

**ISO/IEC JTC1/SC17
Cards and personal identification**

2005-10-07

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**Report of the Convener of WG8
to the 18th Plenary Meeting of ISO/IEC JTC1/SC17
being held in Sun City, Republic of South Africa, 2005-10-05/07**

1. Meetings since the last SC17 Plenary Meeting

Three WG8 meetings have been held since the last SC17 Plenary Meeting:

- 33rd meeting of WG8 in Sydney, Australia, 2004-10-12/15

Participation: 19 delegates from 9 countries and 2 Liaison Organizations, in detail:

Australia	1
Austria	2
France	3
Germany	1
Israel	2
Japan	4
Singapore	1
U.K.	1
U.S.A.	2
Mastercard	1
Visa	1

- 34th meeting of WG8 in Madrid, Spain, 2005-04-04/08

Participation: 27 delegates from 10 countries and 2 Liaison Organizations, in detail:

Austria	3
Belgium	1
France	6
Germany	2
Israel	1
Japan	3
Spain	2
Switzerland	1
U.K.	3
U.S.A.	3
Mastercard	1
Visa	1

- 35th meeting of WG8 in Sun City, Republic of South Africa, 2005-09-27/30

Participation: 26 delegates from 11 countries and 1 Liaison Organization, in detail:

Austria	2
China	3
France	7
Germany	1
Israel	2
Japan	1
Singapore	3
South Africa	1
Spain	1
U.K.	2
U.S.A.	2
Visa	1

During that period the Task Force TF2 of WG8, working on the ISO/IEC 14443 series and the related test methods in ISO/IEC 10373-6, with its Convener Pascal Roux (France) has held one meeting:

- 23rd meeting of WG8/TF2 in Sydney, Australia, 2004-10-08+11.
Participation was: 17 delegates from 9 countries and 1 Liaison Organization.

and the Task Force TF4 of WG8, working on the ISO/IEC 14443 test environment, with its Convener Francis Christian (U.S.A.) has also held one meeting:

- 1st meeting of WG8/TF4 in Sun City, Republic of South Africa, 2005-09-26.
Participation was: 10 delegates from 8 countries.

Further, a joint meeting of SC17/WG8 and SC31/WG4 was held in London, U.K., on 2005-07-15 and chaired by Mr. Chris Stanford, Convener of the Task Force 3 of WG8. The purpose of that meeting was to identify a common view on how to proceed with the standards ISO/IEC 15693 Parts 1 to 3 (SC17) and with ISO/IEC 18000-3 (SC31). A further task was to find a commonly agreed procedure on the assignment of AFI codings and their registration.

2. ISO/IEC 10536, Close-coupled cards (CICCs)

All three parts of ISO/IEC 10536, i.e.:

ISO/IEC 10536-1, Identification cards - Contactless integrated circuit(s) cards - Close-coupled cards - Part 1: Physical characteristics

ISO/IEC 10536-2, Identification cards - Contactless integrated circuit(s) cards - Close-coupled cards - Part 2: Dimensions and location of coupling areas

ISO/IEC 10536-3, Identification cards - Contactless integrated circuit(s) cards - Close-coupled cards - Part 3: Electronic signals and reset procedures

were designated the status "Stabalized Standard". No more action on that standard series needed.

3. ISO/IEC 14443, Proximity cards (PICCs)

3.1 ISO/IEC 14443-1, Physical characteristics

The standard:

ISO/IEC 14443-1, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 1: Physical characteristics

was published on 2000-04-15.

3.1.1 Revision of ISO/IEC 14443-1

14443-1 is being revised. As its revision is considering specifications related to the SC17 work item on „Limited use contactless smart cards (LUC)“, being partly in the responsibility of WG1 (ISO/IEC 15457), WG8 is grateful that the WG1 Secretary Mr. Steve Brunt, U.K., had offered to become the Project Editor for 14443-1. WG8 appreciated and accepted Mr. Brunt's offer, so that the necessary cooperation between WG1 and WG8 on how to cover the aspects of LUC in both ISO/IEC 14443-1 and 15457 is per se guaranteed. Also the request on form factor free options, as requested by U.K. and endorsed by SC17, is going to be covered by the specifications in 14443-1.

WG8 reviewed Mr. Brunt's working draft of 14443-1 at its last meeting and decided by majority (8 approvals, 3 abstentions, no disapprovals) to hand over the revised text of it (WG8 N 1164) to the SC17 Secretariat for CD ballot. The abstentions come from some doubts, whether 14443-1 should contain information regarding the geometry of antennas inside the carrier of the contactless chip. Most of the WG8 experts, however, are of the opinion that the optionally usable specification of antenna sizes will improve the compatibility of contactless cards and readers, and thus may better fulfill the aim for interoperability.

3.2 ISO/IEC 14443-2, Radio frequency power and signal interface

The standard:

ISO/IEC 14443-2, Identification cards - Contactless integrated circuit(s) cards -Proximity cards - Part 2: Radio frequency power and signal interface

was published on 2001-07-01.

3.2.1 Revision of ISO/IEC 14443-2

Its revision is being started, so that a first Working Draft of it is expected to be presented at the next WG8 meeting. When editing the text of the 14443-2 revision its Amendment 1 will be integrated.

3.2.2 ISO/IEC 14443-2 – Amendment 1: Bit rates of $f_c/64$, $f_c/32$ and $f_c/16$

The standard:

ISO/IEC 14443-2, Identification cards - Contactless integrated circuit(s) cards -Proximity cards - Part 2: Radio frequency power and signal interface - Amendment 1: Bit rates of $f_c/64$, $f_c/32$ and $f_c/16$

was published on 2005-06-01.

3.2.3 ISO/IEC 14443-2 – Amendment 2: Bit rates of $f_c/8$ and higher

The standard:

ISO/IEC 14443-2, Identification cards - Contactless integrated circuit(s) cards -Proximity cards - Part 2: Radio frequency power and signal interface - Amendment 2: Bit rates of $f_c/8$ and higher

hasn't attracted contributions yet. WG8 will try to start the development of that amendment until its next WG8 meeting or then decide to stop it. The Amendment 2, should it further be considered, will not be taken into account when revising 14443-2.

3.3 ISO/IEC 14443-3, Initialization and anticollision

The standard:

ISO/IEC 14443-3, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 3: Initialization and anticollision

was published on 2001-02-01.

3.3.1 Revision of ISO/IEC 14443-3

Same applies as for 14443-2, see clause 3.2.1

The revision of 14443-3 is being started, so that a first Working Draft of it is expected to be presented at the next WG8 meeting. When editing the text of the 14443-3 revision its Amendment 1, a related Defect Report and the Amendment 3 will be integrated.

The revised text of 14443-3 will kindly be provided by the new Project Editor for 14443-3, i.e. Mr. Reinhard Meindl, Austria.

3.3.2 ISO/IEC 14443-3 – Amendment 1: Bit rates of fc/64, fc/32 and fc/16

The standard:

ISO/IEC 14443-3, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 3: Initialization and anticollision - Amendment 1: Bit rates of fc/64, fc/32 and fc/16

was published on 2005-06-01.

3.3.3 Defect Report to ISO/IEC 14443-3 – Amendment 1

WG8 decided at its last meeting to launch a Defect Report procedure related to 14443-3/Amendment 1. Reason is that a few timing values had been mistakenly defined too small, i.e. it is seen necessary for PICCs to negotiate a longer frame delay time between the end of a PICC response and the subsequent command from the PCD. This fact and the related constraints are known with the involved industries, so that they wish to correct the relevant specified values in the Amendment 1.

3.3.4 ISO/IEC 14443-3 – Amendment 2: Bit rates of fc/8 and higher

Same procedure applies as for 14443-2/Amendment 2, see clause 3.2.3.

The standard:

ISO/IEC 14443-3, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 3: Initialization and anticollision - Amendment 2: Bit rates of fc/8 and higher

hasn't attracted contributions yet. WG8 will try to start the development of that amendment until its next WG8 meeting or then decide to stop it. The Amendment 2, should it further be considered, will not be taken into account when revising 14443-3.

3.3.5 ISO/IEC 14443-3 – Amendment 3: Handling of reserved fields and values

The standard:

ISO/IEC 14443-3, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 3: Initialization and anticollision - Amendment 3: Handling of reserved fields and values

had achieved the status of FDIS (FDAM). Its FCD was balloted in N 2659, the result of which is laid down in N 2721 (15 approvals, 2 disapprovals from the U.K. and U.S.A., 1 abstention). Both the negative votes could be resolved. That Amendment is currently being processed as FDIS ballot, the voting period of which will start soon.

As noted in my last report that amendment should be interpreted as an essential step to improve interoperability and to reduce misunderstandings regarding the 14443 interface.

3.4 ISO/IEC 14443-4, Transmission protocol

The standard:

ISO/IEC 14443-4, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 4: Transmission protocol

was published on 2001-02-01.

3.4.1 Revision of ISO/IEC 14443-4

Same applies as for 14443-1 and 14443-2, see clauses 3.2.1 and 3.3.1.

The revision of 14443-4 is being started, so that a first Working Draft of it is expected to be presented at the next WG8 meeting. When editing the text of the 14443-4 revision its Amendment 1 will be integrated.

The revised text of 14443-4 will kindly be provided by the new Project Editor for 14443-4, i.e. Mr. Wolfgang Meindl, Germany.

3.4.2 ISO/IEC 14443-4 – Amendment 1: Handling of reserved fields and values

The standard:

ISO/IEC 14443-4, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 4: Transmission protocol - Amendment 1: Handling of reserved fields and values

had achieved the status of FDIS (FDAM). Its FCD was balloted in N 2657, the result of which is laid down in N 2720 (19 approvals, 1 disapproval from the U.S.A., 1 abstention). The

negative vote could be resolved. That Amendment is currently being processed as FDIS ballot, the voting period of which will start soon.

3.4.3 ISO/IEC 14443-4 – Amendment 2: Bit rates of fc/8 and higher

Same procedure applies as for 14443-2/Amendment 2 and for 14443/Amendment 2, see clauses 3.2.3. and 3.3.4.

The standard:

ISO/IEC 14443-4, Identification cards - Contactless integrated circuit(s) cards - Proximity cards - Part 4: Transmission protocol - Amendment 2: Bit rates of fc/8 and higher

hasn't attracted contributions yet. WG8 will try to start the development of that amendment until its next WG8 meeting or then decide to stop it. The Amendment 2, should it further be considered, will not be taken into account when revising 14443-4.

3.5 Test Methods for ISO/IEC 14443: ISO/IEC 10373-6

The standard:

ISO/IEC 10373-6, Identification cards -Test methods - Part 6: Proximity cards

was published on 2001-05-15.

3.5.1 Revision of ISO/IEC 10373-6

The revision of that standard is being started. It will be tried to have a first working draft available at the next WG8 meeting. The revision will be quite complex, because the estimated volume of the revised text will reach almost 200 pages, full of extremely condensed specifications. Possibly that editing work may be shared by two editors, one Project Editor and one Co-Editor. However, that task is interpreted as very important, as it definitely increases the tools for proving the quality and capability for interoperability of products intended to comply with the standard series 14443.

When editing the text of the 10373-6 revision all its amendments 1 to 5, partly published, partly prior to FDIS balloting, will be integrated.

3.5.2 ISO/IEC 10373-6 – Amendment 1: Protocol test methods for proximity cards

The standard:

ISO/IEC 10373-6, Identification cards - Test methods - Part 6: Proximity cards - Amendment 1: Protocol test methods for proximity cards

has achieved the status of FDIS (FDAM). Its FCD was balloted in N 2743, the result of which is laid down in N 2823 (17 approvals, no disapproval, 4 abstentions). That Amendment will be processed as FDIS ballot, scheduled for the end of 2005.

3.5.3 ISO/IEC 10373-6 – Amendment 2: Improved RF test methods

The standard:

ISO/IEC 10373-6, Identification cards - Test methods - Part 6: Proximity cards - Amendment 2: Improved RF test methods

This amendment was published on 2003-10-16.

3.5.4 ISO/IEC 10373-6 – Amendment 3: Protocol test methods for proximity coupling devices

The standard:

ISO/IEC 10373-6, Identification cards - Test methods - Part 6: Proximity cards - Amendment 3: Protocol test methods for proximity coupling devices

has achieved the status of FDIS (FDAM). Its FCD was balloted in N 2745, the result of which is laid down in N 2824 (17 approvals, no disapproval, 4 abstentions). That Amendment will be processed as FDIS ballot, scheduled for the end of 2005.

3.5.5 ISO/IEC 10373-6 – Amendment 4: Additional test methods for PCD RF interface and PICC alternating field exposure

The standard:

ISO/IEC 10373-6, Identification cards - Test methods - Part 6: Proximity cards - Amendment 4: Additional test methods for PCD RF interface and PICC alternating field exposure

has achieved the status of FDIS (FDAM). Its FCD was balloted in N 2747, the result of which is laid down in N 2825 (16 approvals, no disapproval, 4 abstentions). That Amendment will be processed as FDIS ballot, scheduled for the end of 2005.

3.5.6 ISO/IEC 10373-6 – Amendment 5: Bit rates of fc/64, fc/32 and fc/16

The standard:

ISO/IEC 10373-6, Identification cards - Test methods - Part 6: Proximity cards - Amendment 5: Bit rates of fc/64, fc/32 and fc/16

has achieved the status of FDIS (FDAM). Its FCD was balloted in N 2749, the result of which is laid down in N 2826 (17 approvals, no disapproval, 4 abstentions). That Amendment will be processed as FDIS ballot, scheduled for the end of 2005.

3.6 ISO/IEC 14443 Test environment

The NP on „ISO/IEC 14443 Test environment“, recommended by WG8 to SC17 and balloted in N 2666 had been approved, as documented in N 2713. That ballot attracted 82% approval and 5 commitments from countries to participate in that task.

WG8 had decided to establish a new Task Force, i.e. Task Force 4 (TF4), for dealing with that Work Item. Its first meeting, having been held prior to the WG8 meeting in last week, was attended by 10 delegates from 8 countries. WG8 appointed Mr. Francis Christian (U.S.A.) the Convener of TF4, Mr. Chris Stanford (U.K.) TF4's Secretary and Mr. Colin Tanner (U.K.) the Project Editor.

In order to accelerate the development of TF4's standard on its work item WG8 recommends to SC17 to launch a Call for Technical Information, as proposed in the Attachment 1 to this report.

3.7 NFC, Near Field Communication

As reported to SC17 at its last plenary meetings, WG8 maintains a close cooperation between JTC1/SC6 (the home of the NFC standards) and JTC1/SC17. in order to keep NFC standards and the 14443 series harmonized. NFC conformant products take the communication with cards being compliant with 14443 into account and will raise relevant applications in the market.

3.8 Close cooperation with WG3 (ICAO/NTWG)

Following relevant SC17 Resolutions from past plenary meetings, WG8 maintains an intensive cooperation with WG3 and thus with the ICAO NTWG. This is seen as absolute necessary in order to best address coming up issues and successfully assist to governments and related industries in their worldwide introduction of electronic Machine Readable Passports (MRP, eMRP), also named electronic passports (ePassport), and its systems. That cooperation has been optimally and constructively working on either side.

In order to accelerate that cooperation process and to provide the implementors of the ePassport systems with actual and urgently needed specifications, WG8 published at its

website (<http://wg8.de> -> „WG8 Projects“) so-called „Technical Recommendations to WG3“. At least two of them are recommended to be taken into account in ePassport implementations at once, i.e.

- Quick selection of ePassports and eVisas
- AFI (Application family identifier) in ISO/IEC 14443-3 and its recommended usage for MRTDs

Those Technical Recommendations will be integrated in the revised versions of the 14443 standards in due time.

3.9 NP on „Multiple PICCs in a single operating field“

Due to some initial requests on possibly put several electronic Visas (e.g. in form of stickers or cards) into MRPs WG8 has started to discuss the related technical details and constraints for defining those and put them into a standard. During the last few months WG8 increasingly became convinced that ISO/IEC 14443 should be enriched by adopting the related specifications in order to allow intendedly putting several PICCs into one operating field, thus in particular to support the requested technical application for combining one ePassport related PICC with several eVisa PICCs inside one ePassport.

WG8 drafted an NP at its last meeting and consolidated it with WG3 at its meeting prior to the SC17 Plenary Meeting, the resulted version of which is provided as Attachment 2 at the end of this report. SC17 is recommended to approve that NP and to launch its balloting.

3.10 Technical Report on how to use RFU definitions in standards

Due to a few difficulties which WG8 had found out when considering so-called RFU (Reserved for future use) definitions in ISO/IEC 14443 implementations, WG8 developed and agreed on a proposed text for a Technical Report, as laid down in document WG8 N 874 R2, see the Attachment 3 of this report.

The scope of the proposed Technical Report, i.e. the guidelines contained in it, is to define an agreed set of fields to be used in standards and the way to associate test methods with them. The expected result of following the guidelines is a better definition of the meaning and interpretation and testing of certain field types used in standards.

WG8 is of the opinion that the proposal could be useful not only for WG8 but also applicable in several working groups of the SC17 community. E.g. WG4 had already indicated a positive feedback on that.

Therefore WG8 recommends to SC17 to let other working groups check the usability of the proposed Technical Report in their groups, to provide comments on that to WG8 and finally to launch a Technical Report balloting process within SC17.

4. ISO/IEC 15693, Vicinity cards (VICCs)

4.1 ISO/IEC 15693-1, Physical characteristics

The standard:

ISO/IEC 15693-1, Identification cards - Contactless integrated circuit(s) cards - Vicinity cards - Part 1: Physical characteristics

was published on 2000-07-15.

4.2 ISO/IEC 15693-2, Radio frequency power and signal interface

The standard:

ISO/IEC 15693-2, Identification cards - Contactless integrated circuit(s) cards - Vicinity cards - Part 2: Radio frequency power and signal interface

was published on 2000-05-01.

4.3 ISO/IEC 15693-3, Anti-collision and transmission protocol

The standard:

ISO/IEC 15693-3, Identification cards - Contactless integrated circuit(s) cards - Vicinity cards - Part 3: Anti-collision and transmission protocol

was published on 2001-04-01.

4.4 Revision of all three parts of ISO/IEC 15693-3

WG8 decided at its last meeting to make available revisions of all three parts of 15693 at the next WG8 meeting. The revised texts are expected to become almost copies of the existing ones, additionally considering:

- COR 15693-2 (published in 2001)
- a modified AFI table (agreement with SC31/WG4 at an adhoc WG8 meeting)
- an editorial correction in Figure 10 of 15693-3

Those revised texts will kindly be provided by the new Project Editor for all three parts, Mr. Chris Stanford, U.K.

4.5 Test Methods for ISO/IEC 15693: ISO/IEC 10373-7

The standard:

ISO/IEC 10373-7, Test methods - Part 7: Vicinity cards

was published on 2001-05-15.

4.5.1 Revision of ISO/IEC 10373-7

The revision hasn't been started yet. WG8 has believed that at first ISO/IEC 10373-6 should become stable (considering the 5 currently available amendments), maybe soon even available as a revised text, and then it will be clear how to apply the revised text of 10373-6 to the revision of 10373-7.

5. Record of Technical Issues/Ideas raised during meetings

WG8 started in 2005 to record specifically technical issues and ideas having been raised and discussed at its meetings, even if they were not going to be considered in WG8 standards. This method is seen as useful for avoiding future problems regarding patent claims. WG8 recommends to SC17 and its working groups to adopt that method in order to increase the efficiency and availability of SC17 standards.

6. Appreciation to the WG8 Project Editors

In my view it has become time to indicate gratitude on SC17 level for the impressive involvement of all the WG8 Project Editors, who have been much active throughout the last three years, i.e. Messr. Steve Brunt, Mickey Cohen, Reinhard Meindl, Pascal Roux. In particular Mr. Cohen deserves special attention and appreciation for his editing work of an extreme amount of information in more than 160 pages, full of very complex and condensed specification.

7. Commemoration to Mr. Alain Berthon

I feel it fair to inform SC17 of the tragic event that one of the WG8 members, i.e. Mr. Alain Berthon, had passed away in summer 2005 after a several-month illness. His contribution to the development of ISO/IEC 15693, in particular its part 3, for which he had been the Project Editor, was of great significance. Alain was an expert recognized in the RFID industry as a person of stature, intellect and vision. His contributions to WG8 and to several other groups will be greatly missed. The intensive memory of Alain will remain forever in our hearts.

8. WG8 Website

The WG8 website consists basically of two sections, one of which is public and the other one is password protected.

The public section consists of general information about the structure of WG8, its projects, meeting dates, and documents lists. This section can be accessed via the URL:

<http://wg8.de>

From there the protected WG8 website can be entered by selecting "WG8 Member's Homepage", which contains all the internal information and documents of WG8 and its Task Forces. Any person authorized by a national member body can request the ID/password for accessing the WG8 website from the WG8 Secretariat via e-mail to office@wg8.de .

9. Next meetings

WG8/TF4	#02	2006-01-11/12	in London, U.K. (to be confirmed)
WG8/TF2	#24	2006-04-03	in Vienna, Austria (t.b.c.)
WG8/TF4	#03	2006-04-04/05	in Vienna, Austria
WG8	#36	2006-04-06/07	in Vienna, Austria
WG8/TF4	#04	2006-08-d1/d2	in Washington D.C., U.S.A. (t.b.c.)
WG8/TF2	#25	in the week 2006-09-25/29	in Paris, France (t.b.c.)
WG8/TF4	#05	in the week 2006-09-25/29	in Paris, France
WG8	#37	in the week 2006-09-25/29	in Paris, France

Michael Hegenbarth
Convener ISO/IEC JTC1/SC17/WG8

Call for technical information:

WG8 Task Force 4 have started the work on developing the contactless card test environment standard as approved (see ISO/IEC JTC1/SC17 N 2713) in spring 2005. The first meeting took place on 2005-09-26 and the new task force established a list of technical issues to be addressed and the prime goals to be achieved when developing the standard. The prime goals are:

- Improve interoperability
- Take into account existing work (ie. Industry specific specifications)
- Identify areas where the base standards may need to be enhanced
- Prioritize work according to market drivers
- Recognition that time is of the essence in developing this standard

A work-plan that phases the development of the standard while prioritizing the work according to market drivers has been produced. TF4 is committed to an aggressive development timescale whereby the FCD ballot is targeted for the 3rd quarter of 2006.

One of the most important goals is to take into account similar work known to be underway in a number of industry sectors. Supply of technical details that are, in some cases, beyond the reach of TF4 members, are vital to the success of TF4 and to provide the assurance of future inter-industry interoperability.

WG8 unanimously supported the suggestion of TF4 that a call for technical contributions relating to the development of this standard should be sent out to SC17 members, test houses and those other organizations known to be using PICCs and requiring interoperability, in order to emphasize the importance of obtaining contributions from those organizations currently working independently from ISO in this area. Examples of such organizations are financial institutions, MRTD issuers and transportation scheme operators.

Attachment 2

New Work Item Proposal

WG8 N 1162 R2

PROPOSAL FOR A NEW WORK ITEM

WG3 N xxxx

Date of presentation of proposal: YYYY-MM-DD	Proposer: ISO/IEC JTC1/SC17
Secretariat: APACS for BSI	ISO/IEC JTC 1 N XXXX ISO/IEC JTC 1/SC 17 N XXXX

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 - to be completed by the proposer. .

Title (subject to be covered and type of standard, e.g. terminology, method of test, performance requirements, etc.) Specification of Data Value Domain
Multiple PICCs in a single operating field
Scope (and field of application) To identify the problems, necessary requirements, specifications, constraints and relevant aspects associated with an ISO/IEC 14443 compliant system operating successfully when comprising a single PCD and multiple PICCs, the latter existing in a number of like or dissimilar documents/cards forced to operate in a single field.
Purpose and justification - attach a separate page as annex, if necessary ISO/IEC 14443 has focussed on the anti-collision protocol to deal with more than one PICCs in a logical way only, but not yet on the physical RF interface layer. This case is coming up in the market increasingly, e.g. the need for an ePassport containing several eVisa stickers to operate successfully or similarly an ePassport containing a multi-use eVisa Card housed in an internal transport pouch; or several contactless tickets in a single purse.
Programme of work If the proposed new work item is approved, which of the following document(s) is (are) expected to be developed? <input checked="" type="checkbox"/> X a single International Standard or <input type="checkbox"/> more than one International Standard (expected number:) <input type="checkbox"/> a multi-part International Standard consisting of parts <input checked="" type="checkbox"/> X an amendment or amendments to the following International Standard(s) ISO/IEC 14443 and 10373-6 <input type="checkbox"/> a technical report , type
And which standard development track is recommended for the approved new work item? <input checked="" type="checkbox"/> X a. Default Timeframe <input type="checkbox"/> b. Accelerated Timeframe <input type="checkbox"/> c. Extended Timeframe
Relevant documents to be considered ISO/IEC 14443, ISO/IEC 10373-6 and its amendments
Co-operation and liaison ISO/IEC JTC1/SC17/WG1

Preparatory work offered with target date(s)
Working Drafts of amendments to ISO/IEC 14443-1 and 14443-2 expected on 2006-02-01
Signature:
Will the service of a maintenance agency or registration authority be required? - If yes, have you identified a potential candidate? - If yes, indicate name
Are there any known requirements for coding? -If yes, please specify on a separate page
Does the proposed standard concern known patented items? - If yes, please provide full information in an annex

Comments and recommendations of the JTC 1 or SC 17 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 17/WG8
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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: 2005-10-DD	Closing date for voting: 2006-01-DD	Signature of Secretary:
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NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	Validity	Explanation
A. Business Requirement		
A.1 Market Requirement	Essential <input checked="" type="checkbox"/> Desirable ___ Supportive ___	
A.2 Regulatory Context	Essential ___ Desirable <input checked="" type="checkbox"/> Supportive ___ Not Relevant ___	
B. Related Work		
B.1 Completion/Maintenance of current standards	Yes <input checked="" type="checkbox"/> No ___	
B.2 Commitment to other organisation	Yes ___ No <input checked="" type="checkbox"/>	
B.3 Other Source of standards	Yes ___ No <input checked="" type="checkbox"/>	
C. Technical Status		

C.1 Mature Technology	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
C.2 Prospective Technology	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
C.3 Models/Tools	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
D. Conformity Assessment and Interoperability		
D.1 Conformity Assessment	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
D.2 Interoperability	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
E. Cultural and Linguistic Adaptability	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
F. Other Justification		

Notes to Proforma

A. Business Relevance. That which identifies market place relevance in terms of what problem is being solved and or need being addressed.

A.1 Market Requirement. When submitting a NP, the proposer shall identify the nature of the Market Requirement, assessing the extent to which it is essential, desirable or merely supportive of some other project.

A.2 Technical Regulation. If a Regulatory requirement is deemed to exist - e.g. for an area of public concern e.g. Information Security, Data protection, potentially leading to regulatory/public interest action based on the use of this voluntary international standard - the proposer shall identify this here.

B. Related Work. Aspects of the relationship of this NP to other areas of standardisation work shall be identified in this section.

B.1 Competition/Maintenance. If this NP is concerned with completing or maintaining existing standards, those concerned shall be identified here.

B.2 External Commitment. Groups, bodies, or fora external to JTC 1 to which a commitment has been made by JTC for Co-operation and or collaboration on this NP shall be identified here.

B.3 External Std/Specification. If other activities creating standards or specifications in this topic area are known to exist or be planned, and which might be available to JTC 1 as PAS, they shall be identified here.

C. Technical Status. The proposer shall indicate here an assessment of the extent to which the proposed standard is supported by current technology.

C.1 Mature Technology. Indicate here the extent to which the technology is reasonably stable and ripe for standardisation.

C.2 Prospective Technology. If the NP is anticipatory in nature based on expected or forecasted need, this shall be indicated here.

C.3 Models/Tools. If the NP relates to the creation of supportive reference models or tools, this shall be indicated here.

D. Conformity Assessment and Interoperability Any other aspects of background information justifying this NP shall be indicated here.

D.1 Indicate here if Conformity Assessment is relevant to your project. If so, indicate how it is addressed in your project plan.

D.2 Indicate here if Interoperability is relevant to your project. If so, indicate how it is addressed in your project plan

E. Cultural and Linguistic Adaptability Indicate here if cultural and linguistic adaptability is applicable to your project. If so, indicate how it is addressed in your project plan.

F. Other Justification Any other aspects of background information justifying this NP shall be indicated here

Attachment 3

ISO/IEC JTC1/SC17/WG8 **N 874 R2**

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ISO/IEC JTC 1/SC 17/WG 8

Secretariat: DIN

Identification Cards — Guidelines — Reserved for ISO Future USE

Carte d'identification — Guidelines — Reserved for ISO Future USE *Réservé pour Usage ISO Futur*

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ISO/IEC Guide 14443 was prepared by ISO/IEC JTC1 SC17/WG8.

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Introduction

This document contains guidelines for writing a standard including fields, which are reserved for future ISO use (RFU). The need for such guidelines became evident, as there are indications that there might be ambiguity in the interpretation of RFU fields and values as well as proprietary fields and values. The ambiguity may exist in the standards and in the test methods associated with them.

Identification Cards — Guidelines — Reserved for ISO Future USE

1 Scope

The scope of this guideline is to define an agreed set of fields to be used in standards and the way to associate test methods with them. The expected result of following the guidelines is a better definition of the meaning and interpretation and testing of certain field types used in standards.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

ISO Standard Action

an action required by ISO to be performed. ISO Standard Action should exclusively depend on ISO Functional Values. It should not depend on ISO Proprietary Values, ISO RFU Values or ISO Restricted Values in any field, in any data frame at any time.

2.2

Proprietary non-ISO Action

a proprietary action, not defined by ISO, is to be performed which has no effect on any ISO Standard Action.

2.4

ISO Default RFU Action

a default action required by ISO to be performed when an RFU Value is received

2.5

ISO Fixed Value

a value fixed by ISO for ISO Fixed Field

2.6

ISO Functional Value(s)

a value or values with associated ISO Standard Action

2.7

ISO Proprietary Value(s)

a value or values without associated ISO Standard Action and with non-ISO Proprietary Action

2.8

ISO RFU Value(s)

a value or values with associated ISO Default RFU Action

2.9

ISO Restricted Value(s)

a value or values that are not currently being covered by a definition and have no documented action associated with them.

NOTE Having value or values without a documented associated action may compromise possible compliance with Common Criteria.

2.10

ISO Default RFU Value

a default value associated with an RFU Field.

2.11

Field

a field is a sequence of one or more bits

2.12

Fixed Field

a field allowed to contain only one ISO Fixed Value

2.13

Functional Field

a field allowed to contain ISO Functional Value, ISO Proprietary Value and ISO RFU Value

2.14

RFU Field

a field totally reserved by ISO for future ISO definitions

2.15

Proprietary Field

a field allowed to contain only ISO Proprietary Values

2.16

Data Frame

field or fields sent by a sender in one transmission block to a receiver

3 Symbols (and abbreviated terms)

RFU Reserved by ISO for future use by ISO for ISO needs

4 Introduction to field types

In a system comprised of a sender and a receiver of information, data frames may be transmitted. The data blocks are a concatenation of fields each carrying a specific meaning and each comprised by one or more concatenated bits. This document describes the following:

- The categories of values that can be associated with each field type.
- The Actions ISO should or should not associate with certain field types and certain value category.
- The recommended testing procedure of the sent data frame and the actions performed by the receiver, taking into account that a data block may contain fields of several types with their associated values also of several categories and which fields or values should or should not affect an ISO Action.

5 Fixed Field

A fixed field is a field that can contain only the ISO Fixed Value associated with it in the standard. When introducing a fixed field in a standard, the ISO Fixed Value associated with it should be documented. An ISO

Standard Action should also be associated with it explaining the meaning of the field and how it should be used.

Unless an error is detected or a severe need for modification arises, ISO should not change the size and contents of this field through the lifetime of the standard. In case future flexibility is anticipated by ISO, an RFU field should be used instead.

5.1 Sender of a fixed field

5.1.1 Operation

A sender of data frame containing a fixed field should always set the fixed field to the ISO Fixed Value associated with it.

5.1.2 Tests procedure

A fixed field should be monitored constantly during the entire test procedure and in case any fixed field in any data frame at any time does not contain the ISO fixed value associated with it, the test should be marked as FAIL and the sender declared as non-compliant to the ISO standard.

5.2 Receiver of a fixed field

5.2.1 Operation

A receiver of a data frame containing a documented fixed field can assume that the fixed field contains the ISO Fixed Value. It can also be assumed with fairly high degree of confidence that ISO will not modify a fixed field as the field could have been defined as an RFU Field in case a need for future possibly modification was anticipated.

In case there is no ISO Standard Action associated with a Fixed Field, it is a bit less difficult to change its meaning or ISO Fixed Value in the future. It is advised, although not required, that a receiver take this observation into account.

5.2.2 Tests procedure

No testing is required for a receiver of a Fixed Field as there is no action associated with it. Further, there is no independence test imposed for other fields as fixed fields are not expected to be changed in the future by ISO (as ISO did not designate any possible RFU values for it) and is not expected to contain any proprietary values other than the Fixed Value (as no other ISO Proprietary values were associated with it by ISO).

6 Functional Field

A functional field is a field that can contain the ISO Functional Values associated with it in the standard. When introducing a functional field in a standard, the ISO Functional Value(s) associated with it should be documented. An ISO Standard Action should also be associated with every ISO Functional Value.

In case the ISO Functional Value(s) do not occupy the whole range of possible values, ISO RFU Value(s) and/or ISO Proprietary Value(s) may be associated with the Functional Field.

In case ISO RFU Value(s) are associated with a Functional Field, an ISO Default RFU Action should also be documented describing the action a receiver of such ISO RFU Value(s) should do in order to preserve future ISO flexibility in assigning a possible ISO Standard Action with it.

In case ISO Proprietary Value(s) are associated with a Functional Field, no ISO action should be defined and the interpretation of the ISO Proprietary Value(s) is left entirely open for free proprietary use by anyone and Proprietary non-ISO Actions may be performed by the receiver. See discussion below on Proprietary Fields.

In case ISO Functional Value(s) together with ISO RFU Value(s) and ISO Proprietary Value(s) do not occupy the whole range of possible values, the remaining possible values are ISO Restricted Values. These values are not reserved for future use by ISO, otherwise ISO could define them as ISO RFU values. These values are not for proprietary use, otherwise ISO could define them as ISO Proprietary Values. Thus these values have no documented use, are not reserved by ISO for any future use and are should not be used by anyone for any proprietary purpose. It is advised to avoid leaving any value or value(s) without a documented action associated with.

In order to guarantee existing and future compatibility and interoperability, which is a long declared goal of ISO, all ISO Standard Actions should depend on ISO Functional Values only. ISO Standard Actions should not depend on ISO RFU values (as they are reserved for future use by ISO), should not depend on ISO Proprietary Values (as the interpretation of these is inherently proprietary and thus not identical between implementations) and should not depend on ISO Restricted Values as those have no documented definition and no documented action associated with them. Consequently, all values in a Functional Field which are not part of the ISO Functional Values for this field should be ignored. Furthermore, ISO RFU Values, ISO Proprietary Values and ISO Restricted Values in any field in the data frame should be ignored as well. Moreover, unless otherwise documented by ISO, the ISO Standard Actions should only depend on what ISO documented in Functional Values and nothing else.

6.1 Sender of a Functional Field

6.1.1 Operation

A sender of data frame containing a functional field should always set the functional field to one of the ISO Functional Values or ISO Proprietary Values associated with it.

6.1.2 Test procedure

A Functional field should be monitored constantly during the entire test procedure and in case any functional field in any data frame at any time does not contain an ISO Functional Value or an ISO Proprietary Value associated with it, the test should be marked as FAIL and the sender declared as non-compliant to the ISO standard.

6.2 Receiver of a Functional field

6.2.1 Operation

A receiver of a data frame containing a documented functional field should perform the ISO Standard Action associated with it when it contains an ISO Functional Value and can perform whatever Proprietary non-ISO Action when it contains an ISO Proprietary Value.

6.2.2 Tests procedure with functional values

In the test procedures, functional fields should be set to ISO Functional Values associated with them and the test should determine that the ISO Standard Action is correctly and successfully performed.

In case the ISO Standard Action is not performed as documented, the test should be marked as FAIL and the receiver should be declared as non-compliant to the ISO standard.

6.2.3 Tests procedure with RFU values

In the test procedures, functional fields should be set the ISO RFU Values associated with them and the test should determine that the ISO Default RFU Action is correctly and successfully performed.

In case the ISO Default RFU Action is not performed as documented, the test should be marked as FAIL and the receiver should be declared as non-compliant to the ISO standard.

6.2.4 Tests procedure with functional values to determine independence of RFU, proprietary and restricted values

In the test procedures, functional fields should be set to their ISO Functional Values and the test should determine that the ISO Standard Action is correctly and successfully performed when other fields are set to ISO RFU Values, ISO Proprietary Values and ISO Restricted Values.

In case the ISO Standard Action is not performed as documented, the test should be marked as FAIL and the receiver should be declared as non-compliant to the ISO standard.

NOTE See clause about complexity below.

7 RFU field

An RFU field is a field that can contain only the ISO Default RFU Value associated with it in the standard. When introducing an RFU field into a standard, the ISO RFU Default Value associated with it should be documented. There shall be no ISO action associated with it.

ISO reserves the freedom and liberty to change anything about an RFU field including the ISO Default RFU Value associated with it and redefine the field or any part of it to any other field type. Consequently, a receiver of a data frame should ignore it and assume nothing about its value or interpretation or functionality.

7.1 Sender of an RFU field

7.1.1 Operation

A sender of data frame containing an RFU field should always set the RFU field to the ISO Default RFU Value associated with it.

7.1.2 Tests procedure

An RFU field should be monitored constantly during the entire test procedure and in case any RFU field in any data frame at any time does not contain the ISO Default RFU Value associated with it, the test should be marked as FAIL and the sender declared as non-compliant to the ISO standard.

7.2 Receiver of an RFU field

7.2.1 Operation

A receiver of a data frame containing a documented RFU field can assume nothing about the RFU field(s) including nothing about the value they might contain. The content of an RFU field should be completely ignored by a receiver. Further, a receiver should not modify any of the ISO Standard Actions not Proprietary non-ISO Actions based on anything any RFU field might contain in any data frame at any time.

7.2.2 Tests procedure with functional values

In the test procedures, other functional fields should be set to ISO Functional Values associated with them and the test should determine that the ISO Standard Action is correctly and successfully performed. All possible values should be assigned to the RFU Field during the test.

In case the ISO Standard Action is not performed as documented, the test should be marked as FAIL and the receiver should be declared as non-compliant to the ISO standard.

NOTE See clause about complexity below.

8 Proprietary Field

A Proprietary Field may contain any value. ISO should not assign any value or an action with a Proprietary Field. The contents of Proprietary Fields should be ignored by a receiver in respect with ISO Standard Actions and ISO Default RFU Actions.

Extreme care should be carried by ISO when changing Proprietary Fields (and ISO Proprietary Values) to other field types or associating ISO Standard Actions with them as they were declared free for proprietary, potentially even contradicting, use between products. It is greatly preferred to avoid Proprietary Fields (and ISO Proprietary Values) as much as possible. No testing shall be carried out on Proprietary Fields regarding functionally associated with them except for what is needed to ensure that the content of Proprietary Field(s) is ignored as far as independence of documented ISO Standard Action and ISO Default RFU Actions is concerned.

NOTE See testing of functional fields above.

9 Discussion on Complexity of testing

As testing all possibilities of Allowed ISO Actions associated with Allowed ISO Functional Values in all Functional Fields for all RFU Values and ISO Restricted Values for other Functional Fields, RFU Fields and Proprietary Fields might be exhaustive and lengthy, it is allowed to test less than all possible combinations.

However, the coverage figure should be depicted in the test results and should never be less than 25% (but minimum of 100). In case coverage is less than 100%, at least 25% of the tested combinations should be random.

There are two types of coverage levels. The test report should mark, for each test, which level is applicable, with encouragement given to test to level two.

9.1 Coverage assuming independence of fields - Level one

The possible values in each RFU, Proprietary and Restricted are summed up when calculating the total number of possible cases. This Independent Coverage Base is accurate in case the fields are assumed to be independent of each other.

The individual count of tested RFU, Proprietary and Restricted values is summed up when counting the total number of Tested Independent Cases.

The Independent Coverage figure under the assumptions of independence of the fields is calculated by dividing the Tested Independent Cases into the Independent Coverage Base)

9.2 Coverage assuming fields are dependent - Level two

The possible values in each Functional, RFU, Proprietary and Restricted fields are multiplied when calculating the total number of possible cases. This Dependant Coverage Base is accurate in case the fields are suspected to be dependent on each other and is the best base for worst case testing.

The individual count of tested RFU, Proprietary and Restricted values is multiplied when counting the total number of Tested Dependent Cases.

The Dependent Coverage figure under the assumptions of Dependency of the fields is calculated by dividing the Tested Dependent Cases into the Dependent Coverage Base)

10 Discussion on practicality

Legitimately, there can be cases where the definition of certain fields is changing between, say, Fixed Fields, Functional Fields or RFU Fields as a function of certain bit combinations in the frame as documented by ISO in the standard.

In such cases, follow the spirit of the above rules, applying them wisely in accordance with the conditionally applicable type of a field and associated, possibly conditional, actions.

In special cases, ISO may recommend not to test certain fields or certain values. It should be avoided as much as possible.