Payment meter standards from Africa for Africa

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Evolution of meter type test standards

- Proprietary phase
- Industry phase
- National phase
- International phase

1985: Proprietary standards – South Africa and UK
1993: ESKOM publishes MC 171
1994: STANSA publishes SANS 1524
1995: IEC TC13 WG15 is established – for payment systems
2005: IEC publishes IEC 62055-21 and IEC 62055-31
Evolution of Standard Transfer Specification

1985: Proprietary standards – South Africa and UK
1993: ESKOM + manufacturers develop and publish STS
1997: STS Association becomes custodian of STS
2001: STSA establishes liaison with IEC
2007: IEC publishes STS standards – IEC 62055-41, -51 and -52

- Proprietary phase
- Industry phase
- International phase
• **Membership**
  - 12 countries
  - 27 manufacturers
  - 2 utilities
  - 1 representative from AMEU
STS Association standards

• 7 working groups
  - STS enhancements
  - Key management
  - STS numbering
  - Conformance test specification

• Standards under development
  - STS 101-1 Companion specification – Serial port VTC
  - STS 200-1 Companion specification – MeterFunctionObject classes
  - STS 201-15.1.0 Companion specification – RegisterTable
  - STS 401-1 Code of practice for allocation of supply group codes
  - STS 501-1 Certification test specification for products
  - STSE – suite Advanced functionality (2-way + tariff + clock)
IEC TC13 standards

- **WG 15: Payment metering systems**
  - IEC 62055-21 Payment metering systems – framework for standardization
  - IEC 62055-31 Particular requirements – payment meter type test

- **STS publications**
  - IEC 62055-41 (STS) Application layer protocol for one-way token carrier systems
  - IEC 62055-51 (STS) Physical layer protocol – numeric + magnetic card
  - IEC 62055-52 (STS) Physical layer protocol – virtual token carrier
IEC TC57 standards

- **WG13: Energy management system application program interface**
  - IEC 61970-301  Common information model (CIM)

- **WG14: System interfaces for distribution management**
  - IEC 61968 (parts 1 – 14)  CIM interfaces
  - IEC 61968-9  Interface to meter reading and control systems
  - IEC 61968-11  CIM extensions in distribution networks
  - IEC 61968-12  Use cases for distribution management
STS Association services

- **Key management centre**
- **Product certification centre**
- **Utility users**
  - 32 countries
  - 400 utilities
  - 700 vending keys
  - 8 million meters
- **Manufacturer users**
  - 4 countries
  - 12 manufacturers
  - 14 vending products
  - 86 meter products
STS open standards

Why?

Benefits for the utility?

Impact on the manufacturer?
Utility benefits

- Future-proof investment – assures continued service and product availability
- Avoids product or supplier lock-in – multi supplier sourcing
- Product interoperability – international open standard
- Unified operational processes for all product brands
- Experience-sharing amongst utilities
- One-stop-shop service from STS Association
- Key management services – trusted and secure revenue protection
- Quality assurance – sustained product certification test procedures
Manufacturer impact

• **Upside**
  - Easier market entry – but widens supply base (more competition)
  - Easier market expansion – increase size of the cake

• **Downside**
  - Competitive bid – sharpen pencil
  - Differentiate on quality of products and value-add services
  - Optimization of price v/s performance
Conclusion

- Utility has a lot to gain
- Manufacturer placed under pressure
- Promotes balanced market forces

Open standards - the way to go

Thank you!

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