



Title : List of "Potentially Useful standards'  
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# List of 'Potentially Useful Standards'

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This is a compilation of standards (in a broad sense; i.e., not limited to specifications produced by the 'official' standards bodies (as e.g., ISO, ITU, CEN, ETSI, IETF, etc), but also including specifications issued by consortia, forae, and industry organisations (as e.g., the W3C, OMG, UPU, etc) potentially useful/usable for the purpose of the MEET workshop. It is a 'living' document, frequent additions and modifications are likely to occur.

Figure 1 show the general classification.

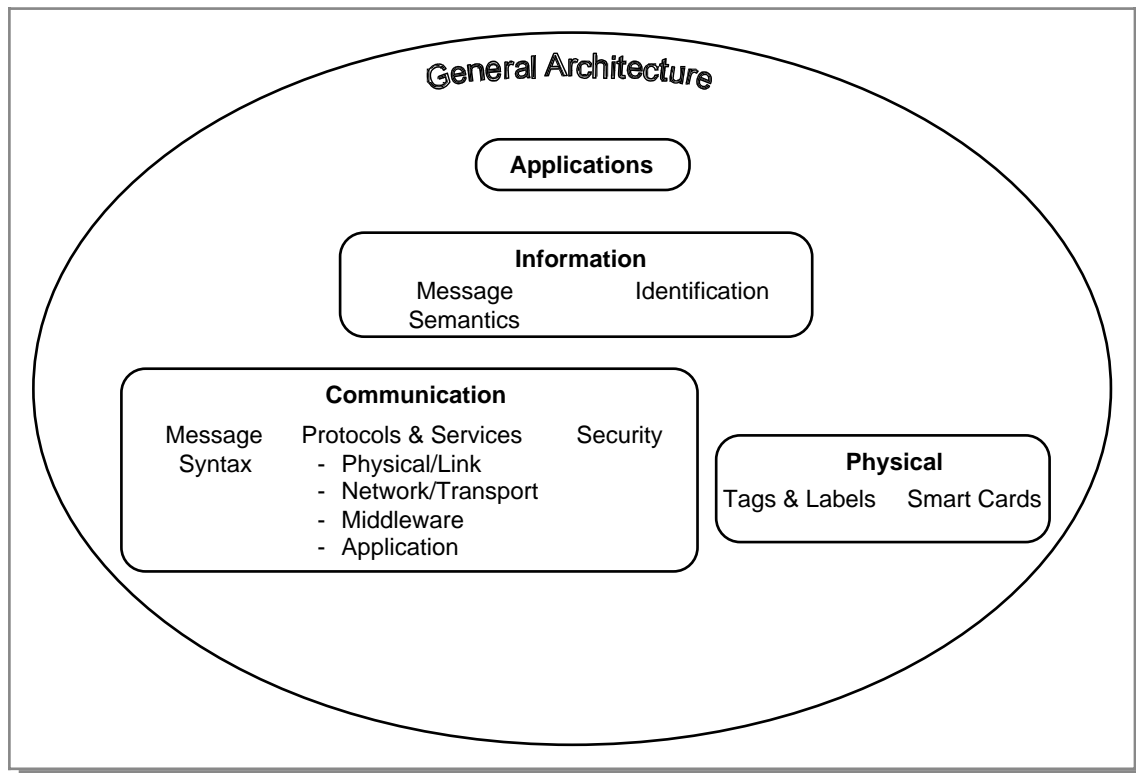


Figure 1: General Classification of the Potentially Useful Standards

Part I of this document simply lists those standards and specifications that have been identified as 'potentially useful' for the work of the MEET workshop.

Part II provides some more specific information on those standards/specifications considered to be of major importance.

# **PART I: List of Potentially Useful Standards**

## **General Architecture**

- ISO/PRF TR 14813-2 Transport information and control systems -- Reference model architecture(s) for the TICS sector
  - Part 2: Core TICS Reference Architecture (Ed. 1)
  - Part 3: Example elaboration (Ed. 1)
  - Part 4: Reference model tutorial (Ed. 1)
  - Part 6: Data presentation in ASN.1 (Ed. 1)
  - Part 7: TICS Data Profiles (Ed. 1)
- ENV ISO 14812:1999: Glossary of Standard Terminologies for the Transport Information and Control Sector
- UPU S27-2: Framework for Communication of Information about Postal Items, Batches, and Receptacles

## **Applications**

- .....

## **Information**

### **Message Semantics**

- UN Trade Data Interchange Directory (UNTDID)

### **Identification**

- ISO/CD 14814 Reference model architecture for generic AVI/AEI (Ed. 1)
- ENV 12314-1:1996: Automatic vehicle and equipment identification - Part 1: Reference architectures and terminology
- ENV 14815:1999/ISO/TS 14815:2000 : Automatic vehicle and equipment identification - System specification
- ENV 14816:1999/ISO/TS 14816:2000: Automatic vehicle and equipment identification - Numbering and data structures
- ISO/IEC 15459-1:1999 Information technology -- Unique identification of transport units
  - Part 1: General
  - Part 2: Registration procedures
- ISO 6346:1995 Freight containers - Coding, identification and marking
- ISO 10374:1991 Freight containers - Automatic identification
- ISO/IEC 15963 Information Technology- AIDC Techniques - RFID for Item Management- Unique Identification of RF Tag and Registration Authority to Manage the Uniqueness
- ISO/IEC 15418 Information Technology AIDC Techniques- EAN / UCC Application Identifiers and FACT Data Identifiers + Maintenance

- ISO/IEC 15434 Information Technology AIDC Techniques - Bar Code Symbology Specification - Transfer Syntax for High Capacity ADC Media
- ISO/IEC 15459 Information Technology AIDC Techniques - Unique Identification of Transport Units
  - Part 1: Technical Standard
  - Part 2: Procedural Standard
- ISO/CD 17262 AVI/AEI -- Intermodal goods transport numbering and data structures (Ed. 1)
- UPU RF 0001.2 Identification and Marking using Radio Frequency Identification Technology: Data Schemes
- UPU Snn-1 Identification and Marking using Radio Frequency Identification Technology: Reference Architecture and Terminology
- UPU Snn-3 Identification and Marking using Radio Frequency Identification Technology: System Requirements and Test Procedures
- Application Standard for Shipping Container Codes (ANSI/UCC6-2000)
- CEN 1556: Bar Coding Terminology
- General EAN Specifications: Global Location Number (GLN)

## **Communication**

### **Message Syntax**

- XML
  - Query Data Model released 11 May 2000
  - Inclusions (XInclude) released 22 March 2000
  - Information Set Dec '99:
  - Information Set Requirements Feb '99
  - Fragment Interchange revised Jun '99 after Last Call
  - Schema Part 0: Primer
  - Schema Part 1: Structures
  - Schema Part 2: Datatypes
- ISO 7372: ISO Trade Data Elements Directory, identical to sections 1, 2, 3, 4 and 9 of UNTDED.
- ISO 9735: International Standard issued by ISO which reproduces the UN/EDIFACT Syntax Rules as agreed by WP.4.
- ISO/IEC 15962 Information Technology AIDC Techniques - RFID for Item Management - Data Syntax
- ISO/IEC 15961 Information Technology -AIDC Techniques - RFID for Item Management - Host-Interrogator-Tag - Functional Commands and Other Syntax Features
- UPU S25-1G Data Constructs for the Communication of Information on Postal Items, Batches and Receptacles

### **Protocols & Services**

- Physical/Link
  - ENV 12253:1997: Dedicated Short-Range Communication - Physical layer using microwave at 5.8 GHz

- ISO/IEC 18000 Information Technology AIDC Techniques-RFID for Item Management Air Interface
- UPU S23-1 Part A Radio Frequency Identification (RFID) and Radio Data Capture (RDC) Systems Air Interfaces : Communications and Interfaces : Part A : Parameter
- UPU S23-1 Part B Radio Frequency Identification (RFID) and Radio Data Capture (RDC) Systems Air Interfaces : Communications and Interfaces : Part B : Parameter Values for 5.8 GHz RFID Systems
- UPU S23-1 Part C Radio Frequency Identification (RFID) and Radio Data Capture (RDC) Systems Air Interfaces : Communications and Interfaces : Part B : Parameter Values for 2.45 GHz Narrow Band RFID Systems
- UPU S23-1 Part G Radio Frequency Identification (RFID) and Radio Data Capture (RDC) Systems Air Interfaces : Communications and Interfaces : Part G : Parameter Values for 13.56 MHz RFID Systems
- ENV 12795:1997: Dedicated Short-Range Communication (DSRC) - DSRC Data link layer: Medium Access and Logical Link Control
- ISO/IEC 18001 Information Technology AIDC Techniques-RFID for Item Management – Application Requirements Profiles.
- 8802-11: 1999 (ISO/IEC) (IEEE Std 802.11, 1999 Edition) Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific requirements--Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications
- 802.11b-1999 Supplement to Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific requirements--Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Higher Speed Physical Layer (PHY) Extension in the 2.4 GHz band
- The Bluetooth Specification
  - Part 1: V1.0 Core
  - Part 2: V1.0 Profiles

### *GSM*

- ETS 300 021: European digital cellular telecommunications system (Phase 1); Mobile Station - Base Station System (MS-BSS) interface; Data link layer specification
- ETS 300 023: European digital cellular telecommunications system (Phase 1); Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface
- ETS 300 024: European digital cellular telecommunications system (Phase 1); Short Message Service Cell Broadcast (SMSCB) support on the mobile radio interface
- EN 300 900: Digital cellular telecommunications system (Phase 2+); Alphabets and language-specific information
- EN 300 901: Digital cellular telecommunications system (Phase 2+); Technical realization of Short Message Service (SMS) Point-to-Point (PP)
- EN 300 902: Digital cellular telecommunications system (Phase 2+); Technical realization of Short Message Service Cell Broadcast (SMSCB)
- EN 300 937: Digital cellular telecommunications system (Phase 2+); Data Link (DL) layer; General aspects

- EN 300 938: Digital cellular telecommunications system (Phase 2+); Mobile Station - Base Station System (MS-BSS) interface; Data Link (DL) layer specification

#### *GPRS*

- Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Service description; Stage 2 (GSM 03.60 version 7.4.1 Release 1998)
- Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); GPRS Tunnelling Protocol (GTP) across the Gn and Gp Interface (GSM 09.60 version 7.5.1 Release 1998)
- Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol (GSM 04.60 version 8.4.1 Release 1999)
- Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Service description; Stage 1 (GSM 02.60 version 7.5.0 Release 1998)

#### *UMTS*

- 3G TS 23.101: Universal Mobile Telecommunications System (UMTS): General UMS Architecture
- 3G TS 22.100: Universal Mobile Telecommunications System (UMTS): Phase 1 capabilities
- 3G TS 22.101: Universal Mobile Telecommunications System (UMTS): Service aspects; Service principles
- 3G TS 22.105: Universal Mobile Telecommunications System (UMTS); Services and Service Capabilities
- 3G TS 22.115: Universal Mobile Telecommunications System (UMTS); Service Aspects: Charging and Billing
- 3G TS 22.121: Universal Mobile Telecommunications System (UMTS); VHE Stage 1
- 3G TS 22.129: Handover requirements between UMTS and GSM or other Radio Systems
- 3G TS 21.133 : Universal Mobile Telecommunications System (UMTS); Security threats and requirements
- 3G TS 22.960: Universal Mobile Telecommunications System (UMTS); Mobile multimedia services including mobile intranet and internet services

#### *WAP*

- WAP-100: Wireless Application Protocol Architecture Specification
- WAP-152: Wireless Application Environment Overview
- WAP-153: Wireless Application Environment Specification
- WAP-155: Wireless Markup Language (WML) Specification
- WAP-154: Binary XML Content Format Specification
- WAP-156: WMLScript Language Specification
- WAP-174: User Agent Profiling Specification
- WAP-165: Push Architectural Overview
- WAP-164: Push Access Protocol Specification
- WAP-145: Push Message Specification
- WAP-158: Wireless Datagram Protocol Specification

- WAP-144: Wireless Control Message Protocol Specification
- WAP-162: Wireless Session Protocol (WSP)
- WAP-133, Wireless Transaction Protocol (WTP)
- WAP-163: Wireless Transport Layer Security Specification
- WAP-160: Wireless Identity Module

- **Network/Transport**

- RFC 0791 Internet Protocol. J. Postel. Sep-01-1981. (Format: TXT=97779 bytes) (Obsoletes RFC0760) (Also STD0005) (Status: STANDARD)
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification. S. Deering, Hinden. December 1998. (Format: TXT=85490 bytes) (Obsoletes RFC1883) (Status: DRAFT STANDARD)
- RFC 2461 Neighbor Discovery for IP Version 6 (IPv6). T. Narten, E. Nordmark, W. Simpson. December 1998. (Format: TXT=222516 bytes) (Obsoletes RFC1970) (Status: DRAFT STANDARD)
- RFC 2462 IPv6 Stateless Address Autoconfiguration. S. Thomson, T. Narten. December 1998. (Format: TXT=61210 bytes) (Obsoletes RFC1971) (Status: DRAFT STANDARD)
- RFC 2463 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification. A. Conta, S. Deering. December 1998. (Format: TXT=34190 bytes) (Obsoletes RFC1885) (Status: DRAFT STANDARD)
- RFC 0793 Transmission Control Protocol. J. Postel. Sep-01-1981. (Format: TXT=172710 bytes) (Also STD0007) (Status: STANDARD)
- RFC 0768 User Datagram Protocol. J. Postel. Aug-28-1980. (Format: TXT=5896 bytes) (Also STD0006) (Status: STANDARD)

- **Middleware**

- CORBA/IIOP 2.4 Specification
- CORBA Language Mapping Specifications
- CORBA Services Specifications
- CORBA Telecoms Specifications
- CORBA Transportation Specifications

- **Application**

- ENV 12834:1997: Dedicated Short-Range Communication - Application layer
- ENV 13372:1999: Road Transport and Traffic Telematics (RTTT) - Dedicated Short-Range Communication (DSRC) - DSRC profiles for RTTT applications
- Traffic and Travel Information (TTI) - TTI messages via cellular networks
  - Part 1: General specifications
  - Part 2: Numbering and ADP message header
  - Part 3: Basic information elements
  - Part 4: Service-independent protocols
  - Part 5: Internal services
  - Part 6: External services
  - Part 7: Performance requirements for onboard positioning
  - Part 8: GSM-specific parameters
- RFC 821 Simple Mail Transfer Protocol. J. Postel. Aug-01-1982. (Format: TXT=124482 bytes) (Obsoletes RFC0788) (Also STD0010) (Status: STANDARD)

- RFC 822 Standard for the format of ARPA Internet text messages. D. Crocker. Aug-13-1982. (Format: TXT=109200 bytes) (Obsoletes RFC0733) (Updated by RFC1123, RFC1138, RFC1148, RFC1327, RFC2156) (Also STD0011) (Status: STANDARD)
- RFC 1157 Simple Network Management Protocol (SNMP). J.D. Case, M. Fedor, M.L. Schoffstall, C. Davin. May-01-1990. (Format: TXT=74894 bytes) (Obsoletes RFC1098) (Also STD0015) (Status: STANDARD)
- Hypertext Transfer Protocol -- HTTP/1.1 - Draft Standard RFC 2616
- Use and Interpretation of HTTP Version Numbers - Informational RFC 2145
- HTTP State Management Mechanism - Proposed Standard RFC 2109
- Digest Access Authentication - Proposed Standard RFC 2069 (see RFC 2617)
- HTTP/1.1 - Proposed Standard RFC 2068 (see RFC 2616)
- HTTP/1.0 - Informational RFC 1945 (see RFC 2616)

- **Security**

- HTTP Authentication: Basic and Digest Access Authentication - Draft Standard RFC 2617
- Internet X.509 Public Key Infrastructure Certificate and CRL Profile (RFC 2459)
- Internet X.509 Public Key Infrastructure Certificate Management Protocols (RFC 2510)
- Internet X.509 Certificate Request Message Format (RFC 2511)
- Internet X.509 Public Key Infrastructure Certificate Policy and Certification Practices Framework (RFC 2527)
- Internet X.509 Public Key Infrastructure Representation of Key Exchange Algorithm (KEA) Keys in Internet X.509 Public Key Infrastructure Certificates (RFC 2528)
- Internet X.509 Public Key Infrastructure Operational Protocols - LDAPv2 (RFC 2559)
- Internet X.509 Public Key Infrastructure Operational Protocols: FTP and HTTP (RFC 2585)
- Internet X.509 Public Key Infrastructure LDAPv2 Schema (RFC 2587)
- X.509 Internet Public Key Infrastructure Online Certificate Status Protocol - OCSP (RFC 2560)
- Certificate Management Messages over CMS (RFC 2797)
- Internet X.509 Public Key Infrastructure Qualified Certificates Profile (RFC 3039)
- Internet X.509 Public Key Infrastructure Data Validation and Certification Server Protocols (RFC 3029)
- RFC 2015 MIME Security with Pretty Good Privacy (PGP). M. Elkins. October 1996. (Format: TXT=14223 bytes) (Status: PROPOSED STANDARD)
- RFC 2440 OpenPGP Message Format. J. Callas, L. Donnerhacker, H. Finney, R. Thayer. November 1998. (Format: TXT=141371 bytes) (Status: PROPOSED STANDARD)
- RFC 2726 PGP Authentication for RIPE Database Updates. J. Zsako. December 1999. (Format: TXT=22594 bytes) (Status: PROPOSED STANDARD)
- RFC 2660 The Secure HyperText Transfer Protocol. E. Rescorla, A. Schiffman. August 1999. (Format: TXT=95645 bytes) (Status: EXPERIMENTAL)

- ITU-T Recommendation X.509 (1997 E): Information Technology - Open Systems Interconnection – The Directory. Authentication Framework,
- ETSI TS 101 456: "Policy requirement for certification authorities issuing qualified certificates"
- ETSI TS 101 862: "Qualified Certificate Profile"
- ETSI Draft TS 101 861: "Time Stamping Profile"
- ETSI TS 101 733: "Electronic Signature Formats"
- IEEE P1363: Standard Specifications for Public-Key Cryptography
- PKCS #1: RSA Encryption Standard. Version 1.5.
- PKCS #3: Diffie-Hellman Key-Agreement Standard. Version 1.4.
- PKCS #5: Password-Based Encryption Standard. Version 1.5.
- PKCS #6: Extended-Certificate Syntax Standard. Version 1.5.
- PKCS #7: Cryptographic Message Syntax Standard. Version 1.5.
- PKCS #8: Private-Key Information Syntax Standard. Version 1.2.
- PKCS #9: Selected Attribute Types. Version 1.1.
- PKCS #10: Certification Request Syntax Standard. Version 1.0.
- The SET Standard Book 1 Business Description
- The SET Standard Book 2 Programmer's Guide
- The SET Standard Book 3 Formal Protocol Definitions
- SET External Interface Guide~

## Physical

### Tags & Labels

- **Linear Symbologies**

- ISO/IEC 16388 Bar Code Symbology Specs - Code 39
- ISO/IEC 16390
- ISO/IEC 15417
- ANSI/AIM BC12-USS - Channel Code
- USS Telepen
- ITS - 93i
- ITS - Reduced Space Symbology (RSS)

- **Two Dimensional Symbologies**

- Multi-Row Symbols*

- ANSI/AIM BC6-1995, USS - Code 49
  - USS Codablock F
  - USS - PDF417
  - ITS - MicroPDF417
  - ITS - SuperCode

- Matrix Symbols*

- Dot Code A
  - USS - Code One

- **Composite Symbologies**

- ITS - EAN.UCC Composite Symbology

- ITS - Aztec Mesas
- ANSI/AIM BC10-ISS - MaxiCode
- ANSI/AIM BC11-ISS - Data Matrix
- ANSI/AIM BC13-ISS - Aztec Code
- ITS - QR Code
- **Under Development**
  - International Symbology Specification - PosiCode
  - International Symbology Specification - Ultracode

### **Smart Cards**

- ISO/IEC 10536:1992 Identification cards - Contactless integrated circuit(s) cards
  - Part 1: Physical characteristics
  - Part 2: Dimensions and location of coupling areas
  - Part 3: Physical characteristics
  - Part 4: Answer to Reset and transmission Protocols
- ISO/IEC 14443: Identification cards - Contactless integrated circuit(s) cards- Proximity Cards
  - Part 1: Physical characteristics
  - Part 2: Radio frequency Power and Signal interface
  - Part 3: Initialization & Anticollision
  - Part 4: Transmission Protocols
- ISO/IEC 15693: Identification cards - Contactless integrated circuit(s) cards - Vicinity Cards
  - Part 1: Physical characteristics
  - Part 2: Radio frequency Power and Signal Interface
  - Part 3: Initialization & Anticollision
  - Part 4: Transmission Protocols

## PART II: Descriptions of Some Important Standards

<b>Number of the standard</b>	<b>ISO/IEC 15418:1999 (E)</b>
Name	Information technology – EAN/UCC Application Identifiers and Fact Data Identifiers and Maintenance
Source	Joint Technical Committee ISO/IEC JTC1, Information technology, Subcommittee SC 31, Automatic identification and data capture techniques
Current status	FDIS
Related standards	ISO/IEC 15459-1, Information technology – Unique identification of transport units - Part 1: General ISO/IEC 15459-2 Information technology – Unique identification of transport units, Part 2 Registration Procedures
Assessment	most important for secure data interpretation and processing
Contact	Joint Technical Committee ISO/IEC JTC1, Information technology, Subcommittee SC 31, Automatic identification and data capture techniques

<b>Number of the standard</b>	<b>ISO/IEC 15459-1</b>
Name	Information technology – Unique identification of transport units - Part 1: General
Source	Joint Technical Committee ISO/IEC JTC1, Information technology, Subcommittee SC 31, Automatic identification and data capture techniques
Current status	ISO/IEC Standard
Life-cycle information	First edition 1999-12-01
origin, family of standards	ISO/IEC 15418:1999 (E) for application identifiers ISO/IEC 15459-2 Information technology – Unique identification of transport units, Part 2 Registration Procedures
Assessment	most important for seamless tracking & tracing of transport units
Contact	Joint Technical Committee ISO/IEC JTC1, Information technology, Subcommittee SC 31, Automatic identification and data capture techniques

<b>Number of the standard</b>	<b>ISO/IEC 15459-2</b>
Name	Information technology – Unique identification of transport units – Part 2: Registration procedures
Source	Joint Technical Committee ISO/IEC JTC1, Information technology, Subcommittee SC 31, Automatic identification and data capture techniques
Current status	ISO/IEC Standard
Life-cycle information	First edition: 1999-12-01
origin, family of standards	ISO/IEC 15418:1999 (E) for application identifiers Information technology – Unique identification of transport units - Part 1: General
Contact	Joint Technical Committee ISO/IEC JTC1, Information technology, Subcommittee SC 31, Automatic identification and data capture techniques

<b>Number of the standard</b>	<b>EN 799</b>
Name	Bar Coding – Symbology specifications "Code 128"; aim-d-@t-online.de
Source	CEN/TC 225 "Bar Coding" in cooperation with AIM (Automatic Identification Manufacturers)
Current status	EN/ISO 15417
Life cycle	approved by CEN: 1995-06-22
Contact	CEN/TC 225 "Bar Coding" in cooperation with AIM (Automatic Identification Manufacturers)

<b>Number of the standard</b>	<b>EN 1556</b>
Name	Bar coding – Terminology; German version EN 1556 : 1998
Source	CEN/TC 225 "Bar Coding"
Current status	European Standard (EN 1556 : 1998 D)
Life cycle	approved by CEN: 1998-02-28
Contact	CEN/TC 225 "Bar Coding"

<b>Number of the standard</b>	<b>DIN V 27001</b>
Name	RFID Systeme Anforderungen der Konsumgüterwirtschaft RF-Tag-Identifikator
	RFID-Systems Requirement Profile of the Consumer Goods Industry – RF-Tag-Identificator
Source	Normenausschuss Daten- und Warenverkehr in der Konsumgüterwirtschaft (NDWK) im DIN, PF 30 02 51, D-50772 Köln Dr. Andreas Füßler, fuessler@ccg.de
Description	In auto-discriminating systems it is necessary to identify the encodation methodical procedure an RFID (Write-) Reader has to deal with. The intention of the Standard is to define the transponder chip architecture in a way that the unambiguous definition of an RF-Tag-Identificator for the consumer goods industry fulfills the requirements of this industry.
Current status	Pre standard
Assessment	most important for secure use of tags
Contact	Dr. Andreas Füßler, fuessler@ccg.de

## Part III: Universal Postal Union (UPU) S and M Series Standards

### S Series Standards

- S1 Bar code symbology for postal receptacles
- S2 Bar code symbology for postal items
- S3 Airports
- S4 Air carriers
- S5 Countries
- S6 Offices of exchange
- S7 Postal consignments
- S8 Postal despatches (NB in course of being replaced by S32)  
*A postal despatch is a collection of mail - normally in bags or other receptacles - that is being transported from one international mail processing centre to another. A despatch is identified by a unique 20-character dynamic identifier which contains information about the despatch.*
- S9 Postal receptacles  
*A postal receptacle is a container used for the transportation of a uniquely identifiable collection of one or more letters, packets, empty bags, or items being transported together as part or all of a despatch. Its contents are identified by a unique 29-character dynamic identifier which contains information about the receptacle. This identifier fulfils various objectives relating to operations, quality of service, security, and accounting.*
- S10 Postal items (identification of)  
*It is sometimes necessary to be able to identify individual mail items, usually for tracking purposes. A unique 13-character identifier is used for individual items and its structure depends on the type of item, i.e. EMS, registered, insured, etc.*
- S11 Item tracking events  
*It is becoming increasingly important to track various events for particular postal products as they move through the postal system from posting to delivery. These item-tracking events were originally designed for EMS items but can be used to track other items as well.*
- S12 Format of message exchanges
- S17 Word processing document exchange
- S18 ID-tagging of letter mail items
- S19 Encoding on envelopes - placement area definitions
- S20 RFID - Reference architecture and terminology  
*This is the first of four standards dealing with RFID systems, which can be used to automatically identify postal items. This standard provides a reference structure to allow interoperability between different commercial systems so that there is unambiguous identification of messages from tagged postal items.*
- S21 Data presentation in ASN.1
- S22 RFID - System requirements and test procedures  
*This is the second of four standards dealing with RFID systems, which can be used to automatically identify postal items. This standard provides a number of definitions, categorisations, and tests in order to enable users and suppliers of UPU RFID systems to specify system requirements that guarantee interoperability.*

- S23a RFID and RDC - Air interfaces: Communications and interfaces  
*Part A: Definitions of parameters to be standardised*  
*This is one of a series of standards defining identification/ codification standards for the UPU, for use in RFID and RDC systems. This standard provides a framework to define common communications protocols for each frequency, and, where possible, to determine the use of the same protocols for ALL frequencies such that the problems of migrating from one to another are diminished; to minimise software and implementation costs; and to enable system management and control and information exchange to be common as far as is possible. This standard (Part A: parameters), identifies which parameters must be specified in order to establish interoperability, and provides common methods of determination and description.*
- S23b Part B: Parameter values for 5.8 GHz RFID systems  
*Specifies the values and value ranges associated with the parameters to be standardised for RFID systems at 5.8 GHz.*
- S23c Part C: Parameter values for 2.45 GHz narrow band RFID systems  
*Specifies the values and value ranges associated with the parameters to be standardised for narrow band RFID systems at 2.45 GHz.*
- S23g Part G: Parameter values for 13.56 MHz RFID systems  
*Specifies the values and value ranges associated with the parameters to be standardised for RFID systems at 13.56 MHz.*
- S24 FACT-Based representation of postal information and identifiers
- S25 Data constructs for the communication of information on postal items, batches and receptacles  
*This standard provides a dictionary of data constructs for use in the communication of information about postal items and batches. It contains both simple data constructs, which correspond to elementary items of information about an item or group of items, and compound data constructs, which are built up from a series of simple constructs.*
- S26 FACT-Based license plates for parcels  
*This standard defines a UPU implementation of the ISO 15459 license plate and associated label for the identification of parcels. It provides an open international standards-based identification for parcels and allows all parties (e.g. customers, customs, and private transport providers) which handle a particular parcel to use the same identifier for automatic reading and tracking purposes. This common identity is useful as an alternative to a more limited identifier assigned by a postal enterprise.*
- S27 Framework for communication of information about postal items, batches and receptacles  
*This standard defines a reference framework for the communication of data concerning both individual and batches of postal items. It supports the integration of such data, with data stored in postal processing systems and databases, for the purpose of postal process and enterprise management. The standard applies to the communication of all data, exchanged between postal administrations, in a form which is, or is intended to be, directly captured and interpreted by postal information technology systems. Its application in other situations requiring the communication of postal data in processable form is strongly encouraged.*
- S28 Communication of postal information using two-dimensional symbols  
*This standard describes the use of two-dimensional digital indicia or array codes to convey postal information in the form of symbols printed on postal items, on item or receptacle labels and on accompanying documentation. The standard is intended for application in all cases in which postal information and identifiers are encoded, using two-dimensional symbols, on postal items, receptacles, labels and forms which are exchanged between postal administrations. It may also beneficially be applied in cases in which only a single postal administration is involved.*

- S29 Bar coded receptacle labels  
*The UPU Convention determines the form and content of labels for mailbags and other receptacles, in human-readable form, and makes provision for the inclusion of a bar code. However, in order for automatic identification techniques, and particularly bar coding, to be successful, there are additional parameters that require definition concerning these labels. This standard provides standard label configurations that additionally have provision for automatic identification and provides guidance for bar code generation including printer selection, types of printing and quality checks.*
- S30 International postage meter approval requirements
- S31 UPU issuing agency - Assignment of issuer codes  
*Several standards in the TSM make use of the concept of an identifier for individual postal administrations/users of the standard concerned. These and any similar future standards should utilise a common identification system for these organisations. This standard provides for assignment of issuer codes for use in association with the UPU issuing agency code.*
- S32 Postal consignments  
*A postal consignment is a collection of mail receptacles - normally bags or containers of mail - that is being transported as a whole from one location to another. A consignment is identified by a code of up to 12 characters, consisting of the ISO country code and a unique alphanumeric identifier.*
- S33 Interoperability framework for postal Public Key Infrastructures
- S34 International Mail Processing Centres
- S35 Assignment and use of organisation identifiers  
*This document defines the allocation and use of identification codes which may be used to identify organisations of interest to postal administrations and other mail service contractors. The mechanism chosen supports a system of global identification for any type of organisation, including customers and suppliers.*
- S36 Digital postage marks: Applications, security and design
- S37 Receptacle asset numbering  
*This standard specifies a mechanism for the unique identification of individual receptacles. It defines the method of construction of the identifier, referred to as the receptacle asset number, and specifies one required and a number of optional methods by which this identifier may be associated with (affixed to) the receptacle itself.*
- S39 Trusted Time Stamp

### **M Series (EDIFACT Messages)**

- M10 PRECON Message specification, Version 1.1
- M11 PREDES Message specification, Version 1.1
- M12 RESCON Message specification, Version 1.1
- M13 RESDES Message specification, Version 1.1
- M14 PREDES Message specification, Version 2.0
- M15 TRAKIT Message specification, Version 1.0
- M16 EMSEVT Message specification, Version 0
- M17 EMSEVT Message specification, Version 1.0
- M18 CARDIT Message specification, Version 1.1
- M19 TRAKIT Message specification, Version 2.0
- M20 CARDIT Message specification, Version 2.0

- M21 EXCEPT Message specification, Version 1.0
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