

Date 29.09.2006

Deutsche Post  World Net

MAIL EXPRESS LOGISTICS FINANCE

**DEUTSCHE POST WORLD NET RESPONSE
TO THE COMMISSION ONLINE CONSULTATION ON RFID**

Section 1: Respondent details

Deutsche Post World Net and its integrated Deutsche Post, DHL and Postbank companies offer tailored, customer-focused solutions for the management and transport of goods, information and payments through a global network combined with local expertise. Deutsche Post World Net is also the leading provider of Dialog Marketing services, with a unique portfolio of efficient outsourcing and system solutions for the mail business.

The Group generated revenue of 45 billion euros in 2005. With currently some 500,000 employees in more than 220 countries and territories Deutsche Post World Net is one of the biggest employers worldwide.

Section 2: General Questions

Question 9: There is sufficient information available for interested citizens to come to an informed judgment of RFID pros and cons. Please tick the box that best reflects your view. (Compulsory)

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

Don't know

COMMENTS:

RFID technology is currently more largely tested and used with applications with no direct contact with the end consumers, for instance for the supply chain or in production management. Therefore, the information to the public was to a large extent available in specific business and sectorial media coverage.

However, with the success of RFID technology and its future applications to other domains with a direct contact with the consumers, for instance in public transportation, in retail and in health care, the information on RFID delivered to an extensive business audience and to the general public has now increased tremendously.

Information is crucial. Only complete information will make the consumer to understand the real benefits of RFID technology and of its application in its day-to-day life while answering his questions about the potential risks linked to his privacy, his health or the impact on the environment. In this respect, the media have a key role to play to release well-researched information provided by industry and science to the general public.

Companies using RFID including a direct contact with the consumer, like the retailers, have developed good communication on their own or via other industry platforms. Most of them comply with some industry guidelines to clearly inform consumers about the use of RFID technology and about the choices available to discard or remove the tags (e.g. EPCglobal Consumer Guidelines, CDT).

Whereas our RFID applications in logistics do not directly involve consumers, we are committed to properly informing people. To this end, our Internet website provides clear

information about RFID technology and our logistics applications (See: http://www.dpwn.de/dpwn?tab=1&skin=lo&check=yes&lang=de_EN&xmlFile=2006758).

More specifically, we will inaugurate in November 2006 the DHL Innovation Center open to DHL customers and the public. In the showroom, visitors will be able to learn in concrete how DHL uses RFID to improve supply chain visibility.

Question 10: The application of RFID offers great potential for improving the life of European citizens. Please tick the box that best reflects your view. (Compulsory)

Strongly agree

Disagree

Agree

Strongly disagree

Neutral

Don't know

COMMENTS:

RFID applications in the transport and logistics sectors contribute indirectly to improving the life of the citizens.

In particular, RFID applications in logistics will improve the visibility and the transparency of the supply chain and to accelerate processes and the quality monitoring of logistics. For instance in 2005 and 2006, RFID pilots have been conducted by DHL for tracking (case, pallet, item), for improving inventory, for monitoring the condition of transport (temperature, humidity, shock/vibration) and for certifying the authenticity of the products.

Question 11: A number of forums have developed guidelines on the protection of privacy and, specifically, criteria and standards for promoting respect for consumer privacy in the growing use of RFID technology in commercial applications. Such forums include the Organisation for Economic Cooperation and Development (OECD) and various institutions (ISO, EPCglobal, ETSI, CDT, etc.), most of which are open to participation. Are you aware of these efforts to develop "fair information principles" and RFID best practices? (Compulsory)

Yes

No

COMMENTS:

Deutsche Post World Net is principally member of EPCGlobal and of the Informationsforum RFID.

This participation is essential to ensure that the standards and the guidelines agreed are interoperable and recognized by public institutions and governments across the world. Worldwide logistics and transport operations require interoperable RFID standards in order to be able to use RFID from the beginning to the end of the supply chain whatever the countries and parties (companies, authorities) concerned.

In addition, via these forums, we aim at ensuring a common recognition of the different RFID applications, based on either direct contact between the tag and the end consumer or usage without contact with consumers. RFID applications for the supply chain and logistics do not

involve contact with the private individuals and as such should comply with less specific requirements to protect consumer privacy.

Question 12: Do you think that current European Union data protection and privacy legislation is adequate to deal with privacy and/or security concerns about RFID? If not, what do you think should be done (e.g., modification of existing law, self-regulation)? (Optional)

ANSWER:

Directive 95/46 on personal data protection and the national implementing legislations provide the adequate legal framework to deal with privacy and/or security concerns about RFID. It must be seen as efficient to be a basis for compliance. The technology neutrality of this legislation allows it to cover the constantly evolving RFID applications and technology.

There is currently no need for further regulation.

The present RFID applications used in the transport and logistics businesses do not raise privacy concerns. The tag does not store any personal data but only carries number identifying items throughout the supply chain (e.g. cases and pallets). In addition, such number cannot be freely interpreted and can only be understood by an authorized circle with access to the corresponding databases. Thus, this item level identification per se does not pose any threat to privacy.

Section 3: RFID Use

Question 13: Do you consider that the European Commission should stimulate the implementation of RFID technology in the following application areas (please select your top three or tick last answer): (compulsory)

- | | |
|--|---|
| <input type="checkbox"/> Healthcare | <input type="checkbox"/> Lifestyle and Leisure (skiing, ticketing, museums) |
| <input checked="" type="checkbox"/> Pharmaceuticals | <input type="checkbox"/> Retail |
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Public Transport |
| <input type="checkbox"/> Government - Asset management | <input checked="" type="checkbox"/> Logistics & Goods Transport |
| <input type="checkbox"/> Government - immigration/border control/customs | <input checked="" type="checkbox"/> Supply Chain Management |
| <input type="checkbox"/> Government - Defence and National Security | <input type="checkbox"/> Manufacturing and Processing |
| <input type="checkbox"/> Government - Hazardous Materials Management | <input type="checkbox"/> The European Commission should not stimulate the take-up |
| <input type="checkbox"/> Library Systems | |

COMMENTS:

The European Commission has a role to play alongside the companies and forums in educating the public. In this respect, this consultation should also succeed in conveying a clear and consistent message to the general public on what is RFID, how RFID is used and what are the benefits of RFID to the consumer.

The European Commission could also contribute to finance RFID pilots especially for cross border trials.

In this respect, we are actively involved in EPOSS and believe that this initiative would favor Research & Development in RFID projects, which will enable the improvement of the European industry and of the European competitiveness in general.

Question 14: In healthcare environments (hospitals, elderly care and home care institutions), there is evidence showing that some processes are not always running effectively (wrong medication or treatments, missing surgical equipment, inadequate disinfection...). The European Commission should promote the use of RFID-based solutions in such environments in order to increase patient safety and potentially reduce costs (thanks to improved logistics and management). Please tick the box that best reflects your view: (compulsory)

- Strongly agree
- Agree
- Neutral

- Disagree
- Strongly disagree
- Don't know

Question 15: Do you think that the European Commission should encourage the use of RFID technology for the purpose of identification and tracing in the following areas: (you can tick more than one option) (compulsory)

- Light weapons and other dangerous products?
- Pharmaceutical products (to reduce the risk of counterfeit)?
- Products that require a high reliability (e.g., airplane spare parts)?
- Food safety?
- Electronic Vehicle Identification?
- None of the above?
- Don't know

Question 16: Do you think harmonisation of one or more of the following areas should be pursued through concerted efforts at European level? (Optional)

- The identification and tracking requirements of pharmaceutical products in different EU Member States?
- Transportation ticketing solutions (train, metro, bus)?
- Interoperable electronic number plates that can be used in, for instance, theft preventing systems?
- Toll collection systems?
- Intermodal transport systems, container and shipment tracking systems?

COMMENTS:

RFID technology would only improve the efficiency of logistics operations at a large scale if the RFID standards are interoperable with each other.

Logistics is a fast business with worldwide operations. In a highly competitive global environment, a logistics service provider must, therefore, be able to rely on harmonized RFID standards, which allow the same tag to be operable worldwide. In addition, such standards will allow the logistics service provider to communicate and exchange data with the other actors of the supply chain, namely the producers and the retailers. Thus, the costs can be shared proportionally.

In addition, RFID technology can play a major role for minimizing the administrative obstacles faced when operating logistics business. In this respect, it is, therefore, highly desirable that the customs authorities examine together with the industry how RFID technology can be used to facilitate customs clearance and trade procedures in general.

Global harmonization is the key for the success of global interoperable standards, especially for the general readability of the RFID transponders.

Question 17: Counterfeiting today accounts for 10% of world trade, affects all economic sectors (pharmaceuticals, luxury goods, mechanical products, textiles, etc.) and results in loss of 200 000 jobs per year in Europe. The World Health organisation (WHO) estimated that counterfeit drugs account for 8% to 10% of all pharmaceuticals. Do you think that the European Commission should encourage Member States to define legal, technical and organisational framework dedicated to the prevention and dissuasion of counterfeiting? If yes, please specify how this goal could be achieved.

ANSWER:

RFID technology can offer a valuable tool to the fight against counterfeit. Combined with other technology solutions and a legal and organizational framework, it can contribute to the prevention and dissuasion of counterfeiting. By identifying one item by one specific number, RFID technology can especially trace the product and help in recognizing its authenticity along the supply chain.

Improving the security and monitoring of shipments is also part of the actions to undertake in order to prevent counterfeiting. In this respect, in its continuous effort in research, Deutsche Post World Net developed a prototype of an “*intelligent container*”. An “*intelligent container*” is a thought as a re-usable asset (e.g. a box or a container) equipped with different auto-identification, telecommunication, or logic modules to provide in time information about the status of shipments. Especially companies that transport high-quality goods have shown interest in such a solution.

Section 4: Security, Privacy and Data Protection, and Safety

Question 18: What in your opinion would be the best solution(s) to eliminate or greatly reduce the security, data protection and privacy concerns that may arise from deploying applications of RFID technology? (You can tick more than one option) (Optional)

- | | |
|---|---|
| <input type="checkbox"/> To enact legislation regulating RFID | <input type="checkbox"/> To foster the development of technical solutions allowing to disable RFID tags |
| <input type="checkbox"/> To rely on self regulation and best practices based on the fair information principles | <input checked="" type="checkbox"/> To raise the awareness of consumers through educational campaigns |

COMMENTS:

The application of the existing data privacy rules shall be deemed sufficient to tackle data protection and privacy concerns.

However, raising awareness of consumers through educational campaigns can secure the future RFID deployment across the European industry. Consumer trust and confidence have been and will always be a decisive factor for successful implementation of a technology based innovation. Consumer awareness is a necessary and indispensable prerequisite of the core data protection principle of "*self determination*".

Question 19: If you are in a supermarket, would you prefer a RFID tag related to a product to be: (you can tick more than one option) (optional)

- | | |
|--|--|
| <input type="checkbox"/> A removable sticker attached to the product itself? | <input type="checkbox"/> Part of the product's package box? |
| <input type="checkbox"/> Automatically de-activated at the point of sale? | <input type="checkbox"/> A proximity tag with a very short reading distance of less than 5 cm? |

Question 20: Which maximum reading distance in your opinion could be considered as acceptable for "proximity tags" (i.e. tags which may be read only at short range - less than a few inches or centimetres)? Please specify the application domain (e.g., product tagging) and provide options for maximum reading distance (1cm, 5cm, 10cm, 25cm, 50cm, etc.) (Optional)

ANSWER:

In practice, the reading distance of a tag depends on a number of factors such as the substance of the product which has been tagged, the reading environment, the number of tags in proximity of the reader, the frequency of the tag, the available spectrum and the speed with which the tag passes the reader.

If such "*proximity tags*" were created, they would, therefore, limit the potential business applications of RFID along the supply chain and increase the technical complexity without being more secured and respecting more data privacy.

Given the constantly evolving nature of the technology and its applications, such compulsory reading distance can quickly become obsolete. It can therefore be more effective to encourage the responsible use of RFID technology across the supply chain rather than specify reading distances.

Question 21: How in your opinion should the RFID application provider treat security, data protection and privacy issues? (You can tick more than one option) (Compulsory)

- | | |
|---|---|
| <input checked="" type="checkbox"/> Conduct a risk assessment prior to the technology deployment | <input type="checkbox"/> Leave these issues to the end-users |
| <input checked="" type="checkbox"/> Select RFID systems that provide appropriate security and privacy mechanisms | <input type="checkbox"/> There is no need to address these issues |
| <input checked="" type="checkbox"/> Manage security and privacy properly throughout the whole RFID-enabled business process | |

COMMENTS:

As data protection and privacy are crucial for our company, Deutsche Post World Net generally conducts risk assessments, establishes appropriate security and privacy mechanisms and appropriately manages security and privacy concerns throughout its business processes and in line with the relevant legal requirements applicable at the European level and at the national level. RFID applications involving the collection, processing or usage of personal data will be treated similarly and fully integrated into these mechanisms and procedures.

Question 22: RFID can be used for employee tracking, typically by attaching RFID tags to name badges or security passes. Data capture from RFID tags may sometimes be integrated with personnel files (e.g., linked to employee time sheets, pay records, or health records), thus modifying the traditional balance of personal convenience, workplace safety and security, and individual privacy. In accordance with the current EU laws, employees should always be made aware that personal data is being collected and of how it is used and distributed. Do you feel concerned about the extent of the right of employers to undertake RFID-enabled monitoring of their workforce? (Please tick the box that best reflects your view) (Compulsory)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Very strongly | <input type="checkbox"/> Not very strongly |
| <input type="checkbox"/> Fairly strongly | <input type="checkbox"/> Don't know |

COMMENTS:

We are specifically aware of the sensitivity of RFID deployment in connection with the individual workplace environment and closely monitor compliance with all applicable data protection, labor and collective labor law regulations which provide protection against unjustified and excessive monitoring of workforce.

Question 23: Do you think that privacy enhancing technologies in RFID applications should: (optional)

- | | |
|--|--|
| <input type="checkbox"/> be promoted at European level? | <input checked="" type="checkbox"/> be left to the market? |
| <input type="checkbox"/> be made mandatory (e.g., "privacy by design" rule)? | |

COMMENTS:

The well-established data protection regulatory framework, both on EU and on national level, gives a satisfactory answer to tackle the privacy concerns, which may be generated by the RFID applications including direct contact with the end consumer.

Privacy enhancing technologies (PETs) in RFID should, therefore, to the largest extent be left to the market. As there will be a multitude of technically different RFID applications adapted to the needs of the various economic sectors, the companies/sectors concerned will be also allowed to develop PETs in a most flexible when required complying with the data protection and privacy legal provisions.

In this respect, the financing support of the European Commission for the development of PETs at the European level may well be useful.

Question 24: How do you think the end-user should be informed that RFID applications are being used? (Compulsory)

Notification by the RFID user (e.g., labels for compliance with best practices or independently set standards)

Notification under third party certification (e.g., labels for compliance with best practices or independently set standards)

COMMENTS:

The development of RFID applications for consumers is at a too early stage in order to make a choice between the two options given. The development of the market for RFID would help to determine whether end-users prefer to be informed by the RFID user (the deploying company itself) or whether notification under third party certification is the preferable way for creation of consumer confidence and trust.

Section 5: Standardisation and Interoperability

Question 25: Do you think that the European Commission should stimulate and support initiatives that lead to global harmonisation of RFID standards? Please tick the box that best reflects your view (compulsory)

Strongly agree

Disagree

Agree

Strongly disagree

Neutral

Don't know

COMMENTS:

Deutsche Post World Net/DHL transports goods rapidly, safely and on time. Our network covers 120,000 destinations on five continents.

RFID represents for our transport and logistics business a unique opportunity to enhance the visibility and the transparency of our operations. However, this will only be achieved, if there are RFID standards to secure the interoperability of the RFID technology when moving goods from one country to another, from one continent to another.

Without global harmonization of RFID standards, the benefit of this technology for the EU economy and for the consumer will be lost.

In this respect, the European Commission has an active role to play in this effort towards global harmonization by avoiding divergent European national regulations, by encouraging the exchange of knowledge, by bringing together the standardization organizations and by developing cross-border trials.

Question 26: Do you think that the European Commission should take a more active role in setting RFID standards? (Optional)

Yes

Question 27: If yes, would you say that the European Commission should: (optional)

- | | |
|---|---|
| <input checked="" type="checkbox"/> bring together stakeholders in standard setting activities? | <input type="checkbox"/> support the development of certification services? |
| <input type="checkbox"/> mandate standards? | <input type="checkbox"/> assess whether standards are in compliance with European cultures and values (e.g., privacy and data protection, small or medium-sized enterprise requirements)? |
| <input checked="" type="checkbox"/> align European Union standards with those of other regions of the world | |

COMMENTS:

Standards should be established by the business in order to better reflect the need of each specific sector (e.g. retail sector, logistics sector, pharmaceuticals sector) and to allow much more flexibility in the way to adapt those standards in response to the constant evolution of the technology.

The European Commission should, however, make sure that the different initiatives of standardization would not lead to a complex and ineffective framework with standards not interoperable. This action should also be required outside the EU, especially vis-à-vis the American and the future Chinese and Indian standards.

Question 28: The small size of the tags implies that it is difficult to display regulatory information on them (this includes - but not only specific to- spectrum regulation). Regarding in particular the R&TTE Directive requirements, do you think that mechanisms using the CE mark or its principle, could be adequate ? Please specify (optional)

ANSWER:

Using CE mechanisms to mark RFID tags seems not to be feasible not only because of the size and format of some transponders but also because of the type and purpose of some RFID applications (e.g. applications that are security related).

It would be more appropriate to apply marking to the reading equipment for the tag rather than to the tags themselves.

Section 6: Frequency Spectrum

Question 29: The European Commission has proposed an EC Decision on UHF spectrum harmonisation for RFIDs (865 - 868 MHz) in order to accelerate the establishment of a fully functioning internal market for these devices and to provide legal certainty throughout the European Union. This proposed EC Decision should be applied into national law by the respective Member States by the end of 2006. Do you believe this regulatory action is sufficient to provide a favourable environment for the initial deployment of UHF RFIDs? (optional)

Yes

No

COMMENTS:

The EC decision on UHF spectrum represents a major step towards the harmonized adaptation of the national frequency plans for RFID applications and provides the legal certainty that is necessary for its development.

Nevertheless, the narrow spectrum band available combined with the obligation to use the «listen before talk» protocol already impede the widespread large-scale implementation of RFID pilots.

Question 30: If yes, how long do you think can industry reasonably operate within the limitation of the 3 MHz set across the European Union for RFID UHF bandwidth (of which 2 MHz can be used at power level up to 2 watts) without congestion? Please tick the box that best reflects your view. (optional)

Less than 3 years

Between 3 and 5 years

Between 5 and 10 years

COMMENTS:

Considering that the widespread use of RFID applications would probably take about five years in supply chain management and another five years in other areas (like wholesale and retail industry), the RFID UHF bandwidth could reasonably operate more than 10 years without congestion.

Question 31: It is likely that additional UHF spectrum will be needed as UHF RFID technology will mature and become virtually ubiquitous in the whole society. Do you agree that this prospect is not so remote? (optional)

Yes

No

COMMENTS:

It is obvious that UHF based RFID technology has made good progress in the past 3-4- years, based on the interest of major global retail companies. UHF offers the advantage of fast data transmission and a long read range compared to HF (but in turn HF also shows some specific technical advantages). In light of the growing use of UHF, technology suppliers already optimize and standardize their system. A wider use of UHF based applications therefore does seem to be very likely in the near future.

Question 32: If yes, when do you think we would run out of the currently allocated spectrum? What could be the best candidate spectrum bands for an extension? What is the level of global compatibility/co-ordination that would be required? (Optional)

ANSWER:

Considering the number of interfering factors, it is rather difficult to estimate when the current availability of the radio spectrum will not be sufficient for the development of RFID applications and the improvement of RFID technology.

However, prospect of congestion could already have a negative influence on the investments in RFID and, thus, have a direct impact on the competitiveness of the European economy. Therefore, RFID technology suppliers and the concerned authorities (the European Commission and the member States) have to find already now a workable solution for radio spectrum to secure the users' needs of tomorrow and the investment of today. There are currently two main solutions explored, i.e. giving dedicated channels to RFID with RFID-specific reader synchronization or giving additional channels to RFID. In case the second solution is implemented, RFID radio spectrum band should then be expanded between 860-960 MHz in Europe and 910-920 MHz in other regions to allow current UHF broad-spectrum tags to continue to function effectively.

International co-ordination is also essential when tackling the question of radio spectrum allocation in order to ensure that efficiency gains through RFID technology is applicable to global trade.

Question 33: Whenever long-term spectrum needs cannot be identified using straightforward methods, an alternative would be to start by a macro economic and societal impact assessment of the underlying applications and then to derive indirectly the associated spectrum requirements. How in your opinion could such macro economic and societal impact assessment be done? Please tick the box that best reflects your view. (Optional)



Study



Research project



Industrial co-operation



A combination of the three options above

COMMENTS:

EPoSS, for instance, is an adequate European research platform to perform macro economic and societal impact assessment to identify the spectrum requirements.

Section 7: Research

Question 34: Research and Development in the RFID field covers the elementary technological blocks needed to create the "smart tags" of the future and system integration and delivery of "end-to-end systems". Which in your opinion are the research topics which the European Commission should support in priority? Please select up to 3 options (optional)

- | | |
|--|--|
| <input type="checkbox"/> Organic electronics and organic RFID devices | <input checked="" type="checkbox"/> The use of RFID and other identification technologies to provide enterprises with the ability to sense events and to respond in the most adapted manner to their competitive environment thanks to near real-time information and adapted supply chain processes |
| <input checked="" type="checkbox"/> The integration of smart sensors and actuators with RFID devices | <input checked="" type="checkbox"/> Innovative applications and services such as the use of RFID technology to make road transport safer, to help blind and impaired people on streets and in shops, to enhance the efficiency of logistics and business processes... |
| <input type="checkbox"/> The removal of the technological hurdles of the existing silicon based RFID generation | <input type="checkbox"/> Privacy enhancing technologies such as encryption and authentication |
| <input type="checkbox"/> New systems of item identification to connect every day objects and devices to large databases and networks and to the Internet | |

Question 35: The European Commission should support SMEs by investing in awareness raising campaigns, in establishing vendor independent competence and training centres, and/or in promoting the development of RFID applications based on identified best practices (optional)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Strongly agree | <input type="checkbox"/> Disagree |
| <input checked="" type="checkbox"/> Agree | <input type="checkbox"/> Strongly disagree |
| <input checked="" type="checkbox"/> Neutral | <input type="checkbox"/> Don't know |

COMMENTS:

The Project BRIDGE offers, for instance, to European SMEs good training for adopting and implementing RFID.

Question 36: In the future, technology is expected to allow consumers and citizens to look up on the Internet additional information by entering the RFID number affixed to the product bought (e.g., for warranty purposes, further product and production information, maintenance information). When such an "Internet of Things" comes into widespread use, its governance model should be built on transparent, fair and non discriminatory international principles, free of commercial interest (optional)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Strongly agree | <input type="checkbox"/> Disagree |
| <input checked="" type="checkbox"/> Agree | <input type="checkbox"/> Strongly disagree |
| <input checked="" type="checkbox"/> Neutral | |

COMMENTS:

Part of the vision of the “*Internet of Things*” from a logistics perspective is the “*intelligent package*”. This package will be given the “*knowledge*” of where it is going by storing this target information in a transponder attached to it. This will enable the package to navigate its own way through a logistics network. With control commands integrated into the transponder, the freight will also control the systems to reach its destination.

However, this vision will only come true if the suitable governance model is in place. This transparent, fair and non-discriminatory framework should be particularly attentive to make the technology compatible and interoperable worldwide in order to meet the business needs.

Question 37: Do you have comments on any other aspects which are not covered in the above questions and which you consider to be important? (Please note that such comments should be limited to issues which relate directly to RFID systems) (Optional)

COMMENTS:

Please refer to the above comments.

Question 38: How did you perceive this questionnaire? (optional)



Expectations met



Expectations not met