

Contract Number 235542

RACE networkRFID

FP7 Thematic Network
ICT-PSP: a European concerted effort on RFID

D4.4 – Security, Privacy and Safety issues and requirements report

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Dissemination Level		
PU	Public	PU
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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Introduction

Some RFID applications make a direct and positive contribution to Security, Privacy and Safety. It has to be recognized that in order to promote widespread and growing adoption of RFID applications these applications like so many other technologies need to be designed, implemented and monitored for their impacts with respect to security, privacy and safety.

Security can assist with privacy and broader concerns about potential threats to information and physical security related to RFID deployment. The unanswered questions are which elements of security need universal application, which need targeted and, which may undermine or weaken security and/or RFID adoption? The breadth and speed of RFID adoption is susceptible to impediments to costs and to performance, both of which are commonly related to complexity. Security measures generally equate to complexity. Further universal application of security measures can lead to the premature diminishing of the security measure effectiveness, examples of which make media headlines around the world continually.

Privacy equates to data protection of personal information for a number of stakeholders. For other stakeholders privacy goes beyond data protection to cover the broader aspects which pose potential threats either real or perceived, being related to information or physical objects. While there are issues to be addressed by considering data protection of personal information the widespread adoption of RFID will be impeded in some way or other by not gathering a more comprehensive answer to these wider concerns.

Safety covers a number of areas some of which relate to long term exposure to electromagnetic fields of RFID systems through to areas overlapping with security such as the threats to individuals or their property from illegal activities. While privacy and security by design is a popular expression it is essential to the future success of RFID applications and others using wireless technology that safety and the 'precautionary principle' is universally implemented from application design through to the applications end of life.

Deliverable number: D4.4							
Deliverable title: Security, Privacy and Safety issues and requirements report							
Dissemination level (i): P				Nature of the Deliverable (ii): R			
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Participant no. contributing to the deliverable	5	2	7	11	14	18	20
Participant short name	ETSI	GS1	IBERLOG	ELTRUN-AUEB	UNIMAN	VTT	RAND EUROPE
Participant no. contributing to the deliverable	21	22	25	12			
Participant short name	SINTEF	RFID NORDIC	INTER NET	RFIDsec			
Deliverable description and objectives to be achieved (iii): The Thematic Network will identify and report the issues and requirements on RFID Applications and Services Security, Privacy and Safety.							

Progress

The main progress on the topic of RFID related privacy has been through the contribution to the PIA developed under the Informal RFID Recommendation Implementation working group and lead by GS1 (a RACE networkRFID member).

With respect to RFID applications and services security there has been considerable effort invested in moving forward the ETSI TISPAN WG7 Work Item (WI) related to RFID and RFID application interfaces (otherwise referred to within the WI as Radio Identification Equipment (RIE)) with Next Generation Networks (NGN). With a growing number of RFID applications relying upon NGNs and the potential for RFIDs future use by private individuals in the home and on the move there is a need for alignment between RFID and the NGN in terms of privacy and security. The goal of this initiative is to ensure that NGN is protected from RFID systems and applications and thereby provides effective reassurance to NGN operators and users. The reassurance is offered through analysis of the security and privacy threats and aligned with the objectives of EC RFID Mandate M436 and the European RFID Recommendation on RFID Security and Privacy. The initiative also offers the potential to indirectly protect RFID operators when using the NGN from malicious attacks upon RFID systems and system components.

There is some scepticism within ETSI groups responsible for issues related to radio spectrum about the need for the TISPAN WG7 RFID related Work Item. In general these same groups share a similar scepticism for Mandate M436 and the European RFID Recommendation, being in denial that RFID has any relationship to privacy. The participation of these sceptics has slowed the progress of the WI. This underlines the need to use a standardisation process enabling to work by consensus on difficult and sensitive subjects like RFID Security and Privacy where the interest of different stakeholders are not converging but need all to follow the European Regulatory Framework that fosters adoption of Security by Design RFID Solutions.

Deliverables

November 2008, ETSI TISPAN WG7 Work Item 07042 was approved

December 2008, ETSI TISPAN WG7 Work Item 07042 held their first informal meeting

February 2009, ETSI TISPAN WG7 Work Item 07042 was first an agenda item with WG7 meeting

April 2009 – now, ETSI TISPAN WG7 Work Item 07042 Draft EN document advanced

October 2009, ETSI TISPAN WG7 Work Item 07044 was approved in preparation for Specialist Task Force STF in response to Mandate M436, Phase 1

February 2010, European Standards Organizations appoint an ETSI STF and Coordination Group (CG) to address Mandate M436, Phase 1

Planned Activities to M24

It is proposed to survey members of RACE networkRFID to gather together information on RFID application security, privacy and safety. This activity will be scheduled between to coincide with the start of the activities related to Mandate M436, Phase1. Further actions will depend upon the information received from RACE networkRFID members and taking into consideration related activities underway within the European Standards Organizations (ESOs).