

# Wavelengths



## Fall Section Conference Report

by Mark Ciechanowski, P.E.

The Fall Section Conference was a great success because of the attendance, the food, the chapter speakers, keynote speaker, the volunteers, and the financials. John Casazza, IEEE Life Fellow, gave us the keynote presentation "Impact of Power Industry Restructuring on Power System Planning, Operation and Economics". The financial analysis shows that the section almost broke even on the conference. This is great improvement over past years where we were losing several thousands on each conference.

### Increase Attendance

The Section Executive Committee is constantly discussing increasing the attendance at the conferences. This is a marketing issue. Like any marketing project (or engineering project for that matter), we need to analyze the situation first in order to correctly determine a course of action. In other words, we need to diagnose the problem before we prescribe the treatment. I have analyzed the attendance data from the past three section conferences, and the results are surprising.

The first question we typically ask is "How many attendees do we have?"

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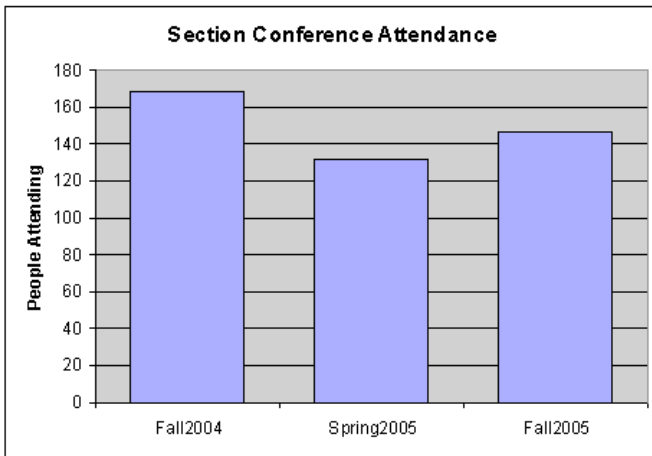
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### IEEE-SEM IS ESD-AC PARTNER OF THE YEAR

The Engineering Society of Detroit Affiliate Council (ESD-AC) has granted its Coveted Partner of the Year Award to the IEEE-SEM at its last meeting on Wednesday Dec 7 2005. IEEE-SEM will be honored with the Award at the ESD Gold Award Banquet on Feb 22, 2006, Dearborn Inn in Dearborn. The Partner of the Year Award is given to the ESD Affiliate Council Organization who most networks and partners with the other members of the ESD Affiliate Council in the grand spirit of cooperation!

This first questions is answered in figure 1.



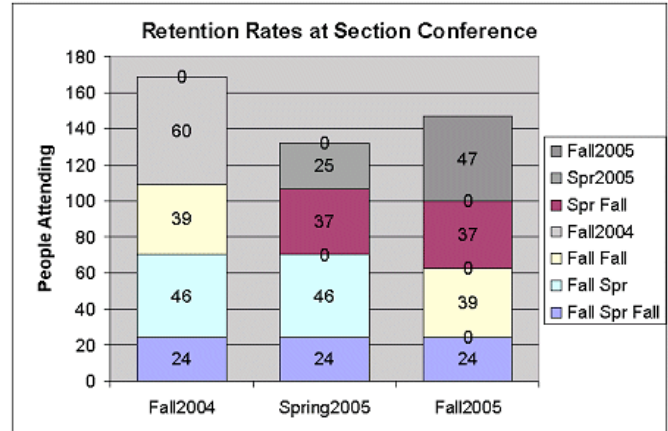
**Figure 1:** Overall Attendance is Down Slightly

You can see that, for the Fall 2005 conference, the attendance is up slightly from the Spring 2005, but both are down slightly from the Fall 2004 conference.

**Segmentation**

However, these “raw” numbers don’t tell the whole story. If we want to find out the entire story, we must analyze the attendance data. We need to know who is attending if we want to increase the success of the conference -- that is we need to segment the attendance into logical groups. So, other questions we should ask are “How many new people are we attracting to the conference?” and “How many people are returning to the conference from last time?” In other words, “What is the retention rate?”

Before I looked at the data, I would have guessed our retention rate was about 80%, therefore about 20% of the conference attendees were attending for the first time. The real numbers are not even close to that. Figure 2 shows the attendance broken down into segments.



**Figure 2:** Attendance Segments

Let’s look at this data. The segments are as follows:

- People that attend all conferences = 24
- People that attended in Fall 2004 and Spring 2005 = 46
- People that attended in Fall 2004 and Fall 2005 = 39
- People that attended in Spring 2005 and Fall 2005 = 37
- People that attended for the first time = 25 + 37 in Spring, 47 in Fall

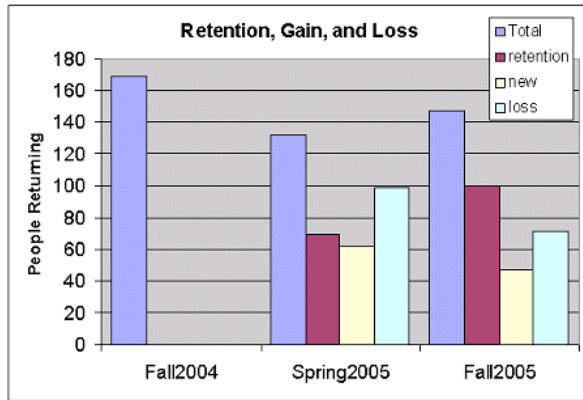
The table shows that at the Spring 2005 conference, 47% of the attendees (37 + 25 out of 132 total attendees) had never attended before. So the retention rate was 53%. At the Fall 2005 conference, the retention rate was 68% (not counting the 39 people who returned from the Fall 2004 conference).

**Loss Factor**

The data also shows another category of people. Forty-six people attended the Fall 2004 and Spring 2005 conferences and did not return for the Fall 2005 conference. That means we lost 46 people between the Spring 2005 and Fall 2005, plus another 25 that did not return. Ninety-nine people attending the Fall 2004 conference did not return for the Spring 2005 conference (although 39 returned to a later conference). This “loss factor” is an important component of conference success.

**Success Factor**

For success, we need to increase the retention, increase the new attendees, and decrease the loss. Figure 3 show the retention numbers along with the new attendees and loss.



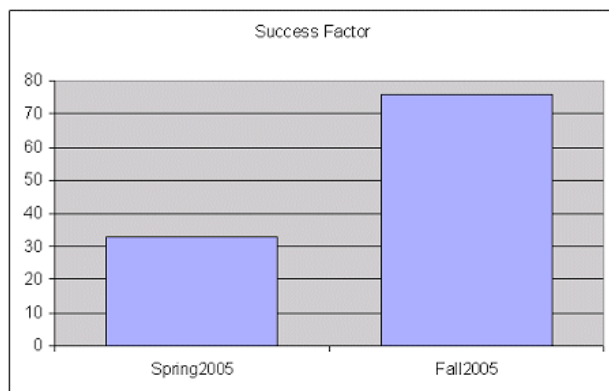
**Figure 3:** Retention, Gain, and Loss of Attendance

For the Fall 2005 conference, retention is up and loss is down, just what we wanted, although the number of new attendees is down.

We need a success metric that takes into account all of the important attendance factors we have identified. We can define such a success equation as

$$\text{success} = \text{retention} + \text{new} - \text{loss}$$

Notice that when using this equation, a conference with higher raw attendance can actually be less successful than a conference with lower attendance. Using the success equation, we can calculate the success of conference attendance. Figure 4 shows the success factor for the last two conferences.



**Figure 4:** Success Factor

Our success factor is way up for the Fall 2005 conference, which is very good news. Compare this to figure 1, where the attendance was only slightly better than last time. Clearly we need work on gaining more new attendees.

**Conclusion**

The conference was a huge success! In order to continue to make the conference successful, we need to reduce our loss in attendance while simultaneously increasing our retention and new attendees. This makes sense intuitively. We have many fronts to work on, but if we continue to succeed in all of these areas, we can have even more successful conferences in the future.

We hold the conference twice per year, once in the spring and once in the fall. The next conference is in April 2006, and planning is already underway. The Conference Planning Committee is chaired by Dr. Chris Mi ([mi@ieec.org](mailto:mi@ieec.org)), Section Vice Chair. Contact him now to volunteer. Tell him you want to work on either conference retention, loss prevention, or new attendance attraction. You will also want to join the planning form on the Section Online Community .

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## Judges Needed for January's Future City Competition

by Don C. Bramlett, PE - IEEE/SEM Advisor

This is the eighth year that IEEE-SEM will provide a dedicated team of judges and a special professional organization award for the project having the most innovative application of electro-technology in the design of a city in the future. Judging for the 2006 Michigan Regional Future City Competition will be on Wednesday, January 18, 2006 at the Rock Financial Showplace (previously Novi Convention Center) just off I-275/I-96 at Novi Road. Judging will be from 8:00 AM to 11:00 AM, followed by lunch. Free parking, continental breakfast and lunch are available that day for the judges. This pleasurable and fulfilling task only takes half a day

Please volunteer to be among those to comprise the team of IEEE/SEM special award judges. More information on the Future City Competition and the need for mentors for middle schools can be found in the related article on that subject in this issue of the Wavelengths.

I encourage anyone who has an interest in the science and math education of our youth or an interest in pre-college education programs to consider being a judge at the Michigan Regional Future City Competition. IEEE Student Branch members as well as regular IEEE members have found this to be a fulfilling experience in past years. As a judge myself in previous years, I have found the experience of talking with the students, finding out their interests and observing their projects/presentations to be very rewarding. So come out and spend the morning with us as we meet with some of the potential engineers, scientists and city planners of the future.

If interested in more information concerning being a judge for the IEEE-SEM professional award at the Michigan Regional Future City Competition, contact Don Bramlett at (313) 235-7549 during normal weekday business hours, or at home at (73) 591-1452 or by email at [d.bramlett@ieee.org](mailto:d.bramlett@ieee.org).

## IEEE-SEM Reports to Region 4

by Mark Ciechanowski, P.E.

I had the privilege of presenting our Section report to the Region 4 board at the Region Meeting on October 15, 2005. All the Region 4 officers and committee chairs were there, in addition to representatives from all of the Sections in our region (see <http://ewh.ieee.org/ecc/r4> or visit <http://www.ieee.org> and click on "Local Activities" -> "Central USA"). Our Section was well represented, since many of our officers also hold position on Region 4 committees. The Region Meeting takes place twice per year, in the fall and in the spring. This meeting took place in Tampa, Florida at the location of the Sections Congress.

Each Section representative had only a few minutes to discuss their activities. They wanted to know how many meetings we have in our Section, how many participants, what successes we had, and what are our goals. Being a Six Sigma Certified Black Belt, I wanted to answer these questions using data. I answered the attendance questions using the three graphs. Figure 1 (below) is a Pareto Chart showing the number of meetings for 2004 and 2005 for each of our 12 technical chapters. You can see that one chapter, EMC, had many more meetings than the other chapters. Computer and Engineering Management had five meetings each. All of the other chapters had two meetings, except one had zero meetings. The chart shows that the 2005 year is basically the same as 2004. I don't have the exact data for prior years, but anecdotal evidence suggests that activity in prior is about the same.

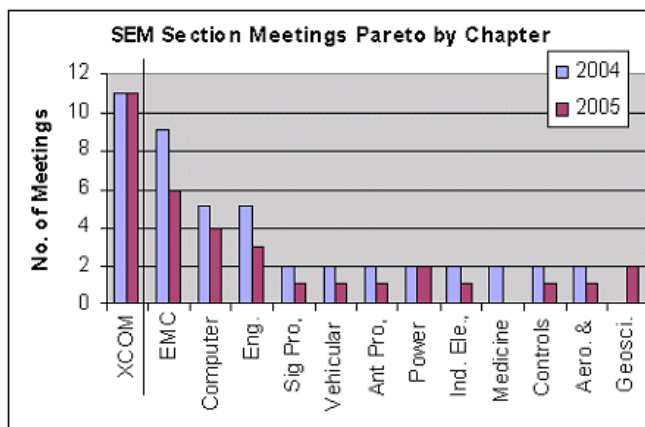
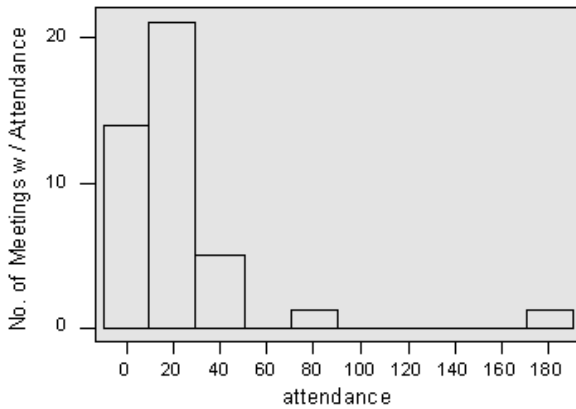


Figure 2 shows a histogram of the attendance of all of the forty-five meetings from 2004. You can see that one meeting had about 180 attendees, one had 80 attendees, and the other meetings had 40 or less attendees. The mode is at 20 attendees. This shows us our typical attendance at our meetings.

SEM Section 2004 Meeting Attendance Histogram  
45 Meetings Total

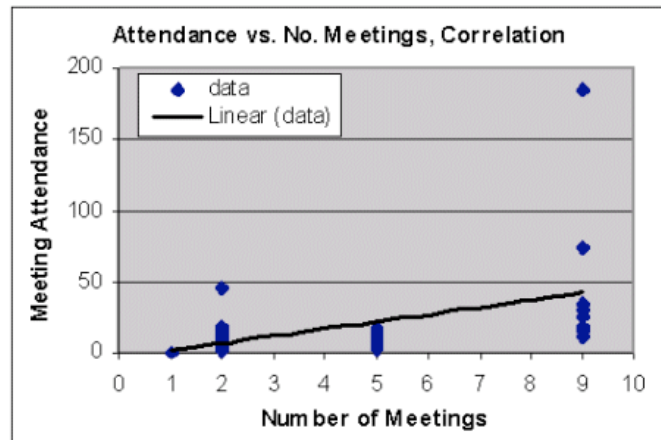


**Figure 2:** Histogram of Attendance

Now you might ask questions such as: “What chapter had these two large meetings?”; “Did the chapters that have MORE meetings have LESS attendance?” It turns out that the chapter with the most meetings had the meetings with the most attendance. Figure 3 shows the attendance of the meetings vs. the number of meetings. You can see three groups: 2 meetings, 5 meetings, and 9 meetings. On the right side of the figure you can see the chapter that had 9 meetings. You can see the distribution of their attendance where the two meetings had very large attendance, and the other meetings had between 10 and 40 attendees. Two chapters had five meetings shown in the center of the figure, and you see their distribution of attendance is between 5 and 20. All of the other chapters had two meetings shown on the left.

What does this all mean? Well, we now have a way to easily and quickly analyze our meeting statistics and compare year-after-year data. If our goal is to increase meeting attendance, we can use these graphs to clearly show whether we are, or are not, meeting that goal. If our goal is to increase the number of meetings, these graphs can also show us

those results. How to achieve these goals is another question altogether. The data clearly shows that three chapters are performing differently than the others, and that one chapter is performing much better than all chapters. Some might think that decreasing the number of meetings per year might increase per meeting attendance. While this might work for in some cases, the data shows that a chapter can have many meetings AND have greater attendance. It’s up to us to figure out how to do it. And when we make program changes, these simple graphs will show us the kind of difference our efforts make.



**Figure 3:** Attendance Vs. Number of Meetings

For our successes, I mentioned our Spring and Fall Section Conference where we had some very good keynote speakers. We also created a GOLD (Graduates of the Last Decade) group, a Minorities in Engineering Affinity group, and a Women in Engineering Affinity group, thanks in large part to the efforts of Sam Barada.

The next Region 4 Region Meeting will be held January 28-29, 2006 in Chicago.

The Region 4 web site is at <http://ewh.ieee.org/reg/4>. Region 4 also maintains an IEEE Online Community that you can access using your IEEE web account. I encourage everyone to join the community at <http://www.ieeecommunities.org/region4>.



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## Chapter X Report

by Mark Ciechanowski, P.E.

Dr. Eugene Greenstein was our speaker at the Fall Section Conference on November 9, 2005. He generated much discussion with his talk on Product Lifecycle Management entitled "PLM Tools are Necessary but not Sufficient". The group of ten members stayed for half an hour after the presentation to ask additional questions of Dr. Greenstien about PLM.

For our December meeting, we decided to forgo our regular format and join with the Engineering Society of Detroit (<http://www.esd.org>) at their "Holiday Networking Event and Fundraiser" to benefit the Michigan Regional Future City Competition. The event was held at the Park West Gallery in Southfield. The wine, hors d'oeuvres, and the art made an enjoyable background for the evening conversation. Several hundred engineers attended, and I personally saw at least five chapter members at this festive gathering. Several of the chapter officers took the opportunity to discuss plans for chapter meetings for next year. Since our local IEEE Southeastern Michigan Section is one of the seventy-five Affiliate Council societies, all IEEE members were invited to attend, at the Affiliate Council discount price. It was nice to talk with colleagues I have not seen in a while and see so many fellow engineers from other engineering disciplines.

I would like to congratulate the chapter officers on their election to office for the year 2006: Chapter Vice Chairs Marty Biancalana, Liang Downey, Kathleen Giesting, and Jim Morgenstern, and Dennis Siemiet, Secretary/Treasurer. I would also like to welcome Darrell Winchell as a new volunteer. Thank you all for volunteering to serve, and I look forward to all of us making this next year's program even more successful.

Our chapter meets regularly every other month. The meetings are on the first Tuesday of the month during February, June, August, and December. During April and November (formerly March and October), we meet at the Southeastern Michigan Spring and Fall Section Conferences, respectively.

Our chapter is always seeking speakers for topics in areas such as: Management Ethics; Risk Management; Competitive Intelligence; Hiring Practices, such as Hiring Talent vs. Skills; Software Project Management; and Transitioning into Management. Send me your suggestions at [mark.ciechanowski@ieee.org](mailto:mark.ciechanowski@ieee.org). Visit us online at <http://www.ieee-sem.org/chapter10/index.html>.

## IEEE-SEM at Sections Congress

by Mark Ciechanowski, P.E.

I had the privilege of representing the Section as the Primary Delegate at the 2005 Sections Congress in Tampa, Florida October 13-17, 2005. Sections Congress, held only once every three years, is a gathering of Section, Chapter, and Region officers and volunteers from all around the world. Also attending from our Section was: Sam Barada, Mo Berri, Don Bramlett, Liang Downey, and Terek Lahdhiri.

The activities included the Region meetings, the volunteer training, IEEE table exhibits, and the recommendations. The most important event was the selection and voting of the Sections Congress Recommendations. This is chance for volunteers and regions to influence the actions of IEEE. The Congress approved ten recommendations, which are posted on the website.

The training was great, but we had to choose only six sessions to attend out of the forty sessions offered. All of the Sections Congress training presentations are online at <http://www.ieee.org/sc2005> under the link "Breakout Session Presentations". I encourage you to visit the site and use the presentation material in your job as well as in your volunteer activities. You will also find pictures there from the event. You can also find information about the last four Sections Congresses at <http://www.ieee.org/organizations/rab/sc>.

Our own Don Bramlett presented two of the forty training sessions, one on recognition and one on partnering with non-IEEE groups. Here is a photo of him along with the other presenters.



During the day, all of the different IEEE services groups were represented at the exhibit tables. I learned about many of the new services and benefits that IEEE offers to its members. If you have any questions, Member Services has a central point of contact for benefit questions at <http://www.ieee.org/memberservices>.

Conferences such as this are so crowded, that when you get up from your seat to take a break, it is likely someone will abscond your seat. Here is trick I use to save my seat. When I get up to take a break, I leave a note on my seat (see photo). The note contains my name, my Section and Region, my cell phone number, and a message stating "I will return shortly".

Sections Congress included several keynote talks. At Monday's closing ceremony, Matt Long spoke on "Robotic Technologies for Urban Search and Rescue". He told us about the training he conducts for emergency responders and search and rescue teams. They are the only robot team in the world that currently responds to disasters that can happen anywhere worldwide. Matt is a Ph.D. candidate at the University of South Florida. You can find information about his Robot-Assisted Search and Rescue (CRASAR) project at <http://crasar.csee.usf.edu>.

The next Sections Congress will be held September 19-22, 2008 at the Hilton in Quebec City. Bring your seat saver!

## Events

**Wed, Jan 18** - 5:30 pm  
ESD Affiliate Council Meeting  
ESD, Southfield, MI

**Wed, Jan 18** - 7:30 am  
Judging for Michigan Regional Future City Competition  
Rock Financial Showplace, Novi  
Arrive between 7:30 & 8:00 am, orientation from 8:00 - 8:30 am, judging from 9:00 to 11:00 am, followed by lunch.  
Contact Don Bramlett, [d.bramlett@ieee.org](mailto:d.bramlett@ieee.org)

**Mon, Feb 6** - 6:30 pm  
Executive Committee (XCOM) Meeting  
Univ. of Michigan, Dearborn Professional Education Center (PEC) Bldg

**Tue, Feb 7** - 6:30 pm  
Engineering Management Society Meeting  
West Bloomfield Township Public Library  
Regular bi-monthly meeting.  
Contact: Mark Ciechanowski, P.E.,  
[mark.ciechanowski@ieee.org](mailto:mark.ciechanowski@ieee.org)

**Thu, Feb 16** - 5:30 pm  
Power System Integration Standards  
SISCO, 6605 19-1/2 Mile Road Sterling Heights, MI  
The presentation will discuss the evolution of power system integration standards as they have evolved from simple communications protocols to the model-driven integration architecture of the next generation of intelligent power systems as described by IntelliGrid. The presenter, Ralph Mackiewicz, is Vice President of SISCO a Sterling Heights, MI developer of standards based real-time communications and integration products. Food and soft drinks will be provided at no charge, but attendance is limited to 20 people.  
Contact Kevin Taylor, 586-573-0713, [k2356@aol.com](mailto:k2356@aol.com).

## Executive Committee

### Chair

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### Chapter II - Vehicular Technology

Mr. Arman Moein  
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### Chapter III - Communications and Aerospace Electronics

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### Chapter IX - Power & Industrial Electronics

Shao Liang

### Chapter X - Engineering Management

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### Chapter XI - Engineering in Medicine & Biology

Dr. Darrin Hanna

### Chapter XII - Control Engineering

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