The Basics

The research-group "Institut für Telematik" of the department for computer-science at the University of Trier is a research and development-center formally administered by the Fraunhofer Society and was established on January 1, 1998 and has since then evolved into an ever-growing competence center that develops solutions for problems in the interfaces between telecommunications and information technology. Around 30 scientific staff members from various countries who are experts in different areas of science are currently with the institute.

The scope of the working group "Institut für Telematik" covers a wide spectrum: From application-oriented information technology and telecommunications research to the development of customized solutions and pilot systems for commerce, industry, medicine and administration. It is also focusing on new media training and continued education, which is offered to cooperation partners as well as employees of companies domiciled in the region and in other areas.

Project Partners

High tech businesses, as well as large and even small and medium sized companies support the institute as project partners. The partner firms implement the institute's scientific findings in practical applications. The focus of the work is on the development and utilization of new information and communications media for technical, medical and social applications.

Areas of Competency

The current research and development projects aim at the practical implementation of the latest scientific findings in the areas of electronic publishing, Internet/Intranet, tele-medicine, secure data transfer, system development and analysis. The Institut für Telematik focuses primarily on the following technological applications:

- Editor systems: Web-based information and knowledge management
- Navigation systems: Processing of information, data interfaces, EAI, data warehouse
- Database management: Innovative middleware on open standard basis, e.g., Smart Data Server (SDS)
- Open network security: Architecture, policies
- Network security: Firewalls, Lock-Keeper, Tiger Teams, CERT
- Content security: Public-Key-Infrastructures, digital signatures
- Mobile technologies and applications: Ubiquitous Computing, Mobile Security, ad hoc-Networks, Smart Cards
- Tele-medicine: Patient CD, DICOM-image management and compression,
- Consulting: Studies, evaluations, audits

Patent Protection has already been awarded to the institute for two of its solutions: <Lock-Keeper> – a security <sluice> between Internet and Intranet, that protects users more effectively against online attacks than firewalls – and <Dicomzip> an image compression process that reduces the transmission times of medical images from several hours to just a few seconds.

Universität-Trier

Institut für Telematik
Hightech-Forschung rund ums Internet

Web Content Management with jDAPHNE

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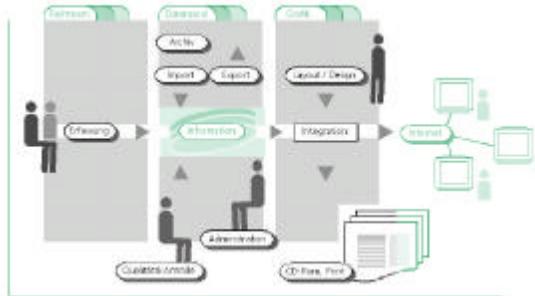Univ.-Prof. Dr. sc. nat. Christoph Meinel

jDAPHNE an easy to use Content Management system

Generally, www document publishing is very demanding when it comes to IT- related education of those entrusted with the task. Usually, it is a web editorial staff that is responsible for the document contents, layout and hypertext linking, but not the employees having a highest level of competence for the contents. Therefore, there are often bottlenecks while creating a document as well as problems with its updating and refreshing.

Thanks to a new editing system, which was developed by the chief developer, even specialist, authors without any expertise in website creation can now make documents to be published on the internet, and they can do it directly at their desks. DAPHNE is a web based system of the new generation and it is based on an open standard philosophy. It is able to handle all major operating systems as long as a Database and a JAVA engine are present. A defined workflow enables jDAPHNE to manage website documents in an "easy to handle" manner. Each Author needs to be familiar with his own published document only. To do so, the Author is using his familiar tools and web browsers like Internet explorer or Netscape Communicator. To edit a document all standard applications like MS Word, Star Writer, Excel format etc. can be used. This makes it very easy to write and edit Documents for the Internet.

For quality control the Document has to run through a workflow procedure, which can be customized and created by the publishing administration. Hence the workflow and its Process and control structure are depending on the publishers needs. Only if the document passes this process it will be published in the Internet.

Separate managing of content and layout

jDAPHNE separately manages the content and the layout of a Document. They will only be combined into a complete website after being exported into the Internet. During this process all the different authors can view the new website at any time.

In any case, before a document will be published, at least two separate authorizations are required (four-eye-principle). Before a document will be removed from the web, jDAPHNE is automatically checking all links and documents containing related links. Thus "dead-links" are avoided.

Hyperlink Management

Advanced hyperlink-management functionality is constantly verifying all links and connections in the entire web-documents. Inconsistencies are detected and reported fully automatically. jDAPHNE is thus not only facilitating creating content and layout in a dynamical and distributed manner, it is also delivering the sate of the art tools to manage and handle even complexest web-profiles.