SMF PMD naming

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100GbE naming

The existing (and draft) names for 100GbE PHYs are:

100GBASE-KP4, 100GBASE-KR4, 100GBASE-CR4, 100GBASE-CR10, 100GBASE-SR10, 100GBASE-SR4, 100GBASE-LR4, 100GBASE-ER4

According to a decision taken during the P802.3ba project, the character after “-” in the names does not have a fixed meaning.

For the 10GbE PHYs, S, L and E were indicators of the wavelength, while for 100GbE, the same characters were used to differentiate reach.

If a new 100 GbE SMF PHY with 500 m reach is standardised, then a new letter will need to be chosen for the PHY name.

Previously used letters

The letters that have been previously used after the “-” in Ethernet names are:

B (for bidirectional)
C (for twin axial copper)
E (for extra long wavelength or 40 km reach)
F (for fiber or 2 km reach)
K (for backplane)
L (for long wavelength or 10 km reach)
P (for PON)
S (for short wavelength or 100 m reach)
T (for twisted pair)

None of these seems appropriate for a new SMF PHY with 500 m reach.

Available letters

Of the remaining letters, I, O and Z should be avoided as they are easily mistaken for numbers.

Also, R, W and X should be avoided as they are all used in the next character position and terms such as 100GBASE-R are used in the standard.

This leaves:

A, D, G, H, J, M, N, Q, U, V, Y

Of these, three candidates:

D (for data centre or Roman numeral D (500))
M (for medium reach)
V (for VSR as per 600 m applications in G.693)

Seem like good possibilities.

Proposal

If a new 100 GbE SMF PHY with 500 m reach is adopted by the P802.3bm project, use the name:

100GBASE-DR4 if it is a 4 lane solution or:
100GBASE-DR if it is a single lane solution.

Thanks!