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## E-business conference opens minds and business avenues

by Helen Randall, HKR Communications



From the left: E-business Conference speakers, Anthony Hendrickson and Bruce Brorson

About 200 people from across Iowa and nearby states, from business owners and managers to company marketing and sales operations specialists, took a major leap into the world of e-business in September.

They participated in various levels of learning, challenge, and sharing offered at the three-day Midwest E-business Conference at Iowa State University, an event organized by CIRAS and its many business and manufacturing partners.

The term "success" falls short of describing the energy and enthusiasm that evolved from this gathering. CIRAS Specialist Paul Gormley, who took the lead role in organizing the conference, said he received almost exclusively positive comments from speakers, attendees, and sponsors alike.

"Unlike many events that wave the e-business flag, this one was totally learning based," noted Gormley.

He was impressed with the excitement the conference generated and its success in accomplishing two very important objectives:

- to attract people who were nowhere in e-commerce and take them to where they felt familiar and empowered with the tools of success

- to attract those who were somewhere in the e-commerce chain and help them better understand how the tools work, what options exist, and the thought processes behind these options

Well-known speakers from within Iowa and the surrounding region, as well as speakers from across the nation, and even from as far away as Germany, contributed to the success of the event. Most expressed appreciation of the learning-charged atmosphere at the conference, said Gormley. They also expressed interest in attending future events.

The September conference was the first of what is planned as an annual event for the future, said Gormley. The conference also has the potential, he said, for additional tracks in the future that would accommodate newcomers to the field as well as those who move further into the rapidly changing technical world of e-commerce.

"This conference has been a great overview tool for me—a great resource," said Stewart Fluent, a partner in RADEC Engineering Services, Denver, Iowa. Fluent explained that he was at a very elementary level of knowledge about the whole range of e-business topics. He was pleased with the way the presenters were able to take a mix of topics and "create a whole semester or two of courses."

The presentations and discussions traversed from futuristic to realistic. Conference participants were able to choose from two sessions—technical and management. In addition to attending regular sessions, attendees listened to sage experience and advice from keynote speakers and learned the key to successful use of newer communication technologies. Prominent speakers included

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### CIRAS Mission Statement

*The mission of CIRAS is to enhance the performance of Iowa industry, and associated entities, through education and technology-based services.*

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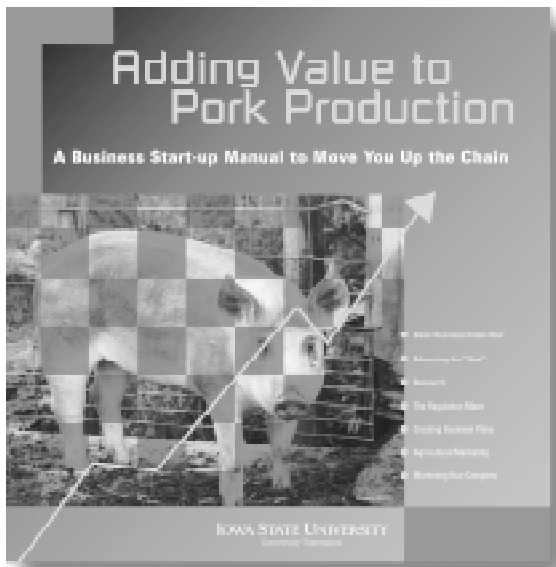
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## Boosting food processing industry in Iowa by Reg Clause, CIRAS

Thanks to CIRAS, Iowa livestock producers are using a newly released business start-up manual, *Adding Value to Pork Production*—the first comprehensive manual to help guide producers through planning and implementation of their value-added business in pork production.



It's all about asking the right questions. This manual contains an exhaustive set of questions and answers to every aspect of value-added pork production. It provides Internet, phone, and mailing addresses to a range of resources from industry, state, and national organizations to financial assistance programs and employee training services. It discusses regulatory issues and codes and provides information on specialty markets as well as technical support systems in the private sector and university system. In fact, the manual is a great place to just get ideas and discover tools for innovation.

The pork manual exemplifies the typical manner in which CIRAS works. The process began several months ago when a team was brought together to meet a challenge set by the USDA Rural Development Agency to create a “how to” manual for value-added pork production. The CIRAS team consisted of writers, technicians, accountants, business planners, and industry experts, who were originally assigned to focus on hog processing techniques. The

team soon broadened the project to include business and marketing along with other specific disciplines to create a comprehensive self-help guide.

Unprecedented choices for consumers in today's market have led to significant changes in the agriculture and food processing industry. At the same time, global competition is changing standards for food quality and safety. In the midst of this fluid environment, the traditional Iowa livestock producer has struggled with volatile and low market prices. As a result, many groups of pork producers have created their own value-added business as they keep an eye on processing and marketing aspects. Producers see an opportunity to create value through special production methods and relationship marketing. They are motivated to capture margins that both processors and retailers now enjoy.

Adaptability is the key then for producers, who must cultivate new skills to make the transition from task-oriented farmers to processors/marketers of pork products. Their newly developed abilities must include a fundamental understanding of group dynamics, capital formation, regulations, business planning, business management, product development, and target marketing of products, to name just a few.

A start-up manual, generic enough for wide use but specific enough to be of high value, thus provides a new tool for entrepreneurs. It can reduce by weeks or even months the amount of time normally required to start a value-added ag business.

A similar manual for beef producers is nearing completion. The manuals are available through CIRAS or the Iowa State University Extension offices. For a copy of the pork manual, contact Sarah Terrones, 515-294-5008; [sterrones@ciras.iastate.edu](mailto:sterrones@ciras.iastate.edu). The cost of the manual is \$75 in-state and \$125 out-of-state. The manual can also be accessed through the CIRAS Web page at [www.ciras.iastate.edu](http://www.ciras.iastate.edu).

### CIRAS expands scope of work

CIRAS' national reputation for doing business research and feasibility studies in recent years has led to its prominence as a third-party consultant to the USDA Rural Development Agency. The USDA guarantees loans of up to \$25 million for business development in agriculture and food processing. In order to help “perfect” these loans and get an objective view of the business, agency procedures require a certain “due diligence” or a study coupled with a report to be compiled by a third party consulting group. The CIRAS team at Iowa State University has become a preferred provider of such services for the USDA.

Research and feasibility studies that CIRAS provides are a natural outgrowth of its many expanded services. Increasingly, staff will examine a company's business before plunging forward into implementing ISO or other process improvement tools. Why? The reason behind this careful pre-assessment lies in a fundamental belief that business basics must be in order for new concepts to be effective rather than become just another burden to the venture. Thus, our efforts aim for a more system-wide approach that can help a company integrate

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# CIRAS to manage Iowa's 'Industries of the Future' program

The Department of Energy, through its Office of Industrial Technology, recently awarded a grant to Iowa to implement a state-level Industries of the Future (IOF) program. The Iowa program will be modeled after the successful federal program, which boosts industrial efficiency and productivity, improves labor and capital productivity, and reduces the generation of wastes and pollutants.

The national IOF program currently focuses on nine energy intensive industries—agriculture, aluminum, chemicals, forest products, glass, mining, metal casting, petroleum refining, and steel. Together these industries account for more than 75% of the energy consumed by U.S. manufacturing. At this level, teams of industry-led visionaries generated both a vision document and a roadmap on how to achieve desired improvements in energy efficiency and productivity by the year 2020.

The Iowa IOF program will bring to the state the national visions and roadmaps of the nine industries that are most closely related to Iowa's economy. By adapting industry-specific goals to the local situation, IOF anticipates accelerating development and deployment of the research base and more rapidly achieving its energy, waste, and productivity goals.

"The success of this program will be tied to the level of involvement of Iowa industry," said CIRAS Industrial Specialist Ron Cox, who will manage the Iowa IOF program. "Over the next few months we will be canvassing the state, inviting Iowa manufacturers to provide guidance in the development of the state program."

During the first year of the Iowa program, the partners will develop a state-level metal casting IOF program. Preliminary work on an agriculture IOF will also be initiated. Iowa industry will be supported by staff from Iowa State University, the Iowa Department of Natural Resources, the Iowa Energy Center, the University of Northern Iowa, and other public sector partners.

To find out more about the Iowa Industries of the Future program, visit the Iowa IOF Web page at [www.ciras.iastate.edu/iof](http://www.ciras.iastate.edu/iof), contact Ron Cox at 641-424-5432, or e-mail him at [rcox@ciras.iastate.edu](mailto:rcox@ciras.iastate.edu).

## Iowa Industries of the Future

### **CIRAS expands scope of work**

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process improvement at all levels of business and not just in isolated categories.

Who will benefit from these services? Start-up companies and those that are looking at major expansion will benefit from strategic planning, feasibility work, business planning, and marketing plans. If these services are not readily available or the project is very complex, a CIRAS team can help to fill the need.

A recent example of success in using feasibility studies is the case of a start-up company looking for a \$10 million loan guarantee to implement special processes for seed coatings and organic fertilizer. CIRAS pulled together a comprehensive team that included experts in accounting, chemical engineering, plant sciences, economic modeling, and marketing—all from within the CIRAS organization.

The pork manual project, outlined in another article in this newsletter, grew out of the USDA relationship with CIRAS in developing expertise that helps build and strengthen businesses. For assistance contact Reg Clause at 515-576-0099 or e-mail him at [rclause@ciras.iastate.edu](mailto:rclause@ciras.iastate.edu).

## CIRAS NEWS Notes

*by Verl K. Anders, CIRAS*

Tim Sullivan, CIRAS Field Specialist, received notification that his TOC web site, <http://www.ciras.iastate.edu/toc>, has been included in the Edinburgh Engineering Virtual Library, <http://www.eevl.ac.uk/>. This site is the UK gateway to engineering resources on the Internet.

Paul Gormley, CIRAS Field Specialist in Cedar Rapids, was honored as the Iowa MEP Rookie of the Year in August.

Jim Black, CIRAS Central Staff, is completing the requirements for certification in Lean Manufacturing from the University of Kentucky at Lexington. Black and Jim Hedrian from DMAAC are co-chairing the Iowa Lean Policy Team.

CIRAS received the Iowa Recognition for Performance Excellence (IRPE) award from the Woods Quality Center for completing Option 1 Self Assessment. Rudy Pruszko and Don Brown were approved as IRPE Examiners.

## Are J.I.T. order quantities always your best buy?

The following article by Harold Zarr covers one of many topics that comprise his “Managing the Purchasing Function of a Firm” course, one of nine courses included in the CIRAS Job Shop Management Series. The course covers a variety of topics including common forms and documents, department organization, legal issues, supply chain management issues, negotiation, and inventory control.

The course series, which is currently being offered in Cedar Falls by CIRAS field staff Mike Willett, is scheduled at nine additional sites around the state next year. For more information on the series and locations, contact Mike Willett (319-266-3260 or e-mail mwillett@ciras.iastate.edu) at the ISU Industry Outreach Center.

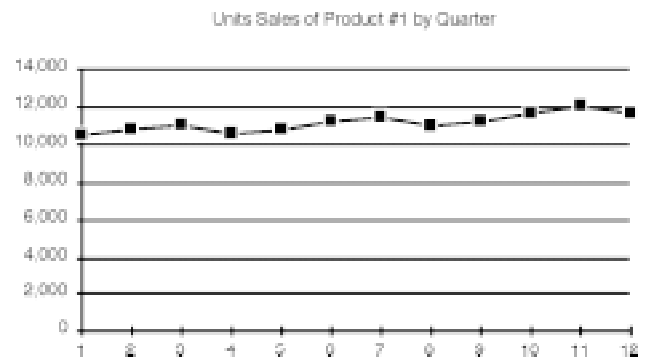
All businesses operate under one inviolable law of economics—without money, you cannot survive. Taking advantage of price discounts for quantity purchases should be done on a case-by-case basis.

For this example, we will examine the quarterly sales of three of the products sold by a firm. We will assume that the firm may purchase either one-month or three-month quantities and has adequate storage space for either amount. Based on this information, we shall attempt to determine the optimum purchase quantity for each item so that it maximizes the profitability of the firm as a whole.

Product #1 has a fairly stable demand pattern that has remained relatively unchanged throughout this time period. Product #3 can be seen to be declining over time at a fairly steady pace. Product #5 is a “rising star” exhibiting a strong growth rate that should enable it to contribute strongly to total company sales if the growth rate continues.

Many firms try to control their on-hand inventories using a just-in-time system. They deliberately seek to limit the amount of on-hand inventory as much as possible in order to limit the amount of money invested in their inventories and maximize their inventory turnover. But is this always the wisest action to take? We will examine this question using some of the product data.

As we know, most vendors offer discounts based on the volume of a product that you purchase. The more you buy, the smaller the purchased cost on a per-unit basis. What we are interested in is the optimal quantity that we should purchase based on the observed sales pattern. To illustrate this concept, we will begin by examining the demand pattern for product #1, which has been fairly stable over the past twelve quarters. The unit sales on a per-quarter basis are plotted as follows:



In examining this chart, we find that demand for this product is quite stable, with a slight upward trend. We will assume that the vendor for the raw materials for the product has offered the following set of quantity:price breaks for this product to the firm.

0 - 3,999 units	\$ 14.00 each
4,000 - 7,999 units	\$ 12.00 each
8,000 - 11,999 units	\$ 10.00 each
12,000 - 15,999 units	\$ 8.00 each

The sales for this item have ranged from 10,500 units to 12,019 units. The question we need to ask is, what is the most appropriate quantity to purchase in order to maximize the profitability of this product? First, we have to remember that the data that we are examining is quarterly data, not monthly data. Therefore, if we assume that the sales within a quarter are relatively stable, we can divide each one

of the quarterly sales results by three (3) in order to arrive at an approximate monthly amount. In quarter #12, the actual sales were 11,659 units, which equals an average of 3,886 units per month.

If we ordered the exact amount indicated (3,886 units) we would be paying \$14.00 per unit. However, if we only ordered 115 units more, we would save \$2.00 per unit. If we compare the order costs as a whole for the two orders, we find that we would save \$6,404 by simplifying “rounding off” the order quantity to the closest quantity:price break.

3,886 units @ \$14.00 per unit =	\$ 54,404
4,000 units @ \$12.00 per unit =	\$ 48,000
<b>Savings by ordering extra 114 units =</b>	<b>\$ 6,404</b>

What we also need to ask ourselves is whether or not we would be better off ordering an entire quarter’s worth of product at one time in order to take advantage of the quantity:price break that would be available. The comparison in this case would revolve around comparing the price for three one-month quantities (which we will round to 4,000 units) vs. one three-month quantity of 12,000 units. We can again make the same comparison as above using the relevant prices for each order.

12,000 units @ \$12.00 per unit =	\$144,000
12,000 units @ \$ 8.00 per unit =	\$ 96,000
<b>Savings for ordering 3-month supply =</b>	<b>\$ 48,000</b>
<b>Inventory carrying cost @ 25% =</b>	<b>\$ 2,000</b>
<b>Net savings =</b>	<b>\$ 46,000</b>

We derive the carrying cost of the inventory as follows. First, we assume that 4,000 units of the 12,000 received will be used in the first month and shipped out. Thus, no carrying cost will be assigned to these items. Of the remaining 8,000 units, 4,000 of them will be held in inventory for one month, and 4,000 would be held for two months. Thus, the cost of carrying these items in inventory is:

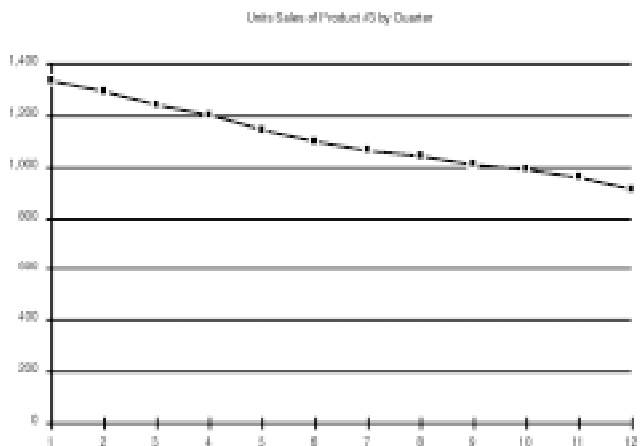
4,000 units x \$8.00 per unit x 0.25 x 1/12 of a year =	\$ 667
4,000 units x \$8.00 per unit x 0.25 x 2/12 of a year =	\$1,333

It is important that you always factor in the cost of carrying the inventory for it may affect the profitability of one ordering pattern versus another. In this case, when we compare the annual savings to the firm of ordering quarterly quantities versus monthly quantities, the savings amounts to:

\$ 46,000 savings x 4 orders =	\$ 184,000
\$ 6,404 savings x 12 orders =	\$ 76,848
<b>Net savings with 4 orders =</b>	<b>\$ 107,152</b>

Obviously, in the situation where demand is relatively stable the firm is much better off when ordering the items on a quarterly basis. While the number of inventory turns on an annual basis is significantly less (four turns versus twelve), the dollar savings generated by the quarterly order far outweighs the value of ordering on a monthly basis. Thus, using a just-in-time ordering system for this product would not be wise from a profit maximization standpoint.

But will this same result hold true for a different demand pattern? We will examine the demand pattern for product #3, whose sales have been declining over the same twelve quarters, and try to determine if the same ordering pattern is appropriate for this product as for product #1.



As we can see, the demand for this product is steadily declining. The sales in terms of units have declined from 1,333 units in the first quarter to 915

## Management Report

units in the twelfth quarter. The average quarterly decline for this product is approximately 3.4%. Let's assume the following quantity:price break information for this product.

0 - 399 units	\$ 50.00 per unit
400 - 899 units	\$ 45.00 per unit
900 - 1,299 units	\$ 40.00 per unit
1,300 - 1,799 units	\$ 35.00 per unit

The last four quarters of sales for this item are as follows:

Quarter # 9	1,013 units	
Quarter # 10	993 units	Tot. sales = 3,884 units
Quarter # 11	963 units	Ave. sales = 971 units
Quarter # 12	915 units	Mon. sales = 324 units

We have to estimate what the demand will be for any given quarter. The average decrease of 3.4% per quarter does not hold for every quarter, so using that to estimate the demand for the next quarter will often lead to shortages. For ease of calculation, and since we are in a "transition zone" between the second and third quantity:price breaks, we will order 1,005 units for each of the last three quarters. (This quantity makes the math easier and comparable for monthly versus quarterly order quantities.)

Once again, we must decide whether to order monthly or quarterly. If we order monthly, we will order 335 units per month. Comparing that with a quarterly quantity of 1,005 units, we find the following result.

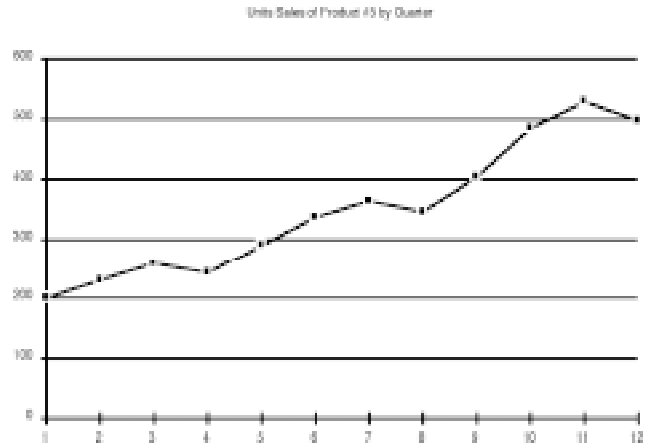
1,005 units @ \$50.00 per unit =	\$ 50,250
1,005 units @ \$40.00 per unit =	\$ 40,200

Savings for ordering 3-month supply =	\$ 10,050
Inventory carrying cost =	\$ 838

Net savings =	\$ 9,212
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Thus, even when the sales are declining significantly, it is still more advantageous for the

firm to continue to order on a quarterly basis than to go to a monthly basis. We will conclude this analysis by examining the demand for product #5 to see if this situation favors either a quarterly or a monthly ordering cycle.



If we assume the following quantity:price breaks for product #5, we can determine the optimal purchase quantity in the same manner as we did previously.

0 - 599 units	\$ 175.00
600 - 1,199 units	\$ 165.00
1,200 - 1,799 units	\$ 140.00
1,800 - 2,399 units	\$ 125.00

The quarterly demand for the past four quarters is as follows:

Quarter # 9	405 units	
Quarter # 10	486 units	Tot. sales = 1,917 units
Quarter # 11	529 units	Ave. sales = 479 units
Quarter # 12	497 units	Mon. sales = 160 units

In this case, the purchasing manager is faced with a situation where both the monthly and quarterly demands are within the initial quantity:price break framework supplied by the vendor. Logically, we can see that the optimal solution would be to simply order the estimated monthly quantity and avoid the inventory carrying charges that would be incurred by ordering a three-month supply of material.

However, this does not mean that the purchasing manager should ignore this product. Given the growth rate of the product line, the time is rapidly approaching where ordering a supply of six-hundred units may be an advantageous option to consider. We can determine this “break-even point” as follows. The total cost for 600 units is:

$$600 \text{ units} \times \$165 \text{ per unit} = \$99,000$$

When you divide \$99,000 by \$175 per unit, the answer is 565 units. Thus, whether you order 565 units @ \$175 or 600 units at \$165, the cost is the same. Next you have to determine the carrying cost for the difference between 600 units and 565 units. It is necessary to determine the additional cost for carrying the 35 “extra” units. That cost can be calculated as follows:

$$17.5 \text{ units} \times \$165 \text{ per unit} \times 0.25 \times 1/12 \text{ of a year} = \$60$$
$$17.5 \text{ units} \times \$165 \text{ per unit} \times 0.25 \times 2/12 \text{ of a year} = \$120$$

This amount is approximately equal to one unit at \$175; therefore, once demand reaches 189 units per month, it will be more profitable for the purchasing manager to order material on a quarterly basis than on a monthly basis.

Do these examples discredit the entire concept of just-in-time and with it the application of MRP in a manufacturing environment? No, and here are the reasons why.

First, we are dealing with situations where the sales values are such that the price and/or quantity differentials between the monthly and the quarterly purchase prices are significant enough to generate a savings greater than any increase in the carrying cost for those items.

Secondly, given this data we can readily see that it is only when the price differential disappears or is so slight as to not make a significant difference that we then begin to order materials on a monthly basis. The basis for both just-in-time and MRP is ordering material according to exact demand. However, as this analysis has shown, following that pattern is not always in the best interest of the firm as a whole.

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*Harold also teaches courses to prepare individuals in industry for the APICS and NAPM professional certification exams. He may be reached by calling him at 1-515-964-6696, fax at 1-515-964-6815, or e-mail at [hdzarr@dmacc.cc.ia.us](mailto:hdzarr@dmacc.cc.ia.us).*

## Job Shop Management

Are you the owner of a small business or a non-financial manager and want to know more about financial reports?

There is still time to register for the final two courses of the Job Shop Management Series. Both seminars will be held at the ISU Outreach Center in Cedar Falls.

- Financial Accounting for Non-Financial Managers—November 8, 2000
- Cost Accounting and Quoting—December 6, 2000

These seminars may not make you an accountant, but will provide you with an understanding of accounting terms and concepts. We will look at two different types of accounting systems and three different reports and show how they relate to your business needs. Discussion will focus on subjects such as break-even analysis, budgeting, and forecasting.

If these subjects are of interest, plan to attend either one or both seminars. For more information contact Mike Willett at 319-266-3260, [x1willet@exnet.iastate.edu](mailto:x1willet@exnet.iastate.edu), or Sarah Terrones at 515-294-5008, [x1tallon@exnet.iastate.edu](mailto:x1tallon@exnet.iastate.edu).



# Engineering distance education gets new director

by Sunanda Vittal, *Engineering Communications and Marketing*

CIRAS is pleased to announce Rebecca Sidler Kellogg as the new director for the Engineering Distance Education (EDE) facility on the Iowa State University campus. EDE plays a major role in the industrial and extended outreach effort of the College of Engineering at Iowa State. It is also under the direction of CIRAS, which as part of the college has provided extensive technical and managerial outreach services for Iowa industry for more than 30 years.

Kellogg's previous work experience includes seven years as an adjunct assistant professor with the aerospace and engineering mechanics department at ISU and five years with Chamberlain Manufacturing Corporation in Waterloo, Iowa. She received her B.S. degree from ISU, where she also completed her master's and, in 1998, her doctorate in engineering mechanics.

As director, Kellogg hopes to offer more short courses through EDE and to continue to be responsive to industry educational needs and priorities within the state and beyond. Future plans also include changing the fundamentals in an engineering review course offered at the university to Web-based delivery, hosting a national meeting on distance education issues, establishing strong alumni contacts, and facilitating K-12 teacher education issues.


"We're taking stock of where we are, keeping what's good about us, and considering all our options to see what we could become," Kellogg said. She invites ideas from industry and Iowa companies on ways to better utilize EDE facilities for their continuing education needs and outreach efforts.

Kellogg brings a solid balance of academic and industry experience to her position at EDE. During five years in industry, she worked as a research and contract administrator and project manager, supervising development contracts in the design, fabrication, testing, and evaluation

of sub-scale and full-scale tank ammunition. She also managed and performed engineering structural analysis using finite element software.

Kellogg's academic background includes teaching basic and senior-level engineering design courses and conducting research that integrates knowledge and the practical aspects of teaching engineering. Currently, she has ongoing projects with Sandia National Laboratories in New Mexico and with the National Science Foundation in the area of science and engineering networking for educators.

The EDE office in Howe Hall at Iowa State offers state-of-the-art distance education facilities from videotaped credit courses to real-time delivery with opportunities for two-way audio and video communication via the state's fiber optics network. Iowa State University is affiliated with the National Technological University, a consortium of 47 universities that delivers a wide variety of credit courses each semester via satellite to engineers in participating industries across the country.

Kellogg's staff includes: Paul Jewell, program coordinator; Hiro Iino, instructional support specialist; and support staff Kristy Goodale and Pam Shill. In addition to the full-time office staff, students work at EDE on a semester basis. To learn more about distance education, visit the Web site at [www.eng.iastate.edu/ede/homepage.html](http://www.eng.iastate.edu/ede/homepage.html) or call the EDE office at 515-294-7470 / 800-854-1675; e-mail: [ede@iastate.edu](mailto:ede@iastate.edu). 



*Clockwise from front center: Paul Jewell, Kristy Goodale, Pam Shill, Kelly Boyd, Hiro Iino, Josh Prins, Jim Doolittle, Andy Hoyt, and Rebecca Kellogg.*

- Bruce Brorson, associate professor and senior technology associate at the University of Minnesota and vice president of technology programs at Northern Great Plains Initiative for Rural Development, Crookston, Minnesota
- Vadim Levitin, president of the E-commerce Institute, San Diego, California
- Daniel Amor, author of *The E-business (R)evolution* and e-solutions architect at Hewlett-Packard, Stuttgart, Germany
- Kristi Branson, director of Sapien, Los Angeles, California

Businesses that provide technical and consulting support to companies entering or expanding in the realm of e-commerce also made themselves known at the conference. Through presentations and exhibitions, they provided answers to the multitude of questions that surfaced during networking time slots.

Susan Henson, a participant from the Missouri Textile & Apparel Center, University of Missouri, Columbia, commented that it was interesting to see the variety of participants, speakers, and topics that organizers had succeeded in bringing together. "I think it can be built on," she added, referring to the potential for future events.

CIRAS and the Small Business Development Center (SBDC), two of the conference sponsors, have recently unveiled plans to work jointly with Iowa industry to assist them in transitioning into the age of e-business or refining and upgrading current e-business practices.

Primary sponsors of the e-business conference were CIRAS, the Iowa Procurement Outreach Center (IPOC), the colleges of engineering and business, the Iowa Manufacturing Extension Partnership (IMEP), and SBDC—all from ISU. United Parcel Service (UPS) also provided support for this conference.

Other sponsors included the Thomas Register, PFK eBusiness Systems & First of Omaha Merchant Processing, Technology Resource Group, Computing Solutions Incorporated, Engineering Animation, Inc., First Technology Solutions, Lighthouse Communications, MSI Systems Integrators, Morgan Stanley Dean Witter, North Central Regional Center for Rural Development, Parker Solutions.com, Rainier, Silicon Plans Technologies, Solutech, Symplex Software Systems, and TechNow.

CIRAS is excited about entering the e-business world. There is a vital need to integrate the constantly evolving IT tools and technologies of e-business with sound business and management practices. The advantages lie in reduced paperwork and costs, improved services, and a general speeding up of the business transaction process.

For more information about e-business, call Paul Gormley at 319-377-9839 or e-mail [pgormley@ciras.iastate.edu](mailto:pgormley@ciras.iastate.edu).

## Speaker Highlights

*From Bruce Brorson, University of Minnesota:*

Why are companies using e-business strategies?

- expanding global marketplace
- evolving business relationships
- cost-effective telecommunications
- the need to access information (internal and external) for decision making
- many others . . .

•••••

*From Vadim Levitin, E-commerce Institute, San Diego, California:*

Information technology is not developing incrementally. It develops exponentially....We can now see the universe as an exchange of BITS, as seen with digital DNA and neural networks....The computers of the future will be biological. We recently have seen the first generation of robots that was engineered and produced by robots—they were not engineered by humans, and they were not manufactured by humans.

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*From Anthony Hendrickson, associate professor, Department of Logistics, Operations and MIS, ISU:*

Virtual organizations are not so much about the new technology. They are about how it is going to change management practices to take advantage of the technology.

"Virtual" advantages:

- the anything, anyplace, anytime workplace
- increased emphasis on knowledge/service/work
- corporate flattening or downsizing
- explosion of team-based work units
- organizational flexibility
- reduced travel costs

"Virtual" disadvantages:

- flexible managers think differently
- need ability to manage remote workers
- productivity measurement
- intangible benefits of co-located employee

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## IPOC proactive effort targets small businesses

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Iowa Procurement Outreach Center (IPOC) is a federally funded program of the ISU Extension Service. It provides marketing and technical assistance to Iowa businesses through proactive outreach, which targets Iowa firms that have the potential to provide goods and services to the federal government.

According to an Office of Advocacy study, only 1.4 percent of small businesses use the Internet to buy and sell goods and services. Most do not have e-commerce capabilities because of two basic concerns: the up-front costs are prohibitive and the investment is unlikely to yield a return.

To facilitate federal e-commerce transactions with small businesses, IPOC is pleased to announce a business procurement Web site created earlier this month by the General Services Administration. The site ([www.smallbizmall.gov](http://www.smallbizmall.gov)) allows federal agencies to shop for information technology products and services from small and disadvantaged businesses.

Private firms are also addressing the small business dilemma. Digital Commerce Corporation has created a Web site ([www.fedcenter.com](http://www.fedcenter.com)), which is a worldwide electronic marketplace designed exclusively for government buyers that allows small businesses to put product catalogs online.

*Information is excerpted from "Small firms missing out on federal e-commerce efforts," a news release by Katy Saldarini available at [www.govexec.com](http://www.govexec.com).*

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## IPOC helps Carver Pump meet military requirements

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*by Jeanette A. Billingsley, After-market Sales Manager, Carver Pump Company*

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Carver Pump Company, located in Muscatine, Iowa, has been a leading centrifugal pump manufacturer for over 50 years. Traditionally, Carver has focused its applications on the industrial and marine markets, designing pumps for water, oil, and chemical use. A supplier for every major navy shipbuilding program for the last 40 years, Carver has maintained its long-term partnership with both the Military Sealift Command and the U.S. Coast Guard.

Marine pumps are required to meet exacting specifications for noise and vibration limits, as well as shock capabilities. This is where IPOC has provided the necessary assistance for Carver. The Outreach Center has been a tremendous resource for answering questions concerning military specifications. IPOC staff readily sends any available specifications to the company to help meet all military requirements for their products.

IPOC has also provided training for Carver employees, demonstrating new ways of doing business with state and federal governments, including following correct procedures to receive bid requests and quoting costs on the Internet. IPOC is there for all small businesses and remains an invaluable resource for the everyday operations of Carver Pump Company.

Carver's number one priority is a commitment to high quality, both in its products and its people. One of the first American pump companies to attain ISO 9001 certification, Carver is now incorporating the lean manufacturing practices of Kaizen into its everyday operations.

For more information on how IPOC can help your business, contact Bruce Coney, 515-294-4461; [bconey@ciras.iastate.edu](mailto:bconey@ciras.iastate.edu).

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## NOTICE: U. S. Army proposes reverse auctions for purchasing hardware

*from the TACOM Warren Business Opportunity Web page [www.contracting.tacom.army.mil/onlineauction.onlineauction.htm](http://www.contracting.tacom.army.mil/onlineauction.onlineauction.htm)*

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The U.S. Army Tank-automotive and Armaments Command (TACOM) proposes to use reverse auctions to purchase select hardware items under an army pilot project. A reverse auction is a process, where sellers/offerers compete against each other by submitting prices on RFQ or RFP items in a real-time auction setting.

TACOM intends to use a commercial provider of Internet-based auction services to conduct its reverse auctions. In order to be eligible for a contract award, sellers/offerers will need to do the following:

- Register with the auction service provider.
- Abide by the auction service provider's terms of service.
- Participate in the on-line auction.
- Pay any fees charged to the auction service provider.

Each on-line auction will display real-time prices submitted by the sellers/offerers, whose individual identities will not be displayed but replaced and masked with an alphanumeric alias. The RFQs and RFPs will contain specific proposal evaluation criteria, to be posted on TACOM's Business Opportunities Web page.

In addition to price, TACOM may evaluate past performance and any other factor deemed appropriate. Sellers/offerers will be bound by the terms and conditions contained in each individual RFQ or RFP. TACOM may reserve the right to award to a seller/offerer a bid other than the low offer in the auction.

The contact for on-line auctions is Patrick Watkins at Corporate Contracting; email: [watkinsp@tacom.army.mil](mailto:watkinsp@tacom.army.mil).

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CALENDAR

**November 8, 2000: Financial Accounting for Non-Financial Managers**

One of two final courses in the Job Shop Management Series, this seminar will be held at the ISU Outreach Center in Cedar Falls. Price for this seminar has been reduced to \$299. For more information or to register, contact Mike Willett at 319-266-3260, [mwillett@ciras.iastate.edu](mailto:mwillett@ciras.iastate.edu), or Sarah Terrones at 515-294-5008, [sterrones@ciras.iastate.edu](mailto:sterrones@ciras.iastate.edu).

**November 9, 2000: Central Iowa Women/Minority/Small Business Owners Networking Breakfast**

Downtown Holiday Inn, Des Moines. Cost \$9.00. Register with Kathy Bryan, 800-458-4465 or email [kbryan@ciras.iastate.edu](mailto:kbryan@ciras.iastate.edu).

**November 17, 2000: Entrepreneur Forum**

Gallery Room, Memorial Union. 12:00pm. to 1:00 pm. Speaker: Kurt Heiar, CEO, Advanced Analytical Technologies, Inc. (AATI) No cost – bring brown bag lunch. For more information see [www.isupjcenter.org](http://www.isupjcenter.org).

**December 6, 2000: Cost Accounting and Quoting**

This seminar will be held at the ISU Outreach Center in Cedar Falls. Price for this seminar has been reduced to \$299. For more information or to register, contact Mike Willett at 319-266-3260, [mwillett@ciras.iastate.edu](mailto:mwillett@ciras.iastate.edu), or Sarah Terrones at 515-294-5008, [sterrones@ciras.iastate.edu](mailto:sterrones@ciras.iastate.edu).

**December 12, 2000: Eastern Iowa Women/Minority/Small Business Owners Networking Breakfast**

Radisson Hotel, Iowa City. Cost \$9.00. Register with Kathy Bryan, 800-458-4465, [kbryan@ciras.iastate.edu](mailto:kbryan@ciras.iastate.edu).

**December 15, 2000: Retirement reception for Richard Grieve, Interim Director of CIRAS.**

Howe Hall Atrium, ISU campus. 2:00 pm. to 5:00 pm. For more information call Joanne Hansson, 515-294-5382, [jhansson@ciras.iastate.edu](mailto:jhansson@ciras.iastate.edu).

**January 15 & 16, 2001: E-business for Small Business Conference**

This conference will be held at the Riviera Hotel & Casino in Las Vegas, Nevada. Contact Rachel Adams at Essman/Associates, 515-282-7145, [radams@eassoc.com](mailto:radams@eassoc.com) or visit the Web site at [www.eb4sb.org](http://www.eb4sb.org).

**January 19, 2001: Entrepreneur Forum**

Gallery Room, Memorial Union, 12:00-1:00 pm. Speaker: Joe Dunham, Senior VP, Equity Dynamics, Inc., Des Moines. Topic: Venture capital for your start-up. No cost – bring brown bag lunch. For more information see [www.isupjcenter.org](http://www.isupjcenter.org).

**April 3, 2001: 5<sup>th</sup> Annual Northeast Iowa Manufacturing Exposition**

This event will feature over 60 company exhibits, seminars, and speakers to promote manufacturing in the region. Companies interested in exhibiting or attending should contact Dawn Hines at 319-266-3260 for more information.