

**Joint ITU-IEICE-CTIF-GISFI Workshop on Standards Education**  
**(Kyoto, Japan, 25 April 2013)**

# **Role Of Standardization In Education For The Development Of The Society**

**Prof. Liljana Gavrilovska**

Head of Telecommunications Department  
Faculty of Electrical Engineering and Information Technologies  
K. Smiljkovic, M. Angelinoski, V. Atanasovski



[liljana, katerina, markoang, vladimir@feit.ukim.edu.mk](mailto:liljana,katerina,markoang,vladimir@feit.ukim.edu.mk)

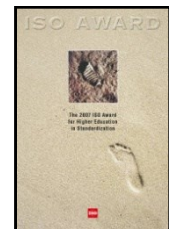


# Outline

- Motivation
- Standards Education in Europe
  - The situation in Europe
  - European Standardization System
  - SE initiatives in Europe
  - National strategies
- Situation in South East Europe
- Activities in Macedonia
- Conclusion

# Motivation

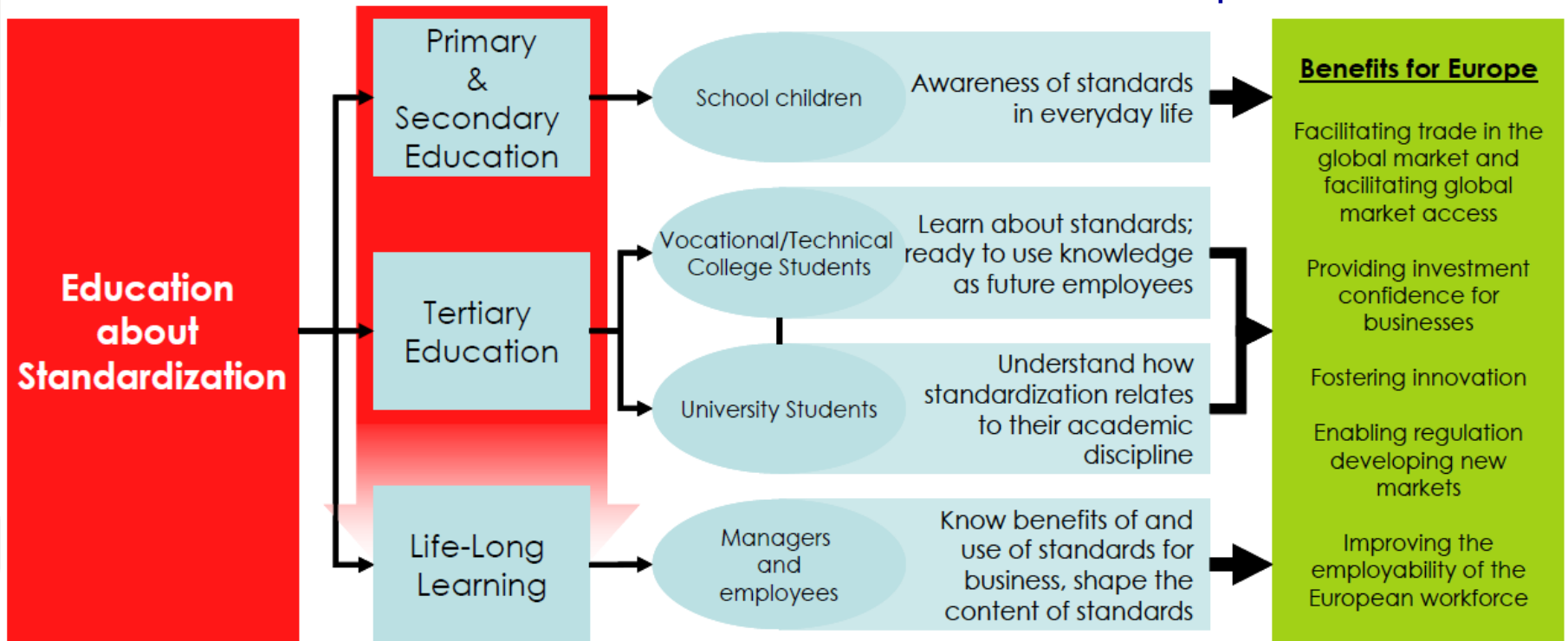
- **Standards Education (SE)** is teaching *pupils, students, CEOs, managers, employees* in business, and *life-long learners* the subject of standards and standardization
- SE may include:
  - The use and benefits of standards;
  - The strategic importance of standardization for business and Europe's competitiveness;
  - How to implement standards in businesses;
  - How to participate in standardization to influence the content of future standards
- *Possible consequences* of neglecting SE in Europe
  - **Reduction of the European influence** in *international standardization*
  - **Domination of non-European agents** in *international standardization*
  - Europe becomes a **follower**, not a *leader* in standardization issues
- **SE in the world – successful stories**
  - *China*: **More than 30 universities** in China engaged in SE
  - *Indonesia*: **ICES workshop** and **WSC Academic Day 2012** (28 universities in Indonesia participated in discussion about standards education)
  - *Korea*: The forerunner (in 2004 initiated the **University Education Promotion on Standardization (UEPS)** program)



ISO Award  
*Education in Standardization*

# The situation in Europe

- Europe plays a substantial role in the global standardization research community
  - European researchers provided **more than one third** of the total amount of academic papers on interrelations between standardization and innovation
- How education about standardization can benefit Europe ?\*



\* <http://www.cencenelec.eu/standards/Education/JointWorkingGroup/Pages/default.aspx>

# European Standardization Strategy 2020



- The **European Standardization System (ESS)** comprises the three recognized European Standards Organizations (ESOs) - CEN, CENELEC and ETSI, their members and other involved stakeholders.
- **ESS objective in Europe:** Implementation of standardization throughout Europe to facilitate the exchange of goods, information and services through the elimination of barriers caused by provisions of a technical nature, and thereby to ensure a **large unified European market promoting competitiveness and fostering innovation\***
- **European Standardization System Strategy 2020**
  - Strategic blueprint for European standardization to 2020
  - Identifies and addresses common challenges, the need for convergence and for strengthened cross-sector cooperation through a shared vision
- National standards organizations who published the national consultation for the **European Standardization System Strategy 2020**
  - Bulgaria – **BDS**, France – **AFNOR**, Germany – **DIN**, Iceland – **STADLAR**, Italy – **CEI**, Norway – **NEK**, Poland – **PKN**, Slovakia – **SUTN**, Sweden – **SEK**, United Kingdom – **BSI**

\*<http://ec.europa.eu>



# SE initiatives in Europe



- European Academy for Standardization **EURAS**
  - The connecting organization for the European standardization research community
  - Promotes the inclusion of education in standardization policies at the national and at the European level for more than a decade
- CEN, CENELEC and ETSI have formed a **Joint Working Group - Education about Standardization (JWG-EaS)**
  - Most South East European (SEE) countries (including Bosnia and Herzegovina, Croatia, **Macedonia**, Serbia, Albania and Slovakia) are ETSI and ITU members
- 29 June 2012 -> **First European Dialogue on Education about Standardization** jointly organized by the European Standards Organizations, held in Brussels
- More than **90 delegates** including representatives of business and industry, the higher education sector, national governments, the European Commission, national and European standards organizations

# SE Forthcoming Events

- **StandarDays** - open info days on European Standardization
  - **When and where:** 23 and 24 April 2013, Brussels, Belgium
  - **Objectives:** StandarDays give a clear and structured overview of the European Standardization System, of the CEN and CENELEC products and processes, as well as the benefits of involvement to potential stakeholders
- **18th EURAS Annual Standardization Conference**
  - **When and where :** 25-26 June 2013, Brussels, Belgium
  - **Objective:** Achieve the European Single Market without barriers to trade and analyze standardization role in boosting European competitiveness
- **ICES 2013 Conference and Academic Day 2013**
  - **When and where :** 12-14 June 2013, Sophia Antipolis, France
  - **Objective:** Promote **education about standardization** and improve its quality and attractiveness for all stakeholders
- **'SMEs and Standardization' European Conference**
  - **When and where :** 28 May 2013, Brussels, Belgium
  - **Objective:** Offer a wide range of benefits to small and medium-sized enterprises (SMEs) to improve their efficiency and competitiveness
- ...

# Germany's SE activities



## ■ DIN's strategy:

- ➔ **Lectures with focus on strategic standardization** at the TU Berlin (TUB), TU Clausthal, Universität Potsdam, Helmut-Schmidt-Universität Hamburg
- ➔ **Technical lectures** with contribution related to standardization
- ➔ Various actions aimed at **young people**
- ➔ **Series of events** for students and young graduates in various fields:
  - E-mobility (2011), Offshore-wind energy (November 2011), Civil Security (January 2012), Aviation (June 2012)
- ➔ **National conferences** addressing **standardization and education**:
  - March 2009, cooperation with TU Clausthal -> “Standardization and University – Standards and Standardization in Education and Research”
  - May 2010, cooperation with Dr. R. H. Stiftung in Bonn-> “Standardization and Education-not alone at universities“
  - October 2010, cooperation with TUB -> “Education about Standardization-international and multidisciplinary”
- ➔ DIN-Award “Young Science” for student thesis (bachelor and master)
- ➔ Opportunities to enquire about DIN Standards



- public access
- public access and sale



# SE in Britain and France



- **Britain:** leader in SE in Europe!
- **BSI Education\*** actively approaches all ages and all educational levels

**“ Imagine what life would be like if...  
...credit cards were different sizes?  
...light bulbs didn't fit into lamps?  
...railway lines were different widths?  
...microwave ovens emitted large amounts of harmful radiation?  
  
without the British Standards Institution this would be a reality”\***

- **France:** AFNOR’s objective for the period 2011-2015:
  - **“Develop, in a structured manner, education on standardization at high education level as well as for technological and professional education level”**
- Actions -> **Develop partnership with the main actors of the education system:**
  - Ministry of Education (April 2008), Technological Institutes Association (October 2008), Engineers and Business Schools Association (June 2009), Ministry of Higher Education and Research (current)

[\\*http://www.bsieducation.org/Education/default.php](http://www.bsieducation.org/Education/default.php)

# Situation in SEE – Balkan countries

- **Electronic South Eastern Europe (eSEE) Initiative**
  - ◆ Integration of SEE countries into the global, knowledge-based economy by regionally supporting the development of Information Society
- **Standardization, Prototypes & Quality: A Means of Balkan Countries' Collaboration - 9th International Conference [05-06 Oct 2012]**
- <http://www.euras.org/> **EURAS White paper, 2011**; by Wilfried Hesser and Henk de Vries discussing the current situation in standardization education.
- **CONFERENCE ON THE STRATEGIC IMPORTANCE OF EDUCATION ABOUT STANDARDIZATION – A DIALOGUE WITH ACADEMIA AND INDUSTRY**; 29 June 2012 CEN-CENELEC Meeting Centre, Avenue Marnix 17, 1000 Brussels
- **PARTICIPATION OF WEST BALKAN COUNTRIES ...** Specific support *activities* for the 'Western Balkan Countries' must be included in FP7 to foster ... investments in R&D-infrastructure according to European *standards*.(SEE\_ERA Net activities)
- **2007 Macedonia become a member of CEFTA**
- **WESTERN BALKANS REGIONAL COMPETITIVENESS INITIATIVE ·2010·2013·**
- The Southeast-European ERA- NET (SEE-ERA.NET) has been established in order to promote scientific co-operation between the SEE-ERA.NET consortium members with a specific emphasis on Southeast Europe. It is designed to contribute to the '*EU-Balkan Countries Action Plan in Science and Technology*' adopted by the Council of Ministers in Thessaloniki and dedicated to enhancement of the European Research Area.

# Activities in Macedonia

- The **focal standardization body** in the country
  - **Standardization Institute of the Republic of Macedonia (ISRM)** <http://www.isrm.gov.mk>
- ISO/ISRM Awareness-Raising Seminar (Sep 2009)
  - 29 participants from production, **educational institutions** and governmental bodies
- ISRM is a **full-fledged member of European standardization committees CEN and CENELEC** (since June 2012)
- **ITU Academy Centers of Excellence (CoE)** network in Europe
  - ITU hosted two distance learning courses, delivered by the Faculty of Electrical Engineering in Skopje, under the ageist of the ITU Centre of Excellence for EUROPE
    - **“Future Internet including technologies, regulation and business aspects”** (101 students enrolled)”
    - **“Next Generation Mobile and Wireless Networks”**

# Conclusion



- Standards make life *safer, healthier and easier* for people, organizations and enterprises all over the world
- **Involvement in the standardization processes** is beneficial in multitude aspects, including:
  - Direct influence on international standards and easier and transparent monitoring of global business trends
  - Strategic adaptation of national economies to the global industrial movements
  - Influence on the overall industry and the development of the industrialized world towards more competitive and fruitful future
- SE is of crucial significance for **national and global awareness** for the importance of standards
  - It helps to bridge the gap among ICT developments and society potential to transparently follow them
- University role is to introduce SE in their curricula
- The **synergy** among the **standardization responsible bodies** and **academia** will faster the developments toward the ICT society
- Europe is rapidly moving towards vast inclusion of SE in the national education systems and creating globally competitive industry

# Thank you for your attention

