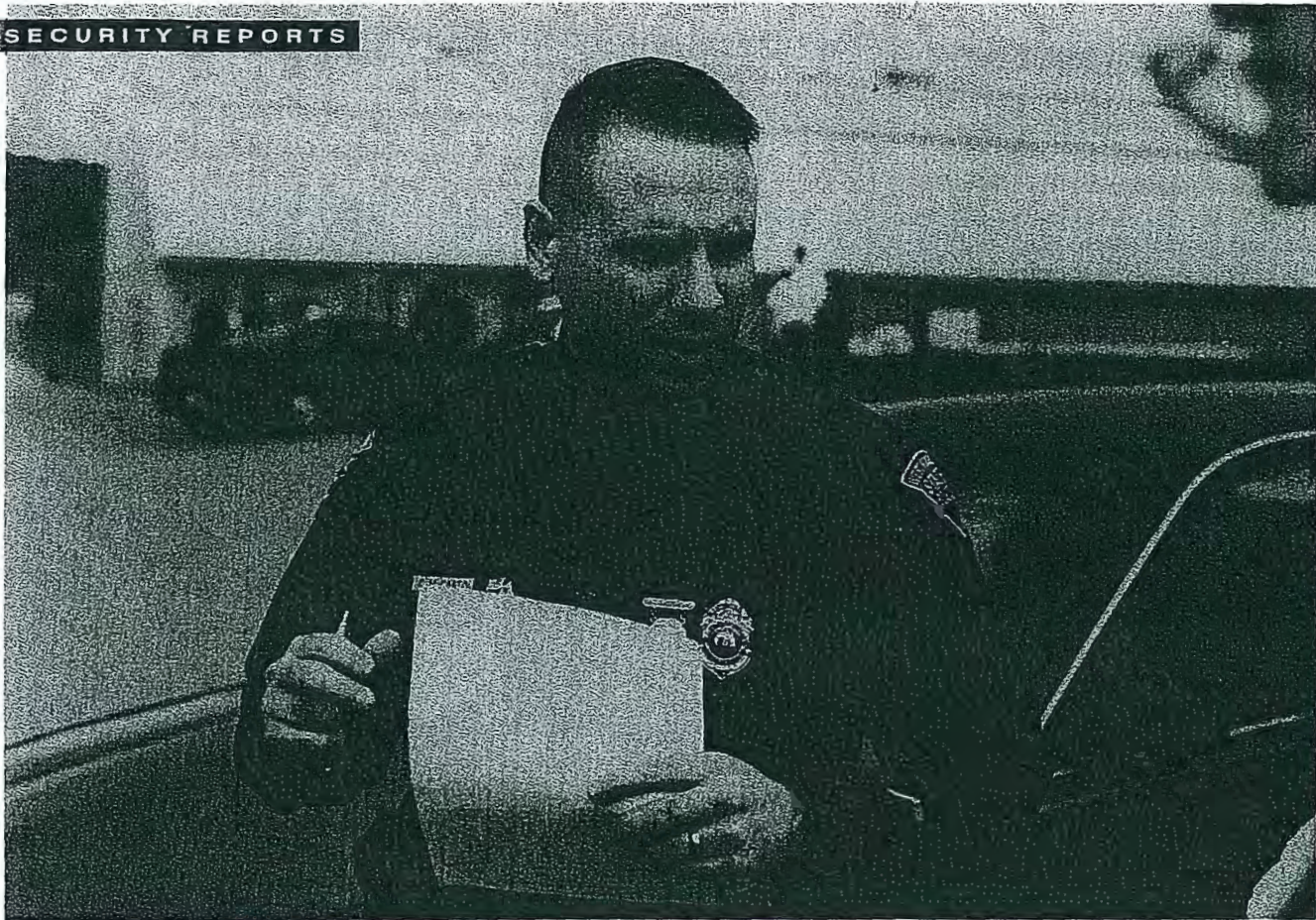




Forms and Functions

BY GARY L. WINN, DAVID S. BUCY, AND MICHAEL J. KLISHIS

In the Information Age, it is more true than ever that knowledge is power. For security professionals, the precise knowledge of what has transpired when a security breach occurs is key to preventing a recurrence and, in the best cases, catching the criminals. Accurate and reliable incident report information is as critical to the security mission as state-of-the-art access control.

As the following case study involving West Virginia law enforcement illustrates, training officers to observe and report is only half the battle. Something as simple as a well-designed report form can make the difference between a successfully investigated case and a hopeless one.

In March 1993, a technical paper by the U.S. Department of Transportation (DOT), "New and Emerging Technologies for Improved Data Collection," reported that law enforcement was failing to

include vehicle identification numbers (VIN) on between 40 and 50 percent of completed motor vehicle accident reports, some involving criminal activity. Why?

Were criminals cleverly hiding the numbers? Were police poorly trained? Ironically, the answer was simply that some officers were given forms without enough space for the seventeen-digit number. The consequence was not only poor data for insurance companies and other private industry users but also unsolved cases of auto theft and insurance fraud, leaving the criminals free to continue their schemes.

The DOT report inspired a highly coordinated partnership between West Virginia officials, law enforcement, and the state university. The group was determined to improve the data collection process for motor vehicle accidents.

Assessment. Throughout their careers in traffic safety for private industry and as teachers and researchers of related topics for West Virginia University, Morgantown, the authors had long been aware of problems with the state's Uniform Traffic Accident Report (UTAR), originally created twenty years ago by the West Virginia Division of Highways (DOH).

The UTAR, along with a troublesome supplementary form used to collect commercial carrier data, was the main instrument by which accident information was collected and entered into the state's database. It was a document designed by computer analysts who had sought no input on the form's element flow, box size, line spacing, and type fonts from those who would have to read it by flashlight or use the data years later to reconstruct an accident for a legal proceeding.

The UTAR was set in minuscule type and crowded with questions—some incomprehensible. For example, one item was the single word “gore.”

the West Virginia DOH. Funding was acquired for Winn to assemble a research team to assess the document and create a mechanism for changing it. Included in the team were computer consultants, state and federal agency personnel, a behavioral psychologist, a sociologist, an experienced project manager, and most significantly, about one hundred law enforcement personnel, including representatives from sheriffs' departments and the state police, as well as officers from small towns. The goal was to create an alliance that would encourage full participation.

The needs assessment was broken down into



Before it was revamped, the UTAR was set in minuscule type and crowded with questions—some incomprehensible. Key data was not asked for.

Officers, who received no training on the form's arcane language, left the space blank. The item was actually meant to note whether an accident occurred in the triangular area between the highway and the off-ramp.

The supplemental commercial carrier form, required for accidents involving trucks, was detached from the UTAR—and was, therefore, easily misplaced or forgotten. Some of its items were equally inscrutable. For example, one merely read “carrier,” leaving the officer to decide if that meant the driver, owner, lessor, or someone else entirely.

Several important data elements—such as the already mentioned VINs—were either poorly accommodated or not requested on the forms at all. The U.S. DOT now strongly encourages states to adopt a set of twenty-two data elements known as Critical Accident Data Reporting Elements (CADRE). Among elements formerly missing from the UTAR that are included in the CADRE were whether drivers or passengers had been thrown from the vehicle and whether anyone had been trapped inside the vehicle and extracted by emergency respondents.

After reading the DOT's technical paper, author Gary Winn discussed the benefits of revamping the UTAR with

four phases: focus groups with police officers; a stratified telephone survey of small and rural police departments; a mock crash to test the clarity of the revised form; and a two-month trial period followed by a thorough review of results and of the data collectors' level of satisfaction. At each step of the needs assessment, the goal was to quantify progress empirically.

Focus groups. In phase one, the UTAR was reviewed by geographically representative focus groups of state, county, and local West Virginia law enforcement officers. Thirteen of these groups met between August 1995 and February 1996. They were asked to discuss the current form and its real, in-the-field weaknesses or strengths, then to brainstorm ideas to improve it.

At the conclusion of each session, the officers voted on the changes they believed would most improve the UTAR. Each officer was given five votes. If an officer felt one idea was superior to all others, he or she could cast all five votes for that idea.

The focus groups produced more than 100 suggested alterations, eventually reduced to twenty-five changes incorporated into a draft of the new form. Some proposals addressed items whose importance was evident only to officers

working in the field. For example, they mentioned the need to change the form from one joined at the top to one joined at the side to make turning pages easier when using the clipboards issued by West Virginia police. The group members also recommended ways to improve logic flow within the document. In addition, they suggested more eye-pleasing typefaces, devised a better filing system for hard copies of the forms, and projected that a space should be left in the form for Global Positioning Satellite coordinates.

Surveying. The next step was a comprehensive statewide telephone survey of law enforcement agencies, including large and small municipal police departments, county sheriffs' offices, and state police. The research team felt it was important to contact agencies that had been unable to participate in focus groups—especially the smallest ones, where both time and manpower would be low and the adverse impact of the UTAR higher.

Survey questions were created in a cooperative effort between the West Virginia Department of Safety and Environmental Management (SEM) and the West Virginia Survey Research Center (SRC). SRC staff contacted more than 50 percent of the state's law

enforcement agencies, interviewing officers who regularly filled out the UTAR form. The operators made 150 calls and conducted 122 interviews for an 81.3 percent response rate.

Interviews were randomly monitored to ensure consistency. Officers polled were asked to describe the storage and transfer of UTAR information within and between agencies and to discuss computer resources in their agency environment. They were also given an opportunity to offer additional comments.

Among the results of the survey was an estimation of man-hours consumed filling out the UTAR form. Completion of the report took a mean of fifty-one minutes. Small agencies (ten or fewer officers) estimated filling out one UTAR per day, requiring about 365 staff-hours per year; large agencies (more than 100 officers) reported about fifty UTARs per day, adding up to 18,250 staff-hours per year. Any reduction in that time could benefit the agencies and the public.

About 60 percent of the respondents estimated it took seven days or less for one of their completed UTARs to reach DOH, while others said that it took as

long as ninety days due to the tediousness of completing the form and the need to tackle other urgent matters as they arose.

Approximately one-third of the agencies reported some computerization of the UTAR data, such as database creation or electronic information networking. None reported networking with the state to directly enter information into the accident report database.

After every group had a chance to evaluate the existing form, the research team met to design a new one. They removed useless, confusing, or outdated information, added new items selected by focus groups, simplified terminology, and cleaned up the presentation. CADRE elements and essential items from the supplemental commercial carrier form were incorporated. The team was ready to test the results.

Mock crash. The research team held an intensive one-day evaluation session to test the prototype form under mock-crash conditions. Law enforcement officers were selected from across the state to participate in the test.

Thirty-five officers from seventeen West Virginia municipal police depart-

ments and state police detachments attended. During the morning session, the participants were split into three groups. Group one was given training on how to fill out the new form. Afterward, they were asked to do so from a description of a fictitious crash.

The second group received no training for filling out the form from the description. The third group served as a control, filling out the old UTAR using the same accident description. Officers in each group were allowed thirty minutes to complete their forms, then each participant in the first two groups was given a survey to evaluate the revised UTAR.

In the afternoon, all the officers examined three simulated head-on vehicle crashes with "drivers" and "witnesses" on hand for questioning. The officers were asked to choose one of the three mock crashes and complete the new UTAR form with no time restrictions. Afterward, officers answered the same survey questions for a second time. This exercise was followed by a feedback session with the project team.

The analysis of the forms, surveys, and feedback session from the mock



When you need to call for
HELP it shouldn't be about
your emergency phone!

New for 1997, from the
makers of the most durable
equipment in the security
industry comes a reliable
emergency phone worthy of the
name Code Blue.

**Receive \$200 toward a new CB2000 speakerphone
with the trade-in of your current emergency phone,
regardless of condition!**



Code Blue

1-800-205-7186

*Valid through June 30, 1997, offer not available to communication equipment manufacturers. Code Blue reserves the right to change or cancel this offer at any time. Code Blue reserves the right to refuse sale. Offer valid on list price (\$550.00) item only.

crash yielded the hoped-for results. In particular, there was no significant difference in performance between the officers who had received training on how to fill out the UTAR and those who did not. This finding underscored that the form was understandable.

Officers told the project group that the new form was superior to the old in helping them collect adequate data for reconstruction and investigation of crashes. They indicated that the new form took less time to complete. The officers were also pleased with the

graphic redesign of the form and said that it would be easier for them to read in poor light or inclement weather.

Pilot testing. The final phase of the project was a sixty-day field trial of the new form, now known as the West Virginia Uniform Crash Report (UCR). One hundred officers from three geographically disperse agencies participated: a detachment of the West Virginia State Police, a large municipal police department, and a rural sheriff's department representing state, local, and county law enforcement.

Despite evidence from the mock-crash test that the form could be completed without explanation, participating officers were given a two-hour training course with materials constructed from previous feedback. The West Virginia University research team trained all of the participants from the state police and the sheriff's department. In-house educators trained participating officers at the municipal police department.

After training, all participants were told to use the new form when future incidents occurred. Officers in the field filled out UCRs in low-light conditions, bad weather, and while distracted by the normal flurry of activity at a crash scene with injuries. Three hundred field-test forms were completed.

Upon analysis, more than two-thirds of the field test forms reflected officer approval of the UCR's logic flow, improved design, larger typeface, and the incorporation of the supplemental commercial carrier form and the CADRE elements. The remaining one-third of respondents noted areas of dissatisfaction; however, after an extended period of use, officer satisfaction rose to approximately 90 percent.

Using information gained from the field tests, the research team further refined the training materials. The training can be given as a total package or in stages. The materials can also be used as a reference tool, where specific items can be researched by topic. These materials were created with the view that each user group is unique—from officers at large municipal agencies to state forest rangers to campus police.

The new form is in use throughout the state and is beginning to appear at West Virginia DOH for processing. Security managers looking for ways to improve data collection can benefit from a similarly inclusive approach that gives users a chance to help shape and test any changes. As seen from this case, the process is likely to yield better information and reduce staff time and costs. ■

Gary L. Winn, Ph.D., is an associate professor of safety and environmental management at West Virginia University, Morgantown, West Virginia, where he specializes in transportation research with emphasis on data collection and commercial vehicles, and agriculture safety. David S. Bucy, M.S., is a research instructor at the university, and Michael J. Klishis, Ph.D., is an associate professor.

CPP PROFILE



ASIS proudly congratulates the thousands of professionals who have sought and attained the CPP—the profession's highest recognition. In commemoration of its 20th anniversary, ASIS is recognizing 12 outstanding individuals, such as the person profiled here.

The CPP is Required if You Want to Advance To Senior Ranks

Douglas G. Karpiloff, CPP

Program Manager, World Trade Center Security Systems
The Port Authority of New York and New Jersey
New York City

Industry: Real estate.

Job Responsibility: Facility management of all interim and permanent security upgrades at the World Trade Center

Education: Masters degree in industrial and management engineering

Years in Security: 9 **Year Earned CPP:** 1995 **Year Joined ASIS:** 1994

Why I Pursued the CPP: "I recognized the CPP as an important professional certification, almost a requirement if one wants to advance to senior ranks in this profession.

How the CPP Benefits Me: "I am now treated as an expert in the field and my professional security assessments carry more 'weight' than was formerly the case. Further, I find that it gives me substantial credibility when I meet with business, government, and professional groups."

Value of the CPP: "The CPP absolutely makes a difference. It raises my professional standards and stature in the business community, not just the security community."

Why Security Professionals Pursue the CPP Designation: "It helps separate the truly 'multi-faceted' professional from others in the security field who only have a smattering of knowledge in limited security areas. Since there is a recognized knowledge base required and a rigorous examination prior to certification, the CPP becomes part of a cadre of skilled practitioners.

Achievements: A survivor of the World Trade Center bombing in New York, Mr. Karpiloff was honored for his efforts to help victims, and has been called upon as an expert in the Oklahoma City bombing. He is currently assisting the Federal Protective Service on a Presidential Task Force charged with implementing new federal government security guidelines.

**Let the CPP get you recognized
worldwide as a professional.**

