

Modular XML-based Testing Component

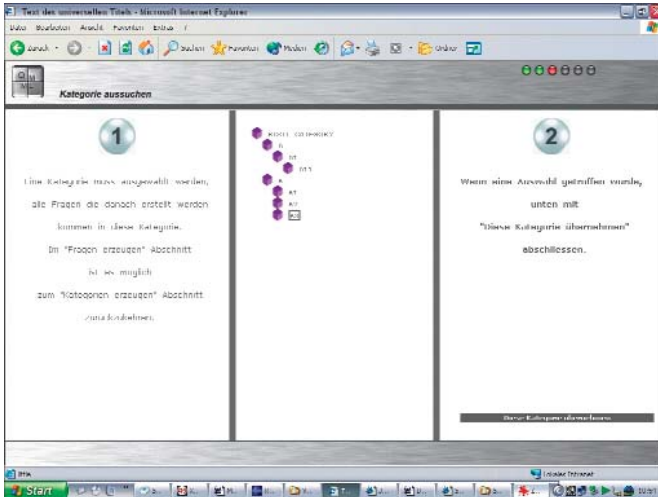


Figure 1: The QMML editor (screenshot)

On basis of QMML, the Fraunhofer IGD Darmstadt developed a graphical editor and an output module that may be used on its own or embedded in existing applications.

Within the »Virtual Car Dealer« project, QMML will be used to generate tests. By using an output module, the achieved results may be displayed interactively.

For the generation of tests and questionnaires, the Fraunhofer IGD Darmstadt uses the proprietary development called Questionnaire Modelling Markup Language (QMML). QMML defines a general and flexible format for documents that contain both the content and structure of questionnaires.

The QMML which was developed is based on XML and is available as a Document Type Definition (DTD) and as a schema where the syntax and the permitted tags are defined. There are obvious inherent advantages: the language is continuously expandable and open to new demands. Seamless integration into existing systems is possible using simplified data exchange and standard converting tools.

For the generation of QMML documents (i.e., questionnaires with XML structure), the user can use common XML text editors as well as more convenient editors with graphical user interfaces. The latter allow the user a WYSIWYG feeling. This generating process results in a QMML file that may be transformed into the desired file format, e.g., HTML, PDF, Flash. Some elements of the questionnaire

may be manipulated on the client side using complex controls or combinations of JavaScript and HTML. This possibility offers the most ergonomic usage of the questionnaire and makes the completion process very comfortable for the user. The limitations set by standard HTML forms are a thing of the past. Additionally, dependencies between questions may be modelled without much hassle.

Parallel to this, the definition of the questionnaires' structure will be used for automated analyses and graphical representations and reports on the collected data. This will be done on the server side. Using this quite general concept, numerous different modules are possible.

QMML is used in a learning context. The concept has been adjusted so that correct answers may be included in the structure description. These correct answers will not play a role on the client side, but will be used on the server side for the automated rating of the test results.

Contact

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