

**Regulators in India recently designated 865-867 MHz as the country's UHF RFID spectrum, in line with the frequencies used by the United States and Europe.**

By Jonathan Collins

July 5, 2005—In a move expected to kick-start RFID adoption among Indian companies, regulators in India recently designated UHF RFID spectrum in accordance with the frequencies used by Europe and the United States.

The [Wireless Planning and Coordination \(WPC\)](#) wing of India's Ministry of Communication assigned the 865-867 MHz UHF band for use by radio frequency identification devices. The ruling was part of a process initiated by [EPCglobal India](#), a joint industry-government initiative that is leading the development of electronic product code to support the use of RFID.

"India has a strong export economy, so getting this spectrum was an absolute must," says Ravi Mathur, CEO of EPCglobal India, which is based in New Dehli.

Clearing the spectrum in India will enable Indian manufacturers to tag shipments of goods to meet the UHF RFID requirements of customers in Europe and the United States. Prior to the ruling, each use of the UHF spectrum for RFID required special permission from the WPC. Until now, Mathur maintains, some Indian pharmaceutical companies supplying tagged shipments to [Wal-Mart](#) have been forced to do so after the products have already arrived in the United States, where the UHF spectrum for RFID is 902 MHz to 928 MHz. Because Wal-Mart and other retailers are requiring more of their suppliers to tag shipments of goods, Indian companies will increasingly be expected to tag their exports, as well.

Tags that comply with EPCglobal's Gen 2 standard are designed to operate between 860 MHz to 960 MHz without degradation in performance. Thus, Indian companies will now find it much easier to encode and read tags on goods shipped, regardless of whether those goods are bound for the United States or Europe (where the UHF spectrum for RFID is 865 MHz to 868 MHz).

Being able to use the 865-867 MHz UHF band for RFID will also be a boon to India's high-tech businesses. "The Indian software industry is in a position to be a major provider of RFID systems solutions [to the United States and Europe], but it needs to be able to test and develop RFID. In addition, chip manufacturers are also in discussions about producing RFID chips in India. With the spectrum allocated, Indian companies can work with UHF RFID without requiring special clearance," says Mathur.

EPCglobal India is also hoping to see an Indian university become one of the [Auto-ID Labs](#)—a federation of research universities that has evolved from the now-defunct Auto-ID Center and is dedicated to researching and developing new technologies and applications for revolutionizing global commerce.

India had originally considered allocating 2.4 GHz as the spectrum for UHF RFID, but EPCglobal India argued that having UHF spectrum incompatible with that used by the United States, Europe and other key markets would have seriously limited the ability of India's businesses to stay in step with RFID adoption elsewhere around the world.

"Our objective was to ensure that RFID spectrum in India would [provide] important access to the world markets," says Mathur.

EPCglobal India says its petition to the WPC faced initial opposition from both India's military and railways, which had previously had had access to the 865-867 MHz spectrum. In its application to the authority, EPCglobal says it was supported by allocation of the UHF spectrum that had already taken place in the United States and Europe.