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### Why assess conformity? The benefits, principles and approaches to conformity assessment


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1




## Complexity of ICT Products

- Multiple interfaces and protocols
- Multiple standards
- Multiple suppliers and manufacturers
- Complexity examples:
  - Handheld devices  
  - Routers, hubs, bridges  
  - Core Network Technologies e.g. DWDM, MPLS, LTE, 3G/4G
  - Endless Apps e.g. over 80K Windows phone apps alone







2



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## The Standards Development Process

- Contribution driven – suppliers are big players
- De jure, de facto and proprietary processes
- Driven by diverse competitive interests
- Complex technical discourse conducted in natural language – usually English
- Paced for a rapidly changing technology marketplace
- Often no agreed formal interpretations or descriptions of the text, and no test suites
- Results in divergent interpretations of standards and incompatible implementations



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## Best Practices in Standards Development

- Decisions are reached through consensus among those affected
- Participation is open to all affected interests
- Balance is maintained among competing interests
- The process is transparent – information on the process and progress is directly available
- Due process assures that all views will be considered and that appeals are possible
- The process is flexible, allowing the use of different methodologies to meet the needs of different technology and product sectors
- The process is timely; purely administrative matters do not slow down the work
- Standards activities are coherent, avoiding overlap or conflict
- In addition, successful standards processes must lead to quality standards (implementable, error-free, testable)





## From Standards to Interoperable Products

- Commonly agreed technical specifications, often with functional and national options
- Formal Description Languages and tools are available: SDL, MSCs, URN, TTCN
- Standardized test suites (groupings of test cases) and test methodologies
- Test cases describe the method of test, test purpose, test procedure, test setup and additional parameters to verify a specific requirement
- Protocol Implementation Conformance Statement (PICS) and Extra information for Testing (PIXIT)
- Interoperability testing and test plans
- Feedback process from tests to standards development process



## What is Conformity Assessment?

- ISO/IEC 17000:2004, defines conformity assessment as “demonstration that specified requirements relating to a product, process, system, person or body are fulfilled.”
- Conformity assessment includes sampling and testing, inspection, supplier’s declaration of conformity, certification, and management system assessment and registration.
- Conformity assessment forms a vital link between standards (which define the necessary characteristics or requirements) and the products themselves.





## Why Assess Conformity?

- To verify that a particular product meets a given level of quality, safety or performance
- For mandatory standards:
  - To show compliance with legal requirements
  - Focus is on avoidance of network harm, safety and interference
- For voluntary standards:
  - To demonstrate compliance with the standard
  - To increase the likelihood of interoperability with other implementations of the standard
  - To increase market size and opportunities



## Conformity Assessment Principles 1/3

- Do not create unnecessary obstacles to national/international trade
- Open and transparent to all applicants and provides them with equal treatment
- Requirements and procedures are based on international guides and standards to the extent feasible
- Information on all requirements and procedures for obtaining conformity assessments are publicly available
- Conformity Assessment (CA) Procedures are completed promptly and efficiently





## Conformity Assessment Principles 2/3

- Information requirements are limited to what is necessary to assess conformity and determine fees
- All applicants for CA are treated equally with respect to the imposition of any fees charged
- As appropriate, conformity assessment bodies undertake reasonable surveillance procedures to ensure continued product conformity and protection of their reputation and/or mark
- Organizations conducting CA have effective procedures for reviewing complaints, and such procedures are open to all stakeholders



9



## Conformity Assessment Principles 3/3

- Conformity Assessment upholds the WTO Agreement on Technical Barriers to Trade (TBT) and avoids creating unnecessary obstacles to trade
- Conformity Assessment is inherently voluntary. However, marketplace demands and/or government regulation may mandate specific CA requirements
- Multi-stakeholder input and involvement is solicited on Conformity Assessment topics as appropriate



10



## Characteristics of a Conformity Assessment Body

### Conformity Assessment Bodies must guarantee:

- Independence – legal and otherwise
- Objectivity – no prejudice or pre-conceived ideas
- Impartiality – no hidden agenda
- Confidentiality – protect results and sources
- Professional integrity – trusted and principled



## Conformity Assessment Types

- First Party Attestation–self assessment:
  - Attestation issued by manufacturer or supplier
  - Decision and review made by same
  - Supplier or manufacturer accepts responsibility
- Supplier Declaration of Conformance (SDoC):
  - Same as First Party but with detailed compliance with ISO/IEC 17050
  - SDoC may be based on First or Third Party determination
- Second Party Declaration:
  - Attestation issued by a Second Party e.g. buyer or user of the product
- Third Party Declaration:
  - Defined in ISO/IEC 17000
  - Independent of the Party whose product is assessed





## Benefits of Conformity Assessment

- Greater compatibility and improvement towards interoperability of goods and services
- Improved safety and reduction, or elimination of interference
- Assured compliance with one or more standards
- Allows conscientious manufacturers to distinguish themselves from less reputable suppliers
- Provides consumers with a basis for selecting products or services
- Increases user confidence in products or services that bear a mark or certificate of conformity that attests to quality, safety or other compliance
- Regulators benefit from conformity assessment which gives them a means of enforcing governmental health, safety and environmental legislation.



## Conclusions

### How to get there from here

- Identify problem areas where CA can help, establish priorities, develop a step-wise implementation plan and funding requirements
- Familiarisation with ISO/IEC Guides and Standards for Accreditation, Certification and Testing
- Take full advantage of existing experiences, tools, procedures and processes in other regions
- Consider MRAs as a way to achieve CA objectives in short term





**THANK YOU**  
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15