Vulnerability Remediation

CHALLENGES AND PROPOSED APPROACH

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We Can't Test Ourselves Secure

- Test coverage is low
  - Even with IAST [knight in shining armor]
- No one testing technique finds even all critical vulnerability (types)

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[Anyways,] We Know It Doesn't Work

- 10+ years, our re-exploit rate remains incredibly high
  - Where vulnerabilities are closed, re-exploits through [simple] evasion is common

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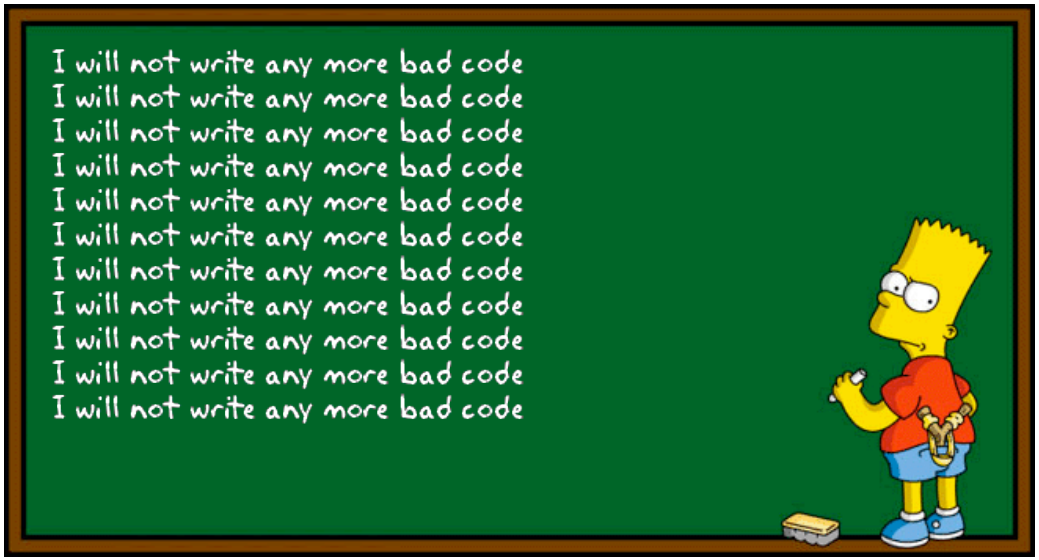
Easier Done Than Said?

- Pick a few common problems
- Solve them
  - Password Storage
  - CSRF protection
  - Encoding



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The Right Way To Do It

1. Seek existing secure code from within the organization
2. Extract that code to shared libraries
3. Bake libraries into existing Web/ORM/ etc. frameworks
4. Make sure frameworks apply protection…
   - As part of functional operation
   - Automatically, w/o developers calling it
   - Possess secure-by-default

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ESAPI #YouAreDoingItWrong

- Pick an un-maintained library
- Adopt an “API” that developers have to:
  - Remember to call, everywhere necessary
  - Choose the right function to call
  - Configure each call correctly

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Measuring / Assuring Progress

- Use (open source) SAST to measure use
- Unit test for consistent, complete & correct use
- Lend teams bandwidth/expertise to integrate
- Reward developers (ease assessment) for use
- Build and tell success story

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Thank You

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