Engaging Academia in Standardization for a Sustainable Future

Mostafa Hashem Sherif, Ph. D.

Outline

- Academia and standardization are in a turbulent environment
- The challenges to the engagement of Academia
- Recommendations

Turbulences facing International Standardization Organizations

- New products and services require tighter integration telecommunications and information technologies in the designs (e.g., the Internet of Things)
- Standardization takes effort and time
- SMEs are rarely engaged in international standardization

Turbulences facing International Standardization Organizations (continued)

- There is the notion that the fusion of telecommunications and IT will end up in common specifications
- Despite the fusion, different set of rules are needed for each constituent, even if they share the tools and technologies (the same piece sounds differently when played by classical or jazz musicians)

Turbulences Facing Academia

- Distance learning started in the 1890s to gain familiarity with new subjects without going through classrooms
    - Tocqueville in 1830's:"(In democracies, people) are obliged to do things which they have imperfectly learned, to say things which they imperfectly understand and to devote themselves to work for which they are unprepared by long apprenticeships"
- Online courses and MOOCs is the new form distance learning in the age of the Internet

Turbulences in the Academic Environment

- No standardized way of evaluation the quality of new offers
- Technology-enhanced learning without standards will produce incompatible platforms and duplicate interfaces
- Standardized evaluations of the quality of online teaching tools are needed

Additional Challenges to the Engagement

- ISO covers many areas, each corresponding to one or more academic discipline

- Many consortia and fora overlap with the ITU, ETSI or the IEEE.

- Computer science departments contribute to the IETF on the IP protocols

- Some mainstream economists object to standardization (stifles innovation, prevents market forces, etc.)

A Way Ahead

- Engagement should focus on services because they have a longer life-cycle than products
- Work with selected academics to solve the problems that SMEs face
- Prepare the next generation to consider Standardization committees as an "interactive learning space"

A Way Ahead -II

- Members of the academic institutions can document the reasons and the justifications of the specifications in textbooks and tutorials to enhance the curricula of engineering schools

- Train future designers to consider standardization at the design stage

- Business schools prepare the next generation of managers. Instructors and teachers can be engaged to construct business cases around specific standards