

**Comments from Germany related to:
US New Work Item Proposal "Limited Use Contactless Smart Card
Standardisation" (WG8 N 813)**

1. Introduction

The USA has submitted a request for a "Limited Use Contactless Smart Card" as a NWI at the last SC17/WG8 meeting in Tokyo (see SC17/WG8 N 813). The justification for this proposal is the supposed need for a new low-end contactless smart card standard in addition to ISO/IEC 14443 to serve the needs of the public transport authorities.

2. Germany's position

Germany objects to the US proposal as presented in WG8 N813. The present standard offers by far sufficient flexibility to fulfil the requirements of the public transport industries and to cover the requested properties. Any dilution of this standard will:

- ? exclude or endanger the interoperability with ISO/IEC 14443
- ? require additional test methods
- ? prevent the co-existence with the existing infrastructure
- ? infringe therefore basic principles of standardisation.

Worldwide interoperability between PICC's and PCD's of various manufacturers can only be achieved and maintained by a 100% compliance with the mandatory normative part of ISO/IEC 14443 as introduced into the market in high volume.

3. Specific Comments

3.1 Complexity of ISO/IEC 14443:

The standard as it has been approved offers sufficient flexibility to allow small die designs as requested by this "New Work Proposal". This has been shown and proved by several existing implementations.

3.2 Application specific characteristics:

Some of the given requirements as: packing material, die thickness, implementation of the antenna, printing, etc. are outside the scope of ISO/IEC 14443. The dimensions of IC cards are addressed in ISO/IEC 7810. But the change of the IC-cards thickness is not a major issue here.

3.3 Operating distance:

It has been the common understanding of the WG8 community that the operating distance shouldn't be included in the standard. Operating distance and operating volume are always depending from specific implementations.

3.4 Usage of the subcarrier:

Subcarrier modulation is a well-accepted modulation scheme for a reliable and noise resistant transmission link. The hardware for the subcarrier generation in the PICC is negligible.

On the other hand a PICC without a subcarrier modulation will not allow reading Limited Use PICC with "existing fully ISO/IEC 14443 compliant PCDs" as requested in clause 3.1 of the document.

3.5 Anti-Collision:

Anti-Collision is an essential feature also for public transportation applications for the ease of use, when users with different electronic tickets in their wallet pass a gate without selecting a specific device manually.

The additional amount of hardware for the handling of the anti-collision sequence is marginal and can be ignored.

3.6 Reduced maximum field strength

The reduction of the maximum fieldstrength from 7,5 A/m rms to 5,0 A/m rms is not acceptable. This will endanger the interoperability without any benefit and gives an unacceptable und unnecessary burden to the existing ISO/IEC 14443 compliant infrastructure.

3.7 Security and data storage requirements

The ISO/IEC 14443 standard defines a very flexible transport protocol. Any application specific implementation should be kept outside the standard; this includes specific security implementations and memory management.

4. Conclusions

The current approach of ISO/IEC14443 provides a well-defined basic interface and protocol specifications for contactless proximity cards and guarantees a worldwide interoperability that shall not be abandoned nor diluted. This implies that no restrictions for parts 2 and 3 of ISO/IEC14443 are acceptable, because these documents include basic signal interface, initialisation and anti-collision methods.