Uplink

Uplink update

While gearing up for the October computer-assisted reporting conference in Silicon Valley (CAR Trek), we're keeping busy with new online activities and an ever-expanding database library.

Our latest foray into cyberspace involves Compuserve and JForum. NICAR now has a place in JForum, and IRE member and dedicated CAR journalist Neil Reisner has graciously volunteered to help manage that area. Our presence on JForum will be a happy addition to our lists at the University of Missouri.

We also continue to receive excellent examples of CAR stories from around the country, and the submission of articles to Uplink increases each month. This month reporters who studied criminal data share their how-to knowledge.

As always, please send us your latest CAR stories, ideas and tech tips by e-mail, snail mail or fax.

Inside

Computers help expose crime, poverty
CAR uncovers urban ills

By Andy Hall
Wisconsin State Journal (Madison)

On Oct. 11, 1992, the Wisconsin State Journal published a disturbing front-page headline: "Crisis hits home front. Creeping urban ills threaten our special city." We came up with an upbeat title, though, for the new series — "City of Hope."

Nearly two years later, the "City of Hope" logo continues to accompany our reports examining Madison's urban problems. And while reporters have rotated in and out of the project, one member of the reporting team — our newsroom's personal computer — has played an increasingly valuable role.

This project is an excellent example of how computers can become an important, inexpensive and innovative tool. Our newspaper, after all, had only one PC (a Zeos 386 purchased in 1991 for less than $2,000). Software costs (Excel spreadsheet, FoxPro for database analysis, SPSS for statistical analysis) have totaled about $1,000. Data costs are low — about $350 for Madison police records, $150 for census on CD-ROM. A decent CD-ROM reader costs about $350.

None of our reporters was trained in computing. We learned while doing the project. (That was a mistake. Get some decent training up front. It saves time and frustration). And we shamelessly scrounged for free help from in-house and university experts, as well as journalists who have tackled other computer-assisted reporting projects.

First, a summary of what we've done. In ten major packages, we've outlined the problems — and potential solutions — regarding juvenile crime, racism, the safety net, repeat offenders, a neglected neighborhood that became violent, crime patterns, links between crime and socioeconomic factors, a shortage of jobs that pay livable wages, and a lack of low-cost housing. We've tried to show how the problems, and their solutions, are connected to one another.

Our project is an unusual blend of traditional investigative reporting methods, lengthy periods spent out in the community in residents' homes, and computer-assisted journalism. In addition, before we published most packages, we convened a group of community leaders and experts on that topic to discuss solutions to the problems. This helped cause residents and, frankly, our editors, to buy into the project.

Findings and techniques include:
— Quality threatened: (Oct. 11, 1992) A dramatic increase in violent crime and poverty raises concerns

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Tapes for those who missed it

By Rosemary Armao
IRE Executive Director

We gotta change the name. For years the little-something-extra program staged before the traditional Friday start of IRE's national conference has been referred to as the Optional Day. But the fare of that program changed two conferences ago from such traditional staples as ethics, libel and writing to computer-assisted reporting, and ever since, the Optional Day has been more like Mandatory Day.

Hands-on training classes were filled and closed nearly as soon as the sign-up sheets were hung in New York City in 1993. And in St. Louis this June a record crowd of 450 crammed an Optional Day devoted to computer skills and on-line resources.

IRE/NICAR's low prices ($35 for a full-day computing seminar at St. Louis) were part of the draw, but no more so than the array of talent and topics. We've begun debating whether it's not time to start integrating CAR panels into the traditional conference program. That would be consistent with our philosophy that while CAR is the new, hot technique among journalists, it is, in the end, not much different than conquering the telephone or the VDT in order to produce better journalism.

Still, the numbers persuade us there's a special demand to focus on CAR training.

If you didn't make it to St. Louis, we invite you to look over what you missed and catch up. For little more than the cost of copying and mailing, you may order handouts from any of the Optional Day panels. Copies of "Computer Assisted Research: A Guide to Tapping Online Information" by Nora Paul are on sale for $3 plus shipping and handling.

And audiotapes of the sessions are available for $8 each by ordering directly from Sound Images Inc., P.O. Box 460519, Aurora, CO 80046.

Also available are tapes of all the sessions from IRE's first computer-training boot camp, a three-day, mind-wringing immersion in CAR last fall at Raleigh.

To be honest, tape sales of the computer-assisted sessions don't sell as well as those from other advanced-reporting panels. We suspect there's a fear that audio without the attendant visual component of screens and demos don't work.

They do. Ask for reviews of the tapes you're interested in from IRE/NICAR staffers who listen to nothing else while driving around Columbia and off on summer vacations.

Here's a listing of the St. Louis tapes. Call (314) 882-2042 if you'd like more information or the entire list of Raleigh tapes.

—Online on the Beat: 30 Ideas in 30 Minutes (Bill Dedman)

—Primer on Online Searching: Power Up, Modem In, Log On. Everything you Need to Know to Get Started (Beth Marchak)

—Specialized Session on Business Reporting (Rob Wells, Penny Loeb)

—Data Analysis on the Beat: 30 Ideas in 30 Minutes (Shawn McIntosh)

—The Mystery and Power of Internet (Dan Woods, Dan Gillmor)

—Creating and Recycling Databases: When to Use a Database and Which Ones to Keep Available for Use on Deadline (Jeff Kummer, Teresa Leonard, James Derk)

—Specialized Session on Government and Social Sciences (Dan Browning, Rich Robertson, Shawn McIntosh)

—Online on the Cheap (Nora Paul, Mike Berens)

—Using Spreadsheets and National Tabular Data to Show Where Your Town or State Ranks (William Casey, Rich Gordon, Chris Schmitt)

—Environment on Computer (Dave Davis, Jane Kay, Wendell Cochran)

—Attribution and Accuracy on the Information Highway (Nora Paul)

—Deadline Online: Using Bulletin Boards to Find Eyewitnesses and Experts and to Profile People (Deborah Crowe, Matt Reavy)

—Mapping Software on Deadline: How to Plot Census, Crime and Gerrymandering Information (Susan Brown, Jennifer LaFleur)

—Specialized Session on Medicine and Science (Bill Allen, Paul Overberg, Beth Marchak)

—Access to Federal, State and Local Online Records: Success Stories and Pending Battles (Sandra Scott, Mike Casey)

—Statistics Can Be Your Friend: Five Statistical Tools You Need to Know (Jon Schmid, Phil Meyer)

—The Electronic Newsroom (Corky Johnson, Karl Idsvoog, Mark Nichols, Neil Reisner)

—Getting Started (NICAR staff)

Train with best in CAR

If you can attend just one computer-assisted reporting event this year, make it to CAR Trek in the Silicon Valley, Oct. 6-9.

The people who pioneered these reporting techniques, the top practitioners of the craft, and the best instructors of CAR will talk and teach for four intense days of panels and hands-on training at the Westin Hotel (800-228-3000 or 408-986-0700 for reservations) in Santa Clara. Registration is $150. Call IRE at 314-882-2042 for details.

CAR Trek panels will range across every kind of computer-assisted reporting. Hands-on training will cover beginnning and advanced topics, includ-ing the Internet. You'll be able to snag speakers for one-on-ones in the hallways and in the computer demonstration room where you can go into greater detail about what interests you.

Sponsored by IRE/NICAR and the *San Jose Mercury News,* the conference also will showcase a host of vendors showing off their databases and online wares.

CAR Trek has a terrific team of journalists from newspapers and broadcast. You may have e-mailed them or talked to them on the phone — now come and meet them.

Conference registration is $150. Call IRE at (314) 882-2042 for details and forms.

Here's a partial line-up

Scott Anderson, Ft. Lauderdale Sun-Sentinel

Dave Armstrong, Boston Globe

Adam Berliant, Tacoma News Tribune

Neill Borowski, Philadelphia Inquirer

Tom Boyer, Virginian-Pilot & Ledger-Star

James Brown, Indiana University

Ron Campbell, Orange County Register

Pete Carey, San Jose Mercury News

Morgan Cartwright, Contra Costa Times

William Casey, Washington Post

Rose Ciotta, Buffalo News

Russell Clemings, Fresno Bee

Wendell Cochran, American University

Sarah Cohen, Tampa Tribune

Alan Cox, WCCO-TV

Tom Curran, New York Newsday

Dave Davis, Cleveland Plain Dealer

Bill Dedman, Associated Press

James Derk, Evansville Courier

David Dietz, San Francisco Chronicle

Steve Doig, Miami Herald

Jacqueline Doubinis, National Library on Money and Politics

John Freed, New York Times

Dan Gillmor, San Jose Mercury News

Rich Gordon, Miami Herald

Tom Heslin, Providence Journal Bulletin

Elliot Jaspin, Cox Newspapers

Tom Johnson, San Francisco State University

George Jordan, New York Newsday

Jillian Kaskey, Money Magazine

Jeff Kummer, St. Paul Pioneer Press

Jennifer LaFleur, NICAR

George Landau, St. Louis Post Dispatch

Alan Levin, Hartford Courant

Penny Loeb, US News & World Report

Beth Marchak, Cleveland Plain Dealer

Carla Marinucci, San Francisco Examiner

Rich Mauer, Anchorage Daily News

Shawn McIntosh, Dallas Morning News

Ted Mellnik, Charlotte Observer

Philip Meyer, University of North Carolina

Tom Moore, Congressional Quarterly

Dwight Morris, Los Angeles Times

Richard Mullins, NICAR/University of Missouri

Carol Napolitano, Munster Times

Richard O'Reilly, Los Angeles Times

Peter Overby, Common Cause Magazine

Bob Paynter, Akron Beacon Journal

Tom Philp, Sacramento Bee

Bob Port, St. Petersburg Times

Matt Reavy, NICAR

Greg Reeves, Kansas City Star

Neil Reisner, Bergen Record

Kenton Robinson, Hartford Courant

Richard Robertson, Arizona Republic

Steve Ross, Columbia University

Ricardo Sandoval, Center for Investigative Reporting

Anne Saul, Gannett Newspapers

Jon Schmid, Raleigh News & Observer

Chris Schmitt, San Jose Mercury News

David Stoeffler, Wisconsin State Journal

Hal Strauss, Atlanta Journal & Constitution

Danny Sullivan, Orange County Register

Drew Sullivan, NICAR

Scott Thurm, San Jose Mercury News

Lisa Van Asch, Raleigh News & Observer

Patrick Weiland, Eye to Eye, CBS

Dan Woods, Raleigh News & Observer

Kevin Woodward, Santa Cruz County Sentinel

CAR uncovers urban ills

Madison could lose its high quality of life — and its national reputation as a great place to live. We used interviews and a took a very basic look at crime and demographic data.

— Juvenile crime skyrockets: (Nov. 8-11, 1992) The juvenile justice system is a revolving door for hard-core offenders, with troubled teens bouncing from one program to another while their crimes multiply. This time we used interviews and a manual review of court records.

— Racism widespread: (Dec. 20, 1992) Blacks suffer from frequent racism despite the city's liberal image and widespread residential integration. We conducted a public-opinion survey designed, conducted, and analyzed by reporters and in-house polling workers, with advice from university experts. An in-house marketing director with expertise in SPSS, a statistical analysis program, helped us analyze the findings.

— Fixing fragmented system: (April 18-27, 1993) Local leaders are trying to transform a human services system as fragmented and troubled as the community it serves.

— Repeaters spur crime: (June 20, 1993) Repeat criminals contribute to dramatic increases in crime here. People charged with committing more than one crime accounted for nearly 85 percent of criminal charges from 1988 to 1992. We used a computer to analyze data obtained from county court officials. A computer expert who runs our company's billing and subscriber operations helped us transfer the data from a 9-track tape into the newsroom PC. (He has a tape reader, worth $15,000, so the newsroom didn't need to purchase one.)

— Worthington's pain: (Sept. 26-27, 1993) Three decades of neglect by apartment owners and city officials left the Worthington Park neighborhood on Madison's near East side vulnerable to crime and decay. Increased police patrols in other city neighborhoods pushed drug dealers into Worthington. We spent time in the neighborhood to witness problems and become acquainted with the residents and police, manually tallied microfiche building-inspection reports and used FoxPro to compile census and police data for the neighborhood The police department, at our request, compiled an analysis of its data, too. The census data was on a $150 compact disc of Summary Tape File 3A (commonly called STF 3A) that has proven its value many times over.

— Crime concentrated: (Feb. 20-22, 1994) While violence in Madison stabilized last year, most serious crime continues to be concentrated in several neighborhoods. Using help from an in-house computer expert, we transferred 1992 and 1993 police data from 9-track tapes to our PC. We analyzed calls for service — not just incidents officially designated as crimes — because they give a richer portrait of neighborhood strife. We focused on 10 types of violent incidents. Intensive time spent in the city's most violent neighborhood brought the story to life and spurred ideas, too, for the data analysis. We compared demographics to violence patterns.

— Unemployment, crime linked: (March 20-21, 1994) A natural follow-up to the previous package. An analysis of police and U.S. Census data shows that the areas of highest unemployment, large numbers of idle youths, and highest numbers of blacks are the areas with highest violence. Findings suggest policymakers might focus on better jobs and education to lower violence in the community. Poverty experts from the University of Wisconsin helped us use our crime and census data in a regression analysis — A method researchers commonly rely on to explain social factors. We paired this story with an in-depth comparison of two families, one poor and one well off. We also used PUMS — the census' Public Use Microdata Sample — to get a closer look at who's poor.

— Job market faulty: (March 27, 1994) Underlying problems in the Dane County job market are pushing poor residents into a swelling number of low-paying, dead-end jobs. Interviews, census data, and employment data told most of the story. But a simple half-day exercise — typing job-training and pay data for the fastest-growing jobs into FoxPro — gave the analysis some real bite: "An analysis of Dane County's 40 fastest-growing occupations reveals that most newly created jobs won't pay enough for poor families to climb out of poverty."

— Shortage of low-cost housing: (May 1-2, 1994) Affordable housing is largely segregated

Poverty experts from the University of Wisconsin helped us use our crime and census data in a regression analysis — A method researchers commonly rely on to explain social factors.

and confined to certain urban neighborhoods in Madison, while fast-growing suburbs have little affordable housing. And the gap is expanding. We used FoxPro and census data to determine how many housing units in each Dane County community were within reach of poor households. Housing experts, who'd long wished for such an analysis, helped us decide precisely what to look for. Graphics and maps played a key role in making housing and crime packages understandable. We also used the Comprehensive Housing Affordability study, which is free from HUD. The study is also available on CD.

The results are pouring in. Police patrols have been moved and a neighborhood center is being opened in Worthington Park. The police now refer some public inquiries about crime to the State Journal. A "jobs summit" is being held this summer to find ways to improve the local labor market. A county task force has been formed to increase the supply of low-cost housing.

We've begun incorporating the lessons of "City of Hope" into our daily beat reporting. Reporters are asking developers about the affordability of new housing projects, and they're finding out whether new jobs pay livable wages.

And in the newsroom, we're replacing our mid-1970s Harris mainframe with a PC-based system, meaning every reporter will have a 486 computer. We are committed to using these powerful machines not just for writing stories, but for finding the real stories hidden between the numbers.

— Andy Hall, investigative reporter, Wisconsin State Journal. (608) 252-6136.

Would-be cyberjournalists beware!

Internet robust but unreliable

By Gwen Carleton
NICAR Staff

Despite the recent fascination with the Internet, there is a reason that much of the world is hanging on to its telephones and fax machines. In fact, there are several.

For journalists, one of the net's worst failings is its lack of verifiability.

"In USENET newsgroups, there's a barrage of inaccurate stuff posted all the time," said Dan Gillmor, a reporter for the *San Jose Mercury News*. "People put up opinions, and people forge opinions from someone else."

Much of the "official" information flowing through Internet must be double-checked as well. The federal government takes no responsibility for mistakes that are transmitted through FedWorld, for example.

Researchers see similar weaknesses in the system. Gopher, a popular application that organizes access to Internet resources, helps information seekers to pursue specific topics throughout the vast network.

"To me, the problem with Gopher is, you don't know what it's indexing on," said Nora Paul, library director for the Poynter Institute. "You type in a word, but what has it searched? There's so much reliance on someone being reliable somewhere."

Another serious obstacle for journalists is the fluid nature of the network itself.

"I have been at budget meetings and promised to obtain information I knew was available on the net, only to get back to the office and find that for some reason or other the information was unavailable at the time," said Michael Meiners, database specialist for the Ft. Lauderdale Sun-Sentinel.

Internet vagaries, from disappearing databases to access overloads, are all part of the experience. But according to Beth Marchak, a reporter for the Cleveland Plain Dealer, that's no excuse for staying unplugged.

"You don't wait until 4 in the afternoon to put out a PROFNET request," she said. "You do it first thing in the morning."

Programs such as jughead, veronica, gopher and mosaic have been developed to make the organization and retrieval of information on the Internet simpler. Even so, users agree that Internet adventurers must know what they're looking for. As Marchak pointed out, "there is no one-stop shopping." The network is no substitute for reporting.

"It doesn't replace anything else; it's a supplement," Gillmor said. "You still have to get out of the office."

However, for all its quirks and limitations, the Internet is a resource to watch. And it rewards those who learn to use it well.

"The Internet offers many possibilities, several successes and thousands of disappointments," Meiners said. "I think it has a long way to go before it is a reliable resource for directed research, but I still seem to end up using it at least once a day."

Drive-by shootings in Tacoma

By Adam Berliant
Tacoma News Tribune

Guns, gangs and drive-by shootings.

For obvious and unfortunate reasons, violence, the media buzz-word of the '90s, quickly brings these thoughts to mind. But few would deny that among them, there's something particularly disturbing about drive-by shootings.

You can choose not to own a gun. You can choose not to belong to a gang. But drive-by shootings seem beyond our control. Even worse, we're hearing increasingly how innocent people end up stopping the bullets.

Yet last year, when The News Tribune ran its eight-day series on crime, "Beyond Violence," Tacoma and Pierce County police could barely provide us with even the vaguest clue about how many drive-by shootings there were in our city, much less how likely it was for bystanders to actually get shot.

The "Beyond Violence" project was time-consuming, titanic in scope and extremely thorough (see *Uplink*, Sept. 1993). The series was made possible by a police database containing seven years' worth of violent crime incident reports, about 250,000 records. We proudly squeezed that data until there was nothing left.

That's why it was so bothersome that we couldn't get real numbers for drive-by shootings. The Law Enforcement Support Agency (LESA), the record-keeping mechanism for both the city and county police that provided The News Tribune with the database, simply didn't bother to categorize drive-by shootings separately. Instead, drive-bys were recorded as assault, vandalism or reckless endangerment.

So, we were stuck with anecdotes.

One police official told us there were so many drive-by shootings in Tacoma that people didn't even bother to report them anymore. Patrol officers guessed that there were as many as four drive-by shootings every night, a shocking figure for any city, but even more so in a town the size of Tacoma.

The stories and numbers seemed hard to believe, and we were disappointed (to put it nicely) that better information about drive-bys wasn't available.

Fortunately, the feeling was mutual — police were just as eager to track drive-bys as we were. Only a few months before the violence project was published, LESA started tracking drive-bys. By the time the violence project's one year

anniversary arrived, the 16-month-old drive-by database was ripe for analysis.

The News Tribune obtained the drive-by data and also bought an update of the original violent crime database. The total cost was around $200, and the data was supplied in compressed files on four diskettes. (The original, seven-year database came on VAX cartridges.)

After spending about a week updating the findings from the previous year, we discarded our original idea to produce a large, follow-up violence project. There simply wasn't much new information we could derive from one year's data that seven years' worth hadn't already made clear last summer. It was hard to get excited about publishing a dozen "Fill-in-the-blank: One Year Later" stories when they could probably all read "ditto."

Instead, we used the data to prove, once again, that database reporting can lead to excellent, relatively short enterprise stories.

We started by determining once and for all that there weren't three or four drive-by shootings every night in Tacoma. The database showed there were 200 incidents over a full year — about one every other night.

Bits, Bytes and Barks

NICAR offers inexpensive data transfer

The Institute can transfer data to and from floppy diskettes, 9-track tapes, 3480/3490 cartridge tapes, Trakker 120 and 250 mb backup tapes, compact disks, and some 1.3 gb magneto-optical disks (as well as some 650 mb MO disks).

NICAR also offers a number of government databases including:

— Federal Elections Commission contributions data

— Federal Aviation Administration data

— Home Mortgage Disclosure Act records

— General Services Administration federal procurement data

— Alcohol, Tobacco and Firearms gun dealer records

— National Bridge Inventory System data

The drive-by stories were XDB's dying gasp here at the News Tribune. I've always liked XDB even if it was slow, but when I found out the absurd price for upgrades and additional licenses, and when I finally persuaded my editors to let me experiment with FoxPro for a few days, I put good ol' XDB to sleep. Now I'm desperately trying to master FoxPro in time for Access to take over the market. May the wheels of progress continue to smash us flat!

More interesting for our readers, though, was that drive-bys weren't the random acts of violence they were perceived to be, and that drive-bys presented little threat to most people. The data proved this in three ways.

First, it showed that strangers in strange places were not of much interest to drive-by shooters. The targets of 1 in 3 drive-bys were houses that had been targeted previously. And if the target wasn't one of these "hot houses," then it was the house next door, or some other house on the block.

In other words, the records showed that the majority of drive-bys occurred on certain streets, in particular parts of town. And, police told us, these parts coincided exactly with the areas of greatest known gang and drug activity.

The conclusion made by both police and The News Tribune was that if you weren't in a gang, involved with drugs or living next door to someone who was, you didn't have much to worry about.

Second, the data suggested that drive-by shootings were not increasing, as many people feared. Although we didn't have enough data to report with complete certainty that there was no trend, a month-to-month analysis of what data we did have showed that '94, so far, wasn't any worse than last year.

Finally, the police records indicated that a large portion of drive-by shootings didn't target people at all. We provided a break-out box showing how many of the drive-bys were categorized secondarily as assaults, homicides, reckless endangerment, etc. It showed that 30 percent of all drive-bys were determined by police to be acts of vandalism (40 percent outside city limits).

Police sources had a different story than they did a year earlier. Officials were now saying the odds of getting shot by a drive-by were less than being struck by lightning. One police source called the public "paranoid about getting shot by gang members."

It took only a few hours to complete all the reports necessary to reach these conclusions. Patti Epler, who wrote two stories using the drive-by data, completed her reporting in less than two weeks.

We were also able to use the data to include a standard database answer dump: where are the worst parts of town for drive-bys, what's the worst season for drive-bys and what time do the shootings take place.

Call anytime (206)597-8258, or e-mail Berliant@Tribnet.Com

The Institute also has FAA service difficulty reports from 1988 to 1994 on compact disk for $125. The disk includes the airmen directory.

Call the Institute for an up-to-date list of prices and available data.

Japanese equipment prices rising

Alan Warzecha of Computer Logics called to warn CAR journalists that prices for Japanese computer equipment are on the rise because of the weakness of the dollar.

Warzecha said Fujitsu has raised prices $600 on low-end tape cart readers to about $9,400. He also noted that 9-Track drives are American made and therefore should not be directly affected.

NICAR and IRE hit the Net with two new lists

IRE, NICAR and the University of Missouri have launched two new lists aimed at investigative reporters and journalists who use computers for newsgathering and analysis. NICAR-L and IRE-L aim to provide a discussion forum for journalists and educators interested in investigative and computer-assisted reporting.

To subscribe to NICAR-L, send an e-mail message to "listserv@mizzou1.missouri.edu" and include the words "SUBSCRIBE NICAR-L your name" providing the first and last name your would like to use on the list. To subscribe to the IRE list, simply substitute "IRE-L" for "NICAR-L" on the message line.

Gillmor goes West

Dan Gillmor, Internet surfer extraordinaire, has packed his bags and moved to the San Jose Mercury News where he will serve as technology editor.

He is also helping to put together Internet training at the CAR TREK conference October 6-9.

Jobs, jobs, jobs

Speaking of job switches, NICAR is getting more and more requests from news organizations looking for CAR reporters and editors.

If you want your name quietly suggested as a possibility, give Brant Houston a call at (314) 882-1984. We hope to put together a job bank later this year.

Paper marks decade of CAR

By Ted Mellnick
The Charlotte Observer

The Charlotte Observer was an early pioneer in computer-assisted journalism. Back in 1984, the newspaper used an IBM mainframe to catalog political contributions to 267 candidates for the North Carolina legislature.

The stories showed the raw power of special interest money ($2 of every $3 contributed), and the links between gifts and lawmakers' votes on issues like recycling, pollution control and business fees.

That project, which has continued and expanded for a decade, also shows how the newsroom's use of computers has gotten bigger, more sophisticated and more self-sufficient.

Back in '84, a computer programmer developed the mainframe applications, and a market research analyst handled printed reports, queries and analysis. Now, the project has moved from a mainframe to a newsroom PC.

Instead of a couple thousand, there are tens of thousands of contributors on file. And one newsroom staffer has handled programming, application development and report design.

Besides state and federal campaign finance, computer-related stories have reported: Inequities in property taxes, disparities in mortgage lending, and differences in OSHA inspection rates and workers compensation injury rates.

We've used Census data to look at growth trends, poverty patterns and racial disparity in education and income.

My two favorite census stories were based on the Public Use Microdata Sample (PUMS) file. The analysis was done in the statistical package SAS, running in UNIX on an HP9000.

One story involved a comparison of earnings of men, childless women and mothers in the Carolinas. It showed that women make less, even when compared with men of the same age, education, or, in most cases, the same job.

The other was a study of commuters. It revealed that inbound commuters play a much larger than expected role in Charlotte's workforce, constitut-

ing 40 percent of the city's full-time workers. The published census estimate, which included part-time workers, was 30 percent. The story also showed the income benefits various kinds of workers derive from their longer drive time into the city.

"Criminals in the Classroom," a series published in March, began with The Observer matching a file of 50,000 teachers against a file of 300,000 prison inmates. The state doesn't require background checks for public school teachers. Matching revealed that people convicted of rape, incest, child molesting and assault still teaching.

Our current projection on neighborhood crime involves plotting, by address, 18,000 violent crimes reported to Charlotte police in 1992-93.

The computer base map of street blocks was derived from data compiled by local government and university staffers in the GIS package ARC/INFO. The newspaper did the address matching in Atlas GIS/DOS.

The resulting reports and maps plotted on a CalComp 8-pen plotter gave our reporters their first definitive view of the city's high crime areas, their first rankings of neighborhood violent crime rates and their first detailed maps of the exact locations of violent crimes. This material has been the starting point for a year-long series of neighborhood profiles.

The computer side of the crime project also has included plotting more than 12,000 home break-ins and estimating neighborhood break-in rates, plotting the home addresses of thousands of victims and profiling suspects and victims.

Now that our newsroom has developed a few basic computer-assisted reporting skills, the goal is to spread those skills among the staff.

There are now four PCs on the newsroom floor — up from one a year ago — loaded with database, spreadsheet and communications programs. Last May, eight newsroom staffers went through three days of in-house training on FoxPro. More training is planned.

Here's a look at our hardware & software

. . . .

PCs: Four 486 IBM compatibles, 8mb RAM, color monitors, +300mb hard drives, three CD readers.
PC operating systems: DOS, Windows and OS/2.
Mini/mainframe: Newsroom has access to an HP9000 with Unix operating system and 9-track tape drive.
Printers: Lasers, dots and access to a CalComp DesignMate.
Spreadsheet: Quattro Pro for Windows.
Database: FoxPro, dBase IV.
Text & word processing: Word for Windows, Xywrite.
Mapping & GIS: Atlas GIS/DOS 2.1, Atlas GIS Windows 2.0.
Statistical analysis: SAS, SPSSPC/DOS, SPSS/Windows.

The Observer's crime project plotted more than 12,000 home break-ins with mapping software