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## **NAVISEER® Internal GSM/GPRS Radio Capability**

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## NAVISEER® Internal GSM/GPRS Communications Capabilities – New Feature



Current municipal and first responder customers are troubled with older analog RF-based networks currently in place. A large percentage of these customers have updated their wireless handsets to include the capability of digital transmissions, but in many cases, the infrastructure and backbone still operate with analog-only communications protocol. Even with a scheduled upgrade of said backbone systems taking place in the next 5 to 10 years, they often will not have the capability of broadcasting position data over their current RF networks. Therefore, SEER Technology has decided to implement an integrated GSM/GPRS solution into the NAVISEER that will overcome this obstacle by offering real-time tracking and location capability with integrated communications. The GSM-based cellular module implementation for large deployments of users over a wide area will provide NAVISEER-based position tracking of users anywhere within the cellular network broadcast range. The Internal GSM Radio-based NAVISEER will be shipping in quantity in the fourth quarter of 2010.

There has been overwhelming support for the new NAVISEER-GSM solution and broad market acceptance of the increased capabilities that these connectivity solutions offer in many and varied deployment scenarios. The GSM integrated solution will work over a GPRS-based cellular protocol and broadcast NAVISEER position data back to a central or local command center through existing TCP/IP based protocols. Each NAVISEER device will be programmed once for UDP and TCP packet control back to the command center host PC IP address. For command networks that use a DHCP-based configuration, the NAVISEER with integrated GSM will be configured for broadcast over the TCP/IP network through a specific port. This port will be opened at the command center host PC and will continue to listen for correct data packet structures that are used by the NAVISEER proprietary position protocol. Each packet will be analyzed for integrity and user position data updates will be displayed in the SEER 3D visual interface.

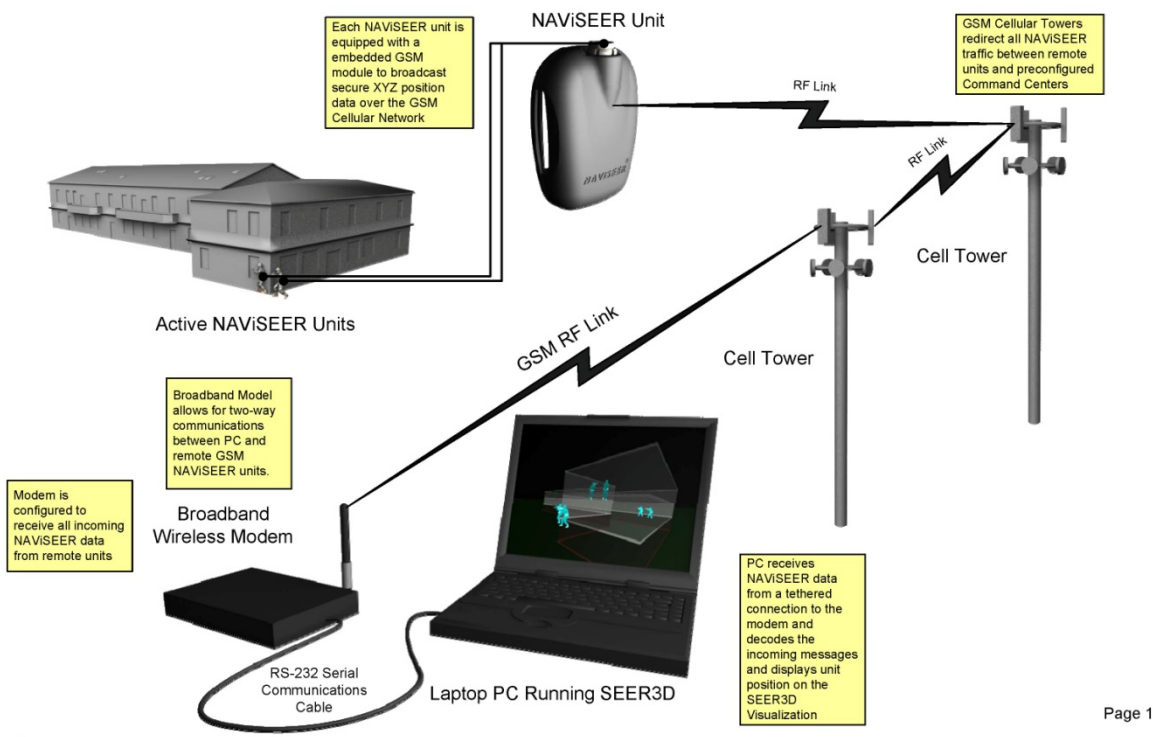
SEER will be announcing comprehensive GSM infrastructure arrangements, including the insertion of SIM cards into the GSM-capable NAVISEER as part of the manufacturing process. A variety of data plans will fit most needs and SEER will have the flexibility to review and modify plans to fit the real-world usage patterns of the end-users. SEER Support will have real-time access to network details during the customer implementations of the NAVISEER, and will maintain this real-time access to up-to-the-minute network information for troubleshooting network or user problems after the initial implementation.

Additionally, SEER is exploring options with providers of portable cellsite technology to provide this capability with NAVISEERS in a complete turn-key private data network offering.

One of the keys to the NAViSEER-GSM/GPRS cellular solution is the ability of the client to implement the solution using commercial off the shelf (COTS) components on the C2 vehicle. This would also allow for replacement or expansion of the solution in a quick and cost-effective way, therefore alleviating the need for a closed communications environment. Security for the location data is afforded via an internal process of encryption of the location data prior to transmission to the C2. This solution would free up the RF bandwidth used for voice traffic and give a primary communications path for consistent position/location data transmission and updates.

## NAViSEER Equipped GSM Units Network Overview

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NAViSEER uses the DIS-based protocol designed by the US military for updating user position between multiple instances of the SEER3D application simultaneously. NAViSEER Controller continuously broadcasts all received position updates over the local IP network to any other SEER3D applications operating in the same IP subnet. This removes the request/poll procedure common with many competing products. As they store information on a central database and then request position updates from a querying system. The DIS protocol removes this and allows every operator running SEER3D to view the situation or scenario in real-time.