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Electronic Interference from Radio Frequency Identification in Medical Equipment:
Awarepoint Gets a Clean Bill of Health

(June 26, 2008, San Diego, CA)-- The recent June 25, 2008 Journal of the American Medical Association study entitled, *Electronic Interference from Radio Frequency Identification Inducing Hazardous Incidents in Critical Care Medical Equipment*, has initiated concern related to asset tracking and real-time location systems (RTLS) in healthcare environments.

San Diego-based Awarepoint Corporation provides real-time awareness solutions that allow enterprise customers to track their most valuable assets. To address concerns relating to interference, Ron Hegli, Awarepoint's chief technology officer, notes the following:

Frequency
Awarepoint's 802.15.4 ZigBee mesh-based asset tracking and RTLS systems operate at 2.48GHz (channels 1-10 are in the 915MHz area, 11-26 are in the 2.4GHz range). Operating in the Industrial Scientific and Medical (ISM) band also allows the Awarepoint solution to coexist with existing wireless technologies that support telemetry, wireless internet access (Wi-Fi), and patient monitoring (IEEE 802.15.1). Each asset tag and network device operates in an isolated medium by occupying unused portions of the RF spectrum and by occupying unused time-on-the-air. All Awarepoint networks are channel-scan compatible and operate at an average duty cycle less than 1%.

Transmission Power
When implementing new applications, providing reliable communication (as required by the specific application) with transmission power as low as possible should always be considered and is of particular concern in healthcare settings. Awarepoint's mesh technology generates less than 1mW of power (4000 times less power than standard active and passive RFID readers) and can monitor assets up to 300 times the distance required by alternative technologies. According to a follow up article published by RFID Journal on June 25, John Collins, the director of engineering and compliance with the American Society for Healthcare Engineering (ASHE), notes that "power coming from the RFID systems, may have more of an impact on devices than the type of frequency used."

The Awarepoint solution is strategically designed to be safe, offering the lowest transmission power for comparable applications and operating outside the frequency band open to interference, while outperforming alternative solutions in response time and real-time location accuracy.

"Although this study was referring to non-clinical tests, the conclusions derived can still have a pronounced impact on how RFID and RTLS play in patient care environments," says Hegli. "The bottom line is that vendors must take into consideration transmission power, electromagnetic interference and frequency in their underlying technology."

For more information on Awarepoint's ZigBee mesh networking technology, click here to download the whitepaper: *From A-ZigBee, The Truth About Sensor Networks.*