

The FORVM

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Forensics Professional Group
The Human Factors and Ergonomics Society

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FROM THE EDITOR

By Joe Cohen

Season's greetings!

We have a full newsletter thanks to a strong response to last month's call for submissions. In this issue there are several important announcements as well as an article by Dick Moll and case studies by Maureen Hunter and Dan Johnson.

You'll see the FORVM layout has changed a bit since the last issue. Its design is a figurative tapestry of new features and familiar themes. I hope you like it, and welcome your feedback.

The Forensics Professional Group is always seeking content for upcoming issues of the FORVM. Have an article, case study, interview, or announcement to share? The FORVM is a great way to connect with your colleagues actively practicing or interested in practicing forensics. Please send your submissions to joe@erroranalysis.com. There is a strict 1,000 word limit.

ANNOUNCEMENT: SPECIAL ELECTION RESULTS

By the FPG Officers

The votes are in! Alison Vredenburg has been elected as the new FPG Chair and will serve in that capacity for a two-year term. Please join us in congratulating Alison.

FAREWELL MESSAGE FROM THE CHAIR

By Marc Resnick

It's now time for me to say goodbye as Chair of the FPG. It has been a pleasure working with all of you, including the officers I have worked with, the members who have been active, presenters at the Annual Conference, and everyone else I have met in these past two years.

I want to specifically thank Tonya Smith-Jackson for her excellent work as Program Chair. The FPG track at the Annual Conference has been full of great content. Having been Program Chair myself, I know how hard and how much work that is, especially when you have a day job as well.

I also want to thank Ken Nemire for his excellent work as newsletter editor. But Ken was a lot more than that. He really kept the board together. Without his oversight, a lot would have fallen through the cracks. I am looking forward to seeing what he does with the program next year as Program Chair. I have no doubt that it will again be excellent. You should all start making your reservations for Vegas.

While not officially a FPG activity, the team that I have been working with to deliver the conference workshop we refer to as "How to be an effective Human Factors Expert Witness" (Andy Le Cocq, Dave Thompson, Harvey Cohen and Joe Cohen) has also been great. Of course, we plan to keep up with that. So when you are making your reservations for Vegas, make sure to come in on Sunday so you can attend the Monday workshop. We have some great plans for next year. As usual, we will continually be updating the content. For next year, we are going to focus it on experienced experts, so no matter how many times you have testified you can still get a lot of insights out of it. I hope to see many of you there.

Finally, I want to welcome Alison Vredenburg as the new Chair and Joe Cohen as the new Newsletter Editor. I have known Alison for many years and I am sure she will do a great job leading the TG and representing us on the Council of Technical Groups. I will also be around to help with transition and give any advice that is needed. Having Ken on the Board will give us some continuity as well. And Joe has already taken charge of the newsletter and is off to a great start. The TG is clearly in good hands.

BUSINESS MEETING MINUTES

By Farheen Kahn

The business meeting of the FPG was held jointly with the Safety Technical Group at the annual meeting in San Francisco.

The meeting kicked off with an announcement of the new FPG officers. Since a new Chair was not elected, the membership discussed how to proceed with a special election in the coming weeks.

Those attending the meeting discussed the FPG LinkedIn site. Currently half of the FPG membership is registered users. It was decided that there needs to be a LinkedIn manager to facilitate discussions on the site. Dee Miller volunteered to take on the position. It was also discussed that the FPG may require in the future a communications manager responsible for the existing web and LinkedIn sites.

The FPG has 286 members as of September 3, 2010. The account balance as of August 20, 2010 was \$8,499.54.

ARTICLE: SO YOU'RE CONSIDERING FORENSIC WORK?

By Dick Moll

After working as an expert witness, first as a materials science expert and later a warnings and instructions expert, I wish I knew early in my career what I have learned during the past 40 years in about 1,000 cases.

Below are my thoughts on expert witness practice, if you will, for prospective experts. I've drawn upon my experiences from working with some very good attorneys and some, not so good.

1) First Impressions Count

After agreeing to evaluate a case and receiving file materials to render an opinion, I sometimes take a step back and ask myself why all lawyers don't send materials that are well put together and contain the requested file material. Because I

have received excellent, well-organized files over the years, I am very disappointed when a box of material arrives in a haphazard fashion. This is the first sign of trouble that might be lurking if a better file is not received.

2) Understand the Assignment

I sometimes don't know exactly whom the parties in the case are that the client is focusing on. Too often, I have been led to believe that my assignment was to evaluate a particular party, only to be asked (often at the last minute) to focus on another named party as well. Unfortunately there is almost always a time constraint because of this, which now brings up the need to look deep in yourself to be sure you can do this and not compromise your ethics.

3) Take the High Road

The high ethical standards of good lawyers, in my experience, are often directly related to their organizational skills, the clarity of the assignment, the timeliness of returning telephone calls, e-mails and faxes, and their ability to challenge you to render honest opinions in a way that is consistent with your own honesty and their strategy of winning the case.

Unfortunately, as in all professions, including university and college faculty, there will come a time that an ethical crisis arises. I can name many such situations.

One scenario in particular, that has been more prevalent than others, has to do with what an attorney might do with your file before a deposition. As incredible as it seems, and there are many other examples, one attorney told me before my deposition to put my notes in my briefcase and not produce them. More incredible was his instruction to me to say I have no notes, if the question should arise during the deposition. When this happened, I told him I would do what he said, except that if the subject of notes were to come up, I would testify that they are in my briefcase, and if asked why, I will say my attorney said to do that, and furthermore, to say I have no notes. Not a pleasant experience, but one an expert is bound to face.

4) Preparing the Witness – or Not

Since almost all product liability cases are settled (some estimates as high as 95 percent or more), the deposition in jurisdictions that require them is the most common manner for experts to give testimony. When I am to be deposed, I have learned that a "pre-deposition" immediately before or shortly before the real deposition, can be detrimental to doing an effective job during the deposition. And as hard as I try, I am not clever or smart enough to prevent this from happening. But I still try.

Why is this detrimental? Because it is hard to predict how long the deposition will last and you don't want to be tired beforehand. More importantly, I have been given new material to review, which I could and should have had earlier, and it sometimes confuses me and often results in an adversarial position with the attorney if I feel it will not help the case and other considerations.

5) Keep in Touch

Finally, don't let the time factor get too long from when you have heard from the attorney.

There are a number of reasons for this. For starters, the case may have been settled and no one notified you. It will verify for you that the case is still active.

More importantly, I have – painfully -- been requested to do something, such as write a report, or help with the expert disclosure, in a timeframe that is burdensome to me because I failed the "do as I say, not as I do" suggestion. Keeping in touch in a timely fashion can avoid many problems.

Lastly, when you are first contacted, ask about time constraints. Often a scheduling order is available that will give you this information.

Richard A. Moll is a professor emeritus with the College of Engineering of the University of Wisconsin in Madison, as well as a consultant, expert witness, and frequent speaker on products liability and warnings. He can be reached at dickmoll@mac.com.

CASE STUDY: REAR-END COLLISION

By Dan Johnson

In Mid-September, 2010, Dan Johnson testified in a King County, Washington, court on the difficulty a driver has, on a clear freeway onramp, even on a sunny day, to recognize that a car ahead in the same lane has actually stopped.

The jury was told that human factors research has shown that in some instances, when a driver does detect that the car ahead has actually stopped, then, depending on the relative closing speeds, it may be too late to avoid a collision.

If the closing driver is adequately warned there is usually no problem. A flashing meter-ahead sign along the side of the road can provide such a warning. But, as occurred in this case, the meter-ahead sign was in the curve and on the left side of the onramp while the onramp curved 180 degrees to the right. The jury was told that human factors research has shown that drivers usually look to the center and to the right edge of the road when it curves to the right. A sign on the left may not be noticed.

A contributing factor was that the 27-year-old driver of the small car, painted flat black, had stopped in the shadow of an overpass and was waiting for a green signal before proceeding. The meter signal he had stopped for was on the far side of the overpass and was not visible to the approaching vehicle until it was too late.

The driver in the stopped vehicle suffered a fracture vertebra and was rendered a quadriplegic. It was argued that the meter-ahead sign was not appropriately placed, and the meter signal itself was placed on the far side of the overpass so that it was not visible in time for the approaching driver to stop. The meter could easily have been placed on the overpass itself, rather than beyond it, so that it would be obvious to approaching drivers.

The jury awarded \$30.2 million to the injured driver.

CASE STUDY: DROWSY DRIVING AND DEGRADED SITUATION AWARENESS: AN INHERENTLY DANGEROUS PROPOSITION

By Maureen Hunter

This case study involves a collision between two vehicles in a signalized intersection on a four lane highway at 5:15 a.m. ET in the summer. The driver of one vehicle ("Driver East") was local to the area and driving between work facilities at the start of his morning work shift. The driver of the other vehicle ("Driver West") had flown into the area the day before from the western US (a three hour time zone difference based on MT) with a companion. When the accident occurred, Driver West was driving a rental car with two passengers, including her companion, after having visited a relative at the hospital in the middle of the night.

Ahead of the intersection, Driver East noted a flashing yellow light to alert drivers to the intersection. As he approached the intersection at posted speed with the light in his favor, he noticed Driver West's car creeping into the intersection against the light from the right, then it stopped in the middle. Driver East immediately tapped his brakes to slow down. About a second later and fearing a collision was imminent, he hit his brakes before his white line and veered to the right in the intersection to avoid hitting Driver West's car. By then, however, he was in extremis and hit the left rear side of Driver West's car. At the hospital that morning, the investigating state trooper cited Driver West for failure to obey the traffic signal and noted "fatigue" as the cause of the accident on the citation. Driver West's traveling companion also commented to the officer that he had "never felt so tired."

Human factors analysis I introduced in the case focused on the fatigue and cumulative sleep loss of Driver West and her companion over a 30 hour time period before the accident, commencing with a "red eye" flight departing at 2 a.m. and arriving about 10 a.m. ET, approximately nine to ten flight time hours later. Driver West rented a car at the airport, and they immediately drove to visit the hospitalized relative. They stayed there until early evening hours, then went home for the evening to another relative's house. In the middle of the night, about 1:30 a.m. ET (10:30 p.m. MT), the household received a phone call from the hospital about the relative's condition. During deposition, Driver West admitted she had been roused from a deep sleep when the call came in, and that she remained behind a while longer while the others went ahead of her. After arriving at the hospital later, she decided to take a nap in the waiting lounge. When the visit ended, Driver West, her companion and another family member left in her car to return home. It was en route that the accident occurred a short time later.

Other human factors analysis I introduced in this case discussed human performance decrements associated with sleep loss and fatigue; a theorized baseline of Driver West's sleep loss and cumulative fatigue over the 30 hour period; and factors that contribute to car crashes during particular time periods in a 24 hour period. Driver East, the local resident, appeared to have demonstrated normal response times to stimuli in his environment, and good SA about his driving environment as he approached the intersection. On the other hand, in my opinion, Driver West had accumulated a significant sleep loss debt over a 30 hour timeframe between taking her flight and when the accident occurred. By the time of the accident, she was severely fatigued with degraded SA. I estimated that by the time of the accident, Driver West and her companion had each lost about ten to twelve hours of sleep, a conservative estimate.

The loss of one night's sleep consists of losing five or more hours of sleep on a given night. Such sleep loss and its attendant fatigue reduce one's cognitive abilities and perceptual vigilance, including the ability to process information, formulate judgments, make decisions, and respond to stimuli. Further, there are two time periods of maximum sleepiness during a 24 hour period: 3 a.m. to 5 a.m., and 3 p.m. to 5 p.m. Sleepiness that occurs during these time periods is typically independent of other factors that might contribute to it. Generally, one's alertness and performance decrease between 12 a.m. and 8 a.m., with the hours between midnight and 6 a.m. considered to be the highest risk. This particular timeframe is referred to as a "zone of impairment" wherein it becomes unsafe to drive or engage in other safety-sensitive tasks. The accident in this case met the criteria for a zone of impairment accident: 1) the accident occurs during late night or early morning hours; 2) the crash is likely to be serious; and 3) the driver does not attempt to avoid the crash.

Driver fatigue and drowsy driving result in several thousand vehicle accidents annually. From her combined sleep loss, jet lag and fatigue, Driver West had in effect become a drowsy driver with degraded SA by the time of the accident. I concluded that she should not have been driving in the first place on the morning of the accident, and that she was the primary cause of the crash. In effect, Driver West had placed herself and others, including her passengers and other drivers, at a significantly increased risk for a traffic accident. In conclusion, Driver West's fatigue and degraded SA had become an inherently dangerous proposition for all parties involved.

References

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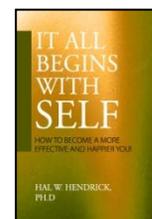
Jet lag (time zone change syndrome), Cleveland Clinic Foundation.

ANNOUNCEMENT: NEW BOOK BY HAL HENDRICK

It All Begins with Self: How to Become a More Effective and Happier YOU! is now available from American Book Publishers.

The major chapter headings are as follows:

- Chapter 1: Self Concept: Learning to Know Who You Really Are
- Chapter 2: Adaptive and Non-Adaptive Behavior
- Chapter 3: Understanding and Improving Your Interpersonal Communication
- Chapter 4: Influencing the Behavior of Others
- Chapter 5: Understanding and Reducing Your Stress
- Chapter 6: Understanding and Moving Towards Conceptual Maturity
- Chapter 7: Becoming an Effective Leader



For any colleagues interested in a signed copy, send a personal check for \$26, which also covers shipping and handling, to Hal Hendrick, 2901 Fairway View Court, Castle Rock, CO 80108.

ANNOUNCEMENT: 19th TRIENNIAL MEETING OF THE INTERNATIONAL ACADEMY OF FORENSIC SCIENCE together with the MEETING OF THE MEDITERRIANIAN ACADEMY OF FORENSIC SCIENCES

By David Thompson

The 19th Triennial Meeting of the International Academy of Forensic Science and the 5th Meeting of the Mediterranean Academy of Forensic Sciences will take place in Funchal-Madeira, Portugal at the Casino Park Hotel between September 12-17, 2011. For your information, Madeira is an exotic island off the coast of North Africa owned by Portugal.

For more information, go to <http://www.iafs2011.mj.pt/INDEX.HTM>

ANNOUNCEMENT: MEMBERSHIP RENEWAL FEES DUE

By HFES Central Office

It's dues renewal time for TG-only members and HFES+TG members. HFES membership is based on a calendar year and expires on January 31 of each year. You may renew your membership after that date; however, membership dues are not prorated. Membership renewed after January 31 is subject to a late payment fee.

Renewal requires login to the automated system. You may also contact HFES Membership Services at 310/394-1811, and the staff will be happy to process your renewal over the phone. When you call, please have available your credit card number, expiration date, and billing zip code.

CALL FOR PAPERS: 2011 ANNUAL CONFERENCE IN LAS VEGAS, NEVADA

By Ken Nemire, FPG Program Chair

What do you want for the next Forensic Professional sessions? The Call for Papers for HFES 55th Annual Meeting will be opening in early December. The meeting will be held September 19-23, 2011 at Red Rock Hotel in Las Vegas, Nevada.

Besides showing up at the sessions, there are at least two other ways you can participate:

1. Share your forensics work by submitting interesting and innovative proposals. You can submit a proposal for a lecture and case study sessions. Perhaps you would like to create or participate in a demonstration, workshop, debate or panel? The sky's the limit! The more submissions we get, the more sessions we will be allocated.

2. You also can volunteer to review a few (2-4) proposals. If you are interested, please send me a brief email with your contact info and areas of expertise: knemire@sbcglobal.net.



The FORVM is a publication of the Forensics Professional Group (FPG) of the Human Factors and Ergonomics Society. Membership in the FPG is open to all people interested in the application of human factors and ergonomics to a professional forensics practice.

The FPG is concerned with the application of human factors knowledge and techniques to "standards of care" and accountability established within the legislative, regulatory, and judicial systems. The emphasis is on providing a scientific basis to human factors/ergonomics issues raised within these systems.

Membership in the Human Factors and Ergonomics Society is not required for membership in the FPG. For further information, contact the Central Office of the HFES: P.O. Box 1369, Santa Monica, CA 90406-1369, Phone: (310) 394-1811.