

IEEE Systems Council Technical Community-Systems Engineering Methods:

3 March 2023 via Zoom at 11:00 AM ET

Attendees: Andy Chen, Stephanie White, Jeannine Sivy, Armando Walter-Colombo, Radu Babiceanu, Cecilia Metra, Paul Hershey, Jason Hui, John Byler, Mack Lamont, Robert Lyons, Steve Holt, Tim Cathcart, Vincenzo Piuri, Rajiv Joshi, Paolo Carbone, Ottmar, Kangkang Sun, Jason Hui, Georges Zissis, Cristian Alionte, Bob Rassa

Staff: Bailey Campin

Stephanie started the meeting at 11:05 AM ET and introduced Jeannine Sivy.

Business and Technology Strategies

Jeannine Sivy began chairing the INCOSE Technical Committee (TC) for a year and a half. The INCOSE Systems and Software Interfaces Working Group (SaSIWG) has 26 active members and 70 active followers.

Purpose of SaSIWG

The purpose of the TC is to take multiple ideas from people across the globe and turn them into a sensible plan of action. This includes near-term and later ideas to complete an action roadmap.

They create products that have:

- Near-term traction
- Long-term mission alignment
- Cohesion, flexibility, pivotability

With teams who are:

- Geographically dispersed
- Passionate experts
- Very part-time

About SaSIWG

SaSIWG was created by the path of comparing product management and system engineering. The idea was to close the interface gaps and find a way in the digital world.

What Got Us “Here” Won’t Get Us “There”

Foundational paper, persistent interface gaps, and a mission got the group to where they are today.

There is asking challenging questions and the need for finding new solutions.

The first step to get “There” is an e-book. “Realizing Relevance: Stories for Our Digital Era” has relevant stories of business and is meant for digital transformation executives.

Discussion opened on how the roadmap was made.

Path to Action: Roadmap Level

Jeannine presented the steps to creating the roadmap:

1. Address the challenge question: this step addressed the context, roles, processes and methods, people, synthesis, business value, culture, and trends.
2. Ideate and select focus area: this was open to discussion on the response to the challenging questions. This step helped gauge interest. They selected the Tech + Arch for the focus.
3. Information sharing and learning: This included presentation on ontologies and roles. The TC members continued to ideate and diverge/converge.
4. Workshop: The group went into the workshops with a goal to provide a plan for Architectural Interface Gaps. This step was used to present the themes and goals. This step included systemic brainstorming. The themes for the workshop were Architecture Ontology Matrix (or alternative) to synch systems and software architecture and activities, and enable comprehensive tradeoff analysis by any role.
5. Synthesis and Prioritization: This step was used for visualizing the system.
6. Implement each idea: This stage was used to define the action plan and put the plan into a roadmap.

Reverse Brainstorming

There were 14 participants around the world in the Reverse Brainstorming Workshop. Each person generates one idea against the goal. Another person builds on two ideas that aren't their own. A debriefing followed each presentation.

Outcome of the workshop were 32 ideas that were categorized into 11 groups mapped into 3 leverage/intervention categories.

The next steps were doing some screening on the ideas and asking themselves what they were passionate about, what ideas are easy, and what can they get rid of. They did a round of impact and difficulty about how hard it is to implement and how big of an impact it would be. The group voted.

For each idea, they filled out an action worksheet as much as they could, came back into discussion, and refilled out the action worksheet.

Discussion opened about Reserve Brainstorming.

Putting It into Action

The working group discussed what problems they are wanting to find a solution for. The key premise was to find other roles who define business-technical agenda, project portfolio, etc. for their SW colleagues. They overlapped the roles with the intent and added them to the big picture. For over role, they looked at the outputs of the role, interaction, and experience.

Breakthrough on a Concrete Scenario

Using a fictional company, team, and product, the group began a case study. A fictional organization with an organizational evolution was discussed. Somewhere in the fictional organization, roles have built and maintained a system. The systems engineers aren't engaged on a day-to-day basis in this scenario. The software teams are really involved in the day-to-day in this scenario. The fictional roles have a new market that requires a digital transformation or a new product. The fictional roles try to do this, but they are understaffed and unorganized, so chaos results. They began to investigate why this didn't work, won't work, and what information that is needed.

The working group is taking people in the new world order, thinking it's okay and making it visible as to why it's not okay, and bringing back the discipline of systems engineering. The action worksheet is still working with their roles. Right now, the reference model is IEEE 15288, which is being used to analyze social networks. Working group members are asking what are the interactions in a very specific scenario.

Discussion opened on the fiction scenario the INCOSE working group investigated.

Stephanie White adjourned the meeting at 12:00 PM ET.

Next meeting will be held on Tuesday, 11 April at 11 AM ET.