Quality Challenges for Home Gateways

Dr. Anna Mereu – New Technology Specialist
AnnaMereu@eurofins.com

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Heterogeneity of services

• Growth in home automation market within different sectors:
  • Professional Installations
  • DIY
  • CE
  • Service Providers
QA priorities through the value chain

Are communication interface and SW middleware correctly integrated?

Have the exposed APIs been comprehensively tested?
Do the applications and services function correctly?

Are the devices correctly controlled by the applications?

Is the whole suite of services functioning correctly?
Quality Issues

Digital Testing

Are the software components of the box integrated correctly?

Device-level testing: Does the box/sensor work? Can it connect to the other devices?

Hub box, generic HA device

- APP
- API
- Drivers
- HW Interfaces

Communication protocol testing

- Thermostat
- Smart Plug
- Presence Sensor

Does the app developed for the smartphone connect with the box and retrieve the device’s data?

Overall ecosystem testing - do the devices and services work well?

Do the software components work in this box? Does the ‘gather connected device’s data’ API work?
• Quality and ease of use essential for Operator’s customer base
  • Device interoperability and seamless service integration needs to be achieved ‘off the shelf’
• Interoperability essential to strengthen the product/services ecosystem.
  • A comprehensive testing strategy is essential
  • A thorough conformance regime must be designed. E.g.
    • Products listed on websites
    • Set up of Logo Programmes
Conformance regimes as a means to ensure:

- Compliance to standard specifications
- Compliance to common, established SW APIs of the ecosystem
- Interoperability among devices and services in the ecosystem
- Companies can identify quality in third party devices, software and apps without having to test everything themselves

Various types of conformance regimes:

- Lightweight regimes, relying on self-certification
- Mandatory regimes
About Eurofins Digital Testing

- The Leading Digital Media Testing Company
- ISO17025 Accredited
- 162 people in UK, Belgium and Hong Kong
- Formed in June 2015 combining Digital TV Labs and Testronic Labs

- Device Manufacturers – Range of Connectivity Technologies, Media delivery Broadcasting standards:
  - Test Suites, Testing Services and Test Tools
  - Certification Services

- Standards Organisations
  - Bespoke Test Tool Development
  - Supply of Certification Regimes

- Operators & Broadcasters
  - Test Automation
  - On-site test consultancy
  - Test Suite & Test Tool Development
  - End-to-end QA services

- Focus on High Quality Service Levels
Standard Organisations Memberships

- Broadcasting and Broadband
- Italian Broadcasting Forum
- Standards Organisation
- Adaptive Media Delivery
- Alliance for the support of ULE technology
- US Broadcasting Standards Organisation
- Consumer Technology Association
- Industry Association for Home Gateway Standards
- UK Broadcasting Forum
Eurofins Digital Testing UK
Castlemead,
Lower Castle Street,
Bristol BS1 3AG,
United Kingdom.
+44 1179 896 100

Eurofins Digital Testing HK
Unit 609, 6F, Lakeside One,
8 Science Park West Avenue,
Phase 2, Hong Kong Science Park,
Shatin. Hong Kong.
+852 3426 9695

Eurofins Digital Testing Belgium
Wetenschapspark 7
B-3590 Diepenbeek
Belgium
Tel: +32 11 303 600

www.eurofins-digitaltesting.com
digitaltesting@eurofins.com
@eurofinsdigitaltesting
/company/eurofins digital testing