Work continues on the amendment of AS/NZS 3080 (ISO/IEC 11801) along with revision of AS/CA S008 and AS/CA S009 (Mandatory Standards).

These long established standards are now starting to address issues associated with IoT deployment or if you prefer different terminologies, smart cities and/or digital disrupted marketplaces.

One of the issues in the development of the standards that are currently under review is when they are published they will need to address technological changes that are likely to occur over the life of the standard.

The fundamental requirements for IoT connected devices is the delivery of power and communications to the end device over the telecommunications cabling.

Copper telecommunication cabling provides a viable and reliable option to meet these deliverables.

While the cable and connector product standards are likely to remain mostly unchanged with the exception of an increase in bandwidth performance, the challenge is to how to address cabling implementation for remote powering.

It is worth pointing out that cables and connectors are defined in standards as individual components, while cabling is defined as the installed interconnection of these individual components.

The issues relate to how to define or classify generic customer cabling (installed) requirements without knowing what electrical load will be applied over the life of the cabling.

The paradigm shift in our current thinking relates more to cable runs greater than ninety metres as there has been substantive work on cabling to ninety metres and there is a solid implemented base to provide a level of comfort.

Cabling over ninety metres needs to address: -

- the use of telecommunication in the delivery of power particularly for non-traditional applications (lighting, building management systems and associated devices),

- the uptake of 28 AWG cable that uses 0.32 mm dia in lieu of 0.5 mm copper conductors,
- the utilisation of telecommunication cable for remote powering in addition to PoE,
- temperature rise in cable bundles due to higher currents and restricted pathways,
- inferior cable entering the marketplace (copper-coated aluminium cable and cabling products with-misleading classifications),
- and in Australia we also need to look carefully at LV telecommunication cabling with its higher voltages.

If we look at the revision cycle of telecommunication standards as being approximately a five-year cycle, it is probable that we could see more non-traditional devices powered by telecommunications cabling and additional Ethernet reach to a 1000 m or more over the life cycle of the standards currently under development.

Given all this, it is unclear if the standards currently under development will remain relevant over their life cycle.

In this case the qualification of the cabling system as being “Fit for Purpose” for a specific implementation may need additional consideration at or before the time of deployment.

The question now is, what will that qualification look like and how will the installed base be qualified as being “Fit for (future) Purpose”?