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ISO/IEC JTC 1/SC 6

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Notes for
3rd SC6 Study Group for Harmonization between ISO/IEC 18092/21481 and ISO/IEC 14443

In: DIN German Institute for Standardization
Room # 1003, 10th Floor
Burggrafenstrasse 6
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From: 9 AM on 14 until no later than 5 PM on 15 December, 2009
Attendance:

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Lorenzo	Gaston	GEMALTO	FRANCE (HoD)	
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Draft agenda of the meeting:
1. Opening of the meeting by the Co-Chairs
2. Roll call of participants
3. Adoption of the agenda
The SG amended and adopted the agenda as reflected herein.
4. Reminder on the ToR for the Study group (6N13990)
5. Harmonization tasks

5.1 Revision of ISO/IEC 21481
5.1.1 6N14129 CH
Mr. Thomann presented the SNV contribution in 6N14129.
On the question from Mr. Leenders, Mr. Thomann indicated that he did not have evidence for the claim in footnote 10.
Mr. Thomann claimed that if 21481 and 14443 would be extended into complete PHY and MAC specifications, then Security and File System layer licenses under RAND conditions would be required.

Mr. Leenders indicated that IPR discussions were not in the purview of the Study Group.

Nakamura-san suggested to replace Felica by JIS X 6319-4_2005(E), because Felica might be an implementation of it.

Nakamura-san thinks that 18092 at 212 and 424 kbps is a connection interface whereas JIS X 6319-4 is a card standard.

To split the proximity and vicinity world, 6N14129 proposes to implement two device classes; one with VCD and PCD 15693 support.

Karibe-san contributed an amended figure 1 of 6N14086 with Optional VICC support for full ISO/IEC 15693 support.

Should implementations implement both Options and allow activation of either or both?

The SG suggested to specify recognition and switching on all modes of VCD, VICC, PCD, PICC and 18092, but not require actual protocol operation of ISO/IEC 15693 (i.e. specify protocol operation 15693 as an Option, and consider capability exchange to signal the implemented features).

Mr. Meindl cautioned that having an Option would be departing from the current ideas in NFC and would like to have the backwards compatibility issues considered.

Mr. Hegenbarth thinks that alternatively, 21481 should not be overloaded. It should require only the provision of 18092 + 14443 (i.e. proximity devices) and optionally allow support for 15693.

Takayama-san reported that JISC considers elevating the revised version of JIS X 6319-4 to ISO/IEC, of which the translation in English is a precursor. The US, UK, DE and CH encourage this step. The NB of Japan appreciates this encouragement. F, AT and NL maintain that it is not the task of the SG to recommend submission from a NB to JTC 1, and awaits a possible NWIP and the NB's positions. CH states clearly that their position is a NB position under the provisions of 6N14129.

See 5.7.

5.1.2. 6N14133 from Ecma

The Singapore revision of 21481 is 6N14086.

The SG recommended implementing the Ecma contribution in 6N4133 that proposes to amend clause 4.3, 6 and 7 by making references to "f_c" instead of redefining "frequencies".

5.1.3

6N14153 amends 6N14149 which replaces obsoletes 6N14134 from JP.

The SG thinks that the ISO/IEC directives part 2 should be followed regarding referencing.

The SG could not agree to specify a certain polling sequence.

Mr. Thomann thinks that the behaviour on failing to detect a mode should be specified.

The SG discussed whether introducing separate Target and Initiator steps would be in the scope of their work.

Mr. Buscemi showed how the changes in figure 8 of 6N14149 would impact the flow chart in 21481. Mr. Buscemi explained that the current approach might require a needless RF detection cycle. Mr. Caruana noted that the RF detection is very short in relation to the polling requirements. Messrs Caruana and Raggam think that the new flowchart fixes the sequence protocols are tried, which may not be the application preference. Mr. Thomann thinks the current specification lacks the requests to execute a specific protocol.

Mr. Thomann thinks that NFCIP-2 devices should keep their RF field switched off for a randomised duration. The JNB noted that an idle state is not defined and that it may not be required.

Mr. Buscemi thinks that to find each other, a specification for mode alternation is required. Mr. Caruana thinks that mode alternation is subject to an implementation specification (i.e. not in the standard). Mr. Thomann thinks that SC06/WG1 should consider the VICC mode.

6N14154

Using 6N14154, Takayama-san suggested that the SG studies the RF field strength to accommodate battery requirements of portable appliances and to comply with occupational guidelines regarding EMF.

Mr. Leenders reported that IEC/TC 106 studied EMF using IGNIRP as an input document which has reference levels and basic restrictions. Reference levels may be surpassed when supported by measurements and/or calculations, per footnote 2 below table in the ICNRP guidelines.

In addition, Mr. Leenders added that, if at all, table 7 might apply.

Mr. Leenders thinks that the SG is not competent on EMF and therefore should not study it, implementers have to abide with regulation and take measures when applicable and the field strengths for bridging NFC-type of short distances are much below the mobile phone strength/distances. Mr. Thomann supports the reasoning that if cell phones fall within the limits, the NFC devices would certainly comply.

Takayama-san recommended that the new NFCIP-2 standard be complemented with test and measurement specifications that help show compliance with EMF regulation. Mr. Meindl thinks that compliance of a "final device" may be a composite of several devices which may have complex emission characteristics. In addition the operational profile or duty cycle is application specific and therefore a "standardised" measurement would not apply.

5.2 Security models

Mr. Thomann presented 6N14140 of CH.

In response to Mr. Gaston, Mr. Thomann explained that, in e.g. ISO/IEC 8802 standards, which follow the OSI models, security is part of the Data link layer and therefore not restricted higher layer.

Mr. Gaston thinks that the protocols in the layer diagram on page 3 are of A-PDUs and therefore NFC-SEC would not be appropriate. Mr. Thomann thinks that NFC-SEC fits into the PHY/MAC scope of SC 06/WG1. For smart cards secure messaging is used directly over 14443 MAC and PHY layers.

When NFC devices talk with cards, the security mechanisms for cards should be used and NFC-SEC would not appropriate, DE added in support of Mr. Gaston's position that NFC-SEC would be redundant with the smart card security. M Caruana indicated that the SG should focus on common points and NFC-SEC is clearly is not a common point and therefore not a subject for harmonisation the SG.

5.3 Antenna considerations

No contributions.

5.4 Terms and definitions

JNB contributed documents 6N13965, 6N13966 and 6N13967 as reference for terms and definitions used in the 14443, 18092 and 21481 and related test standards.

DE reminded that 6N14152 also recommends updating the terms and definitions.

5.5 Protocol options

For information: SC17/WG8/N1633R1.

Takayama-san indicating that the JNB does not expect confusion on overlapping application areas, asked whether the x-block mechanism be helpful for interoperability.

Mr. Hegenbarth reported that France presented SC17/WG8/N1633R1 in SC17/WG8 where two NWIP and CDs were processed and WG8 concluded that the application would be on 14443-4 only. When the consolidated proposal would be balloted as a 2nd CD, other SCs, including SC 06, would be informed so possible requests could be accommodated using available RFU bits. Mr. Caruana clarified that the proposal intends to bridge different layers within and above 14443. Mr. Thomann is concerned about the scope of the proposal

and the absence of a contribution to the SG, and would appreciate a liaison statement to other SCs. Mr. Elzinga referred to the Singapore minutes for the history regarding x-block. Mr. Raggam thinks that the streamlined and consolidated proposal, that uses some previously designated RFU bits (per 14443 guidance), is only relevant for 14443-4 and not per se for the harmonisation.

5.6 Other

6N14152 (DE) Revised text of 18092

Mr. Hegenbarth introduced the German SC 06N14151 “revised text of 18092” contribution as a first approach; a second version might appear after wider consultation in DIN. Mr. Raggam presented the replacements of the clauses by references as requested by WG1. Mr. Thomann asked about effort involved for the test standards. Mr. Raggam indicated that the terms, definitions and acronyms still need consideration.

The SG recommends that WG1 considers clause 2.1 of 6N14149, 06N14151, 6N13965, 6N13966 and 6N13967 for the next edition for ISO/IEC 18092; JP would like to also have 2.2 of 6N14149 considered.

5.7 Referencing

See 5.6 for 6N14149 regarding referencing.

Takayama-san, using clause 5 of JIS X 6319-4_2005 (E), showed some similarities between this standard and ISO/IEC 18092.

Takayama-san explained that although JIS X 6319-4_2005 (E) was published in 2005, its history is much longer. Mr. Meindl suggested that a revision of JIS X 6319-4 refers to the appropriate clauses in existing ISO/IEC standards.

5.8 Conclusions of the SG

The SG thinks that the revision of the standards should be done as soon as possible. The SG recommends that SC 06/WG1 revises the standards taking into account the SGs recommendations and that WG1 disbands the SG, since it considers its assigned duties completed, as planned.

6. Subsequent meeting planning

None.

7. Closing of the meeting by the Co-Chairs

The co-chairs thanked the attendance for the constructive contributions for a productive set of meetings.