DIN Deutsches Institut für Normung e.V.
Normenausschuss Informationstechnik (NI) im DIN
Geschäftsstelle * D-10772 Berlin
Tel.: (030) 26 01-2637 * Fax: (030) 26 01- 4 - 2637
E-Mail: nikolaus.kovacs@din.de

Berlin, 2003-09-26

Mr. Thierry Brefort
European Commission
Thierry.Brefort@cec.eu.int

Dear Mr. Brefort!

Re: Contribution to Workshop on powerline communications

Comment of the German standards committes DIN NI- 31.4 "Automatic Identification and Data Capture Techniques /Radio Frequency Identification (RFID)" and NI-17.K Cards and Personal Idenitfication/Contactless ChipCards regarding "Powerline Communications"

We the undersigned have a vital interest in the functioning of modern Data Collection Technologies such as Radio Frequency Identification (RFID) and contactless Chip Cards which are also based on RFID technologies.

For the frequency ranges where PLC emissions will occur, there are a number of ISO/IEC RFID Standards worldwide in operation and the PLC emissions are harmful to the operation of the various RFID technologies.

On the other hand the EMC directive requires that all radio services must still be able to *"be operated as intended"*.

The PLC emissions in the Low Frequency (LF) and High Frequency (HF) ranges will violate this basic requirement.

The most important and heavily used RFID frequency ranges are in the LF frequency range from 119 to 135 kHz as well as in the HF frequency ranges of 6,28 MHz and 13,56 MHz bands including the associated receiver bandwidths which for instance for the 13.56 MHz band can range up to 1 MHz or more, centered around the nominal frequencies.

The LF and RF frequency bands for RFID operation are for public use as devised by the CEPT/ECC in the ERC Rec 70-03. They are internationally in use since many years.

RFID systems are used in high volume applications such as contactless identification of persons, (access control), animals, goods, services in all areas of the daily life as parking access.

The more detailed individual applications as covered by several ISO standards are:

Electronic car immobilizers and antitheft, contacless chip cards (Smart Cards), animal identification, access control for buildings, electronic tickets in public transport, luggage identification in airports, mail distribution, logistics and many other applications which include safety relevant functions.

The RFID industry is one of the fastest growing technologies within the IT Technologies globally. European system designs are leading.

Concerning the particular inductive RFID technologies which are used in the bands below 30 MHz, RFID reader systems need to receive very low signals from transponders in the environment of the RFID readers. These readers are especially critical to noise and interference from PLC systems. This is because the reader systems are mains connected hence very sensitve to noise created on the main lines. The sensitivities of RFID systems are in the order of 10 - 25 dBµV/m.

The industry[1] represented in DIN NI 31.4 and NI 17K raises strong concerns that the introduction of Powerline Communications will cause severe interruptions and malfunctions in the operation of RFID systems. The introduction of PLC will cause substantial commercial damage to the industry as a whole and in particular to the RFID industry.

For this reason we cannot support the introduction of PLC.

Josef Schuerman (Chair, for DIN NI-31.4)
Klaus Sickert (Chair, for DIN NI-17.K)

[1] Deister Electronic GmbH
Infineon Technologies AG
Siemens AG
Giesecke and Devrient GmbH
Melzer Maschinenbau GmbH
AEG Identifikationssysteme GmbH
Pepperl and Fuchs GmbH
Philips Semiconductors GmbH
Atmel Germany GmbH
Feig Electronic GmbH
Sony Deutschland GmbH
ORGA Kartensysteme GmbH