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# National Institute of Justice

## S O L I C I T A T I O N

*Sarah V. Hart, Director*

*February 2002*

### NIJ Science and Technology Solicitation, FY 2002

**APPLICATION DEADLINE:**

April 11, 2002

**U.S. Department of Justice**  
**Office of Justice Programs**  
810 Seventh Street N.W.  
Washington, DC 20531

**John Ashcroft**  
*Attorney General*

**Deborah Daniels**  
*Assistant Attorney General*

**Sarah V. Hart**  
*Director, National Institute of Justice*

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For grant and funding information, contact:  
**Department of Justice Response Center**  
800-421-6770

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**Office of Justice Programs**  
**World Wide Web Site:**  
<http://www.ojp.usdoj.gov>

**National Institute of Justice**  
**World Wide Web Site:**  
<http://www.ojp.usdoj.gov/nij>

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## I. Introduction

The National Institute of Justice (NIJ) is the research and development arm of the U.S. Department of Justice. Created by Congress in 1968, the Institute is charged with investing public funds to develop knowledge that will reduce crime, enhance public safety, and improve the administration of justice. Under its enabling legislation, NIJ is authorized to assist State and local justice systems in the following ways:

- Conduct and sponsor basic and applied research into the causes, prevention, and detection of crime.
- Evaluate major Federal initiatives concerning crime and justice.
- Support research, demonstrations, and validations to develop new approaches, techniques, systems, and equipment to improve law enforcement and the administration of justice.
- Develop, validate, and evaluate new technologies to deter crime and enhance criminal justice operations.
- Make recommendations to Federal, State, and local governments.
- Conduct conferences and workshops for criminal justice policymakers and professionals.
- Collect and disseminate domestic and international criminal justice information obtained by the Institute or other Federal agencies.

NIJ's portfolio covers a diverse and dynamic array of research and development topics. Each year, the Institute's research program evolves as a result of consultations with the community of interested parties, including: researchers; technologists and practitioners; Federal, State and local policymakers; and other public and private organizations. The NIJ Research Portfolio, which lists ongoing NIJ research and development, with project descriptions, is

available online at <http://nij.ncjrs.org/portfolio/>. The Institute encourages prospective applicants to consult the portfolio as a guide to NIJ's approach to criminal justice research and development.

Additional information may be obtained by drawing on the resources and expertise of the NIJ National Law Enforcement and Corrections Technology Center (NLECTC) located in Rockville, Maryland; the regional NLECTCs located in Rome, New York, Charleston, South Carolina; Denver, Colorado, El Segundo, California; Anchorage, Alaska, and the Border Research and Technology Center (BRTC) located in San Diego, California. More information about the NIJ NLECTC system is available on the Internet at <http://www.justnet.org>.

## II. Background

For fiscal year 2002, NIJ will accept proposals for technology-related awards under this solicitation. Proposals will be reviewed by a peer review panel composed of technologists and criminal justice practitioners.

This solicitation is open to a variety of proposals in order to achieve a balanced portfolio of technology and product development, implementation, and evaluation projects. This solicitation focuses on projects that can be successfully completed within one to three years.

Most law enforcement and corrections agencies have limited financial resources for developing or evaluating technology products. Proposers should recognize that the costs associated with the acquisition, deployment, and operation of technology products are a major concern for criminal justice agencies. This is especially true for State and local agencies. Such factors influence the timeliness and the degree to which new technologies are accepted by agency administrators.

Proposals should incorporate information that addresses the general themes posed by the following questions. (It is not necessary to explicitly answer each question.)

# S o l i c i t a t i o n

- How important is the new technology to law enforcement and corrections officers?
- What will be its impact on organizational structure and personnel requirements of police agencies and correctional institutions? What value will be provided to police or correctional officers or agencies in using the proposed product?
- What is the technical goal of the proposed project and what objectives must be achieved to meet this goal?
- What is the breakdown of the various tasks that will be undertaken within the proposed technical work to accomplish the objectives?
- How many units will be needed to accomplish a required or desirable criminal justice objective?
- What are the hidden costs? For example, new computers may require additional labor hours for data input personnel, the purchase of additional software or peripheral equipment, or highly specialized and complex equipment that may incur expensive maintenance costs.
- What, if any, are the net savings in labor or other costs that would be achieved by implementing the technology product(s) in the proposal, as opposed to maintaining the status quo?
- How much training is required to use, maintain, and repair the technology? Is the required level of sophistication of the training amenable to understanding by State and local law enforcement or corrections officers?
- How will the courts view the operational use of the technology with regard to issues of liability and of civil and privacy rights? What constitutional or other legal issues may arise from use of the technology?
- What resource expenditures are planned for each proposed task? Are the proposed technical and cost efforts appropriate?

- How will the product of the proposed project work with existing technology or within the existing technical infrastructure?
- What technical standards will be employed in the development, implementation, and evaluation of this technology?

NIJ encourages partnerships between technology developers and members of the criminal justice community. Such partnerships foster a greater understanding of criminal justice technology needs and implementation challenges.

Cooperative agreements between U.S.-based organizations and international organizations are also encouraged in order to advance technology development in the U.S. NIJ is unable to fund foreign companies directly.

If proposed, teaming arrangements need to have clearly defined technical milestones, leadership roles and responsibilities, business strategies, intellectual property sharing agreements, and participant cost sharing plans. A coordination plan should also be developed identifying technology users, training institutions, government test facilities and laboratories, legal and legislative bodies, and other components that may be required to bring a technology to market.

### **III. Suggested Proposal Topic Areas**

NIJ encourages the submission of any applied research, development, and implementation proposals that will produce innovative technologies or pertinent knowledge for the benefit of law enforcement and corrections personnel. The following topic areas currently represent critical law enforcement and corrections needs. However, they are not considered to be exclusive; proposals that address law enforcement and corrections needs in other topic areas are also invited. Regardless of the topic area, the proposal must include a discussion of the potential benefit to law enforcement and corrections practitioners.

### A. Critical Incident/Counterterrorism Technologies.

NIJ's Critical Incident Response Technology initiative seeks to provide public safety agencies with better tools to deal with major threats to lives and property, such as terrorist acts involving weapons of mass destruction. Recognizing that responder needs for most critical incidents—from terrorist attacks to major accidents or natural disasters—are similar, NIJ is focusing on developing “convertible technologies” that address the needs of multiple public safety disciplines and/or multiple types of incidents.

This initiative focuses on six areas that cross over into many of the other R&D efforts within NIJ. These areas include: infrastructure security, with an emphasis on weapons and contraband detection (see also Protective Systems Technologies); personnel location, with an emphasis on location and tracking through structures; explosive detection and remediation, with an emphasis on remediation; communications/information technology and training, with an emphasis on incident management; chemical and biological defense, with an emphasis on “real-time” warning; and urban search and rescue (US&R), with an emphasis on improved search and surveillance technologies for US&R technical search teams.

### B. Pursuit Management Technologies.

Technologies are needed to enhance the capability of law enforcement agencies to manage high-speed vehicular pursuits. The safe and effective immobilization of motor vehicles is a key need. NIJ is interested in receiving proposals to develop, demonstrate, and evaluate electrostatic discharge devices (i.e., direct injection) for vehicle immobilization.

### C. Protective Systems Technologies.

Under the Protective Systems Technologies Program, NIJ continues to develop, demonstrate, and evaluate technologies for various personal protection and safety equipment products. Specific technology focus areas of interest to NIJ include but are not limited to:

- **Concealed Weapons Detection** - systems to unobtrusively detect body-worn metallic and non-metallic concealed weapons via an imaging capability and based on multiple technologies.
- **Tracking and Monitoring** - technologies (such as cellular, radio frequency, and video), that enable the periodic or continuous remote monitoring of persons' locations indoors or outdoors, to serve both law enforcement and corrections needs.

### D. Crime Prevention Technologies.

The goal of NIJ's Crime Prevention Technologies program is to develop, evaluate, and promote technology that can be used to avert or minimize criminal activity. Specific areas of interest for proposals under this solicitation are:

- **Sensing and surveillance technologies** - to detect criminal activity or provide situational awareness to law enforcement or corrections officers. For example, NIJ is completing an extensive evaluation of advanced thermal imagers in law enforcement operations.
- **Non-intrusive contraband detection** - to efficiently and effectively detect contraband, particularly at portals along US borders and within correctional facilities. NIJ has an interest in technologies including radar, magnetic fields, and millimeter wave to detect contraband.
- **Biometrics technologies** - including facial and voice recognition, for potential use to control perimeter access and to identify persons during surveillance. The integration of multiple biometric technologies is also a potential area of interest.
- **Speech translation technologies** - to enable law enforcement, corrections, and other public safety officers to communicate with non-English speaking persons and to transform spoken information into written format.

## **E. Cyber (Electronic) Crime.**

NIJ's Electronic Crime program is designed to address any type of crime involving digital technology, including cybercrimes such as cyber-terrorism. The goal of the program is to enable the criminal justice community to better address electronic crime by building capacity for investigative tools and conduits among Federal, State, and local agencies, industry, and academia. Based on an NIJ-funded needs assessment, the program will develop, demonstrate, and evaluate tools and technologies to solve cybercrimes and to train criminal investigators.

NIJ encourages the submission of cybercrime proposals under this solicitation in the following topic areas:

- Development of computer software tools to perform the forensic analysis of digital evidence.
- Development of technology tools that will provide law enforcement agencies access to cybercrime investigation and forensic analysis training. The technology tools may take the form of software (e.g., CD-ROM), internet-tools, Advanced Distributed Learning (ADL), or some other method. The technology tools must be inexpensive and easy-to-use by law enforcement practitioners.

NIJ will consider the development, demonstration, and evaluation of technology tools for training cybercrime investigators. Proposals that only provide training are not eligible for an award under this solicitation.

## **F. Learning Technology/Education and Training.**

Law enforcement and corrections officers repeatedly cite the need to improve the quality, availability, and frequency of their training; however, in today's environment of budget constraints, it is difficult for them to fund needed training. Technology may be used to reconcile training needs with budget constraints. NIJ funds programs to survey and develop training/technology tools to bring effective and efficient training to law enforcement and corrections officers.

(The following focus area is not considered exclusive and research may be proposed in other areas:)

**Simulation and Training:** The operational duties and tasks of law enforcement and corrections officers are becoming increasingly complex, diverse, situation-dependent, and highly interactive. Live exercises and role-playing can provide desired realism. However, they are usually expensive, manpower intensive, and sometimes not feasible. New methods of training are required to address such areas as (1) event modeling and simulation; (2) policy and procedures training; (3) interpersonal skill development; (4) officer safety; (5) threat identification and mitigation; and (6) use of force or judgment training.

## **IV. Selection Criteria**

NIJ is firmly committed to the competitive process in making awards. All proposals are subjected to an independent, peer-review panel evaluation. Peer review panelists are academicians, technologists, or practitioners from law enforcement or corrections agencies, each of whom possesses expertise in the subject areas of the solicitation. After the peer review panelists have completed their proposal evaluations, they will provide NIJ staff a determination of each proposal's worthiness of award. Based on the panel's findings, NIJ staff will then recommend the award of specific proposals to the NIJ Director. The NIJ Director will make a final decision regarding the issuance of awards to individual proposals.

Selection criteria that will be used by the peer panel reviewers and NIJ staff to evaluate proposals are as follows:

### **1. Quality and Technical Merit**

- Soundness of methodology, analytical approach, or technical approach.
- Innovation and creativity.
- Feasibility of the proposed project; awareness of pitfalls.

- Awareness of existing research and development work currently underway or completed, and related applications.

## **2. Impact of the Project**

- Potential for significant advance in crime prevention, law enforcement, courts, corrections, or other practice or policy areas.
- Potential for advancement of scientific understanding of the problem area.
- Relevance to law enforcement or corrections practices.
- Importance of the law enforcement or corrections problem to be addressed by the proposed effort.
- Affordability and cost-effectiveness of proposed end products for law enforcement or corrections users, as appropriate, including acquisition, maintenance, and training costs.

## **3. Capabilities, Demonstrated Productivity, and Experience of Applicants**

- Relevant qualifications and experience of personnel.
- Demonstrated ability to manage the proposed effort.
- Adequacy of proposed project management plan as evidenced by the specification of project goals and objectives, a breakdown of the various tasks to be undertaken within the project, and the specification of the resources to be expended in each task.
- Adequacy of proposed resources to perform the proposed effort.

## **4. Budget Considerations<sup>1</sup>**

- Total cost relative to perceived benefit.
- Use of existing resources to minimize the costs associated with the project effort.

## **V. Post-Award Requirements**

For each project funded under this program, the recipient will provide NIJ with a final written report containing, as a minimum, sections on the criminal justice problem(s) addressed; goals and objectives; methodology used; results and findings, conclusions; and recommendations. The report should also include the nature and number of discussions with practitioner agencies. In addition to the final report, the recipient may also be required to provide other deliverables (e.g., a prototype device, working model) depending on the nature and goals of the project.

To help ensure that the goals of the program are met, for a proposal to be eligible to receive an award, it must include:

- A description of the deliverables that will result from the proposed effort.
- Acknowledgment of the understanding that the written final report is required as a separate deliverable item. To the extent possible, provide any details of an outline of the final report.

## **VI. Performance Measures**

The goal of this program is the study, development, improvement, demonstration, and implementation of technologies and tools with demonstrated value to public safety agencies. Performance toward that goal is measured by the knowledge gained and the number of technologies or tools successfully developed, improved, demonstrated, or implemented versus the number funded; as evidenced by written reports submitted to NIJ and prototype devices described in the award.

## VII. How to Apply

Persons interested in submitting proposals under this solicitation must submit the application materials specified below. (See below for instructions on obtaining application forms and guidelines.) **Please be aware that the application must include the following information or completed forms to qualify for an award of funding:**

- Standard Form (SF) 424—Application for Federal assistance
- Geographic Areas Affected Worksheet
- Assurances
- Certifications Regarding Lobbying, Debarment, Suspension, and Other Responsibility Matters; and Drug-Free Workplace Requirements (one form)
- Disclosure of Lobbying Activities
- Budget Detail Worksheet
- Budget Narrative
- Negotiated indirect rate agreement (if appropriate)
- Names and affiliations of all key persons from applicant and subcontractor(s), including advisors, consultants, and advisory board members. Include the name of the principal investigator, with title, organizational affiliation, department (if institution of higher education), address, phone, e-mail, and fax.
- Proposal abstract<sup>2</sup>
- Table of contents
- Program narrative or technical proposal
- Privacy certificate
- Form 310 (Protection of Human Subjects Assurance Identification/Certification/Declaration)
- Environmental Assessment (if required)
- References
- Letters of cooperation from organizations collaborating in the research project
- Resumes for key personnel that will participate in the proposed project effort
- Appendixes, if any (e.g., list of previous NIJ awards, their status, and products)

**Confidentiality of information and human subjects protection.** NIJ has adopted new policies and procedures regarding the confidentiality of information and human subjects protection. Please

see the *Guidelines for Submitting Proposals for National Institute of Justice-Sponsored Research* for details on the new requirements at <http://www.ojp.usdoj.gov/nij/funding.htm>.

**Page limit.** The number of pages in the “Program Narrative” part of the proposal must not exceed 30 double-spaced pages, regardless of the amount of funding requested.

**Due date.** Completed proposals **must be received** at the National Institute of Justice **by 4:00 PM Eastern time on April 11, 2002.** Extensions of this deadline will not be permitted. Please be aware of the potential for proposals to encounter time delays when they are mailed via the U.S. mail system, due to counterterrorism security processing.

**Award period.** In general, NIJ limits its grants and cooperative agreements to a maximum period of 12 or 24 months. However, longer budget periods may be considered.

**Applying.** Applicants need to obtain two packets: (1) application forms (including a sample budget worksheet) and (2) guidelines for submitting proposals (including requirements for proposal writers and requirements for grant recipients). To receive these documents, applicants can:

- Access NIJ's Funding Opportunities page on the World Wide Web: <http://www.ojp.usdoj.gov/nij/funding.htm>.
- Access the Justice Information Center on the Web: <http://www.ncjrs.org/fedgrant.html#nij>.
- Request hard copies of the forms and guidelines by mail from the National Criminal Justice Reference Service at 800–851–3420 or from the Department of Justice Response Center at 800–421–6770 (in the Washington, D.C., area at 202–307–1480).
- Request copies by fax. Call 800–851–3420 and select option 1, then option 1 again for NIJ. Code is 1023.

# S o l i c i t a t i o n

- For additional information, please contact the National Criminal Justice Reference Service at 800-851-3420.

**Guidance and information.** Applicants who wish to receive additional guidance and information may contact the U.S. Department of Justice Response Center at 800-421-6770. The Response Center staff can provide assistance or refer applicants to an appropriate NIJ professional. Applicants may also discuss their prospective research topics with the NIJ professional staff. To do so, contact Mr. Amon Young at (202)514-4338 (younga@ojp.usdoj.gov). However, applicants are expected to obtain and carefully review application forms and proposal guidelines in advance.

**Send completed forms to:**

NIJ Science and Technology Solicitation  
c/o Ann Marie Boyer  
National Institute of Justice  
810 Seventh Street N.W.  
Washington, DC 20531

Please note that NIJ's overnight courier ZIP code is 20001, which differs from the above ZIP code for use by non-overnight delivery service. Ten (10) copies of fully executed proposals must be received by NIJ by 4:00 P.M. Eastern time on **April 11, 2002**. For more information on the National Institute of Justice, please contact:

**National Criminal Justice Reference Service**

Box 6000  
Rockville, MD 20849-6000  
800-851-3420  
e-mail: askncjrs@ncjrs.org

You can view or obtain an electronic version of this document from the NCJRS Justice Information Center Web site (<http://www.ncjrs.org>) or the NIJ Web site (<http://www.ojp.usdoj.gov/nij>).

**Notes:**

1. When estimating budget requests, investigators should note that NIJ policy prohibits the use of grant funds for operational, training, or other nonresearch costs of the project.
2. The proposal abstract is meant to serve as a succinct and accurate description of the proposed work. The abstract must minimally describe: the criminal justice problem to be addressed by the proposed project; the project's goals and objectives; the proposed methodology to be used to achieve the goals and objectives; and the final product(s) to be derived from the project. Descriptions of past accomplishments made by investigator-associated organizations should be avoided in the abstract. **DO NOT include company proprietary information in the abstract because the abstract WILL be made available to the general public if an award is made based on the proposal.** The total length of the abstract must not exceed 400 words.

**SL#000556**