Session 8
Conclusions & Recommendations

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Standardization in E-health

Presentations in Session

- **Interoperability and QoS implications of ISO TC 215 WG2.**

  T. Cooper Chairman, IEEE 1073, Technical Director, MDCIG / IEEE-ISTOPresident, Breakthrough Solutions

- **Architectures review for interoperability in e-health;**

  V. Traver, Project manager, Bioelectronic, Engineering and Telemedicine Group, ITACA Polytechnic University of Valencia

- **Basic requirements to Quality of Service (IP centric);**

  JY Monfort, ITU-T SG 12 Chairman, France Teleom T&I/R&D

- **ETHEL Interoperability in e-Health;**

  Dr.med. M. D. Denz, EHTEL AWG Health Authorities, Swiss Medical Association FMH

- **Europe : TM-Alliance, facilitating eHealth interoperability;**

  C. Bescos, Telemedecine Coordinator of TM-Alliance Project, European Space Agency

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Highlights from presentation 8.1 "Interoperability and QoS implications of ISO TC 215 WG2"

- Presentation of ISO TC215 Interoperability & QoS across all working groups. The non-medical device interoperability work is concentrated on ISO layer 7.

- Presentation of ISO/IEEE/CEN **X73 point-of-care medical device communication** (real time Plug-n- Play; efficient exchange of vital signs and medical data). It includes QoS Management.

- Need additional pilot projects to show capabilities of X73 protocols, as well as demand for interoperability from health care organizations.

- Support is welcome in adding security, web services, and rigorous LAN-based QoS support to the existing standards

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Highlights from Presentation 8.2 "Architectures review for interoperability in e-health »

- An exhaustive presentation of available architectures for interoperability purposes IEEE 1471-2000, TOGAF, paying special attention and special on "Telemedicine system Interoperability Architecture"

- There is a need of a common framework/architecture for the use of standards

- A list of standards for e-health and Telemedecine has been given. Each e-health domain has developped its own standards. It is needed to solve problems of interoperability in several fields that have been indentified (Distribution of components, Buses, User Interfaces, Medical devices, Terminology, Communications,...)

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Highlights from Presentation 8.3
"Basic requirements to Quality of Service (IP centric)"

- Overall presentation of ITU-T activities in QoS and NP.

- Availibility of preliminary limits for IP services. These data should be applied and adapted for telemedecine needs.

- Disponibility of QoS classes and ways to implement/signal/assess them under development.

- More efficient integration of the uses context in QoS (Concept of Quality of experience) that could be applied to Telemedecine.

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Highlights from Presentation 8.4
"ETHEL Interoperability in e-Health"

Key problems are not a technology issues, it is a matter of organisational development.
Therefore eHealth has to be seen as change management in healthcare by using ICT.
Ethel has identified critical success factors :

- **Human-human interaction**
- **Understanding users need**
- **Transcultural management**
- **Education and training** (skills)
- **Organisational development**

Conclusions are :

- **Emphasize on communication and relationship management**
- **Lower the number of competing standards, and the number of different data available (redundancy)**
- **Avoid over-specification of standards**
- **Interoperabilty has to be improved by interfacing heterogeneous systems. Need for modelling ICT into healthcare (coherence through existing models)**

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Highlights from Presentation 8.5
"Europe : TM-Alliance, facilitating E-health interoperability"

- **Constatation : Complexity in Europe to achieve a common e-health approach. Lessons learnt.**

- **The aim of TM-Alliance (ESA, WHO, ITU) in interoperability**
  - ◆ **Gathering** multidisciplinary and international experts for the **definition** of Interfaces, **Promoting and facilitating consensus, Disseminating** the agreements among the national policy makers, mass media and general public

- The role: to facilitate the coordination between all the relevant actors in e-Health. To disseminate and promote "best practices"
  - ◆ Even if some concerns were expressed on the creation of one more coordination structure, TM Alliance received a important support. Feedback from the experts is welcomed

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Overview of issues in the session

- Interoperability issues have been addressed during this session, but these problems have also been highlighted in other sessions.

- Interoperability issues are not only technical,…

- Interoperability architectures do exist, but there is a need of a common framework/architecture for the use of standards

- Standardization is ongoing on LAN-based QoS for the real-time applications (remote control,…).

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Follow-up actions

- Cooperation should be useful to identify QoS requirements with respect to regulated, safe and effective exchange of healthcare information.

- The different approaches identified under the "interoperability" should be more detailed to increase the mutual understanding.

- Interoperability "events" –see ETSI, IMTC and other fora – might be used to fix the first implementations of standards (e.g. H.323, SIP,…) at reasonable cost.

- The necessity to take into account the user's experience (acceptability). From user's requirements, it appears important to provide "user-friendly" interfaces in order to avoid misuses, lack of use or, even worse diagnose mistakes/errors.

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Recommendations and conclusion

- There is a lack of communication… (heard several times); could such workshop help to create contacts. These contacts need to be maintained and to begin productive after the workshop. As a first step, this could be done by the different session chairs.

- Exchange of pieces of information on experiment/trial results in healthcare should permit to improve the existing requirements, in particular on QoS.

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