Employee Update

Breaker Conducts Successful Critical Design Review by John F. Masiyowski

The Breaker Project Team

The Breaker project within the Reconnaissance Systems Organization completed a 'traditional' project milestone in mid-June by successfully conducting a system Critical Design Review (CDR). The CDR, attended by over sixty customers each representing specific entities, was a culmination of the efforts of the Breaker project members (see photo). Taking three days to present and a few weeks to prepare for, the CDR's success was due to the team's outstanding efforts.

This CDR was traditional because all aspects of the system design were presented, such as project overview, system overview, hardware (both electrical and mechanical), software, maintenance and support, integration and test, and deployment plans. The CDR also took a non-traditional twist, because not all of the software for the system was completely designed and reviewed. By employing the spiral development model, the Breaker Project is taking a non-traditional approach (for Falls Church) to software development.

At the time of the CDR, the software development activity was in the design stages of the second pass (or build) of the spiral. The third build of software is scheduled to be completed in April 1998. However, there will not be a CDR at that time, but a Demonstration Based Review (DBR) instead.

The entire Breaker Team earned a job well done for all of their efforts. Making this particularly evident was the feedback a number of customers attending the CDR provided to senior management regarding the quality and depth of the project team and the presenters. Vice President of Reconnaissance Systems Mark Neuhausen stated, "I had very high expectations for the CDR. My expectations were far exceeded, almost to the point of being overwhelmed. Attendees all shared the same view -- really proud to be part of the team." ❏

E-Teamers Come Out for TSA

On June 23–27, E-Teamers volunteered their time to judge the technical competitions at the Technology Student Association (TSA) national conference held at the Washington Hilton and Towers Hotel in Washington, DC. Approximately 2500 high school and middle school students attended the conference's meetings and workshops, competed in technological events and explored the newest developments in technology. Falls Church's Martt Harding and Katherine Robertson coordinated the 12 E-Teamers' participation in the conference.

"We received a lot of enthusiasm about the conference," said Martt. "The conference allows students to meet some people who are in the kind of work they are interested in pursuing. They can talk to somebody other than a teacher about the business they think they might want to get involved in."

"Affordable, Flexible Programs for Modular Technology Education," "Control Technology Workshop for the Inventors of Tomorrow," "Profile of a Top Fuel Driver," and "How to Get More Out of Everyday," were just a few of the special interest sessions open to attendees. E-Teamers signed-up to judge a wide array of competitive events such as aerospace technology, architectural model, desktop publishing, computer integrated manufacturing, electricity/electronics, electronic systems, extemporaneous speech, prepared presentation, radio controlled transportation challenge, and technology problem solving.

As the national organization for technology education students, TSA invites

Falls Church Receives ISO 9001 Certificates of Registration

The ISO 9001 Documentation and Implementation Team holding the ISO banner, which now hangs on the front of the building. *Pictured from left:* Tom Fioretti, Ed Comitz, Mary Wohlford, John Umsteadt, Jim Fowler, Kathy Keys, Dave Meyer, Dick Seeley, Peggy Lowe, Larry Terry, Bob Banks, Bob Leidig, Len Lynch, Carty Lawson, Len Mechner, Tavi Alvarez, and Walt Havenstein. *Not pictured:* Clarence Abercrombie, Joe Baran, Larry Buel, Bruce Dautrich, Ken Davidson, Pat Flanagan, Ed Gilsbach, Dan Helmes, John Monahan, Dan Nikolaus, Bill Seward, and Bob Wright.

On June 19, when presented with Falls Church's certificates of registration for ISO 9001, Vice President and General Manager Walt Havenstein applauded E-Teamer's efforts. "ISO 9001 certification is a major milestone in the business evolution of Falls Church operations," said Walt. "Achieving compliance is the result of teamwork and focused effort by nearly everyone at Falls Church. We now have a baseline that enables further improvements in our business processes and competitiveness."

Falls Church received ISO 9001 registrations under the Registrar Accreditation Board (RAB), the United States certification, and the National Accreditation of Certification Bodies (NACB), the United Kingdom certification.

The registration process began in May 1996 when ISO Management Representative Tom Fioretti enrolled Hardware Quality Assurance Manager Jim Fowler and Software Quality Assurance Manager John Umsteadt in an intense, five-day course to become lead assessors. Afterwards, an internal team was generated involving one to two people from each Falls Church discipline. As the originator of the *ISO 9001 Quality Assurance Manual*, Jim, along with Tom, led the team in compiling the docu-

ment. On July 1, 1996, Falls Church adopted the practices of the manual.

"We had over a twenty-person team," said Tom. "They went to their organizations and utilized their own resources to help get the manual put together. All of the procedural changes we made were reviewed and agreed on by the team."

At the beginning of the ISO 9001 registration process, Falls Church hired National Quality Assurance (NQA) to review the policies and procedures for compliance with the ISO standard. In August 1996, NQA performed a desktop audit in which it commented on the *ISO 9001 Quality Assurance Manual* and its references. Answering Falls Church's request for a pre-assessment, NQA came to the facility in September 1996 to evaluate the areas Falls Church felt needed the most improvement or posed the greatest risk to registration. Concluding the March 1997 assessment audit, they recommended Falls Church for ISO 9001 registration.

In June 1997, NQA returned to Falls Church for a surveillance audit. With only minor modifications required, Falls Church passed the three-day audit. The next surveillance audit is scheduled for March 1998. After its conclusion, audits will occur on a six-month schedule.

Based on a continuous audit process, the ISO system revolves around the phrase, "Say what you do and do what you say," said Tom. "When the assessors come in, we

SEPG Contribution Award by John F. Masiyowski
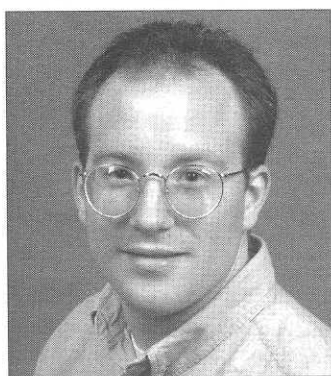
Nathan Ward, SEPG Contribution Trophy Winner

At a recent biweekly division-level Software Engineering Process Group (SEPG) meeting, the first award of the SEPG Contribution Trophy was presented to Nathan R. Ward. Nathan is a software practitioner with eight years experience in software design for real-time and embedded systems. The SEPG Chair presents this award to an individual to recognize significant contributions toward software process improvement activities. The trophy is awarded on a rotating basis, with a goal of once per quarter, at the discretion of the SEPG Chair.

Nathan's involvement in the initiation and continued nurturing of study groups, the peer review Technical Working Group (TWG) including peer review training and the conduction of the Pressman video series on software engineering during lunch time sessions is very important to the SEPG's process improvement efforts. His outstanding work and efforts led to new technologies and improvements being introduced into Falls Church's projects and software processes. Thanks Nathan for a job well done. ❑

Ethics Corner by Larry Buel

A Business Development manager receives a painting from a potential international customer; a Finance manager is offered a "Mont Blanc" pen by a vendor; an Information Services supervisor is offered a watch by a vendor; and a buyer in Purchasing is offered a "Swiss Army Knife" by a vendor. In all four instances, which occurred during the past several months, the employee did the right thing by either declining the gift or accepting the item and immediately reporting its receipt to the Ethics Office. As we continue our annual, mandatory business ethics training, I thought a summary of the Company's policy on business courtesies or gratuities would be appropriate. This policy is addressed in detail on pages 12-14 of the *Standards of Business Ethics and Conduct* handbook (The Code).

A business courtesy or gratuity may be tangible (a gift, favor, meal, entertainment, hospitality, conference fee, loan, etc.) or intangible (discounts, passes, tickets, or other things of value generally not available to the public). In the event any customer (U.S. Government, foreign government, or com-

mercial) offers you a business courtesy or gratuity, you should decline and return it if possible. On the other hand, if declining such an offer offends or embarrasses the customer (this situation typically arises in the international context), accept the item and report its receipt to your Ethics Office. The Company will either donate the gift to charity or retain it for the use and enjoyment of all employees.

In terms of offering or providing business courtesies to U.S. Government customers, Raytheon's policy is more restrictive than the regulations established by the Office of Government Ethics. Company policy provides that no gratuities shall be offered or given to U.S. Government employees (uniformed or civilian). There is one exception to this requirement—unsolicited items (other than money). These include modest refreshments such as soft drinks, coffee, or donuts, or an advertising or promotional item, so long as the item has a market value of $10 or less. Company policy does permit the offering of business courtesies to commercial cus-

| COURSE NAME	ETHICS COMPLIANCE TRAINING (ECT) COURSE NUMBER	TARGET AUDIENCE	DATE
Environmental Ethics	ECT-15	Select employees in Drawing Control; Facilities; Maintenance; Manufacturing; Photography; and Quality Assurance	July 29, 1997
Truth in Negotiations Act	ECT-05	Select employees in Business Areas; Contract Services; and Program Support	August 18-22, 1997
Antitrust Compliance	ECT-16	Select employees in Business Development; Contract Services; and Purchasing	August 25-29, 1997
Revolving Door and Hiring Former Government Employees	ECT-12	Select employees in Business Development; Human Resources; and the General Manager's Staff	August 25-29, 1997

Employee Volunteers to Teach CPR
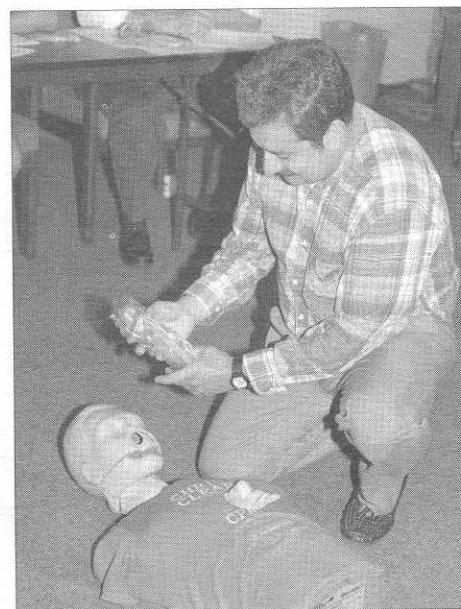
E-Teamer Tavi Alvarez is volunteering two hours of his time every Tuesday and Wednesday to teach employees adult and pediatric CPR. The classes will continue until the 120 people registered for adult CPR and the 60 registered for pediatric CPR complete the training. Tavi is a certified CPR instructor with the American Heart Association. In his free time, Tavi is a volunteer fire fighter and emergency medical technical with the Gaithersburg Washington Grove Volunteer Fire Department in Montgomergy County, Md.

Worth Noting

Raytheon Company's Board of Directors has declared a regular quarterly dividend of 20 cents per share, payable on July 28, 1997 to stockholders of record as of July 7, 1997.

PS&P
What They Can Do for You!

PROPOSAL SUPPORT GRAPHICS PHOTO/VIDEO DUPLICATING
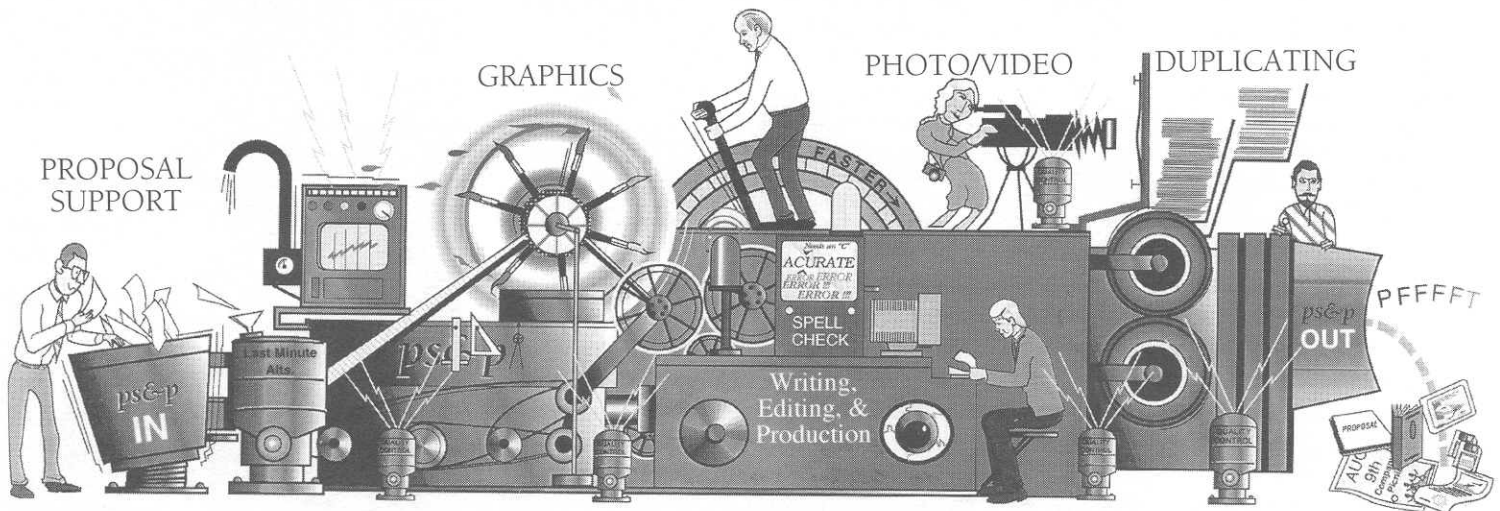
Performing as a team and ensuring our customers have the proper resources and support services necessary to produce high quality, cost-effective documents and publications materials are the goals of the Proposal Support and Publications (PS&P)," said Manager Malcolm Higgins. Improving the compatibility and connectivity of PS&P's systems capabilities helped to expose the 16 person team's talent. When servicing its 1,800 clients, all jobs are approached with a "can do" attitude with quality and customer satisfaction as their top priorities.

"The Proposal Support and Publications group is a key part of the heartbeat of customer-focused activities, because the proposal process is one of the primary interfaces we have with our customers," said Planning and Support Director Fred Wahl. "Proposals represent the capabilities and culture of an organization. With our new support software and hardware tools, proposal documents are more visually appealing, and we are improving the efficiency of the process."

Proposal Support. "It is like compressing a multi-year project into a few short weeks," said Malcolm. "You have to have planning,

> **"The Proposal Support and Publications group is a key part of the heartbeat of customer-focused activities . . ."**

scheduling, and execution with deliverables." That is when Proposal Support staff Lois Wenzell and Marianne Brown step-in to help.

At kickoff meetings with proposal participants the staff introduce themselves, describe their roles and responsibilities, and outline Publications' services. "I am here to keep you all working together as one and keep us all sane," says Lois at these meetings. Keeping everyone focused and on schedule, and getting all the documents to read as if they were written by one person are the staff's biggest challenges. At all times, they must be prepared to provide the most current information on any proposal aspect.

"Larger proposals need the skills of Lois and Marianne," said Malcolm, "because the more complex the proposal, the more additional coordination is needed. They increase the comfort factor in the process." To assist employees in drafting proposals, a continuous process improvement approach is being implemented. Whether or not Proposal Support

> **"If it needs artwork, we can provide it."**

is involved, the goal is to have all proposals follow the same process.

Graphics. From churning out 30-40 view graphs in a day's time to designing and preparing 10, 30- by 40-inch display boards in a week, graphics plays a part in publication production projects. "If it needs artwork, we can provide it," said Publications Supervisor Ed Comitz. Artistic design and development of creative renderings, illustrations and diagrams for proposals, presentations, brochures, posters, displays and more are services Graphics provides.

Over the past year, Graphics overhauled and expanded its computer systems. Operating with PowerMacs, Compac Pentium PCs, scanners, and a variety of color and black and white printers, it is hard to find a project the system cannot handle. The latest in software enables our graphic artists to create high quality publications.

"Our high powered equipment coupled with a talented staff expanded our capabilities," commented Ed. "Graphics' final products are tailored to fit the customer's specific needs and are produced to meet the tightest of deadlines."

Duplicating. "When a multi-million dollar contract is at stake, a quality product is of the utmost importance, along with on-time delivery," said Lead Operator Doug

Dreibelbis. 1996 Team Excellence Award recipients for Administration and Operations, Doug and Press Operator Kevin Droney strive to enhance product quality and increase efficiency.

A contributor to the advancement of production capabilities is the DocuTech 135, which scans 45 pages and makes 135 copies per minute. Before the DocuTech, the 55-page phone book required 75 man-hours to produce 2,500 copies. Now only 12 hours are required. The *How to 2000* documents, scanned and saved to 8mm tape, demonstrate the DocuTech's digital sophistication. In answering these document requests, changes were made to the scanned 'original' so the latest version was reproduced.

> **"Since the beginning of this year, we have reproduced over 4 million copies with no missed deadlines."**

"Quality and cost savings with very short turn-around times are Duplicating's biggest assets," said Doug. "Since the beginning of this year, we have reproduced over 4 million copies with no missed deadlines." By year's end, the number of copies produced by Duplicating's two-person staff should surpass the 6 million copies made in all of 1996.

Photography and Video. "I like change, and get excited about new technology," says Senior Media Production Specialist Lucy Murphy. In an effort to increase productivity and keep abreast of the latest technology, digital photography is used to create prints and slides, and transfer images electronically. "It saves money and supplies. Photos can be transferred electronically, and can be shown on a monitor or in a video conference," says Lucy.

Combining technology and talent, proposal covers and other creative pieces are produced for projects and displayed throughout the building. A blend of photographs and graphics, an eye-catching cover is a value-added piece to any proposal.

Using multimedia and video capabilities to produce training and informational programs for customers are Media Producer Joe Baran's specialties. Working with graphics, computer screen captures, photos and digital video clips, he produces interactive multimedia programs. In addition to imagery, these programs incorporate audio such as music and narration. Thanks to a talented staff and sophisticated equipment, writing, shooting, and editing video productions are services available to customers. To add to a video's professional flare, a CD-quality sound card is integrated into the advanced system.

Writing, Editing, & Production. "Our job is to make you look better by making your documents look better," said Writing, Editing, and Production Lead Brian Wagner. Offering over 15 services, his group helps produce documentation that makes the best possible impression.

A combination of education (Ph.d., M.A., B.A.) and experience (over 50 years) allows the group to tackle almost any writing, editing, or production effort. By offering scanning and Optical Character Recognition (OCR) of hardcopy documents; producing and updating a comprehensive acronym list; and tailoring, writing, editing and formatting to the style guides customers supply, the group adds to document value while saving customer time and effort. A "help desk" is also available to support customer writing, editing, and production needs.

> **"Our job is to make you look better by making your documents look better."**

"All documents are designed to meet customers' needs and desires," continued Brian. Hypertext documents are built where a click takes the customer to any location within a document, or within a collection of documents. Any medium the customer wants to use, including pressing CD-ROMs, is possible. To ensure easy retrieval and document updating, the group preserves the final by archiving it in hard and soft copy and keeping accurate audits of all stored data. ❑

The Proposal Support and Publications Department. Pictured *(from left)* Malcolm Higgins, Ed Comitz, Doug Dreibelbis, Joe Baran, Marilyn Dodson, Clarence Abercrombie, Marianne Brown, Darren Salmons, Mary Wohlford, Lucy Murphy, Kevin Droney, Wade Gunn, Karl Samuels, Brian Wagner and Lois Wenzell. *Not pictured:* Barbara Weaver.

ps&p
PROPOSAL SUPPORT & PUBLICATIONS
BUSINESS DEVELOPMENT AND PLANNING

'97 Highlights Outlined at All-Hands Meeting

At the June 30 all-hands meeting, Vice President and General Manager Walt Havenstein met with employees to outline the first half of 1997 results and the second half of 1997 challenges. Additionally, he discussed his observations and shared the results of the strategic thinking process. A video tape of the meeting is available for off-site personnel.

Blood Drive a True Success
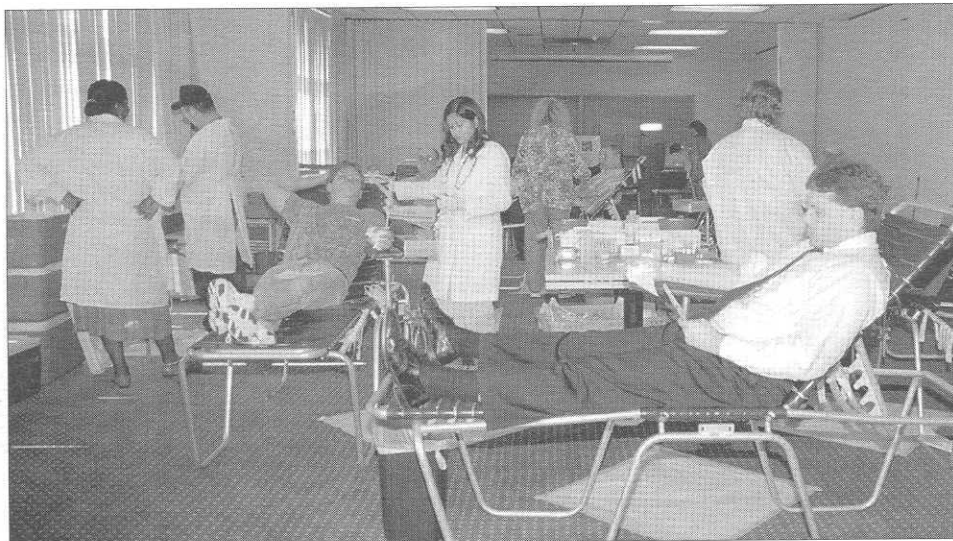
Fairfax Hospital nurses setup shop to collect donations in the Falls Church cafeteria on June 24.

On June 24, 89 E-Teamers volunteered to give blood during the Fairfax Hospital blood drive in the Falls Church cafeteria. "Fairfax Hospital was delighted," said Health Center Coordinator Rosalie Georgeadis. "At most companies, only 20 to 25 donors show up." As a result of participating in the blood drive, Fairfax Hospital will offer a guest speaker for one of Falls Church's health promotion programs.

"Usually in the summer months, there is a tremendous shortage," continued Rosalie, "especially with all of the open heart surgeries going on." E-Teamers' contributions will help to ensure that the hospital's blood supply is maintained for those in need during this critical time period.

The annual blood drive makes a difference not only in the lives of those that receive blood, but in the lives of those that donate. Such is the case with E-Teamer Cary Hancock. "He came to make an appointment and said, 'I have never given blood before and I am really nervous,'" explained Rosalie. Cary's son Joseph was born March 5 weighing approximately 1 1/2 pounds. Joseph, still under Fairfax Hospital's care, is up to 4 pounds 4 ounces and will hopefully be going home soon. Cary felt donating blood would help to serve as thanks for the hospital's efforts in caring for his son. Although Cary did not feel too well after the donation, he expressed to Rosalie that, "It's O.K. I feel fine now, and I would do it again." ❏

ISO 9001
Continued from page 2

show them records of our efforts. A confidence level is built up, and they see Falls Church is continuously trying to improve and monitor its processes."

The ISO 9001 registration signifies that Falls Church "is committed to setting the standard for excellence in our industry and commanding the respect of customers, competitors and suppliers," as stated in the *ISO 9001 Quality Assurance Manual*. Additionally, these registrations are a worldwide communicator of Falls Church's pledge to live up the ISO 9001 Quality System Requirements. These requirements encompass a policy of striving to satisfy customers' needs while guaranteeing management's responsibilities will be defined and committed to the organization's continuous improvement.

When a company is ISO 9001 registered, it complies with a basic set of principles. "It does not guarantee product, but it guarantees you have a process to follow," said Tom. "Someone outside the organization is measuring that process to see that it is in fact being done. It raises the probability that you will have a good product on time." ❏

July 1997 Service Awards

Robert C. Earnshaw
Forty Years
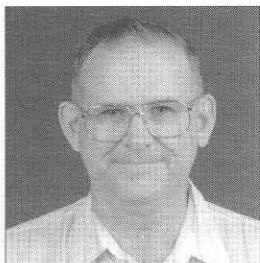
Joe A. Fenrich
Twenty-five Years

Twenty Years
Perry C. Watts

Fifteen Years
Warren L. Ahrens
Richard L. Allen
Belinda L. Cason
John T. McCullough
Jane T. Miley
Robert L. Parks
Detlef R. Rancke
James O. Hitchcock
Mary S. Wohlford

Ten Years
James A. Hopke
Kenneth O. Johnson

Five Years
Philip G. Alvarez
Adam Dean
Alan J. Lauder
Hector J. Munk
Terry L. Walpole

Movers and Shakers

Name	Promoted From	Promoted To
Jeffrey M. Beigle	Elec. Engineer	Sr. Test Engineer
Naomi Hunter	Mgmt. Asst.	Sr. Prog. Mgmt. Asst.
Burl K. Pudleiner	Prin. Engineer	Engineering Supervisor
Joseph J. Schwarzwalder	Assoc. Sys. Engineer	Sys. Engineer I
Gregory L. Taylor	Sr. Program Mgmt. Spec.	Assoc. Program Mgr.

Retirees
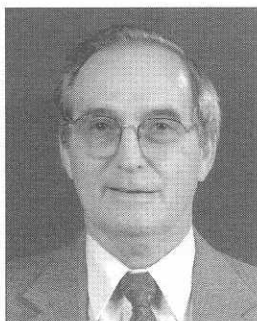
Richard A. Oliver
Fourteen Years

Elizabeth G. White
Fourteen Years

Academic Applause

David J. Johnson
M.S., Computer Science
George Mason Univ.

ETHICS CORNER
Continued from page 3

tomers within very circumscribed limits. For additional information within the commercial context, consult page 12 of The Code.

For those who deal with vendors and suppliers, you must refuse any item offered other than an advertising novelty such as a paperweight, key chain, or coffee mug with an apparent value of $10 or less. However, the Company prefers that employees adhere to the following rule: *"When in doubt, refuse the gift or send it back."* For further clarification on these matters, consult The Code or contact the Ethics Office.

As mentioned in last month's column, I will be presenting several of the Company's compliance training courses during July and August. A number of employees are tentatively scheduled to attend the courses listed in the chart on page 3.
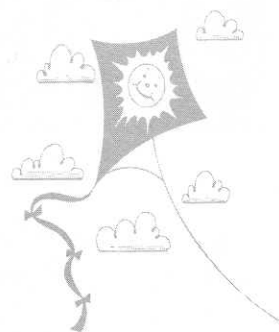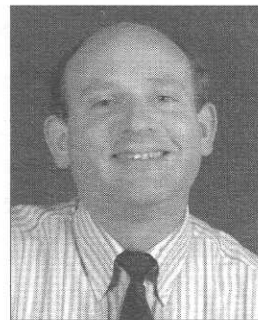
Your supervisor will let you know if you are required to attend one of these training courses.

I have received several telephone calls and e-mail messages asking that I address specific topics in future issues of the "Employee Update." I encourage each of you to call me with your good ideas at Falls Church, extension 4465 or by electronic mail at lbuel@fc. ❏

E-TEAMERS COME OUT TSA
Continued from page 1

students to become critical thinkers, problem solvers, and technologically literate leaders. Its membership is comprised of students, educators, parents, and business leaders. Members' interests focus on understanding how technology can best be used in discovering technological solutions to today's and tomorrow's challenges. TSA believes teaching technology to all children engages them in real-world, problem-solving activities that connect learning across disciplines. ❏

New Hires

50 new employees began working for Falls Church in the month of June.

Hot Dogs Here!
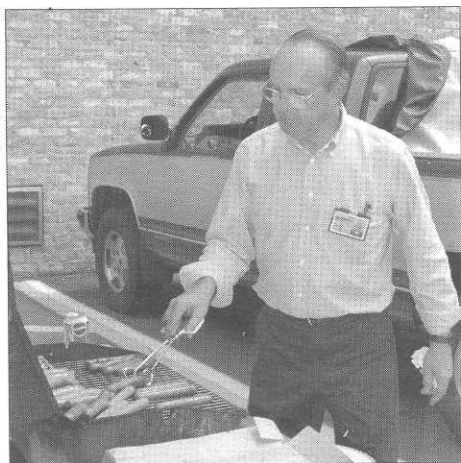
Seb Barrett

On Friday, June 13, Seb Barrett opened Seb's Succulent Sausage Emporium on the Falls Church terrace. From 11:45 a.m. - 1:00 p.m., over 60 people came to redeem their Kudos cards which were initially distributed by Reconnaissance Systems managers in appreciation of special performance. Cardholders traded their cards for grilled hot dogs or sausages accompanied by delicious baked beans, a side of chips, and a soft drink. After the feast, Kudos cards were drawn to see who would go home the with a black leather brief case. Cuong Dang was the lucky winner. ❑

E-Teamers Awarded Certificates of Commendation

The U.S. Army PEO-IEW awarded several Falls Church employees Certificates of Commendation. The certificates recognized their outstanding support during the New Equipment Training when the Enhanced TRACKWOLF (AN/TSQ-199) was brought to the 513th Military Intelligence Brigade at Ft. Gordon, Ga., on January 7 through March 12.

The Army rarely awards these certificates of appreciation, so it is unusual for contractors to receive them. All employees who were a part of the E-Systems training team were recognized. These members included: Robert Brown, Barry Hemmerdinger, Tom Robinson, Terry Saylor, Scott Takane, Jay Turner, Connie Duett (Pensacola), and Ron Foster (Pensacola). ❑

Falls Church employees who were awarded Certificates of Commendation from the U.S. Army PEO-IEW. *Pictured from left:* Robert Brown, Barry Hemmerdinger, Jay Turner, Terry Saylor, Tom Robinson, and Scott Takane. *Not pictured:* Connie Duett and Ron Foster.

FIRST CLASS