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Vubiq Networks' New Patent Application Enables Orders of Magnitude Greater Bit Density for RFID Tags

Breakthrough millimeter wave technology increases bit density while lowering costs of radio frequency identification tags

IRVINE, CA, December 6, 2018 – Vubiq Networks, Inc., the innovation leader in millimeter wave wireless broadband technology, products and solutions, today announced that it has filed yet another millimeter wave radio frequency identification (RFID) patent application with the U.S. Patent and Trademark Office. The new application is entitled **System and Method for High-Bit Density Millimeter Wave Chipless RFID** and has been assigned the application number 62775479.

The patent application defines advanced, high-bit density chipless RFID technology using the company's polarimetric synthetic aperture radar (SAR) technique that incorporates polarization and phase detection. The new technology will provide orders of magnitude higher bit density for RFID tags as compared to "prior art" or other competitive approaches.

"This patent application, which will represent our fourth RFID patent / patent application, will provide additional worldwide protection for our proprietary RFID technology," said Mike Pettus, founder and CTO of Vubiq Networks. "Our technology lowers costs by enabling the use of low electrical conductivity metals for the antenna elements, avoiding costly silver-based inks. We are able to achieve this because we are not relying on spectral signature response, but instead are relying on radar cross-section and antenna re-radiation mechanisms."

The comprehensive patent application includes "reduction to practice" by addressing both hardware and software applications. It provides for very high density chipless tag data encoding through the use of innovative geometrical layout of the patch antennas as the tag elements. The technology provides for reduced optimized element spacing, providing very high bit density for chipless RFID.

"Our new patent-pending technology not only provides for greater bit density, but also greatly lowers the cost of RFID tags, which is a very important consideration for emerging Internet of Things applications and smart objects," said Vubiq CEO John Dilworth. "This fourth patent application further strengthens our fundamental patents and our position in the synthetic aperture radar RFID market."

Additional millimeter wave RFID patents held by Vubiq Networks include:

- US Patent Number 7460014, issued December 2, 2008 – RFID System Utilizing Parametric Reflective Technology.
- US Patent Number 7498940, issued March 3, 2009 – RFID System Utilizing Parametric Reradiated Technology.
- US Patent Application 62746829, submitted October 17, 2018 – Multimode Millimeter Wave RFID Systems and Methods Thereof.

About Vubiq Networks

Vubiq Networks, Inc. is a privately held millimeter wave innovation company headquartered in Irvine, California. The company designs, manufactures and markets proprietary, high-bandwidth, millimeter wave wireless products, including the HaulPass V10g 10 Gbps V-Band wireless transmission link. Vubiq Networks continues to innovate in the millimeter wave market with solutions in wireless broadband communications, video transport, wireless data center solutions, RFID tag decoding, and synthetic aperture radar applications.

For further information, please visit www.vubiqnetworks.com or contact info@vubiqnetworks.com.