



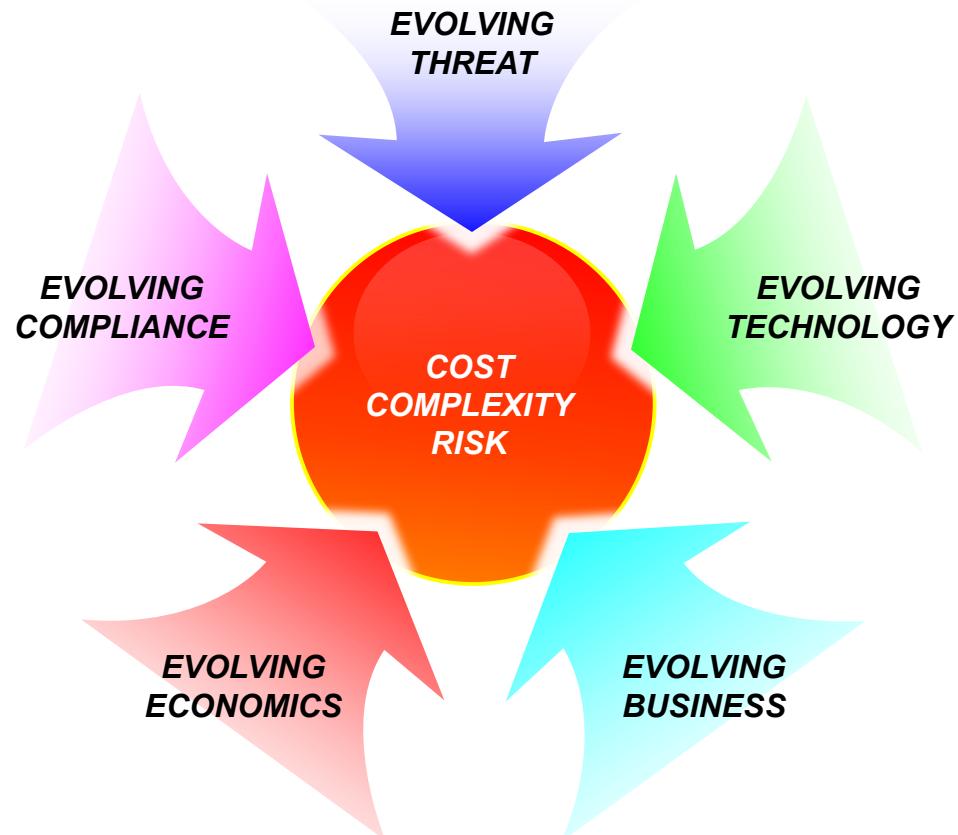
# Rugged Software Development

Joshua Corman, David Rice, Jeff Williams

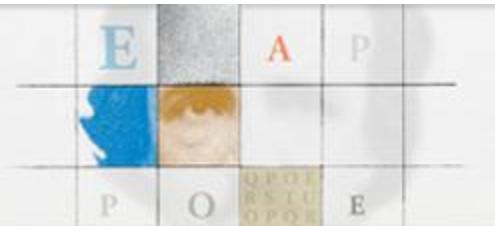
SANS Application Security Summit

February 5, 2010

# Context



**USA 2009** 20-24 April | Moscone Center | San Francisco





“What is missing from  
software security?”

CULTURAL INFORMATION

PRACTICE OR **IDEA** OR CONCEPT

THEORIES PRACTICES HABITS SONGS

**NATURAL SELECTION**

EXAMPLES MIGHT INCLUDE THOUGHTS IDEAS

CHARLES DARWIN'S IDEAS

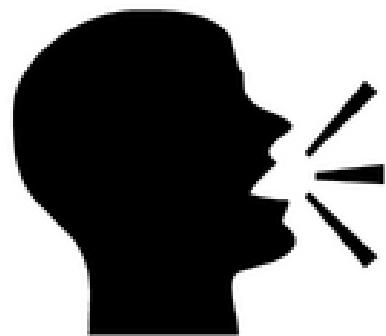
**SELF-PROPAGATING**

SURVIVAL AND COMPETITION INFLUENCE THEM

**MEME**



# DANGER



**MEMES  
AHEAD**

PIRATES ARE ATTACKING U.S. SHIPS OFF THE COAST OF AFRICA. THEY'VE BROKEN THE 100 YEAR TRUCE.

WHO, THE PIRATES?

NO, THE INTERNET MEMES.



IT STARTS WITH PIRATES. THEN THE ZOMBIES AND THE UNICORN RIDING ROBOTS.

THE NEXT THING YOU KNOW, BLOOD THIRSTY LOLCATS ARE JUMPING OUT OF ROFLCOPTERS AND OM NOMNOMING OUR TRACHEAS.

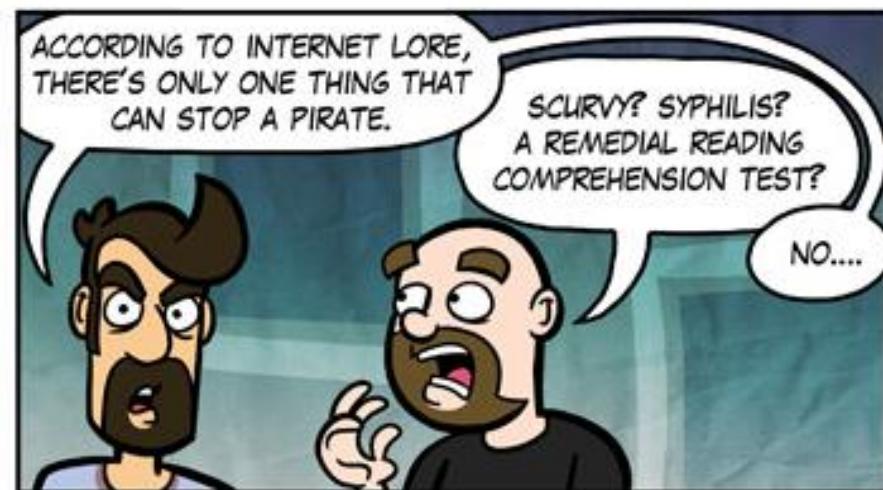
DO NOT WANT!



ACCORDING TO INTERNET LORE, THERE'S ONLY ONE THING THAT CAN STOP A PIRATE.

SCURVY? SYPHILIS? A REMEDIAL READING COMPREHENSION TEST?

NO....



NINJAS!

MY THROWING STARS, LET ME SHOW YOU THEM.

I WAS LATE. WHY ARE WE DOING THIS?

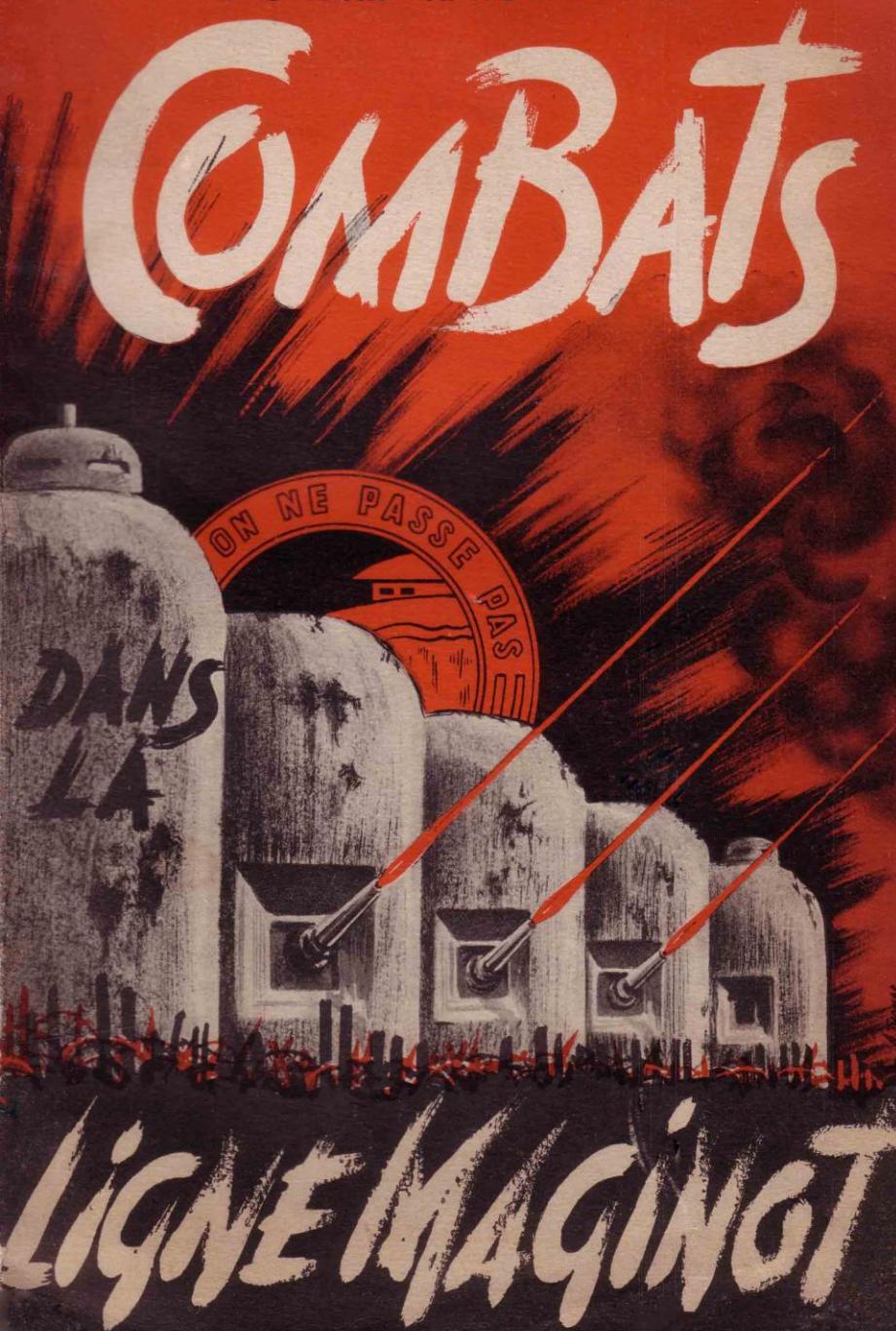




Secure software is critically important to almost every aspect of life.

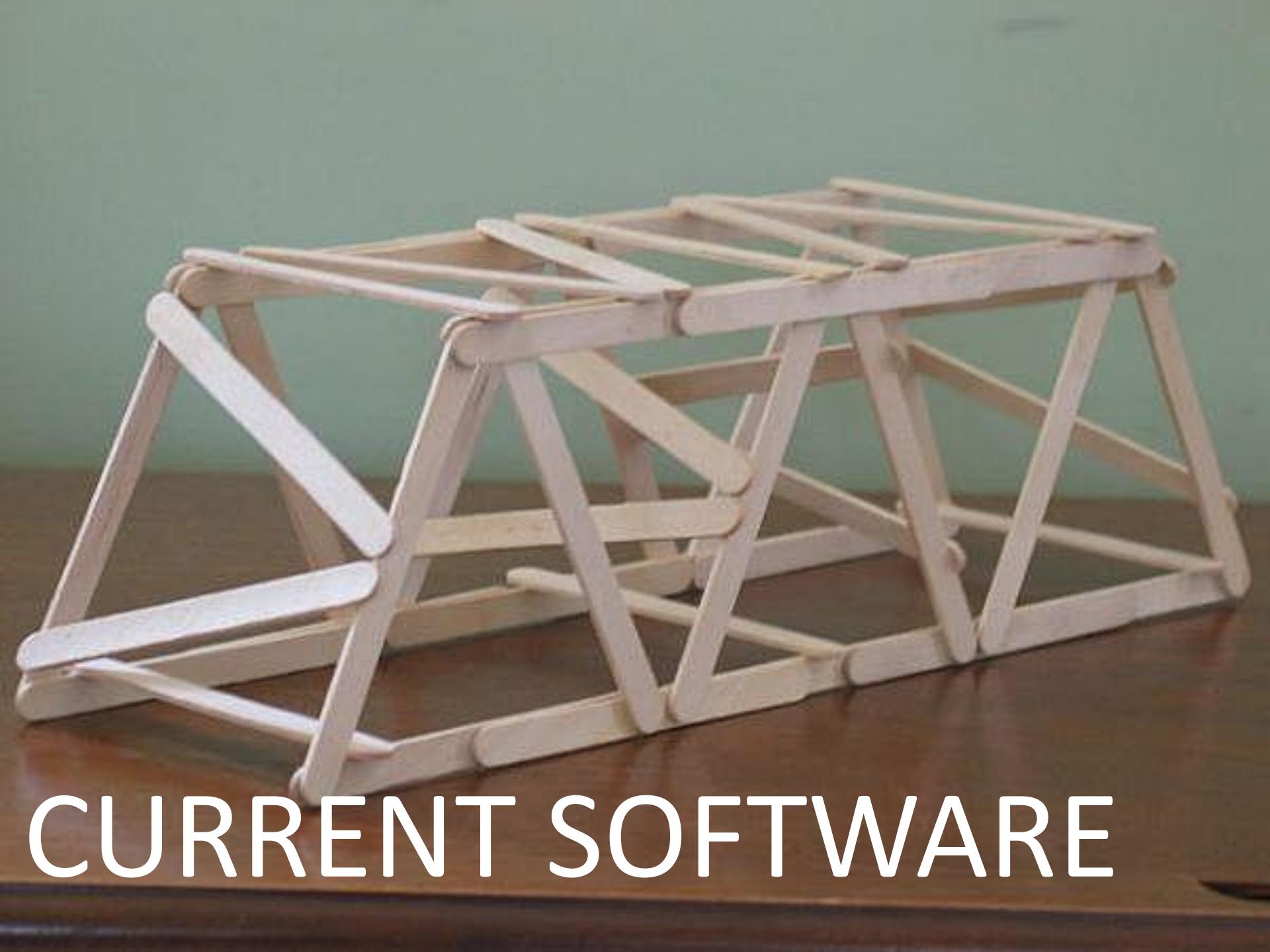


L<sup>T</sup> C<sup>L</sup> DE RES<sup>VE</sup> R. RODOLPHE



“A fortress mentality will not work in cyber. **We cannot retreat behind a Maginot Line of firewalls...** If we stand still for a minute, our adversaries will overtake us.”

-William Lynn, U.S. Deputy Secretary of Defense  
January 2010



# CURRENT SOFTWARE



# RUGGED SOFTWARE

# CURRENT SOFTWARE



Boulanger



# RUGGED SOFTWARE



# CURRENT SOFTWARE



# RUGGED SOFTWARE

...so software not only needs to be...



# FAST

# AGILE

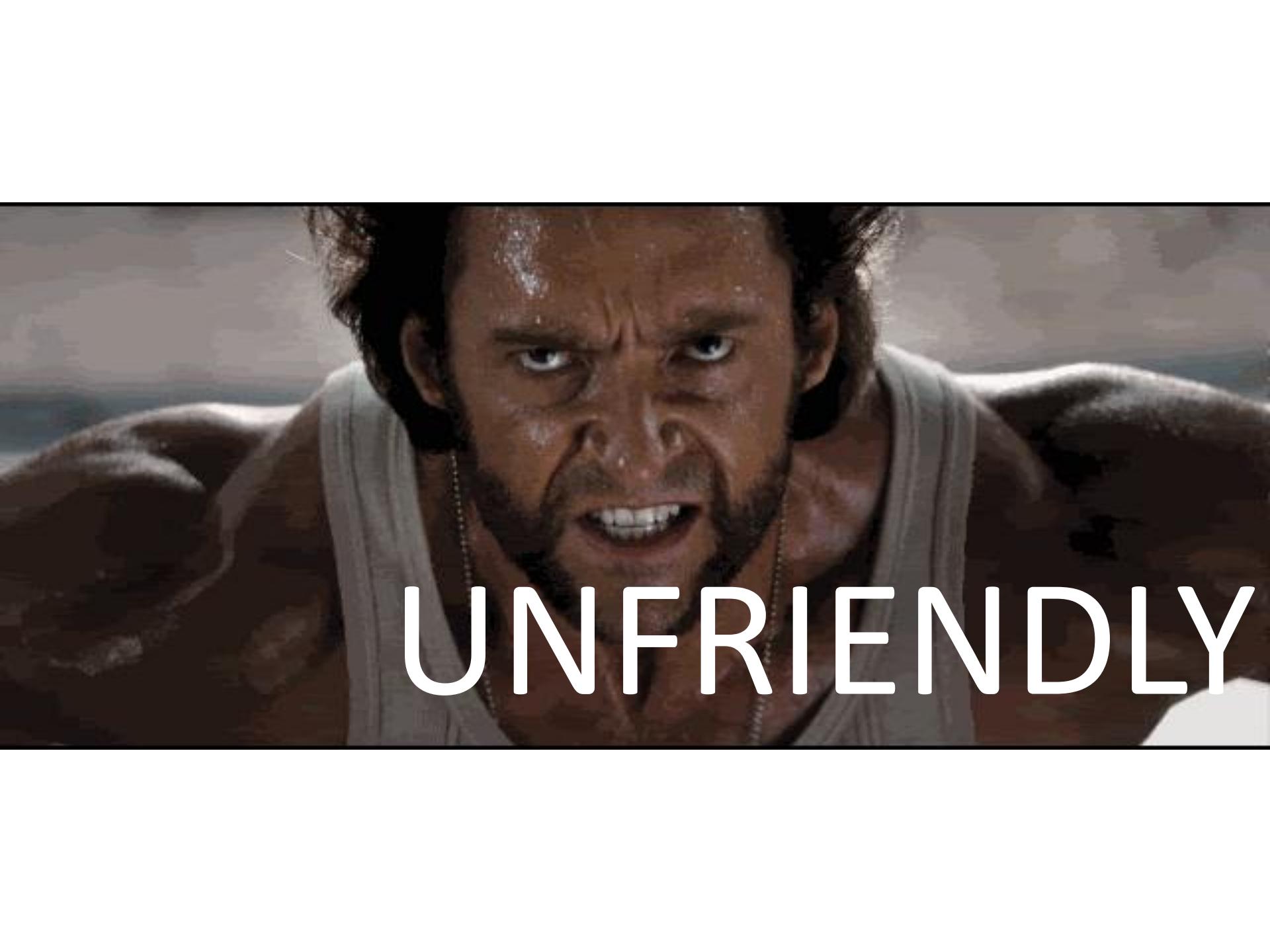




Are You Rugged?

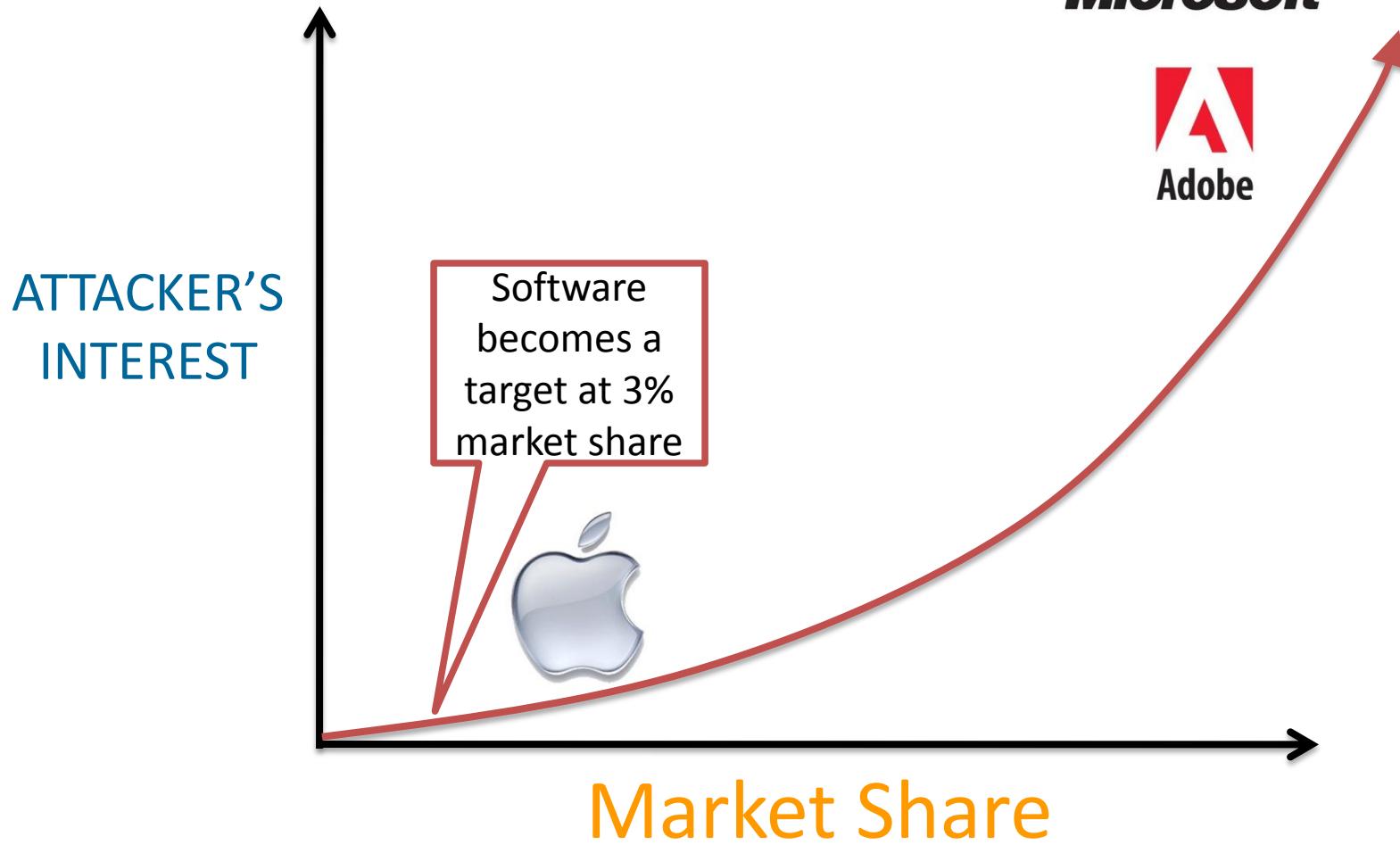


**HARSH**

A close-up, dramatic portrait of Samuel L. Jackson. He has a intense, almost manic expression, with wide eyes and a mouth slightly open as if shouting. He is wearing a light-colored, zippered hoodie. The background is dark and out of focus, suggesting an indoor setting. The overall mood is high tension and aggression.

UNFRIENDLY

There is no such thing  
as “toy” software.



# THE MANIFESTO

I am rugged - and more importantly, my code is rugged.

I recognize that software has become a foundation of our modern world.

I recognize the awesome responsibility that comes with this foundational role.

I recognize that my code will be used in ways I cannot anticipate, in ways it was not designed, and for longer than it was ever intended.

I recognize that my code will be attacked by talented and persistent adversaries who threaten our physical, economic, and national security.

I recognize these things - and I choose to be rugged.

I am rugged because I refuse to be a source of  
vulnerability or weakness.

I am rugged because I assure my code will support its mission.

I am rugged because my code can face these challenges and persist in spite of them.

I am rugged, not because it is easy, but because it is necessary... and I am up for the challenge.

Rugged?

**WHAT IS RUGGED?**



It's not about  
style, it's about  
the result.

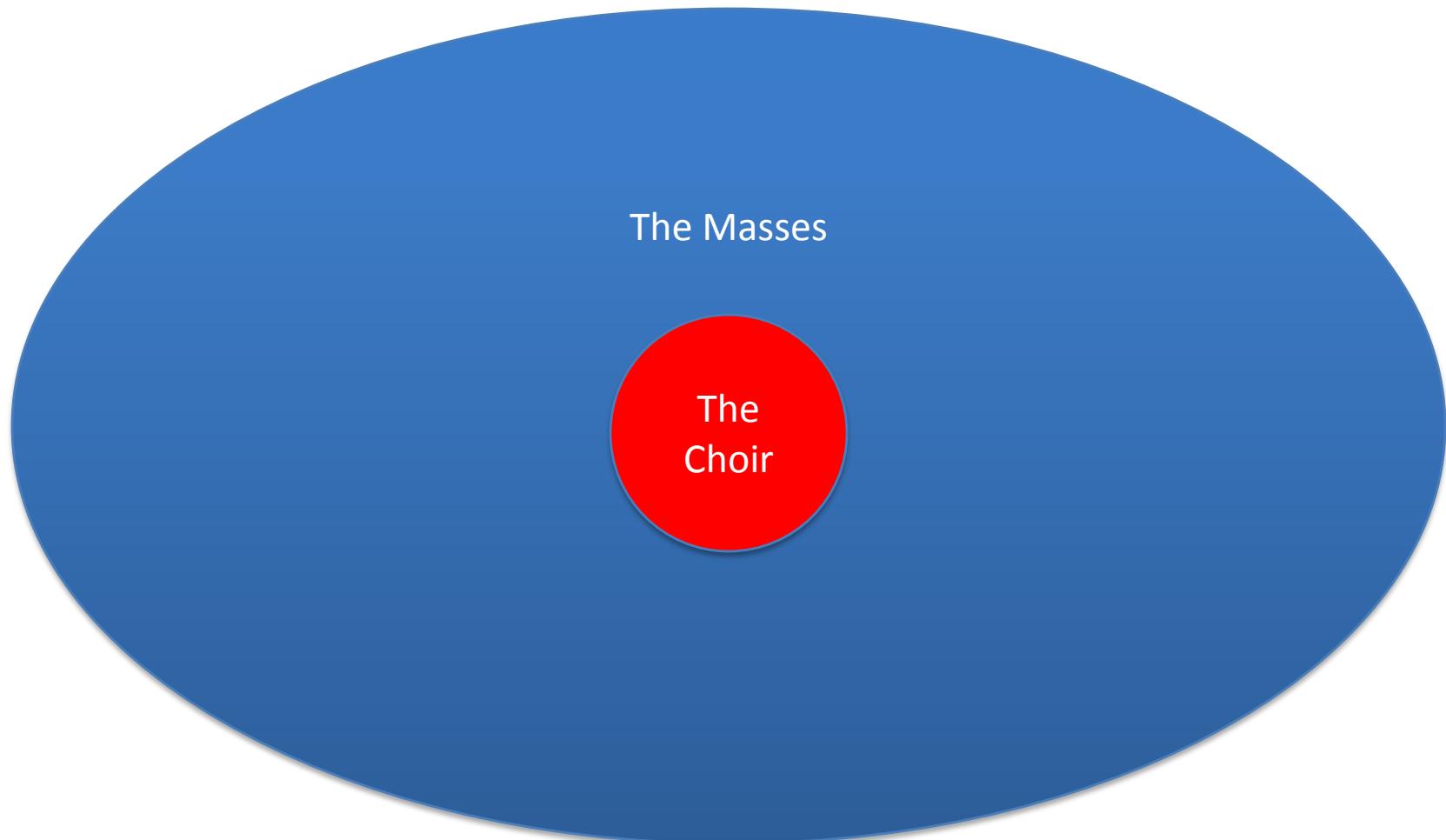


It's not about  
external compliance...

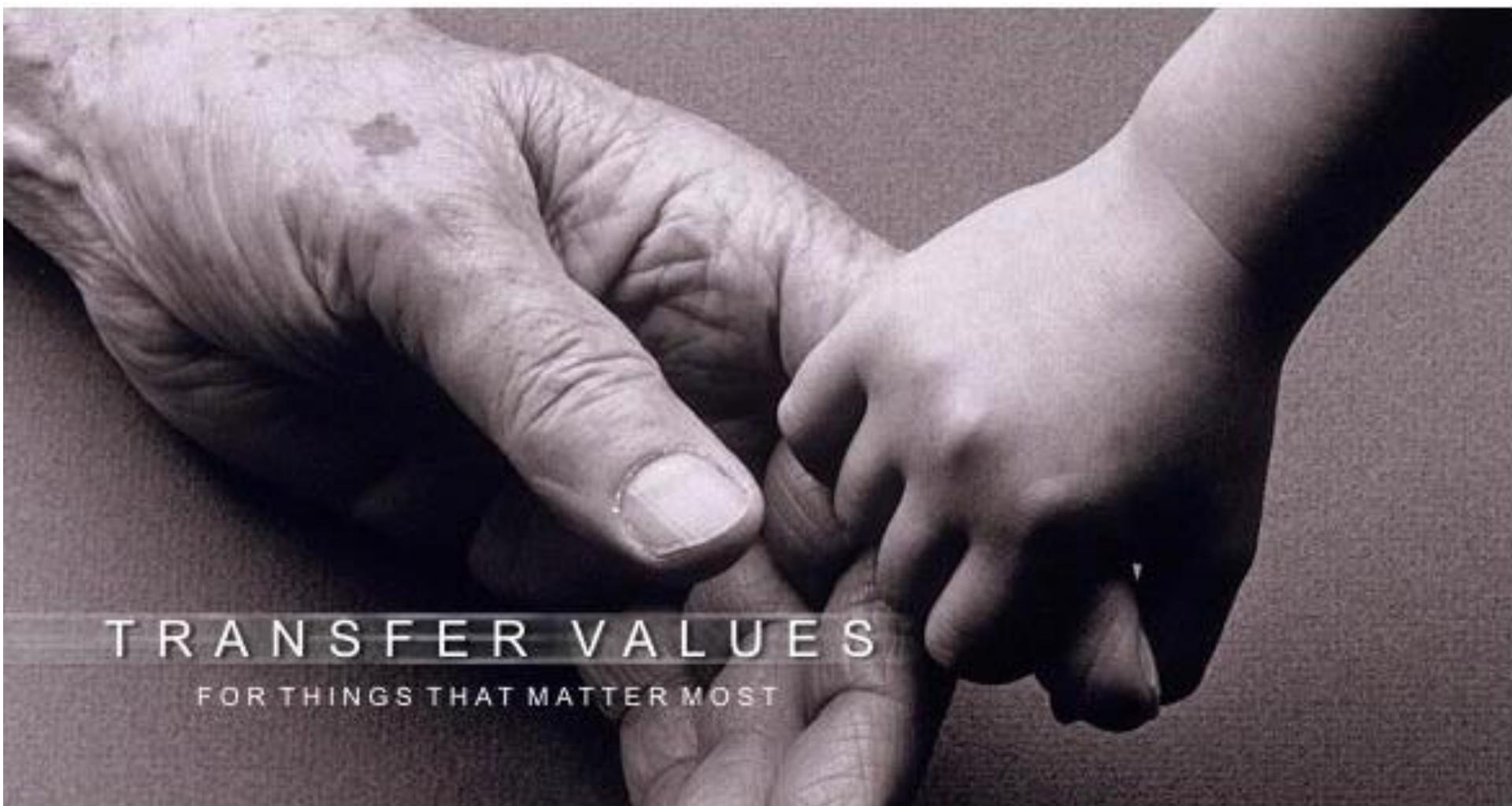
# RULES

1. you CAN....
2. you CAN'T...
3. you CAN....
4. you CAN'T

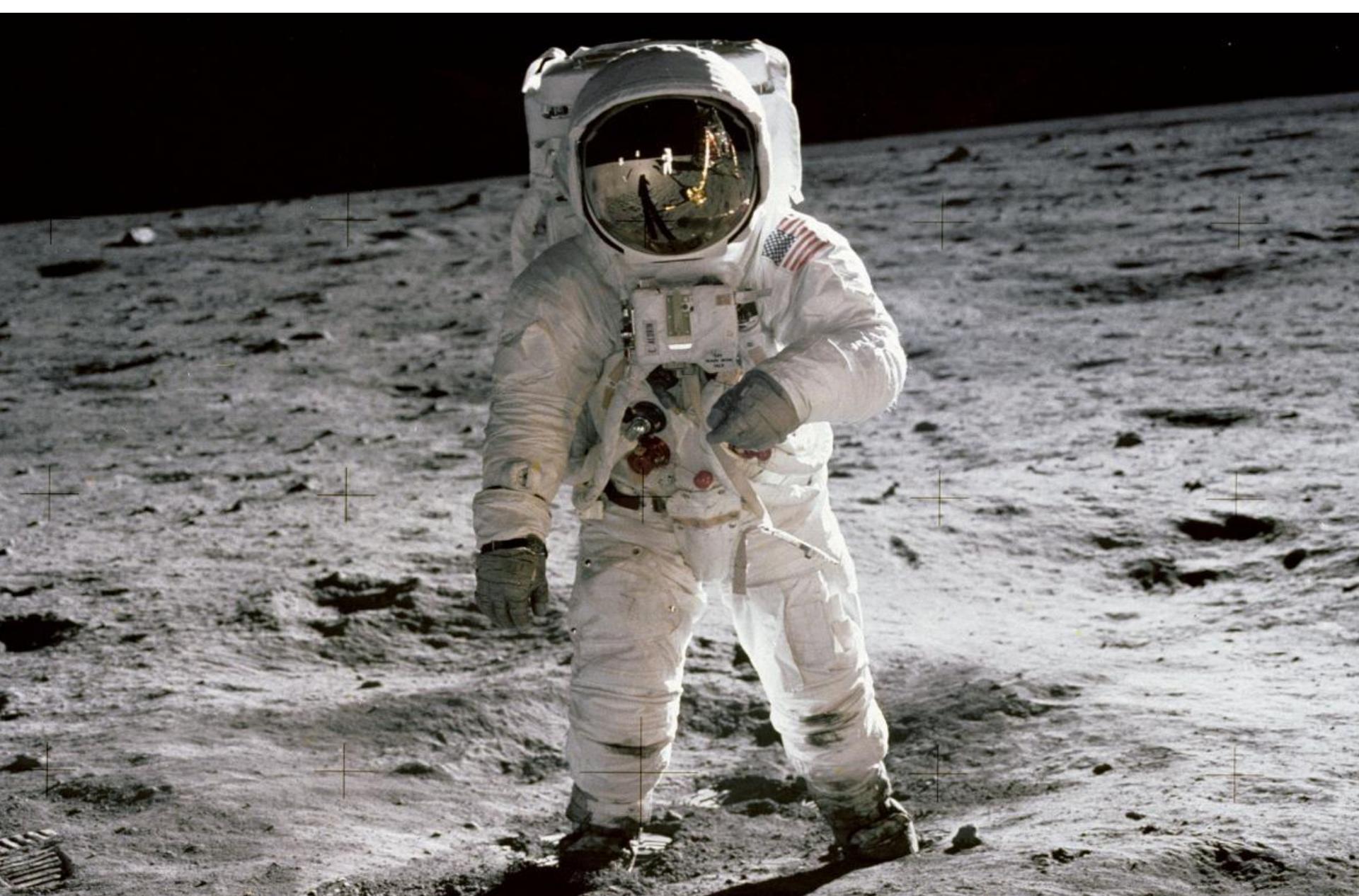
# 1) Beyond the choir



## 2) Beyond technology



# 3) Aspirational



# The Journey

Aware

Informed

Selective

Mature



# **GETTING INVOLVED**

# Folks Who Helped Shape This

- Dan Geer, In-Q-Tel
- Chris Hoff, Cisco
- Chris Wysopal, Veracode
- Scott Crawford, EMA
- Pete Lindstrom, Spire Security
- Andrew Hay
- Tom Kellermann, Core Security
- Will Gragido, Cassandra Security
- Eric Hanselman, LeoStream
- Marisa Fagan, Errata Security
- Anton Chuvakin, Security Warrior
- Joe Jarzombek, DHS
- Barmak Meftah, Fortify
- Nick Selby, Trident Risk Mngt
- David Etue, Fidelis
- Rich Mogull, Securosis
- Adrian Lane, Securosis
- Tim Greene, NetworkWorld
- Dan Guido, NYU: Poly
- Caleb Sima, HP
- Ryan Barnett, Breach Security
- Jack Daniel, Astaro
- Jennifer Jabbusch, CAD, Inc.

# Next Steps...

- Charter Members
- Introductions to University CS Programs
- Chair and Co-Chair Working Groups
  - Welcome Package: Getting Started
  - Business Cases



How to find  
out more...



<http://ruggedsoftware.org>

<https://groups.google.com/a/owasp.org/group/rugged-software>

Discussions - Rugged Software | Google Groups - Windows Inte

https://groups.google.com/a/owasp.org/group/rugged-software

Favorites Web ... Google Conf... TV L... sale... AppE... Blog... Cont... Docs

Discussions - Rugged Sof... Home Feeds (J) Read Mail Print Page Safety Tools

Start Page Mail Calendar Documents Video Groups Contacts

jeff.williams@owasp.org | My Groups | Favorites | Profile | Help | Sign out

Google groups for owasp.org

 **Rugged Software**  Search this group

**Discussions**

View: Topic list, Topic summary Topics 1 - 3 of 3

**Testing multiple lists added to groups**  
Just a test - Do not reply  
By Laurence Casey - Jan 22 - 1 new of 1 message

**Rugged Software Domain name**  
We now own ruggedsoftware.org and it pointing to owasp.org's home page until we have a landing page. -Larry  
By Laurence Casey - Jan 21 - 2 new of 2 messages

**testing outside gmail and owasp.org email addresses**  
testing  
By Laurence Casey - Jan 21 - 1 message

No more topics in this group.

1 - 3 of 3

 Send email to this group: [rugged-software@owasp.org](mailto:rugged-software@owasp.org)

Internet | Protected Mode: On 125%



# Google Groups

“What does Rugged mean  
to you?”

