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Verayo, Bartronics Unveil Unclonable Solution for Indian ID Market

Topics/Verticals: Security and Access Control, IT/Infrastructure

The two companies are teaming to offer a tag to Indian government and mass-transit agencies for authentic identifications.

By Claire Swedberg

Sept. 1, 2009—Targeting the Indian government's plans to issue unique identification (UID) cards to all of its citizens, automatic-identification product provider Bartronics India and California-based Verayo are joining forces to provide an inexpensive secure RFID tag. The tag could be used by government agencies to link client information with the individual's UID data in a central government-managed database. Independent of the UID program, the tags could be utilized by India's mass-transit agency to provide an unclonable transit ticket that could be purchased and used by transit passengers.

With the UID program led by the Unique Identification Authority, under India's Planning Commission, the nation's central government is preparing to assign a unique ID number (similar to a Social Security number in the United States) to each individual in the country that would remain a permanent identifier from birth to death. Expected to go live in 2010, the program aims to provide ID numbers to 600 million people—approximately half the population—within the first four years. A government central server will store each individual's name and UID number, the names and UID numbers of his or her parents, an expiration date and a photograph.

Thus far, various Indian governmental agencies—such as those involved with regulating health care and or providing driver's licenses—that already issue identification cards could encode those cards with each person's UID number (written to a card's RFID chip or printed onto the card as a bar code). Alternatively, each card could store a unique ID number linked to the cardholder's government UID number. In either case, a governmental agency could store data in a centralized location regarding a citizen and the particular services he or she receives.

The Unique Identification Authority is not endorsing any specific technology, RFID or otherwise. However, Vivek Khandelwal, Verayo's marketing and business development VP, says that in India, "there are multiple government agencies that have been adopting RFID-enabled ID cards, transport tickets, etc. This makes us believe this is a good market for a Verayo low-cost authentication solution." While Khandelwal notes that the government has not expressed a concern related to security in RFID technology, he believes such a concern is prevalent.

With the partnership, Khandelwal says, the two companies hope to provide Indian agencies or commercial interests with an unclonable 13.56 MHz RFID chip, based on the ISO 14443-A standard, for about the same price as a regular, less-secure RFID chip. Verayo's RFID chip includes a security layer known as Physical Unclonable Functions (PUF), which the firm claims renders the chip unclonable (see PUF Technology Catches Clones). The Verayo PUF layer results in a unique signature that can be analyzed to determine if a tag is authentic.

Initially, Verayo marketed the solution to manufacturers and retailers of high-value luxury goods at risk

of being counterfeited. With an RFID interrogator, a consumer purchasing a product—such as a purse, jacket or electronic item—or the retailer could scan that item and view whether the tag (and thus the product to which it was attached) was authentic.

Since then, Verayo has been considering the option of marketing its PUF technology to other sectors where RFID adoption growth is greatest, such as Indian government agencies and mass-transit operators. Here, too, Khandelwal says, there is a demand for an unclonable RFID tag that can be used to verify that an object, such as a mass-transit ticket, is genuine, and not counterfeit.

"In India, we see an uptick in government-led identification solutions," Khandelwal says, "and, therefore, we look at India as an opportunity to step into." Although there are no contracts to sell the tags to government agencies in India, he adds, discussions are currently underway with some agencies.

Typically, Khandelwal says, a Bartronics tag with Verayo security could be embedded in an ID card, encoded with a person's UID number. Alternatively, the tag's 512 bits of memory could be used to store a separate serial number that could be linked to a UID. The tag could also be encoded with other data about the card's owner. Agencies would use an RFID interrogator to read the card's tag in order to verify the card is authentic, and to access cardholder data stored on the centralized government UID database.

Verayo continues to offer its tag as an anticounterfeiting measure for luxury consumer goods, Khandelwal says, adding that the proliferation of cell phones with Near Field Communication (NFC) technology will make the tag more popular, as it would therefore be easily read by consumers to, for instance, provide the authenticity of an expensive product they are buying before they complete the purchase.