

CERES – A Webbased Knowledge Repository for Hospital-related Data

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To know where the shoe pinches

Due to the rapid changes in health care, decision-makers and stakeholders in health care require up-to-date and valid information fast and ubiquitous. Tools are necessary, which offer all relevant information about the health care institutions comfortably and of high quality. The problems to collect, prepare and communicate such information led to the idea to develop CERES.

The initial idea

CERES is a webbased knowledge repository for hospital-related data. The data describe the structure of the hospital, the medical and administrative units, and the actors, i.e. the staff and the patients, resp. the cases. Key data referring to economic and medical issues are offered.

The generic approach

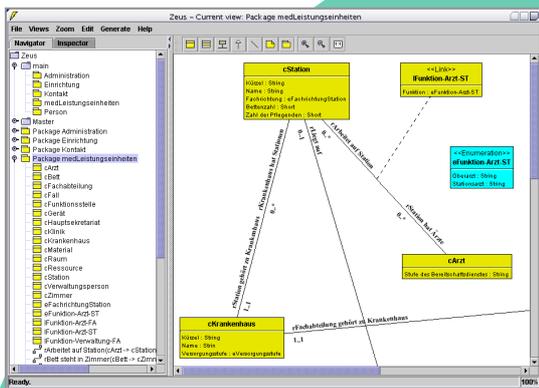
CERES follows a generic approach and is based on an object-oriented meta-model of “the” hospital expressed in the Unified Modeling Language (UML). The meta-model is used as database schema for an object-oriented database management system. The access is applied to the web. Data of existing hospitals were imported from different external sources into the database. Consistency constraints are integrated in the meta-model. CERES’ user interfaces adapt automatically to changes of the meta-model.

Hospitals at your fingertips

So far we developed a webbased, location independent tool for users, who need up-to-date information about one or more hospitals. Using a standard webbrowser it is possible to record, to administrate and to present current and structured data of hospitals, both as tables and graphically, generated at runtime. Since most users are familiar with the world wide web the access to CERES is easy. The data protection is ensured by user authentication and the use of Secure Sockets Layer (SSL).

References

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- Booch G, Jacobson I, Rumbaugh J. OMG Unified Modeling Language Specification. Version 1.5. OMG Object Management Group, Needham, March 2003.
- Cimino JJ, Sochratous SA, Clayton PD. Internet as clinical information system: application development using the world wide web. J Am Med Inform Assoc, pages 273-84, Sep-Oct; 2 (5), 1995.



UML-Editor and Meta-Model

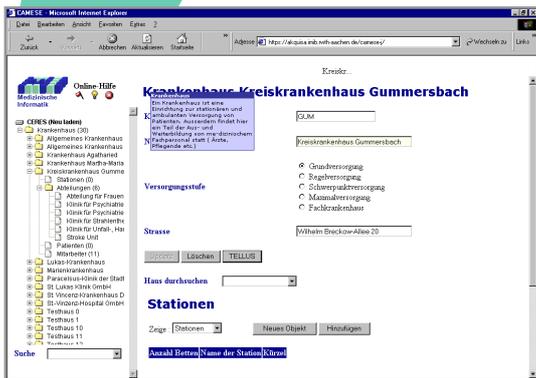
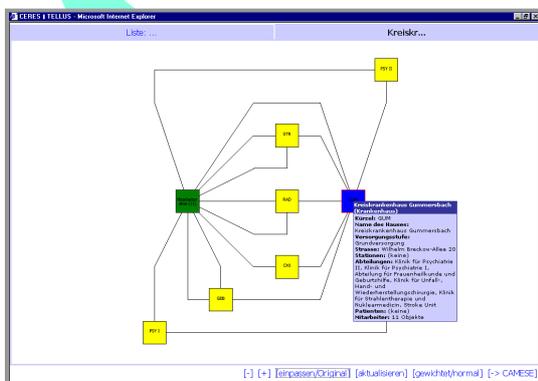


Table-oriented Frontend



Graphical Frontend