RFID SYSTEM UTILIZING PARAMETRIC REFLECTIVE TECHNOLOGY

ABSTRACT OF THE DISCLOSURE

A system and method for encoding and decoding information by use of radio frequency antennas. The system includes one or more interrogator devices and RFID data tags. The RFID data tags include a plurality of antenna elements which are formed on a substrate or directly on an object. The antenna elements are oriented and have dimensions to provide polarization and phase information, whereby this information represents the encoded information on the RFID tag. The interrogator device scans an area and uses radar imaging technology to create an image of a scanned area. The device receives re-radiated RF signals from the antenna elements on the data tags, whereby the data tags are preferably represented on the image. The re-radiated RF signals preferably include polarization and phase information of each antenna element, whereby the information is utilized using radar signal imaging algorithms to decode the information on the RF data tag.

Figure : 5