National Institute of Justice

R e s e a r c h   i n   B r i e f

NIJ Science and Technology Awards Under the Crime Act: Fiscal Year 1996

The National Institute of Justice has pioneered many of the advances in science and technology that help deter, identify, and apprehend offenders, and that ensure access by criminal justice professionals to the tools and equipment they need to perform their jobs more efficiently. In recent years those efforts have received further impetus in a number of ways. One is a partnership between NIJ and the Department of Defense to promote the transfer and adoption of technologies from military to domestic use. Development of less-than-lethal technologies is an area of emphasis in that partnership. NIJ's establishment of the National Law Enforcement and Corrections Technology Center system, with its regional offices, is making technology information and developments more accessible to the field. Most recently, the Violent Crime Control and Law Enforcement Act of 1994 has served as a major catalyst for NIJ science and technology developments.

One of the chief areas for technology development under the Crime Act is community policing. In partnership with the Office of Community Oriented Policing Services of the Department of Justice, NIJ has supported the development of "COPS technologies" with Crime Act funding that will aid police departments and officers in adopting the principles and strategies of community policing. DNA testing, which is proving its effectiveness in the adjudication process and which has long been a focus of NIJ research, is receiving added support from the Crime Act, with NIJ funding for improvements in State and local forensics laboratories. And as amended in 1996, the Crime Act contains provisions to identify, develop, and purchase technologies for use by State and local law enforcement, and vests NIJ with the authority to provide this assistance.

Each of the technology development and related projects sponsored by NIJ under the Crime Act in 1996 in these areas is listed here.* The number is that of the grant; followed by the project title; name of the institution, agency, or corporation that received the award; name of the principal investigator or contractor; and the award amount.

General Technology Support

96–LB–VX–K008
Facilitation of Domestic and International Technology Partnerships in Counter Terrorism Efforts
Eagan, McAllister Associates, Inc.
Robert Greenberg
$298,000
This award supports the development of NIJ partnerships with technology and law enforcement organizations that can work together with NIJ on counter terrorism efforts.

96–MU–MU–0018
Field Evaluation of the System for the Effective Control of Urban Environment Security (SECURES)
University of Cincinnati
Loraine Green Mazerolle
$150,000 (plus $50,000 NIJ base funds)
This project is evaluating the impact in Dallas of SE-CURES, which uses technology developed for the military

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*Companion lists of other NIJ research projects are also available in the Research in Brief series: *NIJ Awards Under the Crime Act: Fiscal Year 1996,* and *NIJ Awards in Fiscal Year 1996.*

to detect and report the location of gunshots in an urban environment. The research is documenting partnership-building efforts among the Dallas Police Department, Alliant Techsystems, Inc., and the local community.

96–LB–VX–K002
NIJ Surplus Property Program
Ultimate Enterprise Limited
Michael Simpson
$150,000
This project is developing procedures for locating, selecting, storing, repairing, and transferring select Department of Defense surplus property to State and local law enforcement and corrections agencies.

96–LB–VX–A043
Oak Ridge National Laboratory Forensic Sciences Program
U.S. Department of Energy
Susan Heiser
$250,000
This award supports the establishment of a Department of Energy-NIJ forensic laboratory alliance for law enforcement.

96–LB–VX–K007
Regional Gang Information System: Phase I
Police Executive Research Forum
Clifford Karchmer
$425,000
This project is conducting an initial demonstration of the Massachusetts Lotus Notes application to determine whether it can be used to establish a National Gang Tracking Network and is reviewing the legal and regulatory requirements that could impact the design, operation, and use of such a network.

96–LB–VX–A038
Systems Engineering and Technical Assistance for the National Institute of Justice Office of Science and Technology
U.S. Department of Defense, Defense Support Office
Carl F. Kiele
$850,000
This award supports program and technical management, planning and oversight, and systems engineering and technical evaluation for NIJ's science and technology programs.

94–IJ–CX–A004
Technology Assessment Program
U.S. Department of Commerce, National Institute of Standards and Technology
Kathleen Higgins
$1,500,000 (plus $1,100,000 NIJ base funds)
This award supports technology development started under NIJ's Technology Assessment Program, including DNA PCR standards, laboratory accreditation under NVLAP, armor piercing ammunition testing, trauma plate testing, less-than-lethal technologies technical support, integrated systems digital network standards, and ballistic studies in support of the body armor program.

96–LB–VX–K004
Working With Technology in Corrections
American Correctional Association
John J. Greene
$100,000
This award is identifying, locating, and evaluating methods used to purchase correctional technologies and support a conference to introduce manufacturers and suppliers to a cross-section of practitioners who will share their experiences with and expectations of the costs of technology.

Less-Than-Lethal Weapons Technology

96–MU–MU–K016
Law Enforcement Technology, Technology Transfer, Less-Than-Lethal Technology, and Policy Assessment
SEASKATE, Inc.
E.A. Burkhalter
$154,000 (plus $79,000 NIJ base funds)
A policy and technology assessment panel is reviewing law enforcement technologies that are the most promising in the short and long terms and that should be the focus of further development and adaptation.

96–LB–VX–K006
Law Enforcement Technology, Technology Transfer, Less-Than-Lethal Weapons Technology, and Policy Liability Assessment
SEASKATE, Inc.
E.A. Burkhalter
$198,000
This award supports efforts to assess the legal liability that might arise from the deployment of certain less-than-lethal technologies and make recommendations regarding liability issues.

Law Enforcement and Corrections Technology Centers

NIJ's National Law Enforcement and Corrections Technology Center and its regional centers offer centralized sources of product and technology information, assessment, and referral services to law enforcement, corrections, and other criminal justice professionals. NIJ also supports a Border Research and Technology Center that focuses on developing and enhancing border research and technology.

96–MU–MU–K011
National Law Enforcement and Corrections Technology Center–Rockville, MD
Aspen Systems Corporation
Richard Rosenthal
$1,600,000 (plus $100,000 NIJ base funds)

96–IJ–CX–A032
National Law Enforcement and Corrections Technology Center: Northeastern Region–Rome, NY
U.S. Air Force, Rome Laboratory
John A. Ritz
$250,000 (plus $450,000 NIJ base funds)

96–LB–VX–K005
National Law Enforcement and Corrections Technology Center: Southeastern Region–Charleston, SC
South Carolina Research Authority
Gary Mastrandrea
$1,562,000

96–MU–MU–K012
National Law Enforcement and Corrections Technology Center: Western Region–Denver, CO
University of Denver, Colorado Seminary
Deborah G. Bradford
$550,000 (plus $202,000 NIJ base funds)

96–MU–MU–K006
National Law Enforcement and Corrections Technology Center: Western Region–San Diego, CA
Aerospace Corporation
Robert M. Pentz
$117,000 (plus $598,000 NIJ base funds)

Community-Oriented Policing Technology*

97-IJ-CX-K005
APD Intranet/Briefing Stations
City of Arlington (Texas) Police Department
Larry Barclay
$183,375
This grant will develop a system for beat officers to access information through a number of methods, such as computerized briefing stations, electronic mail, and beat inquiries.

97-IJ-CX-K006
Affordable Crime Mapping and Information-Sharing Technology for Community Police Officers
City of New Orleans (Louisiana) Police Department
Lieutenant Michael Pfeiffer
$203,328
This award will be used to develop an affordable crime-mapping and information-sharing technology using touch-screen technology for beat officers and community members.

* Grants without identifying numbers will be assigned them after final processing. Numbers prefixed with "97" indicate grants awarded in 1997 with 1996 funding.

97-IJ-CX-K011
Algorithmic Image Matching: Police Technology Research and Development Project
Santa Ana (California) Police Department
Captain Paul M. Walters
$250,041
This project will support the development of an Algorithm Image Matching (AIM) system to reduce the time required to search automated mug shot systems. AIM will provide the ability to search mug shot systems based on known facial features of a suspect. The system will be able to compare photographs, sketches, and video images.

97-IJ-CX-K007
Artificial Neural Network System for Classification of Offenders in Murder and Rape Cases
Battelle Memorial Institute
Jennifer Miles
$310,000
This grant will develop software for the Washington State Attorney General's Office that can compare unknown murder and rape offenders and their method of operating to similar cases on file.

97-IJ-CX-K009
Automation of Local Police Functions
New York State Department of Criminal Justice Services
Jim Shea
$409,035
This award will provide the expanded, real-time data base access software used by nearly half of New York State's law enforcement agencies, allowing officers to access and add incident and arrest data via laptop computer.

Crime Analysis Extension Application
Environmental Systems Research Institute
John Perry
$522,382
This award will be used to research, develop, and field test geographic information system-based crime analysis applications. The resulting tools will provide officers with a mapping and predictive modeling capability for proactive policing.

97-IJ-CX-K013
Demonstration of a Concealed Weapons Detection System Using Electromagnetic Resonances
Akela, Inc.
Alan Hunt
$442,229
This project will develop a handheld concealed weapons detection system with potential to detect metal and plastic weapons beneath clothing.

Development of a Neighborhood Problem-Solving System
Abt Associates Inc.
Marianne Beauregard
$100,343
This award will develop a neighborhood problem-solving system for Hartford, Connecticut that will contain data bases of city agencies, demographic data, and other community information.

97-IJ-CX-K004
FALCON (Future Alert and Contact Network)
City of Charlotte (North Carolina) Police Department
Maureen Brown
$234,980
This project will develop the Future Alert and Contact Network (FALCON) to predict community problems and allow the beat officer to be more proactive in community policing.

97-IJ-CX-K012
Internet Community Oriented Policing Tools Project
City of Davis (California) Police Department
Christian Sandvig
$167,675
This award will use the Internet to develop community partnerships between law enforcement and students, parents, and teachers. The project will provide a two-way dialogue between police and citizens for problem solving and goal setting.

97-IJ-CX-K002
Largo Police Department Wireless Internet Project
Largo (Florida) Police Department
Sergeant Brian McKeon
$56,150
This grant will implement a wireless remote data and voice communications system to link beat officers, investigators, and the community. Officers will use devices equipped with wireless cellular modems, keyboards, pen-based handwriting software, cellular voice communication, and Web-browsing software, creating a wireless intranet.

97-IJ-CX-K003
Metropolitan Nashville Police Department's Palm Top Project
Metropolitan Nashville (Tennessee) Police Department
Lieutenant Ken Peace
$128,875
This project will create an onsite system for law enforcement officers to conduct up-to-date warrant, arrest history, and stolen vehicle checks; access mug shots; and complete reports onsite and online.

Portable Concealed Weapon Detector
Los Angeles County (California) Sheriff's Office
Yu-Wen Chang
$496,624
This research will develop the prototype of a handheld device to detect metal or plastic concealed weapons at a distance of up to 10 feet.

96–LB–VX–K008
Portable Voice-Command Translation System
Integrated Wave Technologies, Inc.
A. Robert Sabo
$493,000
This project is designing and fabricating three voice response translator (VRT) modules that allow officers to identify a subject's language and translate the officers' questions and instructions into that language.

96–IJ–CX–K007
Pursuit Management Task Force
Aerospace Corporation
Donald Peterson
$236,000
This multiagency task force studies operational practices and procedures, vehicle stopping technologies, legal and liability issues, policy and doctrine, training, and community acceptance to accelerate the introduction of safer and more effective methods of vehicle pursuit.

97-IJ-CX-K010
Seamless Mobile Law Enforcement Computer Network
Virginia Department of State Police
Captain John Furlough
$348,362
This grant will develop an infrastructure in Virginia to seamlessly connect different cellular carriers for voice and data communications. The infrastructure will maximize the coverage area and minimize the cost of transmission.

97-IJ-CX-K008
Software Development for Intelligence Gathering
Monroe County (Florida) Sheriff's Office
Deputy Terry Armstrong
$187,900
This award will develop software that will collect, classify, input, and analyze intelligence data collected by officers in the field that will be geographically indexed and digitally transmitted.

96–IJ–CX–A047
Vehicle Stopper Technology Evaluation Program
U.S. Department of the Army
Edward P. Scannell
$250,000
This program establishes an alliance between the Army Research Laboratory and NIJ for the evaluation of Electric/Electromagnetic Vehicle Stopper technologies and concepts for lab evaluations.

DNA Identification

96–DN–VX–0001
Development of Criteria for Model External DNA Proficiency
University of Illinois, Chicago
Joseph L. Peterson
$250,000
This study investigates the feasibility of developing a blind external DNA proficiency testing program for public and private forensic science laboratories.

96–MU–VX–0020
Expansion of DNA Analysis Capabilities: Illinois State Police Forensic Sciences Command
Illinois State Police, Springfield
Susan Hart Johns
$450,000
This multisite research project compares homicide clearance rates in different cities, analyzes the extent to which clearance rates can function as measures of police performance, and identifies strategies associated with higher clearance rates.

96–DN–VX–0002
Forensic DNA Laboratory Improvement Program: Maryland
Maryland Department of Public Safety
Louis C. Portis
$300,000
This program is implementing the convicted offender data base, validating protocols for STR/DNA analysis, and preparing for a transition to chemiluminescence for RFLP DNA analyses.

Forensic DNA Laboratory Improvement Program

The awards below represent part of an ongoing NIJ effort to enhance the DNA analysis capabilities of crime laboratories across the country. The projects were selected under a competitive solicitation and peer reviewed by experts in DNA testing and laboratory operation. They include installing and upgrading lab equipment, development of simpler and faster methods of DNA typing, links to DNA databases, and training in DNA analysis. Under the second phase of the solicitation, additional awards will be made in fiscal year 1997, bringing the total funding for the effort to $11.4 million.

96–IJ–CX–0043
Development of a PCR Laboratory: Minnesota
Minnesota Bureau of Criminal Apprehension
Terry Laber
$249,000

96–IJ–CX–0028
Development of a Rapid, Immobilized Probe Assay for the Detection of mtDNA Variation
Children's Hospital, Oakland Research Institute
Kathleen H. Gonzalez
$193,000

96–IJ–CX–0038
DNA Forensic Laboratory Enhancements: Maryland
Anne Arundel County, MD
Jane C. Cooke
$50,000

96–IJ–CX–0090
DNA Identification Project: Montana
Montana Department of Justice
Bill Unger
$150,000

96–IJ–CX–0051
DNA Offender Data Base Program: South Carolina
South Carolina Law Enforcement Division
Matthew G. Fitts
$210,000

96–IJ–CX–0052
DNA STR Evaluation Project: Indiana
Marion County, Indiana, Prosecutor
James E. Hamby
$151,000

96–IJ–CX–0059
Enhancement of Capability To Analyze DNA: Virginia
Virginia Department of General Services, Division of Forensic Science
Deanne Dabbs
$375,000

96–IJ–CX–0048
Enhancement of DNA Testing Capabilities: Alaska
Alaska Department of Public Safety, Scientific Crime
Detection Laboratory
George M. Taft
$129,000

96–IJ–CX–0032
**Enhancement of DNA Testing Capabilities:
Arizona**
City of Tucson
Walter Tannert
$75,000

96–IJ–CX–0079
Enhancement of DNA Typing: Georgia
Georgia Bureau of Investigation
George Harrin
$292,000

96–IJ–CX–0041
**Enhancement of Serological Analysis to DNA
Technologies: Kentucky**
Kentucky State Police
Lonnie Moert
$119,000

96–IJ–CX–0089
**Enhancement of STR Capabilities in the New
Jersey Forensic DNA Laboratory**
New Jersey Division of Criminal Justice, Department
of Law and Public Safety
Margaret Tarver
$126,000

96–IJ–CX–0055
**Enhancement of STR Capabilities in the West
Virginia State Police Crime Laboratory**
West Virginia Division of Public Safety
Ted Smith
$153,000

96–IJ–CX–0066
**Enhancement of the Tennessee Bureau of
Investigation Forensic DNA Capabilities**
Tennessee Bureau of Investigation, Forensic Services
Division
William Darby
$200,000

96–IJ–CX–0040
Expansion of DNA Laboratory Program: Missouri
Missouri State Highway Patrol
Lori Maloney
$375,000

96–IJ–CX–0062
Expansion of DNA Services: North Carolina
North Carolina State Bureau of Investigation
Mark Nelson
$206,000

96–IJ–CX–0049
**Expansion of the Felon DNA Data Bank Program:
Alabama**
Alabama Department of Economic and Community
Affairs
John Hicks
$375,000

96–IJ–CX–0094
Forensic DNA Enhancement Project: Arizona
Arizona Department of Public Safety
Susan Narveson
$330,000

96–IJ–CX–0084
Forensic DNA Enhancement Project: Texas
Texas Department of Public Safety, Narcotics Service
J.R. Urbanovsky
$400,000

96–IJ–CX–0095
**Forensic DNA Laboratory Improvement Program:
Florida**
Florida Department of Law Enforcement
Dale Heideman
$450,000

96–IJ–CX–0061
**Forensic DNA Laboratory Improvement Program:
Kansas**
Sedgwick County and Wichita Police Department
Consortium
Carrie May
$324,000

96–IJ–CX–0039
Forensic DNA Laboratory Improvement Program: New Mexico
City of Albuquerque
Ann Talbot
$290,000

96–IJ–CX–0034
Forensic DNA Laboratory Improvement Program: Pennsylvania
Pennsylvania State Police
Christine Tomsey
$375,000

96–IJ–CX–0054
Forensic DNA Laboratory Improvement Program: Pittsburgh
Allegheny County Department of Laboratories
Charles Winek
$151,000

96–IJ–CX–0033
Forensic DNA Laboratory Improvement Program: South Dakota
South Dakota Office of the Attorney General
Rex Riis
$60,000

96–IJ–CX–0076
Forensic DNA Laboratory Improvement Program: Vermont
Vermont Department of Public Safety
Eric Buel
$74,000

96–IJ–CX–0096
Implementation of a PCR Program for the Scottsdale Police Crime Lab
City of Scottsdale
Allen Garrett
$85,000

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance, Bureau of Justice Statistics, Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime.

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