

**To: 3P Customers and Business Partners**

Your Ref.	Your Date	Our Ref.	Our Date
		5717@PV	2007.07.24

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### **3P Newsletter No. 1/2007**

#### **New Names of Twisted Pair Cables**

In the good old days when 100 Mhz was very high frequency the world had only "simple" names for copper communication cables. Everybody knew that a UTP cable was an unshielded twisted pair cable and FTP was with an overall foil screen. The only cable with different names was the individual pair shielded cable, which was named both STP, S-STP and PIMF.

These names are still widely applied, but in the past year or so new names have become market standard in some countries. These new names were generated by 2nd edition ISO/IEC 11801 from 2002 and are explained in detail in an appendix of this standard. As far as I know, the good old names are still the only ones being applied in USA and far east. The new names are now being generally used in Europe.

For the end user these two families of names may cause confusion and misunderstanding because they are similar, may identify different cable types with almost the same name and it may be difficult to conclude if the old or new name is applied. The present 3P Newsletter will compare the two sets of cable names and also briefly discuss potential name confusion for patch cords.

#### **1. Principles for the New Cable Names**

The old cable names have been generated from abbreviations for constructions and have been implemented in general market understanding through many years of use. This has worked well for the few traditional cable types like UTP, FTP and S-FTP (old names). However, for the many types of individual pair shielded cables the situation became difficult because the names STP, S-STP or PIMF did not differentiate between the different possible constructions, i.e. with or without an overall braid, and with or without an overall foil.

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The new family of cable names is based on a logical identification of construction written as x/yTP in the following way:

"x" is the name of any overall screen which logically can be

- "U" for no overall screen
- "F" for overall foil screen
- "SF" for overall foil and braid screen

"y" is the name of any individual screen which can logically be

- "U" for no overall screen
- "F" for overall foil screen

This name family is very clear and easily understood if it is known how it is used and what the name stands for. If not it will be the source of much confusion. As an example a traditional old name "UTP" cable is now U/UTP which will most probably cause no confusion, but just some thinking if the two "U"'s are written by mistake, that is if you do not know the new concept. Another amusing point could be that a screened cable can actually appear unscreened as in the case of F/UTP, which is the new name of the traditional old "FTP" cable.

It should be noted that **the new names always contain a "/" between overall and individual screening identification.** The old name may apply "-" as a separation.

A comparison of the two families of cable names is given below:

<b>Old Names</b>	<b>New Names</b>
UTP	U/UTP
FTP	F/UTP
S-FTP	SF/UTP
STP or S-STP or PIMF	U/FTP (i.e.individual pair foil screened cable without overall screen)
	F/FTP (i.e.individual pair foil screened cable with overall foil screen)
	S/FTP (i.e.individual pair foil screened cable with overall braid screen)

**The biggest potential confusion point will be the old name S-FTP versus the new name S/FTP.** These cables are indeed completely different as written above and can from the printing on the cable only be differentiated by application of "-" or "/".

My personal feeling is that the new names are gathering momentum due to the limitation of the old names and the strict logical nature of the new names. 3P has not yet implemented the new names for all cables, but will let the producer decide which names to apply on their certificates.

## **2. Horizontal versus Solid**

The names "horizontal" and "solid" are randomly used and apply for the same cables, i.e. cables installed in the horizontal cabling and having solid conductors.

## **3. Patch versus Flexible versus stranded**

The names "patch", "flexible" and "stranded" are randomly used and apply for the same cables, i.e. cables having stranded conductors, used for patch cords and being more flexible than "horizontal /solid" cables. Strictly speaking there are differences as flexible cables are defined by requirements to a cable flex test, but in reality the three names are used at random.

3P intends to use the name "flexible" but will also use the other two alternatives in cases where it will help understanding.

## **4. Fire Safety Identification**

Different fire safety performance applies for cables and some different names are applied outside the US to identify fire safety performance. Much confusion is caused by the names, but I believe that the market generally do not understand what the safety identification names stand for. The following understanding applies at 3P:

LS0H or LSZH: Flame retardant, zero halogen cable. The flame performance is according to IEC 60332-1-2.

LSFR0H or LSFRZH: Fire retardant, zero halogen cable. The fire performance is according to both IEC 60332-1-2 and IEC 60332-3-24 (Cat.C) (or its old version IEC 60332-3, Cat. C:1992, which is then identified by the certificate).

3P always applies the first version of the names, i.e. LS0H and LSFR0H.

## **5. Patch Cords**

Marking rules for the patch cords are easy, but unfortunately even more easy to misunderstand. Patch cord marking must be on the bag and as a label on the patch cord. Printing on the cable might be useful, but could also be directly misleading. The application of "3P Verified" on the cable is in no way an assurance that the patch cord is verification tested by 3P. It only proves that the cable applied for the patch cord is 3P verified, which is of course significant as we do test the stability of the cable performance against rough handling. However, the assembly operation is always critical and even the best cable can not save performance after a sloppy assembly to the plug.



Therefore, if you find a bad patch cord with "3P Verified" printed on the cable you should not blame us, or even worse the cable producer. It is most likely a problem caused by the assembling operation.

Patch cords are most often a critical component of an installation, difficult to assemble with constant performance complying with the specification. 3P qualification of patch cords involves both patch cord testing and assembly line inspection every 6 months. So far 3P has only qualified patch cords from Brand-Rex, so any other patch cords are not 3P qualified.

Yours sincerely,  
3P Third Party Testing

A handwritten signature in blue ink that reads "Poul Villien".

Poul Villien