Electromagnetic Radiation Source Locating System

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Categories:
- Electrical Engineering
- NSWC Crane

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- Crane
- Detection
- Electrical Engineering
- Measurements
- Radio Frequency
- Signals

Radio frequency detectors are known to detect signal source based upon signal strength or a linear array of sensors that calculate a spatial relationship. However, the need exists for an efficient, comprehensive and dependable locating system to clearly locate, identify, and mark an RF signal source.

Naval Surface Warfare Center, Crane Division (NSWC Crane), has designed, patented, and developed a system for locating electromagnetic radiation sources such as radio frequency (RF) signal sources. This efficient, comprehensive, and dependable locating system clearly locates, identifies, and marks an RF signal source. The exemplary applications of such a locating system include identifying rogue or interfering RF signal sources and tracking down RF signal sources.

Applications for this technology include locating urgent care victims. With today's technology, most people carry cellular phones on or near their person at all times. By combining a COTS signal detector, a directional antenna, a laser range finder, and a UAV, our first responders can detect and locate injured persons with cell phones. In cases when a person is unable to help themselves, these cell phones can be used as a way to help locate the. Wilderness or overgrown urban environments can hamper the location of an immobilized person who may be trapped in a car wreck, unconscious, or otherwise unable to guide emergency services to themselves. This system will enable EMT services to quickly find RF emitters like cell phones.

Advantages:
-Tracking down signals in remote and inhabited areas where cell towers are far between and target signals may be weak or masked.

Potential Applications:
-Telecommunication industry for locating RF signal sources interfering with cellular phone towers
-Rescue personnel to track distress calls

People:

- Miller, Gerald (Project leader)

Intellectual Property:

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