NDIA Systems Engineering Division Software Committee Report

17 February 2016

Paul Croll and Ken Nidiffer (Co-Chairs)

Overview

- **Background**

- **Actions Since Last SED Division Meeting**

- **Next Steps**

Background – 1

- **DASD/SE requested the NDIA SED Software Committee to provide an industry perspective regarding opportunities for "DASD(SE) to improve the practice of software engineering"**
- **The Committee held several virtual meetings and identified eleven areas for consideration**
- **These areas were then ranked in terms of Payoff and Ease of Implementation**
- **Detailed recommendations were developed for seven opportunities for improvement**
- **Committee members included:**

  – Paul Croll, PR Croll LLC (Chair); JoAn Ferguson, General Dynamics; Gary Hafen, Lockheed Martin (retired); Cheryl McIntyre, Lockheed Martin; Cynthia Molin, Raytheon; Ken Nidiffer (Co-Chair), SEI; Shawn Rahmani, Boeing; Rick Selby, Northrop Grumman; Tim Walden, Lockheed Martin

Background – 2

- **Recommendations for Software Initiatives**
  1. Agile/Incremental Software Development
  2. Improved Software Estimation and Integration with EVM and Technical Metrics
  3. Test Optimization
  4. Model Based System Development
  5. Requirements Quality (Systems and Software)
  6. DoD 5000 Lifecycles: Incorporation of High-Impact Software Enabling Technologies
  7. Software Assurance in Acquisition, Development, and Sustainment

Actions Since Last SED Division Meeting

- **The NDIA Software Committee met on January 26 to discuss our approach for supporting the following task:**

  **Task**

  The Joint Federated Assurance Center (JFAC) serves as a joint, Department-wide federation of capabilities to support the trusted defense system needs of the Department. Its objective is to ensure security in the software and hardware developed, acquired, maintained, and used by the Department, pursuant to the trusted defense systems strategy of the Department, and supporting policies related to software assurance and supply chain risk management. In addressing the JFAC mission it is critical to baseline DoD's technical, program, and organizational capabilities relating to trusted systems in a consistent manner, and then to identify the gaps in those capabilities today and relative to emerging and future threats and technologies. Such data are essential to inform policy and investment decisions.

- **The Software Committee agreed to undertake a Software Assurance action to perform baselining and gap analysis in industry, and report the results to DASD/SE with recommendations for remediation where appropriate.**

Next Steps

- **We are developing a strategy to provide a framework for benchmarking industry processes, techniques, tools, architecture and design strategies, and decision-making rules for software assurance, at each stage of the full life cycle**

- **We have DASD/SE agreement that this is a worthwhile effort to undertake, and now need to begin fleshing out the details and recruiting additional industry participants**

Questions?

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