

## 1993 Technology Transfer Meeting

In 1993, The New Mexico Corrections Department's Probation and Parole Division initiated a "technology transfer" meeting, inviting a number of specialists from Sandia National Laboratories along with executives from BI, Inc., the leading manufacturer of electronic monitoring equipment. Also present were a venture capitalist specialist and a representative of the NM Department of Public Safety. The purpose of the August 10<sup>th</sup> meeting was to discuss the potential of commercializing available technologies that would allow corrections and law enforcement officials to actively track criminal offenders. This is believed to be the first meeting convened to discuss offender tracking technologies. The resulting research played a crucial role in the development of offender tracking technologies.

Those attending the meeting were:

**George B. Drake**

Intensive Supervision Program Supervisor, New Mexico Corrections Department

**Dr. Debra D. Spencer**

Senior Member of the Technical Staff (Corrections), Sandia National Laboratories

**Dr. John S. Browning**

Electrical and Computer Engineering, Sandia National Laboratories

**Michael B. Murphy**

Manager (Special Radars Department), Sandia National Laboratories

**Kevin D. Murphy**

Program Manager (Tech Transfer), Sandia National Laboratories

**Leland Traylor**

Senior Member of the Technical Staff (Tech Transfer), Sandia National Laboratories

**David J. Gangel**

Manager (Special Projects), Sandia National Laboratories

**E. Frederick Hartman**

Radiation Effects Experimentations Manager, Sandia National Laboratories

**G. Patrick Muyschondt**

Senior Member of the Technical Staff (Radar), Sandia National Laboratories

**Everett E. Bell**

Vice President of Marketing, BI, Inc

**Eric Hasselman**

Account Manager, BI, Inc

**Dr. Thomas C. Hendricks**

Technology Ventures Corporation

**Ray K. Dennison**

NM Department of Public Safety (Special Projects)

TECHNOLOGY TRANSFER MEETING

AUGUST 11, 1993  
2:00 PM

SANDIA NATIONAL LABORATORIES

BI, INCORPORATED

NEW MEXICO CORRECTIONS DEPARTMENT  
INTENSIVE SUPERVISION PROGRAM

TECHNOLOGY TRANSFER MEETING

August 10, 1993  
2:00 PM

AGENDA

- I. INTRODUCTIONS (10 minutes)
- II. DISCUSSION OF PROBLEM (15 minutes)
- III. TECHNOLOGIES AVAILABLE (1 hour)
  - A. Omni-Directional Antennae
    - 1. Triangulation
    - 2. Radar Technology
  - B. Global Positioning Satellite
    - 1. Real Time
    - 2. Batch Processing
  - C. LORAN
  - D. ARGO System
  - E. Cellular Phone "cells"
  - F. Others
- IV. LEGAL ISSUES (10 minutes)
  - A. FCC Approval
  - B. ACLU Concerns
- V. ASSIGNMENTS (10 minutes)
- VI. SCHEDULE NEXT MEETING (5 minutes)

## TECHNOLOGY TRANSFER MEETING

### DISCUSSION

Prison overcrowding has become a significant social problem with virtually every correctional facility in the country. Revenues for building additional facilities are scarce, yet the flow of defendants through the judicial system has increased to record levels. Many states are under consent decrees which mandate reduced prison populations, forcing correctional officials to release even habitual offenders from their jail cells into the community.

One response to the delima has been the emergence of specialized intensive supervision units which are designed to supervise higher risk prison diversion cases. These probation-parole specialists often augment their stepped-up supervision practices with electronic home detention monitoring equipment. These devices are designed to electronically enforce an offender's house arrest or curfew. It is also widely used by pre-trial supervision programs and county jails as a means of addressing overcrowding problems.

Although this equipment is being successfully utilized by a variety of different programs in virtually every state in the country, certain limitations are inherent with the technology. The equipment, as it operates today, will only monitor the presence or absence of an offender from his home. If a participant is allowed to leave his home to go to work, for example, the equipment can only confirm that he left and returned at the appropriate times. Whether the offender actually went to his job site cannot be ascertained from the monitoring system.

It stands to reason that the focus of the next generation of electronic monitoring equipment should center on creating a system with tracking capabilities. If this can be accomplished, the level

of offender accountability will be increased dramatically. Furthermore, such a system could provide law enforcement and corrections personnel with valuable information which has the potential of revolutionizing the way we supervise offenders.

With a system like this in place, offenders in the program who choose to continue with their criminal activity can be easily caught. By simply querrying the data base, investigators could determine if any participant was at the scene of a crime at the time the offense occurred. The system could also be used to protect victims and witnesses by establishing "restricted zones". If the participating offender were to go into one of these zones, the authorities, and the victim/witness could be quickly notified. This same technique could work in keeping offenders away from bars and high crime areas. Perhaps dozens of other innovative applications could be developed as well.

This technology may provide our criminal justice system with a significant and much needed advancement. With inmates coming out of institutions due to overcrowding problems, our society is looking for answers. No one wants higher risk criminals released into their neighborhoods, but it seems we must resign ourselves to the fact that this is will continue to happen. By developing an offender tracking system, accountability of the participant is greatly increased. Not only will this help protect our society, but perhaps the heightened accountability will create the needed structure in an offender's life which will create the atmosphere in which real rehabilitation can be accomplished.

**OBJECTIVE:** To develop a telemetry system which will track and record the movement of criminal offenders.

APPLICATIONS:

1. To monitor house arrest offenders.
2. Employment/schooling attendance verification.
3. Counseling attendance verification.
4. Prison work release monitoring.
5. Criminal investigations.
6. Identifying criminal associations.
7. Victim/witness protection system.
8. Monitoring of "restricted zone".

SYSTEM REQUIREMENTS:

1. An electronic bracelet worn by the offender must meet the following criteria.
  - A. Designed to withstand significant impact,
  - B. Weights less than 12 ounces,
  - C. Be powered by a battery with a life of no less than three months,
  - D. Be tamper resistant with tamper detection capabilities, and
  - E. Be hypoallergenic.

2. The system's operating cost (per participant) must be significantly lower than the cost of imprisoning an offender.
3. Data produced by the system must be admissible in a court of law.
4. The software must be "user friendly".
5. The system must be able to accomplish each of the application objectives previously cited.