Position Statement for *New Security Paradigms Workshop - Boom or Bust?*

Neither Boom Nor Bust

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1. POSITION SUMMARY

Most new security paradigms don't fit 'Boom or Bust' models, nor does the New Security Paradigms Workshop itself.

2. INTRODUCTION TO BOOM AND BUST MODEL

Boom or bust cycles are useful models for looking at many dynamic phenomena in economics, hydrology, ecology, and social systems. They've been used to describe business cycles such as the California Gold Rush of 1849 and The Roaring Twenties/Great Depression, natural phenomena like snaking streams and ecological disasters, and social phenomena like the rise and collapse of civilizations (e.g. Mayan in Pre-Hispanic Mexico).

The essence of the boom and bust model is a dynamic model with delayed feedback, resulting in failure of the system to adjust rapidly enough to reach sustainable equilibrium. System Dynamics and The Counterintuitive Behavior of Social Systems by J. W. Forrester formerly of MIT describe diverse models in detail.

3. APPLYING BOOM AND BUST MODELS TO INFOSEC

Information security (INFOSEC) certainly hasn't reached equilibrium. Economically, the Y2K bug caused a boom and bust business cycle for many security and technology firms around the Dec. 31, 1999 deadline. Information threats and targets continue to increase as more people obtain, learn to use, and depend upon computers. Securing a system requires vastly more resources and expertise than penetrating one. Defensive technology and methods always lag behind new technology. For example, distributed denial-of-service attacks anonymously brought down even major Internet players like Yahoo and E-Bay. Even announcing a new vulnerability is risky, because hackers will use it before most system managers get around to implementing the "fix". INFOSEC is constantly playing catch-up. Conventional wisdom today maintains that the best one can do is to minimize liability by using "best INFOSEC practices".

NSPW'01, September 10-13th, 2002, Cloudcroft, New Mexico, USA.

4. ARE NEW SECURITY PARADIGMS BOOM OR BUST MODELS?

This paper takes the position that, while security firms are as sensitive to market fluctuations as any other economic entities and may boom and bust, new security paradigms themselves are intellectual concepts like Platonic ideals. They may evolve or become obsolete, but they capture key concepts and can survive indefinitely. Security paradigms may be interactive, dynamic or static, and may use boom and bust style models as appropriate.

NSPW aims to encourage INFOSEC paradigm shifts, even those that challenge vested interests. The analogy to describe NSPW's distribution of ideas is more like dropping a stone into water, generating waves, than boom or bust.

Thomas Kuhn, who coined the term "paradigm shift", studied the process of paradigm acceptance among the scientific community. Most new paradigms take at least a generation to win general acceptance, when holders of the old paradigm die off. NSPW has only been in existence about 10 years, half a human generation.