JUSTIFICATION FOR COMMON REGULATORY OBJECTIVES
FOR PC EQUIPMENT

This document provides the justification for a Common Regulatory Objective related to PC equipment and PC common peripherals. It identifies the requirements that are relevant to the CRO. The output from this document will be used for the PC CRO.

1.   PC EQUIPMENT

1.1 GLOBAL USE

Personal Computer (PC) equipment and their peripherals are in worldwide use today. There is no reason to have different versions for different regions, and consequently PCs are designed for a true global market. People travel with their portable PCs, and connect them successfully to the mains power network.

1.2 APPLICATIONS COVERED

The range of applications covered by this equipment is extremely wide. The PC, with its dramatic increase of performance and price reduction became during the last half century THE tool of our life. In the administrations, in production lines, in the business, at home, in the means of transports, in hospitals, virtually everywhere there is at least a PC enhancing the human existence. The recent trend to integrate several Telecom technologies in the PC will further enhance the quality of life of the citizens and most of all is likely to be the solution to overcome the existing "digital divide".

In principle a PC can by itself be the central tool of some of the following applications:
- Remote learning (e-learning), allowing a single teacher to broadcast or interact with many persons;
- Remote assistance, allowing a single expert, e.g. a surgeon in the best research centre of the world to assist a colleague in a less performing centre;
- Research information, making selective usage of internet, the ever wider source of information available generated by the human being.

Security, safety, health, research, education, social support, administration in general, small business and many other areas can therefore easily beneficiate from this technology.

The range of applications covered by PC peripherals like printers, scanners, memory units may be understood as an enhancement of the above set of central applications.

2.   IDENTIFICATION OF STANDARDS /RECOMMENDATIONS TO SATISFY REGULATORY OBJECTIVES

Standards are continually revised. It is necessary to allow for a transition period between versions. This means that, in general, more than one version of a standard is acceptable as a basis

for the CRO. Rather than list all acceptable versions, the "oldest acceptable" version at the time of publication of the CRO is listed. Subsequent versions of the listed standards are to be accepted unless otherwise stated by Countries having agreed on the CRO.

The standards relevant for this CRO are listed in the Annex. A rationale for the choice of these standards is given.

3.   REVIEW

This document should be reviewed periodically to ensure that the requirements are still valid and suitable for the CRO in question. The review should aim to reduce the requirements in the CRO to a minimum allowing for new innovative products and/or solutions to be placed on the market.

Where necessary, an update of the CRO should be initiated.

ANNEX

A. Safety

IEC 60950 (1999)	Safety of information technology equipment
CB Bulletin (parts covering the intended markets)	IECEE (The IEC System for Conformity Testing and Certification of Electrical Equipment).

Rationale:

The international standard for equipment in this sector is IEC 60950. Due to special national conditions in some countries, national deviations or amendments exist. The best collection of such deviations and amendments is given in the CB Bulletin, used for the The "IEC System for Conformity Testing and Certification of Electrical Equipment" (IECEE, see http://www.iecee.org/).

B. Electromagnetic Compatibility

CISPR 22:1997 + Am1:2000 Class B	"Information technology equipment – Radio disturbance characteristics – Limits and methods of measurement "
FCC Part 15.109 Class B	**Additional for emissions above 1 GHz:** "Radio Frequency Devices; Unintentional Radiators; Radiated emission limits"
IEC 61000-3-2:1995 + Amendments	**For equipment with AC mains power:** "Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current $\leq$16 A per phase)"
IEC 61000-3-3:1995	**For equipment with AC mains power:** "Electromagnetic compatibility (EMC) – Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current $\leq$16 A per phase and not subject to conditional connection"
CENELEC EN 55024:1998 (Alt: CISPR 24:1997)	"Information technology equipment – Immunity characteristics – Limits and methods of measurement"

Rationale:

CISPR 22: CISPR 22 is a widely recognised international standard for emission protection of radio spectrum from disturbances caused by "non-intentional transmitters". It is published as

national standards in many countries. According to the classification given in CISPR 22, personal computers intended for domestic use should meet Class B.

FCC Part 15: The FCC Rules allow the use of CISPR 22 as a replacement for FCC Part 15 for "digital devices" (Part 15.109(g)). However since CISPR 22 currently does not contain limits above 1 GHz, it is required to comply with FCC part 15.109 for emissions above 1 GHz. According to the classification given in FCC Part 15, personal computers intended for domestic use should meet Class B.

IEC 61000-3-2, -3: In EU, protection of electricity distribution networks is part of the emission aspects of EMC regulation. Therefore requirements for harmonics and flicker are part of the standards used for regulatory purposes. The European standards EN 61000-3-2, -3 are identical to the IEC standards.

CENELEC EN 55024 / CISPR 24: Immunity aspects are included in EU's EMC regulation. EN 55024 differs from CISPR 24 regarding the surge test and its compliance criterion for ports intended for connection of telecom lines to outdoor facilities. A PC without ports for connection to outdoor facilities is not subject to this test, and consequently for this case either standard can be used for immunity requirements. It should be noted that Ethernet ports are not connected directly to outdoor facilities, whereas PSTN modem ports normally are.

Note: The following international standards (in the form of European standards) are called up by EN 55024: IEC 61000-4-2, -3, -4, -5, -6, -8, -11

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