

A S Q STATISTICS D I V I S I O N *Newsletter* ©

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Fall, 2001

Incoming Chair's Message

by Van Bowen



We have some exciting plans for this year, our 23rd year. Many of you have sent e-mail expressing an interest in helping with various plans. We thank you and ask that you be patient as we try to get you in touch with the proper person. I must say that I have worked with many groups of people, and never have I seen a more dedicated and giving team of people than the members of the Statistics Division. We have a clear vision of how we can add value to processes at work, and we know that this transforming capacity needs to be shared with those yet unaware of the satisfaction Statistical Thinking brings. Yes, we have an important story to tell.

Several of the 2001-2002 plans focus our efforts on transforming the profession; both in the training of applied statisticians and in the way we partner with others. One of the ways that we will begin to partner with other divisions is to include a few items in each other's newsletters. In the upcoming Newsletter we will present plans which several other divisions hope to accomplish in the incoming year. A future Newsletter will include an article that describes our membership. Where do we come from and what other divisions do we join? How long have we been members?

In my review of our plans for the year, I offer a brief description of each plan and outline how we propose to implement them. As I looked at the plans, I noted that I offered no review of the things that we have been doing well for years. I assume that you know we shall continue with our excellent Newsletter, arguably the best among the 22 divisions. We partner with others to provide regularly scheduled conferences as an opportunity for members to communicate ideas with practitioners from different fields. It is important for us to continue our professional exchanges which cultivate our vision of Statistical Thinking. This being said, I would like to share with you an observation which could have an important impact on our Division in the near future. I see companies reducing travel and support budgets for many of us. Similar restrictions limit the time employers allow for contributing to organizations such as the Statistics Division. These restrictions would potentially reduce our time for writing, for presentations, and for the

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Outgoing Chair's Message

by Janice Shade



A special thanks to everyone for allowing me the opportunity to serve as the Statistics Division Chair. This year has been very rewarding; both in engaging more of our members to discuss their needs, and in defining the long term strategic plan that will drive Division activities for the next 3-5 years. It is hopeful that you feel that this was a productive year, and that your expectations as a member of the Statistics Division were met. I fondly look back at the past year and with deep appreciation want to thank everyone who played a role in Division activities.

In my evaluation of the Division, which appeared in last fall's newsletter, major initiatives included:

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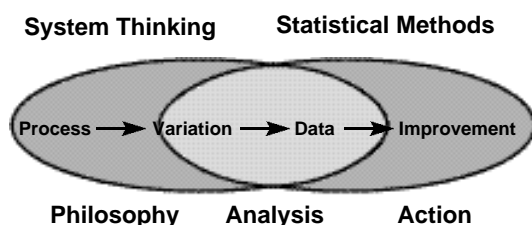
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MISSION

- 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.
 1. Our primary customers are Statistics Division members.
 2. Other key customers are:
 - a. Management
 - b. Users and potential users of Statistical Thinking
 - c. Educators 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



DESIRED DIVISION END-STATE

- Our members will be proud to be part of the 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:
 1. Greatest weight on intermediate level.
 2. Nearly as much weight on basic level.
 3. 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 view of quality management.
- Apply Statistical Thinking ourselves; that is, practice what we preach.
- Uphold professional ethics.
- Continuously improve.

STRATEGY

- Design and deliver selected useable products.
- Have a strong and vibrant Division infrastructure.
- Demonstrate the broad effectiveness of Statistical Thinking.
- Integrate Statistical Thinking into educational curricula.
- Develop a vibrant information communication system.
- Influence key decision makers.

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 **J.Q.T.** The objective of this newsletter is to be a forum for new ideas and to be open to differing points of view. The editor will strive 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 represents the views of the author of the material, and may or may not represent the official views of the Statistics Division of ASQ.

Criteria for Basic Tools and Mini-Paper Columns

Basic Tools

Purpose: To inform/teach the "quality practitioner" about useful techniques that can be easily understood, applied and explained to others.

Criteria:

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.

Possible Topics:

New SPC techniques
Graphical techniques
Statistical thinking principles
"Rehash" established methods

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.)
Longer articles may be submitted and published in two parts.
5. Not overly controversial.
6. 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.

EDITOR'S CORNER

by Karin Chu

What a busy year! The neck-to-neck Presidential election, California energy crisis, human cloning, and of course, the economic slowdown across most business sectors. This is only the 3rd Quarter!

This past year, many companies have undergone, and are still undergoing, various degrees of budgetary reforms. This effect could also trickle down to the individual statisticians (see Van's Chair's Message). The silver lining during this time of cost-reduction is the opportunity for us, as a profession and science, to strategically realign and present an even better foot forward. Statistics is no longer a "voodoo" science; more and more industries, companies, and individuals are realizing the rewards that a statistically data-driven decision can reap.

As companies reshape their structures to become more efficient, what role/s does a statistician play in the economic ups and downs? Sure, given an Excel spreadsheet and a color printer, one may be tempted into believing that "who needs a statistician (see AQC Summary)?" In times of financial flexibility, this scenario may be acceptable, as companies have the resources to accommodate the cost of a possible statistical misuse or sub-optimal decision making. However, this is not that time. This would be particularly true if the outcome of the project directly impacts the bottom line.

Whether the project drives cost minimization, resource allocation, or sustaining process performance, opportunities for improvement through statistics are everywhere (see 2001 FTC program). What can we do to ensure our knowledge and skills are fully utilized? How do we proactively seek out statistical improvement opportunities within a company/organization? These are age-old questions we have heard many times before, is

the present economic situation our chance to address these questions and put the answers into practice?

Our Newsletter welcomes readers to share their experiences and knowledge, whether you are a statistician,

user of statistics, believer/disbeliever of statistics, we would like to hear from you.

In the meantime, take a deep breath, only one more Quarter to go - hopefully.

MEET THE OFFICERS



Marcey Abate

Marcey Abate Treasurer

Marcey Abate joined Sandia National Laboratories as an applied statistician in 1995. She currently is a member of the Sandia Weapons Program Integration Department where she provides technical management and systems engineering support to various defense programs. Through Sandia, she has actively worked with the Federal Aviation Administration (FAA) to review decision support systems, evaluate aviation safety data, perform analyses of aviation safety inspector work processes, and develop a series of analytic training sessions in statistics, quality control, and system safety.

Marcey has a B.S. in Mathematics from Michigan State University, and M.S. and Ph.D. degrees in Mathematical Statistics from Purdue University. As a member of the ASQ Statistics Division, she previously served as Short Course Chair for two Annual Quality Congresses. Most recently, she has held the position of Electronic Commerce Chair.

Bill Rolfes, Secretary

Bill Rolfes is Quality Manager, 3M Personal Care and Related Products Division. Bill has been with 3M for 25 years, and has held various positions in process engineering, quality, and statistics. He holds a BS degree in Chemical Engineering from Case Western Reserve University. Bill is a former chair of the Oklahoma City Section of ASQ.



Van Bowen

Van Bowen Chair

Van just retired from the University of Richmond, where he promoted and taught applied statistics for 33 years, after finishing his graduate work in statistics at VPI & SU. In addition to teaching and consulting in many areas of statistical applications, he has taught Systems Thinking in the Jepson School of Leadership for five years and will continue to teach the course in his retirement. A fellow of ASQ, Van is also a long time member of ASA and of the Systems Dynamics Society.

Van has served the Statistics Division in several capacities since 1990, but is now committed to provide leadership and to build leadership opportunities for the statistics community. As a retired teacher and an advocate for undergraduate applied research, his passion is to promote our discipline and bridge the gap between training and practice.

OUTGOING CHAIR'S MESSAGE

Continued from page 1

Realigning the infrastructure to create a flatter, more matrix organization; one that is more resilient to the changing environment in which we work,

Becoming more active at the local level,

Improving communication with Division members so that everyone is more informed about our activities and how they can get involved, and

Proactively establishing an avenue for all members to participate in the October and November planning sessions.

Activities have begun to address each one of these areas. Much of the work will extend into next year, but at the very least, strategies and the plan leaders were identified during the May planning meeting.

In retrospect, the past year was one of change. The council recognized that the infrastructure was too "hierarchical" to be effective in an environment where everyone tries to squeeze 32 hours of work into a 24 hour day. The overwhelming opinion was to evaluate our current infrastructure, and re-evaluate all positions as well as the fundamental structure to create a flatter, integrated organization. A re-engineering meeting was held in Charlotte, prior to the AQC. The outcome was the development of the framework for the future organization. As Past Chair, I will lead this initiative to completion in the coming year.

Changes were also made to Division operating norms. The principle of "do a few things right" was used when selecting upcoming tactical plans. Not only were we more conscientious about the activity, but also the amount of time that would be needed to complete the activity. All plans identified in May are intended to have a 12-18 month completion time frame. The officer rotation was decreased from a 5 year to a 3 year commitment, in an effort that recognizes people have less and less time to contribute to a volunteer organization. Hopefully, this will attract more member involvement.

A campaign was started to keep our members more informed in Division activities, and to solicit feedback and help from those interested. In order to better communicate Division activities and request input, e-mails will be sent out to members on a semi-monthly basis. Teleconferencing was available during the May Planning Meeting so that any interested member could participate in the planning process of the 3 strategies developed in October.

The comparison between what we, as statisticians, are taught and what we need to succeed in business became a major initiative. Officers and council members recognized that the Statistics Division is in a unique position, as one of the largest industrial statistics organizations, to lead research in this area. Work has begun in identifying this gap. The Division developed a survey for recent graduates of statistics to understand what courses are most useful in their job, and whether there are other courses that they wish they had taken. Work is also being done to meet with key business leaders to understand why statisticians very rarely move out of the technical area. We are also actively seeking a partner to help conduct a statistically valid survey to determine whether curriculum should be changed to better prepare applied and industrial statisticians for business. So if anyone has some grant money lying around, this one may be interesting....

Resources will be put against identifying ways to be more active at the local level through the use of Regional Councilors and Section Liaisons. The Division also needs to become more proactive in grooming these people who support us regionally or in the sections. In a separate initiative, the current use of the website will be evaluated and a strategy for future use will be developed. Separate committees were formed during the May meeting to develop the action plans.

But none of this could be accomplished without a great group of dedicated people who were responsible for working on Division activities throughout the year. Without their assistance, Division activities would

not have happened. I owe all successes of the past year to them.

A warm thanks to **Bob Mitchell**, the Past Chair, for his support and guidance throughout the year. It is anticipated that the Division will once again qualify for Level 3 McDermond. The Incoming Chair, **Van Bowen**, has been active in the Division for many years, working to implement Statistical Thinking in academia and business. He is also the latest Division sponsored ASQ Fellow. **JL Madrigal**, Secretary, served as Secretary last year and previously served as the Membership Chair. **Marcey Abate**, Treasurer, was the Electronic Commerce Chair. It is obvious that these Officers have the passion and dedication to continue the strategies identified in the October 2000 Long Range Planning Meeting.

A special thanks to the members of our Publications Committee, headed by **Nancy Belunis**, Publications Chair. Particularly noteworthy is the work she and **Don Emerling**, Improving Performance Editor, began on the "Improving Performance" Series to identify future topics that are of interest to our members. During the year, the third Special Publication was mailed to our members. Thanks to **Mary Leitnaker** for writing the article entitled, "Using the Power of Statistical Thinking" and **Stu Janis**, Special Publications Editor, for editing the publication. This year saw a change in Newsletter editors. **Sandy Capone**, who did an excellent job over the past few years, stepped down because of other commitments. **Karin Chu**, who was a former Ott Scholarship recipient, took over without missing a beat.

Thanks to our awards committee of **Lynne Hare**, Awards Committee / Ott Scholarship Chair, **Nancy Belunis**, Hunter Award Chair, and **Todd Nelson**, Student Grants Chair. The Statistics Division was proud to award 5 Ellis R. Ott Scholarships in the amount of \$5000 to students in post-graduate studies of Applied Statistics. Congratulations to **Ana Aviles**, **Victoria Jordon**, **Lixia Jiao**, **Karla Gentner**, **Dean DeCock** and **Kevin Busby**. In addition, the Division sponsored 4 students to the 44th Annual

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INCOMING CHAIR'S MESSAGE

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administration of our Division. I believe that these policies, designed to reduce cost, could have an undesirable long-term side effect. What do I mean by that?

One of the systems archetypes mentioned by Peter Senge¹ is "The Tragedy of the Commons." This concept is used to identify actions that are logical and optimum for each component of a system, but have the effect of being tragic for the greater system. The effect is very similar to eating the goose that lays golden eggs. It is not just a problem of depleting ecological commons. Rewarding "localness" in an organization without understanding the organizational consequences creates the opportunity for a spiraling effect. A local optimum decision is rewarded promptly and creates additional enticement to continue operating with local optimization policies. If these actions deplete a "commons," then trouble is brewing in the long term. Senge identifies two ways to deal with the process: create a manager for the "commons" or establish signals, possibly with rewards, to warn local managers that the "commons" is in danger.

How does this apply to our members having diminished support? If companies restrict the external opportunities of cultivating their intellectual capital, it may well have the desired effect on the budget. The question is, how long will it take for those policies to cripple organizations such as the Statistics Division. The issue is not that large companies can't train people to use methods they have found to work well, but that there will be no reason to ask a successful, senior practitioner to prepare a Youden address which helps people see the interaction and synergy linking academics and innovative applications. This Newsletter hardly replaces the one hour conversation with someone at FTC about the way she used data to adjust a filling machine.

I don't know how to establish signals which will influence corporate managers to "think longer term," but I

hope that current policies are above the "water-line." Errors that cause problems above the "water-line" can be repaired, but those below the "water-line" can be more serious.

We can be proud of the accomplishments of the Statistics Division. Continuing to share Statistical Thinking accomplishments at FTC and AQC will energize us and help us stay mentally vigorous. We are 7200, who have a story to tell and a passion for reducing variability. We learned about the sciences when we were much younger. But just think of the science we would never know without the Royal Discipline of statistics, which enables us to learn. That tool, Statistical Thinking, disarms the impediment that variability has to limit our understanding of the real underlying process.

¹Senge, P.M. 1990. *The Fifth Discipline: The Art and Practice of the Learning Organization*. Doubleday/Currency: New York.

OUTGOING CHAIR'S MESSAGE

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FTC. Congratulations to **Ana Aviles, Dean DeCock, Liu Feng** and **Yachen Xu**. Finally, congratulations go to the 9 recipients of ASQ testimonial awards given to active Division members as acknowledgement for a "job well done." The recipients were: **Mark Kiel, JL Madrigal, Ralph St. John, Don Emerling, Bob Mitchell, Stu Janis, Nick Martino, Ed Schilling** and **Lynne Hare**.

The 44th Annual Fall Technical Conference was a great success. **Bob Mitchell**, Program Committee Representative, played a vital role in its success. **Bob Brill**, 2000 FTC Short Course Chair, did an excellent job selecting our short course instructors. **Lynne Hare** taught "Basics of Design of Experiments", while **Christina Mastrangelo** instructed a course entitled "Multivariate Process Monitoring". Thanks to both instructors for developing such wonderful courses! Congratulations to **David Bacon**, the recipient of the 2000 William G. Hunter Award, and **Geoffrey Vining** for presenting this year's Youden Address. There are so many people, not only

from the Statistics Division, but also ASQ-CPID and ASA-SPEs, that diligently work together to make this conference happen. Thank you everyone!

The Division saw many new faces this year, including: **Karin Chu**, Newsletter Editor; **John Murphy**, Membership Chair; and **Harry Koval**, Certification Chair. Others continued to actively support Division activities. **Ed Schilling**, Standards Chair, **Jim Lenhart**, Web Page Administrator, **Mark Kiel**, 2001 FTC Program Representative, and **Bob Perry**, Examining Chair, continue to do an excellent job year after year.

A special thanks goes to **Tom Swails** and **Bill Rolfes** for donating their time to facilitate our October Long Range Planning Meeting. Under the direction of Tom, the Division accomplished more in 1-1/2 days than some organizations achieve in 6 months. We couldn't have done it without either of you!! I also want to thank Past Chairs **Rick Lewis, Nancy Belunis, Pete Jacobs, Don Williams**, and **Galen Britz** for participating in this important meeting, as well as **Bob Brill, Stu Janis, Van Bowen, Bob Mitchell, Davis Balestracci, Sandy Capone, Karin Chu**, and **Greg Gruska**.

This year the Statistics Division sponsored 2 talks at the Charlotte AQC. Thanks to **Steve Bailey, Roger Hoerl, Bob Mitchell, Ron Snee** and **Geoffrey Vining** for their panel discussion entitled, "Six Sigma: A Breakthrough Strategy or Just Another Fad". Additional thanks go out to **Ron Snee** and **Joe Voekel** for working with me on a talk entitled, "Who Needs a Statistician When I Have a Computer and Color Printer".

Finally, a special farewell to those who have worked hard for the Division, but have decided to take a less active role due to other commitments. To **Greg Gruska**, Outgoing Treasurer; **Paula Sommer**, Education Chair; and **Nick Martino**, Certification Chair: Thank each and every one of you for the years you have helped us achieve McDermond Level 3. Your participation brought depth of knowledge and breath of scope, and your absence will be missed!

Thanks again for a great year!

Statistics Division Committee Roster

July 1st, 2001

Committee	Name	Division Position	AQC Mem#	E-mail address
By-Laws				
Chair	Bob Mitchell	Past Chair	613928	rhmittchell@mmm.com
Nominating				
Chair	Jacob Van Bowen	Chair	969535	vbowen@richmond.edu
Member	Open			
Member	Janice Shade	Past Chair	387117	shadej@nabisco.com
Member	Marcey Abate	Treasurer 1st Year	570469	mlabate@sandia.gov
Member	Bill Rolfes	Secretary, 1st Year		brolfes@mmm.com
Auditing				
Chair	Janice Shade	Past Chair	387117	shadej@nabisco.com
Program				
Chair	Bob Mitchell	Chair-Elect	613928	rhmittchell@mmm.com
Member	Don Williams	2002 AQC Session Rep	132223	Dr.Williams@worldnet.att.net
Member	Janice Shade	Past Chair	387117	shadej@nabisco.com
Member	Greg Gruska	2002 AQC Tech Paper Reviewer	14581	Gruska.GF@CI-TTGI.com
Member	Stu Janis	2002 AQC Tech Paper Reviewer	55532	sjjanis@mmm.com
Member	Mark Kiel	2001 FTC Program Committee Rep.	617887	markHK5409@aol.com
Member	Greg Gruska	Deming Applied Stat Conf	14581	Gruska.GF@CI-TTGI.com
Strategic Planning				
Chair	Bob Mitchell	Chair-Elect	613928	rhmittchell@mmm.com
Members	Jacob Van Bowen	Chair	969535	vbowen@richmond.edu
Members	All Statistics Div.	Committee Chairs		
Membership				
Chair	John Murphy		23883	murphy_john_r@lilly.com
Examining				
Chair	Bob Perry		26025	rperry@pillsbury.com
Standards				
Chair	Ed Schilling		29108	egscta@rit.edu
Certification				
Chair	Harry Koval			Hkaval@aol.com
Awards				
Chair	Lynne Hare		15152	hareL@nabisco.com
Member	Lynne Hare	(Ott Scholarship)	15152	hareL@nabisco.com
Member	Nancy Belunis	(Hunter Award Chair)	79535	belunis@merck.com
Member	Todd Nelson	(Student Grants Chair)	79535	trnelson3@mmm.com
OPEN		(McDermond Chair)		
Publications				
Chair	Nancy Belunis		79535	belunis@merck.com
Member	Karin Chu	Newsletter Editor	1392441	karin.k.chu@intel.com
OPEN		(Committee Reports Editor)		
OPEN		(Conference Reports Editor)		
Member	Marilyn Hwan	(Mini Paper / Basic Tools Editor)	16872	mhwan@lsil.com
Member	Stu Janis	(Special Publications Ed.)	55532	sjjanis@mmm.com
Member	Walter Liggett	(How To... Editor)	826987	wliggett@cam.nist.gov
OPEN		(Understanding... Editor)		
Member	Don Emerling	(Improving... Editor)	600953	emerlingd@ryobi.com
OPEN		(Glossary Editor)		
OPEN		(Electronics Publications Editor)		
Education				
OPEN				
Member	Mark Crossley	2001 AQC Sh Course Chair		qma@interpath.com
Member	Bob Brill	2002 FTC Sh Course Chair	63166	Robert_V_Brill@astaris.com
Member	Mark Crossley	Short Course Development Chair		qma@interpath.com
OPEN		(Virtual Academy Editor)		
Electronic Commerce				
Chair	Marcey Abate		570469	mlabate@sandia.gov
Member	Jim Lenhart	(Web Page Administrator)	1234146	jelenha@sandia.gov
OPEN		(Internet Communications Coord)		
Membership				
Chair	John Murphy	Membership Chair	23883	murphy_john_r@lilly.com
		Regional Councilors		
		Region #		
OPEN	George Zeliger	1	197935	zeliger@asqnet.org
OPEN		2		
		3		
	Michael Cohen	4		
	John McCool	5		mpt@psu.edu
	Gordon Booth	6	611851	gordon@bootha.com
	Tom Vaden	7	33217	vaden@aol.com
	Bill Bleau	8	64592	bleau@qt.picker.com
	Ha Dao	9	599779	hcdao@erinet.com
OPEN		10		
	George Marrah	11	21339	marrahgw@jmu.edu
	Bob Dovich	12	10971	rdovich@nfcna.com
	Rick Schleusener	13	173043	schleys@kodak.com
	John Jennings III	14	61471	jjennings@karlee.com
	Dan Dankovic	15	98784	dankovic.d.d@noteswes.com
		Section Liaisons		(48 Sections have been filled)
OPEN	Charles Margolis	Division Marketer	420821	cmargolis@cyberdrive.net
OPEN		Volunteer Placement Coord.		
		ASA Q&P Liaison		

Planning Meeting Report

General Discussion

After introductions and the review of the Division Mission, Vision, Strategy, Principles Marketing and Ground Rules, membership retention was discussed. An analysis done on Statistics Division data indicates that a large majority of our members are also members of other divisions. Also, there are pockets of high membership throughout the country. How we can best tap into these pockets is yet unknown. Another concern is the lack of attendance at council and planning meetings. This year an 800 number was available for any member to participate in the planning session. However, the utilization of this teleconferencing tool was far less than anticipated.

A recap of the organizational restructuring meeting then followed. It is anticipated that three Vice Chairs will be formed in the areas of communication, outreach, and products & services. Over the next few months, a draft of the organization chart will be developed and shared. It is intended that the new organization will be ready for council vote during the October council meeting, which will take place during the FTC in Toronto.

Finally, the action plans from the October 2000 LPR were reviewed. Three distinct areas were identified during the Long Range Plan:

Improving Statistics Division Effectiveness

Practitioner Education in Business

Expanding our Influence

Teams were formed around each area, and several tactics were currently underway. Because of the lack of manpower to focus on all the ongoing tactics, participants agreed to review all action items to determine which plans were the most important. The theme throughout the review was, "do a few things well". With this in mind, each one of the action items was discussed, and the 2001-2002 plans formulated.

Overview of 2001-2002 Plans

Organization Realignment

Leader: Janice Shade
(shadej@nabisco.com)

Purpose: To develop a process oriented structure.

Key Steps:

Develop project plan by June 1.

Identify team.

Complete design detail.

Present to leadership.

Implement and get feedback as part of PDCA.

Update bylaws.

Get ASQ approval.

Outreach Survey

Leader: Darrell Radson
(radson@uwm.edu)

Purpose: To understand problems and current approaches of practitioners.

Key Steps:

Develop project plan by June 1.

Share information.

Ensure survey reflects the Statistics

Division strategic plan.

If appropriate, develop ASQ proposal.

Website Strategy

Leader: Mark Kiel
(MarkHK5409@aol.com)

Purpose: To design a new web strategy, (plan or roadmap) that will better support the strategic initiatives.

Key Steps:

Develop project plan by June 1.

Identify objectives, products and services for the future website.

Identify resources to achieve the objective.

Present proposal to the SD council.

Business and Academia Workshop

Leader: Van Bowen
(vbowen@richmond.edu)

Purpose: To bridge the gap between academia and business.

Key Steps:

Develop project plan by June 1.

Narrow the focus.

Identify the appropriate context within the corporate world.

Decide how to partner.

Plan the pilot.

Regional Councilors and Section Liaisons

Leader: Bob Mitchell
(rhmitchell@mmm.com)

John Murphy
(murphy_john_r@lilly.com)

Purpose: To groom the Regional Councilors and Section Liaisons for future leadership positions and deploy the strategic plan.

Key Steps:

Develop project plan by June 1.

Set up Regional Councilor and Section Liaison conference calls.

Review job descriptions.

Confirm actual RC and SL numbers and vacancies.

Determine what tools are needed to talk to the strategic plan and how we will communicate.

If anyone is interested in getting involved in any of the above plans, please feel free to contact the plan leader(s). Also please copy Van Bowen and Janice Shade (shadej@nabisco.com) on any related correspondence.

TREASURER'S REPORT

Statistics Division 2001/2002 Budget

Working Revenue	2002 Budget	2001 Budget
Dues	\$60,000.00	\$65,000.00
Retail Sales	1,000.00	5,000.00
Interest Royalties	2,000.00	2,000.00
AQC Short Courses	0.00	0.00
2000-2001 Carry-over	15,000.00	15,000.00
Transfer - Money Mrk	7,900.00	0.00
TOTAL	\$88,900.00	\$92,000.00

Expenses	2002 Budget	2001 Budget
New Member Mailings	1,000.00	2,000.00
Teleconferences	4,000.00	2,500.00
Metagraphix	250.00	250.00
General Fund	\$5,250.00	\$4,750.00

GTC/Travel	1,500.00	1,500.00
Tactical Plan Mtg.	8,000.00	8,000.00
AQC Mtg.	4,000.00	4,000.00
AQC Travel	2,000.00	2,000.00
FTC Mtg.	0.00	0.00
FTC Travel	2,000.00	2,000.00
Long Range Plan Mtg.	0.00	0.00
Officers Planning Mtg.	5,000.00	3,000.00
Strategic Planning	\$14,500.00	\$17,500.00

Auditing	0.00	0.00
Bylaws	0.00	0.00
Certification	0.00	0.00
Examining	0.00	0.00

Membership	10,500.00	10,500.00
ASQ Div. Ballot	2,500.00	2,500.00
Exhibitor Fees	4,000.00	4,000.00
Phone Survey	1,000.00	1,000.00
Promotional Items	3,000.00	3,000.00
Miscellaneous	0.00	0.00
Newsletter	37,400.00	46,900.00
Printing	18,000.00	22,000.00
Postage/Miscellaneous	7,300.00	7,300.00
Spec. Publication Print.	7,500.00	10,000.00
Spec. Publication Postage	2,100.00	2,100.00
Spec. Publication Reprints	2,000.00	4,000.00
Spec. Pub. Honorarium	500.00	500.00
Nominating	0.00	0.00
Programs	0.00	0.00
Publications	1,000.00	2,000.00
Standards	3,000.00	3,000.00
Committees	\$51,900.00	\$62,400.00

Expenses	2002 Budget	2001 Budget
Stat Thinking	0.00	1,000.00
Education	0.00	100.00
Web/ECC	6,000.00	2,000.00
LR Planning Projects	5,000.00	0.00
RC Outreach	2,000.00	0.00
Tactical Plans	\$13,000.00	\$3,100.00

Hunter Award	1,250.00	1,250.00
FTC Student Grants	1,500.00	1,500.00
FTC Honorarium	250.00	250.00
Recognition	250.00	250.00
Awards	\$4,250.00	\$4,250.00

Misc/Postage	0.00	0.00
Misc/Travel	0.00	0.00
Misc/Other	0.00	0.00
Misc-Total	0.00	0.00

TOTAL	\$88,900.00	\$92,000.00
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PROJECTED REVENUE - EXPENSE

\$0.00

OTT SCHOLARSHIP

Assets	2002	2001
Scholarship Fund	\$250,000.00	\$260,000.00
Expenses		
Scholarship (6)	\$ 30,000.00	\$ 30,000.00

AQC SUMMARY

Statistics Division Hosts Two Sessions at the 55th Charlotte AQC

At this year's Annual Quality Congress, The Statistics Division sponsored two ninety-minute sessions. Both were held on Monday, May 7th.

The first session entitled, **“Six Sigma: A Breakthrough Strategy or Just Another Fad?”** was conducted by:

Steve Bailey, Dupont

Roger Hoerl, GE

Bob Mitchell, 3M

Ron Snee, Sigma Breakthrough Technologies

Geoff Vining, Virginia Tech

It was a standing room for this panel discussion on the issues surrounding the hot topic of Six Sigma. Each speaker presented prepared comments that either supported or refuted whether Six Sigma was a new business strategy, or a new packaging of an old idea. Discussions looked at the differences and similarities between Six Sigma and TQM, namely:

Is Six Sigma a natural continuation of earlier quality and productivity improvement strategies?

Are the tools used in Six Sigma really different from TQM tools?

Is DMAIC fundamentally different from PDCA?

How does Six Sigma's top-down approach for impacting the bottom line differ from previous strategies?

As the panel discussion continued, it became clear that, in some respects, Six Sigma was a natural continuation of TQM and other productivity improvement initiatives. However, one clear distinction became evident. One of the true drivers of a successful Six Sigma program are upper management, who tie the initiative to the company's strategic objectives. Therefore, everyone is working towards a common goal.

Once all prepared statements were given, the panelists answered questions submitted by Statistics Division members. To close the session, the audience was given the opportunity to ask their own questions.

The second Statistics Division sponsored session was entitled, **“Who Needs a Statistician When I Have a Computer and Color Printer”**. This session was conducted by:

Janice Shade, Kraft, NA

Ron Snee, Sigma Breakthrough Technologies

Joe Voekel, Rochester Institute of Technology

A filled room listened to this presentation that addressed the potential pitfalls of the “Point and Click” approach to data analysis. The fundamentals of data collection and analysis were discussed. These included:

Defining the objective of the data,

The dangers of inappropriately using historical data,

Proper data collection requirements, and

Selection of the right statistical tool.

The speakers then presented a series of case studies that demonstrated the dangers of immediately analyzing historical data, without first defining data objectives and sampling criteria. The importance of proper plotting of data, and the consideration required for analyzing more complex data sets, (e.g. multi-cavity machine, multiple streams, multiple filler heads, multiple sampling points on a sample, etc.), was then discussed.

How can we teach the proper use of statistical software? A discussion on the use of robust learning methods gave the audience an overview of how to better integrate statistical software into the teaching process. The session concluded with an audience Q&A discussion.

Division to Realign the Organization

Within the coming year, the Statistics Division will restructure the organization and change all Bylaws accordingly. During a meeting conducted at the Charlotte AQC, it was determined that the current infrastructure does not support the objectives set forth in the October 2000 Long Range Planning Meeting. Participants felt that:

Many of the jobs were functionally organized (emphasizing maintenance), instead of being process oriented (supporting activities).

Future activities must expand to include more partnering and alliances with other sister and outside organizations. The website will become increasingly important for disseminating communication and information.

In a sentence: **The infrastructure should be flexible enough to foster alliances with internal and external partners, enabling membership growth and involvement through the increased use of the web.**

Based on this statement, the organization will be realigned using the following guidelines:

Position	Responsibility	Select Activities
Past Chair	Infrastructure	Bylaws, Organization
Chair	Leadership/Administration	McDermond, ASQ Requirements, Alignment to Strategic Plan
Chair-Elect	Leadership/Administration	ST and LT plans, Committee Reports, Conference Preparation,
Secretary	Administration	Meeting Minutes, Operating Manual, Phone Book
Treasurer	Administration	Finances, Budget, Quarterly Reports
Vice Chair Outreach	Member Acquisition and Retention	Surveys, Market Segmentation, Regional Councilors, Examining, Welcome Packets
Vice Chair Products and Services	Identification and Delivery of Division Offerings	Special Publications, Books, Conferences
Vice Chair of Communications	Information Dissemination Via Various Channels	Short Courses, Certifications, Standards Newsletter, Web, Email, Snail mail

Additional details of the new organization are still under draft, and will be communicated once they are complete.

FALL TECHNICAL CONFERENCE SCHOLARSHIPS

The Statistics Division of the American Society for Quality Control is offering 5 grants to cover the cost of registration, meals (up to \$50) and lodging for students who wish to attend the Fall Technical Conference (FTC) that is sponsored jointly with the ASQ's Chemical and Process Industries Division and the Section on Physical and Engineering Sciences of the American Statistical Association. This year's FTC will be held at the Fairmont Royal York Hotel, Thursday and Friday, October 18-19 in Toronto, Ontario, Canada.

Grants are available for currently enrolled undergraduate and graduate students of statistics and quality management. Travel costs are not covered. Recipients may be asked to serve as room monitors for a session at the conference and will be required to write a brief article about their conference experience for the Statistics Division Newsletter.

Applicants should send a letter of interest, together with a letter of recommendation from a major professor by September 12, 2001 to:

Todd R. Nelson
3M Company
Bldg. 230-3F-05, 3M Center
St. Paul, MN 55144-1000
trnelson3@mmm.com

Notifications will be mailed after September 15, 2001.

Statistics Division Strategic Plans for 2001-2002

A. Introduction

Our planning in Charlotte was driven by two core realities. First, we see that statisticians are potentially not utilized as well as they could be, how can we enhance the effectiveness of statisticians in business and industry? Second, dwindling employer support for commitment to external organizations, such as our Statistics Division, requires us to design an adaptive organizational structure. We need to optimize our effectiveness, and this requires a change in the way we get the Division's work done.

Three strategic themes were identified from our Winter Newsletter. These are as follows:

1. Strategic Direction: Improving our organization's effectiveness

- Fix infrastructure. Clearly communicate the Practical Vision, open jobs, and solicit and engage members to join in the accomplishment of the vision.
- Acquire/enhance personal interaction and change management skills

2. Strategic Direction: Educating statistical practitioners for business

- Merge business needs with academic services. Assist business and academia in developing applied statistics curriculum for statisticians and practitioners.
- Understand and communicate with business. Leverage six sigma as a means to the bottom line.

3. Strategic Direction: Expanding our influence

- Understand and communicate with business. Leverage six sigma as a means to the bottom line.
- Grow customers & revenue
- Market our services
- Identify a target partner/alliance opportunity and develop it.

- Find and fill gaps in product and delivery. Make sure that our conferences and publications do a satisfactory job of promoting/advancing the journey to our Practical Vision.

B. Our Organization

Janice Shade will lead the charge to implement a more process-oriented leadership for our division. The concept of officers accepting a five year commitment in the officer rotation is no longer a model which employers support. The officers will be charged with leading members who are working on projects.

Leading is the operative word, members will be working, and managing sub-processes. The processes of managing our web, producing our newsletter, communicating with new members, and a few other processes are all under the purview of communicating with members. We envision a Vice Chair of Communications who will coordinate the efforts of the various project owners. Janice will need to gain Division approval, to adjust our bylaws, and also to seek approval from ASQ.

C. Outreach Survey

Darrell Radson will direct the research necessary to understand the problems and needs of current practitioners. We hear that technical publications don't often meet some of the readers' needs, and we hear that the academy is not meeting the needs of applied statisticians. We would like to conduct a statistically designed survey and obtain reader feedback. Darrell has provided a note in this issue asking for your input. The funding which was anticipated for the proper design and implementation of the survey is not yet available. We need your ideas and support for this effort. Darrell's e-mail address is radson@uwm.edu.

D. Our Web Strategy

Mark Kiel will guide the development of a road map for our web strategy. The needs have changed since we began the Division's web site. In the early days, there might have been 400 sites that a search on statistics would "hit." Now there are nearly 13,000,000. We see the need to realign in order to provide the best service to our members.

E. Regional Councilors and Section Liaisons

Bob Mitchell will spearhead this effort with the help of John Murphy and JL Madrigal.

We need to support and develop our Regional Councilors and Section Liaisons for future leadership positions. Their help to deploy the strategic plan is essential. Bob plans to set up conference calls with the regional councilors so that we can establish good communication with them.

F. Business/Academia Workshop

Van will be working on this project. In our long range planning, we recognized that teaching statistical tools and mentoring practical applications are two processes which compete for time in statistical educational programs. A recent survey of our members indicated that by far the most important topic which might have been added to the statistical preparation was leadership and working with teams. In response to these situations, our plan is to interview various senior executives and ask them to identify key factors for a statistician to be considered for a leadership position. We plan to organize a pilot workshop at an accessible university which will include participants who are academics, students, recent graduates, and statistics practitioners.

The overall purpose of our effort is to enhance the effectiveness of statisticians in business and industry, particularly as it relates to exhibiting leadership.

45TH ANNUAL FALL TECHNICAL CONFERENCE

"It's Still Statistics & Quality: Challenges Old and New"

Toronto, Canada • October 18-19, 2001 • Fairmont Royal York Hotel

PROGRAM

The "best value" technical conference is being held this year in Toronto, Canada's largest city with more than 4.8 million residents. Toronto is the most popular destination for U.S.-sponsored association meetings outside the U.S. For more information on Toronto check the web site:

www.torontotourism.com

Sessions will offer the latest development in statistical methods as they relate to quality and decision making. Applications focus on the chemical and process industries and the physical and engineering sciences.

This year's conference celebrates the 50th Anniversary of the Box and Wilson paper on Response Surface Methodology (RSM). On Friday morning, a videotaped interview with George Box will be followed by a panel discussion.

SHORT COURSES

Pre-Conference Wednesday, October 17 8am to 5pm **Better Industrial and Scientific Experiments**

Instructor: James M. Lucas

You will learn how to run better industrial experiments for quality and process improvement or scientific experiments to answer important questions (hypotheses) from a world-class experimenter. We emphasize experiments using industrial or scientific equipment such as production machinery. We show how to carry out the best experiments when there are hard-to-change and easy-to-change factors. Our proposed experiments are "super-efficient" because they are more efficient than "Optimum (computer generated) Designs." We discuss the role of randomization, show when it is better not to randomize and tell when randomization is essential. We use the fact that many experiments using equipment are inherently split-plot experiments in our examples; we tell how to design and analyze split-plot experiments. Because resources are always limited we also tell how to run the lowest cost experiment.

This course is designed for people who have run an experiment or who have taken a previous course on Experimental Design. All course participants are encouraged to send in a problem they have; the examples used can build off the problems of the participant.

An Introduction to Genetic Algorithms

Instructor: Alejandro Heredia-Langner

What are Genetic Algorithms? How do you make them work? How do their behaviors compare to that of other common optimization techniques? This is a beginner's course on the fundamentals of Genetic Algorithms (GA) with emphasis on their application to optimization problems. The description of the procedures and parameters that make GA work will provide you with sufficient knowledge to intelligently implement the algorithm that is best for a particular problem. Some basic ideas on how these algorithms work and the reasons for their efficiency will be reviewed but no previous knowledge of the area is

assumed. The examples presented will be solved using an Excel-based GA and a version of this program will be made available to you along with a brief user's manual. Genetic Algorithms are a general methodology to solve difficult optimization problems. The examples shown will demonstrate that GA are highly reliable, efficient and sometimes the only choice available when other methods have failed. The main objective of this course is to help you understand and create the GA that will work best on your own practical application.

Post-Conference Saturday, October 20 8am to 5pm

An Introduction to Data Mining

Instructor: Richard D. De Veaux

Data mining is the exploration and analysis of large data sets, by automatic or semiautomatic means, with the purpose of discovering meaningful patterns. These patterns, or rules, are then used for decision making via a process known as knowledge discovery. Much of exploratory data analysis and inferential statistics concern the same problems. What's different about data mining? What's similar? Data mining comprises techniques from Computer Science, Machine Learning and Statistics. Like Statistics, it concerns itself with learning, or generalization from data, but typically, only retrospectively. In typical business applications, data mining is the obvious next step after data warehousing. It has the potential to rank among the most strategic applications in organizations because of the enormous payoffs it brings. Some of the more notable applications include fraud detection, identifying good (and bad) credit risks, product warranty management, evaluating the effectiveness of retail promotions, and customer life cycle management.

Recent innovative applications of data mining have included clinical trials and relating biological activity to chemical structure. We will start the discussion by defining data mining and the knowledge discovery process and the typical applications that motivate it. We will next survey the collection of data mining techniques that are most commonly found in commercial data mining tools including neural networks, decision trees, K-nearest neighbor methods and MARS. We will discuss the role of Statistics and statistical thinking in data mining and what the field of Statistics can bring to the data mining effort. We will conclude with applications and case studies of data mining in a variety of fields including Marketing, Telecommunications, E-commerce and Bioinformatic.

COUNCIL MEETINGS

On Wednesday, October 17, the ASQ Chemical and Process Industries and Statistics Divisions, and the ASA Section on Physical & Engineering Sciences will hold council meetings from 7:30 to 9:30 p.m. We invite everyone to attend these open meetings. This is a great opportunity to learn about division/section activities and to get involved.

Continued on page 13

45TH ANNUAL FALL TECHNICAL CONFERENCE

Continued from page 12

HOSPITALITY SUITE

The Fall Technical Conference and the officers of the sponsoring organizations host a hospitality suite every year. Please join your fellow conference attendees and the officers in a friendly, informal atmosphere.

TRAVEL INFORMATION

By Plane:

Pearson International Airport is served by all major airlines and is located 17 miles from downtown Toronto.

AIRPORT EXPRESS AEROPORT provides frequent service (every 20 minutes) between the airport and downtown Toronto hotels for a \$ 9 U.S. one-way fare.

By Train:

The main terminal UNION STATION is located at 100 Front St. W. - across the street from the Fairmont Royal York.

VIA Rail provides Canada's passenger rail service.
AMTRAK provides service from the U.S.

By Car:

Toronto is located 96 miles from Buffalo, NY, 171 miles from Rochester, NY, and 236 miles from Detroit, MI.

ENTRY INTO CANADA

From the United States:

- U.S.-born citizens should carry a passport or a birth certificate plus photo identification
- Naturalized citizens require a naturalization certificate with photo identification

From Countries other than the U.S.:

- Visitors must have a valid passport, and a visa may be required

ACCOMMODATIONS

A block of rooms has been made available at the Fairmont ROYAL YORK in downtown Toronto, 100 Front Street West

Single	Double	Premier	
\$229	\$229	\$299	Canadian
\$145	\$145	\$190	U.S approx.

The guest room block will be held until September 18. 1-800-441-1414 or 416-863-6333.

Mention the Fall Technical Conference to receive the special conference rate.

Group code: CASQ1

Parking is available for an additional fee.

CANCELLATIONS AND REFUNDS

Cancellations prior to October 1 will be refunded in full. After that date, we will deduct non recoverable expenses and refund the difference.

CONFERENCE REGISTRATION FORM

MAIL YOUR REGISTRATION TO:

Fall Technical Conference
647 Elmwood Terrace
Rochester, NY 14620

Please circle the sessions that you will most likely attend:

Thursday, October 18: 1A 1B 1C 2A 2B 2C 3A 3B 3C
Friday, October 19: 4 5A 5B 5C 6A 6B 6C

Name: _____

Badge Name: _____

Company: _____

Address: _____

City/State: _____ Zip: _____

Telephone: _____

e-mail: _____

Check here to receive the 2002 FTC Call for Papers by email

Please circle all membership categories that apply:

I am a: Member Senior Fellow of ASQ
I am a: Member Fellow of ASA
I belong to: ASQ-C&PID ASQ-Statistics ASA-SPES

Registration Fees:

(Please submit one form for EACH person attending)

Conference:

Two Days (Oct 18 & 19) \$225 _____
Thursday, October 18 only. \$180 _____
Friday, October 19 only. \$180 _____
Student (ID required). \$100 _____

Short Courses:

Pre Conference Short Courses (Wed, Oct 17)
Better Industrial and Scientific Experiments. . . \$220 _____
An Introduction to Genetic Algorithms. \$220 _____
Post Conference Short Courses (Sat, Oct 20)
An Introduction to Data Mining. \$220 _____

Late Registration Fee (after October 1). \$25 _____

TOTAL DUE (All amounts in US \$). \$ _____

Payment Options:

____ Company/Personal Check payable to FTC-2001
Credit: Visa Master Card American Express

Card # _____ Exp Date _____

Print name: _____

Authorization Signature: _____

You will receive a confirmation letter.
For other registration questions, contact the Registrar: Amy Friend
amy.friend@kodak.com, 716-724-4988,
FAX 716-527-9209

Federal Tax ID #390912502

45th Annual Fall Technical Conference

Thursday, October 18, 2001

7:30	Registration Desk Opens		
8:00 - 9:00	WELCOME/PLENARY SESSION Topic: The Changing Nature of Data, and Its Impact on Applied Statistics Speaker: John F. MacGregor Welcome: Sharon Fronheiser, Eastman Kodak, ASQ-C&PID Chair-Elect		
Session	Statistics	Quality Control	Case Study/Tutorial
9:15 - 10:00	A. Graphical Analysis	B. New Opportunities in Quality	C. Genetic Algorithms
1	Graphical Design Evaluation Techniques for Constrained Mixture Experiments Speaker: Geetha Rajavelu Motorola Moderator: Connie M. Borrer	Improving Business Processes With Six Sigma Discussants: Soren Bisgaard, Roger Hoerl and Ron Snee Moderator: Bob Mitchell	Genetic Algorithms for the Construction of D-efficient Designs Speaker: Alejandro Heredia-Langner Arizona State University Moderator: Malcolm Hazel
10:00 - 10:30	BREAK		
10:30 - 12:00	A. New Topic in Designed Experiments	B. Quality and Reliability	C. Process Control
2	Superstaturated Response-Surface Designs Speaker: William Li University of Minnesota New Second-Order Designs Speaker: Robert Block University of Tennessee Moderator: John Murphy	Calculation and Comparison of Three Weibull Models Speaker: John W. Tegtmeier Avion, Inc. Quality Oriented Maintenance for Manufacturing Processes Speaker: Dr. Jionghua Jim University of Arizona Moderator: Katina R. Skinner	A Case Study for Control Charting a Product Quality Measurement that is a Continuous Function over Time Speaker: Bob Brill Astaris LLC Multivariate Process Monitoring: The 'Preprocessing' Challenge Speaker: Christina Mastrangelo University of Virginia Moderator: Joseph Madrigal
12:15 - 1:45	LUNCHEON Topic: Marketing Opportunities Intersections: Looking for Innovations Systematically Speaker: Allan Magrath, 3M Canada Presiding: Jim Stuart, Eastman Chemical Co., ASQ-C&PID Chair		
2:00 - 3:30	A. Technometrics	B. Topics in Quality Control	C. Alternative Methods
3	The Performance of Exponentially Weighted Moving Average Charts with Estimated Parameters Speaker: L. Allison Jones University of Miami A Ranked Based Multivariate CUSUM Procedure Speaker: Peihua Qiu University of Minnesota Moderator: Karen Kafadar	Establishing Multivariate Specification Regions for Incoming Materials Speaker: John F. MacGregor McMaster University Experiments for Assembled Mechanical Products Speaker: Sue M. Lewis University of Southamptom Moderator: Dean V. Neubauer	An Approach to a Simple Statistically Valid Alternative to Process Capability Indices: Part II Speaker: Richard Post Intel Corporation The Crucial Role of Optimization in Statistical Control of Technological Processes Speaker: George Zeliger Anvical-Simplex Moderator: Mark Kiel
4:00 - 5:00	W. J. YOU DEN ADDRESS Topic: Industrial Statisticians: Our Reputation as Communicators and Teachers Speaker: Raymond H. Myers, Professor Emeritus, Virginia Polytechnic Institute Presiding: Jacob Van Bowen, ASQ-Statistics Chair		

OFFICERS OF SPONSORING ORGANIZATIONS
ASQ - C&PID
 Chair: Jim Stuart, Eastman Chem. Co.
 Chair-Elect: Sharon Fronheiser, Eastman Kodak
 Secretary: Malcolm Hazel
 Treasurer: Dean Neubauer, Corning

ASQ - Statistics
 Chair: Jacob Van Bowen, University of Richmond
 Chair-Elect: Bob Mitchell, 3M
 Secretary: J.L. Madrigal, Oxford Worldwide
 Treasurer: Marcey Abate, Sandia National Labs

ASA - SPES
 Chair: Christopher Nachtsheim, Univ of Minnesota
 Chair-Elect: Chuck Bayne, Oak Ridge National Laboratory
 Secretary-Treasurer: Robert Wilkinson, The Lubrizol Corp

Please visit the Fall Technical Conference web site: www.cpid.net/conferences/ftc/

45th Annual Fall Technical Conference

Friday, October 19, 2001

7:30

Registration Desk Opens

Session	Statistics	Quality Control	Case Study/Tutorial
8:00 - 10:00	50th Anniversary of Response Surface Methodology		
4	Speaker: George E. P. Box (videotape) Professor Emeritus, University of Wisconsin Invited Panel Discussion Panelists: Norman Draper, Raymond H. Myers, John Cornell, Andre Khuri, Douglas C. Montgomery Moderator: Soren Bisgaard		
	BREAK		
10:30 - 12:00	A. Screening Designs	B. Multivariate Control	C. Topics in Analysis of Designs
5	A New Approach for Screening Many Factors: TSP Speaker: Linda Trocine University of Central Florida Some Difficulties in Analyzing Plackett-Burman Designs with Interactions Speaker: Don Holcolmb Honeywell, Inc. Moderator: Dorothy Sempolinski	Multivariate Control Charts for Discrete Data Speaker: Katina R. Skinner Arizona State University Multivariate Batch Process Monitoring Speaker: Robin C. Wurl Oregon State University Moderator: Alejandro-Heredia Langner	Projection-based Screening Design and Analysis Speaker: Bert Gunter Merck Research Labs Variance Component Calculations: Common Methods and Pitfalls Speaker: Charles R. Jensen Micron Technology, Inc. Moderator: Dean V. Neubauer
	LUNCHEON Topic: Statistics for A New Century: Meeting the Needs of a World of Data Speaker: Richard L. Scheaffer Presiding: Chris Nachtsheim, ASA-SPES Chair		
2:00 - 3:30	A. Issues in Reliability	B. JQT	C. Topics in Factorial Designs
6	Statistical Evaluation of Material Aging and Degradation Speaker: Joanne R. Wendelberger Los Alamos National Laboratory Economical Plans for Reliability Demonstration and Estimation Using Tail Testing Speaker: David Mease University of Michigan Moderator: Mark Kiel	Six-Sigma Black Belts: What Do They Need to Know? (with discussion) Speaker: Roger Hoerl General Electric Moderator: Bill Woodall	Enhanced Analysis of Factorial Designs with Regression Trees Speaker: James W. Wisnowski U.S. Air Force Academy Robust Product Design to Minimize Counted Defects Speaker: Julia O'Neill Rohm and Haas Co. Moderator: Connie Borrer

2001 FALL TECHNICAL CONFERENCE COMMITTEE

General Conf Chair: Sharon Fronheiser, Eastman Kodak
 Host Committee: TBD
 Local Conference Chair: Herman Sahrman
 Treasurer: Steve Caffrey, Eastman Kodak
 Program/ASQ-C&PID: Dean Neubauer, Corning

Registration: Amy Friend, Eastman Kodak
 Program/ASQ-SPES: Connie Borrer, Arizona State University
 Short Course Chair: Bob Brill, Astaris
 Program/ASQ-Statistics: Mark Kiel

FTC ANNOUNCEMENT

By Sharon Fronheiser, ASQ - Chemical and Process Industries Division - Chair Elect

45th Annual Fall Technical Conference

October 18-19, 2001

It's Still Statistics & Quality: Challenges Old and New

The "best value" technical conference is being held this year in Toronto, Canada. Sessions will offer the latest development in statistical methods as they relate to quality and decision making. Applications focus on the chemical and process industries and the physical and engineering sciences.

This year's conference celebrates the 50th anniversary of the Box and Wilson paper on Response Surface Methodology (RSM). On Friday morning, a videotaped interview with George Box will be followed by a panel discussion. Invited panel discussants are: Norman Draper,

Raymond Myers, John Cornell, Andre Khuri, and Douglas Montgomery.

In addition, three short courses are being offered: Better Industrial and Scientific Experiments – James Lucas, An Introduction to Genetic Algorithms – Alejandro Heredia-Langner, and An Introduction to Data Mining – Richard De Veaux.

Information is available on the ASA-SPES website: www.amstat.org/sections/spes or from the registrar: Amy Friend, 647 Elmwood Terrace, Rochester, NY 14626.

SKIP-LOT SAMPLING ANNOUNCEMENT

Your Feedback is Requested on Skip-Lot Sampling!

The Statistics Division is revising the S1 standard on Attribute Skip-Lot Sampling. We are looking for comments from users of this document.

The purpose of this standard is to provide a procedure for reducing the inspection effort on products submitted by those suppliers who have demonstrated their ability to control, in an effective manner, all facets of product quality and consistently produce superior quality material. This procedure shall not be applied to the inspection of product characteristics which involve the safety of personnel. The skip-lot program is designed to be used with attribute lot-by-lot plans described in ANSI/ASQ Z1.4-2001.

The standard was designed to address four major issues:

1. The number of lots inspected prior to entering the skip-lot state
2. The number of lots inspected in the skip-lot state between a shift in quality and the detection of the quality shift, with the result of detection being a switch to an interrupt state where lot-by-lot inspection is temporarily reinstated
3. The characteristics of the interrupt state during which

less stringent qualification requirements are used to reinstate full skip-lot inspection

4. The management capabilities of the supplier. The last issue is important because a working skip-lot program requires confidence in the supplier's capabilities and integrity.

A series of enhancements to this standard (Annexes A, B and C) augment the usability of the standard by outlining procedures for tailoring to the user's specific situation, by describing a simple method of random selection, and by providing criteria for deciding between skip-lot inspection and reduced inspection under ANSI/ASQ Z1.4.

We want your participation in this important process. If members of your division would like to review and comment on this standard, please have them e-mail Robin Gildersleeve at: informintl@erols.com or call her at: 703-680-1436. Comments are needed from participants by September 15, 2001. Thank you.

Robin Gildersleeve
Communications Coordinator
ASQ Standards Group on QEDS

Statistics Division Business Meeting

May 7, 2001

Charlotte, North Carolina

Although there was a quorum, attendance was light at this year's open business meeting. The meeting began with a review of the Division Mission, Vision, Strategy, Principles, Market Weighting and Ground Rules. The minutes of the 2000 FTC Council Meeting were reviewed and approved. The Treasurer's report and 2001-2002 Proposed Budget were tabled until additional information about 3rd Quarter expenses and Proposed Budget line items for the new tactical plans were obtained. The budgets were later approved via an on-line council vote.

ASQ Capital Campaign

The discussion regarding a donation to the ASQ capital campaign was very lively. There were several alternatives discussed:

Donate \$12,500 of the \$25,000 needed for a conference room,

Donate the recommended amount of \$1 per member, or

Some other dollar amount.

After much discussion, a motion was made to not participate in the capital campaign drive. After more discussion, a vote was taken. The motion carried.

Membership report.

As of April 30, the Statistics Division had 7,753 members, a slight decrease from a year ago (651 members, 7.74%). General membership at ASQ also decreased 8.1% (-9741 members). Currently, we have 62 section liaisons in 28 states. Approximately 52% of them have presented an abbreviated version of the Statistical Thinking presentation on their sections.

Standards Committee Report - Ed Schilling

Writing groups report as follows:

B1, B2, B3, Guide for Control Charts (01), Draft of B1 complete, B2 and B3 almost done. They will be submitted for limited review by June.

S1, An Attribute Skip Lot Plan (01), The first draft has been completed and is being prepared for a limited review by June.

S2, An Introduction to Attribute Sampling (01), Transferred to the Z-1 committee as reported in the 2000 Fall Edition of the Statistics Division Newsletter.

Z1.4, Sampling Procedures and Tables for Inspection by Attributes(01), Transferred to the Z-1 committee as reported in the 2000 Fall Edition of the Division Newsletter.

Z1.9, Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming(00), The first draft has been completed and is being prepared for public comment by June.

Electronic Commerce Committee - Marcey Abate

Activity	Status
Miscellaneous updates to homepage	Ongoing
Addition of AQC information	Completed
Addition of Gordon Research Conference information	Completed
Updates to Ott Scholarship information	Completed
Transfer of newsletters from BGSU server	Completed
Renewal of domain name (asqstatdiv.org)	Completed
Purchase of new hard drive for archiving	Completed
Responses to homepage inquiries	Ongoing, ~1 per week

Future discussions are needed to determine if the cost of an outside host for the website may outweigh the benefits given the current uses of the website. If in the future, the website is used more interactively (such as to gather member inputs, surveys, respond to inquiries) and requires work beyond occasional updates, an outside host may be justified. Another activity includes posting of the newsletters to the website after they have been fully scanned.

Certification Committee - Harry Koval

The Division needs to identify ways to improve communication between ASQ National and the Division. Communications with National are taking place.

Recognition:

Testimonial awards were presented to Mark Kiel, JL Madrigal, Ralph St. John, Don Emerling, Bob Mitchell, Stu Janis, Nick Martino, Ed Schilling, and Lynne Hare.

THE USE OF STATISTICAL METHODS FOR QUALITY CONTROL AND IMPROVEMENT: A PROPOSED STUDY

by Darrell Radson

Background

Since the publication of *Economic Control of Quality of Manufactured Product* by Walter Shewhart in 1931, thousands of books have been published on the use of statistical methods for quality control and improvement. In addition, numerous journal articles have been published on this same subject since the first publication of *Industrial Quality Control* in 1944. Most of these articles have appeared in journals published by the American Society for Quality, such as *Technometrics*, *Journal of Quality Technology*, *Quality Engineering*, and *Quality Progress*.

Through the years these books and articles were written, for the most part, by academics and research scientists. The result has been an enormous amount of published work devoted to the development of new statistical methods for quality control and improvement and the refinement of earlier methods. The current state of published research, therefore, goes well beyond the methods endorsed during the time of Shewhart.

There has been, however, no study on the actual use of statistical methods in industry for quality control and improvement. Specifically, do the methods used in industry today go well beyond the methods endorsed during the time of Shewhart over six decades ago? Can the impact of all the research, books, and journal articles be seen by the use of these statistical methods today? In addition, is there a “gap” between the types of methods used in industry and the methods developed and proposed over the last several decades by academics in their research? Certainly, methodologies endorsed under the “Six-Sigma” umbrella have had an impact in several major firms, but to what extent are statistical methods for quality used in industry as a whole?

The implications for this country, in terms of quality improvement, can be staggering. Perhaps there is not only a “gap” between current research and current practice, but also a difference between the current quality issues facing industry and the quality problems that can be addressed by the methods currently being proposed in books and journals. In 1993 W. Edwards Deming stated, “The gap

between the needs of industry and the teaching and application of statistical theory grows wider and wider by year ... Respect for statistical work had been on the decline for years because of failure of statistical practice to match the needs of industry and science. Losses to industry from this failure are beyond calculation.” (From the announcement of the 1993 Deming Seminar for Statisticians, Stern School of Business, New York University.) Since these words were printed, has the gap widened or narrowed?

With only anecdotal evidence and opinion to address these issues, there is a need to formally verify what statistical methods for quality control and improvement are being used in industry. In addition, we need to know what are (in the opinions of industry practitioners) the current quality issues that can be addressed by the use of these methods.

Proposed Study

This year, the Statistics Division of ASQ is committed to understanding these issues by implementing a survey of industry practitioners. The goal of the survey will be to determine the following:

The statistical methods for quality control and improvement currently being used in the respondent’s firm;

The current quality issues that are currently being addressed by the use of statistical methods;

Whether the current literature in statistical methods for quality control and improvement are (in the opinions of the respondents) useful in solving the firm’s quality problems;

The firm’s quality issues that the respondent feels need to be addressed by the application of statistical methods.

The benefits of the research will far outweigh the expense and effort put forth to complete the project. The results of this study will provide verifiable evidence on the use of statistical methods for quality control and improvement. More importantly, the data will allow for an assessment of

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A PROPOSED STUDY

Continued from page 18

how well our formal educational systems train quality professionals and managers to use the methods being taught and developed.

Future Steps and Call for Assistance

Members of the Statistics Division met this year before the 55th Annual Quality Congress to develop a preliminary plan for designing and funding this study. It was been determined, however, that the potential source of funding is no longer providing resources for such projects. To advance such a study, we are asking for your assis-

tance. If you see value in this study, know of a potential source of funding, or would like to assist the Statistics Division in securing funds for this type of project, please send me an e-mail at radson@uwm.edu. You may also contact us to offer your advice and opinions on this type of project.

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Applied Statistics Conference Preview

57th Annual Deming Conference on Applied Statistics

Metropolitan Section and Statistics Division of the American Society for Quality
Biopharmaceutical Section of the American Statistical Association
Resorts Casino Hotel, Atlantic City, NJ
December 10-14, 2001

12/ All Presentations are Three Hour Tutorials	
10 Regression Modeling Strategies\$ Prof. Frank E Harrell Jr.	Modeling Variance and Covariance Structure in Mixed Linear Models\$ Prof. Ramon C. Littell
Bayesian Computation and its Application to Non-linear Classification and Regression Prof. Bani K. Mallick	Analysis of Covariance: Repeated Measures and Some Other Interesting Applications\$ Speaker: Professor George A. Milliken
11 Statistical Methods for Clinical Trials\$ Mark X. Norleans, M.D., Ph.D.	Experiments: Planning, Analysis and Parameter Design Optimization\$ Speaker: Professor Jeff Wu
Sequential Clinical Trials: Design, Monitoring and Analysis Vlad Dragalin, PhD	Multiple Comparisons for Making Decisions\$ Prof. Jason C. Hsu
12 Simultaneous Monitoring & Adjustment\$ Prof. J. Stuart Hunter	Applied Logistic Regression\$ Speaker: Professor Stanley A. Lemeshow
Permutation Methods: A Distance Function Approach\$ Prof. Paul W. Mielke, Jr.	Approaches to the Analysis of Microarray Data and Related Issues Profs. Elisabetta Manduchi and Warren Ewens
Two Day Short Courses	
13 14	Log-Linear Models and Logistic Regression\$ Prof. Ronald Christensen

\$ Based on a Recently Published Book Available at the Conference at a Discount



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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

Issue	Vol.	No.	Due Date
Winter	20	1	Dec. 1, 2001

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