

BI ExacuTrack® One Q&A

with Jim Buck, Senior Product Manager

The BI ExacuTrack Series now features a single-piece, active tracking device – ExacuTrack One. ExacuTrack One combines multiple location technologies in one piece of equipment. The unit also provides RF capability in the form of a beacon and client communication via pre-recorded messages.



Jim Buck, Senior Product Manager, has over two decades of experience with BI and led ExacuTrack One product development efforts. Below, Jim answers questions about the most recent addition to BI's GPS tracking continuum.

Q: *What makes ExacuTrack One different from BI's other GPS tracking products - ExacuTrack and ExacuTrack AT?*

A: The most obvious difference is the fact that ExacuTrack One has only a single piece of equipment. Instead of a belt-clipped or hand-carried tracker, the client wears an ankle-mounted device. There's nothing for a client to carry with them or leave behind. In addition to that, ExacuTrack One incorporates AFLT (Advanced Forward Link Trilateration). AFLT is essentially the technology that enhances the accuracy of tracking points and allows for indoor tracking. This technology relies on cellular towers and, when combined with GPS, can greatly enhance location monitoring data.

Q: *You mentioned the AFLT technology used in ExacuTrack One. Tell us more about the location monitoring technology behind the device.*

A: ExacuTrack One uses three location monitoring technologies: Autonomous GPS, Assisted GPS and AFLT. Using all three increases tracking accuracy and location acquisition in a variety of terrains. Autonomous GPS relies solely on the 24 GPS satellites always circling the earth and does not use a cellular network. Assisted GPS, on the other hand, relies on cellular towers to speed the acquisition process of location data. Because cellular towers constantly monitor satellite coordinates, ExacuTrack One can download these coordinates to get a location fix within 30 seconds of an acquisition attempt. Using AFLT, cellular towers aid in offender location through signal triangulation: three cell towers are needed to determine location. Depending on cellular service capability, AFLT – in combination with GPS – not only provides more accurate location data but also establishes indoor location fixes.

Q: *Is there a specific cellular network that ExacuTrack One uses?*

A: Yes, ExacuTrack One uses the CDMA network provided by Sprint. Specifically, it operates on Sprint's data network. Like all cellular providers, there are areas with limited coverage. For example, if there is no Sprint coverage, ExacuTrack One may use other roaming providers also on the CDMA network. However, when the device is attempting to use AFLT, it must be in Sprint's service area.

Q: *How does ExacuTrack One fit with BI's existing continuum of offender monitoring solutions?*

A: The key word is continuum. Because we have a wide range of equipment and monitoring solutions, we're able to tailor our offerings to a specific agency's needs. Depending on the client population, budget, staffing, and many other factors, agencies can choose from a full menu of options. ExacuTrack One is on the upper end of that spectrum as it enables officers to track clients in near-real time, set exclusion and inclusion zones, obtain client acknowledgement of alerts, and more.

Q: *Tell us about the customer feedback used in the product development process.*

A: Customer feedback is continual, but is a particularly big part of the development process. We involved a number of our customers from day one as we began to design the product. In fact, the locator beacon was the result of direct customer input. We also use customer sites in our beta testing process.

Q: *What role does the beacon play?*

A: ExacuTrack One has the option of a radio frequency beacon that can be placed in the home, treatment center, work, or other location where a client spends time. The beacon is small and battery operated so there are no phone or power cords for officers to deal with. The beacon acts as an RF transmitter while the ExacuTrack One unit acts as a receiver. When the two come within range of one another, client location can be monitored using RF technology. This helps to conserve tracker battery life while also eliminating GPS drift or false alerts. This is especially advantageous when supervising clients living in environments where they are in close proximity to neighbors, such as multi-floor apartment buildings or even trailer homes.

Q: *There's also the option of a locator beacon. Tell us about how that works.*

A: The locator beacon is essentially a mechanism for recovering lost equipment. If a tracking unit is removed and motionless for a specific length of time, it establishes one last location fix before shutting down to conserve battery life. As I mentioned before, the tracking unit has an RF receiver in it and the locator beacon serves as an RF transmitter. Once the locator beacon is in range of the tracker, the tracker receives the locator beacon RF signals which allow the unit to turn on its sounder. Then, officers are able to find the tracker's location by following the sounder.

Q: *What specific features of ExacuTrack One will officers find most user-friendly?*

A: With just one piece of equipment, the likelihood of clients leaving the equipment behind or losing it is greatly diminished. In addition, audible messages can be sent to the client, who then must acknowledge them. For example, when battery power becomes low, an audible message can be sent to the client reminding them to charge. These two specific features will help to eliminate client excuses. Officers will also enjoy the product's ability to track clients indoors and the optional RF fencing.
