eHealth and Telemedicine:  
Case Studies in the Czech Republic

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Introduction

- ICT and eHealth

- Mobile technologies and their functions in healthcare
  - Collecting health data
  - Delivery of healthcare information
  - Real-time monitoring of patient vital signs
  - Direct provision of care
  - Emergency response systems, etc.
eHealth Projects

- **I4C-TripleC** - Integration and communication for the continuity of cardiac care - implemented and validated in two Czech hospitals

- Pilot application *Multimedia distributed electronic health record* (MUDR) - cardiology and dentistry
voice-controlled DentCross component for EHR
K4Care project

Knowledge-based home-care eServices for an Ageing Europe

- Home care model
- Electronic health record (defined for home care)
- Ontologies – for describing roles of actors, diseases, treatment plans and their individualization for each patient
- User interface – web application, smart phone application
ICT helping disabled and elderly

I4Control – control of technical devices through eyes

Simple input devices for people with limited movement abilities
OLDES – Older people’s eServices at home

Follow-up project SPES - Support to Patients through E-service Solutions
HomeBrain

- main idea - integrate many different functions and unify the control interface
- user interface - aim to have the system control as simple and intuitive as possible

- main functions - gate to the internet, multimedia services, senior monitoring, health state monitoring, social networking of HomeBrain users, remote control of home devices, intelligent security system
Internet health books

- **IZIP** funded by the General Health Insurance Company
- **Kartazivota** is a project of the Health Insurance company of the Ministry of the Interior
- **VITAKARTA** and **mVITAKARTA** represent a project of the Sectoral Health Insurance company
Medical Imaging

- **MeDiMed** - system for transferring videodocumentation of patients between health facilities coordinated by the Masaryk University in Brno

- **ePACS project** - operated by the General University Hospital in Prague
Conclusions

future challenges

- standardisation of data formats
- suitable tools for data mapping onto data models
- consistency checking of data models
- process description (application of business process tools)
- international standards and classification systems
- security of data storage and data transfer