



Overview of ITU Standards for e-health

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HL7 WG Meetings – Mobile Health
Paris, 13 May 2015



A sample of ITU private sector members

OKI

SAMSUNG



QUALCOMM

Alcatel-Lucent



ERICSSON



kt



CHINA MOBILE

FUJITSU

BILL & MELINDA
GATES foundation

KDDI



NEC



NOKIA



Telefonica



Telstra

BlackBerry



ZTE中兴





ITU collaborates with relevant standards development organizations



40+ formal partnerships



ITU Development Sector - mHealth

ITU-WHO “Be He@lthy 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?

- ✓ Study Group 16 – Multimedia – lead ITU study group on IPTV, e-health, media coding, accessibility, IoT, ITS
 - Question 28/16: Multimedia framework for e-health applications
 - IPTV-GSI: 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?