

## INSIDE

RFID is coming!

Page 3

Is your ISO 9001 certification valid?

Page 5

Addressing business challenges with "similar interest" groups

Page 6

2007 Bioconference is November 5 and 6

Page 9

CIRAS helps businesses win government contracts

Page 11

\$22.5 million for biofuels research

Page 12

## Creating a culture of quality

By Larry A. Raymon, CEO, Raymon

**M**y company is called Raymon. I joined the company in 1979 when there were only four employees and the company was bankrupt. The company was called Donco Air Products until last year when I changed the name. I acquired total ownership of the company in the early '80s. About 60 people are employed in our plant in Albion, Iowa, and my son, Chad, our national sales manager, lives in Nashville, Tennessee.

We manufacture grilles, registers, and diffusers for commercial buildings. We distribute our products through a manufacturer's representative system with about 100 independently owned agency offices across the United States. We also manufacture under private labeling agreements for a number of our competitors.

We are affiliated with the United Sheet Metal Workers, Local 45. They are a fine union concerned about the welfare of employees but also cognizant of the need for the businesses they represent to be successful.

We work two 10-hour shifts, back-to-back, four days a week. The factory is down on Friday unless overtime is necessary. The employees love the 10-hour days, particularly with gas at its current price. They are able to use Fridays for personal errands, doctor's appointments, domestic duties, and so on, leaving Saturdays and Sundays to be with family and friends.

One of my early management goals was to create a "culture of quality"—quality of employees, quality of customers, and quality of products. I wanted to have a company that combined the beauty of a college campus with an inside environment that was reminiscent of a convention center.

Our 10-acre site is landscaped and carefully groomed. We have a beautiful two-acre prairie where employees can wander and pick flowers



*By emphasizing a high-quality work environment, Raymon has decreased employee absenteeism and turnover.*

all summer long. An apple orchard sits on the edge of the prairie, and, in the fall, employees can take as many apples as they want.

Our factory environment is very important. We have a sign on the office door that opens to the factory that reads, "Please wipe your feet upon entering." That may be a bit of an exaggeration, but not much. Most of us spend a good majority of our lives in the place where we work, and we are affected by workplace stress including the environmental conditions we work in. When you create a high-quality work environment, you eliminate some workplace stress, reduce absenteeism and turnover, and encourage a positive attitude. Also, it is hard to make poor-quality products in a high-quality environment.

The inside of our factory is nearly spotless. Flags and banners hang from the ceiling, and we have an international wall where flags are displayed from countries outside the United

Continued on page 10



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Improve the quality of life in Iowa by enhancing the performance of industry through research, education, and technology-based services.

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The Center for Industrial Research and Service (CIRAS) provides education, research, and technical assistance to Iowa industry through partnerships with Iowa's universities and community colleges, government agencies, and professional associations. Assistance is supported in part by the DoC/NIST Manufacturing Extension Partnership, the DoD Procurement Technical Assistance Program, and the DoC/EDA University Center Program.

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# Radio frequency identification (RFID) is coming!

By Merle Pochop, CIRAS



Rockwell Collins of Cedar Rapids this spring provided an update on radio frequency identification (RFID) technology to the Sioux City Industrial Roundtable. The team of Kevin Fischer, Martin Stimson, and Todd Boyle briefed representatives from Sioux City industry and commerce on characteristics of this developing technology, including levels of application and the value it can provide as it becomes available in reliable, practical form.

RFID technology uses identification labels that contain, in addition to written and bar-code information, encoded information that can be transmitted from remote and even unseen locations to a receiver transmitter that, in turn, sends the information to a central processing unit for storage and retrieval. Since cartons with RFID labels don't have to be touched or even seen, moving material through a checkpoint and on to a predetermined site can be faster and more accurate.

There are different types of RFID technology, and the one that's used will depend on the degree of performance required. For example, passive technology would be most appropriate for items that must be tracked individually or in boxes. Passive tags remain inert until they pass within range (usually up to 6 to 10 feet) of an antenna that emits a signal at a recognized frequency. The signal prompts a response from the tag's transponder, which may include data such as part number, serial number, and movement history. In contrast, active tags, which are battery powered, are much larger and significantly more costly. Active tags emit a periodic signal that can be detected up to 300 feet away. They are better suited for tracking large items, such as trucks or shipping containers. Active tags typically have greater data storage capacity, allowing maintenance history or repair information to be included on the tag. Data on both active and passive tags can be defined as read only, write one time, or write multiple times. Both passive and active tags can also operate at one of many possible frequency ranges—the selection will depend on system constraints and environmental factors. The many facets of RFID tags virtually ensure an appropriate technology for most applications; however, much analysis and planning must occur prior to deployment.

Given the ability of RFID technology to track information or objects in large quantities and at high speeds, the use of

the technology can go far beyond conventional inventory storage and retrieval activities. Possible additional uses include tracking of documents, equipment, livestock, baggage, and freight movement. Supply chain management issues are seen as a major driver in the development of this technology.

Rockwell Collins already supplies some products to the Department of Defense using RFID tags and is also preparing to utilize RFID tags with products that will be supplied for the Boeing 787 program. Rockwell Collins is currently exploring specific applications for future gains in manufacturing efficiency and effectiveness.

Current commercial applications include tracking systems for Department of Defense logistics on the high end and at the most competitive level and the use of RFID by Wal-Mart stores suppliers who are working to develop reliable applications for warehousing and inventory control activities. Progress on the Wal-Mart effort, which has been reported in the *Wall Street Journal* and other publications, is still in the experimental stages.

Cost for the various elements varies by complexity and volume, which limits application feasibility. One goal is to reduce the cost of passive labels to a few cents or less each, opening the door to much broader application.

At this time, component suppliers are still divided into niches such as labelers, send and receive transmitters, readers, high-end package controllers, and data storage and retrieval systems, although integration of technology and signaling protocols has occurred. For a potential user, the journey to application of this technology will likely require the use of knowledgeable technical assistance to plan and implement any envisioned system.

Each year will bring additional resources and capabilities that, in turn, will broaden the use of this technology. Companies that are currently involved in supply chain activities will likely find this technology of greater importance as the need to have greater control and visibility of inventory grows.

*For more information, please contact Merle Pochop at 712-274-0048; pochop@iastate.edu.*

# ISO 9001:2000, using data for improvement

By Merle Pochop, CIRAS

In revising ISO 9000 into the 2000 format, the wording of many clauses was changed, thus placing greater emphasis on some requirements. For example, in clause 8.4, Analysis of Data, the phrase “where suitable” was changed to “The organization shall . . .”

The standard now clearly requires collection and use of data and even identifies areas for collection. These are

- Customer satisfaction
- Conformity to product requirements
- Characteristics and trends of processes and products, including opportunities for preventive action
- Suppliers

Nothing has been said about what to do with the data, once collected, or how to analyze it. But experience with companies that are ISO certified reveals that registrar auditors are increasingly requiring them to use this data in productive ways. A primary question asked by registrars is “What are you doing to improve?” This question is asked at all levels, and an observation or an opportunity for improvement is recorded whenever anyone is unaware of efforts to improve.

Observations can turn into noncompliances if they are not acted upon in a reasonable period of time.

Given the ambiguity over how to use this information and because most companies are thinly staffed when it comes

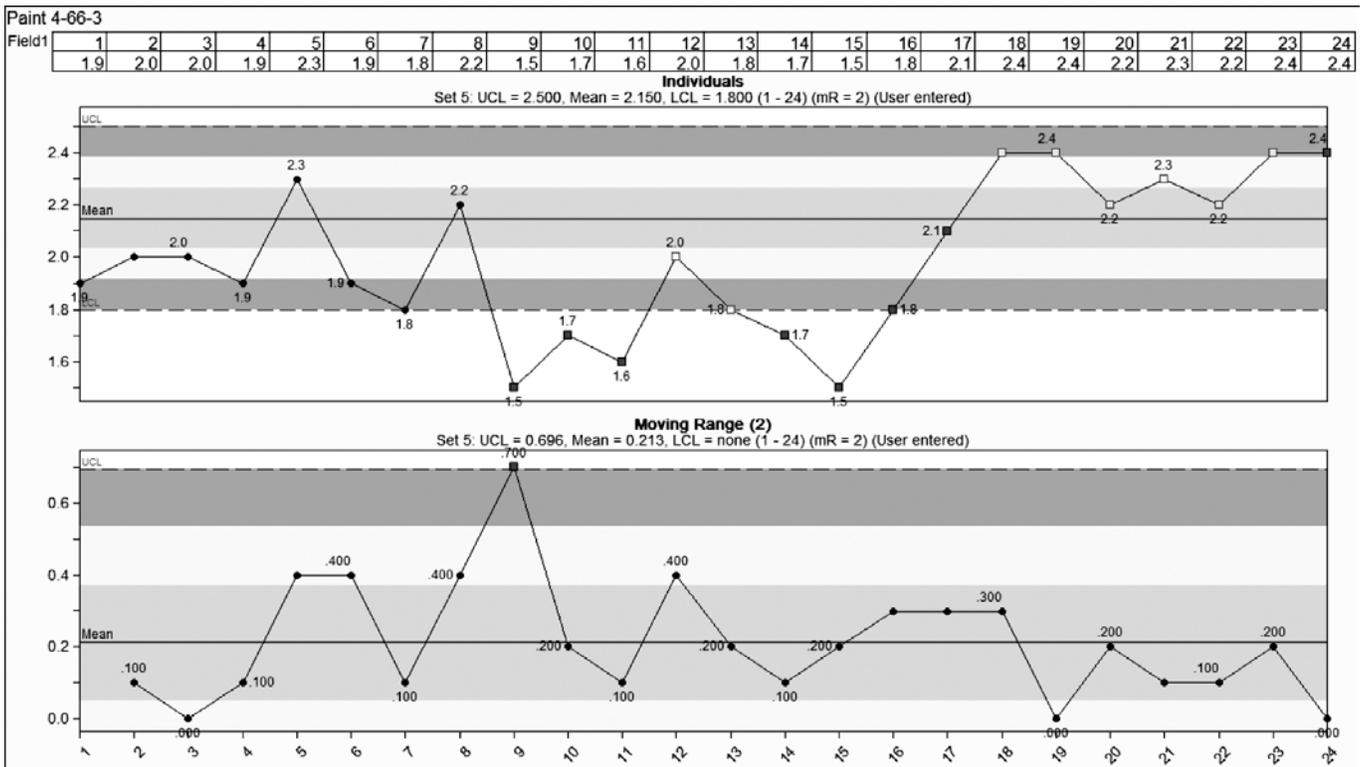
to support resources, the collection and use of data for improvement becomes more of a task than an opportunity. But it doesn't have to be that way. Even companies with low-volume activities have data that can be collected, analyzed, and used to identify issues and trends that directly impact the bottom line in terms of reduced costs and improved performance.

The following example is based on the production of an item that must be coated for protective or aesthetic purposes.

## Tracking important measurements for control of a process function

Companies that paint products are generally quite good at tracking quality from an aesthetic point of view. Surface finish flaws such as runs are investigated and corrected, though not always reported. As long as the paint meets visual requirements, companies tend to go no further in optimizing cost along with quality. The chart here shows a hypothetical company with three painters on rotating single shifts. The painters are required to measure and record the thickness of a sample when starting the process.

For powder coating, the acceptable range of thickness is 1.8 to 2.5 mils. Thinner paint results in poor protection, reduced flexibility, and poor gloss. Paint that's too thick can result in less flexibility and aesthetic problems like “orange peel,” sags, and runs. But the biggest penalty for using too much paint is the added cost.



Run charts for paint analysis.

The chart itself is a “run” chart. It allows us to use single samples to construct both range and distribution displays with a minimal amount of data.

The goal of this activity is fairly clear: the company wants to provide enough—but not too much—coverage for good aesthetics and protection. As the chart shows, the painters are not achieving the same results. Although we don’t provide enough information to judge whether the paint is too thick or too thin, we can use what we do know about paint costs and coverage to determine that operator #3 applies more paint than operator #2. Does this extra paint result in a better quality paint job, sufficient to justify the extra cost?

The data shown does not indicate what needs to be done, nor does it indicate which thickness is the best. Answers to those questions can be determined by a problem-solving exercise. To develop greater consistency in setup and operation, thus achieving more uniform results, the exercise must include input from the painters.

Two things were done to make the data more usable. First, the method used to record the readings was simplified, allowing operators to record whole digits, 18, instead of the more cumbersome percentage, 0.0018. While this won’t work in all cases, it does make the process simpler for op-

erators when it is feasible. Second, the range of acceptable thickness was increased from 1.8 to 2.5 mils. We could’ve used 66% of this range, thus requiring correction whenever the operator fell outside the narrower allowable range. That restriction would’ve resulted in more operators falling outside of allowable ranges; the new restriction allows for adjustments before the application is out of spec.

We could have allowed the process to determine the limits, although, in all likelihood, this might have caused a greater allowable spread in acceptable thickness.

This example shows that massive amounts of data aren’t needed to create a picture of a process. The example also shows that it’s possible to gather information on many different types of processes and display them in a way that will inform the operators and control the final result.

Statistical process control, on a beginning level, can provide valuable information. For companies who seek better performance, it can be used to generate greater knowledge of daily operations.

*For more information on ISO 9001:2000, using data for improvement, contact Merle Pochop at 712-274-0048; pochop@iastate.edu. ■*

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## Is your ISO 9001 certification valid?

*By Merle Pochop, CIRAS*

**T**he strength of ISO 9001 certification is its universal nature. Certification can be trusted because it’s granted only if a supplier’s quality management system (QMS) meets certain pre-determined, highly specified criteria. A neutral third party whose credentials, in turn, are verified by an internationally recognized sanctioning body makes these assessments. This does not mean that a company’s product performance will always be flawless. What it does mean is that a system for identifying and correcting errors or non-conformances was in place and was evaluated to be effective.

There is growing concern that a program called “Virtual Cert” may undermine the integrity of the certification process. The company is distributing an e-mail flyer that offers certification with no requirements for external audits or assessments, no need to maintain a documented QMS, and no need for management to meet with auditors. In return for an annual fee of \$500, companies will be able to claim ISO certification, thus eliminating the competitive advantage of companies that achieve certification through more sanctioned means.

This quick process is advertised by a firm that once was certified as a registrar for ISO 9001:2000 but has since been decertified by the American National Standards Institute’s Registration Accreditation Board (ANAB). The source of that firm’s current accreditation is an independent agency that shares an address and phone number with the firm.

A response from the ANAB on the status of this independent accreditation was that “the ‘virtual certification’ program would not conform to the requirements for certification bodies, which are specified in ISO/IEC Guide 62:1996, or ISO/IEC 17021:2006.”

Since litigation is pending, little can be said about the validity of the new certification process or the firm offering it. Until the situation is resolved, companies that rely on certification as a benchmark of quality would be well served to ask their suppliers about their certification. Specifically, ask if the company is ISO certified. And if so, who the registrar is and what the registrar’s sanctioning body is.

The experience of companies seeking registration to date is that all registrars are more than willing to provide information on the source of their accreditation. In addition, all registrars have Web pages with information on the scope of their activities and the services they provide. Any difficulty tracing the validity of a company’s certification or information about its registrar should send up a red flag.

It is doubtful that this instance of an apparent self-certified registrar is anything other than an isolated case. If you have any questions about registration or certification best practices, contact a CIRAS industrial specialist.

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# Addressing business challenges with “similar interest” groups

By Joseph Papp, CIRAS

Today we are driven to do more in less time and without adding resources. Along with growing workload demands, we need to keep pace with the technological advances that affect our jobs and organizations. Yesterday’s innovation may be today’s standard and tomorrow’s “buggy whip.” The gap between innovation and buggy whip closes more rapidly every year.

Workload issues and technological advances are only part of the modern employment picture. Today’s emphasis on shorter lead times requires quicker responses, and that’s changing relationships between the people within an organization and their customers, suppliers, and stakeholders. We need to find ways to react more quickly to problems, reduce their severity and frequency, or eliminate them altogether.

One effective way to keep pace with today’s fast-moving business environment is to bring together people who have faced similar issues and learn from their experiences. This article will address the potential value and structure of “similar interest” groups and also provide suggestions for developing or improving them.

## **Keeping pace with today’s fast-moving business environment**

Using similar interest groups to leverage the knowledge and experiences of others can be a timesaving, effective way of dealing with today’s business challenges.

Networking is another benefit of participation in similar interest groups. For many, it is the main reason for joining the group. The contacts made through networking can share insights on a wide range of issues and areas of expertise. They can also provide information about suppliers of products or services. Networking can lead to new customers and suppliers as well. “Exchanging ideas has led to a better understanding of our group members and what they offer. More than once I have heard ‘Heck, I didn’t know you did that,’ and a new customer or supplier relationship is formed,” says Bob Jacobsen, member of the Siouxland Industrial Roundtable.

Similar interest groups can also provide a strong voice to help improve overall conditions. For example, your group can make valuable suggestions to local support organizations, such as advising educational institutions on the depth and scope of topics to cover in training and education programs.

Making new friends is another benefit. These friendships may lead to mentor relationships that can provide professional and personal growth. Many find a deep level of satisfaction from helping others grow and develop professionally.

## **Common types of similar interest groups**

Discussion groups are typically organized into three types: executive/management (E/M) groups, common practice (CP) groups, and project specific (PS) groups.

**Executive/management (E/M) groups**—E/M groups are made up of upper-level managers and are intended to help executives solve their problems and improve their operations in a stimulating environment for exchanging and challenging today’s practices and tomorrow’s concepts. Members share experiences, both good and not so good.

**Common practice (CP) groups**—This forum helps professionals in the same field stay abreast of new developments and issues associated with applying various concepts and practices. The primary focus is on learning and application.

**Project specific (PS) groups**—PS groups are brought together to address specific tasks. Selection of participants typically is based on the value they add to the success of the specific task. Groups generally disband at the completion of the project.

Group sharing and conversation provides participants with opportunities to grow and improve, both personally and professionally. The lessons learned are of great value as participants implement similar concepts and strategies in their own workplace settings.

## **Similar interest groups in Iowa**

There are a number of similar interest groups in Iowa. Each is unique in the way it meets the needs of its members. Brief descriptions of some of these groups and member comments follow. For contact information, see “Roundtable contact information,” page 7.

**Siouxland Industrial Roundtable (SIR)**—The Siouxland Industrial Roundtable addresses timely industrial issues and challenges. The network is a forum for business leaders to exchange nonproprietary information, learn from experts, and share business experiences. According to Debi Durham, president of the Siouxland Chamber of Commerce, the strengths of the group are its diversity, its track record in scheduling quality speakers who address relevant topics, its strong planning team (most are area business leaders), and the respect that exists for the team’s collective business knowledge.

“Every day brings new challenges, and talking about them brings a better understanding of how to deal with them. You can learn a lot from the experiences of others. We have fun exchanging ideas.”—Bob Jacobsen, Vice President/General Manager of Missouri Valley Steel

**Northeast Iowa Lean Network**—Sponsored and coordinated by Northeast Community College, this group focuses on lean manufacturing. Its steering committee includes representatives from six manufacturing organizations. The meeting schedule is flexible to accommodate the availability of speakers and the overall interests of the group.

“Initially, meetings were held monthly. The group now meets less often and on a more flexible schedule. The

change allowed for improved organization of meetings.”—  
Tom Kammer

#### **North Central Iowa Industrial Manufacture’s Forum—**

The forum was established to create a membership-driven networking and advocacy organization that will work within advanced manufacturing to address common needs and problems and build image and awareness of the industry. Iowa Central Community College and CIRAS provide leadership; the strengths of the group are its flexibility, inclusiveness, and open format.

**Iowa Quality Center—**The Iowa Quality Center provides help in establishing and hosting interest groups, which they refer to as “networking groups.” Information on these networks is available at [www.iowaqc.org/networking.asp](http://www.iowaqc.org/networking.asp).

**Cedar Valley: Performance Excellence Network—**This network meets monthly on the third Thursday from 7:30 to 9 a.m. The group emphasizes a climate of learning and sharing of performance excellence tools that will help build the Cedar Valley area into a great place to live, learn, and do business.

**Southwest Iowa Manufacturers Alliance for Quality (SWIMAQ)—**Quarterly meetings are held to address important and timely business issues, including quality and process issues as they pertain to manufacturing and related business operations, lean implementation and maintenance of lean principles, and other issues like workforce needs, government procurement, nondestructive evaluation, and so on. The group’s strengths are its diverse membership and support base, its member-driven focus, and the active participation of a variety of entities.

#### **Organization of similar interest groups**

If you’d like to join a group but can’t find one that matches your needs or interests, consider forming a new group. Here are some helpful hints.

- Provide a clear purpose—Develop a mission statement and goals that clarify the group’s purpose and how achieving that purpose will make a difference. The mission statement should explain why the committee exists. Goals should provide direction and a means to evaluate and improve the group’s ability to provide value to participants.
- Establish an advisory group—The role of the advisory group is threefold: (1) identify topics and speakers based on input from group members; (2) arrange for speakers; (3) make appropriate operating changes based on the interests of the group.
- Select a chairperson—Typically, the role of the chairperson is to manage meetings and represent the group. Responsibilities usually include meeting management (planning, organizing, and conducting meetings) and keeping the group aligned with its mission and goals.
- Find a host organization—The sponsor may share many of the above roles. In addition, sponsors frequently provide a “home” for interest group meetings and information for prospective members. Sponsors may also assist in scheduling meetings, communicating meeting information (group newsletters, announcements, etc.), developing/maintaining member contact information, and similar administrative activities. Local community colleges, chambers of commerce, CIRAS, and professional organizations are frequent sponsors of special interest groups.

## **Roundtable contact information**

### **Cedar Valley: Performance Excellence Network**

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#### **Hints for maintaining successful interest groups**

Following are suggestions for maintaining interest groups provided by people who belong to one:

#### **Debi Durham, Siouxland Industrial Roundtable (SIR)—**

The challenge for the group is to maintain and build momentum. Events must have relevance and provide opportunities for meaningful networking. Members should be surveyed on their areas of interest, desired topics, and time/schedule. Events should be evaluated by members for effectiveness.

#### **Bob Jacobsen, Siouxland Industrial Roundtable (SIR)—**

Find leadership that is interested and involved. Try to keep leadership among people or organizations that are not “selling” to the roundtable group. Look for the areas of interest among members; don’t dictate the agenda. Don’t be surprised if you learn about things you thought you knew pretty well. Different views can lead to “out-of-the-box” thinking and new solutions.

#### **Tom Kammer, Northeast Iowa Lean Network—**

Provide value at every meeting. Kammer takes personal responsibility for scheduling speakers and discussion topics that add value to each meeting. Build a steering committee from group members representing manufacturing organizations.

#### **Shelly Hill, North Central Iowa Industrial**

**Manufacture’s Forum—**Try new ideas: start it, try it,

improve it, and then start all over. You'll never know if something's going to work unless you try it. Having good food available always helps.

**Mike Langridge, Iowa Quality Center**—It takes a fair amount of energy to keep these groups going, so it's important to identify someone who is willing to put energy into the effort. A point person is needed to keep information in front of the group.

**Bernie Duis, Southwest Iowa Manufacturers Alliance for Quality (SWIMAQ)**—Don't "over meet"; keep members' schedules and business focus in mind. Keep topics and presenters pertinent and interesting. Designate "ownership" of the group to members.

### **Virtual vs face-to-face format**

This article focused solely on a face-to-face format for interest groups. Using a higher level of technology can enable groups to overcome time and location barriers; CIRAS may be able to provide the needed level of technology. The information below provides insight on the use of technology for expanding the bounds of the traditional face-to-face format (1).

**Same Time/Same Place**—The traditional face-to-face meeting.

Advantages:

- participants' familiarity with meeting process
- ability to maximize breaks and other opportunities for informal networking
- opportunity to use multiple senses (visual, auditory, etc.)

**Same Time/Same Place with Technology**—Participants in a face-to-face meeting use linked computers to input data to a variety of software applications, e.g., decision-making support software, electronic white board. Advantages:

- opportunity for anonymous input
- speed and quantity of input
- opportunity for immediate summary, analysis, and documentation during the meeting

**Same Time/Different Place**—Participants join scheduled synchronous meetings from any place equipped with necessary access devices such as video/audio teleconferencing, phone bridge, and online chat. Advantages:

- real-time dialog regardless of location

**Different Time/Different Place**—Participants communicate asynchronously at any time from any place in password-protected environments (e.g., Web conferencing, bulletin boards, voice mail, e-mail) accessible to their team. Advantages:

- sustained connections and conversations over time
- shared, built-in archival capability
- ability to engage at one's own pace

Effectively managed, similar interest groups provide a valuable resource for helping meet the challenges of today's business environment.

Help in forming a similar interest group may be found through your local community college, chambers of commerce, and professional organizations, as well as your area CIRAS account manager.

*For more information, please contact Joseph Papp at 515-231-1452; [jpapp@iastate.edu](mailto:jpapp@iastate.edu).*

(1) Reference: *Maximizing Team Learning Through Boundaryless Facilitation*, by Amy Eunice, Lisa Kimball, Trish Silber, and Nedra Weinstein, (c) Catalyst Consulting Team and Caucus Systems, Inc., Catalyst Consulting Team • [www.catalystonline.com](http://www.catalystonline.com) • 800-775-7237, Copyright 2001. All Rights Reserved. [www.catalystonline.com/about\\_us/pdfs/cct\\_maximizing\\_team\\_learning.pdf](http://www.catalystonline.com/about_us/pdfs/cct_maximizing_team_learning.pdf)

## **ConocoPhillips**

**Continued from page 12**

that uses heat in the absence of oxygen to decompose biomass into a liquid product. The resulting "bio-oil" can be upgraded to make synthetic gasoline, low sulfur diesel fuel, and even synthetic jet fuels, using techniques familiar to the existing petroleum refining industry. The grant will also fund research related to sustainability issues like crop improvement and production, the harvesting and transportation of biomass, and the impact of biofuels production on economic policy and rural sociology.

Jill Euken, industrial specialist for biobased products with CIRAS, chairs the Biorenewables Opportunity Response Team (ORT) that coordinated the development and terms of the ConocoPhillips contract. She says the contract will provide \$1.5 million in 2007, followed by additional grants of \$3 million per year for seven years. "We will work with ConocoPhillips on an annual basis to identify their research areas of interest, and ISU faculty members will then propose projects that match those research areas."

According to Lisa Lorenzen, Iowa State director of industry and government relations and also a member of the Iowa State ORT, the university will own the rights to all technologies developed with funds from the ConocoPhillips grant, but the company will have first rights to an exclusive license. At the press conference announcing the grant, Brown acknowledged the crucial role the Iowa State ORT played in initiating and developing the relationship between ConocoPhillips and the university. In fact, he called their work "pivotal in making the partnership a reality."

Governor Chet Culver, also on hand for the award announcement, addressed the importance of private gifts like the ConocoPhillips grant: "Our small towns are the backbone of our state, and this grant will help to grow the entire state. Private sector investments will be the driving force behind the development of new industries and technologies, and I'm encouraged that Iowa State and ConocoPhillips are working together to create the right research programs for our state's energy future."

*For more information, please contact Jill Euken at 712-769-2600; [jeuken@iastate.edu](mailto:jeuken@iastate.edu), or visit The Office of Biorenewables Programs Web site at [www.biorenew.iastate.edu/](http://www.biorenew.iastate.edu/).*

## 2007 Bioconference is November 5 and 6



Iowa's growing bioeconomy and the opportunities it presents will be a focus of the 2007 Biobased Industry Outlook Conference. The event will be held November 5 and 6 at Iowa State University. Co-sponsored by CIRAS, the conference has annually attracted hundreds of industry and community leaders, academicians, and government officials.

"Our conference has established a reputation for being *the* Midwestern event for people to learn and share information about manufacturing, distributing, and marketing biobased products," says conference chair Jill Euken. "This year's program is especially strong and features speakers and topics that will surely stimulate another year of record attendance."

Several keynoters have been identified for the 2007 conference and commitments have been secured from many, including:

- Jeff Broin, president and CEO of POET, the largest dry mill ethanol producer in the United States and an established leader in the biorefining industry through project development, design and construction, research and development, plant management, and marketing. The company produces and markets more than one billion gallons of ethanol annually. With its jointly funded venture with the U.S. Department of Energy called Project LIBERTY, the company is working to be the first to operate a commercially viable cellulosic ethanol plant through an expansion of its Emmetsburg, Iowa, facility.
- Suzanne Hunt, director of the Worldwatch Institute's bioenergy program and co-founder of "SmartFuel," an organization dedicated to teaching children principles of science and business through hands-on biodiesel production as a cleaner-burning fuel for their school buses. Under her leadership, a team of international experts in the field of bioenergy has assessed the opportunities and risks of large-scale international development of biofuels.
- Vinod Khosla, one of the most successful and influential personalities in Silicon Valley and founder of Khosla Ventures. His group has invested in ethanol technologies that produce fuel out of switchgrass, wood chips, and other plant byproducts. In addition, Khosla co-chairs a ballot initiative to get California to add an

oil extraction tax, which could raise \$4 billion over 10 years for petroleum reduction efforts, like FFVs and plug-in hybrids.

- Ryan Lance, senior vice president, technology, of ConocoPhillips. The company recently established a \$22.5-million research program at Iowa State to support work in diversifying America's energy sources. ConocoPhillips is especially interested in technologies for the thermochemical conversion of biomass to energy, like fast pyrolysis, a process that uses heat in the absence of oxygen to decompose biomass into a liquid product. The resulting "bio-oil" can be upgraded to make synthetic gasoline, low sulfur diesel fuel, and even synthetic jet fuels, using techniques familiar to the existing petroleum refining industry. (See related article on page 12.)
- Craig Venter, co-founder of Synthetic Genomics, Inc., a firm dedicated to using modified microorganisms to produce ethanol and hydrogen as alternative fuels. Synthetic Genomics is developing new scientific processes to allow industry to design and test desired genetic modifications. After designing and producing a synthetic chromosome, the team plans to develop a proof of concept in either of two bioenergy applications—hydrogen or ethanol. The company believes that the synthetic chromosome, and eventually a synthetic cell, will become an integral tool for the energy industry.

Conference organizers have also received tentative commitments from Iowa's two U.S. senators, Tom Harkin (D) and Charles Grassley (R).

The bulk of conference information will be shared in breakout sessions that follow six different tracks: (1) plant sciences; (2) production; (3) conversion; (4) utilization and energy efficiency; (5) conservation and sustainability; and (6) economics and policy.

A unique feature of the 2007 conference will be the opportunity for participants to attend national presidential candidate events. Republican hopefuls will debate November 6; plans are underway for a November 5 forum for Democrats. Both events will be held at Stephens Auditorium on the Iowa State campus.

"There are many issues of importance to Iowa and the nation during this presidential campaign, and we hope that the growth and development of the bioeconomy will be among the issues the candidates address during the debate and the forum," says Iowa State President Gregory Geoffroy.

*More information on the 2007 Biobased Industry Outlook Conference is available online at [www.bioeconomyconference.org](http://www.bioeconomyconference.org). The site is updated regularly, so visit often to get the most current information on this exciting event.*

## Creating a culture of quality

Continued from page 1

States that have purchased our products. We have an art gallery in the back of the plant, although it is sometimes used as an overflow staging area.

At Christmastime, however, the entire gallery area is cleared to provide space for our annual Christmas party. It is held in the afternoon of the last working day before Christmas. A large meal is catered in, and Santa always shows up with gifts for the children. We have various forms of entertainment, and parents, grandparents, and children tour our plant to see where their relatives spend their working time.

To create a culture of quality employees, we start with very high hiring standards. Attitude and communication skills are very important. We can teach the rest. We require every seemingly qualified prospective factory employee to work one week under what we call the “extended interview.” The work can be day or night and only a few hours a day so the candidate need not quit his or her existing job. This arrangement allows the potential employee to evaluate us and decide if he or she really wants to work here. It also allows the factory supervisors to make the final call as to whether or not this person meets our expectations.

In addition to our core workers, we maintain a large number of part-time employees who help level out work spikes. Their hours are totally flexible, and they determine when and how much they want to work. They may go south in the winter or north in the summer, which is fine as long as they tell us when they will be available.

Treating employees with respect is crucial to a culture of quality. Our management philosophy is that we must re-earn trust every day, from our families, our employees, and our customers. I try to learn as many employee names as I can, so when I move through the plant I can call everyone by name. We have an employee photo bulletin board where



*Larry Raymon, CEO, Raymon, located his company on a site that includes a two-acre prairie, where employees spend break times.*

we post photographs of our workers. New employees' pictures are quickly posted, which helps everyone learn names and faces.

We put our employees and their safety first. They, in turn, put our customers first. We insist on quality customers. We don't believe the customer is always right. Sometimes the customer is a jerk and needs to be told so—life is too short. In the necessary partnership between a company and its customers, the line that separates the two must be transparent. If the customer has an attitude problem, the relationship breaks down.

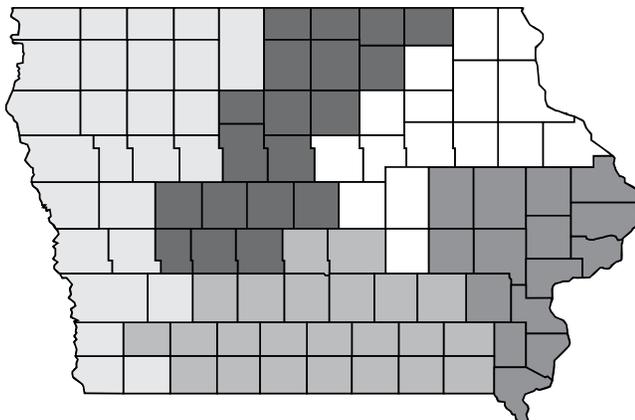
Lastly, in a culture of quality, our products must meet the same high standards we apply to our employees and customers. At Raymon-Donco, we make the highest quality products in our industry. We make low-tech sheet metal products. Our “high-tech” is our short manufacturing cycle and the time it takes to deliver our products to the job site.

Wrapping all of these things together results in the culture of quality that has allowed us to grow and prosper in a highly competitive industry and provides the foundation for future success of the company.

*For more information, please contact Ruth Wilcox at 515-290-1134; [rwilcox@iastate.edu](mailto:rwilcox@iastate.edu).*

## Account territories

Account managers provide initial manufacturing needs assessments and also explore and match resources to client needs. The state of Iowa has been divided into five account managers' territories. Their contact information follows.



North Central 

*Derek Thompson, [thompson@iastate.edu](mailto:thompson@iastate.edu), 515-419-2163*

South Central 

*Joseph Papp, [jpapp@iastate.edu](mailto:jpapp@iastate.edu), 515-231-1452*

Southeast 

*Paul Gormley, [gormley@iastate.edu](mailto:gormley@iastate.edu), 319-721-5357*

Northeast 

*Ruth Wilcox, [rwilcox@iastate.edu](mailto:rwilcox@iastate.edu), 515-290-1134*

Western 

*Bob Coacher, [coacher@iastate.edu](mailto:coacher@iastate.edu), 515-419-2162*

# CIRAS helps businesses win government contracts

By Sharmon Norris, CIRAS

The United States government annually spends almost \$600 billion on goods and services. Any Iowa company or organization interested in competing for contracts or grants from all levels of government (federal, state, and local) can receive information and assistance from the CIRAS procurement assistance staff. A full range of services from registering to do business with government agencies to searching, finding, and replying to solicitations for government contracting opportunities is offered.

Consider the experience of Steve Marshall of Imperial Roof Systems in West Union, Iowa. After attending a “Doing Business with the Government” seminar in 2003, Marshall worked with CIRAS procurement specialists, who connected him with the Small Business Administration to register and certify his company as a HUBZone small business. To qualify as a HUBZone business, an entity must be: (1) a small business; (2) located in a “historically underutilized business zone”; (3) owned and controlled by one or more U.S. citizens; and (4) have at least 35% of its employees reside in a HUBZone. CIRAS procurement staff also helped Marshall register Imperial Roof Systems in the Central Contractor Registry (CCR), a federally mandated electronic registration program; anyone who wishes to do business with the federal government must qualify with CCR as an active vendor.

A CIRAS procurement specialist forwarded solicitations that matched search words chosen by Marshall and North American Industry Classification System codes. In a short period of time, the company became quite successful at bidding and receiving government contracts. Marshall credits CIRAS procurement staff for helping them win contracts of \$1.5 million in 2006 with Offutt Air Force Base, the Iowa Board of Regents, and the city of Hannibal, Missouri.

Marshall’s company is only one of many that CIRAS has helped. In their 2006 annual progress report to the Department of Logistics Administration (DLA), CIRAS documents their role in helping businesses capture several million dollars in federal, state, and local government contracts. According to the DLA, the government contracts awarded to Imperial Roof Systems saved or created approximately 30 jobs within Iowa during the past year.

The HUBZone certification program utilized by Imperial Roof Systems is only one of several programs available to Iowa businesses and organizations. Other certification or set-aside programs within the government have been designed to support the creation and expansion of businesses owned and operated by women, minorities, and persons with disabilities. A program that has received significant current attention is targeted at meeting the business goals of veteran-owned and service-disabled veteran-owned businesses.

According to Jack Hackett, of the Veterans Administration’s Des Moines regional office, Iowa is home to 250,000 veterans. The Veterans Entrepreneurship and Small Business Development Act of 1999 established an annual government-wide goal that not less than three percent of the total of all prime contract and subcontract awards would be granted to small businesses owned and operated by service-disabled veterans. In addition to other provisions, the Veterans Benefits Act of 2003 added a mechanism to enable agencies to reach the three-percent goal established in 1999. Section 308 of the VBA of 2003 established a sole-source and set-aside procurement program for service-disabled, veteran-owned small business concerns.

Look for future announcements regarding a special program sponsored by CIRAS procurement staff on Tuesday, November 13, 2007, including a keynote address by Scott Denniston, director of the Veteran Affairs Office of Small and Disadvantaged Business Utilization in Washington, D.C.

Several businesses in Iowa are owned and operated by service-disabled veterans but may not be registered as such. The veteran-owned business has to meet several criteria to participate in the program, and the procurement specialists at CIRAS are available to answer questions and assist in the registration process.

*If you are a returning veteran and feel you are qualified under this program, please contact 800-458-4465, Sharmon Norris at 800-458-4465; sharmon@iastate.edu, or David Bogaczyk at 515-422-6313; bogaczyk@iastate.edu. ■*

## Patriot Express Pilot Loan Program

A significant initiative was announced on June 13, 2007, by the Small Business Administration. The Patriot Express Pilot Loan is the latest extension to the financial, procurement, and technical assistance programs the agency provides to the military community. Patriot Express is a streamlined loan product based on SBA’s highly successful SBA Express Program, but with enhanced guarantee and interest rate characteristics.

Loans are available up to \$500,000 and qualify for SBA’s maximum guaranty of up to 85 percent for loans of \$150,000 or less and up to 75 percent for loans over \$150,000 up to \$500,000.

INSIDE

RFID is coming!	Page 3
Is your ISO 9001 certification valid?	Page 5
Addressing business challenges with "similar interest" groups	Page 6
2007 Bioconference is November 5 and 6	Page 9
CIRAS helps businesses win government contracts	Page 11



[www.ciras.iastate.edu](http://www.ciras.iastate.edu)



Photo by Bob Elbert

## ConocoPhillips gives \$22.5 million for biofuels research

By Noel Holton, Communications Specialist, Iowa State University Office of Biorenewables Programs, and Jill Euken, CIRAS

ConocoPhillips has established a \$22.5-million research program at Iowa State University that will support research to diversify America's energy sources, thereby reducing the nation's dependence on gasoline. The grant will be administered by Iowa State's Office of Biorenewables Programs (OBP).

"Under the leadership of Robert Brown, we will be able to support sustainability," says Ryan Lance, senior vice president of technology at ConocoPhillips. "We've looked around the world at universities and decided to partner here and create our anchor program with Iowa State," says Lance. "We are helping to create the future with this partnership, to bring energy security to our nation. We are very excited about it."

According to Brown, director of the OBP, ConocoPhillips is especially interested in technologies for the thermochemical conversion of biomass to energy, like fast pyrolysis, a process

Continued on page 8

*Ryan Lance, senior vice president, technology, for ConocoPhillips, was on campus April 10 to announce the company's eight-year, \$22.5-million research grant to Iowa State. Funded research will focus on developing technologies that produce biorenewable fuels. Others speaking at the announcement included (l-r) President Gregory Geoffroy; Board of Regents, State of Iowa member Ruth Harkin; Governor Chet Culver; and Robert C. Brown, director of Iowa State's Office of Biorenewables Programs.*

CIRAS News is published quarterly by the Center for Industrial Research and Service and edited by the CIRAS publications team. Design and production is by Engineering Communications and Marketing, Iowa State University. Please send questions, comments, or address changes to [ciras.news@iastate.edu](mailto:ciras.news@iastate.edu).

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