Gamification for IT Security Training and Awareness Programs

- 31st Annual Conference, March 14, 2018

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3 Goals

- <u>Understand</u> Gamification **Completely**

- <u>See</u> how it is used -- **Everywhere**

- **<u>Add it to the agenda</u> for your next office meeting**

Why Learn?

- Be aware that it is all around you.

- Use it and be more effective.

- Realize what is truly ineffective (wasting time).

- Consider the alternatives.

I. Clichés and Definitions

- Life is a Game
- Game the System
- Running my Game

- But… Cybersecurity is not a Game!

Finding the Fun

- "In every job that must be done, there is an element of fun."

- "You find the fun and snap! The job's a game."

FUN

- "Gamification is … taking what's fun about games and applying it to situations that maybe aren't so fun." Quote from Gabe Zichermann, <u>The Gamification Revolution</u>

Gamification

- "At its core, gamification is about engaging people on an emotional level and motivating them to achieve their goals."

- From Brian Burke: <u>Gamify: How Gamification Motivates People to Do Extraordinary Things</u>.

Gamification?

- Awkward word by design (!)
- It is in version 2.0 or 3.0 already.
- Could use phrase "Game-Type" thinking.
- Or say "Type of Behavioral Economics."
- **Whatever you call it, it is all around us.**
- **UBIQUITOUS**

Points, Badges, Leaderboards

- Focus is on audience (employees, clients, co-workers, etc...)

- Emotions

- What engages an audience – makes them feel accomplished?

Mature Gamification

- "Effective gamification is a combination of game design, game dynamics, behavioral economics, motivational psychology, UX/UI (User Experience and User Interface), neurobiology, technology platforms, as well as ROI-driving business implementations." Yu-kai Chou

II. History

Napoleon

Revolution

Theodore Roosevelt
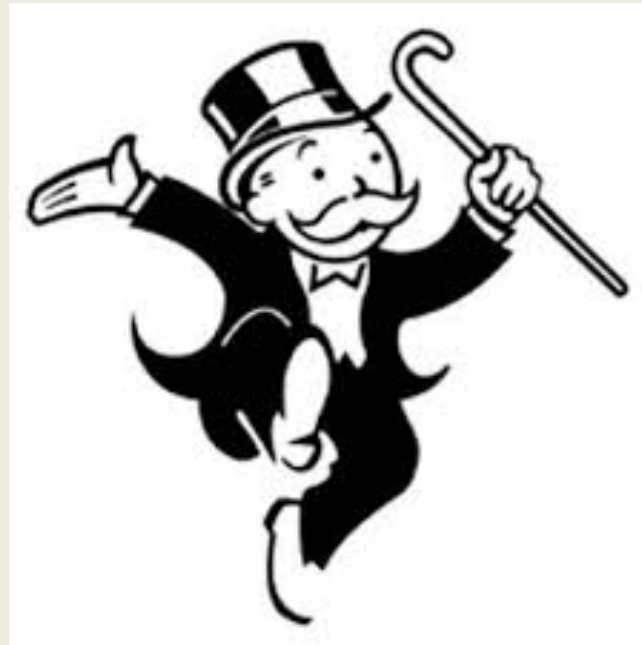
The New Normal

III. Examples

Game the EVS

Rise and Repeat

- (1) Cellphones, Computers and the Internet Create….

- (2) Big Data. And then we have…

- (3) Gamification of Big Data (repeat)

Information Monitored

Monopoly

PLEDGE TO DRIVE LESS THIS SUMMER & WIN!

- Did not call it a game

- Did not add princesses, pigs or angry creatures

- Did have instant feedback

- Did use a threshold and target

Supermarket Check Out

Gamification Fail

- Hotel used leader board to measure speed and effectiveness of housekeeping staff

- Pregnant employee had trouble keeping up, and demoralized workers called it "the electronic whip."
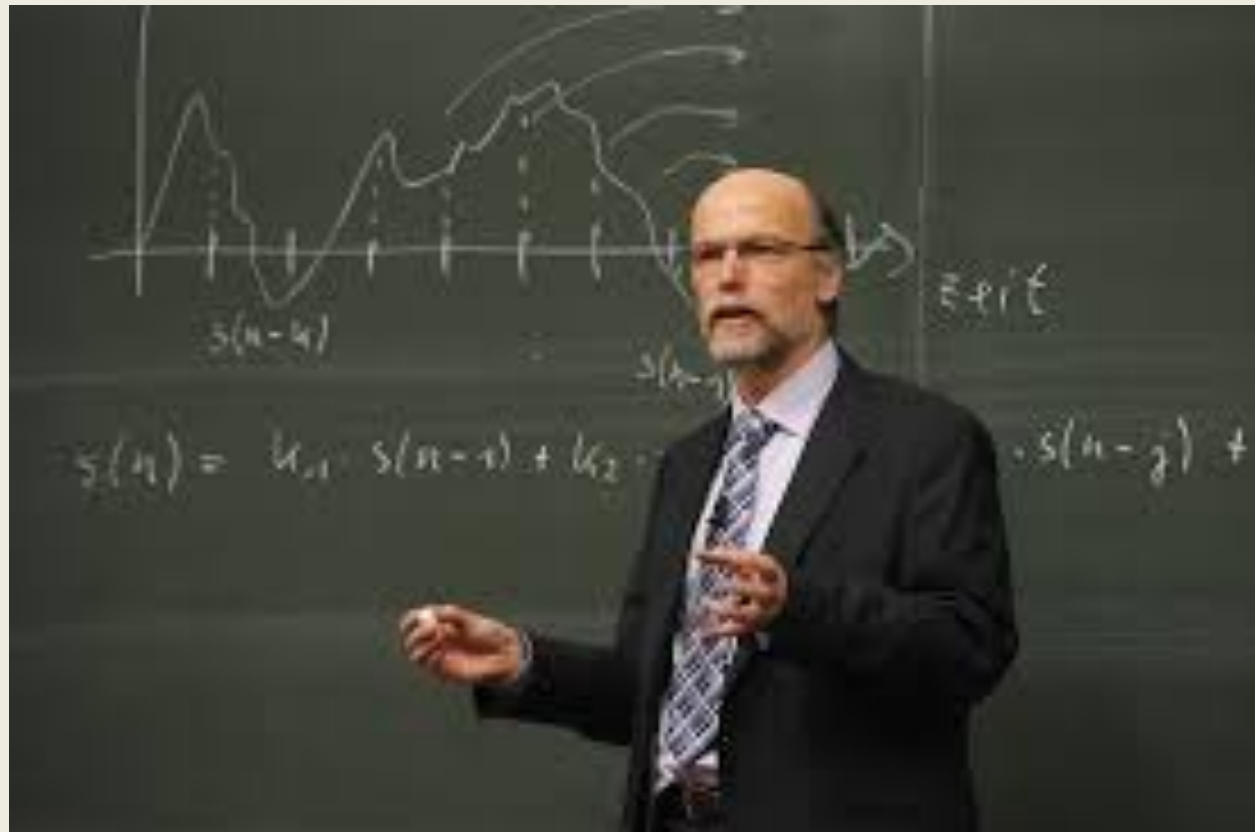
- NOT FUN for Anyone!

More Fail

- Owner (of a chain of stores in Iowa) asked employees to pick which cashier was next to be fired.   Correct guess wins $10.
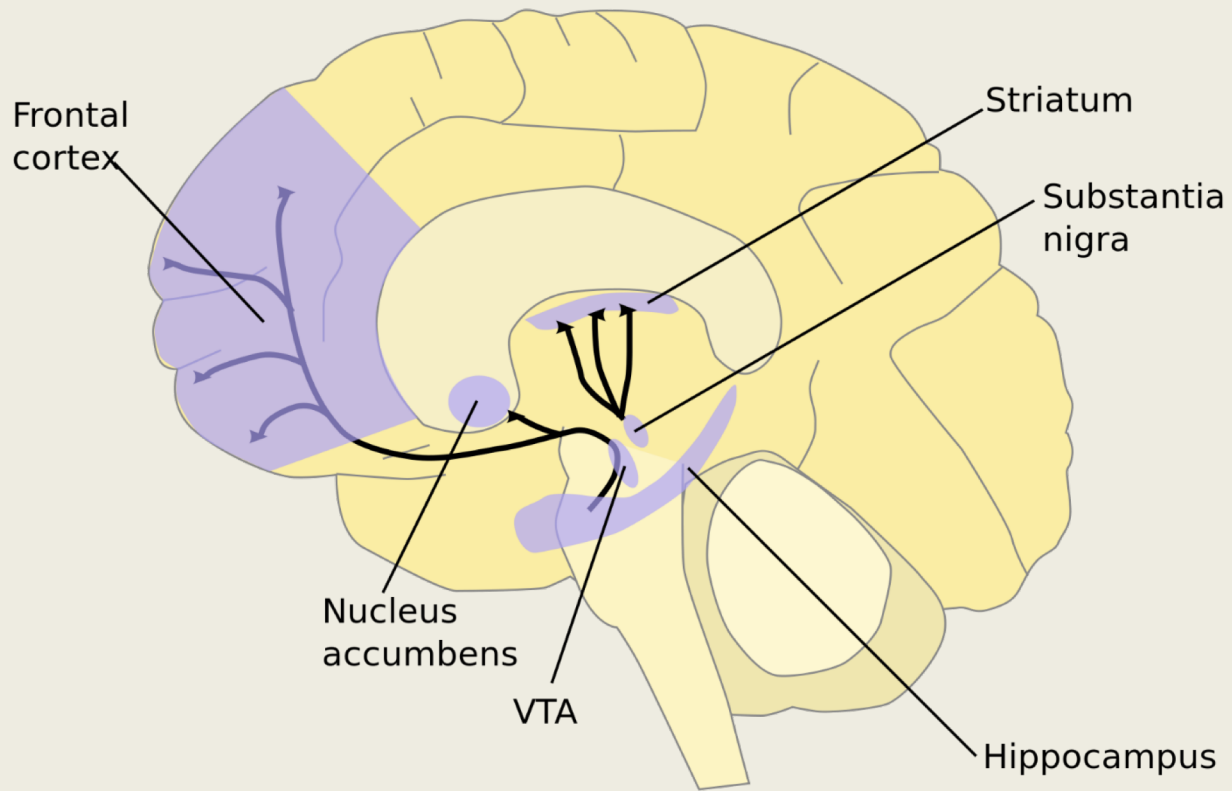

- NOT FUN!

White Chocolate Mousse Cake

IV. Theories

Dopamine

Video Games

What is so Appealing….

- Alternative Reality (where there are rules)
- Where it is fair.
- We can win.
- We can be recognized.
- We can try again.
- We can get better.
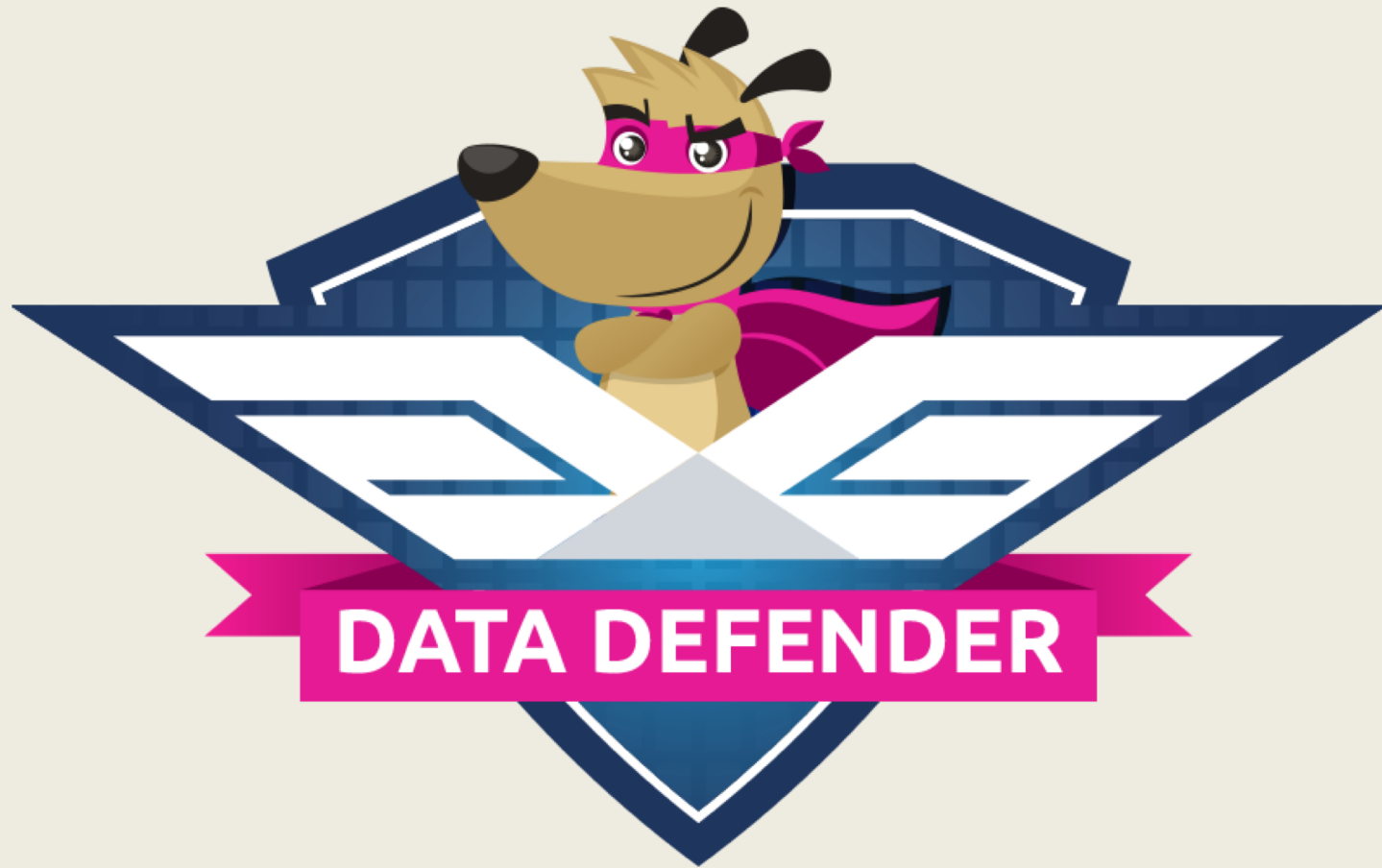
Memories

- You are it
- Tag
- Bridge
- Poker night

More Reasons

- Social Status Theory -- Earn Acceptance

- Cultural model – how we interact

- We naturally break big tasks into small ones. Accomplish each one & enjoy victories.

Millennials

- Continuous exposure to positive reinforcement
- Games –phone & video – PewDiePie YouTube
- Their world offers them more ways to earn trophies
- Other world view "strong work ethic" – Teddy Roosevelt – belongs to receding generations…
- **We are all Millennials now (YOUTH/TECH Culture)**

V. What is Available Now ($)

PwC Gamification

High Tech v. Low Tech

Information Security Game

Confidential Information Game

Low/No Cost

- Kahoot.com

- Theteacherscorner.net (crossword puzzles, wordsearch, mazemaker etc…)

- Print-Bingo.com

- superteacherworksheets.com

- Amazon.com – Raffle Tickets, "Trophies" Medals, (plus Candy) etc… for Contests…

Key Points

- Player's motivations and goals are first priorities

- Organization's motivations and goals are second

- Where the two overlap is the "goal," outcome and the value of the activity for the organization

- Break goal into steps with encouragement along the way

Cybersecurity Program Goals

- Training – Required by Law or Policy

- Increase Awareness of Program

- Creation of IT Security Culture in Agency

- Increase Morale

- Support Employee Engagement and Investment in Company and its Staff

Takeaways

- Don't only focus on points, badges and leader boards & cash.

- Do add other elements like stories and goals.

- Do make it a social activity and more positive reinforcement.

Where is the Fun?

- Fu

Alternatives To Gamification

- Criticisms of the Idea?

- Programs Without Any Game Elements – Good Idea?

- Could a program be effective without any element of fun?

VI. SUMMARY

- Gamification has always existed, it works and is here to stay, especially with the largest generation: Millennials.

- Focus on the employee's emotional engagement (<u>i.e</u>. where is the FUN?)

- **Add Gamification to your agenda** -- The IT Security community needs a community of serious game players…