High Confidence
Software and Systems

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National Security Agency
The HCSS research area is focused on the development of assured methodologies and systems.
With the requirement to enhance NSA’s expertise and capabilities in this area, FY2000 saw the emergence of the high confidence design team.
HCSS Management

- Information Assurance Research Group
  - Chief, Paul Pittelli
  - D/Chief, Susan Alexander
  - Technical Director, Bob Meushaw

- Cryptology Division
  - Chief, John Stasak
  - D/Chief, Penny Brummitt
  - Technical Director, Paul Timmel
Methodologies

• To achieve high confidence in our future systems, we must first know how, and then provide the technological means to build.

• The supporting theory and scientific base, to developing engineering science, tools, and techniques will be the focus of this research emphasis.
Trusted Systems

- Trust is the strong belief that a system will behave in predictable and beneficial ways.

- The trusted systems emphasis can be decomposed into three sub-foci: assurance, containment, and detection.
Java

• Java has emerged as a standard for the computing foundation and for programming the Internet.

• The Java research emphasis is focused in the areas of Java infrastructure construction, and the analysis of Java programs.
Engineering and experimentation provides a vehicle for the techniques and tools under this research focus area to be shown to work effectively and efficiently.

This emphasis will provide for both mature HCSS reference implementations and the empirical evaluation of HCSS engineering capabilities and limitations.
Welcome!