

Uplink

February 1995

A newsletter for the National Institute for Computer-Assisted Reporting

Uplink update

This month's Uplink contains offerings from throughout the country. Merritt Wallick of the *Wilmington News Journal* in Delaware shows how a medium-size paper can tear up the state using computer-assisted reporting on property tax records.

Jim Mosley of the *St. Louis Post-Dispatch* talks about how his newspaper is conducting one the most ambitious CAR training programs in the country, using both inhouse and NICAR resources.

Andrew Lehren, a new researcher at NICAR (fresh from the *Philadelphia Business Journal*), reviews the uses of a Federal Aviation Administration database. In one case, *The Cleveland Plain Dealer*, gets a hit by the significant omissions in the database, while in another, *The Seattle Times*, scores a nice story using details from the database.

Altogether, it shows the continuing emergence of CAR in journalism as a sure path to good stories.

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Property tax records disclose wealth of stories Looking for haystacks in data

By Merritt Wallick
Wilmington (Del.) News Journal

It was one of those times when the computer print-out makes you feel like a prospector staring at a gold nugget in your pan.

This was supposed to be a list of farmers participating in a property tax abatement program intended to preserve farmland. Yet the list included the names of some of the richest people and the largest companies in the United States. It included the names of land developers who have played a major role in Delaware transforming farmland into housing tracts.

Several sharpened queries and dozens of field trips to eyeball the "farms" later we had the basis of our story. Only the interviews remained.

Delaware's farmland preservation program had become a means for the owners of big country estates, oil and chemical companies and land developers to avoid paying property taxes. The state law governing the program was too weak to enforce and county officials had stopped trying. The farmland preservation program actually had the effect of helping to finance land development. In one case, a 400-acre parcel of land zoned for a regional shopping mall avoided \$86,000 in property taxes by claiming to be a farm. Nothing save scrub pine trees grew there.

The story drew one of the greatest responses from the public and the government of any we have ever published. Within days, governments at every level had appointed task forces to study the abuse. Legislators and county

councilmen were deluged with calls from voters. Reform of the system is likely in the current session of the General Assembly.

All this from a routine database. For general reference purposes, we had acquired property records on 9-track tape from each of Delaware's three counties.

We also planned to do a story on whether property tax burdens are unfair. You answer that question straightforwardly, using a sample of recent real estate sales to determine actual housing market values and then computing the percentage of market value the assessment of each home comprises.

With out-of-date assessments like those in Delaware, you can expect that the most expensive homes will be taxed on the smallest percentage of their actual value. It's a predictable but worthy story.

In short, we set out to illustrate something we believed we already knew. Nothing wrong in that, unless we had cruised past the best story. Because we were interested mainly in the assessment of residential properties, we nearly neglected to run a list of

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Coming Events

March 12-17, 1995
NICAR Seminar
Columbia, Missouri

May 14-19, 1995
NICAR Seminar
Columbia, Missouri

More problems uncovered with FAA data

SDRs: Fact or Fiction

By Andrew Lehren
NICAR Staff

When a plane crashes — like the USAir jet outside Pittsburgh — journalists are quick to reveal the aircraft maintenance records maintained by the Federal Aviation Administration. But a huge piece of the puzzle is the FAA's own sloppy record keeping, and the way airlines compile information.

The reporters went
back to the FAA,
back to airlines, back
to overseers,
mechanics, pilots,
manufacturers and
experts. What they
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problems
everywhere.

Perhaps there is no better way to dramatize the gaps than this: In July 1992, a TWA L-1011 was taking off at New York's JFK International Airport. The pilot said he saw a warning system telling him that the engines were stalling. He aborted the takeoff, veered off the runway and the plane erupted into flames. Fifty-one passengers suffered minor injuries.

Investigators started checking on L-1011 warning systems. They found only two FAA reports of stall-warning system failures. But then they went further. Lockheed, the maker of the jet, had its own files. Those showed an additional 14 instances where warning systems went wrong.

Investigators then looked at TWA. The airline had records of another 10 malfunctions. In other words, the FAA was missing records for 24 out of 26 incidents where warning systems went wrong a problem that appears to have contributed to a high-profile airplane accident.

Cleveland's *Plain Dealer* has been sifting through FAA records since November and published its first investigation last month. The results show the TWA accident does not represent the exception. It embodies the way of life at an agency that's supposed to regulate airline safety.

The newspaper has been exploring the FAA's service difficulty reports, often referred to by their initials, SDR. The records are not supposed to be some kind of bureaucratic wasteland. They're designed to play a vital role — helping the FAA troubleshoot airplanes by looking for trends. But bad data and a lack of staff mean the FAA can't do the job.

The funny thing is, that isn't the story *Plain Dealer* set out to do.

The newspaper sent two reporters — Elizabeth Marchak and Keith Epstein — to find which airlines are the safest and least

safe. They were also told to do the same for types of aircraft. And, to drive the point home, they were told to concentrate on aircraft flying in and out of Cleveland's Hopkins International Airport.

Marchak and Epstein used the FAA's SDR database as a starting point. But it was just that: a starting point. FoxPro proved a powerful tool. The reporters conducted a variety of searches, categorizing and ranking records by aircraft and maintenance problem.

Here are some of the stumbling blocks, and how Marchak and Epstein worked to get things right.

The SDR database tracks planes with tail numbers and serial numbers. But airlines over the years may repaint identification numbers. That rendered tail numbers almost meaningless as a way to rummage through the SDR database. Airlines also don't consistently report airplane serial numbers. In addition, the airlines are supposed to rank the seriousness of the maintenance problem on a scale of 1 to 5. However, the *Plain Dealer* found those rankings are often haphazard.

Marchak spotted the shifting serial numbers while performing data analysis. Sometimes they were three digits. In later years, they were six digits. Marchak went into the data line by line to get serial numbers to match. Despite the problems encountered, serial numbers are still the easiest way to follow an aircraft's history.

At the same time, the *Plain Dealer* asked those airlines flying in and out of Cleveland to send lists of the aircraft they were using, including tail numbers. And the newspaper sent a reporter to spend a day at Hopkins, jotting down all the tail numbers.

Marchak later checked those numbers against the SDR databases. And a lot of numbers were not matching up.

The problem wasn't obvious at first. The gap became apparent not by checking serial numbers, but the dates in the SDR database for when the planes underwent repairs. That's when Marchak noticed a disturbing mismatch: a lot of jets flying out of Hopkins showed no maintenance updates since 1992.

The reporters went back to the FAA, back to airlines, back to overseers, mechanics, pilots, manufacturers and experts. What they found were problems everywhere. In some

instances, the airlines were submitting the data to the FAA - sometimes doing the job electronically - yet the information couldn't always be found in SDR. Many times, the airlines were not reporting maintenance - as many as nine of 10 repairs went unreported. The problem was particularly acute among commuter airlines. And the FAA, left with weak provisions to enforce the rules, can do little to force airlines to change their ways.

In addition, records were sloppy. Repairs were often mislabeled. The judgment was left to airline mechanics, who sometimes softpeddle the seriousness of a repair. Marchak and Epstein also looked for what wasn't tracked at all in the database, and found key numbers were missing - the number of hours flown, and number of takeoffs. The stuff that would better track the repairs versus wear and tear.

Along with poor documentation and no enforcement, the *Plain Dealer* used the database as a springboard to show how the FAA poorly analyzes its own records. Agency officials admitted that, in the wake of budget cutbacks, spotting dangerous trends with SDR doesn't get done. The kicker: FAA employees often don't use the agency's database. A private consultant is among those who buys SDR data. He repackages the information and resells the data. Among his biggest customers is - that's right - the FAA. Agency workers find it easier to sift through his version, instead of the FAA's own compilation.

For journalists using FAA data, the *Plain Dealer's* analysis offers another lesson. Learning an aircraft's maintenance record sometimes reveals less than meets the eye. The *Plain Dealer* demonstrated that by profiling a MidWest Express aircraft with a raft of repairs. The newspaper compared that with the USAir jet that crashed outside Pittsburgh. The MidWest Express passengers were on an airplane that underwent more than 144 repairs, but there appears nothing that should have raised concerns. The same went for the USAir flight's 37 repairs. "Trivial" was the way one expert described the maintenance record.

In the article Marchak and Epstein wrote: "The two planes' histories illustrate the perils - for regulators, inspectors, reporters and the public - of drawing conclusions about relative safety from information in federal government computers. Even though that's why the

computerized information exists in the first place."

For more information, the reporters can be reached by phone at 202-638-1366. To send e-mail, reach Epstein at 70404.247@compuserve.com and Marchak at Marchak@digex.com.

Seattle Times overcomes problems with FAA database

SDR reports still useful

By Andrew Lehren

NICAR Staff

The Federal Aviation Administration's database of service difficulty reports, despite the gaps found by the *Cleveland Plain Dealer*, is still good for spotting safety problems. The *Seattle Times* drove that point home in a front-page story documenting a raft of rudder problems in Boeing 737s.

The newspaper rummaged through two decades' worth of service difficulty reports, and found a pattern of malfunctions linked to the jet's rudder. In two dozen cases, pilots were forced to make unscheduled landings, emergency descents or return to the terminal gate.

Concerns ran deep that the rudder could sometimes reverse itself. The FAA ordered airlines in March 1994 to replace the rudder system's central hydraulic mechanism within five years.

The newspaper reminded readers that investigators considered rudder problems a possible cause of the USAir crash near Pittsburgh, but had yet to draw a conclusion.

Reporter Byron Acohido checked with USAir, which reported the jet that crashed did not have the improved rudder system. And the newspaper pulled an unsolved crash out of the National Transportation Safety Board's files - a 1991 disaster outside Colorado Springs; the last jetliner to stump NTSB investigators. It, too, was a 737. Investigators had focused on two theories, including a malfunctioning rudder.

In fact, Acohido said, as soon as he learned of the Pittsburgh crash, he suspected rudder problems may have played a role because of what he learned from the Colorado Springs disaster. "I had kept a file on the rudder problem since Colorado Springs," he said.

A private company supplied its catalog of FAA data to the *Seattle Times*. The firm provided 737 in dBase to the *Seattle Times*. Editorial systems editor Bob Higgins helped Acohido examine the data using Paradox.

The story included a chart depicting the rudder hydraulic system. And it highlighted, in a sidebar, 11 cases where flights went wrong because of rudder problems. Later, during hearings, Boeing officials said they knew of even more 737 flights disrupted by rudder problems than what was listed in the FAA database.

CAR routine in St. Louis

By Jim Mosley

St. Louis Post-Dispatch

Computer-assisted reporting at the St. Louis *Post-Dispatch* has gone from a highly specialized skill to just part of the job.

We were among the first papers in the country to dedicate a full-time reporter to computer-related projects. Now, we are working to mainstream CAR into the newsroom, and are encouraging beat and specialty reporters to incorporate the power of personal computers onto their beats. Management — from the managing editor to assistant city editors — is pushing reporters and editors to embrace the gospel of spreadsheets and databases.

"I want to get computers out of the temple and into the professional kit of everyone in our newsroom," says Managing Editor Foster Davis. "The computer does ordinary tasks so rapidly it seems like a genius instead of a stupid workaholic. The more that people understand what tasks the computer can do, the more they are freed to do the work that a computer cannot do. What drives me nuts is seeing bright people tied up doing stuff a computer could do for them, if we equipped them and trained them."

Post-Dispatch beat reporters are beginning to do their own data analysis for investigative and enterprise stories — in addition to the work done by the two people who work full time on computer-related projects. Washington correspondent Kathy Best (a NICAR bootcamp grad) used Microsoft FoxPro to track spending in a U.S. Senate election in Missouri to find out what areas of the state and country were giving the most. Business reporter Jerri Stroud used Excel and Atlas GIS to analyze and map farmers' participation in the federal Conservation Reserve Program.

Here's how we are involving our newsroom more deeply in computer-assisted efforts:

Giving people the hardware and software they need. We have about 80 486 PCs in our newsroom and bureaus. We hope early this year to hit our goal of providing a PC to every reporter who wants one. The machines have enough disk space, memory and horsepower to allow a beat reporter to analyze just about any chunk of data.

We equip our machines with Excel, FoxPro and Microsoft Access. We have several re-

porters proficient in FoxPro, but we are starting to make the transition to Access as our primary database manager. We also have other software, such as Atlas GIS and SPSS.

The *Post-Dispatch* also has specialized hardware, such as a nine-track drive and a 1-gig magneto-optical drive. This spring, we will buy a large NT server (with 16 GB of storage space) to provide true client-server database services.

Spending money and time training people. We have sent nine staff members so far to the NICAR boot camp. In February 1995, we are scheduled to begin an in-house computer-assisted training program that will cover everything from data acquisition to index tags.

Getting everyone on the Internet. The publisher has approved an Internet node for high-speed access from all office PCs. In addition, we have contracted to provide full Internet access from home for any reporter or editor who wants it. Several reporters and editors already have e-mail addresses, but we want to make knowledge of the Internet part of every reporter's job.

We also are maintaining our commitment to bigger computer-assisted projects. Our practice has been to pair a beat reporter or reporters with the CAR specialist, which has allowed us to draw on the expertise of both sides, to get stories into the paper faster and to show more reporters the power of the PC.

Tim Novak and I analyzed 130,000 Illinois pension records to show that legislators had written state pension law to favor themselves and state judges. Joan Little and I found that black students overwhelmingly make up the waiting list to get into magnet schools, considered among the best in St. Louis.

Carolyn Tuft, Joe Holleman and I (all NICAR bootcamp grads) matched records of people licensed to drive ambulances in Missouri with the database of moving violations. We found that the state was not doing background checks on applicants, and that people with poor driving records and multiple drunken-driving convictions were licensed to drive ambulances. Our story led to other stories about the state granting ambulance licenses to people who had stolen drugs and money from ambulance districts.

The stories prompted the state to remove the head of ambulance licensing and to change the policy for granting licenses.

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From the NICAR library...

	Circulation		
	< 50K	50-100K	>100K
1994 ATF Federal Firearms			
U.S.	o \$250	o \$250	o \$250
Specific State	o \$40	o \$60	o \$80
FAA Service Difficulty Reports (includes Airmen Directory)	o \$125	o \$125	o \$125
FEC Campaign Contributions			
Individuals - U.S.	o \$150	o \$150	o \$150
Individuals - State	o \$50	o \$50	o \$50
PAC Contributions			
United States	o \$75	o \$75	o \$75
State	o \$35	o \$35	o \$35
Federal Contracts Data			
United States	o \$150	o \$175	o \$200
State	o \$50	o \$75	o \$100
National Bridge Inventory Survey			
United States	o \$150	o \$175	o \$200
State	o \$50	o \$75	o \$100
OSHA			
United States	o \$150	o \$150	o \$150
State	o \$40	o \$60	o \$80
Truck Census or Truck Accident Data			
United States	o \$125	o \$125	o \$125
State	o \$40	o \$60	o \$80
SSA Master Death Records			
United States	o \$400	o \$450	o \$500
State	o \$200	o \$200	o \$200
HMDA			
United States	o \$150	o \$150	o \$150
State	o \$40	o \$40	o \$40
FBI Uniform Crime Reports			
United States	o \$400	o \$450	o \$500
State (Per Database)	o \$40	o \$60	o \$80
State (All Databases)	o \$200	o \$250	o \$300

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 If you request information for a particular state or states, please specify the state(s) you are interested in. Prices are subject to change. For up-to-the-minute information on all data, please call NICAR at (314) 882-0684.

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Address: _____

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State: _____ ZIP: _____

Phone: _____ Fax: _____

Format (circle one): *Paradox* *dBase* *Foxpro* *CSV*



Road seminars open to all

By Jennifer LaFleur
and Brant Houston

NICAR's U.S. tour continues in 1995 with on-site training around the country in March and April. Many are open to any journalist wishing to participate. Here's a partial list:

Washington D.C.

NICAR will be bringing our in-depth, hands-on boot camp to Medill News Service. This seminar, cosponsored by Medill News Service, will be held over two weekends — Feb. 25-26 and March 4-5 — at the Medill News Service. It limited to 20 participants. For more information call Ellen Shearer at Medill News Service at (202) 662-1801. Open to all journalists.

Springfield, IL

NICAR and the Illinois Press Association will hold a two-day training in computer-assisted reporting in Springfield, March 1 - 2. Call NICAR at 314-882-0684 for more information. Open to all journalists.

Boston, MA

NICAR will conduct a three-day boot camp at the Boston Globe, Feb. 27-March 1. Private seminar.

Indianapolis, IN

NICAR will participate in the annual computer-assisted reporting conference at the Indiana University/Purdue University campus, March 17-19. Call James Brown at 317-274-2773 for more information. Open to all journalists.

Stamford, CT

NICAR will participate in a regional SPJ conference on Saturday, March 25, and conduct hands-on training on March 26. Enrollment for hands-on training is limited to 20 people and costs \$50 per attendee. Call NICAR for more information. Open to all journalists.

Chicago, IL

NICAR will participate in the IRE regional conference, March 31-April 2. Hands-on training may be added. Call NICAR if you are interested in hands-on training. Open to all journalists.

Albany, NY

NICAR will conduct an overview session at the New York State Press Association conference on April 7. Hands-on training sessions may be added. Call NICAR if you are interested. Open to all journalists.

Bits, Bytes and Barks

Gillmor spots OS/2 Warp bug

Dan Gillmor of the San Jose *Mercury News* received mention in the December issue of *Bug Net* after he identified an installation problem in IBM's new OS/2 Warp software.

Bug Net, a newsletter devoted to "computer bugs, glitches, incompatibles and their fixes," noted that Gillmor's discovery prompted IBM to recall a number of its Warp packages in order to correct the problem.

Buchanan heads up online

Freedom Forum's Brian Buchanan, a great supporter of computer-assisted reporting and NICAR, has received a promotion. He's now director of online journalism programs. He remains in charge of fellowship programs for the Arlington, Va.-based journalism foundation.

Overview delayed

Uplink was about to do a review of last year's computer-assisted stories when a ton (that may be an accurate figure) of newspaper clippings submitted for the IRE awards dropped in from the mailroom. There was too much good stuff to digest in a few days so we're delaying the review until next month.

New books

Two terrific books for online journalists have just been released.

"The Online Journalist" by Randy Reddick and Elliot King is a solid introduction to using online services in a practical way. It covers the basics of getting connected to the complexities of using the Internet on deadline. It's published by Harcourt Brace.

"Washington Online" by Bruce Maxwell is a user-friendly look at significant government bulletin boards including defense, health and medicine, and almost any other subject you can think of. It's published by Congressional Quarterly Inc.

Billboards private in California

Is your name up in lights? If it is in California we may never know it.

NICAR recently called to obtain the California Highway Department database from its Adopt-a-Highway program. This always makes for a festive, easy story with quick turnaround. On the 110 in LA, for example, there is a sign reading: "the next 2 miles sponsored by Bette Midler." Because of privacy laws, however, Bette's name never appears in the database.

The database, which is difficult to obtain electronically, does not contain the name of any individual who sponsors sections of California's highways, so the only way to get that information is to drive around and find the billboards bearing their names.

WDIV launches Web page

WDIV-TV in Detroit is combining its online presence with its CAR work. The station's World Wide Web home page at <http://www.wdiv.com> recently featured the results of reporter Mike Wendland's CAR analysis of FBI Uniform Crime Reports. Interested citizens could find out crime statistics for their city by clicking on its name.

New SSA database available

The Social Security Administration is making available new database that tracks changes in who receives benefits among the elderly and the disabled, according to a recent issue of the newsletter of the Association of Public Data Users.

The database contains demographic, employment, marital and income information. For the elderly, it includes data on efforts to get post-retirement jobs; for the disabled, it includes their efforts to return to work. It also tracks those surveyed during several years.

The agency reportedly plans to make the information available on the Internet. For more information call Dr. Hoard Iams at (202) 282-7092.

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