Standards, Specifications & Interoperability

"It meets the xxx standard" often means little in terms of a product's interoperability - follow-up questions are needed:

- **Has the product received an approval certificate from an appropriate test laboratory?**
- **What is the type of approval certificate?**
- **Does the certificate guarantee interoperability?**
- **What is the date of the standard, and what is the expiry date of the certificate?**

Product specifications will normally reference standards, and are closer to the requirement for interoperability. It is in the interest of the product developers to maximise the market for their products.

Many products can be customised and even personalised. This means that the product will need to be further tested to ensure interoperability in its customised/personalised form.

For example the debit and credit cards in our pockets can be used worldwide, wherever the card scheme cards (Visa, Mastercard, Amex etc.) are accepted. The card scheme specifications refer to EMV (industry) specifications, which in turn refer to international standards e.g. ISO/IEC 7816-n standards.

There are two levels of card scheme certification:
– Card type approval certification, which allows card suppliers to sell their cards to card issuers (banks)
- Card personalisation approval, which allows bank cards to be issued to cardholders

Equivalent certifications apply to smartphone EMV payment apps, and online payment systems.

EMVCo also require certification for all EMV terminals that accept EMV cards, and also security certification for chips used in the cards.

All these certificates have an expiry date, beyond which they are invalid.

The result of this structure of standards, specifications and certification laboratories is a worldwide network, including cards, smartphones & terminals, supporting annual transactions from over 12 billion EMV cards, plus billions of smartphones.

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