(U//FOUO) SIGINT Architecture: Why Do We Need One?

FROM: Michael McNamee
Chief, SIGINT Systems Engineering (S01A)
Run Date: 05/08/2006

(U//FOUO) In most large-scale human endeavors a common and coherent vision is critical to success. The primary purpose of the SIGINT portion of the NSA/CSS enterprise architecture is to communicate a clear and coherent vision of the future SIGINT system and its capabilities to developers, managers making investment decisions, program managers and external stakeholders. With this in mind, SIGINT System Engineering has been working with SID line organizations, ITD , developers and Technical Directors to create **an agreed-upon minimum set of design principles** embodied by the architecture products indicated below.

(U//FOUO) However, architectures are seldom complete and must be agile to cope with changing target threats and evolving external partner architectures, and the team will work together to update the architecture to address new technological solutions such as the on-going TURBULENCE and PRESSUREWAVE development activities.

(U//FOUO) **There are several reasons to develop architectures.** Can you pass this test? True or False:

1. It's the law - Congress and OMB (Office of Management and Budget) have mandated that all federal agencies produce enterprise architectures compliant with the Federal Enterprise Architecture (FEA) and expect that development activities be aligned to the respective architectures.

2. The Clinger Cohen Act requires that federal Agencies develop an enterprise architecture for Automated Information Systems and show how investment in the capabilities improve performance or reduce the total cost of ownership.

3. Beginning in 1998, the Defense Department (DoD) mandated the C4ISR* architecture framework to increase systems interoperability and information flow down to the warfighter.

4. Architecture communicates the roadmap ahead to managers and the development workforce, reducing duplicative development, driving down integration costs and reducing development risk.

(U//FOUO) ANSWER: All the above are true. Question #4 provides the fundamental goal of having all within an organization working towards common development objectives and making coherent investment decisions.

(U//FOUO) Furthermore, the DoD and Intelligence Community have directed the use of a Service Oriented Architecture (SOA) and implementing web services to enable interoperability. The job of SIGINT System Engineering will be to continue to work with developers in the line organizations to document and update the development roadmap ahead.

(U//FOUO) Program managers and developers throughout SID and ITD as well as Lane Managers will need to ensure that contracts and design decisions reflect the SV-4, OV-7, TV-1 and security guidelines at the below links:

- OV-5 "To-Be" Baseline Architecture Operational Activity Model OV-5

- SV-4 "To-Be" Baseline Architecture System Data Flow

- OV-7 "To-Be" Baseline Architecture Logical Data Model

- [TV-1](#) "To-Be" Baseline Architecture Logical Data Model

- [Information Security Architecture Guidelines](#)

(U) The point of contact for this article is ██████████ DE3 (Architecture Governance) ██ ████ ███████.

---

*(U) Note:
C4ISR is Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance

"(U//FOUO) SIDtoday articles may not be republished or reposted outside NSANet without the consent of S0121 ([DL sid_comms](#))."