Chair’s Message

by Mark Kiel

During an AQC many years ago in Cincinnati I wandered into a Statistics Division Council meeting. I had been a member of the division for a couple years and had received the newsletter and other items, but hadn’t met any of the officers. After a rousing meeting, which really seemed organized but fun, I walked out with a division job. The officer group was great in helping and mentoring my efforts, and with their guidance the job was completed. Since that 1994 AQC I have held many positions in the division, all of which have help me in some way to improve my career and improve as a person. It has been great leadership training. I want to thank Davis Balestracci, Bob Mitchell and all the other Chairs of the Division who have set the bar high for division performance and have succeeded. The Chair shoes are very large to fill, indeed.

Just when I was getting comfortable as Chair-elect last Spring in preparing for the job, ASQ changed everything. I hope their efforts will realize a new and invigorated ASQ membership. But don’t throw the baby out with the bath water. The Statistics Division has had twenty-four years of sound leadership, both in the division ranks and ASQ general ranks.

A Past Chair of the division is also a Past President of ASQ. One of our desired end states to our mission and vision is “Our Division’s operations will be a model for other organizations.” I think we have certainly succeeded in this objective. I hope this ASQ staff marketing tail wags the membership dog into a better organization, which will truly deliver more member value. I don’t care how good the restaurant looks; it’s the food that brings them back time and time again.

As part of the new member model, ASQ is providing many more services via the Internet. One of them is to provide a professionally built web site for all divisions. This is a very large

Outgoing Chair’s Message

by Davis Balestracci

As I hand the reigns over to the very capable Mark Kiel as incoming Chair, I’m going to be brief and share my reflections over the past year. First of all, I cannot even begin to give past Chair Bob Mitchell enough thanks for all the work he did behind the scenes, especially in dealing with ASQ at large and keeping me on task during what developed to be a very

Inside This Issue

- Chair’s Message .................................................................1
- Outgoing Chair’s Message ...................................................1
- Meet the Officers ..............................................................4
- Treasurer’s Report ...........................................................6
- 48th Annual Fall Technical Conference ...............................8

CALL FOR PAPERS
- The Gateway to Improved Quality........................................10
- AQC 2004 Summary .........................................................12
- 58th AQC Council/Open Business Meeting ..........................13

MINI PAPER
- Must a Process be in Statistical Control to Perform an Effective Experiment? .................................................................15
- 2004-2005 Strategic Plan ....................................................18
- Statistical Division Operational Planning Meeting Minutes ....19
- Committee Roster ...........................................................23

Continued on page 3
MISSION

• Promote Statistical Thinking for quality and productivity improvement
• Serve ASQ, business, industry, academia, and government as a resource for effective use of Statistical Thinking for quality and productivity improvement
  ▶ Our primary customers are Statistics Division members.
  ▶ Other key customers are:
    ▶ Management
    ▶ Users and potential users of Statistical Thinking
    ▶ Education of the above customers
• Provide a focal point within ASQ for application-driven development and effective use of new statistical methods.
• Support the growth and development of ASQ Statistics Division members.

VISION

Statistical Thinking Everywhere
Statistical Thinking Statistical Methods

Process → Variation → Data → Improvement

PHILOSOPHY → ANALYSIS → ACTION

DESIRED END STATE

• Our members will be proud to be part of the Statistics Division.
• Our Division’s operations will be a model for other organizations.
• We will be a widely influential authority on scientific approaches to quality and productivity improvement.

PRINCIPLES

• Our customers’ needs will be continuously anticipated and met (i.e., customer-focused rather than customer driven).
• Our market focus for products and services is weighted as follows:
  ▶ Greatest weight on intermediate level
  ▶ Nearly as much weight on basic level
  ▶ Much less weight on advanced level
• Focus on a few key things.
• Balance short-term and long-term efforts.
• Value diversity (including geographical and occupational) of our membership.
• Be proactive.
• Recognize that we exist for our customers.
• View statistics from the broad perspective of quality management.
• Apply Statistical Thinking ourselves; that is, practice what we preach.
• Uphold professional ethics.
• Continuously improve.

STRATEGY

Improve our organizational effectiveness
Educate statistical practitioners for business
Expand our influence

1. Application oriented/not theory
2. Non-technical in nature
3. Techniques that can be understood and applied by non-statisticians.
4. Approximately three to five pages or less in length (8 1/2” x 11” typewritten, single spaced.)
5. Should be presented in “how to use it” fashion.
6. Should include applicable examples.

Mini-Paper

Purpose: To provide insight into application-oriented techniques of significant value to quality professionals.

Criteria:
1. Application oriented.
2. More technical than Basic Tools, but contains no mathematical derivations.
3. Focus is on insight into why a technique is of value.
4. Approximately six to eight pages or less in length (8 1/2” x 11” typewritten, single spaced.)
5. Longer articles may be submitted and published in two parts.
7. Should include applicable examples.

General Information

Authors should have a conceptual understanding of the topic and should be willing to answer questions relating to the article through the newsletter. Authors do not have to be members of the Statistics Division.

Submissions may be made at any time to the Statistics Division Newsletter Editor. All articles will be reviewed. The editor reserves discretionary right in determination of which articles are published.

Acceptance of articles does not imply any agreement that a given article will be published.

Disclaimer

The technical content of material published in the ASQ Statistics Division Newsletter may not have been refereed to the same extent as the rigorous refereeing that is undergone for publication in Technometrics or JQT. The objective of this newsletter is to be a forum for new ideas and to be open to differing points of view. The editor reserves the right to review all articles and to ask other statistics professionals to provide reviews of all content of this newsletter. We encourage readers with differing points of view to write to the editor and request an opportunity to present their views via a letter to the editor. The views expressed in material published in this newsletter represent the views of the author of the material, and may or may not represent the official views of the Statistics Division of ASQ.

ASQ STATISTICS DIVISION NEWSLETTER, Vol. 23, No. 1
undertaking. These web sites are linked under the forum/division area on the ASQ.org site. Our web site is no longer linked to that area. You must bookmark our site and go directly to it. It remains at http://www.asqstatdiv.org. Currently we are providing the ASQ staff with the content for their version of our division site and helping to improve it as they populated the site with material. We will be running both sites until the ASQ version is comparable with the current division web site. If you don’t see something you need on one web site, please check the other.

As a Metallurgical Engineer, I use statistics every day. We do not have statisticians in our organization. I have the tools to do the job of analyzing our process, which includes statistical software and digital records of the many variables. But what I need is the insight to pick the right tool and the expertise to explain it to those in control of the process. I want this division to provide the training in the areas of statistics that thousands of engineers like myself face in their every day job. We have the link in this division, academia and practitioners alike, the demand and the supply. It will be our effort this year to put those groups together.

I begin this year as Division Chair with the Department of Commerce announcing that the estimate of U.S. retail “e-commerce” sales for the second quarter of 2004, not adjusted for seasonal, holiday, or trading-day differences, was $15.7 billion, an increase of 23.1 percent (±3.5%) from the second quarter of 2003. This division has decided to join this parade and offer web-based services to our members. Our newsletter is currently electronic and e-zines are being sent when needed. Look for more e-zines announcing more e-products from the division to the members to help keep you employable.

unexpectedly hectic traveling schedule. His leadership has kept us on track during what I feel is a very difficult transition for the quality profession, especially the statistics profession—And I only see “more of the same” for this next year.

Subsequent to Mark, we shall be in the very capable hands of Geoff Vining, current Chair-Elect. Geoff stepped up to the plate during this difficult time, and I am excited about his innovative ideas and academic background to keep us grounded in our founders’ 1979 “roots.” Six Sigma is still here to stay for awhile and its impact has forever changed the roles of quality professionals, regardless of the next quality “phase”—and there are preliminary stirrings in terms of what that is going to be—but there has never been a better opportunity for statistical methods to be appreciated as in the late Bill Hunter’s vision when he founded our division.

Mark Kiel’s efforts in designing and launching a member web site that, in my opinion, is second to none have been invaluable (as are those of our wonderful web designer, Jackie Webster). We have only begun to scratch the surface in terms of what web technology can do for our members, so please “stay tuned” as we implement more of Robert Middleton’s (actionplan.com) outstanding marketing ideas. And please give us feedback and suggestions!

Our strategy is still based heavily in the “statistical thinking” direction originally developed in 1998, and we must still resist the efforts to become a statistical “pharmacy,” which loses track of a framework crucial to quality improvement. So, members, please…realize the “method to our madness”…and give us feedback and suggestions!

I was proud that we could participate in judging the first Lloyd Nelson award for the best paper in the 2003 volume of the Journal of Quality Technology and would like to congratulate, again, the winner, Harriet Black-Nembhard, as well as thank editor Joe Sullivan for his support.

Despite company cutbacks in traveling and funding conference attendance, we still have a very viable Fall Technical Conference, and I can’t thank Dean Neubauer and his volunteers enough for the countless hours that are nothing less than a labor of love. Special thanks also to Jerry Hahn, our Youden speaker. Similarly, thanks to all who helped in putting on the half-track at this year’s AQPC, especially the dogged efforts of Daksha Chokshi to organize, remind, and moderate!

One other significant accomplishment was publication of the revised, updated Statistical Glossary, chaired by Rudy Kittlitz and his very dedicated team.

A special thanks to three people on the current officer team: Marcey Abate for her very capable work as treasurer, our newsletter editor Evelyn Varner for her seamless transition to produce two outstanding documents, and Doug Hlavcek, for volunteering on very short notice to become secretary. Similarly, thanks to all who helped in putting on the half-track at this year’s AQPC, especially the dogged efforts of Daksha Chokshi to organize, remind, and moderate!

Finally, I can’t finish without recognition to Ed Schilling, one of the finest people and statisticians I have ever has the pleasure to work with. His tireless work on the standards committee is so important and so unrecognized. Well, Ed, we notice. I also appreciate his efforts to keep Ellis Ott’s memory alive through his work, along with Dean Neubauer, in revising the very underappreciated book, Process Quality Control. Members, you would do well to take a look…
MEET THE OFFICERS

Chair: Mark Kiel

Mark Kiel is a member of the Iron Technology Group for United States Steel. He is a 39-year veteran of the steel industry with four years currently at US Steel’s Gary Works in Gary, Indiana. US Steel’s Blast Furnace Division supplies the raw material, Iron, needed for steelmaking. Mark is a Metallurgical Engineer with a career that has covered all forms of iron and steel making, including BOF Steelmaking, Primary Rolling, Hot Rolling, Cold Rolling, Plating and further processing. His responsibilities have included statistical analysis, process control, supplier quality, and quality systems coordinator.

Mark received his B.S. in Metallurgical Engineering from Illinois Institute of Technology, in Chicago, Illinois. He has been a member of ASQ since 1988, active in the Statistics Division since 1991, a Senior member of ASQ, and a Certified Quality Engineer. Mark has served the Division as Bulletin Board Administrator, made the Division’s first web site as Webmaster, served on the FTC Program Committee and served as FTC Program Chair, and the Divisions AQC Session Manager.

Mark is Past Chair of the ASQ Illiana Section, a member of AIIST, Past President of the local Chamber of Commerce and serves his community as a member of the Village Planning Commission and a Park District Board Member.

Chair-Elect: G. Geoffrey Vining

Geoff Vining is Professor and Head of Statistics at Virginia Tech. He holds a B.A. from the University of Tennessee at Knoxville (1981), and a M.S. (1986) and Ph.D. (1988) from Virginia Tech. His primary areas of interest are experimental designs and their analysis for quality improvement, response surface methodology, statistical process control, and regression. Dr. Vining has significant consulting experience in industry. He has received research grants from Alcoa and Shell.

From 1988-1999 he served on the faculty of the Department of Statistics at the University of Florida. Prior to going to graduate school, he was a Process Engineer with the Faber-Castell Corp. His responsibilities included technical support to the pencil lead operation and the development of a company wide Deming based quality improvement program.

Dr. Vining has authored or co-authored three books. He was the editor of the Journal of Quality Technology from 1998-2000. He received the 1990 Brumbaugh Award from the American Society for Quality. He was elected a Fellow of both the American Statistical Association and the American Society for Quality in 2001.

Secretary: Doug Hlavacek

Doug Hlavacek is a statistician with Ecolab, a global leader of cleaning, sanitation and service solutions for the hospitality, institutional and industrial markets. Doug joined Ecolab in 2000 and uses statistical, quality and marketing research techniques in order to define customer needs and subsequently translate those needs into successful product and service offerings.

Prior to Ecolab, Doug worked at 3M, Imation and Kraft General Foods in various consulting, training, and project leadership capacities. Doug has received excellence, quality and divisional awards for his use of statistical methods. These efforts have helped to accelerate the development of a new product, reduce product variation through increased process understanding, and successfully defend against a lawsuit by providing objective evidence to refute a competitor’s claim.

Doug received his MS in statistics from Virginia Tech (1979) and BA in Mathematics from Rutgers University (1977). His primary areas of interest are in statistical education, experimental design, graphical display and statistical process control. Doug is a member of ASQ (1988) and ASA (1978) and has been a Certified Quality Engineer since 1988.
**Treasurer:**
**Marcey Abate**

Marcey Abate is manager of the Stockpile Evaluation I Department at Sandia National Laboratories. Since joining Sandia as an applied statistician in 1995, she has contributed to the quality and reliability of the nuclear weapons stockpile through statistical and quality analyses of various components. Marcey later provided technical management and systems engineering support to various weapon programs, and led efforts to implement formal risk and cost management practices. She has also supported projects for qualifying high precision measuring tools, statistically validating complex computer simulations, and verifying international treaties. Through Sandia, Marcey has actively worked with the Federal Aviation Administration (FAA) to evaluate aviation safety data, analyze safety inspection work processes, and develop system safety concepts. She currently oversees the Sandia department responsible for statistically sampling bombs and cruise missiles from the nation’s nuclear stockpile, conducting tests in a laboratory or actual flight environment on the sampled weapons, analyzing the data, and investigating any anomalies disclosed by the data. The testing and investigation help to ensure the safety, security, and reliability of the overall stockpile.

Marcey has a B.S. in Mathematics from Michigan State University, and M.S. and Ph.D. degrees in Mathematical Statistics from Purdue University. Marcey has served as a Technometrics book reviewer and the Albuquerque chapter representative to the American Statistical Association (ASA). As a member of the American Society for Quality’s (ASQ) Statistics Division, she has previously served as Short Course Chair for two Annual Quality Congresses, the Electronic Commerce Chair, and is currently in her second term as Division Treasurer.

---

**Vice-Chair Products and Services:**
**Scott Kowalski**

Scott Kowalski is a Technical Training Specialist at Minitab Inc. His main role is teaching statistics with MINITAB to corporations in the United States, Canada and Mexico. Scott is also involved in software development at Minitab Inc. Before joining Minitab Inc., he worked for two years in academics: one year for Stetson University and one year for the University of Central Florida, where, in addition to teaching, he was the Associate Director of the Statistics Institute.

Scott received his B.S., M.S. and Ph.D. in Statistics from the University of Florida. His concentration was on design of experiments and response surface methodology. His dissertation and continued research focuses on designing industrial experiments with hard to change factors.

Scott is a member of ASQ and the American Statistical Association. In addition, he is on the Editorial Review Board for the Journal of Quality Technology.
## TREASURER’S REPORT

### Statistics Division Treasurer Report

**6/30/04 YTD 2003/2004 Financials**

### Working Revenue

<table>
<thead>
<tr>
<th>Description</th>
<th>YTD Actual</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dues</td>
<td>$46,902.20</td>
<td>$60,000.00</td>
</tr>
<tr>
<td>Retail Sales</td>
<td>1,414.00</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Interest/Royalties</td>
<td>902.36</td>
<td>2,000.00</td>
</tr>
<tr>
<td>AQC Short Course</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>FTC</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$49,218.56</td>
<td>$63,500.00</td>
</tr>
</tbody>
</table>

### Expenses

#### General Fund

<table>
<thead>
<tr>
<th>Description</th>
<th>YTD Actual</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Member Mailings</td>
<td>5,624.85</td>
<td>4,000.00</td>
</tr>
<tr>
<td>Teleconferences</td>
<td>1,109.91</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Metagraphix</td>
<td>$6,734.76</td>
<td>$5,500.00</td>
</tr>
<tr>
<td>DAC/travel</td>
<td>500.00</td>
<td></td>
</tr>
<tr>
<td>Tactical Plan Mtg</td>
<td>6,281.94</td>
<td>9,000.00</td>
</tr>
<tr>
<td>AQC Mtg</td>
<td>689.16</td>
<td>4,000.00</td>
</tr>
<tr>
<td>AQC Travel</td>
<td>3,272.62</td>
<td>2,500.00</td>
</tr>
<tr>
<td>FTC Mtg</td>
<td>297.07</td>
<td>0.00</td>
</tr>
<tr>
<td>FTC Travel</td>
<td>2,023.09</td>
<td>2,500.00</td>
</tr>
<tr>
<td>Long Range Plan Mtg</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Officers Planning Mtg</td>
<td>5,458.87</td>
<td>4,000.00</td>
</tr>
<tr>
<td><strong>Strategic Planning</strong></td>
<td>$11,740.81</td>
<td>$13,500.00</td>
</tr>
<tr>
<td>Auditing</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Bylaws</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Certification</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Examining</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Membership</td>
<td>2,521.57</td>
<td>3,000.00</td>
</tr>
<tr>
<td>ASQ Div Ballot</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Exhibitor Fees</td>
<td>2,106.22</td>
<td>2,000.00</td>
</tr>
<tr>
<td>Phone Survey</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Promotional Items</td>
<td>415.35</td>
<td>1,000.00</td>
</tr>
<tr>
<td>Misc</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Newsletter</td>
<td>3,685.00</td>
<td>12,600.00</td>
</tr>
<tr>
<td>Printing</td>
<td>2,530.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Postage/Misc</td>
<td>500.00</td>
<td></td>
</tr>
<tr>
<td>Sp Pub Printing</td>
<td>7,500.00</td>
<td></td>
</tr>
<tr>
<td>Sp Pub Postage</td>
<td>2,100.00</td>
<td></td>
</tr>
<tr>
<td>Sp Pub Reprints</td>
<td>1,155.00</td>
<td>2,000.00</td>
</tr>
<tr>
<td>Sp Pub Honorarium</td>
<td>500.00</td>
<td></td>
</tr>
<tr>
<td>Nominating</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Programs</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Publications</td>
<td>4,591.12</td>
<td>3,000.00</td>
</tr>
<tr>
<td>Standards</td>
<td>8,452.03</td>
<td>5,000.00</td>
</tr>
<tr>
<td>Promotions</td>
<td>2,000.00</td>
<td></td>
</tr>
<tr>
<td><strong>Committees</strong></td>
<td>$19,249.72</td>
<td>$25,600.00</td>
</tr>
</tbody>
</table>

### Expenses (continued)

<table>
<thead>
<tr>
<th>Description</th>
<th>YTD Actual</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stat Thinking</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Web/ECC</td>
<td>3,887.95</td>
<td>10,000.00</td>
</tr>
<tr>
<td>Outreach Projects</td>
<td>3,021.84</td>
<td>5,450.00</td>
</tr>
<tr>
<td>RC Outreach</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td><strong>Tactical Plans</strong></td>
<td>$6,909.79</td>
<td>$15,450.00</td>
</tr>
<tr>
<td>Hunter Award</td>
<td>215.19</td>
<td>300.00</td>
</tr>
<tr>
<td>FTC Student Grants</td>
<td>1,164.80</td>
<td>1,500.00</td>
</tr>
<tr>
<td>FTC Honorarium</td>
<td>1,250.00</td>
<td></td>
</tr>
<tr>
<td>Recognition</td>
<td>1,073.75</td>
<td>150.00</td>
</tr>
<tr>
<td><strong>Awards</strong></td>
<td>$2,453.74</td>
<td>$3,200.00</td>
</tr>
<tr>
<td>Misc/postage</td>
<td>41.22</td>
<td>100.00</td>
</tr>
<tr>
<td>Misc/travel</td>
<td>247.56</td>
<td>0.00</td>
</tr>
<tr>
<td>Misc/other</td>
<td>150.00</td>
<td></td>
</tr>
<tr>
<td><strong>Misc-Total</strong></td>
<td>288.78</td>
<td>250.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$47,377.60</td>
<td>$63,500.00</td>
</tr>
</tbody>
</table>

### Ott Scholarship

<table>
<thead>
<tr>
<th>Description</th>
<th>YTD Actual</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholarship Fund</td>
<td>$229,086.23</td>
<td>$200,000.00</td>
</tr>
<tr>
<td><strong>Scholarship (2)</strong></td>
<td>$10,000</td>
<td>$20,000.00</td>
</tr>
</tbody>
</table>

### Ending Balances

<table>
<thead>
<tr>
<th>Description</th>
<th>YTD Actual</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking</td>
<td>$53,982.68</td>
<td></td>
</tr>
<tr>
<td>Money Market</td>
<td>$65,669.20</td>
<td></td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>$12,537.10</td>
<td></td>
</tr>
<tr>
<td>ASQ</td>
<td>$12,537.10</td>
<td></td>
</tr>
<tr>
<td>Dividends</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td>$132,188.98</td>
<td></td>
</tr>
<tr>
<td>Capital Assets</td>
<td>$6,413.24</td>
<td></td>
</tr>
<tr>
<td><strong>Long Term Assets</strong></td>
<td>$287,136.90</td>
<td></td>
</tr>
<tr>
<td>from reserve fund</td>
<td>58,050.67</td>
<td></td>
</tr>
<tr>
<td>Ott fund</td>
<td>229,086.23</td>
<td></td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>$419,325.88</td>
<td></td>
</tr>
</tbody>
</table>

---

*ASQ STATISTICS DIVISION NEWSLETTER, Vol. 23, No. 1*
### Treasurer’s Report

#### Statistics Division Approved Budget 2004-2005

<table>
<thead>
<tr>
<th>Revenue</th>
<th>2004-2005 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dues</td>
<td>$80,000.00</td>
</tr>
<tr>
<td>Retail Sales</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Interest/Royalties</td>
<td>2,000.00</td>
</tr>
<tr>
<td>Teleclass Revenue</td>
<td>0.00</td>
</tr>
<tr>
<td>AQC Tutorials</td>
<td>0.00</td>
</tr>
<tr>
<td>FTC Short Courses</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$63,500.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenses</th>
<th>2004-2005 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Member Mailings</td>
<td>5,000.00</td>
</tr>
<tr>
<td>Teleconferences</td>
<td>1,000.00</td>
</tr>
<tr>
<td><strong>General Fund</strong></td>
<td><strong>$6,000.00</strong></td>
</tr>
<tr>
<td>DAC meetings (Nov, May)</td>
<td>1,000.00</td>
</tr>
<tr>
<td><strong>Travel, hotel</strong></td>
<td><strong>1,000.00</strong></td>
</tr>
<tr>
<td>Strategic Planning (AQC)</td>
<td>6,500.00</td>
</tr>
<tr>
<td><strong>AQC Mtg</strong></td>
<td><strong>4,000.00</strong></td>
</tr>
<tr>
<td>AQC Travel</td>
<td>2,500.00</td>
</tr>
<tr>
<td>Operational Planning (Aug)</td>
<td>6,000.00</td>
</tr>
<tr>
<td><strong>Travel, hotel, meals</strong></td>
<td><strong>6,000.00</strong></td>
</tr>
<tr>
<td>Tactical Planning (FTC)</td>
<td>2,700.00</td>
</tr>
<tr>
<td><strong>FTC Mtg</strong></td>
<td><strong>200.00</strong></td>
</tr>
<tr>
<td>FTC Travel</td>
<td>2,500.00</td>
</tr>
<tr>
<td>Long Range Planning (3 yrs)</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Planning Comm</strong></td>
<td><strong>$16,200.00</strong></td>
</tr>
<tr>
<td>Auditing Comm</td>
<td>0.00</td>
</tr>
<tr>
<td>Bylaws Comm</td>
<td>0.00</td>
</tr>
<tr>
<td>Certification Comm</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Examination Comm</strong></td>
<td><strong>0.00</strong></td>
</tr>
<tr>
<td>AQC Exhibitor Fees</td>
<td>2,000.00</td>
</tr>
<tr>
<td>AOC Promotional Items</td>
<td>1,000.00</td>
</tr>
<tr>
<td><strong>Membership Comm</strong></td>
<td><strong>3,000.00</strong></td>
</tr>
<tr>
<td>Regular Newsletter (3)</td>
<td>4,500.00</td>
</tr>
<tr>
<td>Printing (Layout, pdf files)</td>
<td>4,000.00</td>
</tr>
<tr>
<td>Postage/Misc</td>
<td>500.00</td>
</tr>
<tr>
<td>Special Publication (even years)</td>
<td>1,000.00</td>
</tr>
<tr>
<td>Spring 2004 - Six Sigma</td>
<td>0.00</td>
</tr>
<tr>
<td>Sp Pub Printing</td>
<td>0.00</td>
</tr>
<tr>
<td>Sp Pub Postage</td>
<td>0.00</td>
</tr>
<tr>
<td>Sp Pub Reprints</td>
<td>1,000.00</td>
</tr>
<tr>
<td>Sp Pub Honorarium</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Newsletter Comm</strong></td>
<td><strong>5,500.00</strong></td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>$63,500.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ott Scholarship</th>
<th>2004-2005 Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>$200,000.00</td>
</tr>
<tr>
<td>Scholarship Fund</td>
<td><strong>$20,000.00</strong></td>
</tr>
<tr>
<td>Expenses</td>
<td></td>
</tr>
</tbody>
</table>

### Assets

- Scholarship Fund: $200,000.00
- Scholarship (2): $20,000.00
Program
The Fall Technical Conference has long been a forum for both statistics and quality. For the 48th annual conference, we’d like to emphasize innovative and creative techniques and applications for using statistics to improve quality. The ‘best value’ conference around will be held in 2004 in Roanoke, Virginia. This conference wishes to highlight the unique and powerful mix of statistics and quality. Papers chosen for presentation at this conference will feature the latest developments in statistical methods as they relate to quality improvement and decision-making. Some of the most influential leaders in quality and statistics attend this conference to give talks and present short courses. This conference is also one of the most reasonably priced conferences available to quality and statistics professionals and practitioners. You’ll have the opportunity to meet informally and exchange views with speakers and colleagues during breaks and the always-friendly hospitality suite. Four awards sponsored by ASQ divisions will be presented at the conference. On Thursday afternoon, at the W.J. Youden Memorial Address, the Hunter Award will be presented to a person who demonstrated creative
speakers and colleagues during breaks and the always-friendly hospitality suite. Four awards sponsored by ASQ divisions will be presented at the
conferences available to quality and statistics professionals and practitioners. You’ll have the opportunity to meet informally and exchange views with
leaders in quality and statistics attend this conference to give talks and present short courses. This conference is also one of the most reasonably priced
conference to give talks and present short courses. This conference is also one of the most reasonably priced conferences available to quality and statistics professionals and practitioners. You’ll have the opportunity to meet informally and exchange views with
speakers and colleagues during breaks and the always-friendly hospitality suite. Four awards sponsored by ASQ divisions will be presented at the
conference. On Thursday afternoon, at the W.J. Youden Memorial Address, the Hunter Award will be presented to a person who demonstrated creative
techniques and applications for using statistics to improve quality. The ‘best value’ conference around will be held in 2004 in Roanoke, Virginia. This conference wishes to highlight the unique and powerful mix of statistics and quality. Papers chosen for presentation at this conference will feature the latest developments in statistical methods as they relate to quality improvement and decision-making. Some of the most influential leaders in quality and statistics attend this conference to give talks and present short courses. This conference is also one of the most reasonably priced conferences available to quality and statistics professionals and practitioners. You’ll have the opportunity to meet informally and exchange views with
leaders in quality and statistics attend this conference to give talks and present short courses. This conference is also one of the most reasonably priced conferences available to quality and statistics professionals and practitioners. You’ll have the opportunity to meet informally and exchange views with
leaders in quality and statistics attend this conference to give talks and present short courses. This conference is also one of the most reasonably priced conferences available to quality and statistics professionals and practitioners. You’ll have the opportunity to meet informally and exchange views with
leaders in quality and statistics attend this conference to give talks and present short courses. This conference is also one of the most reasonably priced conferences available to quality and statistics professionals and practitioners. You’ll have the opportunity to meet informally and exchange views with
leaders in quality and statistics attend this conference to give talks and present short courses. This conference is also one of the most reasonably priced conferences available to quality and statistics professionals and practitioners. You’ll have the opportunity to meet informally and exchange views with
leaders in quality and statistics attend this conference to give talks and present short courses. This conference is also one of the most reasonably priced conferences available to quality and statistics professionals and practitioners. You’ll have the opportunity to meet informally and exchange views with
leaders in quality and statistics attend this conference to give talks and present short courses. This conference is also one of the most reasonably priced

48th Annual Fall Technical Conference

Thursday, October 14, 2004

7:30
Registration Desk Opens

WELCOME/PLENARY SESSION
Topic: Software and Hard-to-Change Factors
Speaker: John Sall, Executive Vice President, SAS
Welcome: Steve Caffrey, Eastman Kodak Company

Session 1
9:15 - 10:00
A. PROFILE MONITORING

Session 2
10:30-12:00
A. TECHNOOMETRICS

Session 3
2:00 - 3:30
A. MULTIVARIATE PROCESS MONITORING

4:00-5:00
Session Organizer and Moderator: Bill Notz, Ohio State University

Thursday, October 14, 2004

WELCOME/PLENARY SESSION
Topic: Software and Hard-to-Change Factors
Speaker: John Sall, Executive Vice President, SAS
Welcome: Steve Caffrey, Eastman Kodak Company

Session 1
9:15 - 10:00
A. PROFILE MONITORING

Session 2
10:30-12:00
A. TECHNOOMETRICS

Session 3
2:00 - 3:30
A. MULTIVARIATE PROCESS MONITORING
Friday, October 15, 2004

Registration Desk Opens

8:00 - 9:30

Session 4

A. MULTIVARIATE MODELING

Multivariate Prediction with Latent Variables
Bovas Abraham, University of Waterloo

Linking the OLD with the New PLS Multivariate Calibration
David E. Stevens, H. Eddie Newton, Eastman Chemical Company

Moderator: Fred Falthin, The Falthin Group

B. TOPICS IN DOE

A Response Surface Approach to Robust Parameter Design Using Generalized Linear Mixed Models
Timothy J. Robinson, University of Wyoming
Douglas C. Montgomery, Arizona State University
Andre I. Khuri, University of Florida

Prediction Variance Properties of Second-Order Response Surface Designs For Cuboidal Regions
Byu-Jim Park, Diane E. Richardson, Arizona State University
Connie M. Borror, University of Illinois
C.M. Anderson-Cook, Los Alamos National Lab

Moderator: Malcolm Hazel, Drexel University

C. PROCESS ANALYTICAL TECHNOLOGY

Quality by Design in the Pharmaceutical Industry: FDA’s PAT Initiative
Aaj S. Husain, Food and Drug Administration

Optimization of Pharmaceutical Products and Processes: An Engineering Perspective
Fernando Muzzio, Rutgers University

Applications of Multivariate Analysis in the Pharmaceutical Product Development and Quality Assurance
San Kang, Bristol-Myers Squibb Company

Moderator: Gordon Clark, Ohio State University

9:30-10:00

BREAK

10:00-11:30

Session 5

A. JOURNAL OF QUALITY TECHNOLOGY

Model-Robust Optimal Designs: A Genetic Algorithm Approach
Alejandro Heredia-Langer, Pacific Northwest National Lab
Douglas C. Montgomery, Arizona State University
W. Matthew Carfiyle, Naval Postgraduate School
Connie M. Borror, University of Illinois

Efficient Two-Level Designs for Estimating All Main Effects and Two-Factor Interactions: A Review
Robert W. Mee, University of Tennessee

Session Organizer and Moderator: Joe Sullivan, Mississippi State University

B. APPROACHES TO DOE

New Practical Objectives, Solution Methods, and Fractional Factorials
Theodore T. Allen, Nina Zhong, Navara Chantarat, Ohio State University

Response Variance Properties of Second-Order Response Surface Designs For Cuboidal Regions
Byu-Jim Park, Diane E. Richardson, Arizona State University
Connie M. Borror, University of Illinois
C.M. Anderson-Cook, Los Alamos National Lab

Moderator: Dean Neubauer, Corning

C. VARIABILITY ANALYSIS

The Risks and Rewards of Using Leveraging in Variation Reduction Problems
Jock MacKay, University of Waterloo

Multiscale SPC Based Supervisory Control of Thickness Uniformity in Thin Film Deposition Processes
Judy Jin, Huizuo Guo, University of Arizona

Moderator: Shouhui Chen, Penn State University

11:45-1:15

LUNCHEON

Speaker: Fritz Scheuren, University of Chicago, ASA President
Presiding: Dennis Lin, Penn State University, ASA-SPES Chair

A. CONTROL CHARTS

Monitoring Multiple Nonconformities: Improvements on the Demerit Control Chart
Robin C. Wurl, Penn State
Berks Lehigh Valley College
Wichai Chaitinwattawat, Chiang Mai University

A Test for the Randomness of a Sequence with an Application to Control Charts
John L. Stell, Chicago State University

Moderator: Angela Patterson, GE

B. SPLIT PLOT DESIGNS

Graphical Design Assessment Tools for Split-Plot Designs
C.M. Anderson-Cook, Los Alamos National Lab
Li Liang, Virginia Tech University
Timothy J. Robinson, University of Wyoming

Tailor-made Design of Split-Pot Experiments
Peter Goos, Katholieke Universiteit Leuven

Moderator: Sharad Prabhut, SAS

C. MEASUREMENT SYSTEM ANALYSIS

A Roadmap for Measurement Systems Analysis in the Chemical and Process Industries
Steven P. Bailey, Steve F. Larson, David P. Schuessler, DuPont
Ahang Rabbani, Invista

Measurement Systems Analysis and Design for Six Sigma at Lubrizol
The Lubrizol Corporation

Moderator: Jennifer Van Mullekom, DuPont

PROGRAM COMMITTEE
ASA/SPES: Christina Mastrangelo - Chair, University of Washington
ASQ/Q&P: Jennifer Van Mullekom, DuPont
Short Course: Tom Davan, Pratt & Whitney

HOST COMMITTEE
General Conference Chair: Steve Caffrey
Local Conference Chair: Angela Patterson

ASQ STATISTICS DIVISION NEWSLETTER, Vol. 23, No. 1 9
Call for Papers
49th Annual Fall Technical Conference

Statistics: The Gateway to Improved Quality

October 20-21, 2005
St. Louis Hilton at the Airport, St. Louis, MO

Co-sponsored by:
American Society for Quality
Chemical and Process Industry Division
Statistics Division
American Statistical Association
Section on Physical and Engineering Sciences
Quality & Productivity Section

We invite you to submit papers for presentation to the 49th Fall Technical Conference. The Fall Technical Conference has long been a forum for both statistics and quality. The goal of this conference is to engage researchers and practitioners in a dialogue that leads to more effective use of statistics to improve quality.

Achieving higher quality levels is a requirement in today’s dynamic global economy. Successful organizations deliver quality products and/or services. These organizations must focus not only on improving existing products and processes but also on the development of new products and processes. Establishing clear quantitative quality measures enables us to improve and achieve quality. Effective use of statistics permits the interpretation of data to improve and achieve quality. The conference will serve to bring innovations in statistical methodologies and quality tools to the forefront. Papers submitted to this conference typically include novel developments in the area of quality or applications of more established approaches in an innovative way.

The conference will be held in St. Louis, a city with many attractions. They include a cruise on the mighty Mississippi, a ride to the top of the Gateway Arch for a bird’s eye view of St. Louis, or seeking Lady Luck on a riverboat casino.

If you’re interested in presenting an applied or expository paper in any of three parallel sessions (Statistics, Quality Control or Tutorial/Case Studies) contact any of the committee members listed below, preferably by e-mail. Work should be strongly justified by application to a problem in engineering, manufacturing, process/chemical industry, physical sciences, or a service industry. The mathematical level of the papers may range from basic to that of the Journal of Quality Technology or Technometrics.

The submission deadline is February 18, 2005.

Committee Members:

STAT: Gordon Clark (Chair), The Ohio State University, (614) 847-1394, clark.17@osu.edu
CPID: Erika Abbas, E Ink Corporation, (617) 499-6049, eabbas@eink.com
Q&P: Martha Gardner, General Electric Global Research, (518) 387-6546, gardner@crd.ge.com
SPES: Joe Pigeon, Villanova University, (610) 519-7347, joseph.pigeon@villanova.edu

It is important to follow the abstract format (provided below). Papers are selected based on subject matter, technical correctness, usefulness, interest, clarity, and readability.

The program committee welcomes any suggestions for special session topics or speakers. If you have ideas, please contact one of the program committee listed on the Call for Papers.
Abstract Format
(use only a single page please)

Title of Presentation

First Author
affiliation
phone number (day)
fax number
paper mail address
e-mail address

Second Author
affiliation
phone number (day)
fax number
paper mail address
e-mail address

Third Author
affiliation
phone number (day)
fax number
paper mail address
e-mail address

Presenter: Name of presenter

Keywords: Include 3 to 5 key words or phrases

Purpose: One sentence. To derive, prove, synthesize, review, present, inform, encourage, motivate, enlighten, exemplify, highlight, etc.

Abstract
The abstract should include the following 3 components:
1. Motivation or Background:
2. Description: Describe the work done.
3. Significance: Are there improvements, applications, new abilities, new points of view, etc.? How will the status quo be changed?

Session Preference: (choose one)
___ Statistics
___ Quality Control
___ Tutorial/Case Study

Where did you learn about the Call for Papers?
___ Quality Progress ___ ASQ-CPID newsletter ___ On Q
___ ASQ-STAT newsletter ___ AMSTAT news ___ ASA-SPES/Q&P news
___ electronic (where?) ________________________________
___ other (please explain) ________________________________
AQC 2004 SUMMARY

The Statistics Division sponsored three sessions this past AQC. All were very well presented and received. The sessions were:

**SESSION T408**  
Six Sigma and Statistical Leadership.  
The Presenters were Roger Hoerl, Ron Snee and Bill Rodebaugh.

**SESSION W108**  
Multivariate Statistical Process Control and Industrial Applications  
The presenters were Dora Kourt and Vit Vaculik.  
Submitted by Daksha Chokshi  
Session Manager

**SESSION T308**  
DOE as a Map: Navigating your treacherous process terrain.  
Presenter: Davis Balestracci
ASQ STATISTICS DIVISION
58th AQC Council/Open Business Meeting
Fairmont Royal York
Toronto, Ontario
Monday, May 24, 6:00pm – 7:30pm

Present: Bob Mitchell Immediate Past Chair rhmitchell@mmm.com
Davis Balestracci Chair davis@dbharmony.com
Mark Kiel Chair Elect mhkiel@uss.com
John Murphy Outgoing Membership Chair j_murphy@direcway.com
Jonathon Andell Membership Chair jandell@hotmail.com
Ed Shilling Standards Committee Rep egscta@rit.edu
Laura Augustine McDermond Chair laura.augustine@lexisnexis.com
Gordon Clark 2004 FTC Program Rep clark.17@osu.edu
Tracey Blom ASQ DAC Group 2 Administrator

Agenda: See attachment #1.

Attendance was checked and a quorum was declared.

Business Issues
Mark reviewed the Statistics Division mission, vision, principles, current strategic plan, and the proposed agenda. No additions or changes were offered to the agenda.

The 2003 FTC Council meeting minutes were accepted without modification.

Davis Balestracci presented the 2003-2004 YTD Treasurer’s Report provided by Marcey Abate. (See attachment #2). Actual versus Plan:

• There was DAC travel in November, non was listed on the report.
• Officers’ Planning Meeting expenses came in at $5,458 vs. $4,000 forecast.
• The newsletter expenses were $2,380 actual vs. 12,600 due to the change to electronic.
• Standards Committee expenses were $3452 actual vs. $5,000 forecast.
• Web expenses were $3,555 actual vs. 10,000 forecast.

Effective 04/30/2004, the Statistics Division has a net worth (Assets – Liabilities) of $179,597.06. All division expenses are being paid from the checking account, neither the Money Market nor the Reserve Fund is being tapped. The Treasurer’s report was accepted by voice vote, with the request to Marcey for details on the following items: See attachment #3

Membership Committee
AQC Exhibit fees of $300 seems awfully low. Is this the Toronto AQC space rental only?
The amount paid to Champion Exposition (carpeting, tables, chairs, etc.) was $1287.42. Were these expenses paid after 4/30/04? Would they show up on this line, or the “Promotional Items” line?
$415.35 - promotional items... details please?

Newsletter Committee
I assume that printing and postage costs for Special Publication #5 have not yet reached you. $2,380 printing costs... for the postcard that we sent to non-opted in members regarding the Fall & Winter newsletters?

Where do charges from Zimmermann Printing for the Newsletter layout and pdf files show up?

Publications Committee
$4,591.12  -  Glossary Team expenses? Standards Committee $3,452.03 -  Can you please provide a break-down? (Kansas City TC-69 sponsorship/gifts?)

Tactical Plans
$3,021.84 for Out-Reach... details please.

Davis Balestracci presented the proposed 2003-2004 budget provided by Marcey Abate for review and discussion. A few minor modifications were offered and accepted in order to fund activities planned from the previous day’s strategic planning session or reduce due to the elimination of activities:

• Newsletter expenses reduced to $4,000 for Special Publication reprints. (All future Newsletters are downloadable pdf files from our redesigned website and no special pub is planned for this year).
• $1,250 for FTC Honorarium for short course presenter.

The modified 2004-2005 proposed budget was accepted on voice vote. See attachment #3.
General Discussion
Bob Mitchell reviewed the Strategic Planning process and outcomes from Sunday, May 23. The 2004 – 2005 Strategic Plan will continue to follow the themes established in the 2000 Minneapolis Long-Range Plan (LRP): See attachment #4

2004 – 2005 Statistics Division Officers:
- Chair - Mark Kiel
- Chair-elect - Geoff Vining
- Treasurer - Marcey Abate
- Secretary - Doug Hlavacek
- Vice Chair – Products & Services Tom Bargerstock

Other Infrastructure changes:
- Past Chair - Davis Balestracci
- Newsletter Editor - Evelyn Varner

E-Zine update:
- Mark Kiel has sent out three E-Zines with one more in the can for after the AQC. This E-Zine will promote our new discussion boards.
- E-Zine assignments will be made at the summer planning meeting. Need to increase distribution to two per month.

Web Site Migration:
- A copy of the division's web site was provided to ASQ on April 28 for migration efforts.

Recognition:
- The Statistics Division has been recognized with “Top Achiever” status of the ASQ Division Management Program (McDermond’) for the tenth consecutive year and received a special award during the DAC meeting on Friday.
- Davis Balestracci and Bob Mitchell received special recognition awards also at the DAC meeting.

Officers’ Operational Planning Meeting: It was agreed to meet again in Las Vegas this summer (late July – early August) as a convenient, central location to the roster of 2004-2005 Officers and the excellent turnout and accomplishments of last year’s meeting. The purpose of this annual meeting is to develop the Division planning calendar, with input from the ASQ KDC, Statistics Division job descriptions, and tactical plans.

Examining Activity:
Bob Mitchell and John Murphy, sponsored by the Statistics Division, were elected to ASQ Fellow in 2003-2004.

Standards Committee:
Writing groups report as follows:
- B1, B2, B3, Guide for Control Charts (Robert Hertz, CH, Georgia Kay Carter, Edward Schilling). Reviewing and revising standards; incorporating material on six sigma.
- S1, An Attribute Skip Lot Plan (Aridiman Jain, CH, Jack Keyser, Kenneth Stephens), Paperwork completed. On hold pending changes in ASQ Standards Committee Bi-laws.
- S3, An Attribute Chain Sampling Plan (Aridiman Jain, CH, Ed Schecter, Kenneth Stephens) New work item materials submitted to ASQ. Standard is in development. Balloting will be on hold pending changes in ASQ Standards Committee Bi-laws.
- Z1.9, Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming (Herbert Monnich, CH, Rudy Kittlitz, , Paul Roediger, Edward Schilling) Transferred to ANSI Z.1 Committee by ASQ Standards Committee. Standard was issued by December, 2003 as ANSI/ASQ Z1.9 (2003)
- Z1.4, Sampling Procedures and Tables for Inspection by Attributes. Transferred to ASC Z-1 Committee by ASQ Standards Committee. Standard was issued by December, 2003 as ANSI/ASQ Z1.4 (2003)

Ellis R. Ott Scholarship Report: See attachment #5

Meeting was adjourned at 7:35pm.

Respectfully Submitted,

Mark Kiel, Chair-Elect, STAT
MUST A PROCESS BE IN STATISTICAL CONTROL TO PERFORM AN EFFECTIVE EXPERIMENT?

Daniel R. Rand
Winona State University (drand@winona.edu)

Have you ever performed a designed experiment where none of the factors turned out to have a significant effect on the response? Is this a failed experiment? After all, you have discovered that none of the selected factors have an effect. Do you have some statistical certainty in this statement? As is often the case with questions about statistical results, it depends. It may depend on how rigorous you were in controlling other factors when performing the experiment trials.

Deming stated that a process must be in statistical control before performing experimental trials on the potential factors and critical responses of the process. That is, special causes must be accounted for so that the special causes don't inflate the variability of experiment trials. It may be difficult to control external factors and environmental variability in the development cycle, using prototypes, where no consistent process has been established. But the examples below will demonstrate that it is essential to maintain maximum control of the experimental system while randomizing the order of trials.

There is a strategy that is often overlooked in designing and performing even the simplest experiments. The most statistically powerful experiments are those which have the smallest possible amount of variability between replicated trials. The general principle used in measuring statistical significance is to divide the variability or difference between means by the variability amongst trials used to calculate a mean. Consider the comparison of means of sample data from two populations, “S” and “T” as shown in the SAS JMP output below. Data values in each column are clustered closely around the mean value, but the two means are relatively far apart. This will be confirmed as a significant difference by the statistical calculations.

There are two prevalent ways to generate an error term for the denominator of a statistical significance test.

1. The straightforward method is to estimate the error term from replicated trials, where the treatment levels of all factors are held as constant as is possible.
2. When extra trials resulting from replication are too expensive, we can estimate the error term by pooling together the effects that appear to be insignificant in a normal or half-normal plot of effects. This method is often used in fractional factorial experiments.

In either case, if we are sloppy with control of factor levels or lazy with randomization, special causes invade the experiment and the error term can get unacceptably large. As a result, significant effects of factors don’t appear to be so significant. Sloppy experiment trials get sloppy results.
Let’s examine experiments done on the same system by two classroom teams. The purpose was to optimize the distance (meet specifications) that a plastic ball is shot from a catapult. Catapult experiments are used in many classroom settings: undergraduate and graduate courses, industrial training in Design of Experiments, and in Six Sigma training.

There are several potential control factors for this particular catapult. The arm length, pull-back angle, and release angle are adjustable. Multiple rubber bands can be stretched over the post and between hooks on the base and catapult arm. Rubber band variability and operator-release variability should not be ignored. A string is tied to the back of the catapult arm to control the release angle. The string, which can fray, loosen, or break, is also a key component of the system.

So as not to give away secrets for catapult success, factors discussed in the examples will just be listed as letters (A,B,C …) at their high (+) and low (-) levels. Student teams had the following objectives:

- find the important factors in controlling shot distance by experimentation
- build a prediction model for shot distance using the important factors
- make adjustments to the control factors of the catapult to hit a target distance specified by the instructor.

Process specifications for shot distance were set to +/- 4 inches. Cpk was calculated for each team based on 3 shots from each of two operators (after the mathematical model was derived from a characterization experiment). Clearly this is an abuse of Cpk – the process is not likely to be in statistical control. However, it makes a viable, single “snapshot” measurement in the classroom for evaluating team success. Requiring two operators to shoot forces operator-release variability to be measured in the “process.”

The two teams that are highlighted in the examples will be called the Knot Random Team and the String Quartet Team. Each team designed a 16-trial, fractional factorial experiment with two levels for each factor to characterize their catapult’s capability and control factors. The initial target distance for each team was 96 inches. Results from analysis using Design Expert are shown for each of the two teams. The effects of six factors, identified as A through F, and their confounded interactions are shown on the half-normal plots.

Experiment results of the Knot Random team:

Two teams that are highlighted in the examples will be called the Knot Random Team and the String Quartet Team. Each team designed a 16-trial, fractional factorial experiment with two levels for each factor to characterize their catapult’s capability and control factors. The initial target distance for each team was 96 inches. Results from analysis using Design Expert are shown for each of the two teams. The effects of six factors, identified as A through F, and their confounded interactions are shown on the half-normal plots.

Experiment results of the Knot Random team:

Note that the E and AD (or EF) effects seem to lie pretty close to the line in the half-normal plot above; their significance is not as clear as we usually find on a half-normal plot of factorial effects. The AD interaction is aliased (confounded) with the EF interaction. This model didn’t make any practical sense to the experiment team. It could be argued that the AD interaction is not significant, since it lies close to the fit line. Results are ambiguous.

Continued on page 17
**MUST A PROCESS BE IN STATISTICAL CONTROL TO PERFORM AN EFFECTIVE EXPERIMENT?**

*Continued from page 16*

Experiment results of the String Quartet team

Five main effects appear to be clearly significant on the half-normal plot. This was a sensible result, and the team derived a useful mathematical model from the results.

Which team appeared to do a better job of controlling their system, and minimizing error?

Contrast of methods – String Quartet vs. Knot Random

<table>
<thead>
<tr>
<th>Source</th>
<th>Squares</th>
<th>DF</th>
<th>Square</th>
<th>Value</th>
<th>Prob &gt;F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>37182.3</td>
<td>5</td>
<td>7436.47</td>
<td>20.53</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>B</td>
<td>15036.9</td>
<td>1</td>
<td>15036.9</td>
<td>41.51</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>C</td>
<td>2848.89</td>
<td>1</td>
<td>2848.89</td>
<td>7.86</td>
<td>0.0187</td>
</tr>
<tr>
<td>D</td>
<td>6142.64</td>
<td>1</td>
<td>6142.64</td>
<td>16.96</td>
<td>0.0021</td>
</tr>
<tr>
<td>E</td>
<td>9628.52</td>
<td>1</td>
<td>9628.52</td>
<td>26.58</td>
<td>0.0004</td>
</tr>
<tr>
<td>F</td>
<td>3525.39</td>
<td>1</td>
<td>3525.39</td>
<td>9.73</td>
<td>0.0109</td>
</tr>
<tr>
<td>Residual</td>
<td>3622.41</td>
<td>10</td>
<td>3622.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cor Total</td>
<td>40804.7</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANOVA for Selected Factorial Model

Analysis of variance table [Partial sum of squares]

Results for the Knot Random Team
Mean Square Error in experiment = 1268.42
Demonstration of capability for 6 shots with specifications 84 ± 4 inches, Cpk = .34

Results for the String Quartet Team
Mean Square Error in experiment = 362.24
Demonstration of capability for 6 shots with specifications 72 ± 4 inches, Cpk=2.02

By comparing the mean square error for the two experiments, we see that the Knot Random team had more variability between trials. The String Quartet Team benefited from some related experience of two of their members; they were bow hunters who knew the importance of the release method of a projectile from a stringed device. This reinforces the concept that an industrial experiment team needs members with relevant experience with the process in question. We have seen support for Deming’s concept – a “better” experiment with less experimental error results when a process is held in control as much as is practically possible while performing experiment trials.

References:
ASQ Statistics Division

2004-2005 STRATEGIC PLAN

Adopted May 23, 2004

2004 – 2005 Winning Strategies

1. Vigorously attract non-members; aggressively market the ASQ Forum Member type
   - Continue to leverage the division website to deliver new products & services
     - Re-direct Discussion Board visitors from “old” Yahoo Groups (pilots) to the new STAT website Groups.
     - Create meta-tags (key words) that increase our hits on search engines
     - Pilot a narrated version of existing PowerPoint presentations.
     - Add more “Free Stuff” on our website
       ❖ Assign a tactical plan leader
         - Develop a Free Stuff update process and schedule
           - Pilot with 1-2 recent internal-3M presentations
           - Basic tools (hypothesis testing, t-tests, sampling)
           - Previous Statistical Thinking presentations
           - Previously published articles with voice-overs
       ❖ Short-term: Check on availability, suitability of previous material created by Lynne Hare, Roger Hoerl
         - Begin capturing email addresses (to promote e-Zines, tele-classes, other existing products):
           - Get our AWEBer.com link embedded into the “Free Stuff” webpage concurrent to the next Free Stuff product offering

2. Regular, frequent E-Zine mailings to members and non-members
   - Develop a monthly schedule; assign authors, topics
     - Promote Tele-classes, FTC, other existing products

3. Pilot the Statistics Division “Tele-Class”
   - Determine current status
     - Complete the 2003-2004 Tactical Plan
   - Determine feasibility of ASQ webinars process, procedures
   - Develop graduated fee schedules that promote Forum-level ASQ membership but also welcome non-members

4. Nurture, develop new alliances
   - Complete the 2005 – 2009 FTC Co-Sponsorship Agreement
   - Pursue sponsorship of ASQ Healthcare Division’s first annual conference
   - Agree to sponsor the ASQ Software Division’s Pittsburgh conference – contribute $500 to the conference, per request.

5. Re-invigorate the Virtual Academy –
   - Focus modules and activities on Statistical Thinking and the process approach
   - Market towards K-12 students and teachers
   - Incorporate hands-on learning style
   - Use lots of color, graphics, sound, animation
     - STAT to provide technical expertise; find web designer to create the modules
   - Provide links to other on-line learning sites
Statistics Division Operational Planning Meeting Minutes
(August 14-15, 2004 at Las Vegas)

Attending:
Mark Kiel – 2004 chair
Davis Balestracci – 2003 chair
Geoff Vining – 2004 chair elect
Gordon Clark – 2004 FTC program rep
Bob Mitchell – 2002 chair
Laura Augustine – DMP chair
Doug Hlavacek – 2004 secretary

<table>
<thead>
<tr>
<th>Discussion Items</th>
<th>Who</th>
<th>Action Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewed Stat Division Vision/Beliefs/Principles</td>
<td>All</td>
<td>• All Stat Division leaders to load their bios and pictures onto parallel Stat Division website <a href="http://216.171.161.106/administrative/mainmenu.htm">http://216.171.161.106/administrative/mainmenu.htm</a> (username=password=admin)</td>
</tr>
<tr>
<td>• Details found at SharePoint website</td>
<td>All</td>
<td>• Stat Division leaders should visit pertinent SharePoint websites using current username and password located at <a href="http://asqgroups.asq.org/index/">http://asqgroups.asq.org/index/</a> and <a href="http://asqgroups.asq.org/Divisions/Statistics/">http://asqgroups.asq.org/Divisions/Statistics/</a></td>
</tr>
<tr>
<td>• Stat Division membership (#3) running around 7k for last 3 years (5k paid + 2k no pay), down from 18k in the mid 1980’s, generally tracking with overall drop in ASQ membership, Quality Management Division #1 and Quality Audit Division #2 are down as well</td>
<td>Jonathon</td>
<td>• Jonathon Andell to approach non-renewing members, advertise new forum membership model, send them materials to re enlist, engage ASQ to find their email/snail mail addresses</td>
</tr>
<tr>
<td>• Bulk of Stat Division revenue (90%) comes from dues, rest from publication royalties, pre-conference tutorials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Various discussions regarding ASQ new member model, relationship with ASQ staff and organization, parallel websites, etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASQ Staff Organization and Website Hosting</td>
<td>Mark</td>
<td>• Mark to supply Doug with his list of his prior discussions over shortcomings of ASQ-hosted Stat Division website</td>
</tr>
<tr>
<td>• Different structure than ASA where statisticians in staff positions, larger distinction made between staff and unpaid volunteers within ASQ, ASQ working to standardize appearance/content/access across all division websites, Stat Div having problems with website restrictions (links being viewed by us as collaborative but ASQ as competitive), limited content viewable to non-members, links to our parallel website</td>
<td>Geoff</td>
<td>• Geoff to network within ASQ organization to identify right person on the staff to register our concerns</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>• All Stat Division leaders encouraged to review see what contacts they have within ASQ that could be leveraged</td>
</tr>
<tr>
<td></td>
<td>Mark</td>
<td>• Consensus to keep both websites running in parallel until ASQ willing to entertain discussions about our suggestions/enhancements</td>
</tr>
<tr>
<td></td>
<td>??</td>
<td>• Consider forming alliances with other divisions having strong web presence and same issues., united front with ASQ</td>
</tr>
<tr>
<td>Academics and 6 Sigma</td>
<td>Geoff</td>
<td>• Geoff to supply list of potential names (e.g., Woodall) as academic resources</td>
</tr>
<tr>
<td>• Academic programs interested in training materials (course syllabus, case studies) and discussion board for black belt training</td>
<td>Geoff</td>
<td>• Geoff to author E-Zine promoting division support of 6 sigma for academics</td>
</tr>
<tr>
<td>• Pockets of interest include statisticians at VaTech, engineers or industrial engineers at NCState/Arizona, MBAs</td>
<td>Bob</td>
<td>• Bob to publish E-Zine touting Statistical Thinking resources/publications</td>
</tr>
<tr>
<td>• General view that Stat Division hasn’t done enough to publish Statistical Thinking</td>
<td>Mark</td>
<td>• Mark to contact Education Division and see how Stat Division can help</td>
</tr>
</tbody>
</table>

Continued on page 20
PLANNING MEETING MINUTES

Continued from page 19

<table>
<thead>
<tr>
<th>Discussion Items</th>
<th>Who</th>
<th>Action Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glossary</td>
<td>Geoff</td>
<td>• Geoff to float proposal by ASQ Quality Press about electronic download of Glossary &amp; Tables at reduced price for ASQ members</td>
</tr>
<tr>
<td></td>
<td>Mark</td>
<td>• Mark will send out extra copies of glossary to division officers</td>
</tr>
<tr>
<td>Annual Quality Congress in Seattle May 2005</td>
<td>Laura</td>
<td>• Laura to spearhead booth activity</td>
</tr>
<tr>
<td>2004-2005 Wining Strategies</td>
<td>Bob</td>
<td>STRATEGY #1</td>
</tr>
<tr>
<td></td>
<td>Mark</td>
<td>• Bob to post message to old Yahoo groups indicating impending transition over to new discussion groups by October 1, also investigate possibility of having link on Yahoo directing users to new discussion board</td>
</tr>
<tr>
<td></td>
<td>Doug</td>
<td>• Doug to investigate whether narrated PowerPoint presentation can be translated in Adobe Acrobat format</td>
</tr>
<tr>
<td></td>
<td>Ike</td>
<td>• Ike to follow up with past Statistical Thinking authors (Britz, Hoerl), Executive Interviews (Vining) to assess willingness to narrate PowerPoint, if not, at least get their permission and make sure we give them credit</td>
</tr>
<tr>
<td></td>
<td>Bob</td>
<td>• Bob to turn on AWeber for capturing email addresses of non members</td>
</tr>
<tr>
<td></td>
<td>Gordon</td>
<td>STRATEGY #2</td>
</tr>
<tr>
<td></td>
<td>Mark</td>
<td>• Mark to document his current E-Zine process creation</td>
</tr>
<tr>
<td></td>
<td>Ike</td>
<td>• Ike agreed to own E-Zine process, develop year schedule, solicit authors, and consider adding catchphrase (Statistical Thinking Everywhere)</td>
</tr>
<tr>
<td></td>
<td>Mark</td>
<td>• Mark to confirm distribution for E-Zines</td>
</tr>
</tbody>
</table>

Continued on page 21
<table>
<thead>
<tr>
<th>Discussion Items</th>
<th>Who</th>
<th>Action Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Gordon provided update on 2005 FTC, hoping to form team in next couple of weeks, still needs to decide on theme for St Louis related, pick dates</td>
<td>Gordon</td>
<td>STRATEGY #3</td>
</tr>
<tr>
<td>• Build memberships (Forum Members) via alliances with ASQ divisions/forums (Data Integrity Interest Group, Six Sigma Forum), professional societies (SME, IEEE, ASME), or student organizations</td>
<td></td>
<td>• Need person (Products and Services) to own Tele-Classes…discuss this during infrastructure</td>
</tr>
<tr>
<td>ASQ Image Enhancement Adds</td>
<td>Mark/Bob</td>
<td>STRATEGY #4</td>
</tr>
<tr>
<td>• ASQ organization rolling out big ad campaign (Make Good Great)</td>
<td></td>
<td>• Gordon to follow up with Bob Brill regarding FTC agreement</td>
</tr>
<tr>
<td>• Stat Division should consider image enhancement ads as well for selling products and services and not just getting new members, get us beyond ASQ borders, probably looking at least one year off since don’t have products/services well defined, could sell specific products (DOE) into target markets (HealthCare)</td>
<td></td>
<td>STRATEGY #5</td>
</tr>
<tr>
<td>• Top four strategies take precedence</td>
<td></td>
<td>• Mark/Bob to add digital picture of McDermott plaque to website, reference 9 years of running history</td>
</tr>
<tr>
<td>DMP “logbook” to electronic format</td>
<td>Mark/Laura</td>
<td>• Mark to approach DAC to add adoption of electronic logbook to next meeting agenda</td>
</tr>
<tr>
<td>• Laura reviewed points status, currently on a torrid 570 pace, offered various suggestions for future point planning (special publications, point replacement, speakers, document everything)</td>
<td></td>
<td>• Laura to organize Stat Div website for electronic logbook</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>• Stat Division leaders to communicate any Division-related activities to Laura</td>
</tr>
<tr>
<td>Student Membership</td>
<td>Mark</td>
<td>• Daksha Chocksi volunteered to be Treasurer when Marcey’s term’s end</td>
</tr>
<tr>
<td>• Issue with Ike already resolved</td>
<td>Geoff</td>
<td>• Geoff to contact Scott Kowalski at Minitab for Vice-Chair of Products and Services position</td>
</tr>
<tr>
<td></td>
<td>Geoff</td>
<td>• Geoff to contact Cheryl Jennings as potential AQC Session Manager</td>
</tr>
<tr>
<td></td>
<td>Bob/Mark</td>
<td>• Bob/Mark to consider narrating Statistics Division Council spreadsheet, update new member orientation, current org chart</td>
</tr>
<tr>
<td></td>
<td>Geoff</td>
<td>• Geoff to update Statistics Division strategic plan during his term</td>
</tr>
<tr>
<td></td>
<td>Mark</td>
<td>• Mark to see how to best incorporate/add new member model to website</td>
</tr>
</tbody>
</table>

Continued on page 22
<table>
<thead>
<tr>
<th>Discussion Items</th>
<th>Who</th>
<th>Action Plans</th>
</tr>
</thead>
</table>
| Robert Middleton Tele-nar Report  
• Virtual Action Groups, runs 12 weeks in length, 12 students per group, costs running around $2.4k per participant, key is having good facilitator able to work participants through projects, money back guarantee assuming they participate in homework and calls | Laura | • Vice Chair for Products and Services to coordinate pilot project to create time length specific discussion board for Statistical Thinking, $75 for narrated PowerPoint downloads, Statistical Thinking book, access to restricted discussion board/temporary cohort discussion group, consider person(s) narrating would ask questions to get board going, provide course syllabus with timetable/learning objectives, consider creating SharePoint sub-website for this  
• Laura to review speakers list to identify potential member(s) willing to moderate group  
• Second pilot on Basic Stats (another subweb) using Scott’s Kolwaski training materials (15 small sessions), opportunity for Scott to sell copies of his Statistical Methods for Engineers, potential certification credits for attendees, target to get one test cycle of these running by end of this fiscal year  
• Doug to check out RPI website for their quality certification program |
| Strategic Plan Strawman Proposals  
• See discussion items and action plans from above | Doug | |
| Div/DAC Operational Calendar  
• Reviewed and updated calendar | Bob | • Bob to publish the changes |
## STATISTICS DIVISION COMMITTEE ROSTER

### Voting Members of STAT Council

#### 2004-2005

<table>
<thead>
<tr>
<th>Committee</th>
<th>Name</th>
<th>Division Position</th>
<th>ASQ Member #</th>
<th>E-mail address</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OFFICERS</strong></td>
<td>Mark Kiel</td>
<td>Division Chair</td>
<td>617887</td>
<td><a href="mailto:mhkiel@uss.com">mhkiel@uss.com</a></td>
<td>219-888-3788</td>
</tr>
<tr>
<td></td>
<td>Geoff Vining</td>
<td>Chair-Elect</td>
<td>85577</td>
<td><a href="mailto:vining@vt.edu">vining@vt.edu</a></td>
<td>540-231-5657</td>
</tr>
<tr>
<td></td>
<td>Marcey Abate</td>
<td>Treasurer</td>
<td>570469</td>
<td><a href="mailto:mlabate@sandia.gov">mlabate@sandia.gov</a></td>
<td>505-844-9424</td>
</tr>
<tr>
<td></td>
<td>Doug Hlavacek</td>
<td>Secretary</td>
<td>127270</td>
<td><a href="mailto:douglas.hlavacek@ecolab.com">douglas.hlavacek@ecolab.com</a></td>
<td>651-306-5833</td>
</tr>
<tr>
<td><strong>STANDING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Examining</td>
<td>Chair</td>
<td>Howard Swartz</td>
<td>Examining Chair</td>
<td>26025</td>
<td><a href="mailto:swartzhc@aaicorp.com">swartzhc@aaicorp.com</a></td>
</tr>
<tr>
<td>Auditing</td>
<td>Chair</td>
<td>Mark Kiel</td>
<td>Division Chair</td>
<td>617887</td>
<td><a href="mailto:mhkiel@uss.com">mhkiel@uss.com</a></td>
</tr>
<tr>
<td>By-Laws</td>
<td>Chair</td>
<td>Davis Balestracci</td>
<td>Past Chair</td>
<td>553773</td>
<td><a href="mailto:davisharmony@cox.net">davisharmony@cox.net</a></td>
</tr>
<tr>
<td>Nominating</td>
<td>Chair</td>
<td>Davis Balestracci</td>
<td>Past Chair</td>
<td>969535</td>
<td><a href="mailto:davisharmony@cox.net">davisharmony@cox.net</a></td>
</tr>
<tr>
<td></td>
<td>Co-Chair</td>
<td>Doug Hlavacek</td>
<td>Secretary</td>
<td>127270</td>
<td><a href="mailto:douglas.hlavacek@ecolab.com">douglas.hlavacek@ecolab.com</a></td>
</tr>
<tr>
<td></td>
<td>Co-Chair</td>
<td>Scott Kowalski</td>
<td>Vice Chair - Products &amp; Services</td>
<td>1087689</td>
<td><a href="mailto:skowalski@minitab.com">skowalski@minitab.com</a></td>
</tr>
<tr>
<td>Publications</td>
<td>Co-Chair</td>
<td>Doug Hlavacek</td>
<td>Secretary</td>
<td>127270</td>
<td><a href="mailto:douglas.hlavacek@ecolab.com">douglas.hlavacek@ecolab.com</a></td>
</tr>
<tr>
<td></td>
<td>Co-Chair</td>
<td>Scott Kowalski</td>
<td>Vice Chair - Products &amp; Services</td>
<td>1087689</td>
<td><a href="mailto:skowalski@minitab.com">skowalski@minitab.com</a></td>
</tr>
<tr>
<td></td>
<td>Voting Member</td>
<td>OPEN</td>
<td>Newsletter Editor</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voting Member</td>
<td>Bill Rodebaugh</td>
<td>Special Publications Editor</td>
<td>1258249</td>
<td><a href="mailto:bill.rodebaugh@grace.com">bill.rodebaugh@grace.com</a></td>
</tr>
<tr>
<td></td>
<td>Non-Voting Member</td>
<td>Rudy Kittlitz</td>
<td>Glossary &amp; Tables Editor</td>
<td>18478</td>
<td><a href="mailto:e300@overland.net">e300@overland.net</a></td>
</tr>
<tr>
<td>Strategic Planning</td>
<td>Chair</td>
<td>Mark Kiel</td>
<td>Division Chair</td>
<td>617887</td>
<td><a href="mailto:mhkiel@uss.com">mhkiel@uss.com</a></td>
</tr>
<tr>
<td><strong>CONSTITUTED</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tactical Planning</td>
<td>Chair</td>
<td>Geoff Vining</td>
<td>Chair-Elect</td>
<td>85577</td>
<td><a href="mailto:vining@vt.edu">vining@vt.edu</a></td>
</tr>
<tr>
<td></td>
<td>Co-Chair</td>
<td>Marcey Abate</td>
<td>Treasurer</td>
<td>570469</td>
<td><a href="mailto:mlabate@sandia.gov">mlabate@sandia.gov</a></td>
</tr>
<tr>
<td></td>
<td>Co-Chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non Voting Member</td>
<td>Small Web Solutions</td>
<td>Web Master</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Membership Needs</td>
<td>Co-Chair</td>
<td>Marcey Abate</td>
<td>Treasurer</td>
<td>570469</td>
<td><a href="mailto:mlabate@sandia.gov">mlabate@sandia.gov</a></td>
</tr>
<tr>
<td></td>
<td>Co-Chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voting Member</td>
<td>Jonathon Andell</td>
<td>Membership Chair</td>
<td>571003</td>
<td><a href="mailto:jandell@hotmail.com">jandell@hotmail.com</a></td>
</tr>
<tr>
<td></td>
<td>Voting Member</td>
<td>Ed Schilling</td>
<td>Standards Chair</td>
<td>291008</td>
<td><a href="mailto:egscta@rit.edu">egscta@rit.edu</a></td>
</tr>
<tr>
<td></td>
<td>Voting Member</td>
<td>Harry Koval</td>
<td>Certification Chair</td>
<td>18974</td>
<td><a href="mailto:hkoval@comcast.net">hkoval@comcast.net</a></td>
</tr>
<tr>
<td>Awards</td>
<td>Chair</td>
<td>Lynne Hare</td>
<td>Awards Chair</td>
<td>15152</td>
<td><a href="mailto:lynne.hare@kraft.com">lynne.hare@kraft.com</a></td>
</tr>
<tr>
<td></td>
<td>Non-Voting Member</td>
<td>Lynne Hare</td>
<td>Ott Scholarship</td>
<td>15152</td>
<td><a href="mailto:lynne.hare@kraft.com">lynne.hare@kraft.com</a></td>
</tr>
<tr>
<td></td>
<td>Non-Voting Member</td>
<td>Todd Nelson</td>
<td>FTC Student Grants</td>
<td>540577</td>
<td><a href="mailto:trnelson3@mnm.com">trnelson3@mnm.com</a></td>
</tr>
<tr>
<td></td>
<td>Non-Voting Member</td>
<td>Joe Voelkel</td>
<td>Hunter Award Chair</td>
<td>86580</td>
<td><a href="mailto:jgcva@rit.edu">jgcva@rit.edu</a></td>
</tr>
</tbody>
</table>
The *ASQ Statistics Division Newsletter* is published quarterly by the Statistics Division of the American Society for Quality.

All communications regarding this publication, EXCLUDING CHANGE OF ADDRESS, should be addressed to:

Mark Kiel, *Chair*
ASQ Statistics Division Newsletter
US Steel Gary Works
Mail Stop 20
1 North Broadway
Gary, IN 46402
Office: 219-888-3788
Fax: 219-888-4406
mhkiel@uss.com

Other communications relating to the Statistics Division of ASQ should be addressed to:

Bob Mitchell
Bldg. 224-06-S-03, 3M Center
3M Company
Maplewood, MN 55144-1000
Email: rhmitchell@mmm.com

Communications regarding change of address should be sent to ASQ at:

American Society for Quality
P.O. Box 3005
Milwaukee, WI 53201-3005

This will change the address for all publications you receive from ASQ including the newsletter. You can also handle this by phone (414) 272-8575 or (800) 248-1946.

**UPCOMING NEWSLETTER DEADLINES FOR SUBMISSIONS**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Vol.</th>
<th>No.</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
<td>23</td>
<td>2</td>
<td>Dec. 15, 2004</td>
</tr>
<tr>
<td>Spring</td>
<td>23</td>
<td>3</td>
<td>March 15, 2005</td>
</tr>
</tbody>
</table>

**VISIT THE STATISTICS DIVISION WEBSITE:**
www.asqstatdiv.org

Other Periodicals for Applied Statistics
http://www.asq.org/pub/jqt/