

'Lights-out' but production goes on

By RUTH FOLLMER
Collegian Science Writer

As factory employees punch their timecards and head home at 5 p.m., the lights go out, but production doesn't stop. . . it continues on through the night at full capacity with the help of computerized technology.

This "lights-out" scenario is not far from being a reality in the United States, a University assistant professor of organizational behavior said.

James Dean, Jr., said Allen-Bradley, a division of Rockwell International in Milwaukee, and General Electric's major-appliance business group in Tennessee both use the highest level of computer integration manufacturing that exists in the United States.

It is not incorrect to assume that factories in the United States will ultimately reach this "lights-out" level of computer-integrated manufacturing in the near future, he said.

Already, robots help assemble products and computers, regulate factory production and help engineers draft designs and test products.

Computer applications that have such high potential to revolutionize manufacturing also have the potential to affect managers' functions, Dean said.

Impact on workplace

After recognizing in the early 1980s that the computer chip and the microprocessor were going to have extraordinary impact on business organization and the workplace, a University professor of organizational behavior established an Automation Forum in November 1983.

The professor, Gerald I. Susman, said the Automation Forum served as a catalyst in getting people together and was a natural

meeting ground for companies to exchange ideas.

"It provided an opportunity for managers to share ideas on implementing new technology," he said.

The original plan was to have meetings, or forums, on Advanced Manufacturing Technology (AMT) since a sufficient interest was apparent in the business community, Dean said.

"Though a lot of people knew something, nobody knew everything about AMT and its impact on management operations," Dean said. "A mechanism was needed to share information on the management of AMT."

Dean said AMT consists of microprocessor-based technologies that include several computer applications. (Please see the accompanying box for more information.)

AMT adds a great deal of flexibility to technological advances, Susman said. Our country will be more efficiently making a greater variety of products, and AMT is well suited for these manufacturing trends, he said.

Dean said the Automation Forum was a cooperative endeavor that was established so managers could pull each other up to a higher level of understanding of these issues.

PSU establishes center

Soon after the first forum was held in November 1983, firms such as Rockwell International, Westinghouse and Polaroid were funding research on the impact of new technologies on management, he said.

"The Forum was an outreach to the business community but we soon realized that we needed to formalize our research role," Susman said.

The result of formalization was the formation in July 1985 of the Center for the Management of Technological and Organizational Change (CMTOC), which was

established by faculty in the University's College of Business Administration.

Dean said in addition to conducting ongoing research, CMTOC sponsors three annual meetings that deal with a different aspect of the management of AMT.

In November, Automation Forum participants discuss methods and measurements companies use to determine if AMT can improve their current manufacturing processes.

At the February program, they then look at how AMT will be put into practice and what type of design it will follow.

Finally, at the June meeting, they examine AMT's impact on the workplace in such areas as employee training, selection and compensation.

Although many seminars are presented across the country on AMT and its management, no ongoing network like CMTOC exists, Dean said.

"Nobody has an outreach and relationship with the business community like we do," Susman said.

Implementing technology

Thirty-four technical managers representing 25 industrial and consulting firms participated in the 13th Automation Forum held here earlier this fall. Most participants in the three-day forum were engineering or production managers, Dean said.

Howard Kutcher, a participant and technical consultant on advanced manufacturing at Alcoa, said his company has designed a way for businesses to gain valid information that will aid them in their decisions of whether or not to implement AMT into their current manufacturing processes.

Alcoa's methodology, known as "Perspective Understanding of

Manufacturing Processes" (PUMP), allows project managers to sort out important facts and to produce a word and pictorial model of an AMT system, he said.

"In the past, people haven't had a good understanding of their manufacturing processes and few methods existed to give engineers and technicians ideas of how business and marketing understand these (same) operations," Kutcher said.

This lack of understanding made it even more difficult for these employees to communicate goals and accomplish them, he said.

It also directly affected their views on how well AMT could be integrated into their company, he said.

"PUMP provides documentation that's needed before improvements can be made," Kutcher said.

It is invaluable to industrial firms because implementation of AMT can be very costly, he said.

PUMP begins with the selection of a small group of employees who possess a broad background in manufacturing systems, environmental issues, machine design and machine maintenance.

This group meets intermittently over a few weeks to gather information that is relevant to implementing the proposed new technology.

Once this information is secured, computer applications are used to condense it into one understandable document containing the most relevant information. This documentation describes and determines the amount of AMT that should and can be infused into a specific project or manufacturing process, Kutcher said.

It is reflected back quickly to the group members for evaluation so that further modifications of the documentation may then be done to get all the necessary information, he said.

Major components of AMT

Here is a list of the major components of Advanced Manufacturing Technology:

- Computer-Aided Manufacturing (CAM) consists of robotics and other numerically controlled machines that are directly involved in the fabrication and assembly of products.
- Computer-Aided Design (CAD) enables engineers to do routine tasks, such as drafting, on a computer terminal.
- Computer-Aided Engineering (CAE) permits engineers to test their designs and model the effects of stress or heat experienced by the product.
- Manufacturing Resources Planning (MRP) consists of modules that schedule and regulate production in a factory.
- Group Technology (GT) groups together manufacturing operations similar in design.
- Computer-Integrated Manufacturing (CIM) is a methodology of integrating elements of AMT into a coherent system.

— compiled by Ruth Follmer

Poll: U.S. skeptical on Gorbachev

By BRYAN BRUMLEY
Associated Press Writer

WASHINGTON, D.C. — Mikhail Gorbachev has emerged as a popular Soviet leader among U.S. voters, but an increasing percentage of Americans still don't believe the Soviets will keep their word on arms treaties, according to a poll released yesterday.

The poll, conducted in October, found that 71 percent of those surveyed feel Gorbachev "is different from other Soviet leaders." And respondents, by a margin of 57 percent to 32 percent feel he is sincere in saying he wants to reduce nuclear arsenals.

The poll, conducted by Marttila & Kiley, Inc. of Boston, found that Americans had a complex view of the Soviet Union. By and large, Americans favored negotiating with the Soviets while still believing the Soviets cheat on treaties and stir up trouble around the world.

Fifty percent of those surveyed agreed with the statement that "because the Soviets will not keep their end of the bargain, we should not sign any agreements limiting nuclear arms." That figure was up from 45 percent who distrusted the Soviets on arms control when asked a similar question in 1984, the pollsters said.

But despite that distrust of the Kremlin, the Americans surveyed approved by a 72 percent to 20 percent margin of the Intermediate Nuclear Force pact that President Reagan and Gorbachev plan to sign at the summit next week.

Although the pollsters found Gorbachev to be popular among Americans, only 17 percent of those polled said they believed major changes had occurred in the Soviet Union since he took office in March 1985.

On the other hand, three years ago, according to the pollsters, Americans felt by a 56 percent to 36 percent margin that "the Soviet Union is like Hitler's Germany — an evil empire trying to rule the world," while the recent poll found the figures reversed, with those surveyed rejecting the "evil empire" accusation by a margin of 58 percent to 38 percent.

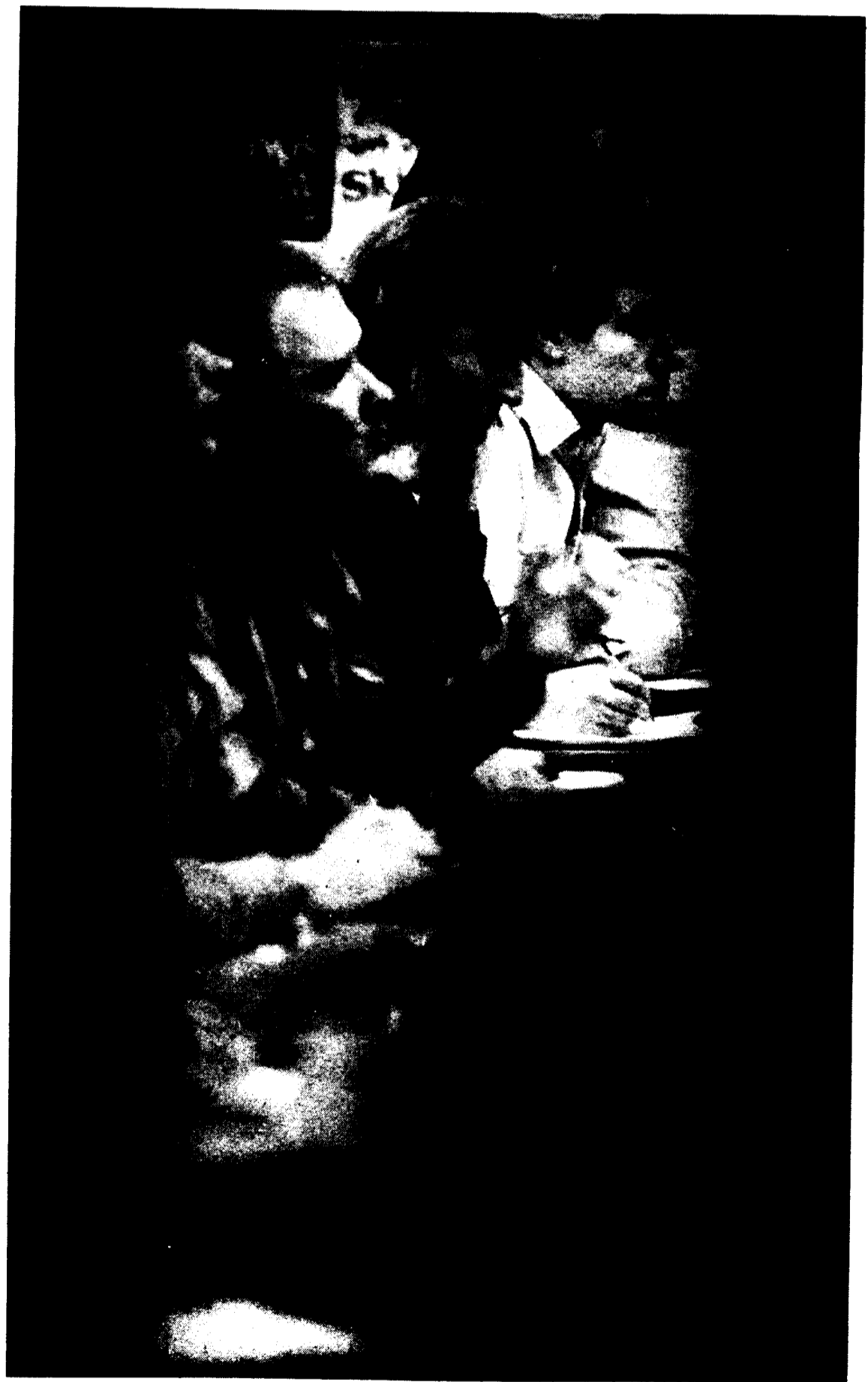
And the willingness of Americans to agree with the statement, "the Soviet Union only responds to military strength," has declined from 61 percent in 1984 to 48 percent in October, the survey found.

While 58 percent of Americans said that Star Wars, formally known as the Strategic Defense Initiative, would be too expensive to build, 60 percent thought "it has already proved to be an effective bargaining issue, in getting the Soviet Union to seriously negotiate reductions in nuclear arsenals."

And they agreed, by 60 percent to 33 percent, that "Star Wars has shown that Ronald Reagan is right: The best way to achieve progress with the Soviets is to deal with them from a position of strength."

The poll, conducted on Oct. 15, 16 and 18, was based on telephone interviews with 1,002 registered American voters. It had a potential sampling margin of error of plus or minus 3 percent, sponsors said.

It was the first of a series of polls conducted under the Americans Talk Security program funded by Massachusetts businessman Alan F. Kay.



Collegian Photo / Dan Oleski

School daze

A student obviously finds her biochemistry class boring after returning from Thanksgiving break.

Sky lit up by mysterious lights

By The Associated Press

Mysterious lights brightened the sky from New York to Virginia early Tuesday, but officials and witnesses pondering the source of the brilliant blaze disagreed on just what it looked like.

Police and emergency operators and Coast Guard spokesmen variously described the display as blue lights, a fireball and a meteor shower.

"What really shocked me was how bright it got," said Maryland State Trooper Paul Keplinger in Easton. "It looked like daylight out here for about five seconds."

Keplinger said he saw a bright yellow light traveling across the sky, trailing a reddish flare. After it disappeared, he said he heard what sounded like thunder.

"It looked to me just like a meteor or something," said Keplinger, who added that he had never seen a meteor shower.

A boiler room attendant at Wallops Island NASA Flight Center on Virginia's Eastern Shore reported seeing "a big blue light that lit the whole sky almost like lightning."

In Cape May, N.J., Coast Guard Petty Officer Carlos Johnson said he received a radio report from a ship in the Delaware Bay at 12:38 a.m.

"We figure it's a meteor shower. We just assumed that due to the fact we had so many calls, from Virginia to New York," Johnson said.

He said those reports described it a "yellowish white bright light" that "lit everything up and then kind of dispersed," he said.

Dover Air Force Base, Del., said it was not aware of the lights and a security guard at Wallops Island said no rockets had been launched from there. A Federal Aviation Administration official said no plane collisions had been reported.

CCSG looking for increased visibility

By PAMELA WEIERS
Collegian Staff Writer

The 29,000 Penn State students at branch campuses go unnoticed by the University Park campus, but their student government would like to get them more visibility.

Two members of the Council of Commonwealth Student Governments recently agreed that the council's mere existence would be news to many students at University Park. Each of the University's 19 branch campuses sends two student government representatives to CCSG meetings.

"When major issues come up that affect the commonwealth system overall, CCSG is the governing body of the campuses," said CCSG Coordinator Gary Price. Price added that each campus also has unique perspectives, interests and problems.

Tony Bottino, CCSG's newest representative on the University Student Executive Committee, said CCSG is directing its efforts this year toward several issues important to commonwealth students, including the improvement of facilities and improved communication between campuses.

"A lot of people transfer from a commonwealth campus and really don't know what's going on," Bottino said. "(CCSG) would like to help facilitate the transition to University Park."

Helen Welde, CCSG's third representative on USEC, said the council

would like to focus on improving communication between University campuses this year.

"I would basically like to open up the lines of communication so people can see student government from a University standpoint instead of a campus standpoint," Welde said.

CCSG also plans to create a better working relationship with both the administration and other key student organizations, including the Undergraduate Student Government at University Park, Price said.

Bottino said a lot of good student leadership is sometimes wasted because students who have been involved at the University's commonwealth campuses do not take advantage of opportunities available at University Park.

CCSG was restructured last year to improve communication and efficiency within the organization, and for the first time this year CCSG is operating on a regional system.

"We came to a point in our organization's time where things just weren't happening. The issues weren't relevant. People became dissatisfied," Bottino explained. Meetings were held to reorganize the structure of CCSG and get the organization back on the track, he said.

Instead of having 19 University Park liaisons — one student for each commonwealth campus — CCSG has only five liaisons at University Park this year, each serving several campuses in the same region.

conduct review

The University's Office of Conduct Standards now releases a monthly disciplinary update, which publicizes resolved actions taken against students for misconduct.

Specifics concerning the cases are not available, to protect the students involved. From Oct. 1 to 31, 212 cases were resolved. Statistics for the month of October include:

- Ten students under the age of 21 received disciplinary warnings for possession of small quantities of alcohol.

- Eight students were placed on one-semester probation for alcohol party responsibility violations.

- Five students were placed on one-semester probation for smoking and possession of marijuana.

- A student was placed on one semester of probation for soliciting Nittany Lion paw prints at a Penn State football game without authorization and permission. The student also failed to produce identification when requested.

- A student was placed on one-semester probation for attempting to remove a study-lounge table to use at a tailgate.

- A student was placed on a 1-2-year probation and lost visitation privileges in all dorms occupied by females during the probation for entering a window of a female's dorm without permission and harassing the occupants.

- A student's diploma was placed on hold for two semesters for aiding and abetting in damage to a marble slab.

- Five students were placed on two-semester probation and lost the right to register and operate a motor vehicle on campus during the proba-

tion period for driving under the influence.

- Four students received disciplinary warnings for urinating in public.

- Three students were placed on one-semester probation for supplying alcohol for a drinking contest in which a student required medical attention.

- Two students were placed on one-semester probation for possession of a BB gun on University property.

- A student was placed on two-semester probation for an escort violation, providing false information and possessing two cases of stolen pretzels.

- A student was placed on two-semester probation for impersonating a police officer.

- A student was placed on one-semester probation for streaking.

- A student was suspended for one year for theft of computer services by using others' computer accounts and passwords.

- A student was placed on probation through graduation (four semesters) and referred to Total Alcohol Awareness Programs for possessing a small quantity of alcohol and being disorderly with a Police Services officer. It was the student's fourth violation.

- Two students were placed on two-semester probation for theft of a newspaper vending machine.

- A student was given a disciplinary warning for unrolling toilet paper from a window into the trees.

- Three students were placed on one-semester probation for possession of stolen street signs.

—compiled by Debbie Yuhasz