



*PROGRAM EXECUTIVE OFFICE FOR
SIMULATION, TRAINING & INSTRUMENTATION*

Simulation as an IT Service

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Network Centric Operations Industry Consortium
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One Million Customers

➤ Army Size*

❖ Regular Army:	507,082
❖ Army National Guard:	333,177
❖ <u>Army Reserve:</u>	<u>189,005</u>
❖ Total:	1,029,264

➤ How do you serve one million customers on their schedules?

- ❖ McDonalds does it (47 million/day)
- ❖ Google Search does it (130 million/day)
- ❖ World of Warcraft does it (675 thousand/day)

➤ How can the Army do it with training?



Top Sites English

Browse the most popular sites on the web. [Learn more.](#)

1.  **Yahoo!**
Personalized content and search options.
pager.
www.yahoo.com - [Site Info](#)
2.  **Microsoft Network (MSN)**
Dialup access and content provider.
www.msn.com - [Site Info](#)



24/7 Access

- What can you access 24/7? (in USA)
 - ❖ Telephone Call
 - ❖ Television Programming
 - ❖ Radio Programming
 - ❖ Internet Access
 - ❖ 911 Response



CROSBLEY SELLER VIA WWW.ARMYSIMUNTADECOM
SEE OUR WEB SITE FOR LOTS OF VINTAGE GEAR!

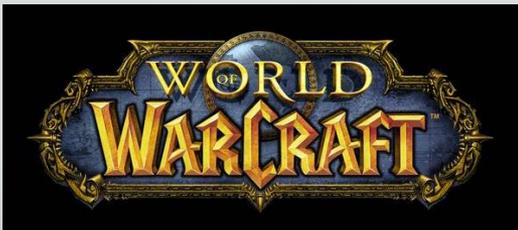
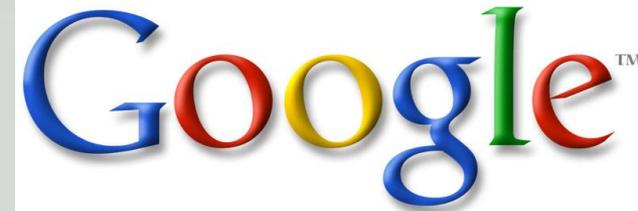
- Can Army training be on this list?
 - ❖ When?





IT Service Characteristics

- Professionally Managed
- Customer Oriented
- 24/7 Access
- Globally Accessible
- Facility, Geography, and Time Independent
- Light Clients, Remote Updates
- Controlled Access





Sim Products Characteristics

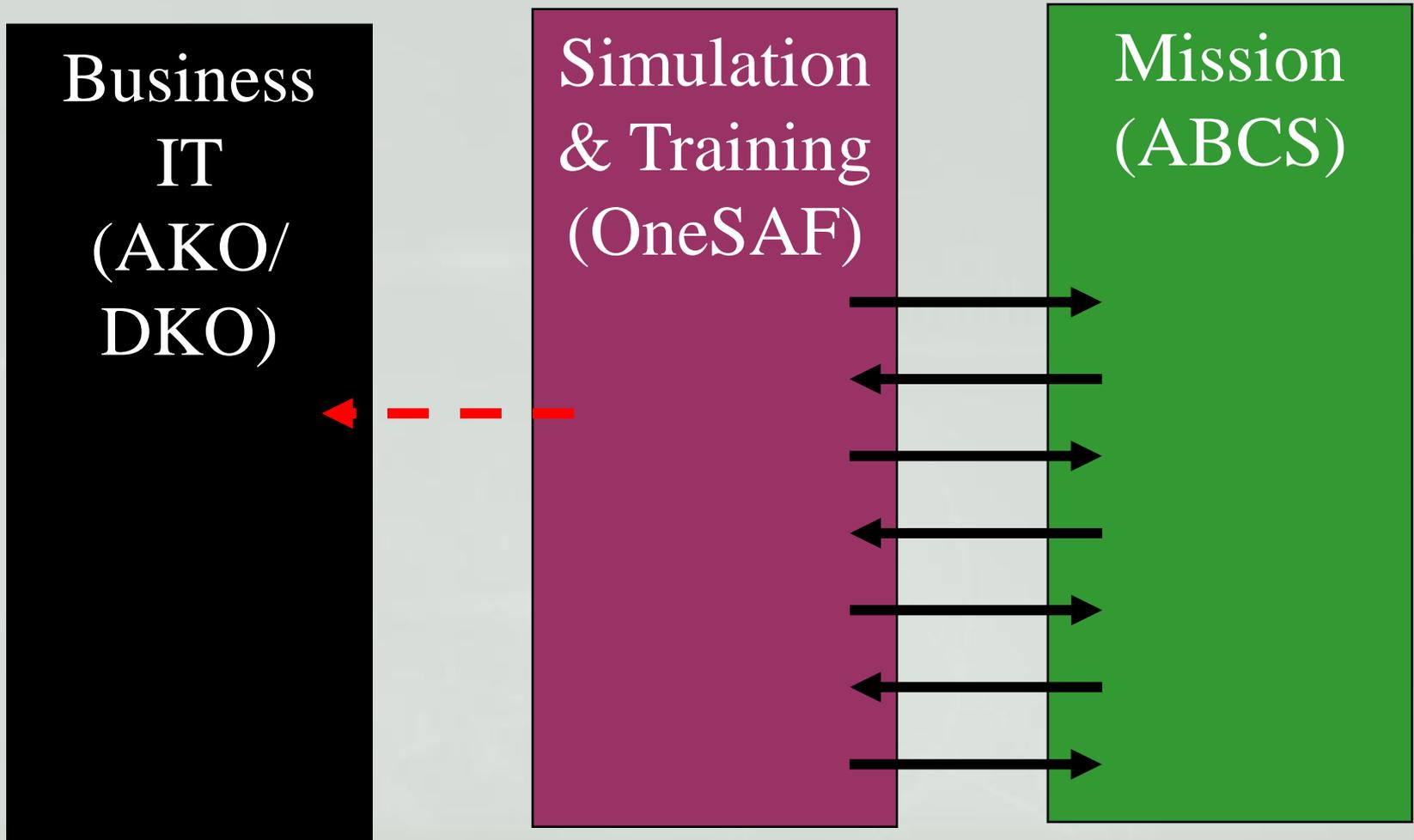
- Heavyweight computer hardware
- Dedicated computer networks
- Tightly integrated Client/Server software
- Large local support staff
- One-to-one relationships between hardware, software, staffing, and the simulation event.



(DEFENSE DEPT.)



Simulation in Your IT





New Simulation Clients

Google Map

Map Type:
 Street
 Satellite
 Hybrid

Show:
 Stops
 Vehicles

Select Routes...
 Help...

If you have problems, comments, compliments, or suggestions with regard to the map, please send them to webbits@ncofbus.com.

Real-Time Predictions:

Route: 1-California
 Direction: Outbound toward the Richmond District
 Stop: California St at Laurel St
 Arrivals: **8min, 9min, & 20min**

Shockwave in Browser

Phosphor
 File Edit
 Back
 Address

PHOSPHOR BETA
 Bot Player 01 slays Default Player1
 Bot Player 02 dispatches Bot Player 011

phosphor_beta1.287.dir 11/26/2006 9:46 PM
 Shockwave3D FPS - www.rasterwerks.com
 FPS=39.13
 MAX=56.86
 MIN=29.52
 Q:1 P:0000

WEAPON: MACHINE GUN
 AMMO: 80/200

eta 1 - Shockwave3D First-Person Shooter - (see below for instructions)

Flash in Browser

Here We Are

Hit Me With Your Best Shot When I See U
 Ladies Love Country Boys
 Ruby

Come A Little Closer
 Lost Without You
 I Loved Her First
 I'm Not Tired Yet

This is what's starting to play on radio. Right now.

Google Earth

PITCH

10.2 km

©2007 Google™

Americas Army



...not everyone lives in a castle



“But even here 80% of soldiers have access to a laptop computer and network”
- SFC Richard Colon, US SOCOM



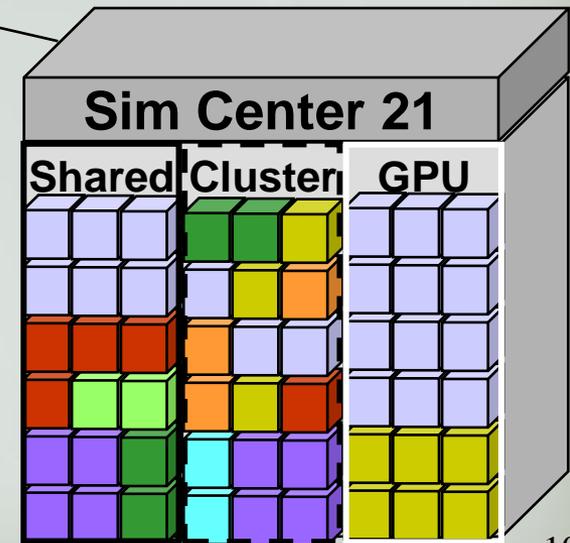
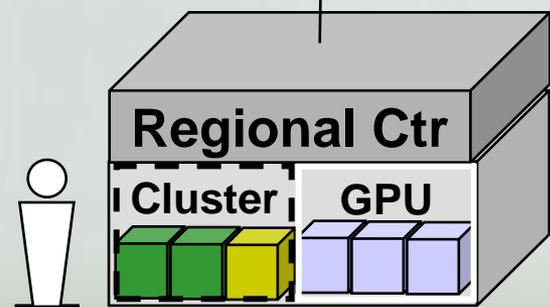
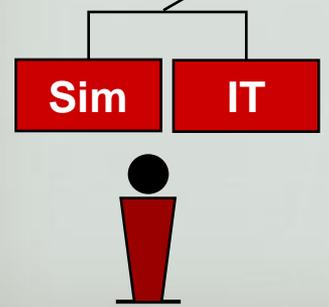
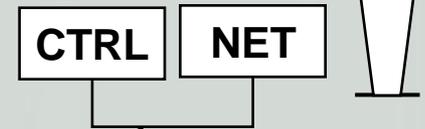
Desktop Client Variety

Client	Examples	Rough Size
Light	HTML, Flash, Shockwave  	Less than 2MB
Medium	Google Earth, Java via Web Start  	2MB to 15MB
Heavy	Americas Army, Second Life  	50MB to 100MB

Customer-focused Sim Center



Sim GUI, Web IF, Google Earth
[Analogy: GIAC, Tapestry, Phosphor]

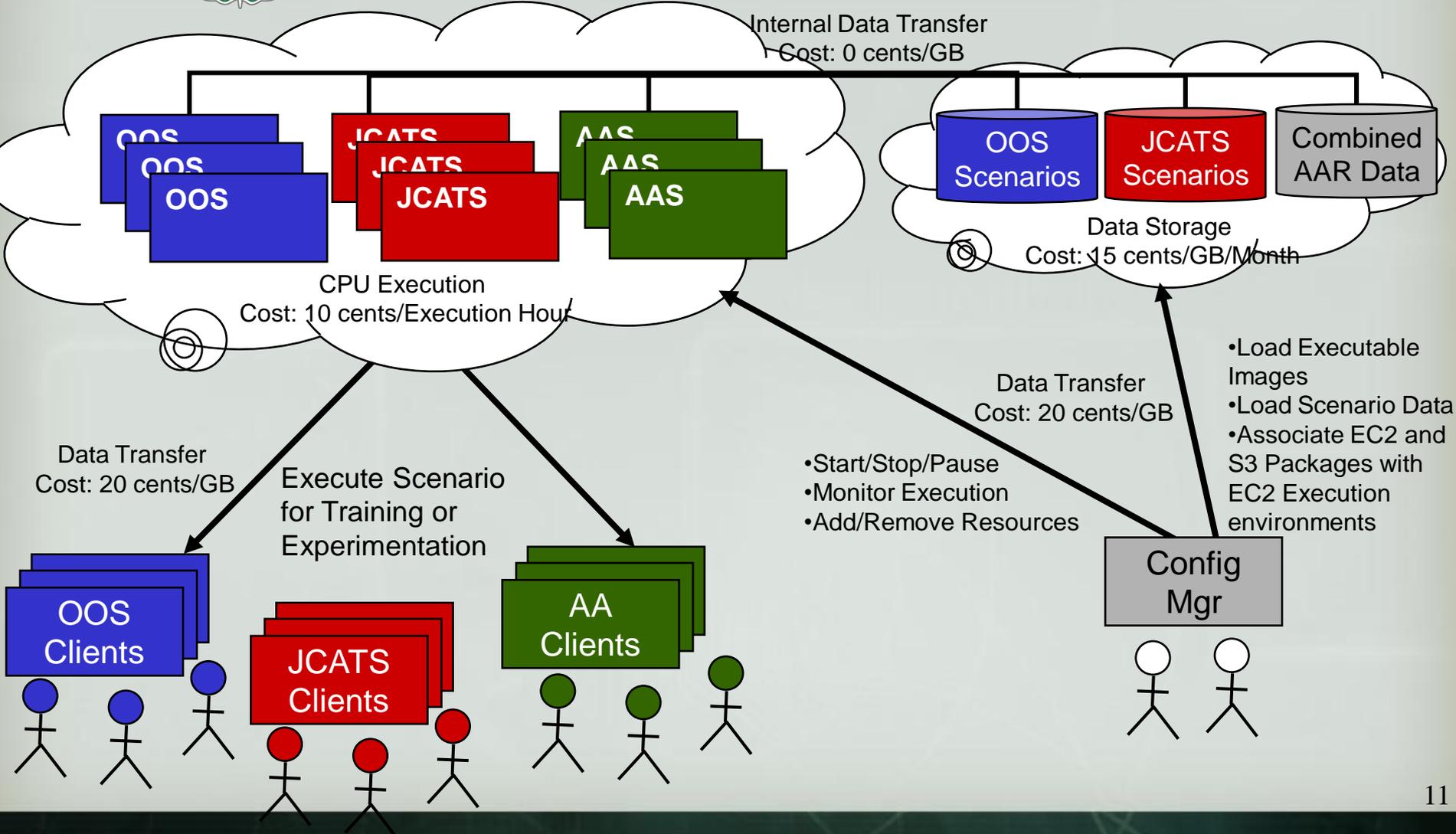




Server-side: Amazon EC2 & S3

Amazon-like EC2

Amazon-like S3





Challenges

- Military IT Infrastructure
 - ❖ Security configurations vary by organization and by day
 - ❖ Apps cannot be guaranteed to work from any node in the IT network
- Ownership of Training Applications
 - ❖ Military apps have typically fallen into at least 3 major camps: Business, Mission, Training
 - ❖ Each have their own separate networks
 - ❖ Running a Training app across the Business infrastructure raises a number of supportability and contracting questions



Conclusion ... Advantages

- There are a number of advantages to deploying military simulations in the same way that IT applications are deployed. We have explored a few of them here, to include:
 - ❖ Reduced equipment ownership costs and obsolescence,
 - ❖ On-demand user access to the best applications,
 - ❖ Commercial architectures to access advances in IT practices,
 - ❖ Centralized control of server applications,
 - ❖ Currency of client applications,
 - ❖ Interfaces between commercial and military infrastructure components.



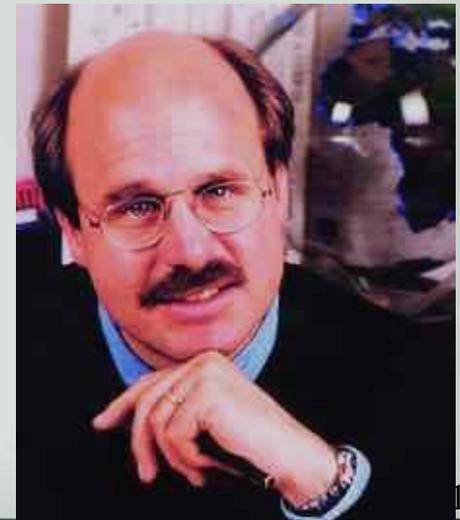
How Close Are We?

“Silicon Valley is littered with the corpses of companies who mistook a clear view for a short distance.”

“One of the secrets in my business is that everything changes slower than people imagine. Change only seems fast because people overlook the antecedents. Most ideas take 20 years to become overnight successes.”

Paul Saffo. (July 16, 2007).

“The Future Really is Now”. *ComputerWorld*.



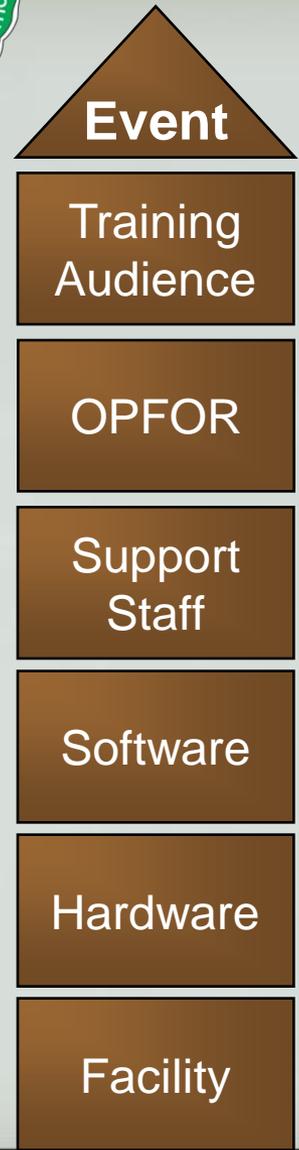
Questions?



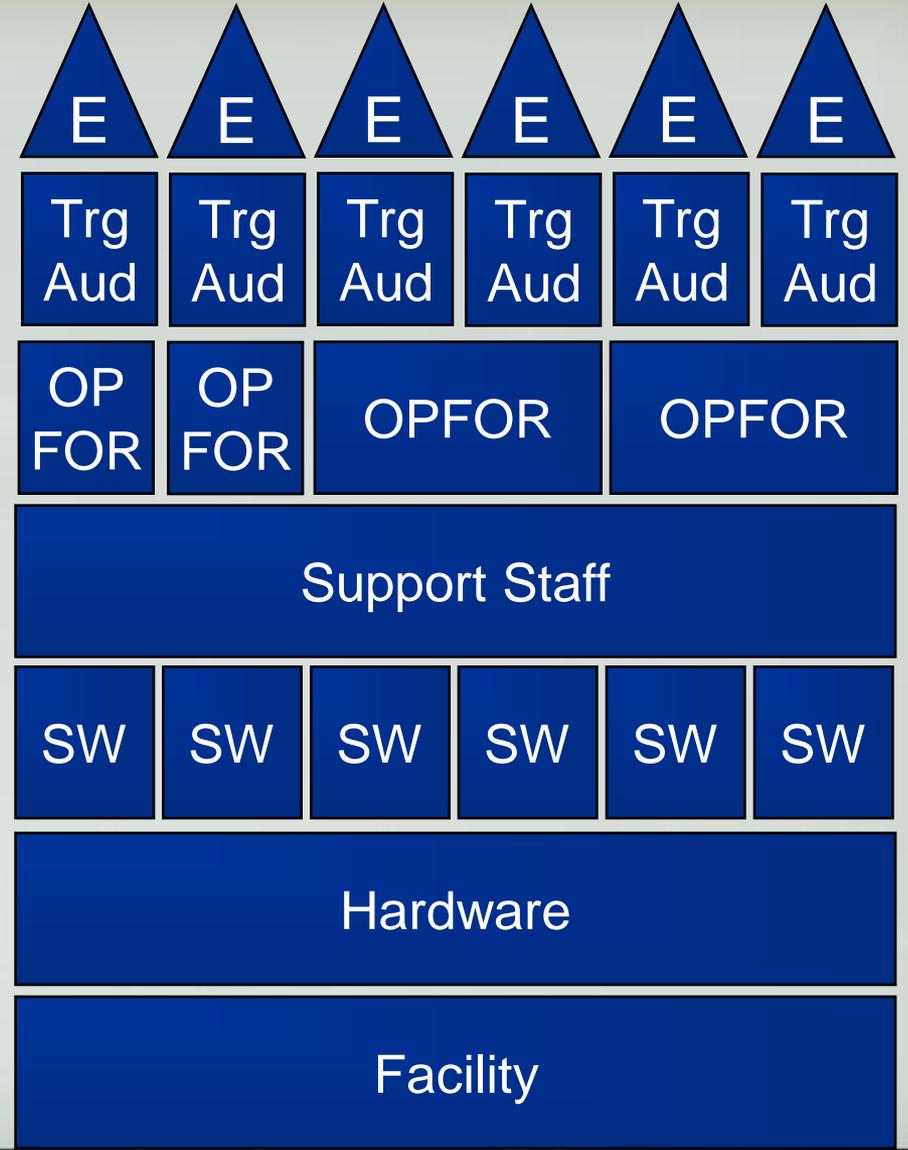


Sim Center 21

One-to-One Training Stack



One-to-Many Training Stack





OPFOR 21

Chess Master



Stock Trader



Nuclear Control



Air Traffic

