

Building eHealth information society in Podlasie region – key strategic factors and struggle for infrastructure and standards

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The Podlasie region is situated in the far north-eastern part of Poland and forms one of the important gates of the European Union to the East. This region with many forests and lakes is known as the green lungs of Poland. Large rural areas with sparse population is characteristic feature of the region. In this context, the demands for the e-health applications are well justified. A variety of the e-health services should be successively planned and implemented in the Podlasie region in the near future.

The Computer Science Faculty TU Białystok has engaged in building an information society in Podlasie through a variety of educational initiatives and through cooperation with administration units and schools in the region. The Excellence Center in the Technology of Information Society has been appointed recently at our Faculty by The Polish Ministry of Science (KBN). We see the co-operation with the Medical University in Białystok as a real chance for developing e-health services in the region.

One of the fundamental constraints in the developing the information society in the region is the lack of sufficiently efficient telecommunication infrastructure. This situation should be significantly improved by means of development of the broadband network Pionier and the realisation of the grid project Clusterix. These national projects are aimed not only at academic needs but also could be used in the public services within the scope of e-government or e-health.

Our area of expertise is in the methods of knowledge exploration in databases. The techniques of knowledge exploration in databases can be used, among others, in the e-health services aimed at distance consultancy. The basic scheme here is the case based reasoning. Remote e-health consultancy can be based on the search in the referencing databases for the most similar cases to the patient actually analysed. One of the necessary conditions for implementing this scheme is developing standards for patients representation in referencing databases from different medical specializations. The manner of the new patient representation should be the same as the representation of the earlier patients collected in the referencing database. Moreover, the patients representations in the referencing databases should provide the possibility of answering all the basic questions of remote consultancy. The answer to the questions of distance consultancy could be based on the search for precedents in the referencing databases.

The developing of standards and collecting medical information in the referencing databases from variety of complementary medicine specializations is actually the most acute problem in planning and implementing the distance consultancy in e-health applications. Solution to this problem should emerge with strong commitment and good will on the part of medical experts from different areas of medicine and their enduring co-operation with informatitions.

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