The Benefits and Principles of Conformity Assessment Schemes

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Contents

- The benefits of conformity assessment
- Conformity assessment scheme guidelines - ISO CASCO
- Mandatory conformity assessment

The Benefits of Conformity Assessment

Why?

- Conformity Assessment
- Standardise

Why Standardise?

- Compatibility between equipment from different sources
  - Manufacturers
  - Users (e.g. network operators)
- Interface characteristics & system behaviour
  - Between systems
  - Between components within a system
- Ensure interoperability
- Reduce barriers to trade
- Provides governments and regulators with best practices

Benefits of Standardisation

- Encourage adoption of technology
- Reduce risks
- Help level the industry playing field & encourages competition
- Create economies of scale
- Improve efficiency
- Increase size of market
- Overall benefit of the industry

Why test conformance?

- Avoid equipment incompatibilities due to:
  - Different interpretations of a specification
  - Errors in implementation
  - Choice of different options

Conformance Testing Methodology

X.290 Series – OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications

- X.290 General concepts
- X.291 Abstract test suite specification
- X.292 The Tree and Tabular Combined Notation (TTCN-2)
- X.293 Test realization
- X.294 Requirements on test laboratories and clients for the conformance assessment process
- X.295 Protocol profile test specification
- X.296 Implementation conformance statements

Formal Description Techniques

- Z.100 - Z.109 Specification and Description Language (SDL)
- Z.110 – Z.119 Application of formal description techniques
- Z.120 – Z.129 Message Sequence Chart (MSC)
- Z.150 – Z.159 User Requirements Notation (URN)
- Z.160 – Z.179 Testing and Test Control Notation (TTCN-3)

Why assess conformity and certify?

- Give confidence that products requirements are met
- Benefits the user as they can make better purchase decisions
- Benefits the supplier as products may more easily gain market acceptance
- Helps level the industry playing field & encourages competition
- WTO Technical Barriers to Trade Agreement recognises *"the important contribution that…conformity assessment schemes can make…by improving efficiency of production and facilitating the conduct of international trade"*
- Provides governments and regulators with best practices

Design of conformity assessment scheme

- Certification scheme should be related to the degree of risk associated with non-compliance considering such aspects as safety, health or environmental impacts, durability, compatibility and suitability for intended use
- Cost should not be excessive
- Should ensure transparency and neutrality

Conformity Assessment Guidelines ISO Conformity Assessment Committee (CASCO)

ISO/IEC 17000 Series – Conformity assessment

ISO/IEC 17000:2004 Vocabulary and general principles.
ISO/IEC 17001:2005 Impartiality - Principles and requirements
ISO/IEC 17002:2004 Confidentiality - Principles and requirements
ISO/IEC 17003:2004 Complaints and appeals - Principles and requirements
ISO/IEC 17004:2005 Disclosure of information - Principles and requirements
ISO/IEC 17007: 2009 Guidance for drafting normative documents suitable for use for conformity assessment
ISO/IEC 17011:2004 General requirements for accreditation bodies accrediting conformity assessment bodies
ISO/IEC 17021:2011 Requirements for bodies providing audit and certification of management systems
ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories
ISO/IEC 17030:2003 General requirements for third-party marks of conformity
ISO/IEC 17040:2005 General requirements for peer assessment of conformity assessment bodies and accreditation bodies
ISO/IEC 17050-1:2007 Supplier's declaration of conformity - Part 1: General requirements
ISO/IEC 17050-2:2004 Supplier's declaration of conformity - Part 2: Supporting documentation

ISO/IEC conformity assessment guides

ISO/IEC Guide 23 Methods of indicating conformity with Standards for third Party certification Systems
ISO/IEC Guide 28 Conformity assessment - Guidance on a third-party certification system for products
ISO/IEC Guide 60 Conformity assessment - Code of good practice
ISO/IEC Guide 65 General requirements for bodies operating product certification schemes
ISO/IEC Guide 67 Conformity assessment – fundamentals of product certification
ISO/IEC Guide 68 Arrangements for the recognition and acceptance of conformity assessment results

ISO / IEC Guide 67

"Conformity assessment – fundamentals of product certification"

- "As products are designed, produced, distributed, used and ultimately disposed of, they may give rise to societal concerns. A very frequent concern is simply whether a product is what it appears to be. Concerns can involve such product attributes as safety, health or environmental impacts, durability, compatibility, suitability for intended purposes or for stated conditions, and similar considerations."
- Product certification benefits consumers as they are able to make better purchase decisions about products and also benefit suppliers as by demonstrating conformity they may more easily gain market acceptance.

Consideration of Risk

- "The type of activity undertaken to demonstrate conformity of product with requirements is often determined by the consequences of nonconformity.
- When consequences are insignificant or not severe, society may (require) expect little or no demonstration of conformity of product since the problems generated can be easily addressed and solved after they occur. In these cases the supplier's claims may be sufficient but they may be complemented by third-party product certification on a voluntary basis.
- However, where the consequences of nonconformity are significant, society may demand completion of activities that demonstrate conformity to requirements prior to allowing the product on the market, concurrent with the product appearing on the market, or both. One method of providing such assurance is through product certification."

Product Certification

- Should address the concerns of users by instilling confidence regarding fulfillment of requirements
- May be used by suppliers to market their products
- Should not require excessive resources and so be overly expensive

Who performs conformity assessment?

- 1st party – the supplier
- 2nd party – the user
- 3rd party – an independent body

ISO define product certification as a 3rd party conformance assessment activity

ISO / IEC Guide 65

"General requirements for bodies operating product certification schemes"

- 3rd party certification scheme
- Non-discriminatory
  - "accessible to all applicants whose activities fall within its declared field of operation. There shall not be undue financial or other conditions. Access shall not be conditional upon the size of the supplier or membership of any association or group"
- Standard specifications required
  - "If explanation is required as to the application of these documents for a specific certification system, it shall be formulated by relevant and impartial committees or persons possessing the necessary technical competence, and published by the certification body."

ISO / IEC Guide 65 Requirements (1)

- Organization of certification body
  - Impartial
  - Transparent
  - Legal entity
  - Competent personnel
  - Independence
    - "ensure that activities of related bodies do not affect the confidentiality, objectivity and impartiality of its certifications, and it shall not 1) supply or design products of the type it certifies, 2) give advice or provide consultancy services to the applicant as to methods of dealing with matters which are barriers to the certification requested, 3) provide any other products or services which could compromise the confidentiality, objectivity or impartiality of its certification process and decisions"
  - Complaints procedure

ISO / IEC Guide 65 Requirements (2)

- Operations
  - Specification of the technical requirements for conformity (including testing, sampling & inspection requirements)
  - Monitor the suitability and competence of the organisations performing testing, inspection and certification/registration
- Subcontracting
  - Agreement covering confidentiality etc
  - Certification body keeps full responsibility
- Quality System
- Conditions and procedures for granting, maintaining, extending, suspending and withdrawing certification
- Internal audits and management reviews

ISO / IEC Guide 65 Requirements (3)

- Documentation
- Records
- Confidentiality
- Changes in certification requirements
- Appeals, complaints and disputes
- Application procedure
- Evaluation procedure
  - Pre-evaluation, evaluation and report
- Decision on certification
- Surveillance
- Use of licenses, certificates and marks of conformity
- Complaints made to suppliers

ISO/IEC Guide 65 – Testing Options

- Initial testing of a product and assessment of its suppliers' quality systems, followed by surveillance that takes into account the factory quality system and the testing of samples from the factory and the open market OR
- Initial testing and surveillance testing OR
- Type testing only

Outline of conformity assessment process

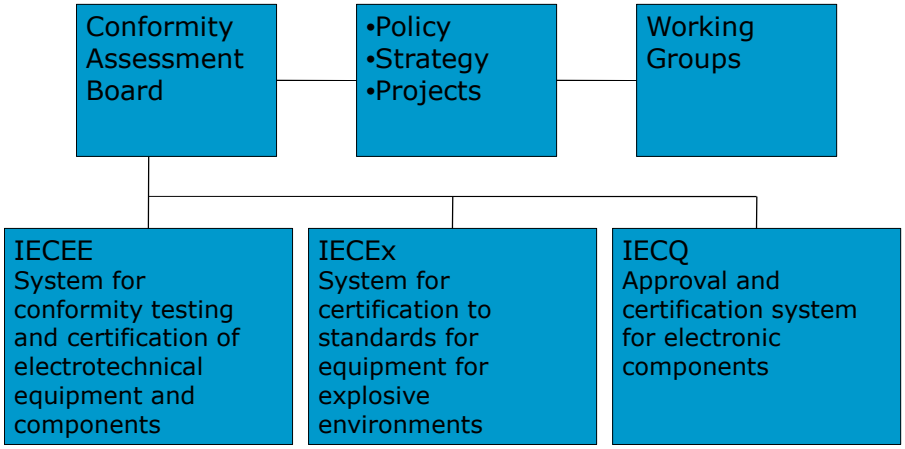
End users – gain independent assurance that products meet their requirements

Certification body – issues conformity assessment certificate; accredited & recognised internationally

Testing Laboratory – performs tests on products & issue test reports; accredited by a national authority and recognised internationally

Standards Development Organisation – produces base specification & associated test specifications

IEC CA structure



IEC Conformity Assessment Schemes

IEC Conformity Assessment Principles

- Peer assessment
- Mutual recognition
- On-line databases

Mandatory Conformity Assessment

Mandatory Conformity Assessment

Examples

- USA
- Canada
- EU

USA

- The FCC oversees the authorization of equipment using the radio frequency spectrum in the USA [http://transition.fcc.gov/oet/ea/].
- Such equipment may not be imported or marketed unless it meets the technical standards specified by the FCC. Depending upon its capabilities equipment may be subject to:
  - **verification** (in which manufacturers test the device),
  - **declaration of conformity** (which requires testing by an accredited test laboratory) or
  - **certification** (which is issued by the FCC or a designated Telecommunications Certification Body based on test results submitted by the supplier).
- FCC provides a database on equipment authorisations
  - [https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm]

Canada

- The Certification and Engineering Bureau of Industry Canada [http://www.ic.gc.ca/eic/site/ceb-bhst.nsf/eng/Home] provides a certification service for radio and terminal equipment in Canada.
- The Industry Canada Certification and Engineering Bureau maintain lists of terminal equipmenthttp://www.ic.gc.ca/eic/site/ceb-bhst.nsf/eng/h_tt00050.html and radio equipment http://www.ic.gc.ca/eic/site/ceb-bhst.nsf/eng/h_tt00020.html that has been certified for use in Canada.

European Union

- The Radio and Telecommunications Terminal Equipment (R&TTE) Directive (199/5/EC) [http://ec.europa.eu/enterprise/sectors/rtte/index_en.htm] defines a harmonised regulatory framework for the approval of terminal equipment in the European Union.
- It is based on supplier declaration of conformity to basic requirements intended to ensure that the equipment is safe to use and does not cause interference with other equipment.
- The Croatian Post and Electronic Communications Agency provides a database of equipment approved in accordance with the EU R&TTE directive [http://www.hakom.hr/default.aspx?id=561]

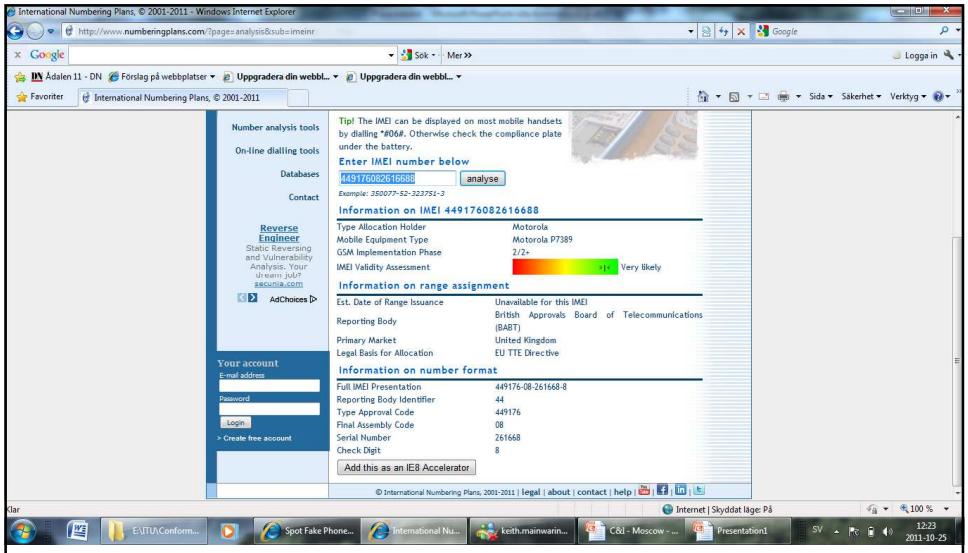
Limitations of mandatory conformity assessment

- No guarantee that the device will work properly or interoperate with other devices
- Does not help identify counterfeit equipment


SpotAFakePhone.com - Windows Internet Explorer
http://www.spotafakephone.com/
SpotAFakePhone.com
Spot a fake phone.com
About fakes
Spot fake phones
Spot fake batteries
Consumer impact
Industry impact
National impact
Buy genuine
Spread the word
FAQ
Report a fake
Thank you for taking the time to learn more about fake phones and batteries and their impact on all of us.
English
The global black market for mobile phones - including sub-standard and counterfeit or fake handsets has been growing rapidly over the past few years with the total size of this market estimated to be in excess of 200 Million devices in 2010.
Counterfeit or fake phones are copies of popular brands and models made from sub-standard materials, that are not tested and certified for safety and are often made from sub-standard components that can contain banned chemicals, such as lead and mercury. Consumers can inadvertently purchase a fake or sub-standard phone, through no fault of their own, by trying to find a cheaper price for a phone - especially on the internet.
Everyone wants to be able to buy a product at a good price - but there are those that want to exploit that and sell you products that are not what they claim to be - or that are just poor quality and perhaps even dangerous. Therefore this site has been set up by genuine manufacturers to help consumers identify and avoid fake or knock-off phones.
Two of the key benefits of buying a genuine phone are reliability and safety. Reliability, in that the phones
spotafake
spotafake SMiShing scam targets cell phones bit.ly/pPkcz2 - Also learn about risks with counterfeit phones bit.ly/nnUt8c
spotafake #ZAMBIA: ZICTA warns traders against flooding market with counterfeit phones which could be hazardous to consumers. bit.ly/p0tbyM
ITU


International Numbering Plans, © 2001-2011 - Windows Internet Explorer
http://www.numberingplans.com/?page=analysis&sub=imeinr
INTERNATIONAL numbering plans
Services
Subscriptions
Numbering plans
Number analysis tools
On-line dialling tools
Databases
Contact
Analysis of IMEI numbers
All mobile phones are assigned a unique 15 digit IMEI code upon production. Below you can check all known information regarding manufacturer, model type, and country of approval of a handset.
Tip! The IMEI can be displayed on most mobile handsets by dialling *#06#. Otherwise check the compliance plate under the battery.
Enter IMEI number below
analyse
Example: 350077-52-323751-3
Add this as an IE8 Accelerator
Reverse Engineer
Static Reversing and Vulnerability Analysis. Your dream job? secunia.com
AdChoices

IMEI = *#06#



Anti-counterfeiting

- Unique identification & authentication
- Secure supply chain / equipment lifecycle management

Market regulatory spectra

Telecommunications Regulation

Ex-ante
Sector-specific regulation

Ex-post
General competition law

Consumer Protection

Specific mandatory
conformity assessment

General consumer
protection legislation

Thank You!