GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY USE IN MONITORING THE ACTIVITIES OF PROBATIONERS

SUMMARY
The Department of Corrections and various local law enforcement agencies use electronic monitoring to supervise offenders in the community. This report provides an overview of the various forms of electronic monitoring and their effectiveness as supervision tools. In addition, it describes the crime scene correlation enhancement to electronic monitoring. Finally, recommendations are made for continued use of electronic monitoring and crime scene correlation.

BACKGROUND
With the increasing sophistication of technological devices, the law enforcement and corrections communities have continued to find new ways to apply this technology to their disciplines. Electronic supervision of offenders can take many forms, from what would now be considered “low-tech” telephone contact to state of the art Global Positioning System (GPS) tracking devices. This report will not focus upon the entire field of electronic supervision, which includes such things as reporting kiosks, ignition interlock systems, remote substance use detection devices, “drive by” detection systems, and identity verification systems. Its focus is on electronic monitoring systems, which are technologies used to determine whether an offender is at a certain location (or is not at a certain location) in accordance with the terms of conditions of supervision. Specifically, the report will examine the use of GPS technology that provides the ability to track the location of an offender in real time. The report will also examine the potential benefits of new applications that correlate data from GPS tracking and crime scene reporting.

Most states use some form of electronic monitoring, although no comprehensive statistics have been found breaking down the type of monitoring that is used. In addition, electronic monitoring is used in some foreign countries. Great Britain, which has maintained a Radio Frequency (RF) monitoring program for years, began a pilot program for active GPS monitoring in September 2004.\(^1\)

In Florida, the Department of Corrections is responsible for supervising criminal offenders who are placed on community supervision. Community supervision includes a number of different types of supervision, but the great majority of offenders on community supervision are on some form of probation or community control. Traditionally, the primary method of supervision has been one-on-one contact between a probation officer and an offender. It is important to note that the department uses electronic monitoring to enhance the effectiveness of supervision, not as a replacement for traditional methods of supervision.

The following table\(^2\) reflects the number of probationers and community controllees on electronic monitoring by the department as of August 31, 2004:

<table>
<thead>
<tr>
<th></th>
<th>Sex Offenders</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio Frequency</td>
<td>30</td>
<td>171</td>
<td>201</td>
</tr>
<tr>
<td>Passive GPS</td>
<td>12</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>Active GPS</td>
<td>193</td>
<td>224</td>
<td>417</td>
</tr>
<tr>
<td>Total</td>
<td>235</td>
<td>413</td>
<td>648</td>
</tr>
</tbody>
</table>


\(^2\)Florida’s Community Supervision Population Monthly Status Report, August 2004, Florida Department of Corrections, Bureaus of Research and Data Analysis, Community Supervision Section.
**Methods of Electronic Monitoring**

The primary differentiation between electronic monitoring approaches is whether it uses radio frequency technology or GPS technology. GPS-based electronic monitoring is further divided into active GPS monitoring and passive GPS monitoring. The department uses all three methods of electronic monitoring. All varieties of electronic monitoring require the offender to wear an electronic device on his or her body.

1. **Radio Frequency Monitoring**

Radio frequency monitoring essentially provides a curfew check to verify whether an offender is within an area to which he or she has been restricted. Most commonly, RF monitoring is used to determine whether an offender on house arrest is in the home. The offender must wear a small transmitter, which can weigh as little as an ounce, that transmits a radio signal to a small receiving unit. The broadcast range of the transmitter is typically about 150 feet, but many systems allow the range to be adjusted depending upon individual circumstances. The receiving unit is linked to a telephone line. If the receiving unit does not receive the radio signal from the transmitter, it causes a telephone alert to be sent to the monitoring station. In turn, the monitoring station notifies the probation officer that the signal has been lost and the offender may have left the restricted area. Because there are a number of conditions that can cause a signal to be temporarily lost, the systems have the ability to set parameters to determine when a probation officer should be notified. For example, it would not be uncommon for the monitoring station to initiate a call back to the offender’s home to verify his or her presence and determine whether there has been an equipment malfunction before notifying the probation officer.

RF monitoring systems can be programmed to account for periods when the offender is permitted to be away from the restricted area, such as to go to work or to attend religious services. However, RF monitoring does not provide any information about the offender’s location when the offender moves outside the range at which the receiver can detect the radio transmission.

The cost for this form of RF monitoring is approximately $2.75 per day, the least expensive of all forms of electronic monitoring.

A variation of RF monitoring is the Field Monitoring Device, or “drive-by” monitoring system. This system also requires the offender to wear a small radio transmitter. The probation officer is provided with a receiver with which he or she can drive or walk by an area and detect the presence of transmitter-equipped offenders. This can be used in a positive way to determine whether the offender is at home or work as required, or in a negative way to determine whether the offender is in a bar or other prohibited location. The most sophisticated devices can identify the specific offender through a unique radio transmission. The department does not use this form of RF monitoring.

2. **GPS Monitoring - Overview and History**

The Global Positioning System consists of 24 satellites that are positioned above the earth in precise geosynchronous orbits. These satellites transmit a unique radio signal that can be detected by a GPS receiver. The receiver has a computer-component that includes data for the location of the satellite and the time the signal was transmitted. Since radio signals travel at the speed of light, the distance from the satellite to the receiver can be easily calculated by determining the time between transmission and reception of the signal. If the receiver has acquired a signal from 3 satellites, it can determine the observer is at one of two possible locations. Normally, one of the locations can be eliminated because it is illogical – such as being a point in space rather than on the earth. If 4 GPS satellite signals are acquired, the receiver can calculate its position in three coordinates (latitude, longitude, and altitude) as well as the GPS time. Atmospheric conditions and other factors introduce a certain amount of error into the equation. Acquisition of additional signals beyond the fourth reduces the location error rate.

The GPS system was developed by the Department of Defense for military purposes. President Reagan announced that it would be made available for civilian
use after Korean Airlines Flight 007 was shot down when it strayed over territory belonging to the Soviet Union in 1983. Even though only a small number of GPS satellites were operational by the mid-1980s, GPS technology began to be used for commercial surveying. Surveyors did not require real-time tracking and could wait for sufficient available satellite signals. GPS surveying reduced the time needed to complete tasks and cost a fraction of traditional surveying methods. The surveying market helped the commercial development of GPS while the launch of additional satellites was delayed following the Challenger disaster. GPS-related technology is now used in a myriad of industries, including transportation, recreation, and criminal justice.

During the first two decades of GPS development, civilian GPS receivers were hampered by the application of “selective availability.” Selective availability introduced an error into the GPS signal so that civilian receivers were significantly less accurate than military receivers. However, selective availability was discontinued in May 2000 and civilian GPS devices are no longer limited or degraded. Off-the-shelf commercial receivers costing less than $100 can now attain accuracies of up to 9 feet. However, it should be noted that the United States reserves the right to reintroduce Selective Availability if it is determined to be necessary for national security.3


Because the defendant’s location can be accurately determined, the system parameters can be set to determine that the offender entered an area from which he or she is legally excluded, such as when a sex offender goes within 1000 feet of a school. The system is referred to as passive because it records the information for later examination by the probation officer. At the end of a specified interval, normally daily, the offender must download the information from the GPS receiver to another device. Depending on the sophistication of the system, the information can either be sent to the monitoring station by telephone or stored for future retrieval. When the data is compared against a set of known locations, such as a map with GPS coordinates, an analyst can determine where the offender was at any particular time.

Passive GPS monitoring is relatively inexpensive at approximately $4 per day.

4. GPS Monitoring of Offenders-Active Systems

Active GPS monitoring uses the same basic technology as passive GPS monitoring, but provides near real-time reporting of the offender’s location. Active GPS monitoring incorporates a cell phone into the equipment in order to transmit the offender’s location coordinates to a monitoring station. The system is designed to provide an alert to the probation officer when the offender either leaves an area to which he or she is restricted or enters an area from which he or she is barred. Because of the additional expense for cell phone service and 24-hour monitoring, active GPS monitoring systems cost approximately $9 per day.

For either type of GPS monitoring system, the department or its contractor maintains an archive of the GPS data points (locations) of offenders on either type of GPS monitoring. Therefore, a law enforcement agency can request a search of the database to determine whether a monitored offender was in the area when a crime was committed. The development of an automated method to compare this offender location tracking data with crime scene location data is a potentially useful advancement in law enforcement investigation.

The Department of Corrections has recently issued notice of intent to award a contract to Pro-Tech, Inc. for provision of GPS monitoring equipment and services. The proposal specifications required that the GPS data must be adaptable to department specifications in order to be compatible with crime scene correlation technology.
Crime Scene Correlation

In November 2003, the department received a technology grant from the United States Department of Justice for a pilot study of a system that combines GPS monitoring technology with data collection of crime incident reports from local law enforcement agencies. The grant proposal was written to include 96 law enforcement agencies in 8 Florida counties: Brevard, Dade, Escambia, Hillsborough, Leon, Pasco, Pinellas, and Seminole. The major difference between the current electronic monitoring process and the pilot system is that the pilot adds a process for automatically extracting the crime information from the law enforcement agency’s computer database, and automatically reporting when there is a correlation between an offender’s location and the time and location of a reported crime. General Dynamics provides the crime scene correlation component of the pilot.

Currently, approximately two-thirds of the agencies involved in the pilot project are integrated into the crime scene correlation component. In addition, General Dynamics reports that it is receiving criminal offense reports from Santa Rosa and Citrus counties. The Department of Corrections administers the grant, and has applied for renewal with the expectation that it will be renewed for an additional year at half of the first year’s funding.

As of October 2004, 73 law enforcement agencies have user accounts for the crime scene correlation system. Thirty seven of these agencies submit their data electronically, and the remainder are small agencies that use the system but input the data manually. The total activity since August 2002 (prior to the start of the pilot project) is as follows:

<table>
<thead>
<tr>
<th>Approximate Number Offenders Tracked</th>
<th>4800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Inclusion and Exclusion Zones</td>
<td>244</td>
</tr>
<tr>
<td>Number of Zone Hits</td>
<td>29,100</td>
</tr>
<tr>
<td>Total Crime Incidents</td>
<td>1,102,800</td>
</tr>
<tr>
<td>Total Crime Incident Hits</td>
<td>231,351</td>
</tr>
</tbody>
</table>

The number of reporting law enforcement agencies has risen from 21 in March 2004 to 73 in October 2004.

The Citrus County Sheriff’s Office has used crime scene correlation analysis for a little less than 18 months, during which time it has tracked 120 pre-trial releasees from the county jail with either active or passive GPS monitoring. It is currently tracking 12 pre-trial releasees. The Sheriff’s Office reports the following results:

<table>
<thead>
<tr>
<th>Total Offenders Participating</th>
<th>120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Completing Program</td>
<td>91</td>
</tr>
<tr>
<td>Total Rearrested, Technical/Curfew Violations</td>
<td>8</td>
</tr>
<tr>
<td>Total Rearrested, New Law Violations</td>
<td>9</td>
</tr>
<tr>
<td>Total Tracked Days</td>
<td>3516</td>
</tr>
<tr>
<td>Average Tracked Days Per Offender</td>
<td>29</td>
</tr>
</tbody>
</table>

There is no single reporting agency that compiles instances in which GPS hits through crime scene correlation have resulted in arrests or convictions. However, a recent article5 recounts two examples:

- In June 2004, a person on pre-trial release was re-arrested after GPS tracking data placed him near the scene of a theft in Sanford. Additional review of the man’s tracked movements showed that he had made visits to a local pawn shop. The police did not have a suspect until the lead from GPS. Using this information, police investigators searched the pawn shop records and linked the man to property stolen in the theft. In addition, a latent fingerprint from the scene was matched to the suspect.

- In Citrus County, GPS location data linked a man on pre-trial release to the location of a home invasion robbery and an auto theft. The man also removed his ankle bracelet, but was quickly apprehended and charged with the new offenses, including violation of the conditions of pre-trial release for removing the bracelet.

Both the article and General Dynamics report a total of 11 instances in which GPS tracking with crime correlation has been used to solve a crime, but the information is dated and there is no firm indication of whether any convictions have resulted. There are no reported cases of a conviction based solely upon GPS tracking and crime scene correlation.

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4 A “hit” is an instance in which the offender’s tracked location correlates with the mapped data. Thus, a zone hit indicates that the offender entered an exclusion zone or left an inclusion zone, and an incident hit indicates that the offender was at or near the scene of a crime.

Law enforcement and industry personnel who support the use of crime scene correlation point out that it is beneficial to law enforcement investigators because it can not only point them to a suspect, but it can also eliminate a suspect from suspicion. This would be a benefit to the pre-trial releasee or offender who is not committing wrong-doing but is suspected of doing so by virtue of their past record.

**Recidivism Studies**

Department of Corrections’ statistics, as well as a controlled study published in March 2003⁶, reflect that offenders on community supervision who are placed on electronic monitoring are significantly less likely to have a revocation or to abscond than offenders who are on community supervision without electronic monitoring. Offenders on electronic monitoring were 55.7% less likely to commit a new offense during the two years following placement on electronic monitoring. Unfortunately, the study was unable to differentiate between offenders placed on RF monitoring and those on GPS monitoring because it did not have enough GPS data.

In an October 2003 report⁷, the department included the following findings relative to the 2-year results for placements made in Fiscal Year 2001-2002:

- The revocation percentage was much lower for RF monitoring (12.3%) than for GPS monitoring (26.3%) or Community Control as a whole (41.6%).

- A higher percentage successfully completed RF monitoring (26.5%) within 2 years of placement than completed GPS monitoring (13.2%) or Community Control (5.3%).

- The rate of absconding after 2 years was lowest for GPS monitoring (0.3%), compared to RF monitoring (1.6%) or Community Control (2.6%).

A 2002 report issued by the Michigan Department of Corrections concluded that parolees monitored by GPS had significantly fewer violation of conditions of parole than other parolees. Subjectively, a survey of parolees also reported that they had a sense of “being watched” while subject to GPS monitoring.⁸

**Statutory Authority for Electronic Monitoring**

Section 948.30, F.S., requires that a sentencing court impose certain conditions of probation or community control for offenders who are placed on sex offender probation for violating ch. 794, F.S. (sexual battery), s. 800.04, F.S. (lewd and lascivious offenses committed upon or in the presence of persons less than 16 years of age), s. 827.071, F.S. (sexual performance by a child), or s. 847.0145, F.S. (selling or buying of minors). Subsection (1) of the section includes conditions for all such offenders whose offense date is on or after October 1, 1995. Subsection (2) of the section includes additional requirements that apply only to such offenders who are placed on sex offender probation and whose offense date was on or after October 1, 1997. Subsection (2) includes a provision for requiring electronic monitoring, but it is not a true statutory mandate because: (a) it only applies when the court places the offender on sex-offender probation, which is not done in all eligible cases; and (b) it may only be ordered “when deemed necessary by the community control or probation officer and his or her supervisor, and ordered by the court at the recommendation of the Department of Corrections.” s. 948.30(2)(e), F.S.

Section 948.101(1)(b), F.S., provides that a court may order electronic monitoring as a condition of community control. Section 948.11(1), F.S., gives the department the discretion to place community controllees on electronic monitoring without a court order. However, the department does not exercise this discretion because of case law that an offender’s failure to submit to electronic monitoring ordered by the department cannot be a basis for revocation of community control.

The only statutory mandate for a court to require electronic monitoring is found in s. 948.101(1)(b), F.S., and applies only to offenders who are placed on criminal quarantine community control for criminal

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⁶ A Controlled Study of the Effects of Electronic Monitoring and Officer Caseload on Outcomes for Offenders on Community Control. Florida Department of Corrections, Bureau of Research and Data Analysis, March 11, 2003.


transmission of HIV. There are currently no offenders on this form of community supervision.

In addition to the above, the sentencing court may place any offender on electronic monitoring as a specific condition of probation pursuant to s. 948.03(6), F.S., or as a special condition of community control pursuant to s. 948.101(2), F.S. Case law has established that a special condition of community supervision must be reasonably related to the offense for which it is imposed. Electronic monitoring, as a form of a restraint on liberty, would seem to be reasonably related to the punishment for any offense.

Section 907.041(4)(b), F.S., provides the court with discretion to release a defendant, including one accused of a dangerous crime, on electronic monitoring if the facts and circumstances on the record warrant such a release. In several counties and municipalities, the local law enforcement agency has responsibility for an electronic monitoring program for pre-trial releasees. In the juvenile law setting, electronic monitoring is one of the forms of pretrial detention which can be ordered if allowed by the risk assessment instrument. See s. 985.215, F.S.

Legal Issues

One issue which could arise is whether nonpayment of fees which would result in a violation of community supervision or pretrial release would constitute an impermissible “imprisonment for debt.” Article I, Section 11, of the Florida Constitution forbids the government from imprisoning persons for nonpayment of financial obligations, unless the debtor has engaged in fraud. This provision, however, does not generally apply to criminal fines, and if the fees associated with electronic monitoring for community supervision are considered a court fine or fee, it should withstand constitutional scrutiny. See Turner v. State, 168 So.2d 192 (Fla. 3d DCA 1964). In a similar vein, if the fees are viewed as an obligation for pretrial release similar to payment of a cash bond, there should not be a constitutional issue. However, the Florida Supreme Court has also held that a probationer cannot be imprisoned for failing to pay restitution unless it is demonstrated that the probationer had the ability to pay. Stephens v. State, 630 So.2d 1090 (Fla. 1990).

Cost

The equipment and monitoring cost for active GPS monitoring is approximately $9 per offender per day. In the department’s fiscal analysis of Senate Bill 2018, a 2004 legislative proposal that would have required courts to place sex offenders on GPS monitoring and greatly expanded the numbers of monitored offenders, the department estimated that placing an additional 1000 offenders on electronic monitoring would require an additional 25 full time employment positions at an annual cost of $1,046,775. These positions would be for the purpose of handling technical issues with the equipment as well as entering data for exclusion and inclusion zones. The department anticipated placing one position in each judicial circuit, with two in the larger circuits. These employees would not be certified correctional probation officers.

Although the department has found that a correctional probation officer must have a reduced case load to effectively supervise offenders on electronic monitoring, it indicated that it could absorb supervision of approximately 1000 additional offenders on electronic monitoring without more certified probation officers.

Local costs for monitoring and equipment should be similar to the department’s costs per offender.

Leon County assesses every monitored offender at least $5 per day. Offenders on active GPS monitoring must pay an additional $8 per day, for a total of $13, but the Leon County Sheriff’s Office pays the additional $8 daily cost for 18 active GPS units. Citrus County assesses each pre-trial releasee on GPS monitoring $5 per day, with a 40% collection rate. The Citrus County Sheriff’s Office calculates that its GPS monitoring program has saved $140,640 in incarceration costs.

Implementation of a crime scene correlation component would pose a significant additional cost to the local jurisdictions. Based upon the amount that General Dynamics states that it would charge for statewide implementation of its Veritracks system, the annual cost for gathering crime incident data from all jurisdictions in the state would be approximately $3.7 million. Because the current model for provision of this service is subscription based, there would be a recurring annual cost of approximately the same amount. In addition, large jurisdictions may have to add an additional employee as a coordinator, although this function might be absorbed within the existing structure.

Currently, General Dynamics is the only known provider of a system that can automatically gather crime incident reports from local law enforcement
agencies and provide alerts when a monitored offender was near the scene of a reported crime. However, Pro-Tech, Inc. has recently announced that it will also provide a crime scene correlation system. Needless to say, any procurement on the local or state level would be subject to state purchasing laws.

**Caseload Requirements**

Early advocates of the use of electronic monitoring, particularly GPS tracking, theorized that use of the technology would allow a probation officer to supervise more offenders. This is a theoretical possibility only if the program has a primary purpose other than public safety, such as reduction of costs. The Department of Corrections stated overall primary purpose is to protect the public. Consistent with this purpose, the department uses electronic monitoring to improve the quality of its supervision. In a report published in February 2004 as required by the Howard E. Futch Community Safety Act, the department reported the following maximum recommended caseload ratios for officers supervising community control offenders:

<table>
<thead>
<tr>
<th>Length of Electronic Monitoring</th>
<th>25:1</th>
<th>22:1</th>
<th>17:1</th>
<th>8:1</th>
</tr>
</thead>
<tbody>
<tr>
<td>No electronic monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RF monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active GPS monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passive GPS monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It seems paradoxical that a probation officer could supervise more offenders on active GPS monitoring than on passive GPS monitoring. However, the department found that the passive GPS system generated almost 3 times the number of alarms per offender as the active GPS system. The most likely explanation for this is that immediate contact made in response to an active GPS system alarm results in offender behavior modification that reduces the number of alarms. The department also found that the average time to clear a passive GPS system alarm was only slightly less than the time needed to clear an alarm generated by an active GPS system.

One local jurisdiction has anecdotally reported the opposite experience, finding that active GPS tracking requires much more probation officer time than passive GPS tracking. This apparently reflects a policy decision to respond immediately to active GPS alarms because the offenders are on active GPS monitoring for victim-related offenses. The officers do not respond immediately to every passive GPS system alarm, but make a judgment as to whether the matter can be discussed during the scheduled weekly meeting with the offender.

**Placement on electronic monitoring by offense type**

The department reported the following statistics relating to the primary offense of persons placed on community control in Fiscal Year 2002-2003:

<table>
<thead>
<tr>
<th>Primary Offense</th>
<th>CC %</th>
<th>RF %</th>
<th>GPS %</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murder/Manslaughter</td>
<td>0.8</td>
<td>0.9</td>
<td>2.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Sexual Offense</td>
<td>3.0</td>
<td>12.8</td>
<td>31.4</td>
<td>5.4</td>
</tr>
<tr>
<td>Robbery</td>
<td>3.4</td>
<td>5.4</td>
<td>4.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Violent, Other</td>
<td>14.4</td>
<td>16.5</td>
<td>16.9</td>
<td>14.7</td>
</tr>
<tr>
<td>Burglary</td>
<td>10.9</td>
<td>13.2</td>
<td>9.0</td>
<td>10.8</td>
</tr>
<tr>
<td>Property Theft/Fraud/Damage</td>
<td>20.7</td>
<td>15.1</td>
<td>12.6</td>
<td>19.9</td>
</tr>
<tr>
<td>Drugs</td>
<td>33.6</td>
<td>22.0</td>
<td>16.4</td>
<td>31.9</td>
</tr>
<tr>
<td>Weapons</td>
<td>1.9</td>
<td>2.8</td>
<td>1.2</td>
<td>1.9</td>
</tr>
<tr>
<td>Other</td>
<td>11.4</td>
<td>11.2</td>
<td>5.1</td>
<td>11.0</td>
</tr>
<tr>
<td>Total</td>
<td>14,343</td>
<td>569</td>
<td>1,161</td>
<td>16,073</td>
</tr>
<tr>
<td>No Data</td>
<td>84</td>
<td>5</td>
<td>9</td>
<td>98</td>
</tr>
</tbody>
</table>

The following observations can be made from this data:

- Nearly two-thirds of the offenders placed on community control without electronic monitoring are drug offenders or property offenders. Violent offenders comprise approximately one-quarter of this population.
- Nearly two-fifths of offenders placed on RF monitoring are violent offenders, slightly more than the combined number of drug offenders and property offenders.
- Violent offenders comprise the majority of offenders on GPS monitoring. Sex offenders, a subset of violent offenders, comprise the largest specific offense group.

**METHODOLOGY**

Staff reviewed publications, conducted legal research, and conducted interviews with law enforcement and industry personnel involved in electronic monitoring programs.

**FINDINGS**

It is important to establish a purpose for using electronic monitoring. Corrections literature identifies a number of possible purposes, including:
• public safety
• safety of individual victims
• accountability of offenders
• behavior change and recidivism reduction
• reduction of jail or prison populations
• reducing costs

Although all of these purposes are commendable and supportable, they may not be mutually compatible. For instance, a goal of enhancing public safety may conflict with goals of reducing costs or reducing the jail or prison population.9

Although early department statistics indicate that the use of electronic monitoring has had the effect of reducing the rate of commission of new crimes, it is possible that enhanced detection of crimes and/or technical violations will actually increase the recidivism rate.

Electronic monitoring is not confinement. An offender can escape from electronic monitoring by cutting off the device and leaving the area.

Passive GPS monitoring has no advantage over active GPS monitoring other than cost savings.

Active GPS monitoring is the most appropriate technology for monitoring violent offenders who are in the community. To properly supervise these offenders, passive GPS monitoring is more labor-intensive and requires a greatly reduced caseload for the probation officer.

Passive GPS monitoring may be appropriate to use in the supervision of lower-risk offenders. However, it is difficult to cite any significant overall advantage of passive GPS monitoring over RF monitoring.

GPS location tracking and crime scene correlation is a law enforcement investigative tool that can focus the police upon a suspect. It is an enhancement of, not a substitute for, traditional law enforcement investigative techniques.

### RECOMMENDATIONS
On the state level, the primary purpose for using electronic monitoring should be to enhance public safety. Thus, EM should be used for offenders who would otherwise be in the community without the additional safeguard. Any reduction of recidivism or positive change in offender behavior would be an ancillary result.

At the local level, reduction of costs and reduction of the jail population is an appropriate primary purpose for the use of electronic monitoring. Of course, such a purpose should not be at the expense of public safety.

Active GPS monitoring should be used for violent offenders and sex offenders placed in community control. RF monitoring has a legitimate place for drug and property offenders.

The Department of Corrections should continue to emphasize the use of active GPS monitoring over the use of passive GPS monitoring. The violent offenders and sex offenders who are the predominant population of GPS-tracked offenders should be tracked in real time.

The crime scene correlation pilot project should be continued with more rigorous attention to compilation of data reflecting apprehensions and conviction resulting from use of the crime scene correlation component.

Crime scene correlation is of primary benefit to local law enforcement agencies as a tool for investigating crimes. Therefore, oversight should be given to the Florida Department of Law Enforcement or the Attorney General’s Office rather than the Department of Corrections.

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