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Information technology
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JTC1 / SC 39, Sustainability for and by Information Technology

Jay L Taylor



JTC 1/SC 39

- Established by Resolution 27 from the November 2011 JTC 1 Plenary
- Officers:
 - Chair, Mr. Jay L. Taylor, USA
 - Secretary, Ms. Sally Seitz, USA
- First meeting of JTC 1/SC 39 held 12-14 June 2012 in Redwood Shores, CA

JTC 1/SC 39 Scope

- Standardization related to the intersection of resource efficiency and IT which supports environmentally and economically viable development, application, operation and management aspects.
- To avoid any duplication of work and to support innovation, SC 39 will engage in active liaison and collaboration with:
 - Other JTC 1 entities;
 - ISO TC 207, ISO TC 242, ISO TC 257;
 - IEC TC 100, IEC TC 108, IEC TC 111, SMB SG 4, IEC/PC 118, IEC TC 57/WG 21, IEC TC 9 and SMB SG 3;
 - ITU-T SG 5; and
 - Any other appropriate body including external organizations (e.g. consortia)



JTC 1/SC 39 Membership

- 13 P-members

- Belgium
- Canada
- China
- Finland
- France
- Germany
- Italy
- Japan
- Republic of Korea
- Netherlands
- Norway
- Singapore
- United States
- United Kingdom

- 6 O-members

- Australia
- Denmark
- Ireland
- Spain
- Switzerland
- United Kingdom



Established Liaisons

- JTC 1/SC 39 has established the following liaisons:
 - Internal: ISO/IEC JTC 1/SC 39 DAPS
 - ISO/TC 207, Environmental Management
 - IEC/TC 100, Audio, video and multimedia equipment and systems
- External:
 - ITUT-T Study Group 5
 - Ecma International
 - CENELEC TC 215, Electrotechnical aspects of telecommunications equipment



Intended Liaisons

- The JTC 1/SC 39 Secretary is working with the following committees and organizations to establish liaisons as defined in the scope of JTC 1/SC 39:
 - ISO/TC 242, Energy management
 - ISO/TC 257, General technical rules for determination of energy savings in renovation projects, industrial enterprises and regions
 - IEC/TC 8, Systems aspects for electrical energy supply
 - IEC/TC 57/WG 21, Interfaces and protocol profiles relevant to systems connected to the electrical grid
 - IEC/TC 111, Environmental standardization for electrical and electronic products and systems
 - IEC/PC 118, Smart grid user interface
 - Storage Network Industry Association (SNIA)
 - Distributed Management Task Force (DMTF)
 - GIPC – Green IT Promotion Council
 - Internet Engineering Task Force (IETF)
 - The Green Grid



Structure

- JTC 1/SC 39 Working Group 1 – Resource Efficient Data Centres
 - Convener: Mr. Henry Wong, US
 - Terms of Reference:
 - Development of a data centre resource efficiency taxonomy, vocabulary and maturity model;
 - Development of a holistic suite of metrics and Key Performance Indicators (KPI) for data centres;
 - Development of guidance for resource efficient data centres; and
 - Development of an energy management system standard specifically tailored for data centres.



Structure, con't

- WG 1 is responsible for the development of:
 - ISO/IEC 30131, Information technology – Data Centres – Taxonomy and Maturity Model
 - ISO/IEC 30133, Best Practices for Green Data Centres
 - ISO/IEC 30134-1, Information technology – Data Centres – Key Performance Indicators – Part 1: Overview and general requirements
 - ISO/IEC 30134-2, Information technology – Data Centres – Key Performance Indicators – Part 2: Power Usage Effectiveness (PUE)
 - ISO/IEC 30134-1 and -2 subject to approval of project division and scope revision of both JTC 1/SC 39 and JTC 1
- First meeting held 28-30 August 2012 in Frankfurt, Germany



Structure, con't

- JTC 1/SC 39/WG 1 Task Force 1 – Data Centre KPIs
 - Convener: Mr. Tomoo Misaki, Japan
 - Terms of Reference:
 - To identify the initial group of KPIs associated with the Data Centre Resource Efficiency, including and not limited to 1) ITEE, 2) ITEU, 3) GEC, 4) CUE and 5) WUE.
 - For each KPI, Designation, Title and Scope shall be defined and agreed by the Task Force group prior to the submission to WG 1 for the subsequent preparation of the NWIPs to be added to the series ISO/IEC 30134.
 - The Task Force is not responsible for the development of the draft text and will terminate when the aforementioned KPI titles and scopes are completed.



Structure, con't

- JTC 1/SC 39/WG 1 Task Force 2 – Methodology of Inter-relationships of KPIs
 - Convener: Mr. Tomoo Misaki, Japan
 - Terms of Reference:
 - Investigate methods of integrating KPIs, determining its value and identify considerations in combining KPIs. Conduct initial SWOT Analysis.



Structure, con't

- JTC 1/SC 39 Working Group 2 – Green ICT
 - Convener: Mr. Yong-Woon Kim, Korea
 - Terms of Reference:
 - Prepare guidance for the development of energy efficient ICT excluding the scope of JTC 1/SC 39/WG 1, Resource Efficient Data Centres
 - WG 2 is responsible for the development of:
 - ISO/IEC 30132, Information technology – IT Sustainability –Guidance for the Development of Energy Efficient ICT Products
 - First meeting scheduled for 1-2 November 2012 in Jeju, Republic of Korea



Structure, con't

- JTC 1/SC 39 Study Group on Gap Analysis
 - Conveners: Mr. Yong-Woon Kim, Korea and Mr. Linpeng Gao, China
 - Terms of Reference:
 - Gap analysis on:
 - Assessment methodology for how to quantify green effects of ICT functions for education, learning and training; and
 - Guidelines for making other industry sectors green by using IT (e.g. building, transportation/logistics, etc.)
 - First meeting scheduled for 31 October 2012 in JeJu, Republic of Korea



Programme of Work

- **ISO/IEC NP 30131, Information technology - Data Centres – Taxonomy and Maturity Model**
 - **Project Editor:** Mr. Andrew Robinson, Canada
 - **Scope:** Develop a taxonomy and maturity model for assessing resource efficiency, environmental and economic viability for IT services within data centres and including external dependencies such as network/grid operations, manufacturing, enterprise, emergency operations or control centres. Economic and environmental design/operations tradeoffs will be described in terms of location, grade of service, workload and lifecycle contexts



Programme of Work, con't

- **ISO/IEC NP TR 30132, Information technology – IT Sustainability – Guidance for the Development of Energy Efficient ICT Products**
 - **Project Editors:** Mr. Sangjin Jeon ,Korea , Mr. Hongzhi Tao, China
 - **Scope:** Study and develop guidance for the development of energy efficient ICT products (goods, networks and services)



Programme of Work, con't

- **ISO/IEC NP TR 30133**, Best Practices for Green Data Centres
 - **Project Editor:** Mr. Soochan Hwang, Korea
 - **Scope:** This work item specifies best practices aimed at developing green data centres. A green data centre can be defined as a repository for the storage, management and dissemination of data in which the mechanical, lighting, electrical and computer systems are designed for maximum energy efficiency and minimum environmental impact.; The construction and operation of a green data centre includes advanced technologies and strategies. The work item provides a set of rules and guidelines to be referred to when undertaking improvement of existing data centres or when planning, designing or constructing new ones.



Programme of Work, con't

- **ISO/IEC NP 30134-1, Information technology – Data Centres – Key Performance Indicators – Part 1: Overview and general requirements**
 - **Project Editors:** Mr. Henry Wong, United States, Mr. Taka Shiino, Japan, Mr. Yong-Woon Kim, Korea
 - **Scope:** This International Standard
 - Provides definitions of terms used in data centre KPIs
 - Defines the need and scope of KPIs for resource efficiency in data centres
 - Defines the areas of KPIs and application
 - Defines the guidelines and applicability in establishing a data centre KPI
 - Provides a structure of document in the series of KPIs
 - Describes a holistic view of resource efficiency



Programme of Work, con't

- **ISO/IEC 30134-2, Information technology – Data Centres – Key Performance Indicators – Part 2: Power Usage Effectiveness (PUE)**
 - **Project Editors:** Mr. Henry Wong, United States; Mr. Taka Shiino, Japan; Mr. Yong-Woon Kim, Korea
 - **Scope:** This International Standard
 - Defines the Power Usage Effectiveness (PUE) of a data centre
 - Introduces PUE measurement categories
 - Describes the relationship of this KPI to a data centre's:
 - infrastructure;
 - IT equipment
 - IT operations
 - Defines the measurement, the calculation and the reporting of the KPI



Programm of Work, con't

- ISO/IEC 30134-1 and ISO/IEC 30124-2 under JTC 1/SC 39 ballot to approve project subdivision and scope modification
- If approved, JTC 1 level ballot will be conducted to approve these changes to the Programme of Work.



Requests to the 2012 JTC 1 Plenary

- Approve the JTC 1/SC 39 Scope as circulated in JTC 1 N 11145

- Approve Mr. Jay Taylor as JTC 1/SC 39 Chair for initial three year term as requested in JTC 1 N 11139



Contact Information

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Questions?
