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e2001: eBusiness and eWork

Interactive and real-time help-desk
system in electronic shop
environment

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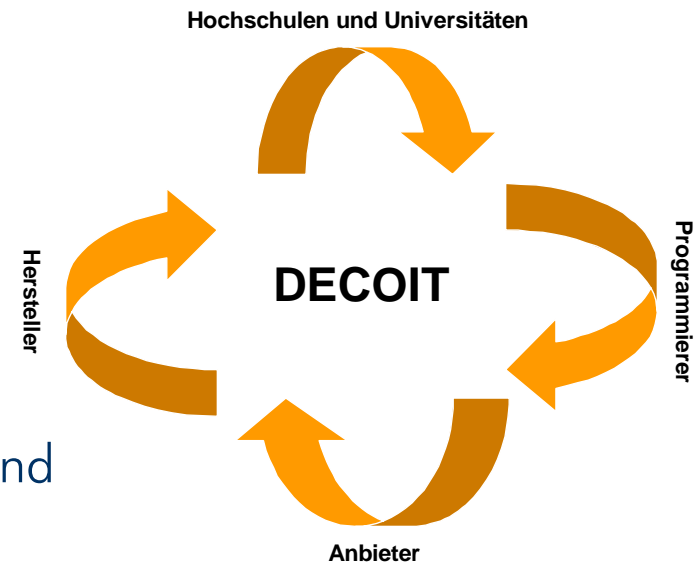
Letter of Content



- ◆ Portfolio of DECOIT
- ◆ Short introduction of the project INTELLECT
- ◆ Open issues
- ◆ Solutions
- ◆ Conclusion

Portfolio of DECOIT

- ◆ Consultancy (vendor independent)
 - ◆ Network Concept
 - ◆ Security Concept
 - ◆ Security Check
 - ◆ Strategy Concept
 - ◆ Software Concept
- ◆ Quality Management
- ◆ Vendor and product tests
- ◆ National and international research and development projects
- ◆ Training (technologies and services)
- ◆ Web projects (design and programming)
- ◆ Marketing (Co-operation with publishing houses)
- ◆ Project management



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INTELLECT



Intelligent Online Configuration of Products by
Customers of Electronic Shop Systems



<http://www.ist-intellect.com>

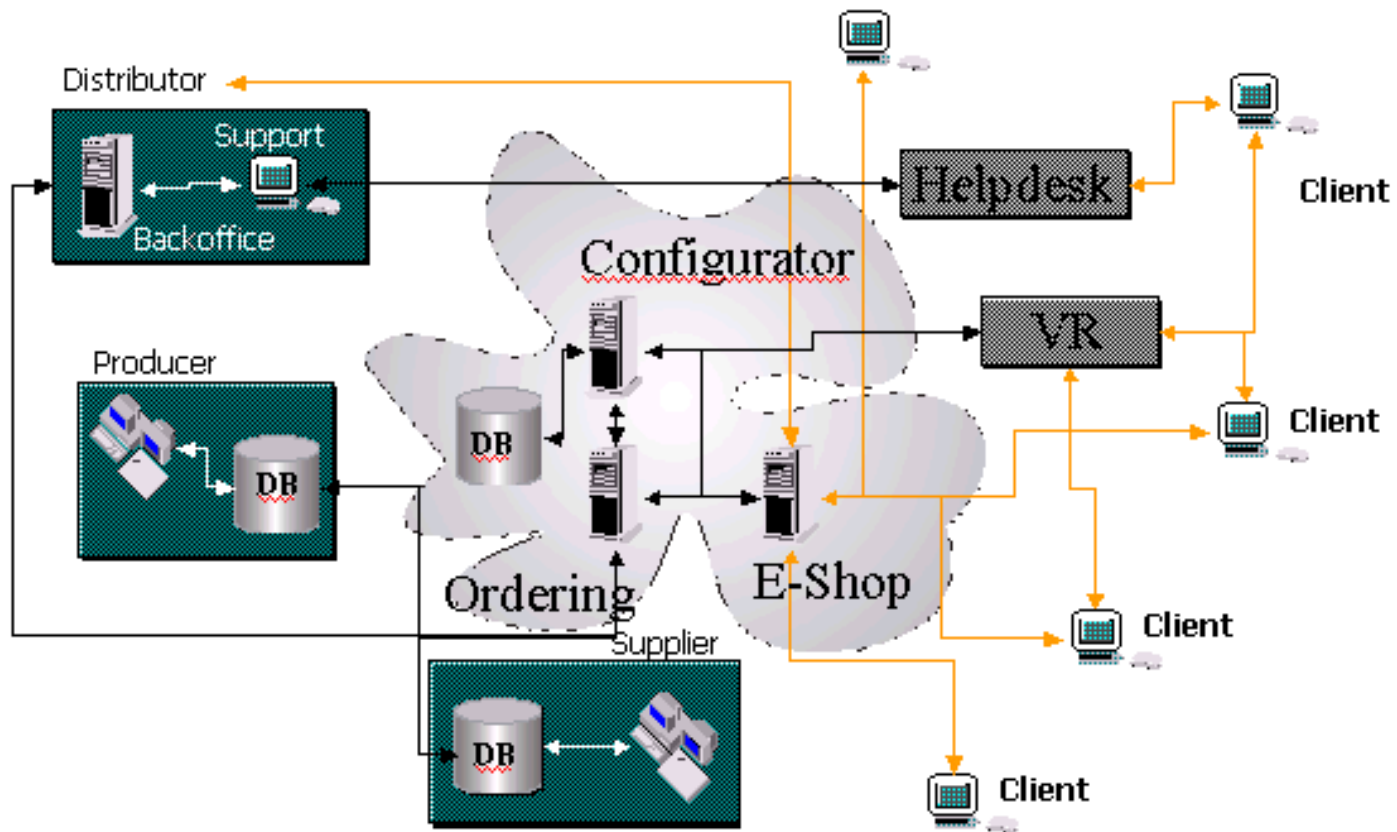


Original idea

- ◆ An eShop solution, with
 - User-friendliness
 - Realistic product presentation
 - Individual design possibilities for the end-user
 - Intelligent support for the end-user during the design of its new products
 - Feeling for the end-user, as if the end-user buy a product in a real traditional shop
 - Implementation of the eShop system without media breaks



The modules of INTELLECT



Open issues



- ◆ The Internet has no possibility to support real-time applications yet (audio and video support is bad and dependent of the time of day)
- ◆ The eShop systems require a high knowledge of the end-user regarding the offered products (e.g. computer systems)
- ◆ The handling of most the eShop systems are circumstantial (not user friendly) and includes slow performance
- ◆ The visualisation of the products has a low quality
- ◆ Less interaction possibilities

Help-desk: user assistance

- ◆ Frequently Asked Questions (FAQ) → not all questions are covered
- ◆ User help via E-mail → no real-time help, takes too long time for customers
- ◆ User help via telephone → extra costs for the customer, sometimes very expensive
- ◆ User help via chat → too slow, only for experienced people
- ◆ IP-telephony and VC → user friendly but needs bandwidth



IP-based communication

- ◆ Communication over IP using the third party tool NetMeeting:
 - Audio/Video: direct connection from the customer to the help-desk agent
 - Whiteboard: functionality mechanism for use as a discussion board
 - Chat: interactive discussion board for text communication which does not need audio/video
 - H.323 and T.120 support
- ◆ Bad quality of audio and video without quality-of-service



Mirroring and multimedia push

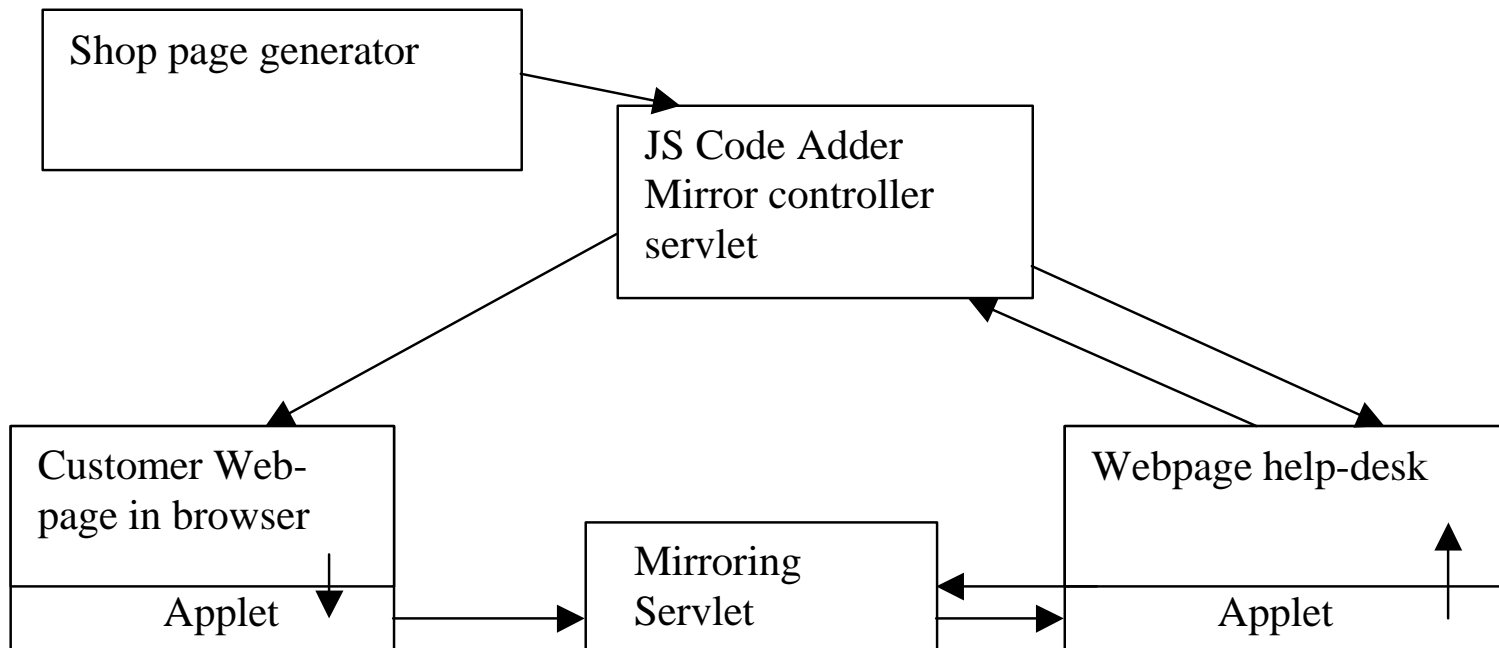
- ◆ Page mirroring: all actions that are done by the customer in the shop are also executed on a mirroring browser window of the help-desk agent
- ◆ The help-desk agent is able to recognise the problems of the customer
- ◆ This mirroring process can change directions, so that the help-desk agent can force the customer's browser window to execute all the actions the help-desk agent executes in his browser
- ◆ The help-desk is able to take over control, to show the customer how to perform the actions he liked to



Mirroring (1)

- ◆ Any new event (e.g. clicking on a link) is caught by special Event-Handlers written in JavaScript and is decoded
- ◆ These handlers parse the supplied information and activate a method in a hidden applet
- ◆ This applet encodes the event information and sends it together with session information (to identify the customer) to a Java servlet and store it in a queue
- ◆ On the help-desk agent side the hidden applet is working in the so called slave mode where it is polling the Java servlet
- ◆ The help-desk connects the Java servlet continuously (because of the HTTP limitations of stateless) and asks for incoming events
- ◆ This instruction is executed with the Netscape JSObject, which is also available in IE

Mirroring (2)

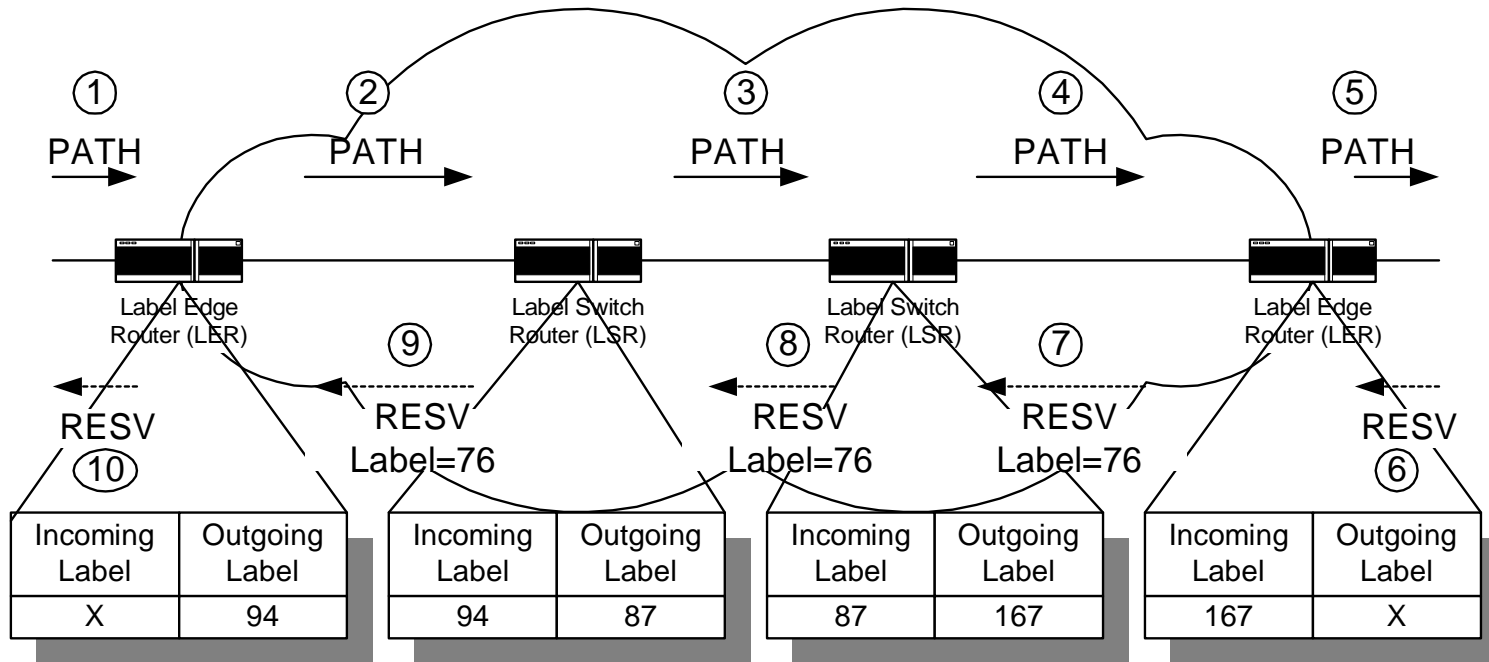


Integration of CSCW application



The screenshot displays a web application interface for scooters. On the left is a navigation menu with links: Home, AboutUs, Products, slow pc, medium pc, fast pc, scooter, and ShoppingCart. The main content area features a header with the Intellect logo, a login section (user/pass fields and login button), and a session ID (x0z1764zq1). Below this is a section titled "Scooters" with a description: "The fastest and smoothest scooter of them all. It is a unique shaped frame with 26 tires offers suspension without suspension. You have got to try it!". A yellow scooter image is shown. A "I need HELP !" button is also present. A "Virtual Reality" window is overlaid on the page, showing a 3D model of a scooter and a list of view points (Front, Back, Right, Left, Over, Under, See all). A "Java Applet Window" is also visible, showing a video call interface with a list of participants (M. B., Michael Beckmann, Alexander (PFC)) and various call controls. A shopping cart sidebar on the right lists items like "Scooter Hinterrad" and "Scooter Lenker" with buttons for "Change", "Add", "Delete", and "Out".

Quality-of-service integration





Conclusion

- ◆ Furthermore quality-of-service is an open issue of the Internet society: several approaches are available, but not implemented yet
- ◆ Real-time applications are not supporting QoS mechanisms yet
- ◆ Efficient customer/user support is an essential need of today's eShop systems
- ◆ Security and IP address problems will arise if we will use more video and audio applications, because of the firewall mechanisms (security policy) and the not available IP address space

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...thank you for
your attention



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