We can't afford to muff security's generational handoff

Shower thoughts from a worried (but still optimistic) old man...

Ryan Naraine, Security Strategy, Intel Corp. OPCDE Vir(tu)al, April 2020

I bought a tweezer in San Francisco...



The sales clerk taught me a lot

There are six main types of tweezers:

- Slant tip
- Pointed tip
- Pointed slant
- Square tip
- Round tip
- Curved tweezers

There's a specific, unique use for each type of tweezer. You must choose wisely.



The experience was incredibly refreshing

The sales lady was a shining example of:

- Patience
- Consideration
- Kindness
- Empathy

No question was too dumb. Answers were clear, honest and refreshing.

What does this have to do with security?

- The first patent for cybersecurity was issued in 1983
 - MIT was granted U.S. patent 4,405,829 for a cryptographic communications system.
- The first DEFCON was in June 1993
- Phrack 49 was published in 1996
- The SSL 2.0 protocol was released in 1995

PS: They're now writing books about cDc and the L0pht. The baby-faced researchers I covered as a reporter are now CISOs, global security leaders...

The cycle of innovation *

- 1. New technology or technique is applied to an age-old important problem.
- 2. Smart people spend time on this problem/solution.
- 3. Solutions appear but fall short of expectations.
- 4. The technology or more commonly that application of it is stigmatised.
- 5. Sometimes the whole field becomes tainted.
- 6. The problem/solution complex is declared a "dead end" or "false dawn".
- 7. Interest cools. Nobody invests for a while. The wreckage of the previous cycle rusts away. The craters erode. This takes 20-30 years.
- 8. During this period, some very small companies, academics, and individuals continue to guard the flame, but lack funding or new talent to advance.
- 9. Go to step 1, invent new buzzwords/framing and repeat. Ignore much of what was learned during the previous cycle.

^{*} Copied verbatim from Nick Hutton's fantastic piece: The Next Big Thing? Go Back To The Future: https://blog.eutopian.io/the-next-big-thing-go-back-to-the-future./

Tensions abound in the generational handoff

- Older generations hanging on to leadership roles longer and longer
- The 'wait your turn' approach of the past isn't palatable to the next batch of leaders
- Gatekeeping is not even subtle
- Age-ism exists (on both sides)

PS: The size of my generation adds an ominous wrinkle.

The coming leadership vacuum

Gabrielle Bosché: "Simply put, there just aren't enough Generation Xers to take over for the retiring Baby Boomers. That means many management positions will be left empty and many more positions will be filled with individuals who are wholly unprepared for the task at hand..."

We tried, we did okay, but...

There's a lot for cybersecurity pioneers to be proud of:

- The foundation feels shaky, but it's there
- Security technologies improve living conditions globally
- Smartphones gave us a shot to rethink security and we used it well
- Shout-out to the innovators moving the needle!

However, let's be honest about our failures:

- Memory corruption still <u>dominates</u> 0day exploitation (<u>Phrack 49 was 1996!</u>)
- Breathless media reporting on data breaches everywhere
- Ransomware attacks against hospitals, APTs target critical infrastructure
- Everything's pwned!

A smooth handoff is crucial

Let's remember the lessons from buying the tweezer

- Empathy and consideration
- Mentorships and apprenticeships
- Patience
- Real, true, meaningful diversity
- Investments in non-traditional geographies

Reach out and say hello



I'm donating a few hours of my personal time to help newcomers and under-represented folks write/review/edit CFP submissions to the upcoming barrage of virtual security conferences.

Typically, it's a GDoc working session with rewrites, edits, feedback, coaching...

Twitter: @ryanaraine (open DMs)

LinkedIn: https://www.linkedin.com/in/ryanaraine