Uplink

Doctor, doctor...
Uplink update

Reporters in New Jersery, Ohio and Florida have taken the temperature of hospitals, emergency medical technicians and neonatal care care.

Rick Linsk andPaul D'Ambrosio of the *Asbury Park Press* take on all of New Jersey in their series "Vital Signs," which gauges the health of the state's hospitals. Joan Mazzolini and Dave Davis of the *Cleveland Plain Dealer* examine how Level II Ohio hospitals have skirted the rules in order to make money off of premature births. And Chris Ford of WTVT-TV in Tampa, Fla., times EMT responses to find out long it takes to get to a scene.

This month's Tech Tip shows how to split name fields in FoxPro.

NICAR's Andy Lehren and Bonnie Britt of the Felton, Calif., *Tribune Review* share the latest in covering plane crashes.

And Griff Palmer shares how *The Oklahoman* looked at the astronomical amount Oklahoma City spends on maintaining its police cruisers.

Diagnosing hospital health
'Vital Signs'

By Rick Linsk
and Paul D'Ambrosio
Asbury Park Press

How healthy are New Jersey hospitals?

A year ago, we asked ourselves that question at the Asbury Park Press. The answers turned into "Vital Signs," a series that ran from July to December and rocked the state's medical establishment.

The project's roots go back two years, to the day someone slipped projects reporter Rick Linsk several pages of statistics on all New Jersey hospitals, including mortality rates, mortality rates after cardiac bypass surgery, and Cesarean section rates.

Thinking these might be internal reports from the state Department of Health, Linsk called there. Not us, officials said; the state publishes no such performance measures on hospitals. But, they said, if you have $1,600 handy, we can sell you the data and you can do it.

We were struck by this irony. In the very area where the stakes were so high — literally life and death — it is virtually impossible for consumers in New Jersey to get any meaningful information about their hospital or doctor. Across in the border in New York and Pennsylvania, by contrast, state agencies routinely publish bypass-surgery mortality rates and other figures for the public.

Jumping in

We took the plunge. The first step was buying New Jersey's hospital uniform billing or "UB" data. About 30 states sell these inpatient discharge records, which contain demographic information such as age and gender plus myriad fields for conditions diagnosed and procedures performed. The price varies by state. To find out whether your state sells the data, contact the National Association of Health Data Organizations (703-532-3282).

Diagnoses and procedures are represented by codes under the International Classification of Diseases (ICD for

Rocking the rules
Baby business

Laurie Snyder
Missouri School of Journalism

On a tip, *The Cleveland Plain Dealer's* Joan Mazzolini, medical reporter, and Dave Davis, projects reporter, investigated why several hospitals were lobbying against tighter restrictions on neonatal care units.

By examining two years of birth and death records, the reporters found that many hospitals were accepting transfers of extremely premature babies, even though a state system was supposed to route these sick babies to the most sophisticated medical centers. These centers, which are certified as Level III hospitals, had cutting edge technology and a staff of specialists.

But in a time of managed care and shrinking profits, many hospi-

Station times EMT responses

By Jody Sowell
Missouri School of Journalism

When WTVT-TV in Tampa, Fla., got a tip that its county's emergency medical system was taking too long to reach people in need, reporters used CAR and vans to illustrate the problem.

With CAR, the reporters used spreadsheets of response times, maps of response zones and ambulance run reports to show how long ambulances were taking to reach people who had dialed 911.

In unmarked vans, the station raced ambulances to the scenes of incidents they heard on a scanner. Reporters often arrived before paramedics and used a stopwatch to determine how long paramedics took to arrive.

The reporters found that Hillsborough County's EMS failed to meet national response-time goals in one out of three cases. In one such case, Rafael Gonzalez died of a heart attack. It took paramedics 11 minutes to get to his home. The house was one mile from an EMS station.

In one out of every four calls, it took paramedics nine or more minutes to reach people in the most densely populated parts of the county. In the rural areas, the response times were even longer. In more than one out of every three calls, it took paramedics 11 minutes or more.

Chris Ford, senior investigative producer, said this series, which was broadcast in November 1995, marked the first time the station used computer-assisted reporting in all aspects of an investigation.

It paid off. Ford said the statistics proved to the county's officials and residents that these poor response times were not isolated cases.

"Unquestionably, the computer concept and ideas it exposed allowed us to do this story in a way that was comprehensive and hard to challenge," he said. "The computer really enabled us to make it hard for them to get any wiggle room."

After receiving a tip from a paramedic, reporters at the station began investigating. The county's EMS officials did not want to release time records for the whole year, so reporters accepted response-time printouts for a month and started building an Excel database of their own.

After much prodding from the station's lawyer, Hillsborough's EMS eventually released response records for the year. Reporters added those figures to their database. Ford said the key was in the field section.

"We were able to sort by different variables, and that really made a difference," Ford said. "We were able to show not just that it was a problem, but where it was a problem, specific neighborhoods."

One of those neighborhoods proved to be an area where the service was needed the most — a retirement community named Sun City. One paramedic, who did not want to be named, told reporter Kevin Kalwary and photographer Phil Celli that any resident of the retirement community who had a heart attack would be in danger because of the slow response times.

"You're basically gonna die," he said. "We probably should give the pre-arrival instructions to hop in your car and drive like hell to the hospital because your chances are gonna be much better."

The station was quick to remind viewers that they were not questioning the paramedics' quality of care, only their response times.

The station talked to residents who had to wait for the ambulance, and some blamed the response times for the death of a family member. But Ford said reporters did not want to show up at people's doorsteps without an idea of what had happened.

They again turned to computers. The station used Autotrak, an online public records database, for background information on victims and their families. They also used the Datatimes clip service to read about the incidents with long response times.

Ford has some suggestions for others who want to do similar projects:

• Just do it: "Don't be deterred by the fact that when you decide you want to do this you say, 'I don't know the software or understand it,' " he said. "You have to just start on a project — you just work on it and make it work. The key is don't be afraid of it. Just figure out what you want to do and do it."

• No excuses: Ford said persistence counts when it comes to getting governments' computerized records, even though officials often say reporters won't be able to use their software. "Don't accept any excuse," he said. "Just get (the software) and then you can deal with it."

Baby business

tals are searching for ways to generate funds — and obstetrics, especially neonatal intensive care, is a good way to do it. In Ohio, the average cost of treating a premature baby, in 1994, was about $40,000 and could hit upwards of $400,000.

So many Level II hospitals, in an effort to "get a bigger piece of the baby market," Davis says, were squeezing by state restrictions and presenting themselves to parents as able to provide the most advanced neonatal care.

However, when it comes to the treatment of premature babies, all hospitals are not equal. *The Plain Dealer* series, which ran on Nov. 27 and 28, 1994, shows that the death rate of premature babies was significantly higher at the Level II hospitals than at nearby Level IIIs. The articles highlights what Davis calls "another example of the business side of hospitals dictating how health issues are handled."

The data

Mazzolini and Davis requested Ohio's birth and death records for 1992 and 1993, although, at the time, only eight months of the 1993 records were available.

Each nine-track magnetic tape cost $100.

Getting the records was relatively easy, Davis says. "In most cases, we had the data a few days after we filed our request" with the state health department. And, the data were clean.

The reporters transferred the data from the tapes to an IBM 486, then used FoxPro for their analysis.

Mazzolini and Davis discovered that birth records are a CAR gold mine, with more than 60 fields of information. The records included when and where the baby was born, as well as such details as the gestation age of the baby, the mother's ZIP code, the number of prenatal doctor visits; and, most important, whether the mother was transferred from one hospital to another, either during labor or afterwards.

"Basically, we were able to track the flow of babies," Davis says.

The birth records allowed Mazzolini and Davis to identify the hospitals that were treating extremely premature babies, Davis says. Then, linking this information to the death records using the hospital code number, they calculated the death rates at various Level II hospitals vs. those certified as Level III.

Finding the names of babies who died wasn't as easy. Birth records do not contain the names or an unique identifier, such as a Social Security number, so they roughly matched the birth records by linking the birth date and hospital code to these same fields in the death records, which do contain names.

"We had good luck; out of 20 names, 15 would be correct matches," Davis says.

They also downloaded data from the Census Bureau site (www.census.gov), which provided the median income level for various ZIP codes. This data did need some cleaning, Davis says. The Census database listed nine numbers in the ZIP code column, so they wrote a program in FoxPro that removed the last four digits.

Mazzolini and Davis discovered that many of the babies were from "families who were relatively well off" and the majority of these families had private insurance, Davis says. "Those are the cases that the hospitals wanted."

After the series ran, the state legislature issued a moratorium on hospitals adding neonatal intensive care units and, in the years since, have closed the loopholes that allowed Level II hospitals to skirt state restrictions.

But, Davis says reporters should revisit the issue. "Hospitals routinely thumb their noses at the state health department."

Station times emergency reponses

• Warning signs: Ford said there are several places to look if a reporter believes their city's emergency medical services are lagging. "One real danger sign is look at the EMS to see if it has dual response or paramedic equipped fire trucks," he said. If paramedics are not riding on fire trucks, there could be a problem. In Hillsborough County, firefighters who had no paramedic training would often arrive long before EMS. Ford also suggested talking to emergency room doctors. The American Heart Association often has a local board that monitors response times.

Medicine and health resources

Good reference books:

•*Dorland's Illustrated Medical Dictionary* (Philadelphia: W.B. Saunders, 1994 [28th ed.])

•*Stedman's Medical Dictionary* (Baltimore: Williams & Wilkins, 1995 [26th ed.])

•*The American Medical Association Family Medical Guide* (New York: Random House, 1994)

•*The Merck Manual of Diagnosis and Therapy* (Rahway, N.J.: Merck & Co., 1992 [16th ed.])

•*The Physicians' Desk Reference* (Montvale, N.J.: Medical Economics, 1996 [50th ed.])

•*The Control of Communicable Diseases Manual* (Washington, D.C. : American Public Health Association, 1995 [16th ed.])

Barbara Gastel provided this handout at the IRE National Conference in Providence, R.I.

Internet directories

Medical "nodes " or "hubs" on the World Wide Web can be good starting points for gathering background information. Such sites include MedWeb (http://www.emory.edu/WHSCL/medweb.html), Medical Matrix (http://www.kumc.edu:80/mmatrix/), and Yahoo—Health (http:/www.yahoo.com/Health). Of course, medical information on the Web varies greatly in quality; thus, let the browser beware. Among books that may aid in finding Internet resources are *Dr. Tom Linden's Guide to Online Medicine* (New York: McGraw-Hill, 1995) and *The Internet Health, Fitness, and Medicine Yellow Pages* (Berkeley, Calif.: Osborne McGraw-Hill, 1995). Given the rapid growth of the Internet, such books cannot be fully up-to-date. However, they may provide at least initial direction.

Journal articles

Articles in medical journals also can serve as useful background. Such articles can most readily be identified through the National Library of Medicine (NLM) database MEDLINE. Sources of access to MEDLINE include medical (and some other) libraries, some commercial online services, and NLM (see http://igm.nlm.nih.gov). To identify articles providing overviews of given areas, you can search MEDLINE specifically for review articles.

Agencies

Among government agencies, the National Institutes of Health (NIH) is particularly geared to providing health information to reporters. The NIH homepage, through which the homepages of various NIH institutes can be reached, may be accessed at http://www.nih.gov/home.html

Phone numbers of media contacts at selected NIH components are:

• National Cancer Institute, (301) 496-6641
• National Eye Institute, (301) 496-5248
• National Heart, Lung, and Blood Institute, (301) 496-4236
• National Institute on Aging, (301) 496-1752
• National Institute on Alcohol Abuse and Alcoholism, (301) 443-3860
• National Institute of Allergy and Infectious Diseases, (301) 402-1663
• National Institute of Arthritis and Musculoskeletal and Skin Diseases, (301) 496-8188
• National Institute of Child Health and Human Development, (301) 496-5133
• National Institute on Deafness and Other Communication Disorders, (301) 496-7243
• National Institute of Dental Research, (301) 496-4261
• National Institute of Diabetes and Digestive and Kidney Diseases, (301) 496-3583
• National Institute on Drug Abuse, (301) 443-1124
• National Institute of Environmental Health Sciences, (919) 541-3345
• National Institute of Mental Health, (301) 443-4536
• National Institute of Neurological Disorders and Stroke, (301) 496-5924
• National Institute of Nursing Research, (301) 496-0207
• Office of Alternative Medicine, (301) 496-1712

If unsure which NIH component(s) to consult about a topic, you can search the NIH information index at gopher://gopher.nih.gov:70/11/clin/nih-infobook or call the main NIH telephone number, (301) 496-4000.

Other government information sources include the Centers for Disease Control and Prevention (http://www.cdc.gov/cdc.html, media phone number (404) 639-3286) and the Food and Drug Administration (http://fdahomepage.html, media phone number (301) 443-3285). CDC has an automated fax information service providing fact sheets and other documents on diseases and other health topics; for information, call (404) 332-4565.

Medical Librarians

Medical librarians can aid greatly in finding written and electronic sources of information. Such individuals are readily contacted at the libraries of medical schools.

Vital signs

short). You can decipher them with a $17 CD-ROM sold by the National Center for Health Statistics. Several medical publishers put out coding manuals that are good to have handy.

Using UB data for medical research is not without controversy. Pitfalls include inconsistency in coding between hospitals, especially when it comes to areas with fuzzy definitions like various complications of labor. Experts also question whether hospitals reliably code their mistakes. And experts point out that the ICD codes do not yet distinguish between ailments that patients came in to the hospital with and those they acquire during their stay (pneumonia and infections being prime examples). Despite all this, a growing number of health researchers are using UB data because it's the best and only database available.

New Jersey's public UB records identify the hospitals, but not doctors' or patients' identities. Date fields are also scrubbed. Some states reportedly withhold even the hospital names.

Next hurdle

If you get this far, the next hurdle is risk adjustment. Hospitals argue, and experts agree, that it's unfair to compare hospitals that have different kinds of patients. The place with a higher mortality rate may have older or sicker patients. To compare apples and apples, you have to adjust for the patient case mix.

We briefly considered trying risk adjustment in-house using SPSS's logistic regression, but quickly became convinced it would not be a wise move. (Logistic regression takes string variables and predicts relationships. In medical data, it will tell if there is a strong relationship between, say, diabetes and kidney failure.)

The major concern was credibility. We were about to launch the most ambitious review of hospitals in the state's history. We were going to tell 7.7 million residents which hospitals were great and which ones were killing too many patients. Our information had to be solid, and we had to present evidence that was acceptable to the medical and regulatory communities. No one would take us seriously unless we used a well-known vendor who did risk-adjustment for hospitals and insurance companies.

Fortunately, we were able to forge a relationship with Inforum, Inc., a Nashville, Tenn., company whose parent firm, MedStat, essen-

tially invented the medical risk-adjustment methodology 15 years ago. Inforum was looking to break into the New Jersey market and we were looking for attack-proof data.

Inforum provided us risk-adjusted data in three areas: cardiac bypass surgery, stroke treatment and pneumonia/influenza care. We got the adjusted death rates, adjusted lengths of stays, and complication rates in each area and compared it to hospitals in eight other states. This was the basis for the report cards we published.

We went a step further and extracted insurance, demographic and geographic data from the UB tapes. This helped us show how minorities of all ages were less likely than their white counterparts to undergo bypass surgery or pneumonia treatment. We also found women with insurance were more likely to have C-sections than poor women insured by Medicaid. Rates varied too between cities and suburbs.

Words of caution

Don't trust anybody or anything. We found errors with the raw UB data (incorrect hospital ID numbers), and Inforum's information (they told us one facility did not note secondary diagnoses when it did). Send your results to your target hospitals before you run and ask them to provide any data that is inconsistent with yours.

Be prepared for a heavy barrage of misinformation, lies and damn lies from all fronts.

Hospital executives and trade groups will talk out of both sides of their mouths. In the same breath that they disparage your consultant's work, they will tell you they use the same data for their own internal reviews. Ironically, the hospital association — which laughed at an early inquiry from us about how to examine the discharge data — came in midway through the series and asked to work with us. Our response: Pucker up and kiss our...

The impact of the series was almost immediate. The state's health commissioner promised to issue his own bypass report card in 1997, moved to standardize stroke and pneumonia care, promised to beef up his hospital inspection staff, and crack down on a Newark bypass center that was violating its license.

Rick Linsk and Paul D'Ambrosio can be reached at is (908) 922-6000, or send e-mail to linsk@app.com or to pmd@app.com. The series can be found on-line at www.app.com

The National Library of Medicine online database DIRLINE can help identify volunteer and medical associations and government agencies. On the Internet, DIRLINE may be accessed by typing "telnet locator.nlm.nih.gov" and then selecting "Directory of Information Resources" from the menu; it also may be reached from the NLM Locator page at (http:// www.nlm.nih.gov/ databases/ locator.html). Institutional sources may be identified through the American Association for the Advancement of Science directory "Science Sources" (http://sci.aaas.org/ sources/). And the standard reference work the *Encyclopedia of Associations* has a section listing more than 2,000 health and medical organizations.

Let's split

By Richard Mullins
University of Missouri/NICAR

One of the recurring questions on NICAR-L is some variation of: "I have a table with a name field and I need to ..." Those who are starting to bear the stains of exposure to computer-assisted reporting will use the term "string functions."

The advice on several occasions recently has been a brief pointer at part of the FoxPro manual or the online help, accompanied by the encouragement to sweat it out on your own. This is good, sound advice. It's not motivated by laziness or a certain relish in picturing you slogging through the personal hell they were forced to go through, back in the old days, and not like you kids today, and ... you know the rest.

Here is how to slug it out on your own. Take short steps and make sure you understand each part before you go on.

Here is the sort of answer you might get if you asked, "How do I a put into a new field everything in a field that is found to the right of the comma?" (This might come in handy for fields with contents like this: Smith, Robert — or, as in our example, Clinton, William Jefferson)

```
REPLACE ALL RestName ;
WITH SUBSTR(name, AT(",",name)+1)
```

If you're thinking, "This looks cryptic and hard to understand," then you should be declared legally sane. If you get the command to work, it may be the result of some luck and a few guesses in correcting the syntax errors after FoxPro tells you that you are missing argument, missing parenthesis, etc.

To illustrate the approach, assume a table called PREZ with a field called NAME. If the table is open and the record pointer (or cursor) is on the first row, you can try out the various functions and see the results on a single row, before you make any changes to your data. In the syntax examples that follow, the line in bold type is what you see on the FoxPro screen when you type in the command window. This is the convention used in the FoxPro manual. The question mark acts as a command word and means, "print this on screen."

```
? name
Clinton, William Jefferson
```

Try out the **left** function with assorted numbers:

```
? left(name, 3)
Cli
? left(name, 11)
Clinton, Wi
? left(name, 1)
C
```

Now, the original problem, posed for the sake of discussion and also one that comes up all the time in real life, is splitting name fields that are separated by a comma. If you understand how the FoxPro **replace all** command does the changes, then you only need three string functions to do the splitting:

```
left()
at()
substr()
```

The advice about sweating it out is related to the old "teach someone to fish" proverb: If you see these functions in action fixing one problem, you'll be able to figure out how to use them on new problems. After that, there is good news and more good news: There are more than three functions in FoxPro (and Access), and you know something useful about how to learn to use them.

Now, back to the command window and taking small steps to solve the task at hand. We could state our instructions in English like this: "For every row, find the location of the comma, then pick up the characters on the left side, up to, but not including the comma.

We've already seen how to print a certain number of characters, starting from the left. But names are not all the same length, which means the comma is not in the same place in every row of a table. This is not an obstacle, because of two facts about FoxPro: 1) There is a function to locate the position of a character within a string of characters, and 2) The results from one function can be submitted to another function. A short term for this, used by geeks, is nesting, an obvious metaphor when you think about it.

Applying this, we try out the **at( )** function, then try combining it with **left( )**, and when we're finished with that, put it all into the replace command. Using the at function on "Clinton, William Jefferson" gives the answer of 8 as the position of the comma. Note the syntax is:

```
AT (CharacterToSearchFor,StringToSearchIn)
```

Take our money – please

By Griff Palmer
The Oklahoman

Griff Palmer attended Advanced Bootcamp in May.

Until he was contacted by a reporter from *The Oklahoman*, Oklahoma City police officer Mike Williams didn't know repair and fuel bills on his police cruiser topped $93,000 — that's on a car that originally cost $12,250.

The car has been in the shop for maintenance or repairs nearly every two weeks since 1992, *The Oklahoman* reported. Yet Williams told the newspaper his cruiser is not the worst of the bunch.

It's not unusual among the city's fleet of 600-plus cars to see repair and operating costs topping $50,000, *The Oklahoman* found. The average mileage for Oklahoma City's police fleet is just under 100,000 miles; 303 police vehicles have logged more than 100,000 miles; 85 cars have more than 150,000 miles; and 12 cars have more than 200,000 miles.

This compares with eight out of 10 cities surveyed by the American Fleet Managers Association, which reported average mileage per police car as 69,000 miles or less.

Reporters Steve Lackmeyer, Penny Owen, and Diane Plumberg and database editor Griffin Palmer got at the heart of the story with data. Palmer tells how:

We worked from a cumulative database that reflected figures for the lifetime of each car. If I had more time, I'd have liked to have gotten the database broken out by year. The National Association of Fleet Managers publishes a booklet titled "Benchmarking for Quality in Public Service Fleets." NAFA surveyed 90 public fleets, ranging in size from 250 units to 10,000-plus units. It analyzed a variety of service/performance measures, plotting distributions of fleet administrators' responses for each measure.

On many of the measures, figures for police cars are plotted separately from those for other fleet sedans.

Many of those distributions are based on annual figures, so having local fleet figures broken out by year allows a reporter to compare the local fleet against NAFA survey results. In addition to plotting the distribution curve, NAFA charts the median value for each measure, along with the low 20th percentile and the high 20th percentile.

Among the many measures in the NAFA book are average number of miles vehicles are driven each year; average number of miles vehicles have been driven since they were put into service; yearly maintenance and repair costs per mile; fuel cost per mile; fuel mileage; total cost per mile; downtime rate; miles between breakdowns; miles per mechanic hour.

Tricky measures

Capital cost is one of the trickier measures. NAFA defines capital cost as the vehicle's purchase price minus its projected disposal value, divided by the number of miles it is projected to be driven during its retention period.

In order to compare against the NAFA benchmarks, a reporter must have those figures for the local fleet.

We found the downtime rate to be problematic because of the way Oklahoma City's Equipment Services Division records its data. City officials said they record time out of service as the number of hours between the time a work order is written and the time it is closed off the books. However, they said a car is often actually put back onto the street long before the work order is cleared off the books, rendering the downtime figures meaningless.

A great many municipal fleet maintenance services operate on enterprise accounting. They receive no general fund appropriations, and have to generate their operating revenue from chargebacks to the city agencies whose vehicles they service. They are constantly being scrutinized for the fairness of their charges, and to make sure the work cannot be done for less by commercial vendors. Thus, most fleet maintenance operations tend to keep good, detailed service data.

Oklahoma City's cumulative maintenance records for each police cruiser included VIN number, police unit number, original cost, fuel cost, fuel quantity, number of breakdowns, parts costs, accident repair costs, labor costs, labor hours, total work orders written, total mileage and total maintenance and operating costs.

Griffin Palmer can be reached at palmer@qns.com

The National Association of Fleet Managers, (908) 494-8100, publishes a booklet titled "Benchmarking for Quality in Public Service Fleets," which can help reporters judge the performance of local public service fleets, such as those operated by the police force.

Put the pedal to the metal

By Brant Houston
NICAR managing director

It's time to accelerate again at NICAR. Over the coming months we will start a series of new efforts and expand on the many already underway. Here's a partial list of what Uplink and the NICAR database library plan for the New Year:

• Add an Uplink column on the use of statistical methods in reporting.

• Provide databases at low cost to journalists, and consistently add tipsheets, handouts and sample stories to the database package.

• Add an intermediate level seminar (coming this January) on data cleaning, good database design, and advanced data analysis.

• Add a seminar in the spring on creating searchable databases on the Web.

• Become a broader repository for common and often used data, particularly state and local campaign data.

• Continue our programs to make CAR available to minority journalists by offering fellowships and working with the Missouri School of Journalism's Multicultural Management Program.

• Offer management seminars for broadcast and print journalists on how to bring and keep a good CAR program at their news organizations.

• Continue our basic bootcamps. Our January bootcamp is full, and our May bootcamp is filling fast. We'll have two more in the summer.

• Give an expanded national conference in Nashville, Tenn., in March. This national conference will not only cover the usual computer-assisted reporting panels and training, but also will have advanced classes in mapping, statistics, programming, Web development, and Lotus Notes.

• Participate in and give academic symposiums and work with journalism faculties to integrate CAR in their curricula.

• Develop more joint programs with other universities. We already work with Northwestern University, University of North Carolina, University of Maryland and Columbia University.

• Continue our on-the-road programs to better help small- to medium-size news organizations, but add on-line tutorials as follow-up training.

Wanted: executive director

By Bruce Moores
IRE staff

The leading association of investigative journalists is seeking an executive director to lead Investigative Reporters and Editors into the 21st century.

IRE, the top newsroom training organization and standard-setter in our business, offers a host of services to the profession, including training journalists in advanced reporting techniques for print and broadcast, editing, and computer-assisted reporting. It is based at the University of Missouri-Columbia. If you have proven yourself as a journalist and manager, we want to hear from you.

We are seeking an energetic chief executive who will relish helping other journalists here and worldwide; oversee an $800,000 budget; manage a highly motivated staff of 20 individuals; raise funds; guide the development of educational conferences and publications; oversee various IRE programs, including the National Institute for Computer-Assisted Reporting and the Periodistas de Investigacion; and spread the word about the good work of IRE.

The executive director reports to an elected board of 13 journalists. A seasoned journalist is preferred but not required. The ideal candidate will have demonstrated managerial and administrative effectiveness; a master's degree or equivalent combination of education and experience; and superior organization and communication skills. If you know computer-assisted reporting, you will have an edge. This faculty position at the Missouri School of Journalism includes teaching responsibilities and generous benefits. Salary ranges $50,000 to 60,000.

Candidates should send a cover letter, resume and three reference letters to Bruce Moores, IRE Search Committee, 138 Neff Annex, Missouri School of Journalism, Columbia, Mo. 65211. A review of applications will begin in late January.

You get what you pay for

By Andrew Lehren
NICAR staff

There's a lot of free aviation data on the Web — but it may be worth what you paid for it.

Consider www.landings.com. It offers the Federal Aviation Administration's Service Difficulty Reports. To the uninitiated, these maintenance reports seem pretty complete. But beware. I compared the Landings site vs. the full database obtained by NICAR under the Freedom of Information Act. To run this test, I picked TWA flight 800, which crashed this summer near Long Island, at the Landings site.

The result: Landings showed 18 SDRs since November 1992, vs. 20 in the full database. In addition, in the history of SDRs, there are more than 100 for that aircraft. The Landings data is not in a rows-and-columns format that can be quickly downloaded for further analysis, though you can download the text of the reports. Also, key fields that give fuller versions of events are not available. I e-mailed Landings to reply on these problems, but did not get a reply. The outfit is not an official FAA site, and does warn that its data may not be complete. To be fair, Landings does offer a lot of aviation information, and does seem promising. It's just not complete.

To download official data, the FAA offers week-by-week ASCII files at http://www.fedworld.gov/ftp/faa-asi/faa-asi.htm. But the agency does not include a record layout for the data, and it only posts reports for the most recent two months. It will fax you a copy of the record layout. Call the FAA's Jim Gillespie at (405) 954-6484. But a word of caution: The data on this Web site is truncated. It, too, does not include fields available under the FOIA, including the airline's ranking of the severity of the problem.

Shameless NICAR plug: We've been revising and expanding the way we collect aviation data, and we will do searches by request or send copies of the data to journalists.

Here are other aviation sites that may help you cover aviation and airplane disasters:

The FAA

After jumping off FAA's main page at www.faa.gov, check out the links and publications listed at http://www.faa.gov/APA/publicat/GUIDETOC.htm

FAA press releases are also at http://www.dot.gov/affairs/faaind.htm

The agency's *A Journalist's Guide to the FAA* is at http://www.faa.gov/apa/publicat/jnalist.htm

For the bulk of FAA data, plus advisories and other detailed information, visit ftp://ftp.fedworld.gov/pub/faa-oai/faa-oai.htm

The NTSB

Look up abbreviated National Transportation Safety Board accidents reports at http://www.ntsb.gov/Aviation/months.htm

The NTSB offers studies from its data at http://www.ntsb.gov/Publictn/Publictn.htm, and summary statistics at http://www.ntsb.gov/Aviation/aviation.htm

Other searchable sites

Search ownership records using Canadian tail numbers (they begin with a C) at http://www.cavok.com/registration.html

Landings, by the way, lets you search U.S. and U.K. tail numbers. I ran some sample tests and did not encounter any problems.

For a detailed listing of airports and navigational systems for those facilities, check out http://www.cc.gatech.edu/db1/fly/

This offers everything from usage figures to radio systems that pilots use to land.

For U.S. flight schools, visit http://www.aviationWeb.com/

The dirt on dirty aviation data

Those who have covered airline crashes know aviation data is tricky.

The FAA's Aircraft Catastrophic Failure Prevention Research Program at http://www.tc.faa.gov/aar400/aar431/ offers expansive information on crashes, including aviation industry complaints about journalists probing FAA data, and how U.S. aviation data is too dirty and incomplete to quickly spot safety problems.

Aside from checking the U.S. General Accounting Office itself, you can quickly look at its report on dirty aviation data at http://

Trade Groups: The International and American Associations of Airport Executives run http://www.airportnet.org/ Information on certain lobbying efforts is off limits, but this does offer links to airports and information on airport security. National Business Aircraft Association is for those who fly corporate jets. At http://www.nbaa.org/ you can find tidbits such as positions on pending legislation. The Helicopter Association International offers some federal safety information at http://www.rotor.com/ But some reporters may be more intrigued by lobbying information, including stances against restrictions for flights over national parks.

NASA reports anonymous tip-offs

By Andy Lehren
NICAR staff

These are the stories of airplane crashes that almost happened.

A Federal Express 727 landed on the wrong runway at Newark Airport in March 1993 — nearly striking another Federal Express jet that was waiting for final clearance before takeoff.

A Continental 727's pilot got confused and turned onto the wrong runway of the same airport. A USAir 737 was hurdling down that runway for takeoff. The air traffic controllers thought they would collide. The USAir pilot thought fast and got enough lift to leapfrog the Continental jet.

Key source

These are some of the tales found by the Newark *Star-Ledger's* Ted Sherman. On Sept. 8, he published a package of stories that highlighted problems at the New Jersey airport. One of the key sources for his story was the Air Safety Reporting System, a database that can provide valuable leads about problems at your hometown airport.

The database is compiled by the National Aeronautic and Space Administration from anonymous reports filed mainly by pilots, air traffic controllers and others involved in aviation. The database started in 1988 as a way for those in aviation to report safety problems. Sherman is among those who have mined it to highlight near disasters.

Tricky data

The database is a little tricky. To protect anonymity, NASA strips out actual flight numbers and other identifying information. But it does include the month, year, location and other descriptive information. Sherman found that, in key cases, it gave enough clues so he could verify and figure out the details of those incidents. In some cases, the clues led him to stories in his newspaper's morgue. In other cases, he searched National Transportation Safety Board and Federal Aviation Administration records. But the NASA database underscored a key point — the NTSB and FAA are not a complete source for airline safety data.

Sherman also recommended, "search broadly, because of coding problems." He found, for instance, one type of problem coded several different ways. It was important to pay attention to how data could be entered into the database.

The key

One helpful way he approached the data was to slice out just those incidents involving Newark. However, even then he paid attention to the way data was entered into the system. He found that looking for his region, including metropolitan New York, revealed problems that involved Newark Airport. He suggested other reporters begin searching the database for the geographic area that interests them, and know which regional facilities to track. The key is looking at the facilities that affect traffic at your local airport. Again, pay attention to coding. Sherman found one New York radar facility reported two different ways in the database.

Biggest shortcoming

"The biggest shortcoming," Sherman said, "is air traffic controllers. They don't use it so much." He hoped to find more reports filed by them. Instead, he found, "pilots use it much more."

Many of the interesting nuggets lie in the database's text fields, where the reports include a narrative description of what almost went wrong. The database includes instances where pilots complain about the way things work at an airport, including bad runway designs or other problems that raise safety concerns.

Sherman obtained the database through a private company for $135. But, he cautioned, the interface on the CD did not permit easy transfers into FoxPro. He used Monarch in a time-consuming effort to get those text fields into a .dbf.

Andy Lehren can be reached at (573) 882-0684, or send e-mail to andy@nicar.org

More plane crash sources

By Bonnie Britt
The Tribune Review

On July 24, in the *Seattle Times*, aerospace reporter Byron Acohido wrote, "The crash of TWA Flight 800 was not the first time witnesses on the ground watched as a Boeing 747-100 burst into flames and tumbled to earth."

The story went on to describe a crash 20 years ago that drew little public attention: A former TWA 747-100 converted into a freighter for the Iranian air force — a sister ship to the one that crashed off Long Island — exploded in flight near Madrid, Spain.

How did he know that?

Hot tip

On a tip, Acohido headed to the library where he spent half a day pressing through four years of indexes on microfiche from *Aviation Week & Space Technology*, the industry bible.

When he didn't find the reference in the trade magazine's table of contents, he pushed through it again, 1975-1979, page by page. He found a brief reference in a column item and another reference to an FAA air worthiness directive (AD) triggered by the crash. The AD called for inspection for dangerous fuel leaks that could cause fire and explosion.

The tip was legitimate. Where were the details?

Acohido says, "It happened 20 years ago on Spanish soil. It was an Iranian jet. I assumed it'd be impossible to confirm." Hungry for elaboration of the crash mentioned briefly in the two *Av Week* stories, Acohido looked up Spanish authorities. When that went no where, he called in the calvary.

"We have a great library. I asked for a universal search. The librarian found three or four references to the crash, plus a couple of remotely related clips, including excerpts from a magazine article that talked about major disasters involving large aircraft.

NTSB

"The article made reference to the National Transportation Safety Board finding implicating lightning in the Madrid crash. It turned out the NTSB and a bunch of agencies had retrieved and closely examined the wing that exploded in Madrid. A light bulb went off. There had to be an NTSB report."

Acohido checked the NTSB's Web site (www.ntsb.gov) but saw no reference to the Madrid incident or the 1976 report. He says, "You can't trust their Web site since it is not complete."

Then he went low tech. He called the records department at the agency and politely requested a copy of the report. Within 24 hours, Acohido had the 50-page report via Federal Express. The report — Special Investigation Report: Wing Failure of Boeing 747-131 near Madrid, Spain. May 9, 1976 — is available from the National Technical Information Service (U.S. Department of Commerce) in Springfield, Va.

Acohido copied it to an aircraft wing expert. The report detailed clear and compelling evidence that a moderate lightning strike (which the aircraft is designed to withstand) most likely ignited a stray spark on a fuel sensor inside a partially-full fuel tank. A small explosion followed by an intense localized fire began a sequence that led to the wing coming apart and releasing a huge ball of burning fuel less than a minute after lighting struck the wing.

"The NTSB text gives step-by-step hard evidence in very technical prose. You have to read between the lines. My wing expert and other knowledgeable sources helped me get a layman's grasp of what the report said."

Next stop, FAA

The next step was to obtain the Federal Aviation Administration's airworthiness directive from the AD database. An AD is an order from the FAA to the industry to fix a flaw in a particular model of aircraft. ADs come with deadlines. Acohido was certain an AD had been issued after the 1976 crash since the encyclopedic *Av Week* referred to it. Guessing there might be other fuel tank glitches, he pressed the FAA for all ADs relating to 747 fuel tank problems.

Aerospace reporter Byron Acohido's *Seattle Times* story on 747s can be found using the newspaper's search engine at www.seatimes.com He used NTSB and FAA data and service difficulty reports to look at problems with fuel tanks.

Plane crash sources

He says his newspaper is discussing building and maintaining its own database of air worthiness directives.

The FAA maintains indexes for their databases of notices of proposed rule-making and the air worthiness directives.

When you are not sure what you want, ask for the AD index to the model aircraft (i.e. 747-100 or 737-100, 200 and 300) that interests you. It contains all regulations pertaining to everything on that model that may be flawed, except what didn't get past the rule-making process.

When you know which AD you want, also ask for the electronic file on the Notice of Proposed Rule-Making (NPRM) associated with that AD. It contains the industry discussion of what went wrong, how serious the flaw is, economic factors in making a fix and logic about deadlines. An AD is a congressionally mandated FAA answer to each and every letter that makes up the NPRM file.

Contents of many items in the two databases — NPRMs and ADs — provide long satisfying looks at the process leading to orders for industry-wide fixes of known defects.

To be thorough, ask for copies of the original letters that make up the NPRM file. They reveal much more than the FAA's electronic summary of who said what in the rule-making discussion.

"From experience," Acohido says, "I know you don't just want the ADs that say a flaw must be fixed in a certain way. You also want the NPRMs since they provide the discussion — and criticism of — the proposed fix."

The final rule or AD gives the industry the recipe to fix the aircraft part that's flawed in general terms, typically referring to Boeing service documents for specific steps.

You guessed it: the Boeing documents, called service bulletins, are another gold mine.

Service bulletins

Says Acohido, "Deeper behind the NPRMs are the service bulletins — the manufacturer's explanation and drawings on how to make the fix. You can get them from the FAA."

Doing so calls for imagination.

After the TWA crash, Acohido recalls, "We physically had to go down to the FAA for the service bulletins and were stonewalled at that level."

Often the service bulletin will contain a single profound line revealing the manufacturer's logic about why a fix must be made.

AD's seeking to fix weak locks on 747 cargo doors were supported by Boeing service bulletins, which noted what could happen if a door ever came open at altitude: "It can cause rapid decompression."

Given the choice of inspecting for weak locks or installing stronger locks, many airlines procrastinated, until a cargo door came open on United Flight 811 off Hawaii in 1989. Nine passengers were sucked out a gaping hole in the fuselage during the resultant rapid decompression. The FAA then mandated stronger locks on all 747s within 30 days.

The Boeing service bulletins supporting ADs mandating inspections and fixes for leaking 747 fuel tanks note succinctly: "Leaks can cause fire."

Where besides the reticent FAA (or the manufacturer) can you find service bulletins in a hurry?

Make friends with the faculty at a college where aircraft mechanics are trained. Ask to see the data on the service bulletin database for the fixes that interest you.

When you return with it, Acohido says "Your artists will love you."

On Aug. 21, the *Seattle Times* ran a generous, above the fold graphic based on detailed diagrams of the 747, its wings, its fuel bays and areas prone to leaks sourced to Boeing's service bulletin.

Bold type asked: "Did fuel leak cause explosion?"

Words and pictures examined the "747 fuel-leak danger" on aging 747 aircraft.

"Federal aviation and Boeing service records contain extensive documentation about where the wing and belly tanks on 747s are susceptible to leaks that can cause fire."

Bonnie Britt can be reached by e-mail at bonnieb@cris.com

What you pay for

www.airportnet.org/DEPTS/federal/gao/safety.htm

For a federal court opinion on another tiff between the FAA and the NTSB, check out http://www.ll.georgetown.edu/Fed-Ct/Circuit/dc/opinions/94-1428a.html at Georgetown University.

NASA

The National Aeronautics and Space Administration offers several sites that will help you analyze its Air Safety Reporting System database. Begin at http://olias.arc.nasa.gov/ for the aviation operation's homepage. Check out http://olias.arc.nasa.gov/ASRS/ASRS.html for the database's homepage. The site offers information such as the monthly newsletter *Callback*, which excerpts some reports on studies that use the data. Also look at ASRS Directline, at http://www-afo.arc.nasa.gov/ASRS/drctlin.html, where analysts highlight key information from the database. You can order the data here, though — another shameless NICAR plug — we sell the data to journalists for less.

Human factors

Many air crashes are blamed not on the planes but on the pilots. Two sites that offer information on human errors are the NASA Ames Research Center at http://olias.arc.nasa.gov/zteam/fcp/FCP-home.html and the FAA's http://www.tc.faa.gov/hfl/hfl.html

A group of psychologists funded by NASA published their paper — including some specific accident information — at http://www.psy.utexas.edu/psy/helmreich/acdntlst.htm

International sources

The aviation safety Web pages at http://Web.inter.nl.net/users/H.Ranter/index.html offer a variety of information on international and U.S. air crashes. It's an intriguing Web site — including things like a movie of the Ethiopian 767 crash, pages highlighting recent disasters and a listserv that promises to tell about accidents within a day or two. Much of the information is pulled from news accounts and others' data. This is a good attempt at gathering information on international air disasters.

The United Kingdom Air Accidents Investigation Branch at http://www.open.gov.uk/aaib/aaibhome.htm reports on accidents and makes safety recommendations.

The Commercial Aviation Resource Center at http://w3.one.net/~flypba/AIRLINES/carc.html offers a variety of links to airlines and airports around the world, identifying codes that may be useful for reporting certain stories, and symbols that indicate whether the sites are official or not.

Boeing offers summary information on the world commercial jet airplane fleet at http://www.bts.gov/smart/cat/461.html

Go to http://WWW.CAM.ORG/~icao/sites.htm and http://www.airparts.com/ for a vast list of airports, airlines and more.

Andrew Lehren can be reached at (573) 882-0684, or send e-mail to andy@nicar.org

Products:
No endorsements here. NICAR has not tried these intriguing products. But you can check out a sample of the Jane's Electronic Information System CD at http://www3.btg.com/janes/eisdemo.html The CD itself promises full descriptions of every civilian and military aircraft made. International Air-CD at http://www.infomart.net/ promises ownership records for aircraft around the world, plus links to several aviation sites.

Tech tip

```
?  at(",”   , name)
8
```

Before combining the two functions, we'll use the literal number 8 with the left function, and then using the At() we'll pass along the same number to the Left() function.

```
? left(name, 8)
Clinton,
? left(name, at(",”   , name) )
Clinton
```

To fix the problem of the trailing comma, you include one less character in the left command. The math for this translates to subtracting one from the number that indicates the comma position.

```
? left(name, 8 - 1 )
Clinton
? left(name, at(",”   , name) - 1  )
Clinton
```

Now, you're ready to use this command to split the last name into its own field. Save yourself typing mistakes and paste your perfectly debugged statement into the **replace all** part of the command.

Get your training

On-the-road training

NICAR and, where indicated, The Associated Press provide specialized training in your newsroom. Learn to transfer data from government files into newsroom PCs. Build spreadsheets for insightful stories on the beat. Comprehend documents with database managers. Navigate the Internet and on-line databases.

Cost varies. For information, call Lisa Barnes at (573) 882-8869, or to register, call the numbers below.

Note: In the following list, "Open to all" means any journalist may sign up. "Closed" means the session is open only to members of the host organization.

• San Francisco, CA., San Francisco Bay Guardian—Jan. 17, 1997

• AAN West Convention — Jan. 17 - 18, 1997

• Milwaukee, Wisc., Milwaukee Journal — Jan. 21-23, 1997. Closed.

• York, Pa., York Daily Record — Jan. 27-28, 1997. Closed.

• San Diego, Calif., San Diego Tribune and SPJ — Feb. 19-22, 1997. Open to all. (619) 293-1261

• Palm Beach, CA., Palm Beach Post — March 25 - 27, 1997.

Conferences

NICAR will offer training and seminars at the following professional conferences, including the IRE and NICAR national conferences. Costs vary. For information or to register, call Lisa Barnes at (573) 882-8869.

• Minority Regional Conference, Richmond, Va.— Nov. 15-17, 1996. Open to minorities.

• Minority Regional Conference, Dallas, Texas — Dec. 7-8, 1996. Open to minorities.

• NashCAR, NICAR National Conference, Nashville, Tenn.— March 3-9, 1997. Costs are: IRE member, $150 for entire conference. Non IRE member, $190 for entire conference, including IRE membership. Renewal member, $190 for entire conference, including IRE renewal. Students, $125 for conference, including student membership. Late fee is $15 for registrations not postmarked by Feb. 14, 1997

• IRE National Conference, Phoenix, Ariz.,— June 12-15, 1997.

Bootcamps

Bootcamps are week-long, intensive training sessions offered at NICAR's headquarters at the Missouri School of Journalism in Columbia, Mo.

As with on-the-road training, you will learn to transfer data from government files into newsroom PCs, build spreadsheets for stories on the beat, comprehend documents with database managers, and navigate the 'Net and on-line databases — but you'll be drilled all day, every day for a full week. Tuition ranges from $500-$1,000 depending on circulation or market size.

For information, call Wendy Charron at (573) 882-0684.

• Jan. 5-11, 1997. Waiting list only.

• Jan. 24-26, 1997. Intermediate Bootcamp concentrating on data clean-up and more. For details, call (573) 882-0684.

• May 4-9, 1997. Advanced Bootcamp concentrating on stats and maps at the University of North Carolina-Chapel Hill with Philip Meyer, author of +The New Precision Journalism.+ The seminar is held in Chapel Hill. For details, call (573) 882-0684.

• May 18 - 23, 1997. Regular Bootcamp on general computer-assisted reporting. For details, call (573) 882-0684

More tech tip

```
REPLACE ALL LastName ;
WITH left(name, at(","  , name) - 1)
```

To do the right part of the name, you need to know how to use the substr( ) function. Here are two examples:

```
? substr(name, 6)
n, William Jefferson
```

```
? substr(name, 6, 5)
n, Wi
```

You could sweat this one out, or just go back to the top of this article for the answer.

Richard Mullins can be reached at (573) 882-2127, or send e-mail to richard@nicar.org

From the NICAR library

NICAR offers a number of federal government databases. Here is a list of our growing collection:

NEW • Federal Aviation Administration's accidents and incidents, including major plane crashes since 1971.

NEW • NASA's air safety reporting system, including anonymous complaints by pilots and air traffic controllers. Useful for finding near misses and problems at local airports, 1988-1996.

• A monthly CD subscription for all 1995-96 Federal Election Commission campaign contributions by individuals and political action committees, plus all presidential matching fund requests.

• The Health Care Financing Administion's 1995 database of all Medicare-funded inpatient work in U.S. hospitals.

• Federal Railroad Administration data for accidents, casualties, and highway crossings. 1991-1995.

• Coast Guard boating accidents, 1969-1994.

• Federal Aviation Administration data, including airplane maintenance work documented in the service difficulty report, pilot licenses and grades, and aircraft registration.

• Home Mortgage Disclosure Act records, for tracking who gets loans and who gets turned down, and finding redlining patterns, 1992-1995.

• Federal procurement data, 1992-1995, includes breakdowns by agency.

• Alcohol, Tobacco and Firearms gun dealer records. 1993-1995.

• National Bridge Inventory System data, includes inspection grades. 1994-1995

NEW • FBI Uniform Crime Reports, a detailed compilation of crime data that includes statistical breakdowns of individual murders. This includes the new 1995 data.

• Social Security death records, by name and social security number, going back to 1937.

NEW • Occupational Safety and Health Administration violation data includes worker accidents and exposures to hazardous chemicals by companies, 1974-1996.

• U.S. Department of Transportation truck accident and census data. It includes accidents by company and road.

• U.S. Small Business Administration loan guarantees, 1989-1995. This includes the name of the business, address, amount covered by the SBA, and status, including whether the loan went bad.

• U.S. Small Business Administration disaster loan guarantees, 1989-1995. This includes individuals and businesses, the amount covered by the SBA, and the status, including whether the loan went bad.

• U.S. Small Business Administration's list of minority companies certified for SBA assistance in seeking federal contracts. It includes the name of the company, its address, the owner, type of business and phone number.

• The National Inventory of Dams. 1991-1995.

• U.S. Department of Transportation hazardous materials accidents database, a collection of roadway, rail, air and waterway accidents from 1971 to 1995.

• U.S. Department of Transportation fatal accident reporting system. It includes all roadway accidents from 1988 to 1995.

• U.S. Coast Guard directory of U.S. merchant vessels. It includes the name of the ship, the managing owner, home port and various descriptive information.

For up-to-date prices and more information, call (573) 882-0684, or send e-mail to nicar@muccmail.missouri.edu.

NICAR's week-long bootcamps in Columbia, Mo., offer hands-on training in computer-assisted reporting skills, including the use of spreadsheets and database managers, accessing data in various media, such as nine-track tapes, and negotiating for data. For more information, call NICAR (573) 882-0684, or send e-mail to nicar@muccmail.missouri.edu

Bits, Bytes and Barks

Gearing up for NashCAR

NashCAR, NICAR's 1997 national conference, will be March 6-9 in Nashville, Tenn., and will offer the widest range of panels and hands-on training yet. Building on the previous conferences in Santa Clara, Calif. (CAR Trek) and Cleveland, Ohio. (CAR Rock), NashCAR will have sessions for beginners, intermediates and advanced users. We'll have tracks for beat reporters, editors, newsrooms managers, broadcasters, researchers and librarians, and trainers both in newsrooms and universities.

The conference will make use of computer labs at local universities and will have a demonstration room that will display equipment and software. We'll also have vendors and numerous opportunities for journalists to find jobs.

In addition, we expect to explore the effect of the World Wide Web on journalism and how journalists are using the Web for their stories.

For more information, call (573) 882-0684.

Moving on

George Landau has left the St. Louis Post-Dispatch to start NewsEngin, Inc., "an information engineering co-op."

Landau aims to provide affordable database applications for organizations willing to build intranets, as well as Internet products using common Web database technology from Microsoft and Lotus.

Check out what Landau has to offer at http://www.NewsEngin.com

Among other things, you'll find a Cost-Of-Living calculator and Percent Change calculator in the Free Tools section. Landau will also be working on research and development projects with NICAR.

Science journalists

The deadline to apply for the Knight Science Journalism Fellowships at MIT is March 1.

The fellowship provides nine months of study in Cambridge, Mass., for mid-career science journalists.

The 14-year-old program is open to staff and freelance journalists working for radio, television, newspapers, magazines, and news agencies, with at least three years' full time experience. Six journalists from the United States or Canada are chosen each year by a selection committee of leading science journalists and MIT faculty.
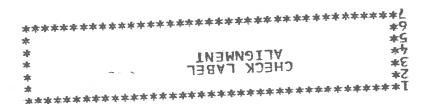
The winners will be named late in April for the academic year beginning Sept. 1.

For information, contact: Victor K. McElheny, Knight Science Journalism Fellowships, E32-300, Massachusetts Institute of Technology, Cambridge, Mass. 02319-4307

IRE-L and NICAR-L addresses

IRE-L and NICAR-L are located on lists.missouri.edu, a dedicated Unix system designed to service discussion groups run out of the University of Missouri. All posts to the lists should be sent to: ire- 1@lists.missouri.edu or to nicar-1@lists.missouri.edu

All commands for subscription changes should be sent to: listproc@lists.missouri.edu