The Chemnitz University of Technology was the first one in Germany, which was able to offer an internet-based study about information and communication technology.

The first lessons was developed in HTML, but this causes some disadvantages. To overcome the problems we changed to a XML-based approach. We identified a relevant set of XML-elements, e.g. to mark important hints, examples or personal opinions. The XML-code will be translated by different tools into a controllable HTML layout.

This concept makes it simple to generate different views. Assistents can see the answers to some exercises, while the participants get links to the "virtual seminars". The learners evaluate her progress by on-line-tools.

This design implements the main components of Learning Technology System Environment. It uses small tools written in Tcl and standard protocols. All data are saved in XML-documents and can be used by different tools. The components communicate about open protocols.