

It's All About the System: Changing the Way We Think About Designing Security Systems

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Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company,
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Outline of Talk

- Framing the problem
- One approach Sandia is using to address the issue—
 - Our course “*Systems Thinking for Security Engineering*”
- Results of this effort
- What’s in the future?

Slide 2

kab5

This needs to be jazzier to stay in the same vein as the rest of the presentation.

kabarre, 10/1/2007

System vs Product





The Problems We Face in Security Engineering

- **Problems now ill-structured, ill-defined, and complex**

Slide 4

kab4

or is it non-linear?? in 2nd bullet

kabarre, 10/1/2007

kab1

It's a what?



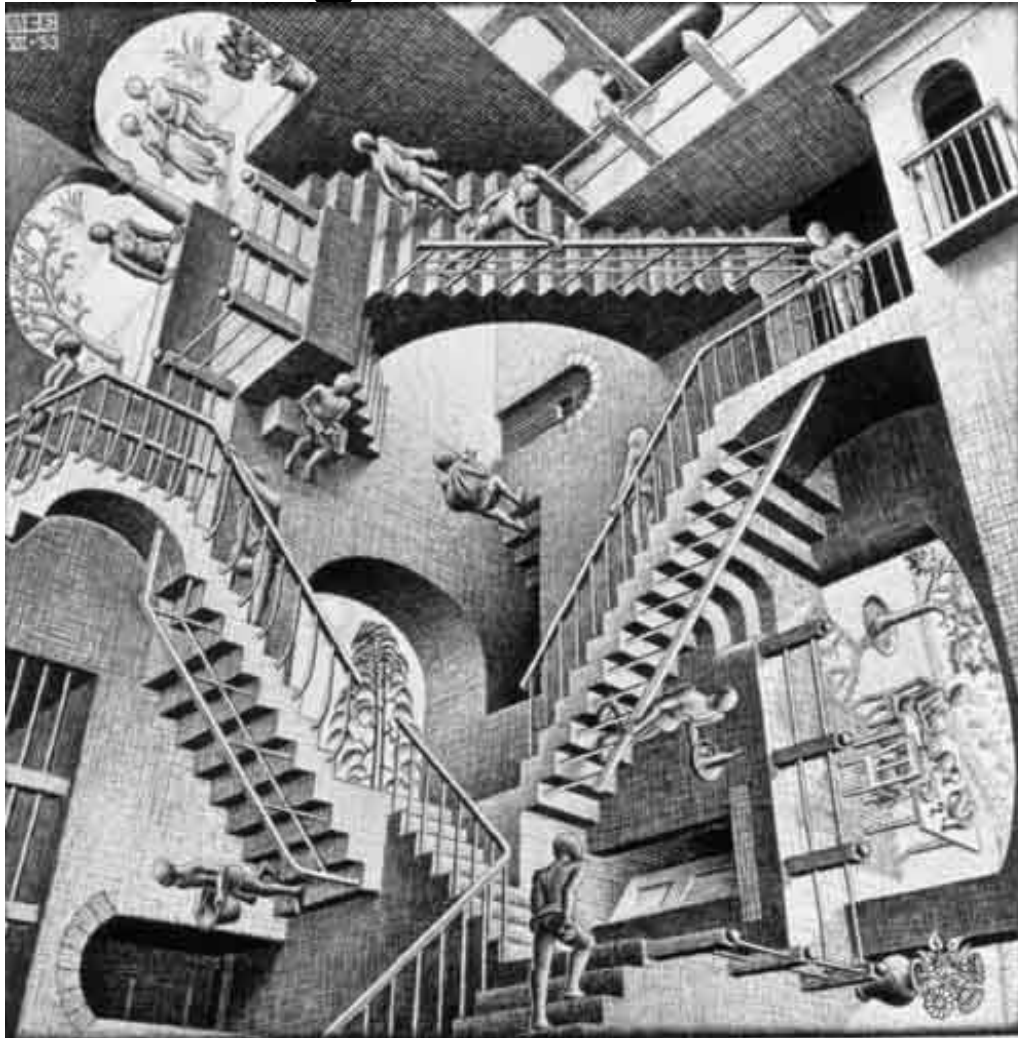
Slide 5

kab1

Put in my tusker photo/use PhotoElements to break into component parts. Animate in PPT to regroup picture.

kabarre, 10/1/2007

Systems Thinking: Getting Out of the Box





The Systems Thinking for Security Engineering Course

- **Module One – Icebreaker and Course Introduction**
- **Module Two – Systems Thinking Activities**
- **Module Three – Videos and Critical Thinking Assessments**
- **Module Four – Systems Thinking Instruction**
- **Module Five – Closure**

***The Systems Thinking for Security Engineering
Course:***
Some Tools of a Systems Thinker

- **Understand the context (outside the boundaries) of the problem and the system**
- **Encourage probing, direct questions**
- **Actively listen to reveal all the issues surrounding a problem**
- **Embrace conflict as a signal that broader thinking is needed**
- **Write a creative narrative describing concept of operations to stimulate thorough thinking**
- **Actively manage the dynamic tension between requisite variety and parsimony**

Slide 8

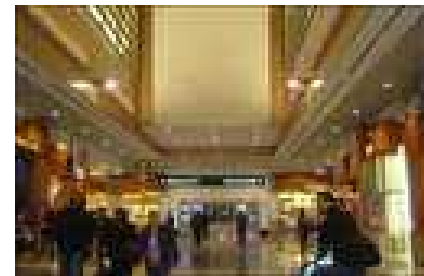
kab3

Open slide w/o any text...fade in all at once after discuss course. Then fade these out at end.

kabarre, 10/1/2007

Airport Security

- What do you think of when you hear “airport security”?



Slide 9

kab2

Take pic of food court area in ABQ Sunport & insert.
Animate to bring in each picture individually.

kabarre, 10/1/2007



Did the Course Achieve Its Purpose?

- **Anecdotal evidence—Yes!**
- **Second pilot course Oct 24th**
- **Continuing interviews**
- **Analyze in AtlasTi**



What's Next?

- **How do we develop ways and methods of thinking through which aspects of non-linear problems are major players, then design systems to effect appropriate pieces of our design?**