Statistics in the Community

StatCom Network Newsletter

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StatCom Network

We have been very busy this fall keeping in touch with StatCom Network members, as always!

The main goal of this past semester was to get votes tallied for a unified Stat-Com Logo. The votes are in and the decision was unanimous to have a unified Network logo for all of the Stat-Coms around the nation and the world! There are five possible logo ideas on page 4. Please take the time to look over them and send your thoughts and votes on which you like best to statcom-outreach@stat.purdue.edu.
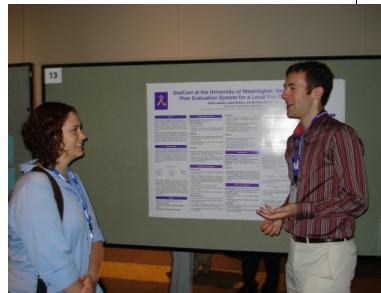
At JSM 2008, we held our second annual Stat-Com Network Business Meeting. During this meeting we discussed issues of liability and funding. We also discussed writing StatCom instead of STATCOM. The decision was made that from now on all Network branches will use StatCom instead of STATCOM, we are working on changing all of this on websites and publications.

Once again, make sure to take note of JSM 2009 (August 1-6) held in Washington D.C. at the Washington Convention Center. During this week, we will host our annual StatCom Network Business Meeting, and we hope to see you all there!

—Meghan Honerlaw
StatCom Network Outreach Coordinator
StatCom at Purdue
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Making StatCom ISO Compliant

The International Organization for Standardization (ISO) is comprised of a set of national standards to be adopted by an organization and is internationally recognized as a distinguished label of quality for an organization's management system. By becoming ISO compliant, clients will have a better understanding of the structure and administration of an organization and assurance that the methods used to produce a product will follow an esteemed set of regulations.

The official ISO seal requires an organization to identify all procedures to be performed, state the order and interaction of these procedures, explain methods used to implement procedures, have information and resources readily available, carefully monitor each procedure, and take corrective action to continually improve the organization's management system. ISO requires specific documentation of policies, planning, operation, and records. This semester, Purdue University StatCom has implemented the necessary procedures to become ISO compliant.

Members of Purdue University StatCom have been trained on the requirements needed to achieve full compliance with ISO, and a new database using Microsoft Access has been put in place to keep accurate records and aid in the procedures StatCom will perform. Manuals have been made that explain StatCom's organizational structure and procedures that are now compliant with ISO 9001-2000 standards.

It is our desire that through this transition, we will enable preexisting and future StatCom's with the knowledge of becoming ISO compliant, and providing current and future clients with a thorough understanding of StatCom as a growing organization.

-Allison Cummins
StatCom Director
StatCom at Purdue University

StatCom at Iowa State University

After a successful first year, StatCom at Iowa State continues to expand student participation and its clientèle. The student executive committee coordinates initial contact with clients and facilitates team formation as projects get underway. The makeup of the executive committee will continue to change as members begin their professional careers, and we hope to draw on students with experience on Stat-Com teams to fill executive committee positions in the future.
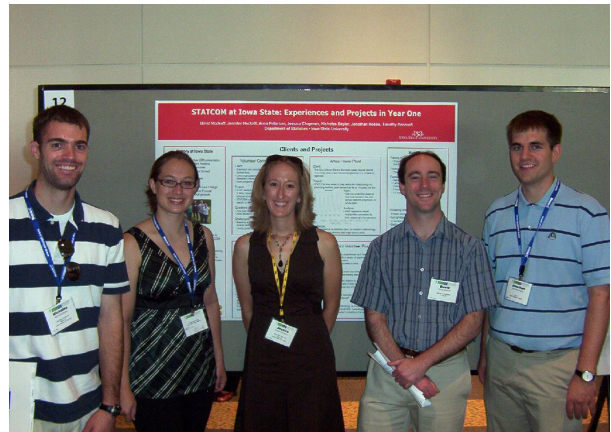
By the start of the 2008 summer session, several funding proposals had secured support for a research assistantship for the Stat-Com student director position for two years, with support from the Department of Statistics, the College of Liberal Arts and Sciences, the office of the provost and Iowa State University Extension. The student director will coordinate the efforts of the executive committee and pursue future funding possibilities. The support from Iowa State Extension has provided new advertising opportunities through Extension Community Economic Development, including an entry on its Program Builder website and an article in its *Community Matters* newsletter.

In addition to the promotion through Extension, which reaches potential clients across Iowa, we continue to receive referrals from our faculty and through previous StatCom clients. Projects have recently been completed for the Volunteer Center of Story County (VCSC), the Retired and Senior Volunteer Program (RSVP) and the Iowa State University Foundation. The fall term began with several new projects on the table that are now gaining momentum. Some executive committee members are working with Iowans for Voting Integrity to communicate the statistical ideas involved in post-election audits as Iowa looks to pass election audit legislation. One team is working with the Ames Public Library on developing a facilities use and program satisfaction survey, and the project presents some unique implementation challenges. Another team is working with the Iowa Ombudsman office on some data from the Iowa Lottery. In addition, work continues on a survey of RSVP volunteers and on predicting peak demand for the City of Ames Electric Services.

The 2007-08 executive committee members were all co-authors on an Iowa State StatCom contributed poster at the 2008 Joint Statistical meetings. The ISU team joined five other StatCom network members presenting posters in the same session. It was the first of several opportunities to share StatCom experiences at the JSM, and the Stat-Com posters were also well-received by many other conference attendees. The annual Stat-Com network meeting was also a useful opportunity to share challenges and successes with network members.

As the upcoming year progresses, StatCom at Iowa State will work to meet a number of new challenges. These include the development of policies for handling referrals from Iowa State Extension, the formation of a P-12 outreach program and the recruiting of student team members as the project load increases. We appreciate the shared experiences of the other network members and wish all continued success in StatCom endeavors.
—Jon Hobbs
Student Director
StatCom at Iowa State

StatCom at Iowa State Members at JSM 2008 in Denver, CO. Pictured from right to left: Nick Beyler, Anna Peterson, Jessica Chapman, David Rockoff, and Jon Hobbs

StatCom at the University of Michigan

StatCom at the University of Michigan was founded in April 2007 and has ten students at that time. The student consultants came from Department of Biostatistics, Department of Statistics and Survey Methodology program. At the beginning of our foundation, we have eager students but no incoming project since people don't know us nor did they know what we can do for them. At the beginning of 2008, we focused on advertising our group and our service by contacting local government and local nonprofit organizations. We received several requests during early 2008.

Because of our success in finding new projects, during last semester (fall term 2009), our team expanded. We have more students joining us and now our team has 37 students and 3 faculty advisors.

We have 3 projects going on. The biggest one is "Residential Property Tax Income forecast for City of Ann Arbor", which is close related to the recent financial crisis. A large portion of City of Ann Arbor's revenue comes from property tax. Property tax is calculated by multiplying a tax rate by a tax base-i.e. taxable value, which will depend on assessed value or inflation rate. Due to recent property market value drop, the city financial officer is worrying that the property tax income may reach its cap, which is the assessed value. The objective of this project is to forecast the residential property taxable value to forecast the taxable income for 2009 and when the taxable value will reach its cap. We have now established the forecasting modal and are in the final wrap up period of this project.

The another project is to design a survey for the William Davidson Institute, which is a non-profit education and research institute associated with the Ross School of Business at the University of Michigan. WDI are helping conducting an impact assessment with the Scojo Foundation, which is a non-profit social enterprise that reduces poverty and generates opportunity through the sale of affordable reading glasses in developing country villages. They wanted to conduct baseline and follow-up surveys to assess the impact with Scojo sellers and buyers (along with control group). We helped in analyze the data from pilot study and designing the full scale impact assessment survey. The survey has been distributed and we are now waiting for the data for analysis.

The third project is with the career service of School of Public Health in University of Michigan. We helped them in designing a alumni survey. The survey has been distributed and the feedback data has already been gathered. Our next step is to analyze the data. The next step for our group is to continue enhancing our marketing, make us known to more potential clients and bring more projects for our group. We are expecting a prosperous future for the Statcom@Umich.
—Xiaobi (Shelby) Huang
Student Director
StatCom at the University of Michigan

StatCom at Chicago

StatCom at Chicago has not had any new projects this semester. They have a potential project lined up for this upcoming semester, for a possible follow-up analysis for a survey project done at the end of this past summer. StatCom at Chicago is beginning work with a lawyer to submit articles of incorporation in Illinois. They are continuing their perseverance in commencing a StatCom at Chicago.

—Meredith Wroblewski
Director and Organizer
StatCom at Chicago

StatCom at Chicago representatives present at the Poster Session at JSM 2008. Pictured on the left in the foreground is Diya Zhang, on the right in the foreground is Bart Phillips. Pictured in the background is Meredith Wroblewski.

StatCom at the University of Washington

Since StatCom at the University of Washington (UW) was started in 2006, there have been two completed projects. The first was for the Shoreline Fire Department, which serves a community of about 50,000 residents north of Seattle and participates in the King County Medic One program, providing 24-hour advanced life support services in the surrounding area. The department had recently introduced a peer evaluation component to the promotions process, which also includes written and skills tests. Each year, a certain number of firefighters are promoted to the position of paramedic. Paramedics in the Medic One program work with Shoreline Fire Department and the nearby Northshore and Bothell Fire Departments, so candidates for these positions come from all three departments. The candidates are rated by members of their own department as well as by current paramedics. The primary concern of the Shoreline Fire Department was how to make a fair comparison between candidates from different departments. The goal of the project was to design a peer evaluation system, which was easy to implement, acceptable to both labor and management, fair, and resistant to intentional manipulation.

The second completed project was for the Washington chapter of the American Civil Liberties Union (ACLU), which is a non-profit organization dedicated to defending and expanding civil rights in the United States. The ACLU is working on truancy, the crime of being absent from school. There was a case in the 1990s of a 13 year old who ran away and was murdered. State legislation then passed a comprehensive bill to prevent this from happening. The ACLU does not like criminalizing absence from school since there is the possibility that a child might land in jail without a formal trial. Parents and child are jointly responsible and may be charged without legal representation. The ACLU had trouble with two reports sent out by two state institutions concluding that truancy laws increased high school enrollment. StatCom provided a dissection of one report and an independent analysis as an *impartial* party.

We are currently working with Meals on Wheels, which is a program run by Senior Services, the largest non-profit agency serving seniors in Washington. They offer frozen home-delivered meals for older persons who are unable to leave their home to shop or prepare nutritious meals. The goal of the project is to determine the population being served by Meals on Wheels, whether there are areas that are being underserved, what meals are being ordered, and how many meals can be expected to be served by Meals on Wheels next year. As an organization, StatCom at the UW is attempting to resolve some long-standing issues. These include: (1) getting new projects, (2) recruiting faculty support and counsel, and (3) completing projects in a timely manner. Additionally, we are working on how to balance and prioritize StatCom projects and graduate school work. We invite and appreciate any discussion, suggestions, and feedback in helping us with these issues.

—Jennifer Chunn and Tanya Granston
co-directors
StatCom at the University of Washington

STATCOM at Purdue University

It's been a great year for new and exciting projects at Purdue! We've focused on a few important tasks this year: new projects, more student involvement, and streamlining our procedures.

On the project side, we've increased out active recruitment of clients through several methods. First, we attended meetings hosted by the United Way. At these meetings, we were able to present the various services StatCom could provide. This was a great opportunity for us to introduce ourselves to a large proportion of the non-profit organizations in the our area. In fact, we received several project requests from these organizations! Secondly, we tried the old-fashioned method of simply calling local non-profits and government agencies and introducing ourselves over the phone. This was a great method, and resulted in a couple project proposals. Finally, with the other projects well underway, we began to develop 'proposal teams.' The goal of each of these teams

was to develop a project proposal for an organization of their choice. The benefits of this kind of system (when added to current StatCom procedures) are numerous. One such benefit is that student teams can participate in the entire process of project development, from brainstorming and planning to execution and analysis. Another benefit for our volunteers is the ability to control the size and scope of the project. This allows each team to tailor the projects to their own student workloads. For any size project, we feel that presenting a thoroughly planned proposal to our clients will garner not only more projects, but also a better relationship with the community.

Our student involvement has increased this year as well. One method we've used to attract students are presentations at orientation events. Each year, new graduate students in our department are gathered together to be introduced to faculty, staff, and other graduate students. This is a perfect time to introduce the many benefits of StatCom, especially by volunteering early in their graduate ca-

reers. We have also actively recruited undergraduates into our teams. For many projects, the skills possessed by these undergraduates is sufficient to be active and contributing members of a team. We have been working with the undergraduate chair and advisors to boost enrollment of these young statisticians.

As you can read in the other article from Purdue, we have also started to streamline our procedures by converting our document control system to meet ISO9001 standards. We could not have done this without Regina Becker, our incredibly talented Staff Advisor. Her work with us has been a great key to our
success!
—Doug Baumann
Student Director Fall 2008
StatCom at Purdue

ASA Committee on Student Pro Bono Statistics

In January 2009, the American Statistical Association Committee on Student Pro Bono Statistics will kick off its first year, and StatCom members from around the country will be working to make its debut a success!

Of the eight student committee members, seven are StatCom members: Andrea Rau (Purdue), Doug Baumann (Purdue), Diya Zhang (Chicago), Meredith Wroblewski (Chicago), David Resendes (Massachusetts), Jon Hobbs (Iowa), and Xiaobi Huang (Michigan). The eighth student member is Justin Gross, a doctoral student at Carnegie Mellon who has been independently involved in pro bono statistical work. In addition, several advisory members have been appointed to provide mentoring, including Fritz Scheuren of National Opinion Research Center (NORC) at the University of Chicago, David Banks of Duke University, and George McCabe of Purdue University.

The purpose of the committee is to encourage and facilitate efforts by students of statistics to use their analytical skills on a volunteer basis to benefit government and nonprofit groups in their communities. In this respect,

the committee will be working closely with the StatCom Network in the coming year. In addition, the committee will be sponsoring an invited panel session at the 2009 Joint Statistical Meetings in Washington DC entitled "The Pros of Pro Bono Statistics." Featured panelists include several current and former StatCom members, as well as other members of the statistical pro bono community. Check the JSM 2009 program listing on the ASA website in late March for more information. We hope to see you there!

For more information about the committee, see our webpage at the ASA website (http://www.amstat.org/comm/index.cfm?fuseaction=commdetails&txtComm=CCNEDU09). If you have comments, suggestions, or would like to find out how to get involved with the committee, feel free to contact the committee chair, Andrea Rau, at arau@stat.purdue.edu.

Representatives of StatCom at Purdue outside the Denver Convention Center, at JSM in August 2008, Gayla Olbricht and Andrea Rau.