HIRING THE UNHIREABLE

SOLVING THE CYBER SECURITY HIRING CRISIS

A politically incorrect (yet correct) view on how to find and

keep the right people to defend networks and nation.

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DHS Secretary Janet Napolitano

- She Says: "There is a lack of expertise and there are a lot of people clamoring for people who know the internet well."
- I disagree.
 - There are plenty of people who we 'can't' hire due to antique ways of thinking and they don't fit into the 'Box'.
 - There are tons of capable IT security people but they don't fit into the preconceived HR & Legal molds of 'Normal' and 'Acceptable



'....The UK needs more young people entering the IT security profession if it is to avoid a skills shortage in the near future, according to the government's special representative to business for cyber security.'



DIRNSA



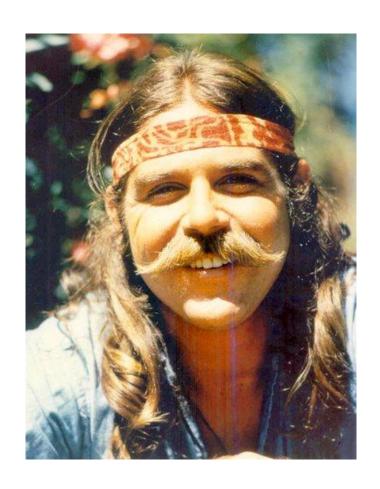
- In this room right here is the talent we need to secure cyberspace," he said. "You know we can protect the networks and have civil liberties and privacy and you can help us get there."
- Now, Defcon is "the world's best cybersecurity community," Alexander said. "This community, better than anyone, understand(s) what we need to do" to address these problems.
- "That's there real reason I came here. To solicit your support. You have the talent. You have the expertise."
- But can he Hire the Unhireable?



17 June 1969



18 June 1969





SECURITY INDUSTRY DISCRIMINATION

1969

- Color Blind
- Long Hair
- People of color

2012

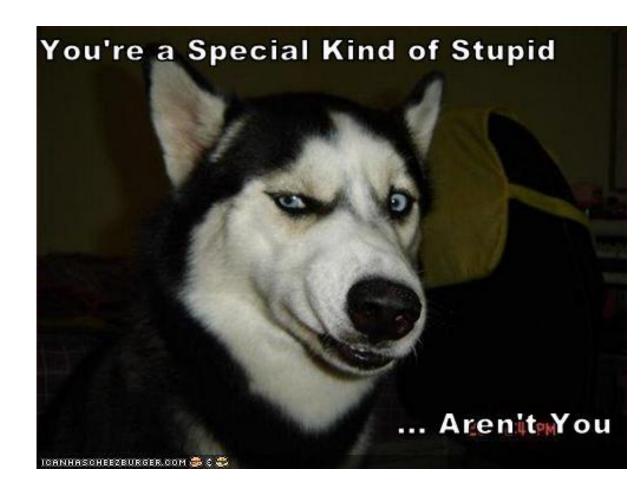
- Metal/Tattoos
- No Degree
- Outmoded vetting process
- Arbitrary exclusion
- Social Discrimination
- Personality Test Fail
- Medical Discrimination





ALL PEOPLE ARE NOT CREATED EQUAL

- Geeks are different
- Do not fit into the MOLDS of business and government
- Not everyone you need is squeaky clean
- ► Think CIA-1947





WHAT IS NORMAL?

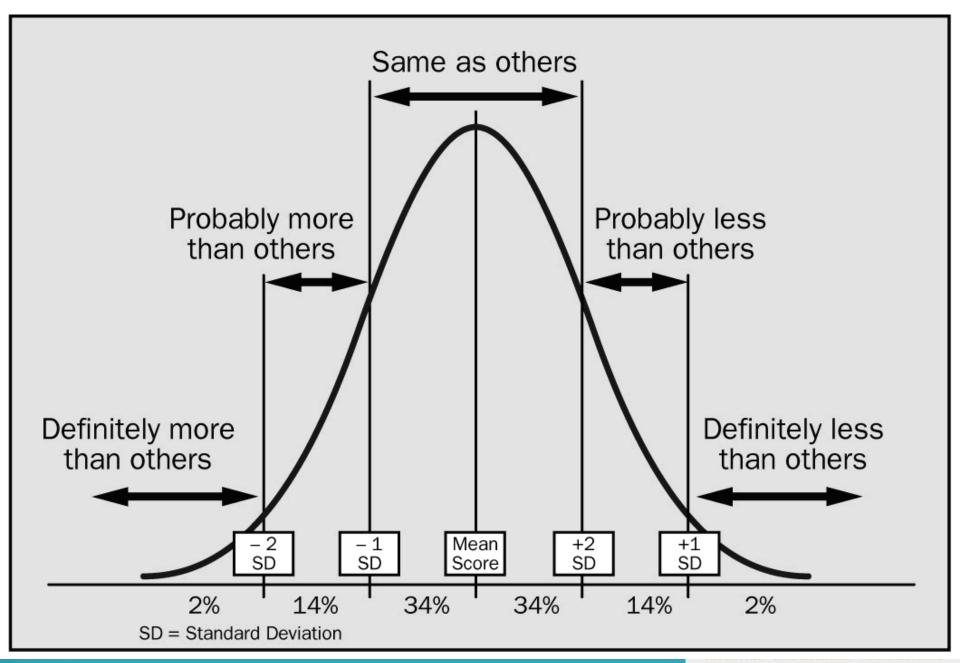
- People Normal High-Q/Low-Q
- ► High-Q CIA Lower-Q Geeks





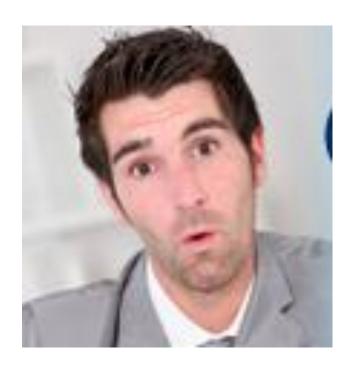


Chart 1: Standard Distribution of Offers



WHAT ABOUT SKILLS FIRST?

- Define
 - Needs/Roles/Skills
 - Programming
 - Reverse Engineering
 - Hardware/Software
 - Malware
 - Think like Bad Guys
- Writing reports and speaking
 - Not so much maybe...



KNOW A MANAGER LIKE THIS?





FORGET DEGREES (THE MBA +)

- More Hiring Discrimination
- Credentials
 - Do they matter?
- Do Security Geeks need a college degree?
 - ▶ BA Comp Sci?
- Certifications?
 - ► Teach to the Test?
- Hiring Tests
 - ► How Un-PC is that!





TEACH SECURITY HISTORY FOR G**'S SAKE

- Why do we allow people to run our companies who have neither history nor context in their skills?
 - What went wrong in the past?
 - What worked in the past?
 - What should we revisit?
 - How can we hybridize the old and the new?
 - Security modeling and theory



WE NEED POLITICAL INCORRECTNESS

- Stop finding reasons to NOT hire the un-hireable
- Adapt your culture to your real needs
- Find the reasons and the way to DO THE JOB... stop using the RULES to stop things from getting done.
- Criminal background or Evil Ways?





YOU'RE NOTHING SPECIAL

- We are afraid to tell kids they did not do so well. (HS Principle Speech, 2012)
- Everyone is not good at everything: Match the affinity with the talent and your needs



EMBRACE FAILURE





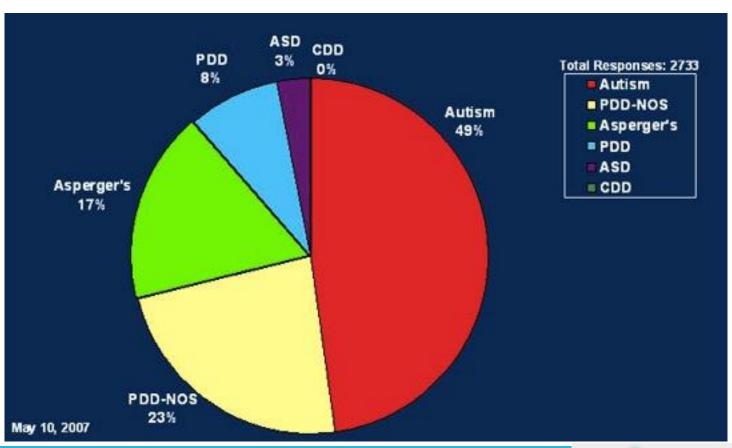
TEACH FAILURE IN EDU (K-12-PHD)

- Unless you fail... how can you succeed?
- "I only know how to configure a firewall."
- "My company's routers caught on fire and I had to get them back up and running in less than an hour."
- "Our DR system is great, but we don't have the budget to exercise it.."
- "My company's backup generator failed. I had to steal power from the street light. It wasn't exactly legal but we only were down 45 minutes."





LEARN ABOUT AND EMBRACE AUTISM



ADD - ADHD

- Hyperfocus
- Lack of focus
- Hyperactivity
- ~16% Kids & ~5% Adults
- ▶ 80/20 Male/Female
- > 75% Genetic
- 300% likelier to start business
- Often Gifted, extraordinary or savant





What Distracts You?

"comfort"	"neatness"	"understanding"	
	"neatness"	my sensations	my sensations
	my sensations	the things I sense with	the things I sense with
my sensations	the things I sense with	what I think about	what others think about
Organize	Organize	Organize	Organize
to		to	
by nature	by oneself	by oneself	by others to
Feeling compelled	Feeling compelled	Feeling compelled	Feeling compelled
the goal: predictable repetition of my sensations avoids discomfort (find the rules for arranging me)	the goal: predictable repetition of how I sense things avoids discomfort (find the rules for arranging things)	the goal: predictable repetition of how I arrange ideas avoids discomfort (find the rules for arranging ideas)	the goal: predictable absence of repetition avoids discomfort (avoid rules / never feel forced)
How? Predictable sensory repetitions (e.g. compulsive head banging, ocking, squeeze machine, etc.)	Predictable object repetitions (compulsive touching and / or sorting of objects)	Predictable intellectual repetitions (compulsive sorting of and / or learning about ideas)	How? Predictable absence of repetitions (compulsive rule breaking, never being forced)
Focus of my compulsion? Regulating my sensory input by self imposed repetition (sensory rituals)	Focus of my compulsion? Regulating how I sense things by repetitive rearranging (material rituals)	Focus of my compulsion? Regulating how I understand ideas by repetitive mental sorting (mental rituals)	Focus of my compulsion? Regulating how others make me think or feel (avoidance rituals)
If extreme, I have Kanner's Autism	If extreme, I have OCD / OCPD	If extreme, I have Asperger's Syndrome	If extreme, I have ADD
What distracts me? "too many sensations"	What distracts me? "too many things"	What distracts me? "too many ideas"	What distracts me? "too many rules"
Type 1 Distractions	Type 2 Distractions	Type 3 Distractions	Type 4 Distractions

WHOM CAN YOU TRUST?



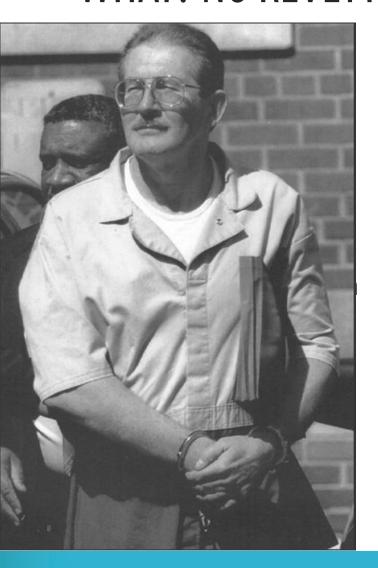
SAY "YES!" TO PROFILING

- Background Checks Are Useless
 - "So, you haven't been caught!"
- TSA vs. El Al
- Use Profiling
 - Look for Deception

- "Are you ever going to cheat on me?"
- "How many times have you hacked illegally?"
- "Do you download movies and music?"
- "If...(?)... then ... (Your Answer)"



WHAT? NO REVETTING?





REDEFINE CLEARANCES

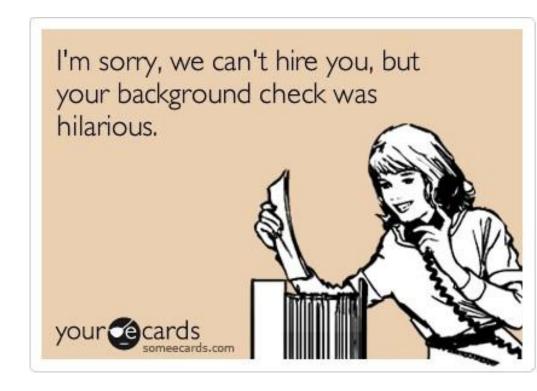
'....The National Security Agency is partnering with select universities to train students in cyber operations for intelligence, military and law enforcement jobs, work that will remain secret to all but a select group of students and faculty who pass clearance requirements,'

Within the last year the market of selling the hacks to government spy agencies has grown many folds and there are suddenly deals worth millions going around all over.



SAYING NO TO GREAT GEEKS

- "I owe the IRS \$50,000..."
- "My brother is in jail..."
- "I did stupid stuff in college..."
- "I spoke out Against/For (pick a cause)…"
- Credit Score Too Low
- "I'm a Canadian..."





THIS COMPANY SAID "YES"!

One man didn't have a college education and didn't graduate from high school. He had a GED and worked at a pharmaceutical plant stuffing pills into bottles. At night, he participated in online hacker competitions and out performed others.

"That person would have not gotten through the normal Raytheon recruiting process," Raytheon said.



NATIONALISTIC



SORRY. YOUR PERSONALITY FAILED!



OTHER CAPRICIOUS DISCRIMINATORS

- AGE-ism
 - Document the Experts
 - Mandatoty Retirement
- Your Choice if Often:
 - ▶ 20-something
 - Promises, no experience
 - 90 Day Wonders Are Cheaper
 - Older-something
 - Arthritis, boatloads of experience

- Too Meek
- Too Aggressive
- Just Right
- HR Doesn't 'Like' You
- Fail An Aptitude Test
- Pregnant
- Anti-Tele-Commuting
- Fall Out Of The Box

Goldilocks Syndrome



9-5: FORGET IT

- Geeks do not "turn it on and off"
- They live and breathe security!
- 36 hrs straight then disappear.
- Only 40 hrs per week?
- Let them come and go...
- Use true MBO
 - Specific goals
 - ► Time limits
 - Use OCD and Aspergers





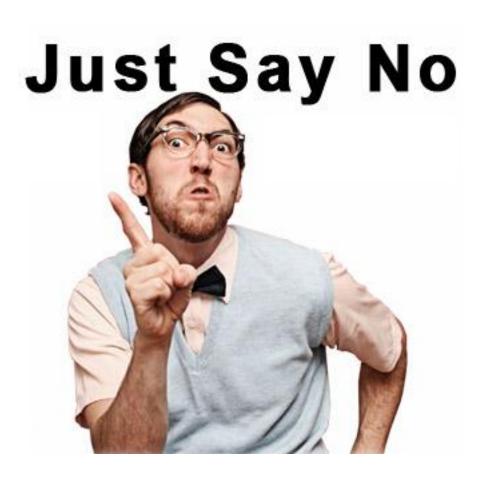
STOP DRUG TESTING

- Raging alcoholics in office is OK.
 - CIA Ames / FBI Hanson
- A little weed is a federal offense.
- How does drug testing help your hiring process? Your security?
- ADHD/ADD/OCD
 - Marijuana assists
 - So does legal Methamphetamine
- "No drugs at work!"
- Don't Ask. Don't Tell.

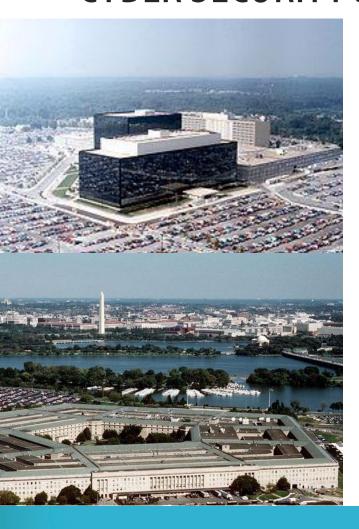


KIDS ARE JUST SAYING NO!

- ► IA-NSA
- See the Future
- "I don't want to live like that..."
- My son and his friends quit.

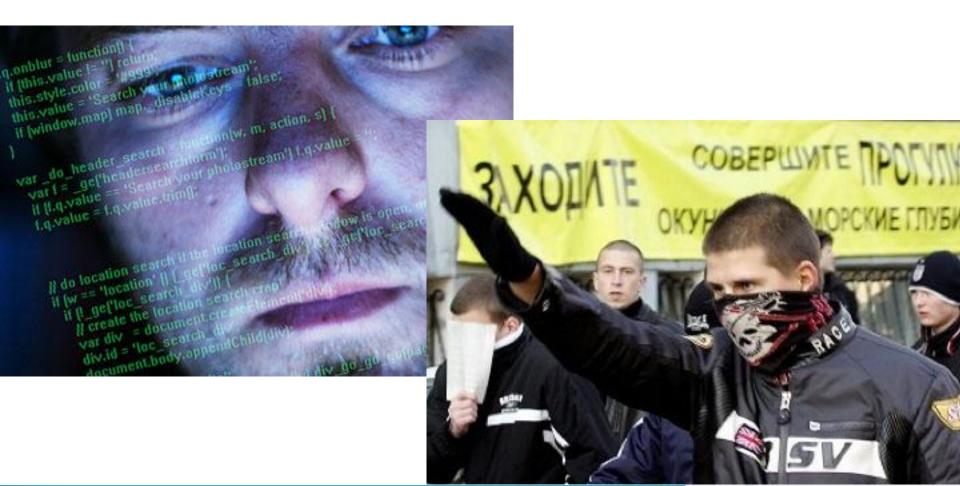


WHO'S IN COMPETITION FOR CYBER SECURITY SKILLS?



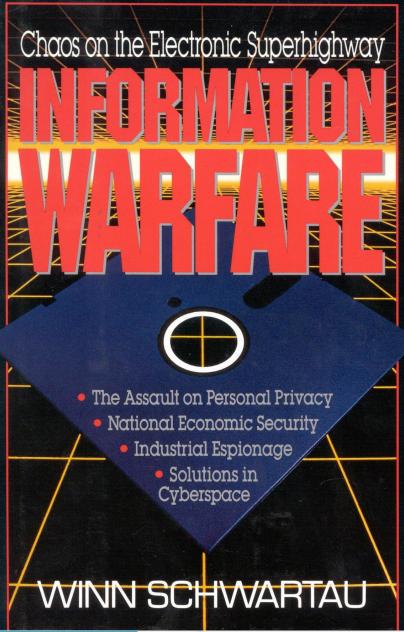


ORGANIZED CRIME: ONLY WANTS RESULTS



NATION STATES







WHAT SHOULD WE GIVE THE UN-HIREABLES?

- An option to criminality
- A chance to do 'Right'
- A fair chance inside of P.C.-Land
- Equal Opportunity
- Adapted environment
- No More Discrimination

MOM SAID I COULD BE ANYTHING



SO I BECAME UNHIREABLE

unnehpictures,com

"YES, YOU CAN GO TO HACKER CONS..."



"YES, YOU CAN OWN YOUR OWN I.P."

- Define
 - Tools developed for work
 - Company products



SUPPORT SYSTEMS

- Management who understands and accepts
 - LEADERSHIP!
- Appropriate medical/psych support
 - HUMANITY
- Special 'places' for alone time
- Less chaotic/noisy workplace
- Define their own environment





LESS MEETINGS



ACCESS TO COOL TECHNOLOGY



PROVIDE HACKING TARGETS





WHAT TO EXPECT?

- Social awkwardness
- No filter on mouth
- Brutal honesty
- Forgetting to eat
- Chaos
- Overly neat
- Body Art
- Odd dress
- "No Life"





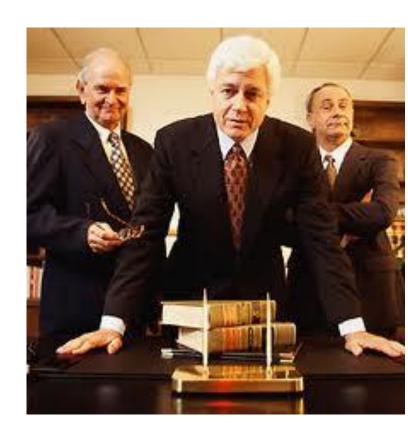
WHO NEEDS TO "GET OVER IT"?

- ► ADAPT OR
- Corporate Culture
- C-Level
- ► HR
- Lawyers
- ► CIO/CISO/CTO



THE LAWYERS ARE COMING

- How many of these issues are litigation waiting to happen?
- Discriminatory Practices Against:
 - Old and Smart
 - Medical: Federal vs. States
 - Mental/Human
- Find ways to make it happen.
- You found ways to say no!
- Now... find ways to Say Yes!





SO...THE RIGHT STUFF

- Find a Way
- People are not the same... especially the ones you need
- Get politically incorrect
- Formal education is not 'All That'
- Create new culture
- Don't Ask. Don't Tell Drug Policy.
- Give the geeks some cool tools and toys
- Let them interface with the 'Community'





BUT IT'S TOO HARD

- Maxwell Air Force Base
- "Defending Networks is Too Hard"
- Transcontinental Railway
- ► TVA
- Marshall Plan
- DNA
- Manhattan Project
- Landing on the Moon
- **ICs**
- Internet



A GREAT START!



REMEMBER THIS MANTRA...

IF IT IS IMPORTANT TO YOU, YOU WILL FIND A WAY.

IF NOT YOU'LL FIND AN EXCUSE



QUESTIONS?

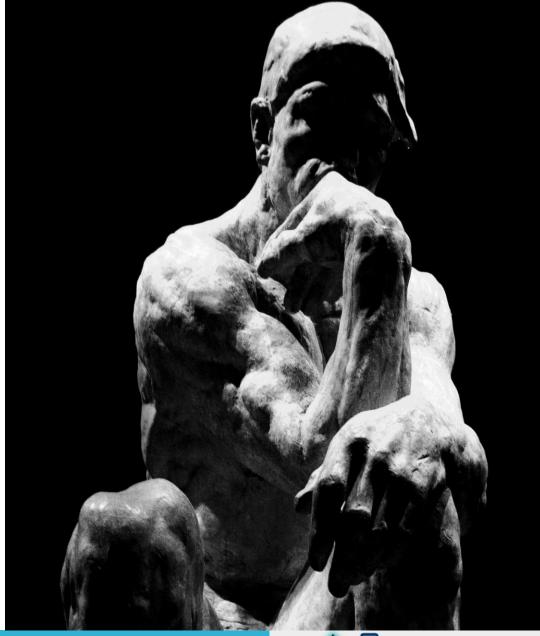
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IT Security spectrum

