Panel: Game Changing Technologies for Cybersecurity Training and Awareness
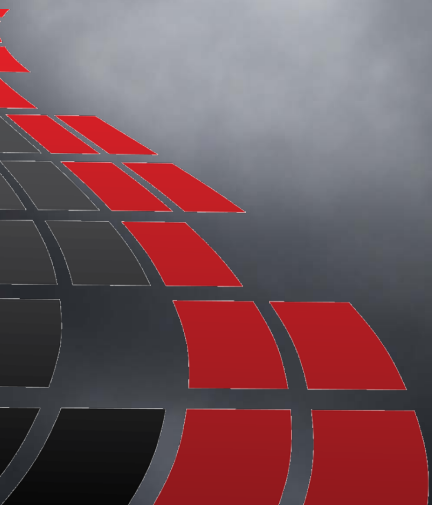
Moderated by:

Brenda Oldfield
Vice President of Cybersecurity Education
Cypherpath LLC

Digital Natives &

Changing Learning Styles

- Social Users
- Mobile Users
- Instant-on Users

Learning evolution

- Constant connection to vast learning content
- Immersed in multi-sensory media

- Harvest anytime – anywhere learning for cyber awareness

Gaming Landscape . . .

Today

- 63 million active users each month spend an average of 15 minutes a day in a game
- Gamification market estimated at ~$100 million in 2011

Future

- *By 2015, 51% of learning will take place via games*
- *By 2016, gamification market will be $2.8 billion*

28 million people harvest their crops on *FarmVille* every day.

OVER 5 million play an average of **45 hours a week** of games.

As a planet, we spend **3 billion hours a week** playing video and computer games.

Trivia Questions

- Who are social gamers: male or female?
- What would you guess the average age of the social gamer?

Dr. Paulette Robinson

I'm a Game Changer . . .

- I facilitate instructional use of technology for the iCollege

- I review emerging technologies for inclusion in the innovations and simulations lab

- I lead the Federal Consortium for Virtual Worlds (>2,500 from government, academia and industry)

- I create new mixed-reality learning environments (CiCenter)
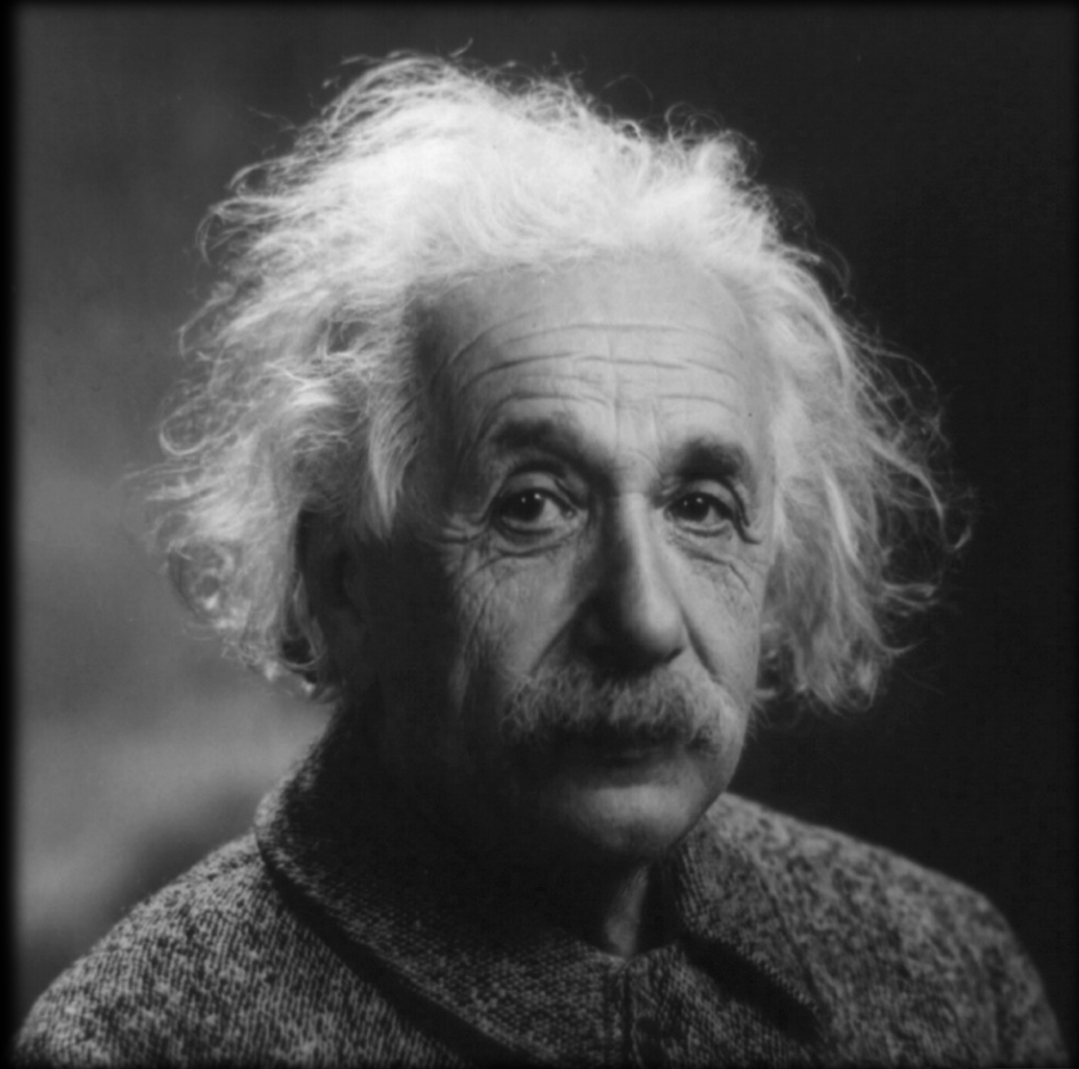
"The definition of insanity is doing the same thing over and over and expecting different results."

Albert Einstein

Key Words

Game - structured playing, usually for enjoyment

Gamification - applies mechanics of gaming to nongame activities

Serious Game - designed to solve a problem, with an explicit educational purpose

Immersive Learning - extensive exposure to surroundings or conditions native or pertinent to the object of study

Virtual World - interactive 3D virtual environment, in which users represented on screen as themselves or as made-up characters, interact in real time with other users

Simulation - a working representation of reality

Synthetic Learning Environment - a synthetic experience, as opposed to a real-world interaction with an actual device or process, created for the learner via a simulation, game, or other technology

Dr. Dan Laughlin

I'm a Game Changer . . .

- I am NASA Learning Technologies senior researcher

- I am involved in cutting-edge educational tools combining NASA mission content with innovative technology and best learning practices

- I am Project Lead for Moonbase Alpha, an award-winning, free, multiplayer, online STEM inspiration game based on NASA's lunar architecture

- I am co-author of the NASA eEducation Roadmap

www.nasa.gov/moonbasealpha

Mr. Alex Cohen

I'm a Game Changer . . .

- I enable use of virtual worlds, distributed repositories, SCORM, O3D, and social networking via DOE's NTER platform

- I connect the pockets of open source training widely across government, academia and industry

- I take the cost (and long development time) out of building 'cool' stuff

Its really about...ICE

- Immersion

- Conversion

- Engagement

To change,
 we need to 'stir things up'…

Questions for Panel

1. Why should the audience consider immersive-learning games/simulations in a cybersecurity educational strategy? When do they make sense, and how should they be executed?

2. Is there a way to think and act outside of the box for acquisition and procurement of these types of technologies?

3. Do you recommend specific strategies for integrating new technologies into the learning process to maximize their learning potential? What new technologies hold the most promise?

4. What do you predict the future learning environment will look like?

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