# Overview of ITU Standards for e-health

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### A sample of ITU private sector members























































# ITU collaborates with relevant standards development organizations





























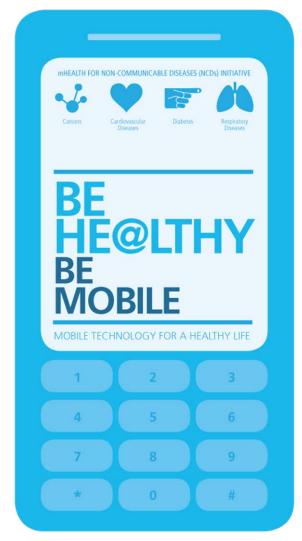
#### ITU Development Sector - mHealth

#### ITU-WHO "Be He@Ithy Be Mobile" Initiative

- Joint work plan to use mobile technologies to address the Non-Communicable Diseases (NCDs) burden through scalable mHealth solutions
- The initiative targets 8 countries in 4 years in the area of prevention, treatment and policy enforcement
- Already implemented national mHealth programmes:
  - Costa Rica for Smoking Cessation
  - Senegal for Diabetes Prevention and Control

#### The initiative aims at:

- Address NCDs and their risk factors
- Enhance country capacities to develop and employ mobile technologies and communications channels
- Create country level platforms and environment for partnership
- Design mHealth for NCD intervention projects
- Strengthen capacity of local stakeholders for optimal and efficient use of available resources
- Validate use of mobile NCD projects





### Technology areas

✓ Personal health devices

- ✓ Data exchange schema and supporting services
- ✓ Health monitoring
- **✓**IPTV





#### ITU-T H.810 (2013)

- ✓ Ensures interoperability of devices used for applications monitoring personal health.
- ✓ Defines the interfaces between:
  - Touch area network (TAN) health devices and application hosting devices (AHDs)
  - Personal area network (PAN) health devices and AHDs
  - Local area network (LAN) health devices and AHDs
  - AHDs and wide area network (WAN) health devices
  - WAN health devices and Health Record Network health devices
- ✓ Test suites completed
  - 32 specs covering 1500+ test cases
- ✓ New edition expected in 4Q 2015



#### ITU-T H.820-H.850 sub-series

- ✓ Conformance testing of H.810 (2013) implementations
  - >HRN component (H.820-series)
  - >WAN components (H.830-series)
  - LAN/PAN/TAN components (H.820~H.850 series)



## Data exchange schema and supporting services

- ✓ Recommendation ITU-T H.860 (2014-04)
  - Multimedia e-health data exchange services: data schema and supporting services
- ✓ Features:
  - Common Health Data Schema (using relevant data standards)
    - E.g. ICD-10, CPT-4/5, LOINC, SNOMED
  - Collaborative development framework
    - Governance for data exchange services
  - ➤ Basic service architecture
    - enabling data security and scalability



### Health monitoring

Independent living

- ✓ Recommendation ITU-T Y.2065 (2014-03)
  - ➤ IoT-centric service and capability requirements for e-health monitoring services
    - Classification, characteristics & scenarios
    - Service requirements
    - Capability requirements
- ✓ Under development:
  - Capability framework for e-health monitoring services

E-health app using ITU-T IPTV standards



Widget implemented with LIME (ITU-T H.762) for e-health information collected from the user site, consolidated in the server backend and displayed on users' IPTV terminal device as a widget. Health devices as per ITU-T H.810.



#### Where the work is done?

- ✓ <u>Study Group 16 Multimedia</u> lead ITU study group on IPTV, e-health, media coding, accessibility, IoT, ITS
  - Question 28/16: Multimedia framework for e-health applications
  - ► <u>IPTV-GSI</u>: umbrella event with topical Questions for e-health, IPTV and digital signage (Q28/16, Q13/16, Q14/16)
- ✓ Study Group 13 Future networks & cloud
  - Question 2/13: Requirements for NGN evolution (NGN-e) and its capabilities including support of IoT and use of software-defined networking



## How to contribute to the technical work?

- ✓ Participate in IPTV-GSI, ITU-T SG16
  - >e-health but also IPTV & digital signage

✓ Participate in ITU-T SG13 Q2/13

✓ Propose topics and provide panelists for workshops and related events



#### New work just started

- ✓ Revision of H.810 for the new version of the Continua guidelines ("Genome")
  - More efficient HRN, new device classes supported
  - Restructured into parts, for easier use and maintenance
- ✓ New work item on ITU-T H.OPVQ "E-health application for on-flight and post-flight virtual quarantine"
  - Coordinated with ITU-T Focus Group on Aviation Cloud



#### For more information

- http://itu.int/en/ITU-T/e-Health
  - Introduction to the ITU-T H.810 Continua Design Guidelines
- http://itu.int/ITU-T/go/sg16
- http://itu.int/ITU-T/go/sg13
- http://itu.int/interop
- http://itu.int/en/ITU-T/challenges
- http://itu.int/en/ITU-D/ICT-Applications/Pages/ehealth.aspx



#### Conclusion

- ✓ Standardization work is moved by the private sector
- ✓ ITU works in cooperation with relevant external stakeholders
  - > Interest in standards for mobile health
- ✓ ITU e-health standards include a family of personal health device standards - Continua Design Guidelines
- ✓ Opportunities for collaboration?