

Engineers testing plane cabins to slow air fires

United Press International
SOUTH BEND, Ind.— Aerospace engineers are using their computers to fiddle with aircraft interiors, looking for a configuration that can help keep passengers of burning jets alive.

Anything they discover will come too late for the 23 victims of last week's Air Canada DC-9 fire, but a research team at the University of Notre Dame is hoping its work will prevent future tragedies.

Using a computer program that essentially is a model of a burning aircraft, the scientists can experiment with different cabin seats or cushion materials, tracing how each delays a fire or advances it.

"We have developed a simulation model which will enable us to find out what happens to the smoke and fire once a fire is initiated in any part of the cabin," K.T. Yang, professor of aerospace engineering, said Monday.

But Yang says the research has a long way to go before it yields the kind of data that could

have prevented the deaths last week of 23 passengers on an Air Canada flight from Dallas to Toronto.

"In this case, the fire starts in the lavatory," he said. "We haven't even gotten to that yet."

Investigators suspect an electrical malfunction or a cigarette in a rear lavatory touched off the smoky Air Canada fire and forced the pilot to make an emergency landing outside Cincinnati. Officials say all 23 victims died of smoke inhalation.

"Fire spread is always very rapid," Yang said. "Any kind of closed area is the same kind of situation. The question is whether the toxicity of the smoke would be so severe that, within a certain amount of time, you'd be in trouble."

Yang, working with professors John R. Lloyd and A.M. Kanury has looked at how well fire and smoke would be contained by seats without space underneath for carry-on luggage, or by seats with higher backs.

"We have found that the seat-back is quite important in how long it's going to take for the smoke to come down to the floor level," he said.

"It turns out when the seat-back is high, it would take more effort — so to speak — on the part of the flow to penetrate down into the seating areas," he said.

That would suggest that jet seatbacks should be made higher, to keep smoke up around the ceiling and away from the passengers — perhaps until the plane is landed and everyone is evacuated.

But the scientists say it will take more study to determine how much time that would buy passengers on a stricken plane.

Yang said the United States is lagging behind other industrialized countries in research into airborne fires.

"On the national scene, (it) hasn't been a major research area at all, contrary to what we think it should be," he said. "It's not the FAA's fault, because they're not getting the money from Congress."

Forth computer language Ch a rising star in Hollywood Lu

United Press International
A programming language available on microcomputers has earned big-time movie and television credits. Forth, as it is called, has helped create special effects for such movies as "Escape from New York," "Jaws III" and "Heavy Metal."

What makes Forth right for Hollywood is its prowess in process control, that is, controlling mechanical devices and sensors. For example, according to Charles Moore, inventor of Forth, one of the first applications developed in the language was a program that helped a computer monitor the radio telescope at the National Radio Observatory. Most other well-known languages for microcomputers were developed for numerical calculation.

Many non-movie applications of Forth have been developed since the National Radio Observatory Program. For example, notes Elizabeth

Rather, a co-founder with Moore of Forth, Inc., and one of the first Forth programmers, a major airline uses Forth to control its automated baggage handling equipment. Scientists use it to monitor laboratory equipment and instruments.

In movie production, some special effects require that a camera be moved two or more times along precisely the same path, as when the image of a space ship must be superimposed on a separately photographed background of stars. If the path the camera takes while photographing the two subjects differs even slightly, annoying jiggles and shadows will appear in the finished film.

One of the firms specializing in Forth-driven process control equipment is Elicon, of Brea, Calif. According to Elicon's Peter Regla, director-producer Roger Corman bought the firm's first Camera

Control System late in 1978 to create the scene in "Escape From New York" in which a glider flies through the city. The system consists of a computer-controlled robot that moves the camera exactly as directed.

Elicon found that Forth had several advantages over Fortran, the language used to program a previous camera control system; the Forth system can be stored in less disk space, floppy disks can be used instead of more expensive hard disks, the Forth programs run faster, and — because Forth makes it easier to attach a digitizing pad to the system — an artist can "draw" the path the camera is to take.

In the Fortran system, Regla said, "all our work had to be precalculated."

The flexibility that allows programmers to define customized commands is only one way Forth achieves its prowess

in process control. Another advantage is speed.

Speed is critical in process control. The program interprets Forth takes up less space in memory than a program that interprets Fortran. When microcomputers were at a premium, this alone made Forth particularly valuable and helped the language gain popularity. A lot of early microcomputer programmers. The home computer user, Forth takes some time used to. It is quite different from the Basic language campaign comes with most home computers. However, with a relatively simple home computer system can be used to control time, usually available only on special purpose computers. Precise timing and photographic equipment is one thing. Forth is available on all microcomputers.

PUC expects rate increase requests

United Press International
AUSTIN — The Chairman of the Public Utility Commission says he expects the Dallas and El Paso electric utilities as well as Southwestern Bell Telephone Co. to file major rate requests now that the Legislature has adjourned.

PUC chairman Al Erwin said Monday that Dallas Power & Light Co., its sister firm, Texas Electric Service Co. and El Paso Electric Co. all are expected to make rate hike requests in the next few weeks.

In addition, Bell has indicated it is nearly ready to file its first rate request since breaking away from its parent firm,

American Telephone & Telegraph Co.

State regulators expect Bell's request to total nearly \$1 billion, by far the largest such rate request ever made in Texas.

"They all waited until the session was over," Erwin said. Due to the expected onslaught of rate cases, Gov. Mark White has agreed to speed up his search for a public counsel to represent consumers in PUC cases, Erwin said.

The Office of Public Counsel was created with the passage of a bill that orders reforms at the PUC. White signed the bill Monday, saying it would "create the atmosphere for the best-regulated utilities in the nation."

Braniff officials to leave Friday

United Press International
DALLAS — The two highest-ranking officials of Braniff International, President Howard Putnam and Executive Vice President M. Philip Guthrie, will leave their management posts on Friday.

Putnam said he and Guthrie would enter another business venture in the Dallas-Fort Worth area after a rest period. He said he doubted he would return to the airline industry.

Putnam said Monday the resignations did not contain any signals regarding the fate of a Hyatt Corp. plan to take over the bankrupt airline.

"If Hyatt moves along, if it ever gets affirmed, Hyatt will put in new management," Putnam said. "If there is no deal, what you are left with is a small, fixed-base operation, and the Braniff estate can no longer afford our talents."

Putnam added, "Phil and I plan to take a little time off and get our batteries recharged. We're tired, we've been trying to save this thing, to turn it around, for 20 months now. We've run out of gas.

"We've done everything we could possibly do, and the job is nearing completion one way or another," he said.

Putnam had revealed several months ago that he and Guthrie would leave the airline this summer, but did not specify a date.

Although Putnam will give up his daily executive responsibilities, he will retain the title of chairman of the board. Guthrie, the airline's chief financial officer, will remain a Braniff director.

Putnam and Guthrie will continue to be consultants to the

bankrupt corporation. The Braniff board scheduled a meeting Wednesday to decide on an interim president and chief financial officer.

Putnam, 45, a 26-year veteran of the airline industry, joined Braniff in the fall of 1981. He was lured from the presidency of Southwest Airlines, one of the nation's most profitable regional carriers.

Putnam signed a three-year contract, at \$250,000 a year, and a "golden parachute" pact guaranteeing he would continue to draw 36 months of pay if a Braniff takeover or merger put him out of a job.

Putnam brought Guthrie along with him from Southwest. Guthrie, 38, received a three-year contract at \$130,000 annually.

Putnam said although the two contracts run until 1984, "under bankruptcy, contracts take on a different light, meaning they aren't any good."

Meanwhile, Braniff's secured bondholders, who hold about 25 percent of the \$467.5 million owed to secured creditors, say they plan to go to court to fight Hyatt's plan.

"We just can't accept the current offer by Hyatt," said Dallas attorney Sander Esserman, who also reported the secured bondholders had withdrawn from the talks with Hyatt.

The airline's \$9 secured creditors — mostly large banks and insurance companies — are reportedly close to an agreement with Hyatt. An agreement would face a vote by all the secured creditors, and there was little chance the smaller secured bondholders group could out-vote the secured lenders.

Worker gets 50 years in murder of guard

United Press International
GALVESTON — A former offshore worker who pleaded guilty to stabbing a Galveston security guard 59 times last November has been sentenced to 50 years in prison.

Wayne La Plant, 19, agreed to plead guilty in exchange for the sentence for the Nov. 30, 1982, killing of Barbara Jean

Whiteley, 57, of Galveston. He was sentenced Monday.

Police said La Plant stabbed Whiteley after she refused him entrance to a Shell Oil Terminal dock on Pelican Island. He then swam the Galveston Ship Channel to escape. La Plant was arrested Dec. 14 in New York City.



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