Workshop on "Introducing standards-related issues in educational curricula"

ITU and Academia

Bilel Jamoussi, PhD, IEEE SM
Chief, SGD, Telecommunication Standardization Bureau
International Telecommunication Union

Geneva, 8 November 2012
AGENDA

- ITU Overview
- ITU-T’s key topics
- ITU and Academia
  - Membership
  - Initiatives targeting academia
  - Education about Standardization

Geneva, 8 November 2012
ITU Overview

Geneva, 8 November 2012
ITU: enabling communication since 1865

Geneva, 8 November 2012
Unique public/private partnership

UN agency for ICTs

Members:

- **193 Member States** (Governments and regulatory bodies)
- **700 Private Sector** (Sector Members and Associates)
- **49 Academia**

Mr. Ban Ki-moon, Secretary-General of the United Nations and Dr. H. Touré, Secretary-General of ITU

Geneva, 8 November 2012
ITU’s Global presence

Headquarters in Geneva with Liaison Office in New York
Regional offices in Addis Ababa, Bangkok, Brasilia, Cairo
Area offices in Bridgetown, Dakar, Harare, Jakarta, Moscow, Santiago, Tegucigalpa, Yaoundé

Geneva, 8 November 2012
ITU’s mission: committed to connecting the world

**ITU-T**
develops ICT and telecommunication standards

**ITU-R**
manages radio spectrum and satellite orbits

**ITU-D**
assists developing countries

**General Secretariat** coordinates work of ITU

Geneva, 8 November 2012
Importance of Global Standards

- Drive competitiveness, for individual businesses and world economy
- Lower prices
- Reduce technical barriers
- Foster interoperability
- Manufacturers, network operators and consumers benefit

Geneva, 8 November 2012
Standards proven economic tool

- Standards make annual contribution of 2.5 billion £ - British Standards Institute (BSI)
- Economic benefits of standardization about 1% GDP - German standards body (DIN)
- Standards have a significant effect on limiting the undesirable outcomes of market failure
- The work of ITU has smoothed the more economical introduction of new technologies

Geneva, 8 November 2012
ITU-T collaboration with standards organizations

44 formal partnerships

- **World Standards Cooperation**: Patent policy & Joint events
- **ITU-T and IEEE**: MoU & Joint events
- **Global Standards Collaboration**: Supports ITU as preeminent global ICT standards organization
- **ETSI**: Management meetings
- **ITU-T and IETF**: Management meetings
- **ITU-T and ICANN**: Management meetings

Geneva, 8 November 2012
ITU-T’s key topics

Geneva, 8 November 2012
5% Regulatory

Numbering

SG2

Denmark +45

Tarif and Accounting

SG3

Geneva, 8 November 2012
Access:
- ADSL: ITU-T G.992
- PLT: ITU-T G.9960 (G.hn)
- FTTX:
  - GPON ITU-T G.984
  - Bendable fibers: ITU-T G.657

Optical Transport:
- SDH: ITU-T G.707
- Carrier Ethernet: ITU-T Y.1731
- Synchronization: Mobile Backhaul
SMART GRID

CLOUD COMPUTING

Geneva, 8 November 2012
INTERNET OF THINGS (IoT)

- Focus Group on M2M Service Layer (FG M2M) NEW!

INTELLIGENT TRANSPORT SYSTEMS

- ITU/ISO/IEC collaboration on ITS Communication Standards

Focus Group on Driver Distraction (FG Distraction)

Focus Group on Cars Communication (FG CarCOM)

Geneva, 8 November 2012
Global Portal on ICTs, the Environment and Climate Change

- Enhance the use of ICTs to measure greenhouse gas emissions across human activities
- Reduce greenhouse gas emissions in ICT sector
  - New standard for universal charger
- Increase information on the role of ICTs in combating climate change

Geneva, 8 November 2012
Advanced video coding: ITU-T H.264
- Used to compress billions of clips on YouTube, but also high-definition content on Blu-ray Discs

New work on the way:
- Joint Collaborative Team on Video Coding (ITU-T, ISO/IEC) to reduce H.264 data rate by 50%
ACCESSIBILITY FOR PERSONS WITH DISABILITIES

- Focus Group on Audiovisual Media Accessibility (FG AVA)

Geneva, 8 November 2012
Cybersecurity & Identity

- Strengthen the confidence and security in the use of ICTs
- Strengthen cybersecurity and combat cyber threats

- Identity Management
- ITU X.509 compliant services
- Child Online Protection

The Economist, July 2010

Geneva, 8 November 2012
EMERGENCY COMMUNICATIONS

Focus Group on Disaster Relief Systems, Network Resilience and Recovery (FG-DR&NRR) NEW!

BRIDGING THE STANDARDIZATION GAP

Geneva, 8 November 2012
Conformance and Interoperability

To ensure their interoperability, products of different vendors must undergo conformity testing to standards.

Interoperability is part of the mission of ITU: ITU-T Conformity Database.

Conformity to ITU standards significantly increase the probability of interoperability of tested equipment, services and systems.

Geneva, 8 November 2012
ITU and Academia

Geneva, 8 November 2012
ITU membership now open to Academia

Academia, universities and associated research establishments can join ITU’s three sectors in their own right

Resolution 169 (ITU PP-10)

Geneva, 8 November 2012
Rights

 ✓ Access to all ITU-T Study Groups
 ✓ Submit contributions
 ✓ Leading positions: rapporteur or editor
 ✓ Unlimited participation of delegates

Benefits

 ✓ Working with Member States and regulatory bodies from all around the world
 ✓ Meeting key players in the ICT industry
 ✓ Partner with the most innovative research institutes and universities

Geneva, 8 November 2012
ITU’S network of academia members

49 universities in 33 countries

Geneva, 8 November 2012
ITU Kaleidoscope academic conferences

- International events bringing academia and industry together
- Brainstorming on future ICT networks and services
- Rigorous, double-blind, peer-review process
- Top 3 papers win prize money totaling USD$ 10,000

Geneva, 8 November 2012
Next Kaleidoscope event

**Building Sustainable Communities**
Kyoto University, 22-24 April 2013

- Future technologies should be designed to enhance the quality of human life.
- Sustainable communities will combine human-oriented technologies and human values.

Geneva, 8 November 2012

http://itu-kaleidoscope.org/2013
ITU-T Technology Watch Watch

Geneva, 8 November 2012
Seminars to meet ITU-T experts

Lecture Series in ITU and universities

Internships for students

Geneva, 8 November 2012
Introduce standards in academic curricula: workshops

✓ ITU Webinar on Standards Education - 30 April 2012

✓ Joint ITU-GISFI-DS-CTIF Standards Education Workshop - 8-9 October 2012, Aalborg University, Denmark

Geneva, 8 November 2012
TSB Director’s Ad hoc Group on Education about Standardization

Webpage: http://itu.int/go/standardseducation

The need to address international ICT standardization in academic curricula is vital for the students of today, as they will become the experts driving the standardization processes of tomorrow.

In this context, “education about standardization” is related not to technology topics, but rather to providing formal information to students at undergraduate and graduate levels on all aspects related to international standards, such as standards development activities, standard strategy planning, and business case studies demonstrating the importance of standards to industry.

The Ad hoc Group will include ITU-T standardization experts, representatives of academia, and representatives of other standards development organizations (SDOs) interested in collaborating with ITU-T to advance standards education worldwide. See Terms of Reference.

Participation is open to all interested parties from members and non-members.

MEETING INFORMATION

1st meeting: during the Joint ITU-GISFI-DS-CTIF Standards Education Workshop, Aalborg, Denmark, 8-9 October 2012

DOCUMENTS

- Aalborg, Denmark, 8-9 October 2012

Documents store: http://itu.int/go/standardseducation/docs
TSB Director’s Ad hoc Group on Education about Standardization (2/2)

- **Secretariat Mailbox:** tsbstdsedu@itu.int
- **Mailing list:** standardsedu@lists.itu.int

**How to subscribe to the mailing list:**

- An account is needed...
- **Members:** use a TIES account (members-only)
  - For creating/managing TIES accounts, see [http://itu.int/TIES/](http://itu.int/TIES/)
- **Non-members:** create or use a Guest account
  - For instruction on creating a Guest account, see [http://itu.int/ITU-T/edh/faqs-guest.html](http://itu.int/ITU-T/edh/faqs-guest.html)

Once you have a TIES or Guest account, you can subscribe to the mailing list using the *ITU-T Electronic Registration and Subscription Service*:

- [http://itu.int/ITU-T/services](http://itu.int/ITU-T/services)

Geneva, 8 November 2012
Future meetings on Education about Standardization

- **Following K-2013** (Kyoto, Japan, 22–24 April 2013); target day: **25 April** (workshop plus AHG-SE)

- **During TSAG** in Geneva, **4 – 7 June 2013**

- **During the IWS 2013 Conference**, New Brunswick, New Jersey, USA, **24-27 June 2013** (workshop plus AHG-SE)

Geneva, 8 November 2012
Thank YOU

Geneva, 8 November 2012