

THE PROMISE OF RFID

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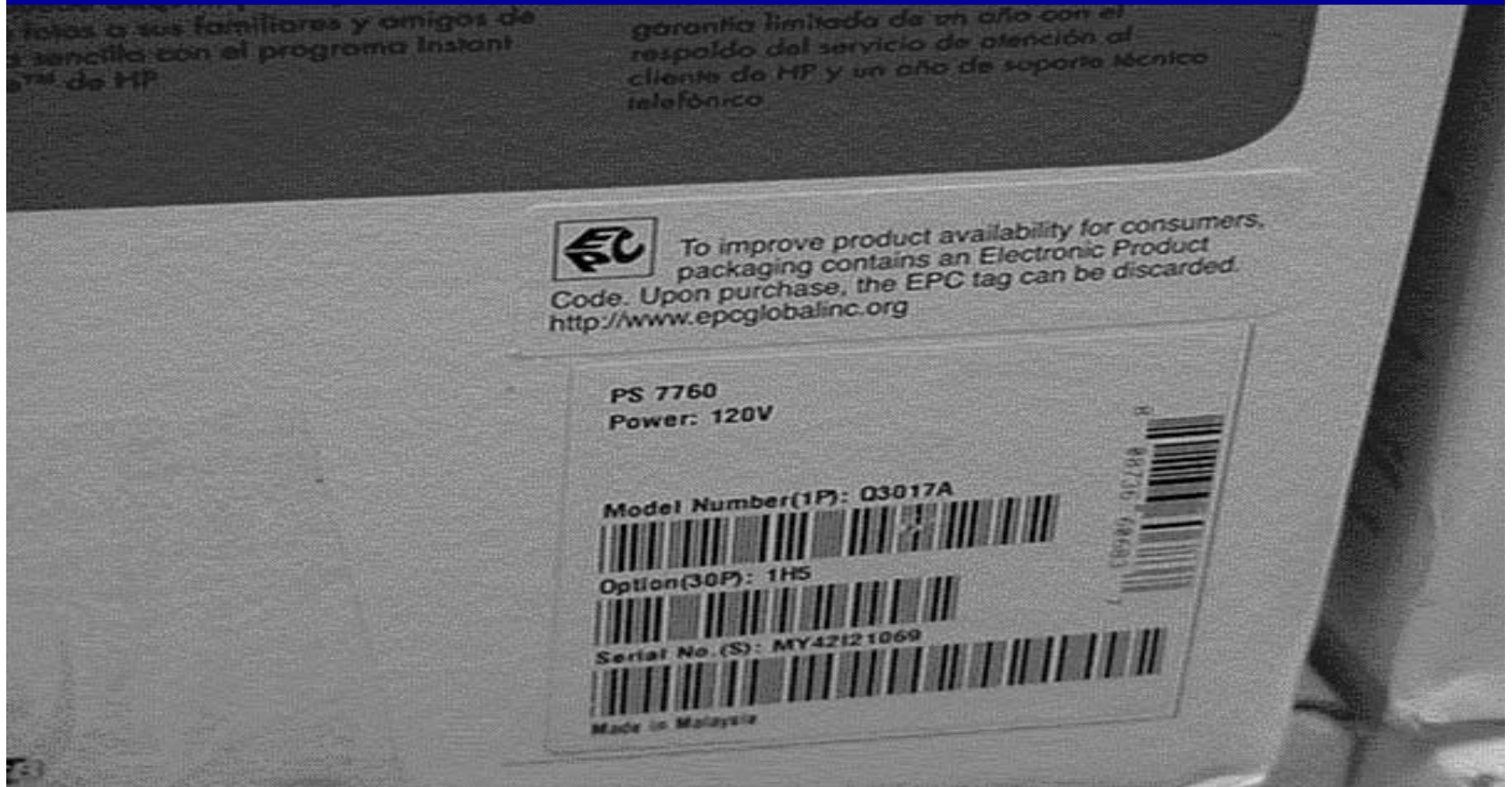
Summary

- 1) RFID can provide potentially huge benefits to consumers, not just lower prices.
- 2) The threats to privacy from RFID are significantly exaggerated.
- 3) Meeting the concerns of the privacy advocates is not costless.
- 4) Given that RFID is only in its initial stages, legislation and regulation is premature.

What is RFID?

- Radio frequency identification devices (RFID) use a tiny computer chip with an antenna to transmit information to a reader.
- In the retail context an RFID tag stores information about a product in the form of a uniquely numbered code, an Electronic Product Code (EPC) that is read by an RFID reader.
- Think of RFID tags as “wireless bar codes”.

An RFID tag attached to the back of a box behind the traditional barcode.



Current Applications

- Because costs are high, applications focus on pallet tracking.
- Wal-Mart requires that by January, 2005 100 of their largest suppliers must put RFID tags on the packaging of large pallets and cases of goods to better monitor the progress of shipments.
- As costs fall, many products, especially ones costing more than a few dollars, could be tagged, either in the packaging or in the product itself. This is not likely to occur within the next few years.

RFID Holds Potentially Large Economic Benefits

- If RFID tags were widely deployed, retailers could reduce standing inventories by 5%, warehouse labor by 7.5%, and product losses by 1% of sales.
- RFID will also facilitate self-service checkout providing considerable savings to stores and other establishments (e.g., libraries).

Other Consumer Benefits

- Products more likely to be in inventory.
- Better product recall.
- Reduced counterfeit products (e.g.. pharmaceuticals) and improved food safety.
- Better disposal of environmentally-hazardous products.

In an attempt to mobilize an anti-RFID public relations campaign, some privacy groups have been raising alarms of hypothetical RFID abuses.

Myth 1) RFID Enables the Creation of Massive Data Bases

“Corporations which compile the data transmitted by the tags could determine which products a consumer purchases, how often products are used, and even where the product – and by extension the consumer – travels. By aggregating data to form consumer profiles, corporations could make inferential assumptions about a consumer's income, health, lifestyle, buying habits, and travels.”

Cédric Laurant, Electronic Privacy Information Center, July 14, 2004 testimony to Subcommittee on Commerce, Trade, and Consumer Protection, House Committee on Energy and Commerce.

“When a consumer purchases a product with an EPC-compliant RFID tag, information about the consumer it could be added to the database automatically. Additional information could be logged in the file as the consumer goes about her business... ‘Entered the Atlanta courthouse at 12:32.’ ‘At Mobil Gas Station at 2:14pm.’”

“Position Statement On Use of RFID On Consumer Products”
CASPIAN (www.privacyrights.org/ar/RFIDposition.htm)



Reality: With Respect to Data Bases RFID Is No Different From Bar Codes

1. When Mary Doe buys a product (e.g., a bottle of shampoo) with a credit card store can already use the bar code and scanner to tie product information to her PII. The only functionality RFID adds is that the store knows that you bought a particular bottle of shampoo.
2. Companies do not aggregate purchasing information in a massive cross-company data base even though they could.

Myth 2) RFID Enables Tracking

“Chips integrated into commonplace products such as floor tiles, shelf paper, cabinets, appliance, exercise equipment, and grocery and packaged products would allow even our most intimate activities to be monitored.”

Cedric Laurent, EPIC (www.epic.org/privacy/rfid/)

“People with RFID chips in their clothing, books, bags, or bodies could be targeted by smart projectiles that will zero in on that particular Smart . . . Imagine being able to bury an explosive in a roadway -- that would only go off when a particular car drove over it. You could bury these bombs months in advance, in any or every major or minor roadway. You could change the targeting whenever you liked (e.g. via driving a radio-equipped car over it and transmitting new instructions to it). You could give it a whole list of cars that it would explode for, or a set of cars and dates.”

John Gilmore, Board Member, Electronic Freedom Foundation

(<http://politechbot.com/pipermail/politech/2004-April/000652.html>)



The Reality:

- Only stores can tie EPC code information to PII.
- If tags are on products and still active after consumers leave the store, identifying these products would require considerable effort and close proximity, and the results would be largely worthless (a code number that would have to be linked to a database and then only tell someone that the person has bought a particular item.)

Even if These Worst-Case Scenarios Were Feasible, Market Forces Make Them Exceedingly Unlikely to Occur

The easiest way for a company to lose business is to publicize PII about their customers or say they are killing tags only to reactive them.

Privacy Is Not Free

- Privacy advocates want to impose their desired level of privacy on the majority of Americans.
- Banning, reducing the functionality or increasing the cost of consumer-level RFID, will raise costs and force consumers to pay higher prices and receive reduced convenience and services.
- Technological mandates on RFIDs, like encryption or more complicated kill devices, will raise the costs of chips and reduce their use.

It's Too Early For Public Policy Action

- The U.S. is the worldwide leader in information technology in part because Americans have accepted the benefits of innovation without trying to control the risks ahead of time.
- RFID is no different. If it's like past roll-outs of IT, things will work out fine with little harm to privacy.
- Industry appears to be well on the way to addressing legitimate privacy issues through their efforts with EPCglobal and other venues.

EPC Global Guidelines

- **Consumer Notice** – Consumers will be given clear notice of the presence of EPC (RFID) tags on products or packaging through the use of an EPC logo or identifier on the products or packaging.
- **Consumer Choice** – Consumers will be informed of the choice that they have to discard, disable or remove EPC tags from the products they acquire.

What Government Can Do

- Make sure that consumers understand the wide array of significant benefits this technology will bring.
- The Federal Trade Commission should work with industry to ensure that they implement the kinds of privacy practices envisioned by groups like EPCglobal.

Conclusion

It's far too early to determine how RFID will be rolled out and what, if any, will be the privacy and consumer protection issues.

As a result, policy makers should respond to this new technology the way they have dealt with all new information technologies: if and when problems arise, address them at the time.

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