



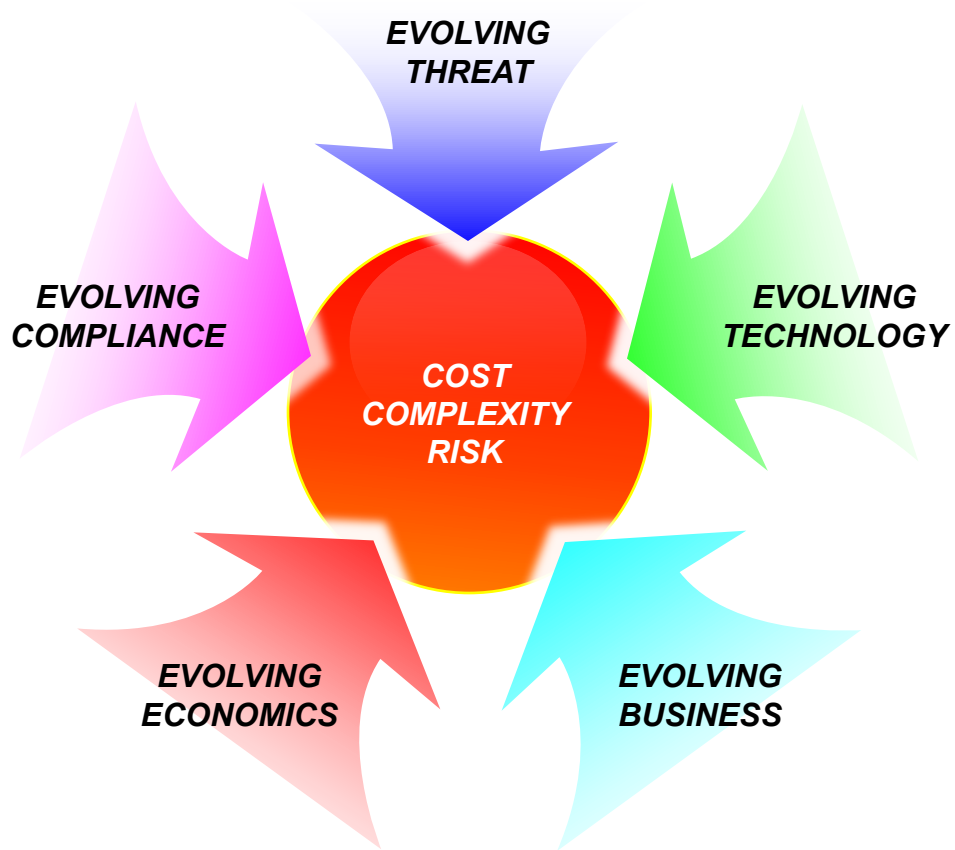
# **Rugged Software Development**

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

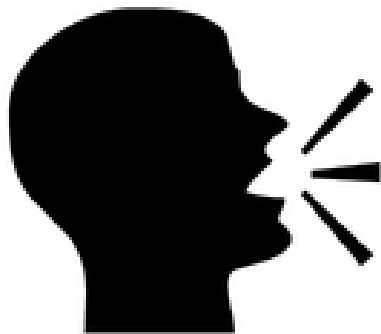
**SELF-PROPAGATING**

SURVIVAL AND COMPETITION INFLUENCE THEM

**MEME**

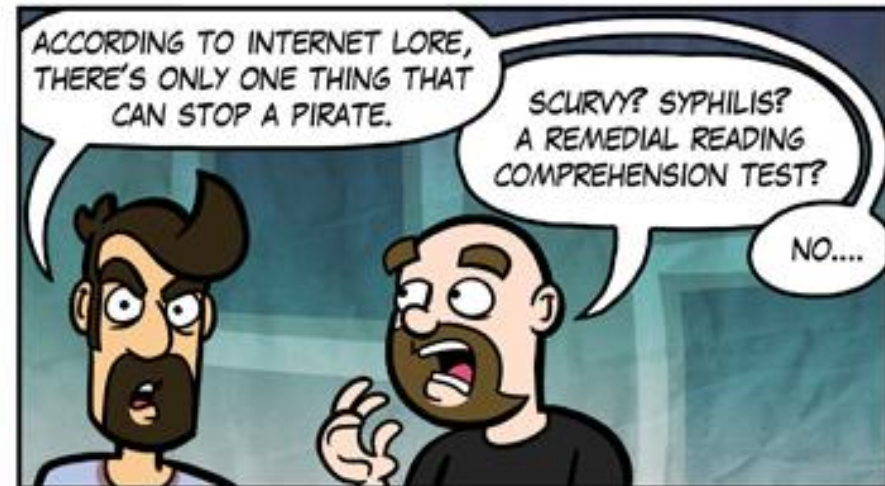


**DANGER**

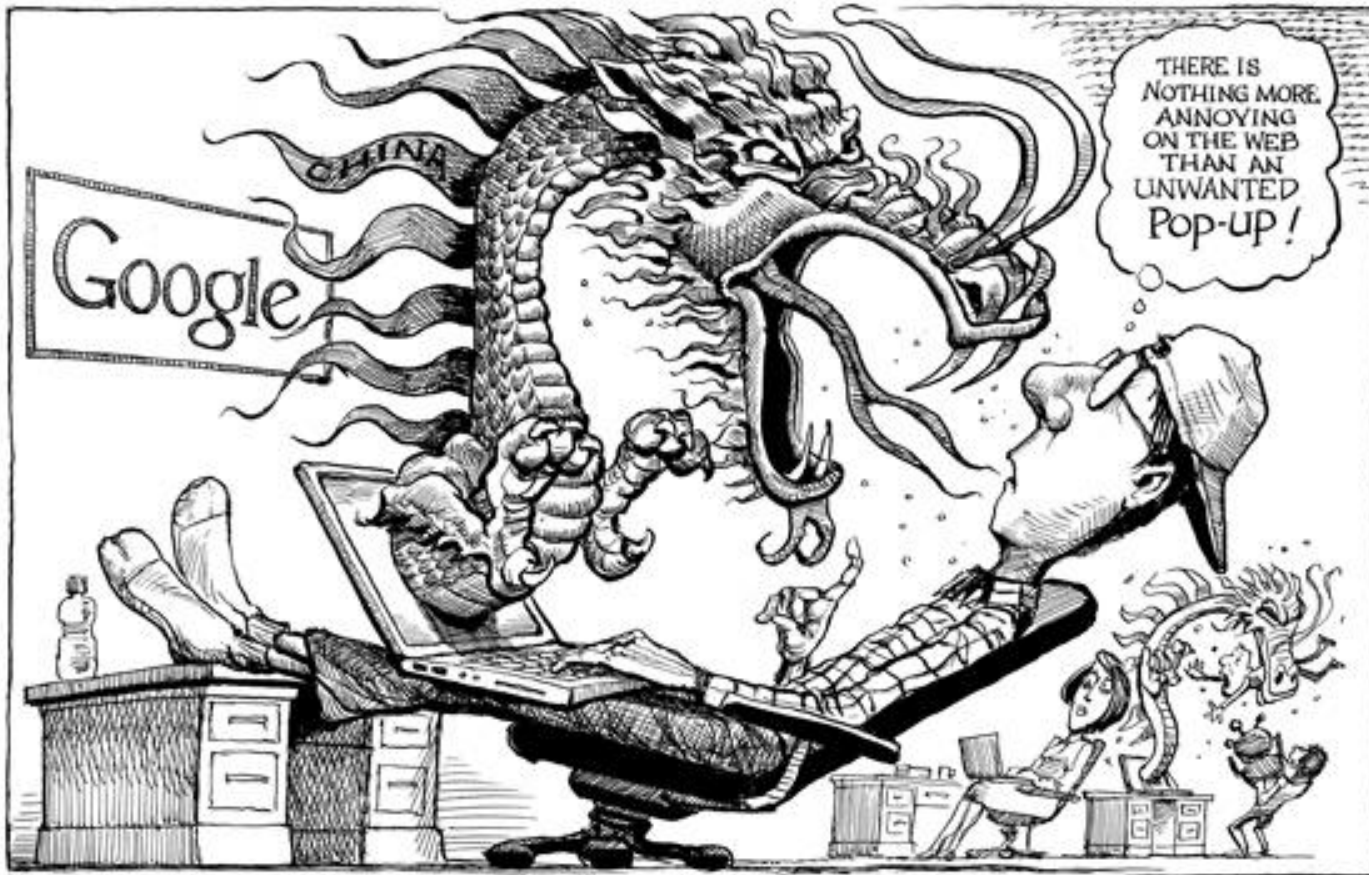


**MEMES  
AHEAD**









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



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

# COMBATS



“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**

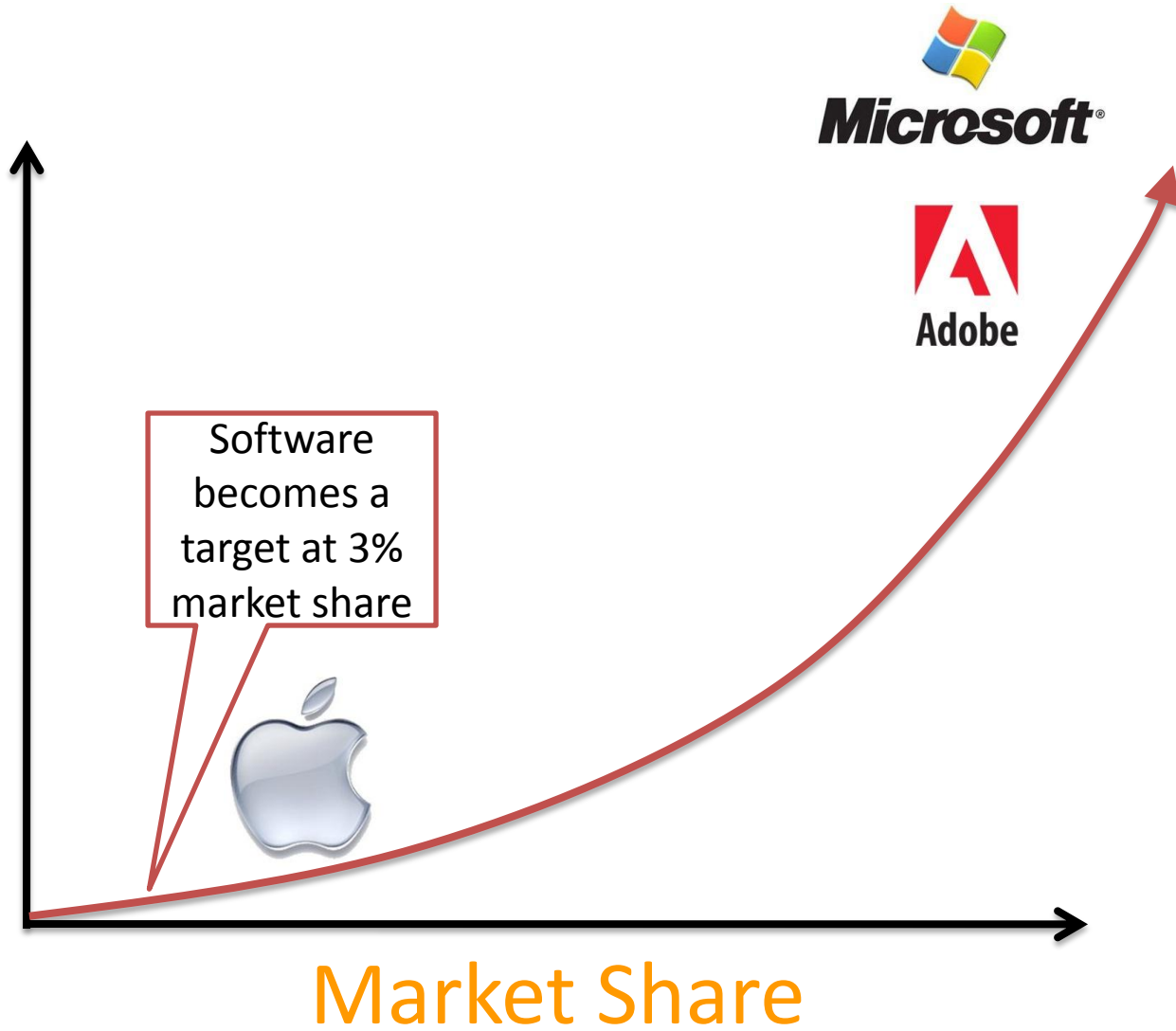


UNFRIENDLY



There is no such thing  
as “toy” software.

ATTACKER'S  
INTEREST



# **THE MANIFESTO**



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

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

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



I recognize that my code may 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....

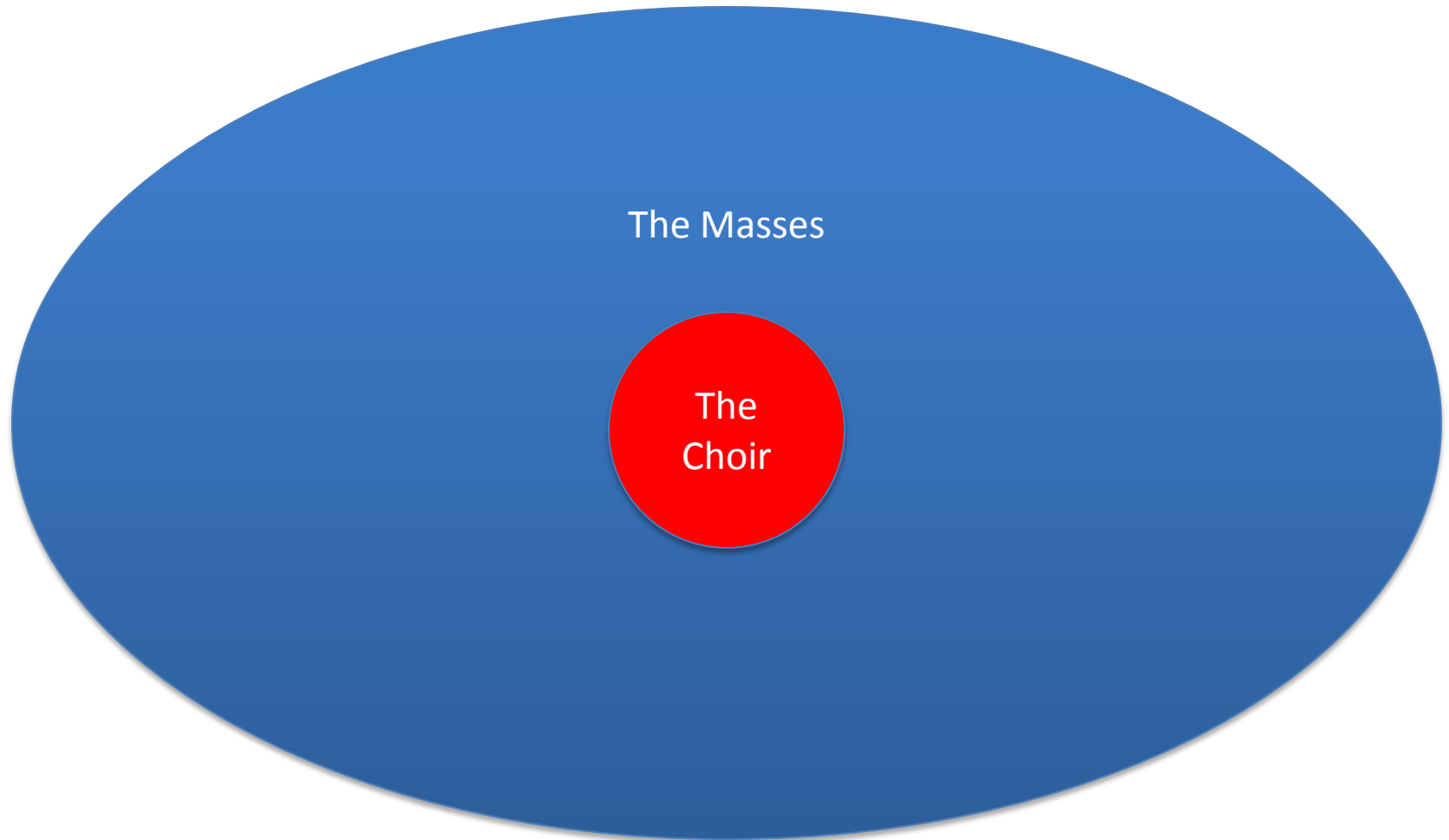
2. YOU CAN'T...

3. YOU CAN....

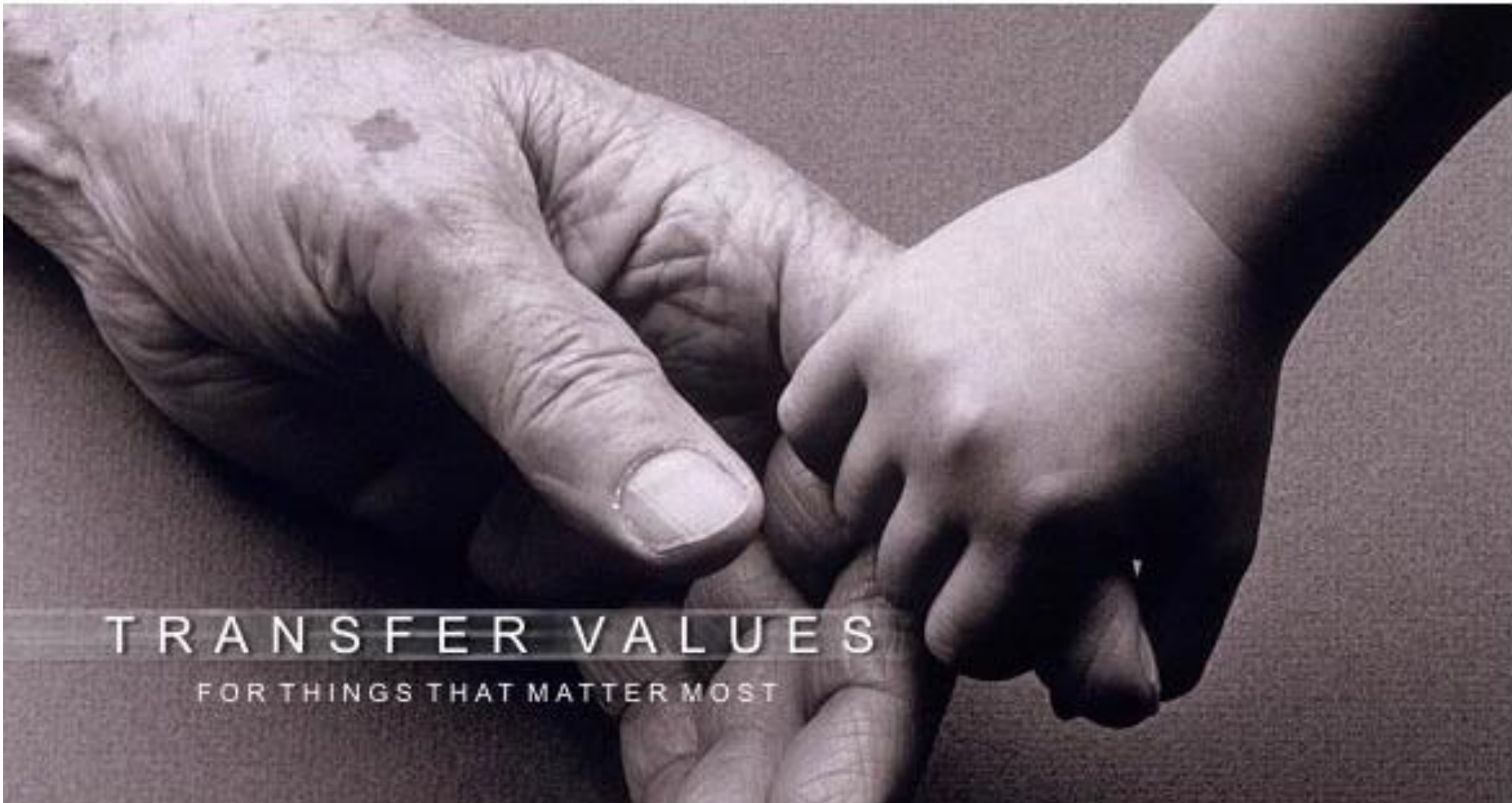
4. YOU CAN'T



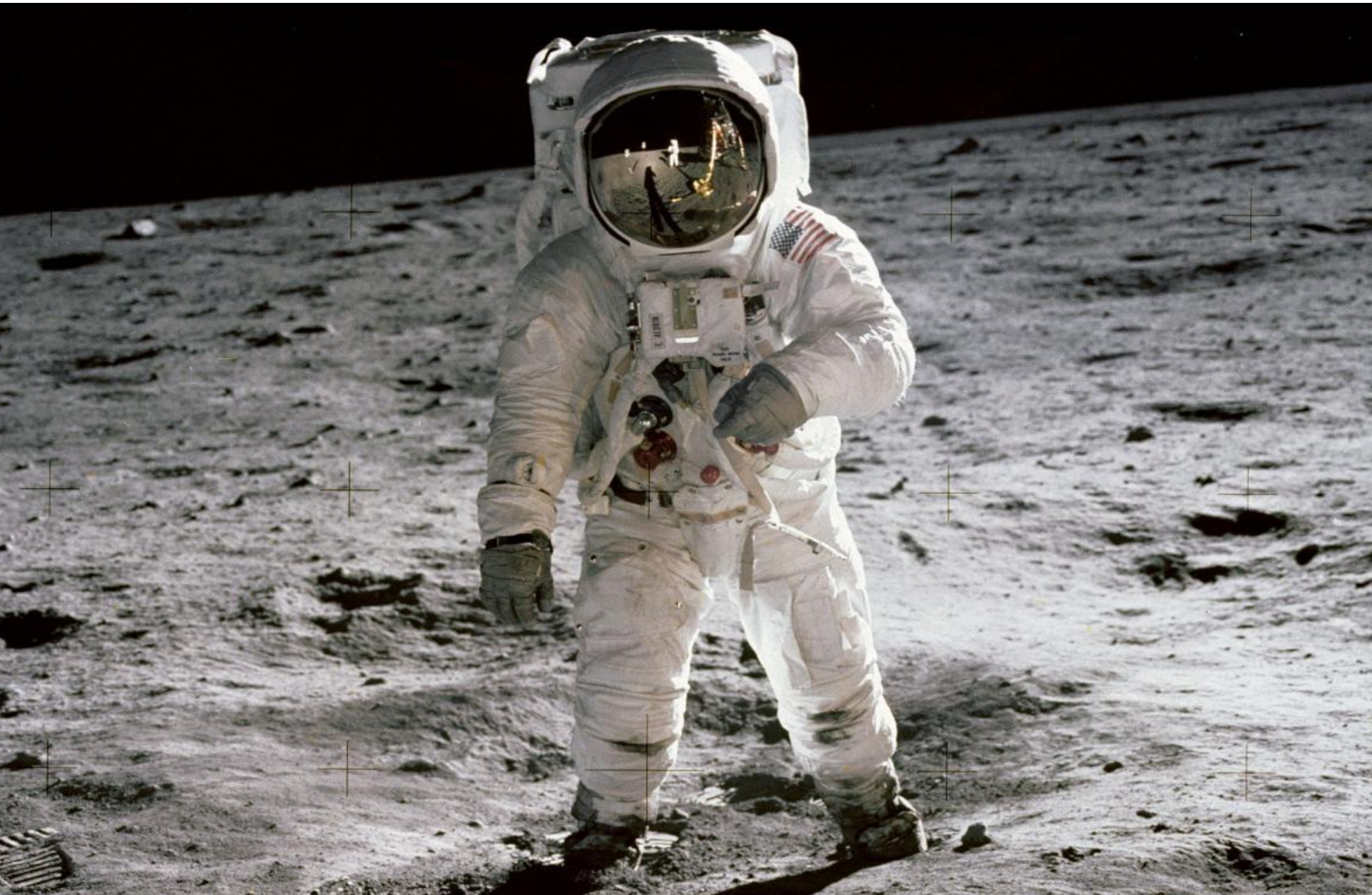
# 1) Beyond the choir



## 2) Beyond technology



# 3) Aspirational



**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 Kellerman, 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, TRG
- 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>

The screenshot shows a web browser window displaying the Google Groups page for 'Rugged Software'. The browser's address bar shows the URL <https://groups.google.com/a/owasp.org/group/rugged-software>. The page header includes navigation links like 'Start Page', 'Mail', 'Calendar', 'Documents', 'Video', 'Groups', and 'Contacts'. Below the header, there's a search bar and a 'Search this group' button. The main content area is titled 'Discussions' and lists three topics: 'Testing multiple lists added to groups', 'Rugged Software Domain name', and 'testing outside gmail and owasp.org email addresses'. Each topic includes the author's name and the date. A '+ New post' button is visible at the bottom left of the discussion list. The right sidebar contains sections for 'Discussions' (with a '+ new post' link), 'Members', and 'Group info' (with a 'More group info >' link).



# Google Groups

“What does Rugged mean  
to you?”



