



'A fine balance'

- encouraging technology and
protecting privacy

EURIM Planning Workshop, 17 November 2006, Portcullis House

Dr Roger Till, External Relations, GS1 UK



The global language of business

www.gs1.org



**The global
language of
business**

GS1 is a not-for-profit membership-based organisation that develops global standards for the identification of goods and services.

GS1's standards foster **cooperation** and encourage **information-sharing** worldwide.

Thanks to GS1, businesses and organisations can improve the **efficiency** of their supply and demand chains by adding useful information to any exchange of goods or services.

A fully integrated global organisation, GS1 was formed in early **2005** from the joining of EAN International and the Uniform Code Council (UCC).

- **30** years of experience
- **104** member organisations representing **all points** in the supply chain
- Over a **million** companies doing business across **140** countries
- Over **20** represented sectors (Fast Moving Consumer Goods (FMCG), healthcare, transport, defence...)
- Over **5 billion** transactions a day

**GS1 is the most widely used
supply chain standards system in the world.**

Services including helpdesk,
Solution Provider Programme,
events, training, consulting
and UK Data Pool

GS1 Keys

 **GTIN**
Global Trade Item Number

 **GLN**
Global Location Number

 **GRAI**
Global Returnable Asset
Identifier

 **SSCC**
Serial Shipping Container Code

 **GIAI**
Global Individual Asset Identifier

 **GSRN**
Global Service Relation Number

 **GDTI**
Global Document Type Identifier

GS1 Products

 **GS1 BarCodes**

Global data and application standards for bar codes

 **GS1 eCom**

Global standards for electronic business messaging:
GS1 EANCOM and GS1 XML

 **GS1 EPCglobal**

A global standards framework for supply chain
applications and data management, using the
Electronic Product Code (EPC), the EPCglobal Network
and Radio Frequency Identification (RFID)

 **GS1 GDSN**

The Global Data Synchronisation Network (GDSN)
encapsulates data standards, processes and a network of
compliant data pools to capture, manage and synchronise
product data between trading partners globally

Benefits of membership

A simpler way to trade

Know where products are
and have been

Reduce out-of-stocks

Automate the flow
of goods
and information

Eliminate re-keying of
information

**Reduced costs, improved
customer service,
increased sales**



GS1 UK Membership

50xxxxx

Standardised data
descriptions

- a company prefix number is assigned on joining
- prefix used to establish unique keys

- keys used to uniquely identify products, locations, consignments, documents, assets and service relationships

- the keys are used in GS1's products to enable the automated capture, exchange and processing of standard data anywhere in the world

GS1 has a full portfolio of **products**.



Global standards for automatic identification
Rapid and accurate item, asset or location identification



Global standards for electronic business messaging
Rapid, efficient & accurate business data exchange



The environment for global data synchronisation
Standardised, reliable data for effective business transactions

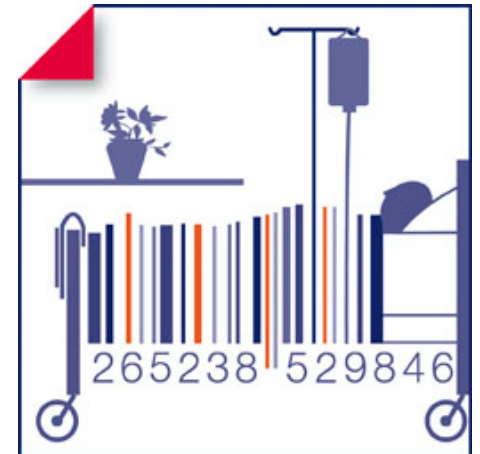


Global standards for RFID-based identification
More accurate, immediate and cost effective visibility of information



Traceability is a robust solution for tracking and tracing items such as food or pharmaceuticals through the supply chain.

Patient Safety ensures the prevention of medical errors and counterfeiting through the healthcare supply chain.



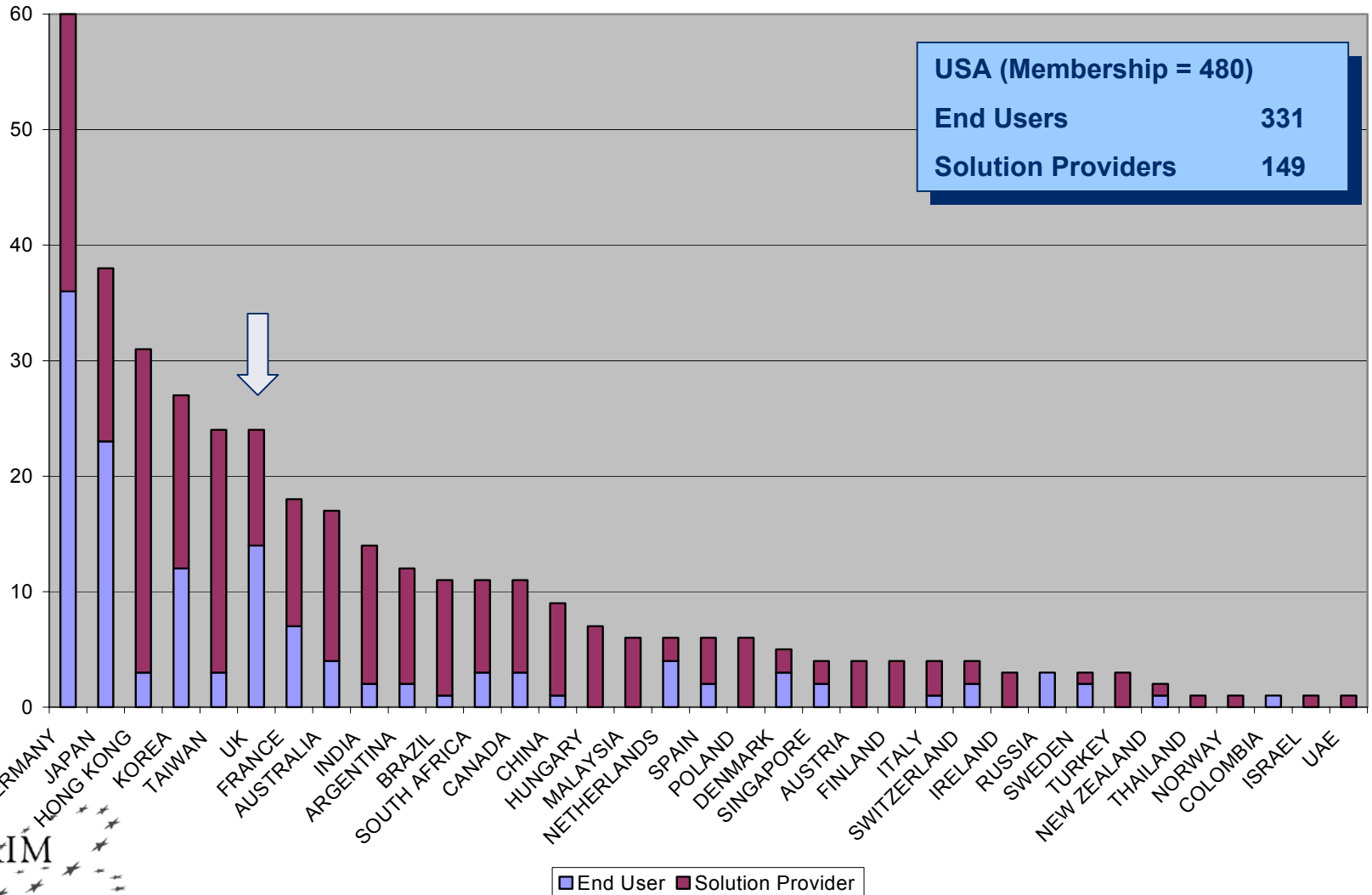
Global standards for RFID-based identification

More accurate, immediate & cost-effective visibility of information



- A global standard system that combines radio frequency identification (RFID) technology, existing communications network infrastructure and the Electronic Product Code (a number for uniquely identifying an item)
- Immediate and automatic identification and tracking of an item through the whole supply chain
- Improved efficiency and visibility in the supply chain

| | June 2004 | June 2005 | June 2006 | % Total |
|------------------------|----------------------|----------------------|----------------------|--------------------|
| Asia | 21 | 117 | 173 | 20% |
| Europe | 36 | 87 | 161 | 19% |
| Latin America | 0 | 5 | 24 | 3% |
| ME & Africa | 2 | 3 | 13 | 2% |
| North America | 132 | 372 | 491 | 57% |
| Total | 191 | 584 | 862 | 100% |



CeBIT – Strong Government support

RFID is a dazzling new technology

.... should open up tremendous opportunities for both economic prosperity and the quality of life of citizens

I am convinced that RFID will change the way in which we work but it will also affect tremendously many other areas of our lives

Viviane Reding
EU Commissioner
INFOSOC



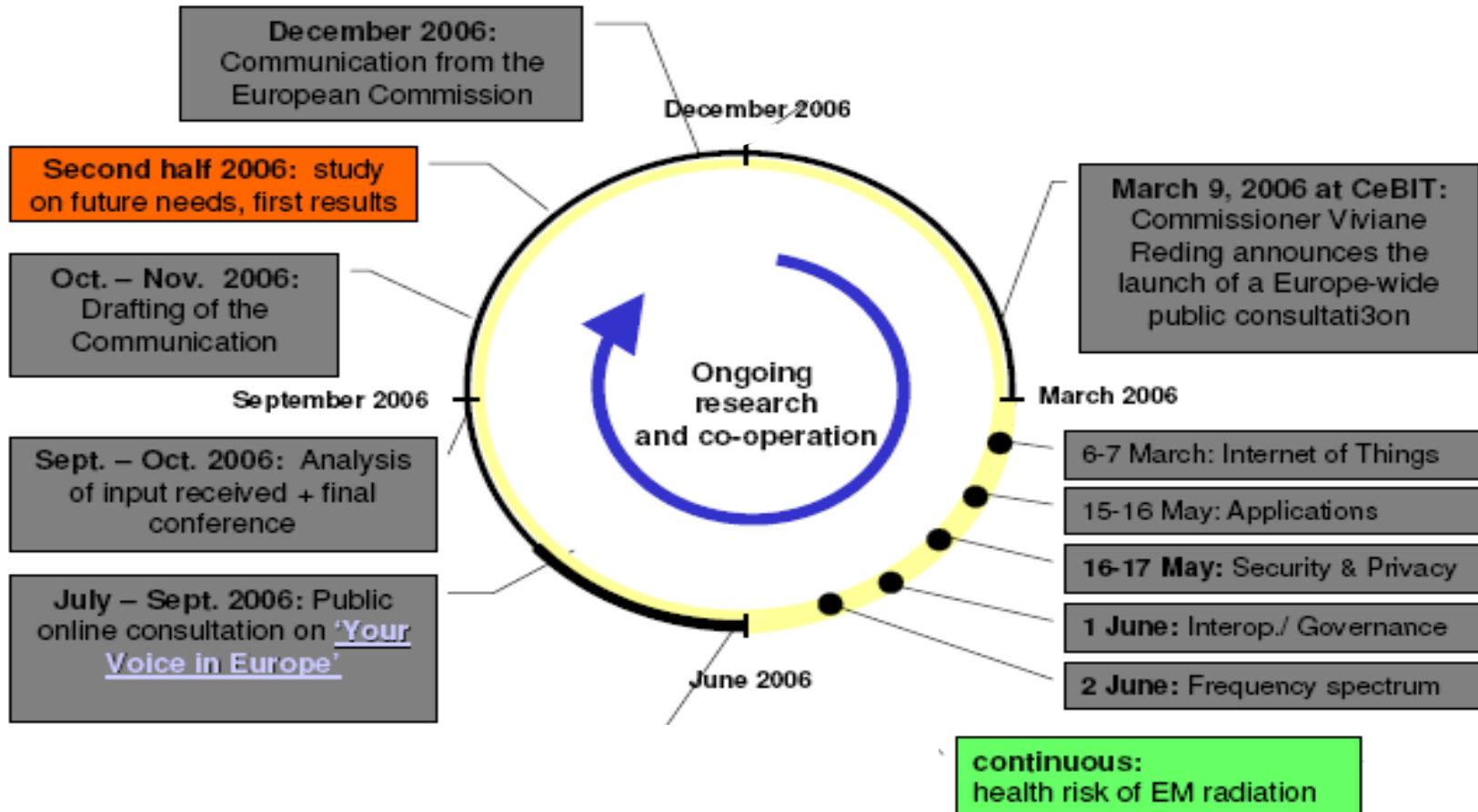
These developments open the door to a new wave of productivity gains....and remember that productivity is the engine of economic growth and job creation.

Angela Merkel
Chancellor
Germany



the Commission has taken the initiative..... to introduce binding EU provisions to open this band to RFID without any further delay and to harmonise the usage conditions

...we will first look at the chances instead of asking ourselves about the risks. I don't want to overlook the risks but I want to say this clear and loud: Germany is in the forefront of many fields; and we do not want to give this position away, by raising concerns; we want to foster the technology



- Commission likely to form Working Groups, after issue of Communication at end of the year
- European Parliament – constructive and pragmatic
- Privacy and security remain at the heart of the EU debate. Clear labelling, disable tags?, opt-in or out?
- Open standards
- Harmonisation of spectrum allocation
- Consumer education and awareness a priority
- Health and environmental aspects (use of EM) must be researched further

Brussels, 16 October 2006

- Creating a task force to draft a white paper on converting codes of conduct into legislation or some other approach
- Dedicating time/effort to educating the public about privacy as relevant to future technologies
- Running more focussed events or workshops examining in greater depth how other countries are addressing privacy issues
- Investigating the area of aggregation of large amounts of data about people and subsequent use to predict patterns of behaviour

- Increasing number of leading organisations are publicising results, for example....

3 days

- **P&G**

- Improving product launches and promotion
- “*The Advantaged Strategy*” – moving beyond an all or nothing approach

16%

- **Wal Mart**

- Improving on shelf availability
- Broad based process improvements

89%

- **DoD**

- Improving “confidence” in the supply chain

99%

- **Baggage tracking**

- Improving control and accuracy

20%

- **Apparel**

- Improving customer availability through improved inventory accuracy and control

- **And many more.....**

RFID Benefits

- **Less out of stocks**
- Reduced inventory
- Reduced shrinkage
- Reduced labour

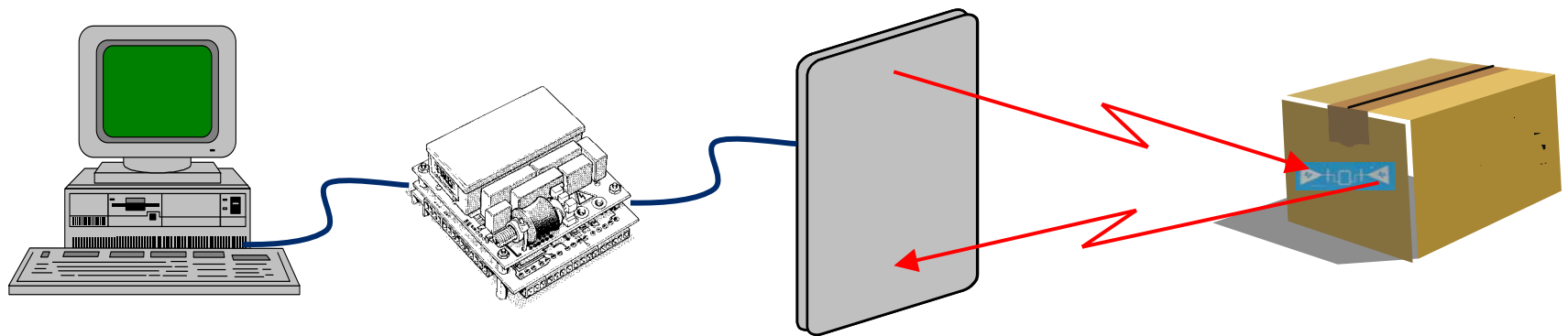
Really Means

- Control of Process
- **Accurate Information**
- Operator Compliance
- Total visibility
- Total traceability
- Competitive Advantage

Why the interest in RFID for supply chain applications?

- Tags do not need line of sight to be read (cf bar code)
- Can read many tags at once
- Tags can easily contain serial numbers, allowing identification of individual physical items
- **Life cycle information/service**

- Countering counterfeiting
- Authentication and safety
 - Food
 - Drugs
 - Recalled products
- Enhanced patient safety
 - Drug pedigree
 - Reduced medication errors
 - Temperature sensitive products
- Improved shopping
 - Better availability of goods, fresher food
 - More efficient after-sales service
- Less waste



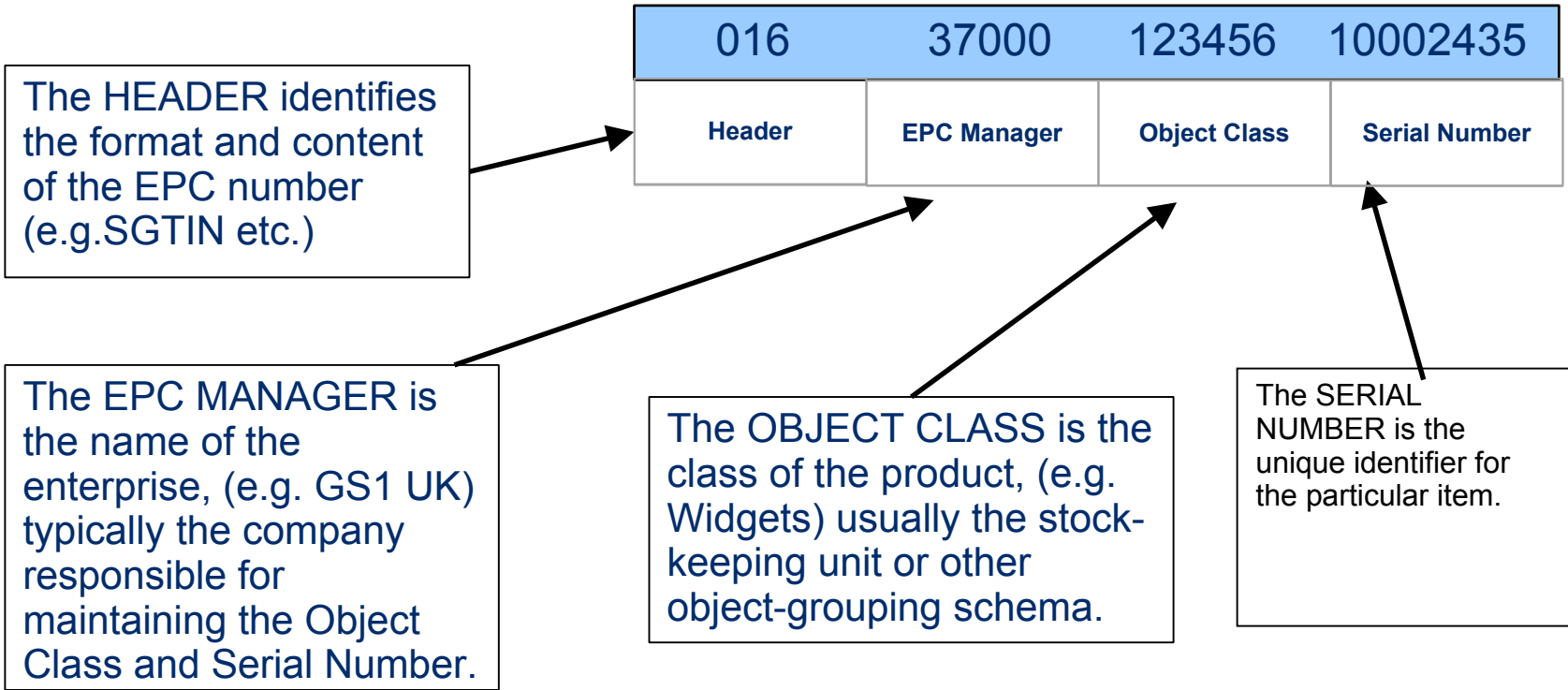
Host

**Reader
Module**

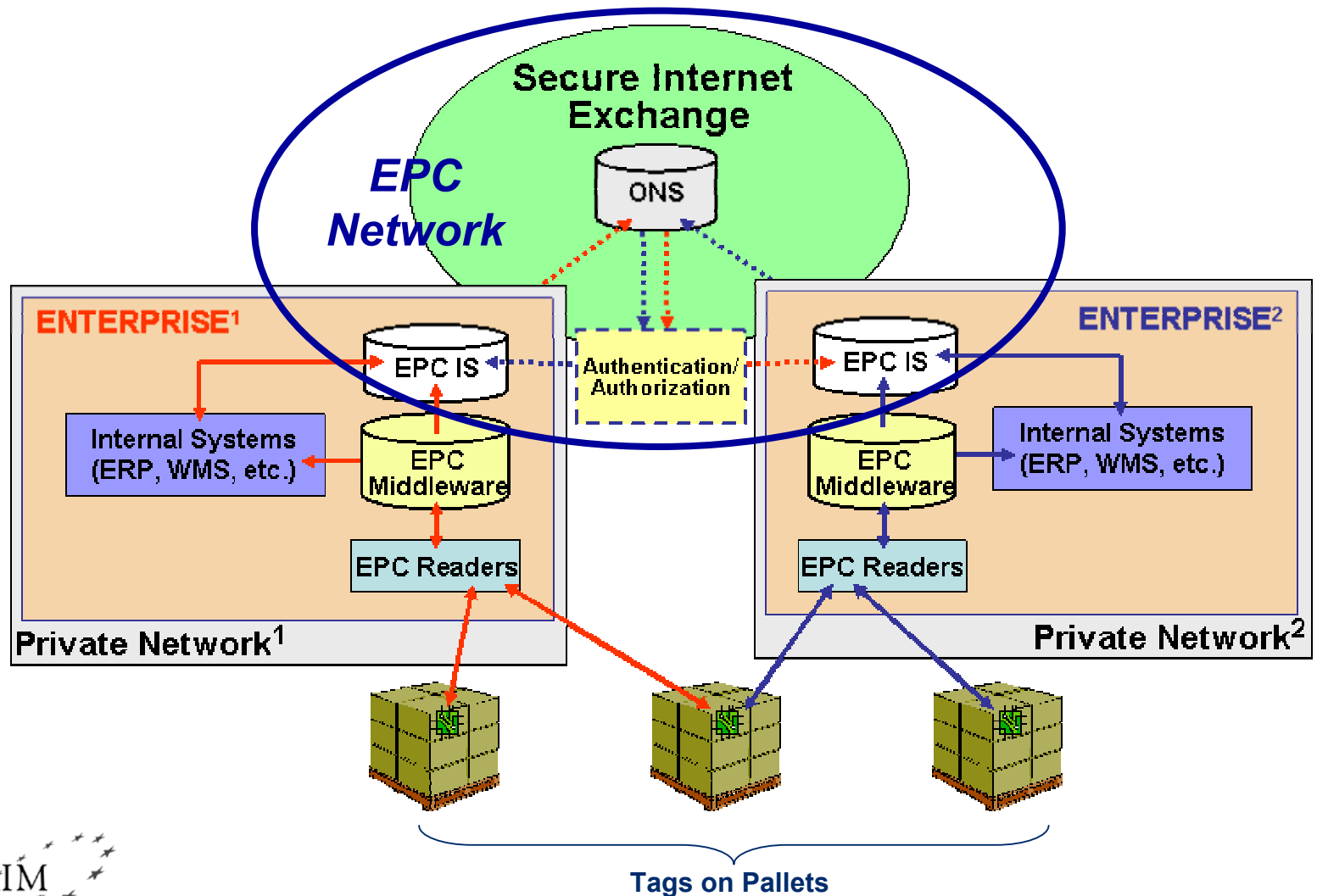
Antenna

Tag

The Electronic Product Code (EPC) format



If the above EPC number existed therefore, it would indicate that the item to which it was attached belonged to GS1 UK (indicated by the identifier 37000), was a packet of Widgets (indicated by the identifier 123456), and was the particular individual packet of widgets, with the unique number 10002435.



- Codes of practice
 - EPCglobal – www.epcglobalinc.org/public/ppsc_guide
 - UK RFID Council - http://www.rfidconsultation.eu/docs/ficheiros/code_release_1_0_120406_logos.pdf - A UK code of practice for the use of radio frequency identification (RFID) in retail outlets
 - .. And of course ... the CDT one
 - EURIM Working Group
- Information
 - Information Commissioner's Office
 - http://www.ico.gov.uk/upload/documents/library/data_protection/introductory/radio_frequency_identification_tags.pdf
 - http://www.ico.gov.uk/upload/documents/library/data_protection/detailed_special_list_guides/radio_frequency_identification_tech_guidance.pdf

- Introduction; What is RFID; RFID tags; Readers; Data & networks; RFID and privacy; Purpose
- Best practice
 - Notice
 - Choice & consent
 - Onward transfer
 - Access
 - SecurityPersonally identifiable information

Visit www.cdt.org/privacy/20060501rfid-best-practices.php

The quality or condition of being secluded from the presence or view of others.

The state of being free from unsanctioned intrusion: *a person's right to privacy.*

The state of being concealed: secrecy.

The right to be let alone.

...there is common agreement that privacy is something that every human being needs at some level and in some degree

...privacy is something that “we” once had, but now it is something that public and private organizations employing the latest information and communications technologies are denying us

...the important point is not that certain information is inherently private, but that we should have a right to control its circulation.

We await Article 29 paper

- Discuss (ie review, confirm/deny, change) my “where we are view”
- Consider how wide a view of RFID we need to take
- Suggested aims for this meeting
 - Agree Objectives
 - Develop a plan of action for the Objectives
 - Agree Outcomes sought (with timescales)
 - Identify sponsors/funding
 - Date of next meeting – and aims

- Who are the stakeholders?
- Do we start with/from the CDT Code?
- Interaction with EU developments
- Support for use of RFID in supply chains

- Identify and publicise practical examples
- Produce a EURIM Brief
- Obtain support and visibility
- Timescale
(the Commission's Communication is due by end 2006)



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