



INCOSE Chesapeake Chapter
International Council on Systems Engineering

Welcome

INCOSE Chesapeake Chapter
2nd Annual Maryland CSEP Gala
7 September 2011



INCOSSE Chesapeake Chapter
International Council on Systems Engineering

Get involved



Help the BoD grow the Chapter



INCOSSE Chesapeake Chapter

International Council on Systems Engineering

Got a topic to share?

Join our great list of speakers – Give a Lecture at our
Monthly meetings





Share your Thoughts – Blog It

- Contact Paul Martin, Communications Officer to become a contributor.

Blog — INCOSE Chesapeake Chapter, Chesapeake

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2006 Click to read more
2002 & 2009
2003-2008, 2010
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BLOG

Some ruminations on Systems Engineering

Can Systems Engineering account for a corrupt heart?
by PAUL MARTIN AUGUST 26, 2011

I was reading a Washington Post editorial a few weeks back, dealing with the tragic events around the July 23rd train accident in China. What got me was the line: "the government was forced to admit that a design flaw was partly to blame for the accident, and not only a lightning strike"
Looking into [...]
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Style vs Substance?
by PAUL MARTIN AUGUST 17, 2011

Where's the fight? Every now and then I get an invitation in the mail to partake in a one day seminar for Edward Tufte's "Presentation Data & Information." I've never been able to go but the invitation I receive has a wonderful reproduction of an 1869 information map by Charles Joseph Minard. On one graphic, [...]
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INCOSE Chesapeake Chapter Events

http://www.incose-cc.org/ Internet 100%



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August 26, 2010 INCOSE Chesapeake Chapter Systems Engineering Professional Certification Reception at The Engineers Club of Baltimore



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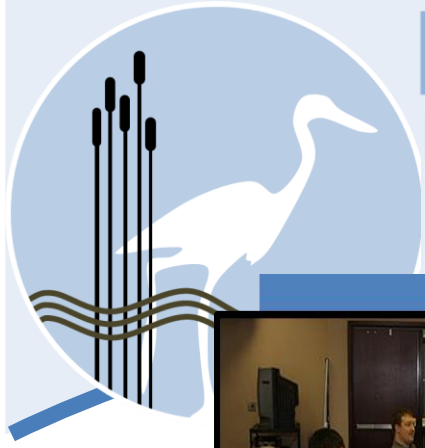
INCOSE Chesapeake Chapter's 2010 Holiday Celebration



INCOSE Chesapeake Chapter

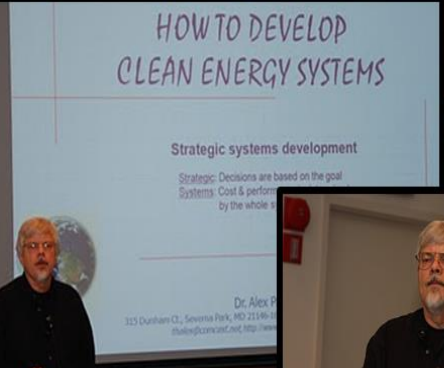
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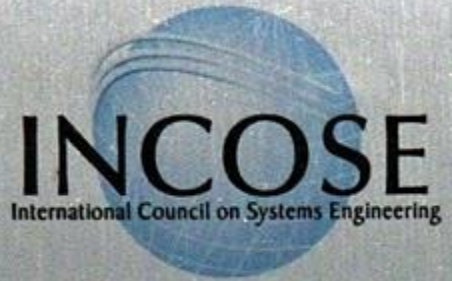
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DIRECTOR'S AWARD

Presented to

CHESAPEAKE CHAPTER

**FOR MOST IMPROVED PERFORMANCE
IN ONE YEAR**

PRESENTED JUNE 2011



INCOSE Chesapeake Chapter

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GOLD CHAPTER CIRCLE AWARD

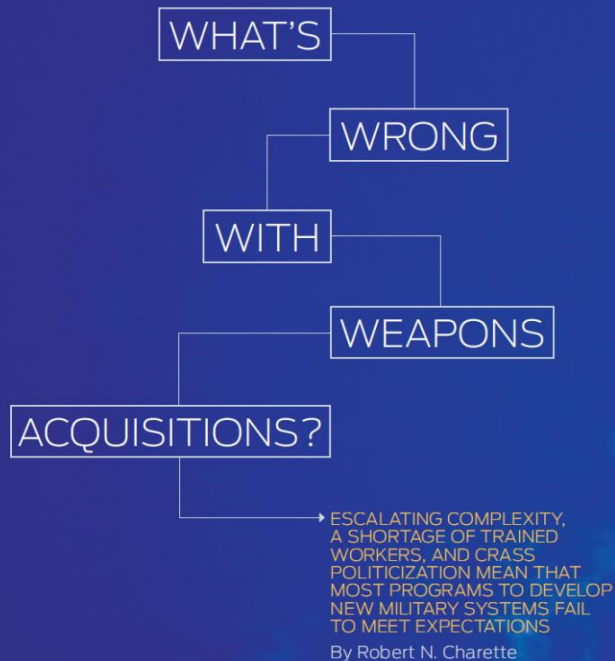
**BASED UPON ITS CONTRIBUTIONS AND
ACCOMPLISHMENTS IN 2010**

CHESAPEAKE CHAPTER

**IS RECOGNIZED FOR REACHING THE HIGHEST GOALS AND
STANDARDS ESTABLISHED BY OUR ORGANIZATION.**

PRESENTED JUNE 2011

The need for Systems Engineers



32 NA • IEEE SPECTRUM • NOVEMBER 2008

WWW.SPECTRUM.IEEE.ORG

"Another factor contributing to program failure is the shortage of technically trained people, especially systems engineers. A systems engineer translates technical needs into an overall system architecture that creates the best operational capability at the most affordable cost. As a project proceeds and goals or needs shift, systems engineers have to determine the difficult but necessary cost, schedule, and performance trade-offs to keep everything on track. As programs get bigger and more complex, the need for rigorous systems engineering increases."

**IEEE Spectrum, Volume 45, Issue 11,
November 2008 Page(s):33 - 39**



Chesapeake Chapter
INCOSE
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CNNMoney.com



- Date: Oct 2009
- Systems Engineer ranked as #1 job in America
- Mentions INCOSE CSEP as a potential pre-requisite



INCOSE Multi-Level Certification

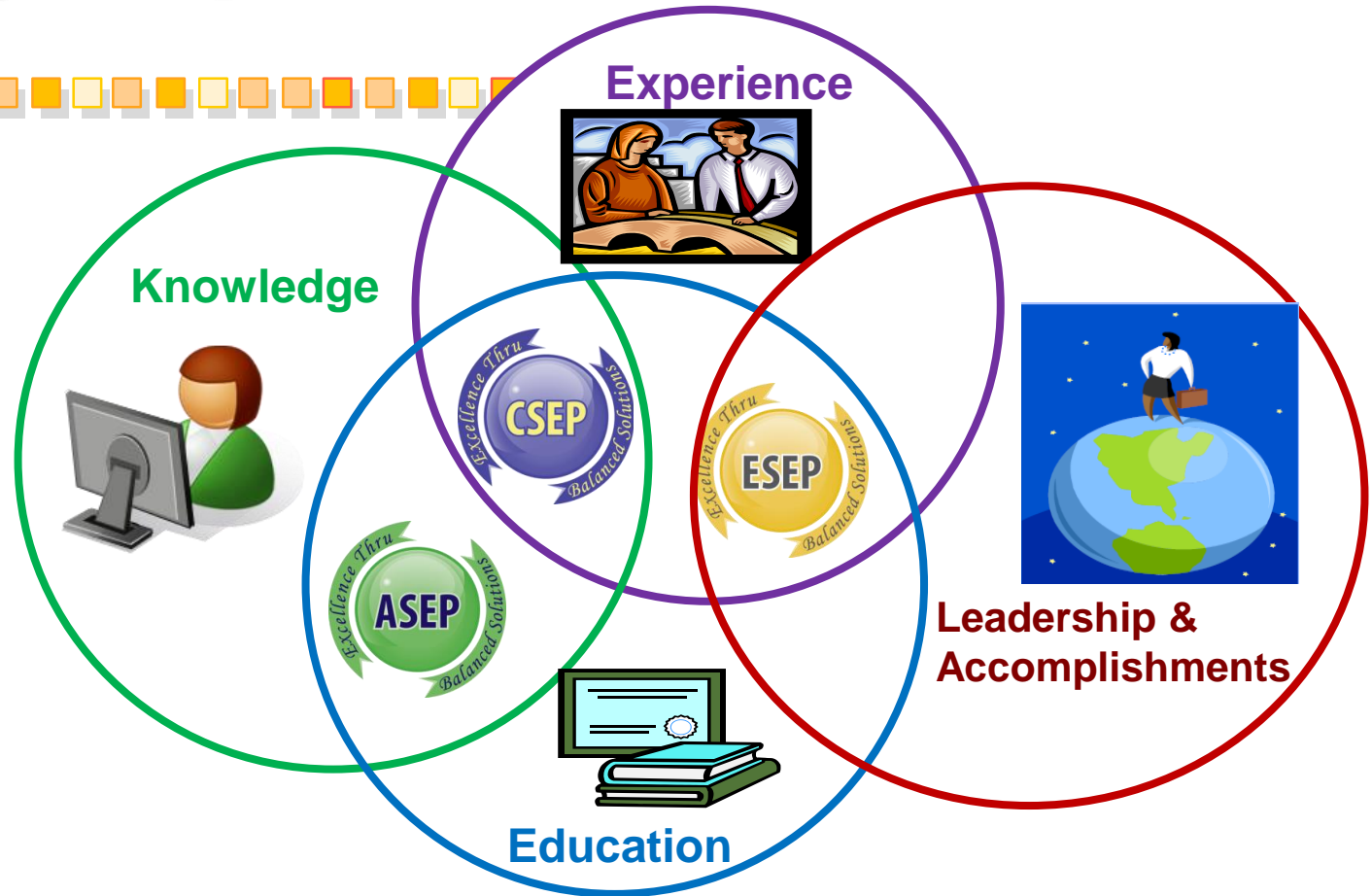
For every stage of your career



ESEP	Expert Systems Engineering Professional
CSEP	Certified Systems Engineering Professional
ASEP	Associate Systems Engineering Professional
-Acq	Certification w/ US DoD Acquisition



Key Requirements of Certification



These elements of the INCOSE certifications are measurable tangible parameters consistent with ISO guidelines for a certification program.

Certification Focuses on the Breadth of Demonstrated Learning Needed for a Career of System Engineering



ESEP focused on:

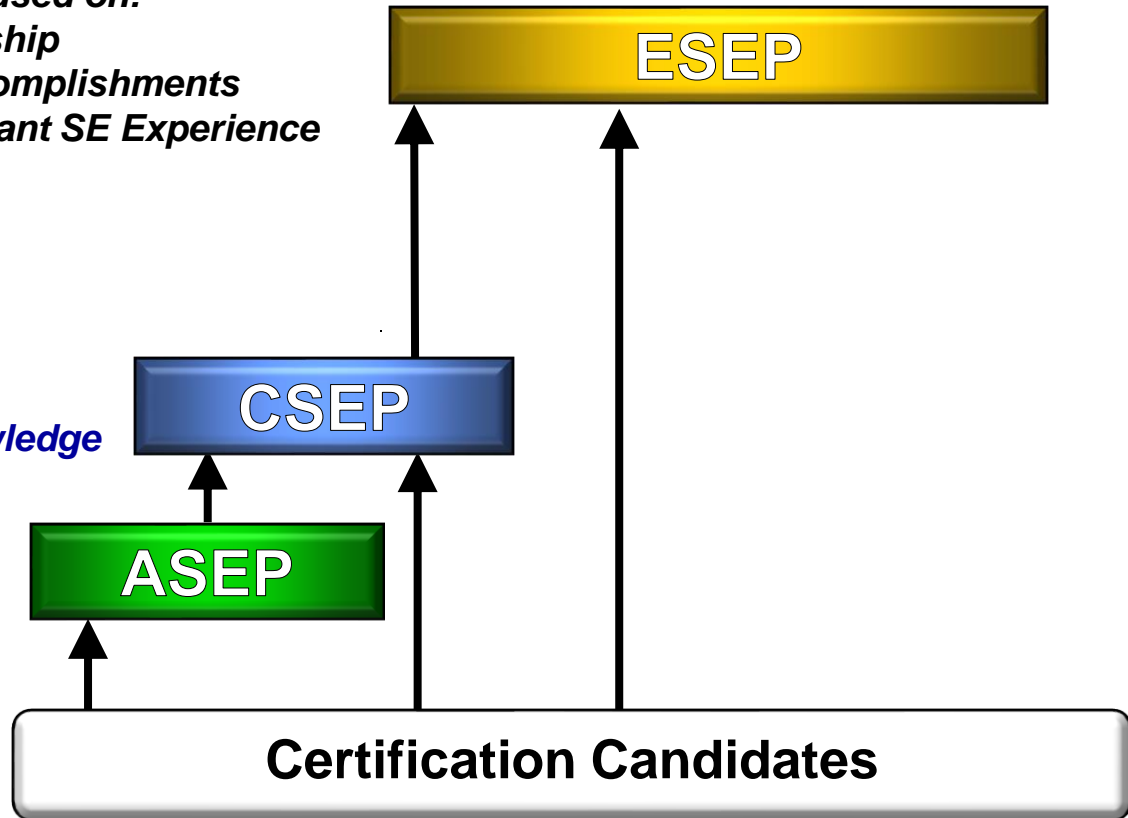
- Leadership
- SE Accomplishments
- Significant SE Experience

ESEP focused on:

- SE Experience
- Applied SE Knowledge

ASEP focused on:

- SE Knowledge





Entry Level

Associate Systems Engineering Professional

- Targeted towards junior/emerging Systems Engineers and recent college graduates with limited Systems Engineers work experience
- ASEPs are certified against knowledge requirements through an exam
- ASEPs must be, and remain, INCOSE members
- Renewal every 5 years through professional development, maximum duration of 15 years
- Available since 2008



Foundation Level

Certified Systems Engineering Professional

- Targeted towards people with five or more years of Systems Engineers work experience
- CSEPs are certified against experience, education, and knowledge requirements
- Experience must be substantiated by 3-5 work-related references
- Knowledge certified through an exam
- INCOSE membership not required
- Renewal every 3 years through professional development
- Available since 2004



Senior Level

Expert Systems Engineering Professional

- Targeted towards Systems Engineering leaders with significant work experience and demonstrated systems accomplishments and who have many years of systems engineering experience
- ESEPs are certified against experience, leadership, professional development, and education requirements
- Experience must be substantiated by 3-5 work-related references
- Interviews used to validate leadership and significant systems accomplishments
- ESEPs must be, and remain, INCOSE members
- No renewal requirements other than INCOSE membership
- Available since 2010

Acquisition Extension

US DoD Acquisition Extensions



- Targeted towards Systems Engineers who support or work in a US Department of the Defense acquisition environment
- Candidates must first become an ASEP, CSEP, or ESEP
- Acquisition knowledge items tested through both the core ASEP/CSEP exam and an additional Acq exam
- Extension renewed concurrently with base certification
- Available since 2008

Multi-Level Certification Concept



*Leadership
Demonstrated Accomplishments
Significant Experience
References
Education
INCOSE Member*

20 yrs SE experience
Technical Bachelor's*

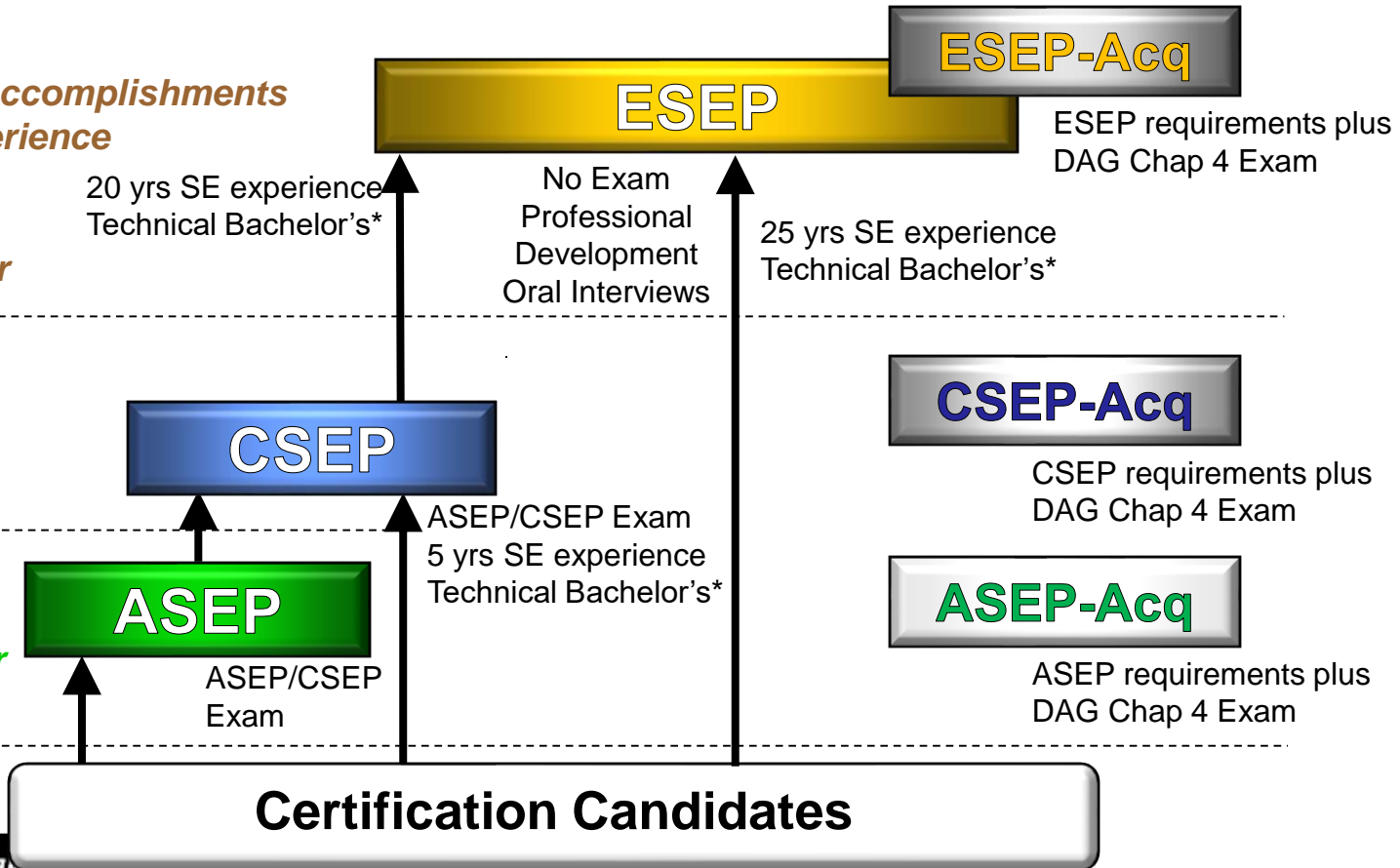
No Exam
Professional Development
Oral Interviews

25 yrs SE experience
Technical Bachelor's*

ESEP requirements plus
DAG Chap 4 Exam

*Experience
References
Education
Knowledge*

*Knowledge
INCOSE Member*



* or Non-Tech Bachelor's & additional 5 yrs experience
or No Bachelor's & additional 10 yrs experience



14 Functional Areas Recognized for Systems Engineering Experience



- SE Technical Competencies
 - Requirements Engineering
 - Design Development
 - System Integration
 - Qualification, Verification, and Validation
- SE Management Competencies
 - Technical Planning
 - Technical Effort Assessment
 - Risk and Opportunity Management
 - Baseline Control
- SE Support Competencies
 - Specialty Engineering
 - Process Definition
 - Training
 - Tool Support
 - Quality Assurance
- Other SE Competencies
 - To allow for the variety of SE across domains

Successful candidates must have balanced experience across multiple areas