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Partners:



The Regulatory Framework for RFID

Results and Recommendations

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CE RFID

Radio Frequency Identification (RFID) is an outstanding key technology for Europe. RFID uses tags, readers and computer systems to transmit data wirelessly without contact or line of sight. European companies are at the forefront of RFID technology development and are continuously promoting the economic and social value of RFID.

European RFID users and vendors have launched the initiative “Coordinating European Efforts for Promoting the European RFID Value Chain” (CE RFID). CE RFID aims at improving the market conditions for RFID technology and at strengthening the development of the technology in Europe. The initiative was funded by the European Commission within the 6th Framework Programme.

The activities of CE RFID centred around five main topics:

- ▶ RFID application and technology roadmap
- ▶ European RFID research & development policy
- ▶ RFID standards and radio regulations
- ▶ RFID application and implementation guidelines, and
- ▶ Regulatory framework for RFID.

About 200 European experts from different stakeholder groups contributed to the work of CE RFID by participating in workshops or by reviewing reports, thus ensuring that the detailed recommendations for a supportive European policy on RFID are based on a broad societal basis.

The brochure highlights the results of CE RFID regarding the regulatory framework for RFID. This work package was lead by Deutsche Post World Net.

Challenges

The following topics were identified as the most relevant ones concerning the regulatory framework applicable to RFID:

Data protection and data security: In most cases, RFID tags do not contain personal data and RFID applications do not involve personal data. Some of the applications may, however, potentially enable a link to personal data and could cause the risk of disclosure of private information to unwanted parties. A wide range of laws, especially the “Data Protection Directive”, provide EU data protection rules. Any RFID application involving personal data needs to comply with the requirements of the “Data Protection Directive” and related legislations. Technical measures are also highly advised to secure data involved in RFID applications.

Standardisation and radio spectrum: First, there is a lack of radio spectrum harmonisation. Secondly, the availability of radio spectrum ranges is narrower in Europe than in other regions of the world. Besides, harmonised international standards are required to avoid the hindering of progression.

Intellectual Property Rights: The right to be granted a patent on technical innovations or a copyright on a certain piece of work is essential to promote progress. However, if in an attempt to make the system interoperable, patented technologies are promoted as standard solutions, competition could be hindered.

Health and Environment: The future widespread deployment of RFID applications especially raises the question of the recycling of the tags in accordance with the European rules on electronics waste recycling. In addition, RFID technology needs to comply with the existing rules for limiting the exposure of humans to electromagnetic fields (EMF).

Governance: If the “Internet of Things” is to be successfully accomplished, the data storage systems should be ethically and securely managed and the processes should remain interoperable and non-discriminatory.

Major results and recommendations

On the basis of the analysis carried out in CE RFID, the following recommendations have been proposed:

The protection of personal data should be ensured without imposing unreasonable burdens upon the RFID users

With regard to privacy and security, the current legal framework is sufficient for existing and currently known future RFID applications. The major focus should therefore be put on the enforcement and monitoring of the current legal requirements. Technical and organisational measures are important to enhance data protection and data security: Privacy Impact Assessments and tag design with embedded privacy features (“Privacy by design”) shall be encouraged before the implementation of an RFID application. Consent of the data subject is essential: citizens and consumers should be able to agree on using RFID applications involving their personal data without imposing unbearable burdens upon retailers or manufacturers. In this respect, considering the lack of general knowledge about RFID technology and its applications, public information on the use of RFID is crucial. Finally, the deployment of RFID in the workplace raises specific concerns that can be addressed by guidelines and close cooperation of companies with their employee representations. In principle, industry guidelines on data protection and data security for the development of RFID applications should help companies to comply with data protection rules.

Ensure an appropriate radio spectrum framework

EU efforts should focus on harmonising the existing technical requirements for the progress of RFID and fostering the spectrum access for border-crossing RFID applications. Interoperable and suitable security standards should be developed.

Follow an international approach with regards to IPR

Concerning Intellectual Property Rights, political efforts to come closer to a genuine Community Patent shall be continued. Global platforms, international debates and private approaches on how to manage IPR shall be encouraged. As for other technologies, ways have to be found to balance technology inventors’, developers’ as well as manufacturers’ interests against the interests of public and corporate users to be able to employ standard solutions without high costs in terms of fees and royalties.

Assess the environmental impact of RFID

Legislation in the fields of Health and Environment covers existing and currently known future RFID applications. RFID technology can also play a great role in the development of environment friendly policies.

Keep a close dialogue on governance topics with all relevant stakeholders

Governance structures should be discussed in a broad scope, open for all ideas and requirements. This dialogue should include all relevant stakeholders and use international forums. Institutions such as EPCglobal should be approached and the European Commission should encourage further scientific research.

Further reading

All CE RFID reports are available in the internet: www.rfid-in-action.eu.

In addition to the reports, the partners of CE RFID have published a summary of the findings in the book: Gerd Wolfram, Birgit Gamp, Peter Gabriel (eds.): The RFID Roadmap: The Next Steps for Europe. Springer: Berlin/Heidelberg 2008

Responsible partners

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