System Phases, Modes, and States Solutions to Controversial Issues

INCOSE Chapter Meeting

International Council on Systems Engineering ● Cleveland-Northern Ohio Chapter

All Welcome ● Member Meeting

Who: INCOSE Cleveland-Northern Ohio Chapter

What: Open meeting with a special topic

When: Tuesday, May 21, 2013, 5:30 PM

Where: Marriott Hotel, Cleveland OH

AMP150 Private Dining Room

Guest Speaker: Charles Wasson, Wasson Strategics, LLC

Registration Requested: See Eventbrite link at http://www.incose.org/cleveland/

Meeting Topic: *System Phases, Modes, and States: Solutions to Controversial Issues*

Abstract for the presentation: System phases, modes, and states are often one of the most controversial concepts in System Engineering due to a lack of standards for implementation. Yet, the topic serves as one of the most critical guiding principles of System Engineering: Decompose system complexity into manageable levels and entities with acceptable risk that lead to optimal system design solutions.

Four issues contribute to the challenges of implementing system phases, modes, and states:
Issue #1 – Definitions of "mode(s)" versus "state(s)"
Issue #2 - Do "modes" contain "states" or do "states" contain "modes"?
Issue #3 - Should specifications specify "modes and states"?
Issue #4 - Should specifications flow down "modes and states"?

To address these four issues, this presentation provides a statement of the problem, identifies sources of the problem, provides clarifying definitions, and provides illustrative examples of "modes" and "states". Building on the foundational definitions, the presentation explores the entity relationships (ERs) between phases, modes, and states and how they can be employed as a problem solving solution development framework to identify and link system phases of operation, modes, use cases, and various types of states to the system architecture.

*The meeting is **free** and **open** to the public. For those in attendance, food and beverage purchases may be made.*

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