



CEN/TC278/WG1 & ISO/TC204/WG5 Status report to CEN/TC278 March 2012

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FprCEN/TS 16439 Security framework

- **Objectives**

- Security framework, defining a framework and necessary elements for interoperable EFC systems
- Support for the European Electronic Toll Service

- **Scope**

- Threat analysis – asset-based and attack-based assessment
- Requirements specification
- Security measures focusing on the interoperable interfaces
- Trust model and Basic key management requirements

- **Status**

- WI adopted in Feb 2011 (TC278 N2429)
- TC review completed (TC278 N2549 in 2011-09)
- Internet Engineering Task Force's specifications normative (TC278 N2656)
- CRR (TC278 N2654)
- **Draft submitted 2012-03 for FV (WG N1524)**

- Drafting is supported by PT133

CEN ISO/TS 17444-1 Charging performance – Part 1: Metrics

- **Objectives**

- Charging performance metrics for discrete and continuous charging schemes to support procurement and service level agreements

- **Scope**

- Charging performance metrics information:
 - Charge reports
 - Toll declarations
 - Billing details
 - Invoicing Accuracy on the level of user accounts.

- **Status**

- WI adopted in Feb 2011 (TC278 N2430)
- For TC information (TC278 N2522) and internal WG review, closing on 2011-08-31. ISO NP adopted in 2011-08 (TC204 N2830).
- CEN TC review / ISO working draft comments: TC278 N2607
- CRR (TC278 N2651)
- **Draft (WG N1572) submitted in 2012-02 for parallel CEN FV / ISO DTS ballot**

- Drafting is supported by PT134

prCEN TR WI 278315 Guidelines for EFC-applications based on in-vehicle ITS stations

- **Objective :**

- Assessment of the technical and operational feasibility of using a generic ITS Station @ ETSI EN 302 665 "ITS - Com arch" for EFC applications

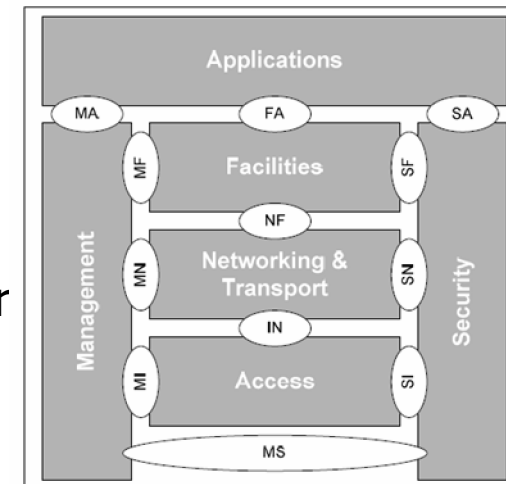
- **Scope**

- Comparison of the ITS and EFC architectures
- Core requirements for operation of an EFC app on an ITS Station
- Potential synergies between EFC and ITS applications
- Requirements for the ITS Station to support EFC apps
- Recs on standards needed to support deployment of or actions to reduce barriers for deployment of EFC applications on an ITS Station

- **Status and target**

- WI adopted in 2011-08 (TC278 N2538)
- TC review: 2012-02
- FV: 2012-08

- EC grant application signed in Dec 2011. Call for N2618), deadline for replies was 2012-03-01



EN 15509 Interoperability application profile (IAP, rev)

- **Objectives**

- Interoperability, equipment compatibility, best industry practice
- Support the European EFC Directive (2004/52/EC)

- **Scope**

- DSRC requirements
- EFC functions and data, security and ICS proforma

- **Status and target**

- Result of review enquiry (TC278 N2556, 2009-09)
- Decision to revise 15509 (TC278 Res 025-2011)
- Draft ready for CEN Enquiry: 2012-04
- Draft ready for FV: 2013-02

prCEN TS WI 278282 "Secure monitoring for autonomous toll systems – Compliance checking"

- **Objective**

- Support for the Toll Charger to check the trustworthiness of the toll declarations from the Toll Service Provider whilst respecting the privacy of the user

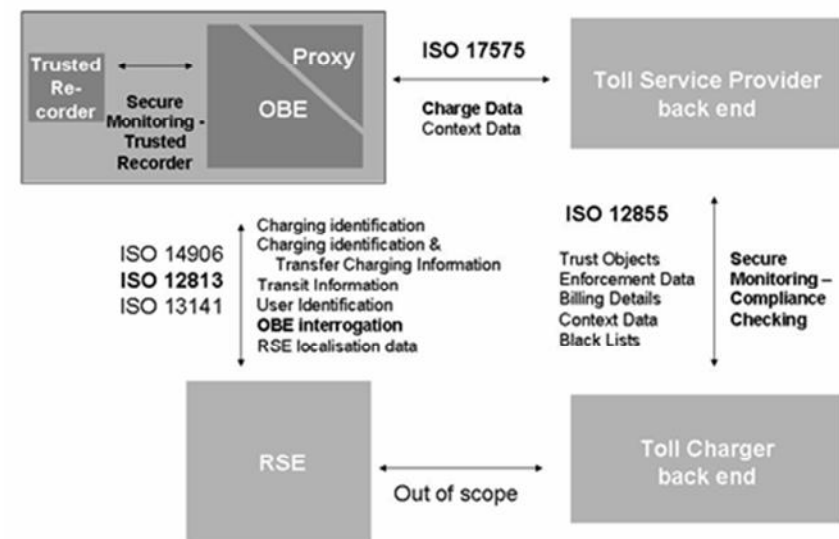
- **Scope**

- Secure monitoring concept and stake holder reqs
- Transactions and data
- Using whenever possible existing standards (CEN/ISO TS 12813, EN CEN/ISO 12855, CEN/ISO TS 17575-1...)

- **Status and target**

- CEN WI adopted in 2011-08 (TC278 N2539)
- TC review: 2012-07
- FV: 2013-02

- **EC grant application signed in Dec 2011. Call for experts (TC278 N2618), deadline for replies was 2012-03-01**



Miscellaneous (1) – Recently approved EFC standards

- **CEN ISO/TS 14907-2** “Test procedures for user and fixed equipment – Part 2: Conformance test for the OBU application unit” (TC278 N2573) and published in 2011-11
- **EN ISO 12855** “EFC - Information exchange between service provision and toll charging” (TC278 N2606, published in 2012-02)
- **CEN/TS 16331** “EFC – Interoperable application profiles for autonomous systems” (CEN/TC278 N2598, published in 2012-03)
- **Evaluation of equipment for conformity to CEN ISO/TS 17575: 6** standards published in 2012-03
 - **CEN ISO/TS 16407-2** (TC278 N2613)
 - **CEN ISO/TS 16401-1/2** (TC278 N2609-2610)
 - **CEN ISO/TS 16410-2** (TC278 N2615)
 - **CEN ISO/TS 16403-1/2** (N2611-N1612)
- **CEN ISO/TS 13140-2** “Evaluation of on-board and roadside equipment for conformity to CEN ISO/TS 13141-2 (CEN/TC278 N2608, published in 2012-03)
- **EN 15876-1:2010/A1** Evaluation of on-board and roadside equipment for conformity to EN 15509 – Part 1: TSS & TP (TC278 N2623 in 2012-02).

Miscellaneous (2)

- **SR of CEN ISO/TS 25110** “on-board account using ICC” **closed on 2012-03-15**; result not yet distributed
- **Submitted work item proposals and proposed TC resolutions**
 - **TC278 N2635** : new work item proposal for “Charging performance – Part 2: Examination framework”, for approval at the 48th meeting on 2012-03-22
 - **TC204 N2899 ISO/NP TS 16785**, Interface definition between DSRC-OBE and external in-vehicle devices, for reply to ISO by 2012-03-27 (ISO only)
- **Ideas for future work**
 - CEN PNWI TS Secure monitoring – **Trusted recorder** – an NWIP is being prepared
 - **Profile standard for EN ISO 12855** “Information exchange between Service provision and Toll charging”; a questionnaire (TC278 N2655) circulated to collect stakeholders’ requirements and experiences.
 - “How to apply **EFC** standards to multi-modal transport services **using common payment media**” **ISO TR** is being prepared
 - **Test standards for EN ISO 12855** “Information exchange””
 - Potentially “Framework to support **suitability for use assessment**”

Miscellaneous (3)

- **EFC 2006 Grant Agreement**
 - 2 ENs and 4 TS
- **EFC 2007 Grant Agreement**
 - 1 ENs, 15 TS and 4 TRs
- **EFC 2010 Grant Agreement**
 - Security framework & Charging performance metrics (TC278 N2362)
 - Target : 3 TS - approval expected by H1/2013
- **EFC 2011 Grant Agreement (2011-38)**
 - Secure monitoring for autonomous toll systems – Compliance checking
 - Guidelines for EFC-applications based on in-vehicle ITS stations
 - Target : 1 TS and 1 TR – approval expected by mid 2014
 - **Call for experts closed on the 1st of March 2012 (TC278 N2618)**
- **EFC 2012 Grant Agreement Application (2012-20)**
 - Secure monitoring for autonomous toll systems – Trusted recorder
 - Interoperable application profiles for information exchange between Service Provision and Toll Charging
 - Coordination of PTs and support to the EC
 - **Application submitted in March 2012**

Miscellaneous (4)

- **Joint ISO/TC/joint WG meetings** in conjunction with the TC204 October 2012 meeting? **Anticipated desire to meeting to discuss**
 - **Fee and fare** – w TC204/WG8
 - **EFC app on ITS stations** – w TC204/WG18
- **Overall appreciation of the relevance of the EFC published standards and work in progress relating to cooperative ITS (TC278 N2533)**
- **Review and input to ITS reference architecture** (TS 14813 rev) – terms and open distributed processing model (WG N1562-1563, ISO 17573)
- **Intellectual property and patent rights** – Monitoring and initial assessment of potentially relevant new patent or patent applications (WG N1502, N1512 and N1549)
- **Overview of CEN and ISO standards development stages** (TC278 N2660) – supports the coordination within the WG and between the TCs
- **M338 progress report** to the ITSCG (TC278 N2633)
- WG convenor access to **CEN's projex** – **easy access to WI status info** ☺

CEN/TC278/WG1 and ISO/TC204/WG5

Recent meetings: 5-6 October 2011, Stockholm (Sweden)
25-26 January 2012, Warsaw (Poland)

Next meetings: 11-12 April 2012, Delft (the Netherlands)
27-28 June 2012, Zürich (Switzerland)
16-17 October 2012, Moscow (Russia)

Members: Australia, Austria, Canada, China, Czech Republic, Finland, France, Germany, Italy, Japan, Korea, Netherlands, Norway, Poland, Portugal, Slovenia, South Africa, Spain, Sweden, Switzerland, United Kingdom

In total **47 expert members** from 21 countries (15 CEN)

Subgroups: SG1 - Trond Foss: Info exchange, architecture, security
SG2 - Jean François Jouen: DSRC based EFC, testing
SG5 - Ian Catling: GNSS/CN based EFC

Liaisons: EC DG TREN, EC Electronic Toll Committee, ETSI ITS, CEN/WG3 & ISO/WG8, CEN WG16 & ISO /WG18, ISO/WG16, IEEE 1609, CEN/TC224/WG11

Convenor's recommendations to TC278

- 1) CEN/TC 278 resolves to adopt the resolution 006-2012 (see CEN/TC278 N2635), concerning the new work item proposal for "Electronic fee collection – Charging performance – Part 2: Examination framework"
2. Noting that different standards sometimes have the same number, e.g.
 - EN 12855: 2003 Food processing machinery - Rotating bowl cutters - Safety and hygiene requirements
 - EN ISO 12855:2012 Electronic fee collection - Information exchange between service provision and toll charging

CEN/TC278 resolves to encourage CEN CMC, in consultation with ISO/CS, to review the assignment of standard reference numbers in order to promote clarity and easy referencing of CEN deliverables on the market

Completed Work (1) - Architecture and technology independent

EN ISO 12855	EFC - Information exchange between service provision and toll charging (published in 2012-02)
ISO 17573	EFC - System architecture for vehicle-related tolling (published in 2010-12, replacing ISO TS 17573:2004)
CEN ISO/TS 17574	EFC – Guidelines for security protection profiles (2nd ed published in 2009-09)
CEN TR 16092	EFC - Requirements for pre-payment systems (adopted in 2010-08, target publication date 2011-03-02)
CEN TR 16152	EFC – Personalisation and mounting of first mount OBE (published in 2011-03)
CEN TR 16219	EFC – Value added services based on EFC on-board equipment (published in 2011-07)
CEN ITR	Integration of payment systems for transport services (CEN/TC278 N278, 1994-03-17)
CEN ITR	Definition of Threats and Security Controls for the Charging Interface in Electronic Fee Collection (CEN/TC278 N780, 1997-10)

Completed Work (2) – DSRC-based EFC

- EN ISO 14906** EFC - **application interface definition for DSRC** (3rd edition published in 2011-10)
- CEN ISO/TS 14907** EFC - **Test procedures** user and fixed equipment
Part 1: Description of **test procedures** (3rd ed published in 2010-06)
Part 2: **Conformance test for the onboard unit application interface** (2nd ed in 2011-11)
- EN 15509** EFC - **Interoperable application Profile for DSRC** (published 2007-05)
- EN 15876** EFC – **Conformity evaluation** of on-board and roadside **equipment to EN 15509**
Part 1: Test suite structure and test purposes (FprA1 approved through UAP vote in 2012-02)
Part 2: Abstract test suite (published 2011-04)
- CEN ISO/TS 25110** EFC - Interface definition for **on-board account** using ICC (approved in 2008-10)
- CEN TR 16040** EFC - Requirements for **urban DSRC systems** (published in 2010-06)
- CEN ITR** AFC requirements for **DSRC** (CEN/TC278 N318, 1994-08)
- CEN ITR** EFC - Requirements for **Integrated Circuit Cards** (CEN/TC278 N779, 1997-10)

Completed Work (3)

Autonomous and support for autonomous EFC systems

- CEN ISO/TS 17575** EFC - **Application interface definition for autonomous systems**
- Part 1: **Charging** (published in 2010-06)
 - Part 2: **Communication and connection to the lower layers** (published in 2010-06)
 - Part 3: **Context data** (published in 2011-04)
 - Part 4: **Roaming** (published in 2011-04)
- CEN/TS 16331** EFC – **Interoperable application profiles for autonomous systems** (published in 2012-03)

Completed Work (4)

Autonomous and support for autonomous EFC systems

CEN ISO/TS 16407 EFC – Evaluation of equipment for conformity to CEN ISO / TS 17575-1

Part 1: Test suite structure & test purposes (published in 2011-10)

Part 2: Abstract test suite (published in 2012-03)

CEN ISO/TS 16401 EFC – Evaluation of equipment for conformity to CEN ISO / TS 17575-2

Part 1: Test suite structure & test purposes (published in 2012-03)

Part 2: Abstract test suite (published in 2012-03)

CEN ISO/TS 16410 EFC – Evaluation of equipment for conformity to CEN ISO / TS 17575-3

Part 1: Test suite structure & test purposes (published in 2011-10)

Part 2: Abstract test suite (published in 2012-03)

CEN ISO/TS 16403 EFC – Evaluation of equipment for conformity to CEN ISO / TS 17575-4

Part 1: Test suite structure & test purposes (published in 2012-03)

Part 2: Abstract test suite (published in 2012-03)

Completed Work (5)

Autonomous and support for autonomous EFC systems

- CEN ISO/TS 12813** EFC - **Compliance check communication** (Published in 2009-11)
- CEN ISO/TS 13143** EFC - **Evaluation** of on-board and roadside equipment for conformity to **CEN ISO/TS 12813**
Part 1: **Test suite structure and test purposes** (published in 2011-04)
Part 2 : **Abstract test suite** (published in 2011-05)
- CEN ISO/TS 13141** EFC – **Localisation augmentation communication** (published in 2010-02)
- CEN ISO/TS 13140** EFC - **Evaluation** of on-board and roadside equipment for conformity to **CEN ISO/TS 13141**
Part 1: Test suite structure and test purposes (published in 2011-04)
Part 2: Abstract test suite (published in 2012-03)
- CEN ITR** Application **requirements** for EFC systems based on **GNSS/CN** (CEN/TC278 N798, 1997-11)