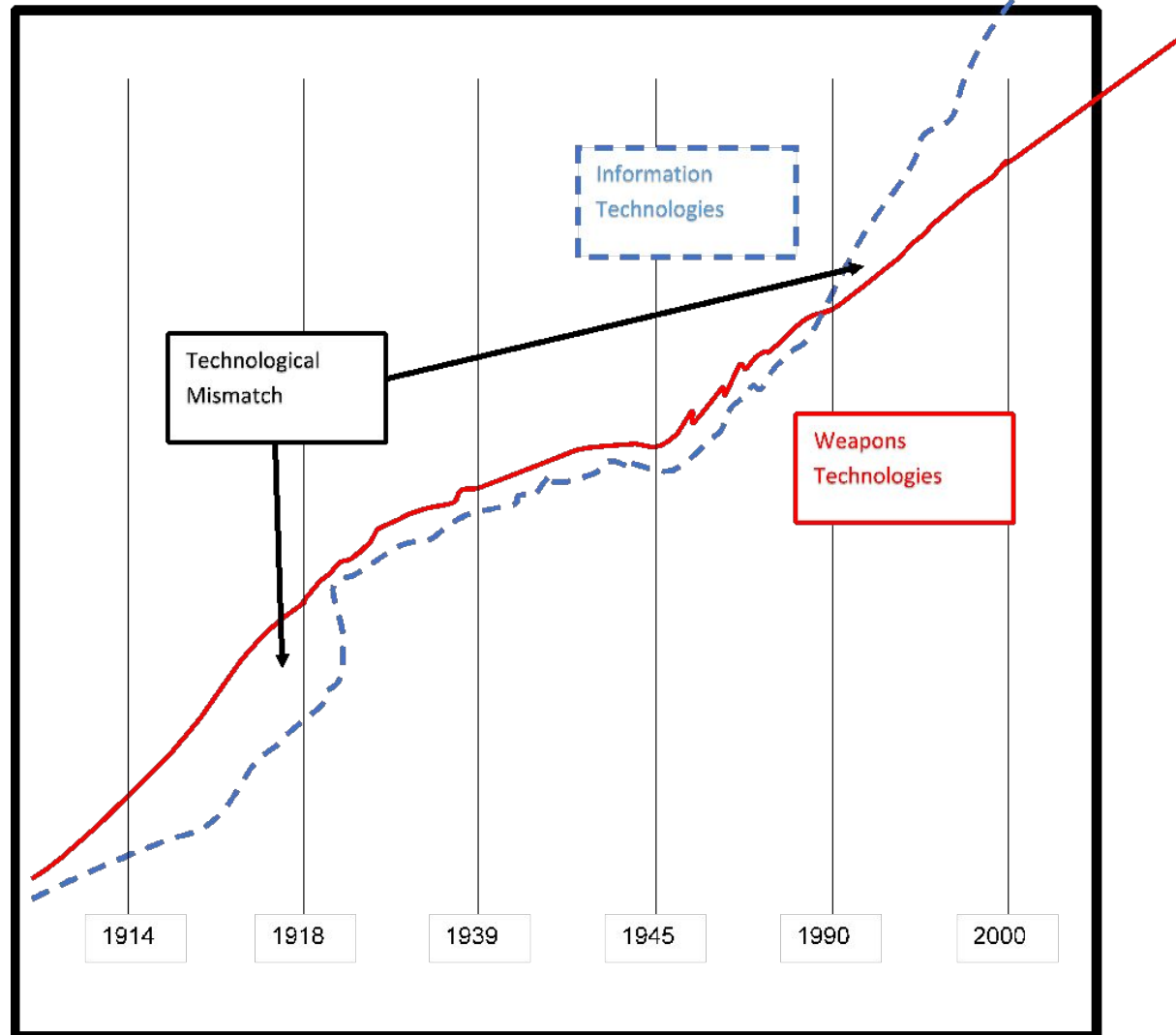
MMOG-INSPIRED VISION FOR TRAINING SIMULATION & DEFENCE



MMOG Report Key Findings

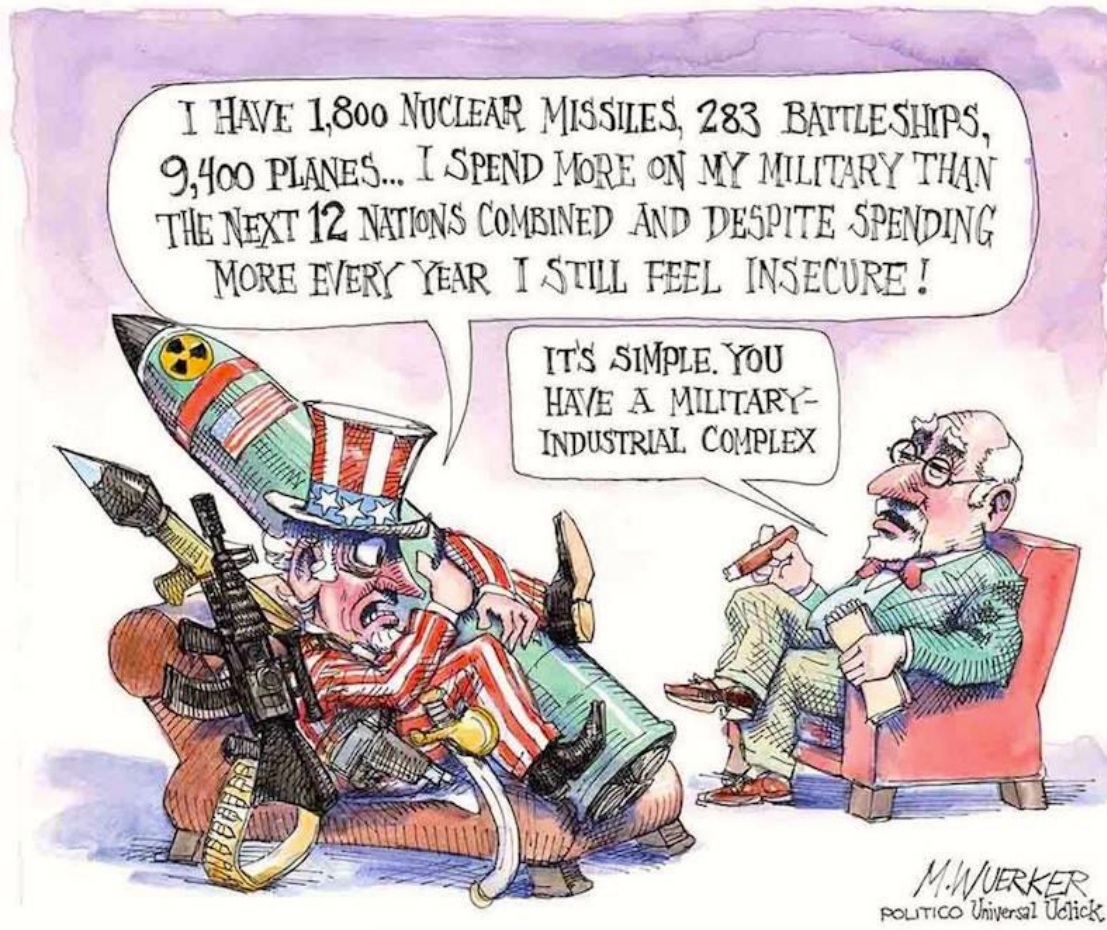
- MMOGs offer a new way of thinking about persistency of training and simulation data and training community user support.
- A Defence-wide MMOG approach could bring benefits to trainees, trainers, analysts and the enterprise, driving cost effectiveness and improving flexibility.
- MMOGs & eSports now foster interoperability of data and data analytics across multiple platforms.
- Persistency of data and data analytics is fostered by persistency of both ranked and unranked simulated spaces.
- Community support architectures support and facilitate end-user and customer learning and foster growth in trainer specific roles within the simulated space.
- Comprehensive customer support protocols feedback into product development, innovation, and product futureproofing.
- Competitive nature of marketplace has fostered innovation in data persistency and interoperability and widespread use of data analytics available to users.
- MMOGs & eSports offer users seamless update experiences and resolution to latency/fair-fight issues.
- User Data and Learning Management is itself Gamified leading to high levels of user engagement.
- Gamified communities become self-educating and self-policing: See China's *Sesame Credit*

BARRIERS TO CHANGE – WEAPONS AND INFORMATION TECHNOLOGIES



Punctuated Equilibrium

BARRIERS TO CHANGE – COMMERCE AND INNOVATION



“...we could more accurately compare it [war] to commerce, which is also a conflict of human interests and activities.”
Clausewitz On War, Book I, Ch. 3

BARRIERS TO CHANGE – INNOVATION MANAGEMENT & MARKETING



