



# VIRGINIA MOUNTAIN SECTION NEWSLETTER

IEEE Region 3, Council 09, Section 65

November 2008

## Thursday, November 20, Holiday Inn Hotel Roanoke Airport Joint Section and Computer Society Meeting Towards the CSI Fingerprinting Vision

presented by

**Mr. Richard K. Fenrich**

President and Chief Technology Officer of Identification International, Inc.

### Abstract

Dramatically variable business needs drive adoption of fingerprinting technology world-wide with the most mature area of need being law enforcement applications. This talk starts with the high-level fingerprinting needs within law enforcement, refines these needs into product requirements, and then explains how current fingerprint capture technology tries to address these needs. In the process, the audience will discover how basic opto-electronic fingerprint sensors work.

Along this biometric path, we'll discover how current technology fits today's needs and how it also misses the mark. As an outcome, a set of future research and development projects will be discussed for which successful results can, indeed, lead to the CSI fingerprinting vision. The potentially long and arduous path involves mathematics, computer science and electrical, optical, material, mechanical, and software

engineering. It promises to be a journey of much discovery.

### Biographical Sketch

Richard K. Fenrich, President and CTO of Identification International, Inc. ("i3"), received a Masters in Science degree from The Ohio State University in Mathematics and a Masters in Science degree from SUNY at Buffalo in Computer Science. Upon graduating from SUNY at Buffalo, Fenrich joined the Center of Excellence in Document Analysis and Recognition ("CEDAR") at SUNY at Buffalo as a Senior Research Scientist. While there, he worked on projects for sorting the US Mail in real-time using handwriting and machine print recognition algorithms built by his team.

Fenrich left CEDAR and founded Exegetics, Incorporated in the Buffalo, New York area. Exegetics also worked on postal sorting applications in commercial environments. Exegetics ultimately deployed 2,000+ of its specialized

postage readers in U.S. Postal Service offices across the United States.

Exegetics built its first fingerprint processing system which scanned ink and paper cards and which led to development of a fully electronic fingerprint capture sensor called a live scan. Fenrich spun the fingerprint technology out into a new company named i3. Today, i3 is one of six manufacturers of live scan units in the world and is working on enhancing its product line into various vertically oriented industries.

**Date:** Thursday, November 20, 2008

**Social:** 6:30 PM

**Dinner:** 7:00 PM

**Talk:** 8:00 PM

**Cost:**

Members & Guests \$20.00

Students \$10.00

**Reserve by 5 PM Monday  
November 17, 2008**

**Dr. Wilbur Dale (540) 464-7547**

[mail to:dalewn@vmi.edu](mailto:dalewn@vmi.edu)

Please specify the number of attendees.

### **Directions to Holiday Inn Hotel Roanoke Airport**

2727 Ferndale Drive NW  
I-581, Exit 3  
Hershberger Rd West  
1st Rt. onto Ordway Drive, ¼ mile,  
Rt. into parking lot.

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### **Student Chapter Websites**

VMI: <http://ieee-vmi.org>

VT: <http://www.ieee.vt.edu>

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### **Editor's Note**

Our national elections are over, but our section and chapter elections are about to be conducted. Voting will be accomplished electronically.

Dave Livingston

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### **SoutheastCon '09**

The website for SoutheastCon '09 is now active:

<http://www.sec09.com/>.

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#### **VMS OFFICERS**

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### **Meanwhile, Back at the Lab...**



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