

Black Box Software Testing

(Professional Seminar)

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Section:15

Stress Testing

Summer, 2002

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Stress Testing

Tag line

- “Overwhelm the product.”

Fundamental question or goal

- Learn about the capabilities and weaknesses of the product by driving it through failure and beyond. What does failure at extremes tell us about changes needed in the program’s handling of normal cases?

Paradigmatic case(s)

- Buffer overflow bugs
- High volumes of data, device connections, long transaction chains
- Low memory conditions, device failures, viruses, other crises.

Strengths

- Expose weaknesses that will arise in the field.
- Expose security risks.

Blind spots

- Weaknesses that are not made more visible by stress.

Stress Testing: Some Papers of Interest

- Astroman66, *Finding and Exploiting Bugs 2600*
- Bruce Schneier, *Crypto-Gram*, May 15, 2000
- James A. Whittaker and Alan Jorgensen, *Why Software Fails*
- James A. Whittaker and Alan Jorgensen, *How to Break Software*

