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Chesapeake Chapter INCOSE

International Council on Systems Engineering

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May 2011 E-Newsletter



Cloud Computing is the trend du jour. Everyone agrees that "cloud" is a great metaphor for the Internet, and when you combine it with "computing" you've just made something even more ambiguous. But the real question is: Can our culture absorb this new paradigm? Especially, if it turns out that all this hype is just a bunch of uninformed opinions creating an intangible concept. In this issue we will cut through the mist and mystery to get to the reality of the future of distributed processing. And of course our next Monthly dinner will address these issues as well, with one of the leading experts in field, Dr. Foxwell. So be sure to join us on May 18th at a CyberCore Technologies for a free dinner followed by an informative lecture. Register today. I hope to see you there! ~~~ Paul B Martin, CSEP; INCOSE Chesapeake Communications Officer

Dinner Meeting - Wednesday 18 May 2011 The Challenge of Cloud Computing

Harry J. Foxwell, Ph.D.; Principal Consultant; Oracle Corp

Presentation: Even as the debate continues to rage about the definition and potential use cases of "Cloud Computing", IT vendors, system integrators, federal and state agencies, and private sector corporations are rushing to exploit it. Are the expectations for this supposedly "new" form of IT realistic? What are the technical and non-technical challenges that must be addressed?



Speaker: Harry Foxwell is a Principal Consultant for Oracle Corporation's Public Sector organization in the Washington DC area, where he is responsible for solutions consulting and customer education on Cloud Computing, Virtualization, operating systems including Solaris and Linux, and open source technologies. Harry worked for Sun Microsystems (acquired by Oracle in 2010) since 1995. Prior to that he worked for 6 years as a UNIX and Internet specialist for Digital Equipment Corporation; he has worked with UNIX systems since 1979. He also contributes to one of Oracle's internal websites of Linux technical information, and [blogs about Cloud Computing](#). He is coauthor of

the book *Pro OpenSolaris* and two of the Sun BluePrints series. He earned his doctorate in Information Technology in 2003 from George Mason University (Fairfax, VA), and has since taught graduate courses at GMU in Operating Systems Security, Computer Architecture, and Electronic Commerce.

NEW Location: [CyberCore Technologies Corporate Headquarters and Logistics Support Center](#); Meadowridge Business Park 6605 Business Parkway Elkridge, MD 21075

FREE Meal: Wine, Beer, Hors D'oeuvres followed by a Main Buffet Featuring, Baked Rigatoni, Meatballs Marinara, Caesar Salad, Garlic Bread and Dinner Rolls, Cookies & Brownies dessert, coffee, iced tea.

[>>Download the May Meeting Flyer Here<<](#)

Reservations:

- In order to have an accurate count of guests you MUST register on-line at our website:

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May 2011

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This is the monthly newsletter for INCOSE Chesapeake, a local chapter of INCOSE International. We are a not-for-profit organization dedicated to providing a forum for professionals practicing the art and science of Systems Engineering in the Northern & Central Maryland & Southern Pennsylvania area.



>>[Registration Page](#)<< Before the cut-off date of May 11th.

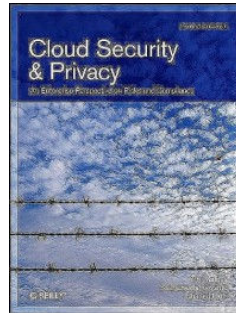
No more reservations will be accepted after May 11th

We sincerely thank [CyberCore Technologies](#) for their generous sponsorship for this month's meeting.

The purpose of the Chesapeake Chapter is to foster the definition, understanding, and practice of world class systems engineering in industry, academia, and government. In light of that goal, every month at our dinner meeting we have a drawing for the latest in Systems Engineering literature. So come on out for a chance to win.

This month's door prize is:
Cloud Security and Privacy: An Enterprise Perspective on Risks and Compliance (Theory in Practice)

Tim Mather, Subra Kumaraswamy, and Shated Latif



The President's Corner Cloud

Many Opportunities for You



May 2011 is another big month: You can register for the International Symposium in Denver, attend the upcoming Cloud Computing event at CyberCore, listen in on two new systems engineering webinars, and craft new programs with your friends. New programs involve things like Model Based Systems Engineering (MBSE), reaching out to a broader population (webinars?), and teaming up with related professional groups (AIAA, AFCEA, PMI, IIBA).

21st ANNUAL INCOSE INTERNATIONAL SYMPOSIUM 20-23 JUNE 2011

Why should you attend?

The International symposium of INCOSE is in its 21st year leading the way into the future with the largest Systems Engineering event in 2011. Continue your professional development by being on the cutting edge of Systems Engineering technology. There are 35 paper sessions with 96 papers (including invited papers from SoS experts & IEEE colleagues), 6 panels debating various unresolved issues, 16 practical tutorials and 4 leading keynote speakers and so much more. Join us and experience the following: Interact one-on-one with leading practitioners, researchers and educators

- Attend paper presentations
- Participate in Panels
- Competence building Tutorials
- Get involved with Working Groups
- Stay current on "Best Practices"
- Learn about Certification
- Network with colleagues and make new connections
- Receive Proceedings and conference bag

LEARN ABOUT CLOUD COMPUTING @ OUR NEXT MEETING ON 18 MAY 2011

Our next monthly meeting will be located at CyberCore Technologies' expanded facility in Elkridge. CyberCore will be funding an excellent catered dinner. We will all be able to share in their celebration of the underlying business expansion. A Principal Consultant

The Chesapeake Chapter is always looking for volunteers to speak at our upcoming meetings! Please contact our Programs Director, [Mr. Donald York](#), if you would like the opportunity to speak or can recommend someone.

The Chesapeake Chapter of INCOSE is proud to recognize the following organizations for sponsoring our endeavors to expanding the understanding and appreciation of Systems Engineering in the local area:



Local SE Training

Preparing for the Certified Systems Engineering Professional (CSEP) Exam

Obtaining a CSEP is not easy, but that's what makes it so valuable. You have to demonstrate your real world experience via a lengthy application and three references. Then you need to pass a two-hour, 120-question, multiple-choice exam. The courses listed below will help prepare potential candidates for this demanding process by becoming familiar with the INCOSE SE Handbook version 3.2 which is the basis for the examination.

1. Center for Systems Management

from ORACLE will be talking about Cloud Computing, one of the key technologies that drives CyberCore's business.

WIKIPEDIA provides a nice definition. Cloud computing refers to the provision of computational resources on demand via a computer network, such as applications, databases, file services, email, etc. In cloud computing, the user's computer may contain almost no software or data (perhaps a minimal operating system and web browser only), serving as little more than a display terminal for processes occurring on a network of computers far away. An expert from Oracle will be briefing us.

THE SYSTEMS ENGINEERING VALUE PROPOSITION

Over the last ten years there has been a lot of talk about the Systems Engineering Value Proposition. I am especially fond of the INCOSE Value Proposition briefing slides from John Thomas, my counterpart at the international level. My version of his three bullets follows:

- Improving our position as technical leaders within the program management team
- Strengthening the value proposition associated with the Systems Engineering (SE)
- Elevating the prestige associated with membership in our INCOSE organization

You already know about the Systems Engineering resources provided by the [International](#) and the [Chesapeake Chapter](#). I hope that you did not miss the Systems Engineering Fundamentals Course and the Systems Engineering Certification Webinar provided by the International. [Sign into your Connect account and find out more.](#)

It is always worthwhile to cruise the both web sites and to become familiar with the resources available to you (for free as a member). Send me an e-mail at John.Lewis@incose.org if you cannot find what you need.

PARTICIPATION

Finally, the INCOSE chapter is actively recruiting key individuals who wish to advance this INCOSE value proposition. You can e-mail [members of the board](#). You can find us at the regular Wednesday meetings (third Wednesday of every month). You can get free food! Tell me what you want to do and what you need to make it happen.

- Our exceptional web site?
- Wednesday evening talks?
- Wednesday chapter dinners. Holiday party?
- Monthly brown bag talks?
- Tutorials?
- CSEP and the SE handbook?
- International conferences? Working groups?
- Publications?
- Tutorials?
- Lunch time brown bags?
- Model Based System Engineering?
- Requirements?
- Regional conference?

*Dr. John Lewis, CC President,
john.lewis@incose.org*

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Feature Article

Cloud Computing *What's the hype all about?*



June 7 - 9th
Vienna VA.

CSM the industry leader in preparing system engineers for the INCOSE CSEP designation, announces a public CSEP Preparatory class [Register >>HERE<<](#)

2. UMBC Training Centers

UMBC

Training Centers
offer an on-line
CSEP Prep Course
Dates: 4 Saturday Mornings,
July 9th - 30th

[>>Register Here<<](#)

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Up Coming Conferences

May 01 - 05, 2011

Detroit, MI

[Department of Defense Intelligence Information Systems \(Do DIIS\) Worldwide Conference](#)

Hosted annually by the DIA Directorate for Information Management (DS) and Chief Information Officer, Do DIIS Worldwide provides a unique opportunity for defense intelligence community members and industry peers to come together for knowledge sharing, training and discussion of current and future information technology (IT) challenges and requirements. The conference's 2011 theme, Secure and Collaborative Intelligence in Defense of the Nation, highlights the DIA Chief Information Officer's commitment to developing and maintaining secure and reliable networks for Department of Defense personnel, services and information technology customers.

May 02 - 04, 2011

Canberra, Australia

[SETE2011 The Systems Engineering Test and Evaluation Conference](#)

SETE2011 (Systems Engineering Test and Evaluation) is a conference co-organized by The Systems

by Kurt Christensen



Figure 1. I'm not expendable, I'm not Stupid, and I'm not going.

Like most terms with *buzz*, the term **Cloud Computing** has been overloaded to mean many things. Generally, it means the application of replicated commodity hardware (or virtual machines) working together to, more or less, appear as a single service.

Doing a web search on '[cloud computing companies](#)' yields a long list. Check out the *Business Innovations* article [90 Cloud Computing Companies to Watch in 2011](#). Here is a short list of the more recognizable cloud computing service providers: [Amazon](#); [Google](#); [Microsoft](#); and [Rackspace](#).

If some sort of extensive computing capability is needed, but you don't want to provide in-house support, these "services" may be leased as a *utility* from vendors. From the point of view leasing cloud services, you pay only for what you use.

- Need more compute power? Provision more machines.
- Need more storage? Provision more disks.
- Need more load-handling capability? Provision more servers.
- Need to save expense? Provision less. Pay only for what you use.

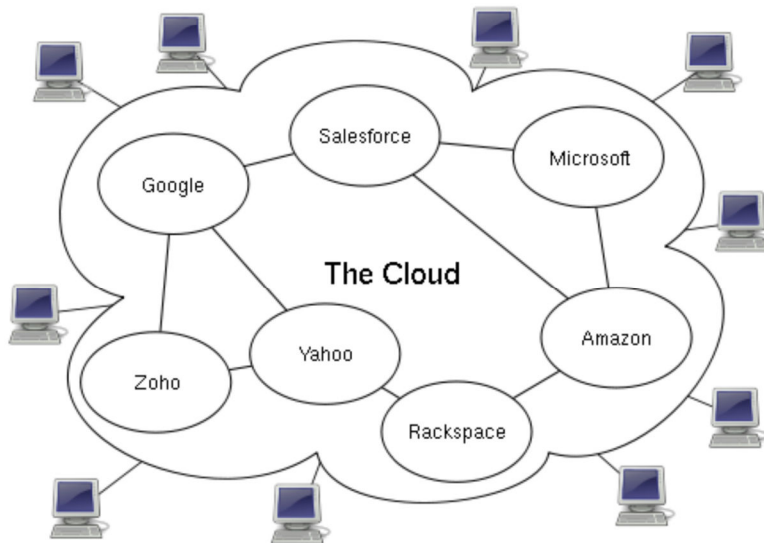


Figure 2. Cloud Computing Conceptual Diagram

Quoting Peter Mell and Tim Grance from NIST

"Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction."

Cloud computing, extends the notion of *Software as a Service (SaaS)*, where applications are removed from the desktop and moved to remote, virtual hardware, typically in a cloud. These services implement various functions like word processors, spreadsheets, photo archives and the like. Some of these services provide for collaboration among many users. This notion can be extended to *Infrastructure as a Service (IaaS)* allowing deployment of almost all business functions into a cloud.

Engineering Society of Australia (SESA), The Southern Cross Chapter of The International Test and Evaluation Association (ITEA) and INCOSE Australia. The theme of SETE2011 is 'Systems Engineering in the Next Decade'

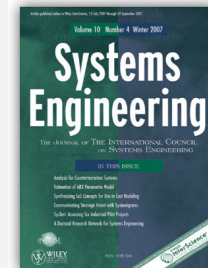
June 20 - 23, 2011

[21st Annual International Symposium](#)

The INCOSE International Symposium is the premier international forum for Systems Engineering. Participants network, share ideas, knowledge and practices, and learn more about the most recent innovations, trends, experiences and issues in Systems Engineering. Paper authors, panelists and tutorial presenters are encouraged to address ways in which Systems Engineering principles and perspectives are performed today and how Systems Engineering may influence our future. Topics of value include technology insertion, process improvements, and organizational governance of the systems we make, manage, operate and maintain over their life cycle, to the benefit of mankind.

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Discover Systems Engineering



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As a member of INCOSE you have online Access to the current and past issues of The Journal of Systems Engineering via the Wile Inter Science site. Search the archives and download papers of interest. Registration on the Wile site is required. Instructions for accessing the SE Journal can be found in [INCOSE Connect](#)

With Connect you can also download the April 2011 Issue of INSIGHT *Special Feature on Knowledge Management*

The utility definition is rather broad. Some purists restrict the definition of "cloud computing" to distributed applications and storage. This implies single programs being distributed to multiple machines and a single file system that has been distributed.

In computing, a [distributed file system](#) or network file system is any file system that allows access to [files](#) from multiple hosts [sharing](#) via a [computer network](#). [Silberschatz, Galvin (1994). Operating System concepts, chapter 17 Distributed file systems. Addison-Wesley Publishing Company. ISBN 0-201-59292-4.] This makes it possible for multiple users on multiple machines to share files and storage resources.

[Read More.](#)

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Did You Miss Last Month?

Defending Software Applications from Threats



On April 20, 2011 we experienced another wonderful meal and great conversation prior to another stimulating lecture. This time out we got to hear from Dr. Spray car discuss software side of Systems Engineering and the vulnerabilities of software applications. He explained the need to instill security in SW applications from the very beginning. If this isn't possible then doing Application Code Analysis is the next best thing. Remember the goal is to reduce operational risk after the application is connected to the internet. Dr. Spray car also pointed out concerns with "[Technology Debt](#)" as well as the [top 25 most dangerous errors](#) leading to vulnerabilities. Want to know more?

Then download Dr. Spray car's presentation slides [here](#) >>

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Read our whole report on our web site [>>HERE<<](#)



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Newest Chapter Members

- Jeanne H Murphy Summit Solutions LLC
- Coos Cappuccino Northrop Grumman
- Lynne Hampton JHU APL
- Jay W School Booz Allen Hamilton
- Laura Cosentino JHU Applied Physics Laboratory
- Mohammad Dehghani JHU Applied Physics Laboratory
- William M Kroshl JHU Applied Physics Laboratory
- Samuel B Ofori UMBC
- Scott R Macrae Booz Allen Hamilton
- Steven Kutoroff AT&T
- Lawrence A Turner Northrop Grumman
- Roger Vasquez Theta Systems Inc
- Michael Perez AAI Corporation
- Monica Walters JHU Applied Physics Laboratory
- Keith D Schoonover BAE Systems
- James R Jackson Northrop Grumman

We welcome our latest new members. We look forward to seeing you at our meetings and tutorials.

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This Newsletter is to serve our members and is open to all for contributions. Do you have an interesting idea for an article? A review of a new book related to engineering? [Let us know.](#) We'd love to hear about. It may wind up in a future issue of our Newsletter.

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Cloud References

Systems Engineering at MITRE, CLOUD COMPUTING Series



[Cloud SLA Considerations for the Government Consumer](#)
Kevin Buck, Diane Hanf

[Products to Build a Private Cloud](#) Lawrence Pizette,
Jennifer Manring

[Information Security in the Clouds](#) Donald Faatz,
Lawrence Pizette

[Federal Cloud Computing—A Decision Process for Applying Cloud Computing in Federal Environments](#) Geoffrey Raines, Lawrence Pizette

[Cost and Business Case Considerations](#) Lawrence Pizette, Jennifer Manring

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Keep up with the latest news and events. Find out about our new Board of Directors. Explore our extensive library of previous lectures from our Monthly Dinner Meetings. Learn of the Benefits of Joining INCOSE. Check out Systems Engineering education in the local area. All this and more awaits you at our [INCOSE Chesapeake Chapter Website](#).

For any comments or suggestions about this newsletter please e-mail our [President, John Lewis](#) or our [Communications Officer, Paul Martin](#). We value your feedback.

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Thanks in advance.**

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