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ISO/IEC JTC 1
Information Technology

Document Type:	**New Work Item Proposal**
Document Title:	**Change from a single IS to a Multi-Part IS for ISO/IEC 29167, "Information technology -- Automatic identification and data capture techniques -- Air Interface for file management and security services for RFID"**
Document Source:	**SC 31**
Reference:	
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Action ID:	**Act**
Due Date:	**2010-02-19**
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ISO/IEC JTC 1/SC 31

Automatic Identification and Data Capture Techniques

Secretariat: ANSI (USA)

DOC TYPE:	**New Work Item Proposal**
TITLE:	**Change from a single IS to a Multi-Part IS for ISO/IEC 29167, "Information technology -- Automatic identification and data capture techniques -- Air Interface for file management and security services for RFID"**
SOURCE:	**National Body of Austria**
PROJECT:	**29167**
STATUS:	**As detailed in "SC031-N-2940 - Multi-Part Standard.doc", the National Body of Austria requests SC 31 to initiate a 90-day letter ballot to revise ISO/IEC 29167 into a multi-part standard with the following part structure.** **P-members have an obligation to vote and are requested to cast votes on the SC 31 Web site (LiveLink) by the date indicated on this cover page. Per Resolution 5 of the Seoul Plenary Meeting, P-Members are requested to use the attached form (SC031 - Form 13B Comment Document.doc)**
ACTION ID:	**COM**
DUE DATE:	**2009-12-21**
DISTRIBUTION:	**ISO/IEC JTC 1/SC 31 members**
MEDIUM:	**ISO TC Portal (LiveLink)**
NO. OF PAGES:	**8 (including this cover)**

New Work Item Proposal

September 2009

PROPOSAL FOR A NEW WORK ITEM

Date of presentation of proposal: 2009-09-17	Proposer: ONORM, Austria
Secretariat: ANSI	**ISO/IEC JTC 1 N** XXXX ISO/IEC JTC 1/SC 31 N 2940 (SC031-N-2940)

A proposal for a new work item shall be submitted to the secretariat of the ISO/IEC joint technical committee concerned with a copy to the ISO Central Secretariat.

Presentation of the proposal

Title (subject to be covered and type of standard, e.g. terminology, method of test, performance requirements, etc.) Specification of Data Value Domain

ISO/IEC 29167-1, Information technology - Automatic identification and data capture techniques – Part 1: Air Interface for security services and file management for RFID architecture

ISO/IEC 29167-3, Information technology - Automatic identification and data capture techniques – Part 3: Air Interface for security services and file management for RFID at 13.56 MHz

ISO/IEC 29167-6, Information technology - Automatic identification and data capture techniques – Part 6: Air Interface for security services and file management for RFID at 860 – 960 MHz

Scope (and field of application)

ISO/IEC 29167-1

This international standard defines the architecture for security and file management for the ISO/IEC 18000 air interfaces standards for radio frequency identification (RFID) devices. Its purpose is to provide a common technical specification for security and file management for RFID devices that may be used by ISO committees developing RFID application standards.

This international standard specifies architecture for

— Security services

— File management

as further optional extension of the air interface for passive and battery assisted passive RFID systems. Both security and file management are defined in alignment with existing air interfaces and this international standard only covers extensions on security and file management beyond the scope of the ISO/IEC 18000 air interfaces.

This international standard defines various security features called *security services* that than can be implemented by a tag depending on the application. A tag may support one, a subset, or all of the specified security services. For a reader it is possible to get information about the security services that are actually implemented and supported by a tag. Moreover, it has been considered that adding new security services remains possible. Besides signalling the presence of certain security services, further details of the services such as utilized encryption algorithm and key length also need to be specified and

accessible.

ISO/IEC 29167-3

This international standard defines the implementation of the architecture for security and file management for ISO/IEC 18000-3 air interfaces standards for radio frequency identification (RFID) devices at 13.56 MHz. Its purpose is to provide a common technical specification for security and file management for RFID devices that may be used by ISO committees developing RFID application standards.

This international standard specifies

— Security services

— File management

as further optional extension of the air interface at 13.56 MHz for passive and battery assisted passive RFID systems. Both security and file management are defined in alignment with existing air interfaces and this international standard only covers extensions on security and file management beyond the scope of the ISO/IEC 18000-3 air interfaces.

ISO/IEC 29167-6

This international standard defines implementation of the architecture for security and file management for ISO/IEC 18000-6 air interfaces standards for radio frequency identification (RFID) devices at 860-960 MHz. Its purpose is to provide a common technical specification for security and file management for RFID devices that may be used by ISO committees developing RFID application standards.

This international standard specifies

— Security services

— File management

as further optional extension of the air interface at 860-960 MHz for passive and battery assisted passive RFID systems. Both security and file management are defined in alignment with existing air interfaces and this international standard only covers extensions on security and file management beyond the scope of the ISO/IEC 18000-6 air interfaces.

Purpose and justification - attach a separate page as annex, if necessary

During the work on the work item ISO/IEC 29167 is was recognized that due to the growing demand in security and file management it is necessary to split the work item into multiple parts according to ISO/IEC 18000 in order to allow different schedules for the different air interface frequencies. While UHF (860-960 MHz) is ahead in schedule, HF (13.56 MHz) is following shortly afterwards due to the huge market interest.
There is a high demand on effective file management due to several basic requirements:

- Integrity of data has to be observed (this is the first duty of a file system)
- Memory has to be efficiently utilized for maximum utility and cost control, which requires efficient packing of data and linking of pages or blocks of data for files that grow over time (this is the second most important function of a file system)
- Demand to store data in hierarchical structures, e.g. directories, for convenient access (this is the next most important function of a file system)
- File-level access control, as opposed to less convenient low level addressing
- Maintaining low error rate transfer of significant amounts of data across the hostile RFID wireless link is most efficiently performed with the data packaged in files, and particular using a journaling file system
- Application of security and data compression techniques are also most efficiently performed upon data managed in file form.
- The assumption of interrogator and infrastructure based memory management breaks down for interrogators that are not always network enabled (such as portable interrogators)
- Sensor files are updated by the tag itself, and thus accurate directory information cannot be maintained by the infrastructure.

These requirements shall be covered by a split document as follows:

- ISO/IEC 29167-1 Architecture
- ISO/IEC 29167-3 HF (13.56 MHz)
- ISO/IEC 29167-6 UHF (860-960 MHz)

Therefore this work item requests the split ISO/IEC 29167 into a multi-part standard starting with Parts 1, 3 and 6. Other parts will follow accordingly with new work item proposals. Actually, part 7 is expected to be next, while there is currently less business interest in parts 2 and 4.

Programme of work

If the proposed new work item is approved, which of the following document(s) is (are) expected to be developed?

____ **a single International Standard**

____ more than one International Standard (expected number: .....)
_X__ a multi-part International Standard consisting of 3 parts numbered 1, 3 and 6
____ an amendment or amendments to the following International Standard(s) .....
____ a technical report , type 1.....

And which standard development track is recommended for the approved new work item?

_**X**__**a. Default Timeframe**

____b. Accelerated Timeframe

____c. Extended Timeframe

Relevant documents to be considered

ISO/IEC 15961-1
ISO/IEC 15961-2
ISO/IEC 15961-3
ISO/IEC 15961-4
ISO/IEC 15962
ISO/IEC 18000-1
ISO/IEC 18000-2
ISO/IEC 18000-3
ISO/IEC 18000-4
ISO/IEC 18000-6
ISO/IEC 18000-7
ISO/IEC 24753
ISO/IEC 24791-1
ISO/IEC 24791-2
ISO/IEC 24791-3
ISO/IEC 24791-5
ISO/IEC 24791-6
IEEE 1451.7

Co-operation and liaison

ISO/IEC JTC 1/SC 31/WG 4
ISO/IEC JTC 1/SC 31/WG 4/SG 1
ISO/IEC JTC 1/SC 31/WG 4/SG 3
ISO/IEC JTC 1/SC 31/WG 4/SG 6
ISO/IEC JTC1 SC27
ISO/IEC JTC1 SC27/WG2

Preparatory work offered with target date(s) :

Austrian NB is pleased to be the sponsoring member for this work item, and the first CD ballot will be within 12 months of approval of the work item.

Signature: Raymond Delnicki, ISO/IEC JTC 1/SC 31 Secretariat

Will the service of a maintenance agency or registration authority be required? ..No.....
- If yes, have you identified a potential candidate? .....
- If yes, indicate name .....

Are there any known requirements for coding? ..No.....
-If yes, please specify on a separate page

Does the proposed standard concern known patented items? ..Not known at this stage.....
- If yes, please provide full information in an annex

Are there any known requirements for cultural and linguistic adaptability? No

-If yes, please specify on a separate page

Comments and recommendations of the JTC 1 or SC 31 Secretariat - attach a separate page as an annex, if necessary

Comments with respect to the proposal in general, and recommendations thereon: It is proposed to assign this new item to JTC 1/SC 31 and JTC1/SC31/WG7 respectively

Voting on the proposal - Each P-member of the ISO/IEC joint technical committee has an obligation to vote within the time limits laid down (normally three months after the date of circulation).

Date of circulation: 2008-09-17	**Closing date for voting:** 2008-12-16	**Signature of Secretary:** Lisa Rajchel

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	**Validity**	**Explanation**
A. Business Requirement		
A.1 Market Requirement	Essential _X__ Desirable ___ Supportive ___	Products with features similar to those covered by this work item are already on the market. The mentioned features are essential for some applications.
A.2 Regulatory Context	Essential _X __ Desirable ___ Supportive ___ Not Relevant ___	
B. Related Work		
B.1 Completion/Maintenance of current standards	Yes ___ No_X __	
B.2 Commitment to other organisation	Yes ___ No_X__	
B.3 Other Source of standards	Yes _X__ No___	
C. Technical Status		
C.1 Mature Technology	Yes _X__ No___	Products are already on the market. The work areas of security and file management are both historical areas of research in computer science, wireless communications, and RFID.

C.2 Prospective Technology	Yes _X __ No___	The work item is expected to contribute on the spread of RFID technology, will consolidate the current status of the technology in respects to competitors, and is expected to make RFID technology even more versatile for future applications.
C.3 Models/Tools	Yes _ __ No_ X __	
D. Conformity Assessment and Interoperability		
D.1 Conformity Assessment	Yes _X__ No___	Criteria will be determined, but this standard will not provide conformance tests
D.2 Interoperability	Yes _X__ No___	This NP will be developed in alignment with existing air interface specifications and application interfaces.
E. Adaptability to Culture, Language, Human Functioning and Context of Use		
E.1 Cultural and Linguistic Adaptability	Yes_____ No___N/A____	
E.2 Adaptability to Human Functioning and Context of Use	Yes_____ No___N/A____	
F. Other Justification		

Current Project Structure within the SC 31 Program of Work

1. ***ISO/IEC 29167: Information technology -- Automatic identification and data capture techniques -- Air Interface for file management and security services for RFID***
   (ITTF Project ID: 45246)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: Josef Preishuber-Pflügl and You Sung Kang	Oct 08 N2639 20.60				

Proposed Project Structure within the SC 31 Program of Work

1. ***ISO/IEC 29167-1: Information technology -- Automatic identification and data capture techniques -- Part 1: Air Interface for security services and file management for RFID architecture***
   (ITTF Project ID: TBD)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: TBD	Dec 09 N 20.20				

2. ***ISO/IEC 29167-3: Information technology -- Automatic identification and data capture techniques -- Part 3: Air Interface for security services and file management for RFID at 13.56 MHz***
   (ITTF Project ID: TBD)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: TBD	Dec 09 N 20.20				

3. ***ISO/IEC 29167-6: Information technology -- Automatic identification and data capture techniques -- Part 6: Air Interface for security services and file management for RFID at 860-960 MHz***
   (ITTF Project ID: TBD)

	Stage 1 NWIP	Stage 2 CD/PDTR/PDAM	Stage 3 FCD/FPDAM	Stage 4 FDIS/DTR/FDAM	Stage 5 IS/TR/AMD
International Standard PE: TBD	Dec 09 N 20.20				