Systems Engineering Management and the Relationship of Systems Engineering to Project Management and Software Engineering

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www.bkcase.org

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What is BKCASE?

- Project to create:

  – Systems Engineering Body of Knowledge

  – Graduate Reference Curriculum in Systems Engineering (GRCSE™ – pronounced "Gracie")

- Started in September 2009 by Stevens Institute of Technology and Naval Postgraduate School with primary support from Department of Defense

- Project will run through 2012

- Intended for world-wide use

Our Partners

Under consideration
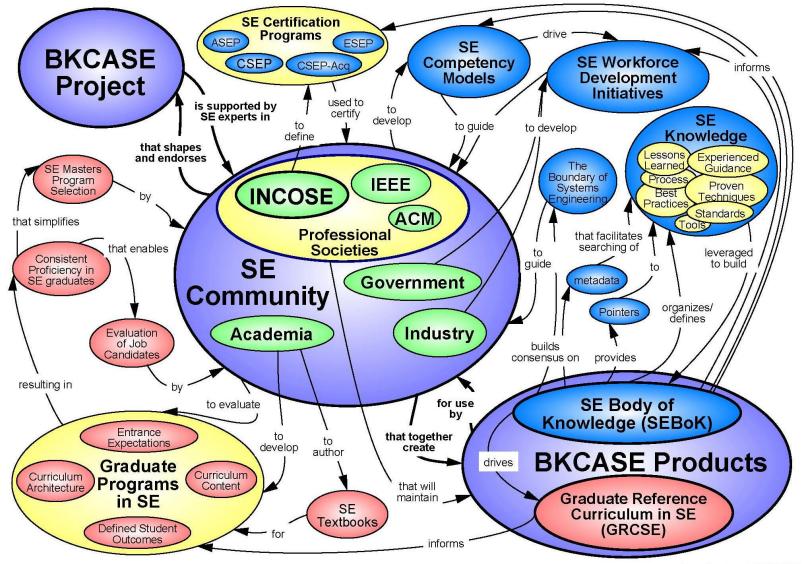
BKCASE Vision and Objectives

Vision

> "Systems Engineering competency models, certification programs, textbooks, graduate programs, and related workforce development initiatives around the world align with BKCASE."

Objectives

1. Create the SEBoK and have it be globally recognized by the SE community as the authoritative guide to the body of knowledge for the SE discipline.

2. Create GRCSE and have it be globally recognized by the SE community as the authoritative guidance for graduate programs in SE.

3. Facilitate the global alignment of related workforce development initiatives with SEBoK and GRCSE.

4. Transfer stewardship of SEBoK and GRCSE to INCOSE and the IEEE after BKCASE publishes version 1.0 of those products, including possible integration into their certification, accreditation, and other workforce development and education initiatives.

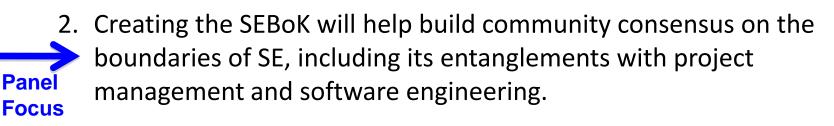# Body of Knowledge and Curriculum to Advance Systems Engineering (BKCASE)

http://www.BKCASE.org/about-bkcase/bkcase-story/

Alice Squires 11/11/2009

SEBoK Value Proposition

1. There is no authoritative source that defines and organizes the knowledge of the SE discipline. Knowledge gap creates unnecessary inconsistency and confusion in understanding the role of SE and in defining SE products and processes.

Panel Focus →

2. Creating the SEBoK will help build community consensus on the boundaries of SE, including its entanglements with project management and software engineering.

3. A common way to refer to SE knowledge will facilitate communication among systems engineers and provide a baseline for competency models, certification programs, educational programs, and other workforce development initiatives around the world.

4. Common ways to identify metadata about SE knowledge will facilitate search and other automated actions on SE knowledge.

Systems Engineering Management Panel

- Panel will examine the approach and content of the Systems Engineering (SE) Management knowledge area, discuss the challenges and issues in developing an acceptable and concise representation of the knowledge, and ensure reasonable application to a wide range of domains.

- Consists of the experts who are authoring this chapter of BKCASE in SE Planning, Assessment and Control, Decision Management, Risk Management, Configuration Management, Information Management, and Measurement.

Author	Organization
Barry Boehm	University of Southern California
Ed Conrow	Management and Technology Associates
Ray Madachy	Naval Postgraduate School
Ken Nidiffer	Software Engineering Institute
Garry Roedler	Lockheed Martin

Challenges

- Complex systems bring many disciplines together and their boundaries are not always the same in different project environments. There is no one-size-fits-all way to define the details of where various SE management functions are performed.

- The advent of net-centric systems has made Software Engineering more critical to SE. Strong synergy exists between them, but there are key distinctions and management challenges between SE and Software Engineering.

- Covering multiple domains and industries for SE management.

- Individual management processes (e.g. Project Planning, Measurement, Risk Management) may require different approaches when distinguishing SE, Project Management and Software Engineering.

Call for Authors, Subject Matter Experts, Reviewers and Early Adopters

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