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Categorization

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Aligning Energy Efficiency Regulations for ICT Products: Developing a Strategic Approach
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Henry M Wong
USA/Intel Corporation

Panelists

- **Mr. Henry WONG (moderator)**
  Senior Staff Technologist, Intel Corporation, United States
- **Mr. LIU Hai**
  Program Manager Corporate Environmental Affairs, IBM, China
- **Ms. Yukari YAMASHITA**
  Board Member, Director, Energy Data and Modeling Center, The Institute of Energy Economics, Japan

ITI

Why Categorization?

Categories are used to group systems with similar capabilities together for energy comparison

Transportation Uses	Personal Computer	Consumption	Computer Uses
Transport a person A→B	Netbook	50 km/lit (20kWh)	Web Browsing
Transport people A→B	Notebook	20 km/lit (40kWh)	Content creation
Transport people and things A→B	High-end Notebook	10 km/lit (60kWh)	Games, Media creation, computational analysis

Goal: Establish categories that group products with similar capabilities (and energy profiles) to enable (efficiency) comparisons.

Key Considerations for Categorization

- Functionality and features that change the energy profile of the system
  - ✓ CPU and compute architecture
  - ✓ Graphics (if applicable)
  - ✓ Memory
  - ✓ I/O
  - ✓ Data storage
  - ✓ Peripheral, human interface, and management
- Market capability and application requirements
  - ✓ Grouping of devices that provide comparable capabilities to the target market or usage model
- Scalability within the category to address customizations
  - ✓ Grouping allows energy scaling within the category to address customizations such as increased memory or storage
- Establishing categories for highly specialized product that may not be comparable for the energy comparison program being considered

Current Categorization Methods

- IEC 62623 Categorization method for personal computers
  - Creates a baseline registry of categories and allows updates to adjust to market changes
  - Segmented by graphics and compute capabilities
- ENERGY STAR for Computer Servers v2
  - Servers grouped by number of sockets, integrated management, redundancy, RAS, and shared resource configurations
  - Scaling within the categories to address customizations
  - Separate categories for specialized products (these products may need to be treated separately or may not be applicable for energy comparisons)
- Top Runner
  - Personal Computers grouped by key attribute capabilities
  - Servers grouped by CPU architecture and sockets
- Eco-Design Directive
  - Broad groups for horizontal* specifications
  - Planned vertical* specifications (i.e. Lot 3) expected to adopt IEC 62623

- Horizontal refer to specifications that cover multiple product markets such as printers, televisions, and personal computers
- Vertical refers to specifications that cover a single generic product group such as televisions

Categorization Challenges

- Categorization methodology convergence
- Definition for specialized group(s) of product that may require separate evaluation methods
- Consumer vs. commercial products
- How to apply to horizontal specifications across varied categories of products.