



# IEEE *The Open Channel*

Newsletter for the Hampton Roads Section of the IEEE  
The Institute of Electrical and Electronics Engineers, Inc.

<http://www.ieee.org/hrs>

Volume 3 – No. 6

September 2006

## Trusted Systems Overview with Case Study: Past, Present and Future

Speaker: Boyd Fletcher

Senior Network Engineer  
US Joint Forces Command  
Suffolk, VA

**Date/Time:** Thursday, September 19, 2006

**Location:** Aberdeen Barn <http://www.aberdeenbarnvabeach.com/>

5805 Northampton Blvd. 757.464.1580

Virginia Beach, VA 23455

**Cost:** Members and guests \$20; Students \$10

### Agenda:

- 1) Quick review of trusted o/s theories. (Bell-LaPadula and Biba, Flask/Type Enforcement)
- 2) Quick review of current and future policy (DOD Regs, SABI process, dicast process, CDMO)
- 3) Overview of past, present, and future trusted operating systems (trusted irix/solaris/hpux, SE Linux, MILS [integrity o/s]) - overview of difference between MLS, MSL, and MILS
- 4) Quick overview of what we are doing at J9 (CDCIE stuff)
- 5) Lessons learned from being on the bleeding edge of guard development using Java.

**Biographical Sketch:** **Boyd Fletcher** started his career in IT in the banking industry in 1986 and graduated in 1993 from Old Dominion University with a Bachelor's in Computer Science. He has spend most of the last 13 years working for the Department of Defense as a software developer and systems engineer, first as a contractor with a variety of companies and now as a civil servant with the Dept of Navy's Space and Naval Warfare Command. As deputy chief engineer at the United States Joint Forces Command Joint Experimentation Directorate (J9) Prototype Engineering branch, Boyd is responsible for software architecture design and participation in experiments and exercises. His areas of specialty include multi-level security and trusted systems, digital library systems, and collaboration technologies.

**Reservations:** Please forward RSVP to Kurt Clemente [+1 757 676 6004] or send an email to [officers-r3-hamptonroads@ieee.org](mailto:officers-r3-hamptonroads@ieee.org).

**Checks:** Payment may be made by cash or check the day of the event.

**Directions:** See page 3

### Upcoming Meetings

<b>Oct 19</b>	<i>Engineers and Financial Planning: IEEE Advantage Services – Larry Grogan {Topeka Steakhouse}</i>	<b>Nov 16</b>	<i>{Aberdeen Barn}</i>
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Hampton Roads Section**

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All materials for THE OPEN CHANNEL are due by the 22<sup>th</sup> day of the month preceding the issue month. Address all correspondence to:

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## From the Chair

Let the meetings begin...

The 'fun in the sun' portion is behind us for another year. Hope you were able to take advantage the summer and spend some time with the family.



Over the summer the EXCOM held to two No-host sessions where there is no presentation – just a gathering to keep in touch with the members. It also gave an opportunity for some members to decide whether or not to get involve with section activities. From those that attended we, the EXCOM, were to get feedback on meetings, topics, locations, etc. I fully expect that we will continue these summer sessions.

Meet the newest member of the EXCOM, Dean Carzoo. Mike has agreed to fill the Secretary's position for the remainder of the 2006 year. Stop in at our next meeting and get to know him.

Speaking of officers, annually, the IEEE members are requested to participate in the IEEE elections. This is your opportunity to provide input to determine who will serve on the IEEE Board of Directors, Regional Activities Board, Technical Activities Board, IEEE-USA Board and the Standards Association Board. The ballots for the IEEE Annual Election will be mailed on or before 1 September to all eligible IEEE voting members.

Get to know the platforms of Lew Terman and John Vig, candidates for 2007 IEEE President-Elect. A list of ten questions and the candidates' answers can be found on the web at <http://www.ieee.org/elections>. You can also check the link on that page for "Annual Election Candidates" for the most accurate and up-to-date information on all candidates and election categories. The elections web site also provides links to candidate biographies and position statements for of the open position.

Locally, the nomination notice for the EXCOM positions will go out in October. If you, or someone you know, would be interested in serving in one of these elected positions please forward that information to the EXCOM at [officers-r3-hamptonroads@ieee.org](mailto:officers-r3-hamptonroads@ieee.org).

A final note. We start this last third of the year with a continuance on network and computing issues entitled 'Trusted Systems Overview with Case Study' by Boyd Fletcher.

V/R,

*Williams LaBelle*

Hampton Roads Section MDC and Newsletter Editor

[w.labelle@ieee.org](mailto:w.labelle@ieee.org)

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## Aberdeen Barn:

### Directions from Norfolk:

1. I-64 West to Northampton Blvd (exit 282)
2. At exit 282, US 13 North/SR 166 take RIGHT ramp.
3. Turn RIGHT into Aberdeen Barn parking lot (0.8 miles)

### Directions from Williamsburg:

1. Take I-64 East to Northampton Blvd (exit 282)
2. At exit 282 take ramp onto US 13 North/SR 166.
3. Turn RIGHT into Aberdeen Barn parking lot (1.1 miles)



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## IEEE Launches Internet Television

On 15 August, IEEE is launching the Beta release of IEEE.tv – an internet-based broadcasting network that will produce and deliver prerecorded, special-interest programming for engineers and technologists. A collaborative effort of IEEE volunteers, members and staff across the organization, the new service will initially be available only to members only through the myIEEE web portal, ([www.ieee.org/myieee](http://www.ieee.org/myieee)). It will expand to provide select content intended for the general public starting in September.

IEEE.tv will feature original IEEE-produced content within a viewer that may in the future serve as a carrier for non-IEEE productions. Series include IEEE conference highlights, interviews with authors who publish books with IEEE, IEEE president-elect candidate debates, and introductions to new IEEE products. In September, general interest programs including those promoting careers in engineering and demonstrating new technology in everyday applications will be available to anyone who visits [www.ieee.org/ieeetv](http://www.ieee.org/ieeetv). Individuals with questions can contact [tv@ieee.org](mailto:tv@ieee.org).

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## IEEE Annual Election

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NOTE to Newsletter Editors and Webmasters: When you publish any information pertaining to the IEEE Annual Election, all efforts should be made to ensure its accuracy. If you have plans to publish information on a candidate, please offer the other candidate(s) in that election category the same opportunity. You can check with Corporate Activities election staff or refer to the election website for the most accurate and up-to-date information on all candidates and election categories.

For questions, contact Carrie Loh at [c.loh@ieee.org](mailto:c.loh@ieee.org).

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## CALL FOR FELLOW NOMINATIONS

Forms and instructions for preparing nominations for IEEE Fellow grade membership are now available on the IEEE web site at [www.ieee.org/fellows](http://www.ieee.org/fellows). Nominations may be prepared electronically or in hard copy form and must be submitted by March 1, 2007.

The grade of Fellow recognizes unusual distinction in the profession and is conferred upon a person with an extraordinary record of accomplishments in any of the IEEE fields of interest. These accomplishments shall have contributed importantly to the advancement or application of engineering, science and technology, bringing the realization of significant value to society.

To recognize the entire spectrum of engineering activity, candidates are classified as Application Engineer/Practitioner, Research Engineer/Scientist, Technical Leader, or Educator, and judged accordingly. At the time the nomination is submitted, the candidate must be a senior member who has completed five years of service in any grade of IEEE membership excluding affiliate membership. The nominee's dues must be current.

Anyone may submit a nomination. However, all nominations must be supported by at least five, but no more than eight, references from active IEEE Fellow grade members familiar with the candidate's work. If the candidate is from Region 9, the IEEE Fellow Committee will accept references from senior members.

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## IEEE Southeast Conference 2007

### Call for Papers (Technical Conference)

March 22–25, 2007, Richmond, Virginia, USA

SoutheastCon is the annual IEEE Region 3 Technical, Professional, and Student Conference. It brings together electrical, computer and other engineering and science professionals, faculty and students to share the latest information through technical sessions, tutorials, and exhibits. It is the most influential conference in Region 3 for promoting awareness of the technical contributions made by our profession to the advancement of engineering and science and to the community. Attendance and technical program participation from areas outside IEEE Region 3 are also cordially encouraged and welcomed. The SoutheastCon 2007 will be held in Richmond, Virginia.

**Scopes of the Technical Conference:** The SoutheastCon 2007 invites prospective authors to submit their technical work on all aspects of engineering, science, and technology of current interest, to the conference. The conference's technical program includes (but not limited to):

- Electrical and Computer Engineering
- General Engineering and Industrial Applications
- Engineering in Medicine and Biology
- Education, Technology and Globalization
- Financial Planning in Engineering Profession
- Intelligent Systems and Control
- Networks and Distributed Systems
- Nanotechnology and Microelectronics
- Circuits and Devices
- Communications and Information Systems
- Computing and Real-Time systems

The SoutheastCon 2007 will feature the presentations of technical papers as well as tutorial sessions and workshops, for which topics of both theory and applications are encouraged.

**Technical Paper Submission Instructions:** The submission and review of technical papers for the SoutheastCon 2007 will be handled by the conference's Paper Submission and Review System, accessible from the website at .

<http://www.softconf.com/start/secon07/>

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### Brain Teaser Challenge – August 2006 *Butch Shadwell*

I live on a cul-de-sac. It is a small finger of land that extends into a tributary to the intracoastal waterway. We have about 10 houses on our street, which tees off of a main thoroughfare in Jacksonville. I happen to have a house on the corner, so since they have decided to expand the thoroughfare, I have had a lot of construction going on on the north side of our lot. There is a constant drone of backup beepers beeping, dump trucks dumping, and scrapers scraping. And don't even get me started about the dust.

All of this annoyance has started me thinking about the future. Envisioning a future where we don't use roads and pavement to get from here to there. Some imagine that in a 100 years we will be whisked from place to place by some kind of automated transport system, a la The Jetsons. Others even image that we will be transported as energy in almost no time at all. I wonder if the future will be a place where one doesn't have to actually go anywhere. What if virtually everything we do in person today, shopping, meetings, delicate surgery, etc., could be done through technological surrogates? If we could have 100% of the sensations of being somewhere else, without having to pack for the trip, why not just stay home? In this future, if we wish to visit a desert in Africa, we might, by some kind of computer interface, extend all of our senses to an android device already in that locale, through which we could sense every breeze, aroma, touch and taste, from that distant place. Just imagine. And we wouldn't get tired from long days of sight seeing. After all it's not really our legs doing the walking. If the android were designed to be instantly transformed into a perfect replica of you, then as far as everyone knew, you would be there.

I could go on for pages on all of the advantages this future holds, but I guess we had to get to the problem. At the construction site across the street there are these yellow flashing warning lights, which seem to last forever on their batteries. When I design low power/low duty cycle devices, I sometimes use a capacitor power supply to tell me the average power consumption of the circuit. If my circuit draws 50 uA all of the time and then an additional 50 mA for 1 mS every second, what is the voltage drop on my 50,000 uF capacitor power source after 10 seconds? Assume that these current drains do not vary with the capacitor supply voltage drop.

Reply to Butch Shadwell at b.shadwell@ieee.org (email), 904-223-4510 (fax), 904-223-4465 (v), 3308 Queen Palm Dr., Jacksonville, FL 32250-2328. (<http://www.shadtechserv.com>) The names of correct respondents may be mentioned in the solution column.



**IEEE Women  
in Engineering**  
[www.ieee.org/women](http://www.ieee.org/women)

## 2006 MPAC-WIE Conference, October 14 – 15

Embassy Suites Baltimore-at BWI Airport  
1300 Concourse Drive, Linthicum, Maryland 21090

### “Meeting the Challenges of the 21<sup>st</sup> Century Engineer”

#### Sponsors

IEEE Region 2, Baltimore, Washington D.C., Northern Virginia, Southern New Jersey Sections and its Women in Engineering (WIE) Affinity Groups



Member Professional Awareness Conference (MPAC)

Baltimore Section

#### NEW!!

#### Registration, Hotel and other Information (secure site)

Attendance requires Registration which is separate from Hotel Reservation.

##### Conference Chair:

**Carole C. Carey**  
WIE R2 Coordinator, PACE chair, Baltimore  
[c.carey@ieee.org](mailto:c.carey@ieee.org)

##### Conference Co-Chair:

**Cathy Jaggard**  
Chair, So. New Jersey  
[catjaggard@usa.net](mailto:catjaggard@usa.net)

##### Program Chair:

**Tina Kohler**  
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[m.a.kohler@ieee.org](mailto:m.a.kohler@ieee.org)

##### Program Co-chair:

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#### SECOND ANNOUNCEMENT (August 17, 2006)

Conference website: <http://www.ieee.org/region2/wie.htm>

You may also make your hotel reservations online through the Embassy Suites Hotel website ([www.embassysuites.com](http://www.embassysuites.com)) and be sure to include **Group/Convention Code HEO**.

- **IEEE Resources for Modern Engineers**
- **Gender Diversity in 21<sup>st</sup> Century Engineering**
- **Conquering the Challenges of Graduate School**
- **IEEE WIE (Women in Engineering) for the 21<sup>st</sup> Century**

##### Keynote speaker:

Celia Desmond, President of World Class Telecommunications, 2006 Vice President of IEEE Technical Activities and VP Member Relations IEEE Engineering Management Society  
**“Skills for Working in Today’s Competitive World in the Telecommunication Industry”**

##### Special guests:

Marc Apter, Past VP IEEE Regional Activities (2006), Past Director, IEEE Region 2  
**“My Career – What I Did Wrong”**

Mary Ellen Randall, Chair IEEE WIE Committee  
**“Gender Influences in Engineering”**

Saturday night Networking Reception, Music and Dinner.

Featured dinner guest speaker: Dr. Ruth David, President and Chief executive of Analytic Services, Inc.

**Pre-conference Tour:** Oct 14 (11:00-12:00)  
Historical Electronics Museum (HEM)  
1745 West Nursery Road, Linthicum, Maryland  
<http://www.hem-usa.org/>



Attendees should meet in the front lobby of the museum at 10:45 am.