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## Bringing Technology Closer to You

### *The RFID Right to Know Acts*

We must carefully gauge the trade-offs of privacy versus consumer benefits when deliberating the extent to which we limit Radio Frequency Identification (R.F.I.D.) and its usage.

As R.F.I.D. emerges as a cutting edge technology that will transform the entire supply-chain, several bills have been put forth as a means of protecting the consumers from unwanted intrusion of their personal information. [*i.e. HB-251*] It is essential however, to understand that overly constraining the data-mining capacity of an R.F.I.D. infrastructure is not the best means to assure the consumer that his information is safe. Nor is it the most mutually beneficial avenue to take when looking forward to how R.F.I.D. can benefit society as a whole. To understand this we must first understand the technological and logistical nature of R.F.I.D.

An R.F.I.D. tag contains an identification number, just as a barcode does, except the number scheme on a radio frequency tag encompasses a larger data field. Meaning, the scheme on a Radio Frequency tag can uniquely identify a specific item, where as a barcode can only identify a product line. The privacy concern here is that we may now wirelessly read individual items that reside on a human being without their knowledge. But this is where the very nature of science and common logic must lay to rest this misconception.

- The human body is made primary made of water (60%). A standard 915mhz tag, the tag forecasted to be the only type of tag economically feasible enough to support item level tagging, will rarely if ever read when directly placed on or very near the skin (at a range of 2 feet or more), simply because physics itself will not allow it. Alternatively a slightly more expensive 13.56mhz tag may due so, but only at a range of about 20 inches. This itself constrains the capacity as to hiding these reading devices from the consumer.
- Think of a passive RFID tag as just a unique number. To deduce what that number is, requires access to the associate back-end system or information service. At the moment, many companies are using an internal number scheme when writing to these radio frequency tags. However in the coming years the EPC global standard (analogous to the Universal Product Code (UPC) used in barcode) will emerge as the single source for issuing product identification. Hence, reading tags secretly will provide you with a number without knowledge as to what the number is. The EPC infrastructure is set-up in such a way that only trusted parties within the supply-chain may access historical data about that particular item.
- Furthermore, the myth of being able to ride down a neighborhood street and read individuals RFID tags in one's house is outright impossible. Reading a passive tag at that distance, through brick and concrete would require an enormous antenna with a large generator capable of providing enough power to it. Forgoing the fact that the tag reply signal would never be strong enough to exit the home.

However, it is not technological limitation that should play the decisive role in concluding that Radio Frequency Identification is safe and helpful. Rather, it should be the hundreds upon hundreds of invaluable benefits it brings to the supply-chain, consumer included. Benefits that could save and protect lives, benefits that could save millions of dollars, benefits that will improve business.

Strict and unwarranted control of R.F.I.D. is more harmful than lack of it. Empowering a trusted entity to know more about the consumer through the use of radio frequency tags may help in a targeted recall of a counterfeit drugs or a chemically contaminated consumer product. What do we as a consumer give up for something as precious as life, the fact that our pharmacist knows that we bought a counterfeit Celebrex instead of the real one, the fact that our retail store knows we bought a contaminated bar of Irish Spring rather than the regular one we buy. Nothing more, nothing less.

Radio Frequency Identification must not be mistaken for what it's not. The RFID Right to Know Acts must not constrain the essence of how the technology can help society.