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To whom it may concern

Re: The use of screened patchcords in UTP systems

The Brand-Rex 10GPLUS cabling system comprises screened and unscreened cabling solutions. Both systems use a common cord, the screened patchcord. The practise of using screened cords in screened and UTP cabling systems is common within the industry and it does not adversely affect the performance of the cabling.

There are unsubstantiated rumours circulating within the industry suggesting that the performance of a cabling system is somehow compromised by 'antenna effects' of 'floating screens' when screened cords are used in UTP cabling systems. This is not true, not based on fact, and is creating unnecessary uncertainty in the industry. The supposition that screened cords perform worse than UTP cords, or that using screened cords in UTP systems is a problem, is a myth.

The facts are that screened cables, even when not earthed at both ends, still outperform UTP cables with respect to rejecting noise from disturbers. The screen significantly reduces the noise coupled onto the transmission line (i.e. the cable pairs) from a disturber, in particular at higher frequencies where a substantial part of the signal energy exists for the newer higher speed LAN protocols. Cable measurements have shown that a grounded screened cord couples 40dB less noise than a UTP cord, and that an ungrounded screened cord couples 20dB less noise. Screened cords offer a higher level of protection to the transmission line against EMI or Alien crosstalk than UTP cords.

Further, when patchcords are deployed in work areas, where they are directly connected to active equipment (e.g. servers, switches, PCs, or other devices) the patchcord shield connects directly to ground via the RJ45 socket in the active equipment. Because the active equipment is always earthed, the cord earths through it and so there is no 'floating shield' or 'antenna effects'.

The standards also recognise the higher performance of screened cords, for instance: recommendations are made in Annex C of the American standard TSB155 that ScTP cords should be substituted for UTP cords if there is an alien crosstalk issue in the cabling system. The IEC document TR24750 makes a similar recommendation.

In summary, using screened cords in UTP systems improves that systems performance with respect to reducing noise coupled into the system and the idea that using screened cords in the system adversely affects the transmission system is a myth. In addition, and notably, besides that fact that the use of screened cords in UTP cabling systems is a common practise in the industry today, it is also a recognised method of improving the cabling system performance in published international standards.

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