Analysis: System Architecture Virtual Integration Nets Significant Savings

The System Architecture Virtual Integration (SAVI) initiative is a multiyear, multimillion dollar program that is developing the capability to virtually integrate systems before designs are implemented and tested on hardware. The purpose for SAVI is to develop a means of countering the costs of exponentially increasing complexity in modern aerospace software systems. A key element of the virtual system integration approach of SAVI is an SAE International standard called the Architecture Analysis and Design Language (AADL). The SEI played a leading role in developing this standard and an open source tool set, which is proving its value in enabling early discovery of defects through analysis of AADL models of embedded software systems. Our analysis showed that the nominal cost reduction for a system that contains 27 MSLOC would be $2.391 billion (out of an estimated $9.176 billion), a 26.1 percent cost savings. The original study reported here had a follow-on study to validate and further refine the estimated cost savings.

In this blog post, which is excerpted from a recently published technical
report, *ROI Analysis of the SAVI Initiative*, the SEI's Peter Feiler presents the results of a return-on-investment (ROI) analysis to determine the net present value (NPV) of the investment in the SAVI approach.

[Read the SEI Blog post.](#)

**SEI NEWS**

- [SEI Introduces “SoundBytes” Video Series](#)
- [SEI Research Combats Mounting Acquisition Costs](#)

[Join Our Mailing List](#)  [Visit Our Website](#)

---

**SEI Publications**

- [ROI Analysis of the System Architecture Virtual Integration Initiative](#)
- [Blacklist Ecosystem Analysis: July - December 2017](#)

**SEI Blog**

Recent posts

- [Automated Code Generation for Future Compatible High-Performance Graph Libraries](#)
- [Static Analysis Alert Test Suites as a Source of Training Data for Alert Classifiers](#)

**SEI Podcast Series**

Available in video and audio formats

- [Obsidian: A Safer Blockchain Programming Language](#)
- [Agile DevOps](#)
SEI Events

Featured events

- Digital Footprints: What Can be Learned from the Traces We Leave on Social Networks?
- NDIA Agile in Government Summit (co-hosted by the SEI)
- NatCSIRT 2018
- SEI Software Engineering Workshop for Educators

SEI Cyber Minute

Short video snapshots of SEI work from our experts

- Preparing for IPv6 Enterprise Deployment
- Using Augmented Reality to See Real Opportunity

SEI Training

- Insider Threat Program Evaluator
  June 26-28, 2018 (SEI Arlington, Va.)
- Insider Threat Vulnerability Assessor Training
  July 10-12, 2018 (SEI Arlington, Va.)

SEI Careers

Featured opportunities

- SEI Career Fair, Pittsburgh, Pa., May 22-23
About the SEI Bulletin

The SEI Bulletin is a biweekly newsletter designed to keep you up to date on SEI news, events, research, and other matters of interest to the SEI community. We hope you find the SEI Bulletin useful and informative.

Send Us Your Story

Do you have a story about how an SEI technology has positively affected your team or organization? If so, the SEI would like to hear about it. Send a short summary of your success to info@sei.cmu.edu and you could be featured in a future issue of the SEI Bulletin.

Our mailing address is

Software Engineering Institute | Carnegie Mellon University | 4500 Fifth Avenue, Pittsburgh, Pa. 15213

info@sei.cmu.edu

Want to change how you receive these emails? You can update your preferences or unsubscribe from this list.