

TEAL – Task Embedded Adaptive e-Learning

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Overview

- Introduction
 - E-Learning in enterprise
 - Workflow systems and just-in-time information delivery
- Shortages of the state-of-the-art process-oriented information retrieval
- Project TEAL (Task Embedded Adaptive e-Learning)
- Sample scenarios of using e-learning based just-in-time information delivery

e-Learning in the Enterprise

- **Maintains the education level of employees and of the whole enterprise**
- **Allows employees to solve problems themselves without getting help from an expert**
 - **LCMS can be used as an enterprise knowledge base**
 - **Very important for newcomers**
 - **Important for employees who change their role in the enterprise**
 - **Important for all the employees who face new types of tasks**
- **Saves money in comparison to the instructor-led training**

E-Learning in the enterprise (acceptance)

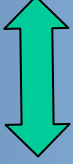
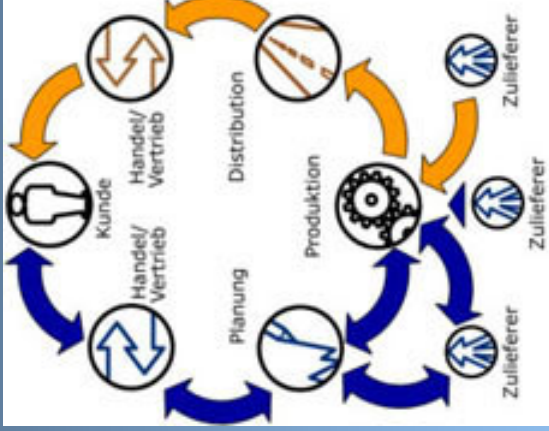
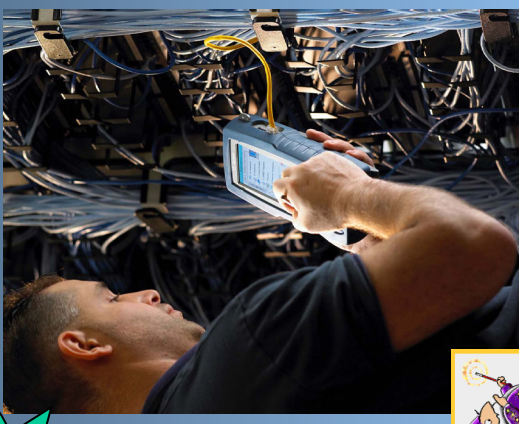
Necessary Conditions for Acceptance of e-Learning:

- E-Learning has to be seamlessly integrated into the process of work: e-Learning is good if the learner does not notice that he is being taught (slogan of T. Kelly)
 - => **Integration into enterprise workflow system!**
- The delivery of the learning content has to meet the following requirements:
 - Just-in-time: the learner receives what he needs at the moment
 - Just-enough: The employee must not fill overloaded with the content, i.e. receive enough to be able to accomplish the task
 - => **learning has to be adaptive and goal-oriented!**
- Learning content must have high quality
- Learning content has to be up-to-date
- Learning content should be pedagogically designed

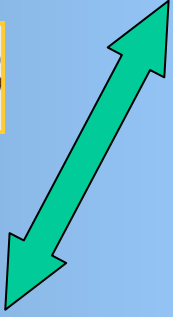
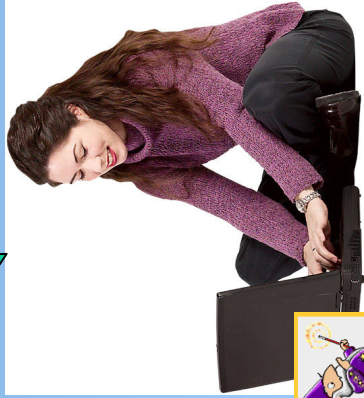
WFMS and JIT Information Delivery

Knowledge, Experience

Knowledge, Experience



Knowledge, Experience



KMS, DMS

- Process Modeling Tool
- Process Enactment Engine
- Knowledge Base (KB), DMS
- Information Assistant (IA)



WFMS and standard JIT Information Delivery (shortages)

Reasons, why standard JIT information delivery methods are not good enough:

- **Even state-of-the-art process-oriented information retrieval is based mostly on queries to DMS or KMS**
- **The learner receives a set of raw documents that normally contain much more information than he needs**
- **The information delivery procedure aims to satisfy the ultimate learning goal and does not consider learner's knowledge gaps which need to be filled before learning the main material**
- **The content of DMS or KMS is not specially designed for being easily learned**

LCMS and JIT Information Delivery

Reasons, why adaptive LCMS can be efficiently used for JIT information delivery in Workplace:

- The content of a LCMS is based on reusable learning objects (RLOs) annotated with semantic metadata
- LCMS can generate succinct goal-oriented learning courses on-the-fly
- LCMS provide possibility for explorative learning, i.e. generated course is not stand-alone but is linked with other RLOs in repository
- LCMS have advanced user model that allows to identify the knowledge gaps and add corresponding RLOs to the generated course
- The content of a LCMS is pedagogically designed and made professionally that increases the acceptance of learning

WFMS TaskMan and LCMS DaMiT

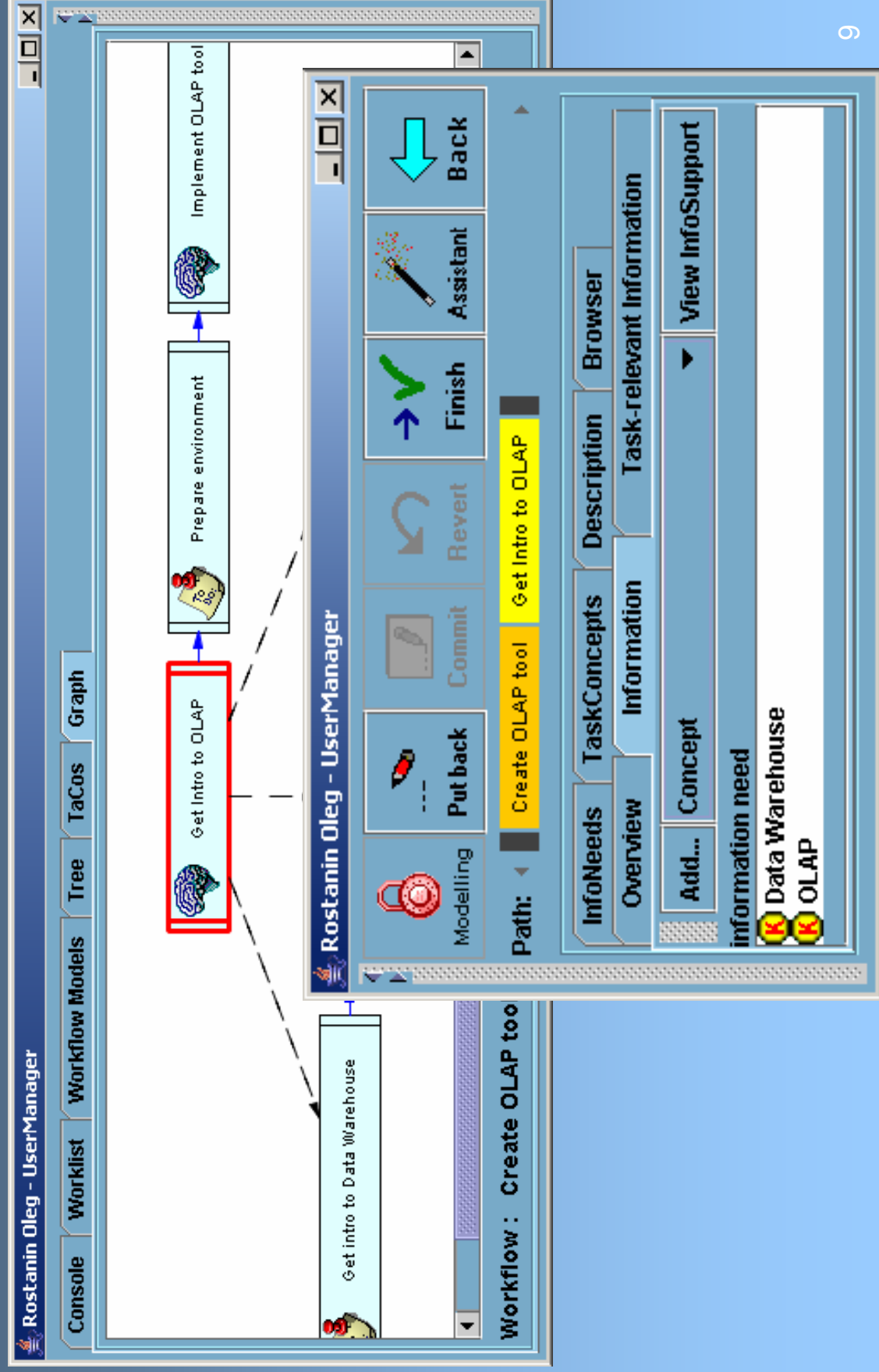
WFMS TaskMan (<http://www.dfki.de/frodo>):

- Developed at DFKI GmbH
- Supports agile workflows
- Supports hierarchical task structures
- Supports semantic task annotation and JIT information delivery

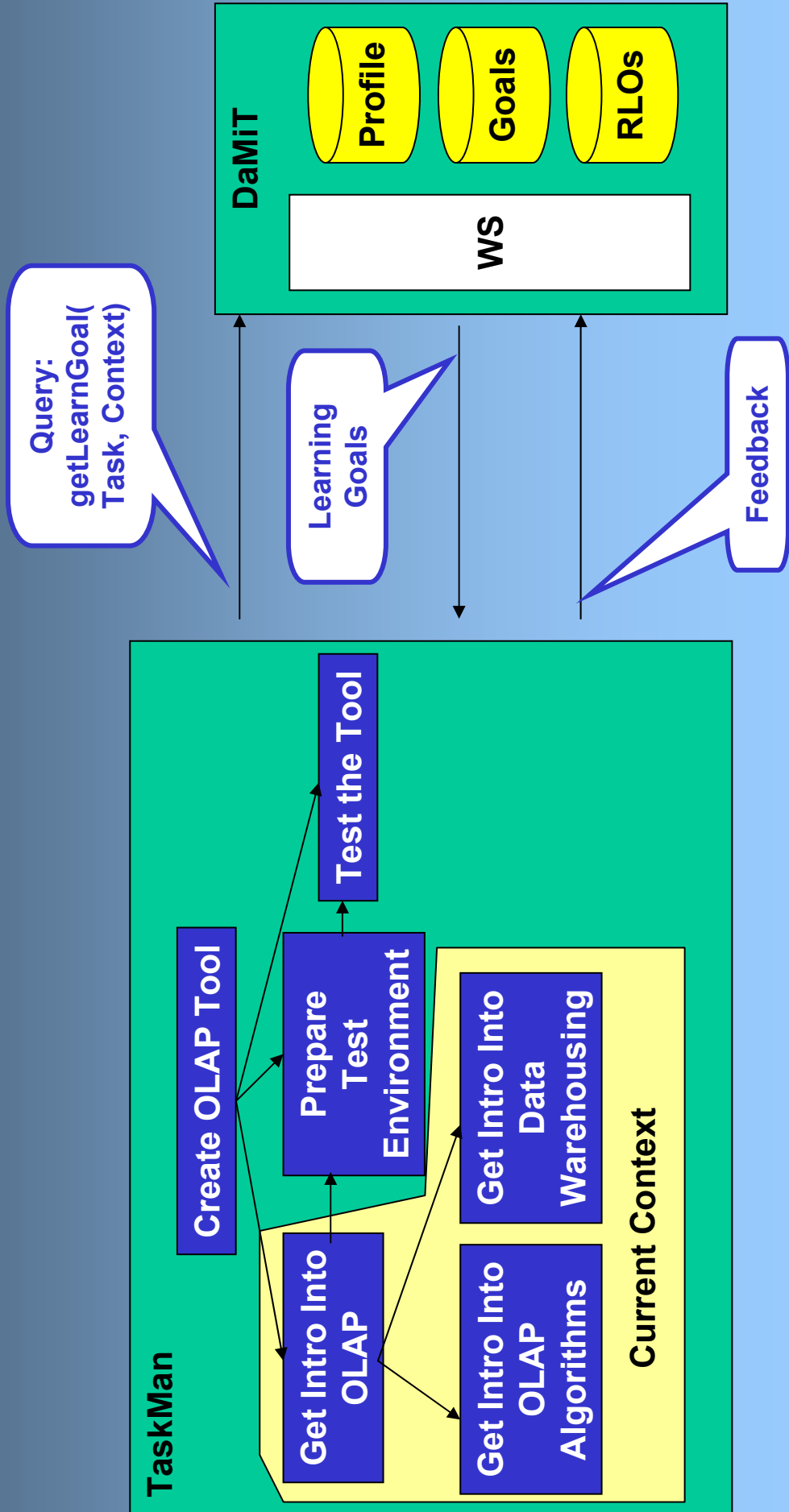
LCMS DaMiT (<http://neumann.dfki.uni-sb.de/damit>):

- Developed at DFKI GmbH
- Adapts SCORM metadata standard
- Integrates the concept of learning goals
- Basic prerequisites for adaptivity
 - Advanced user model
 - Several degrees of content complexity
 - Different content presentation styles

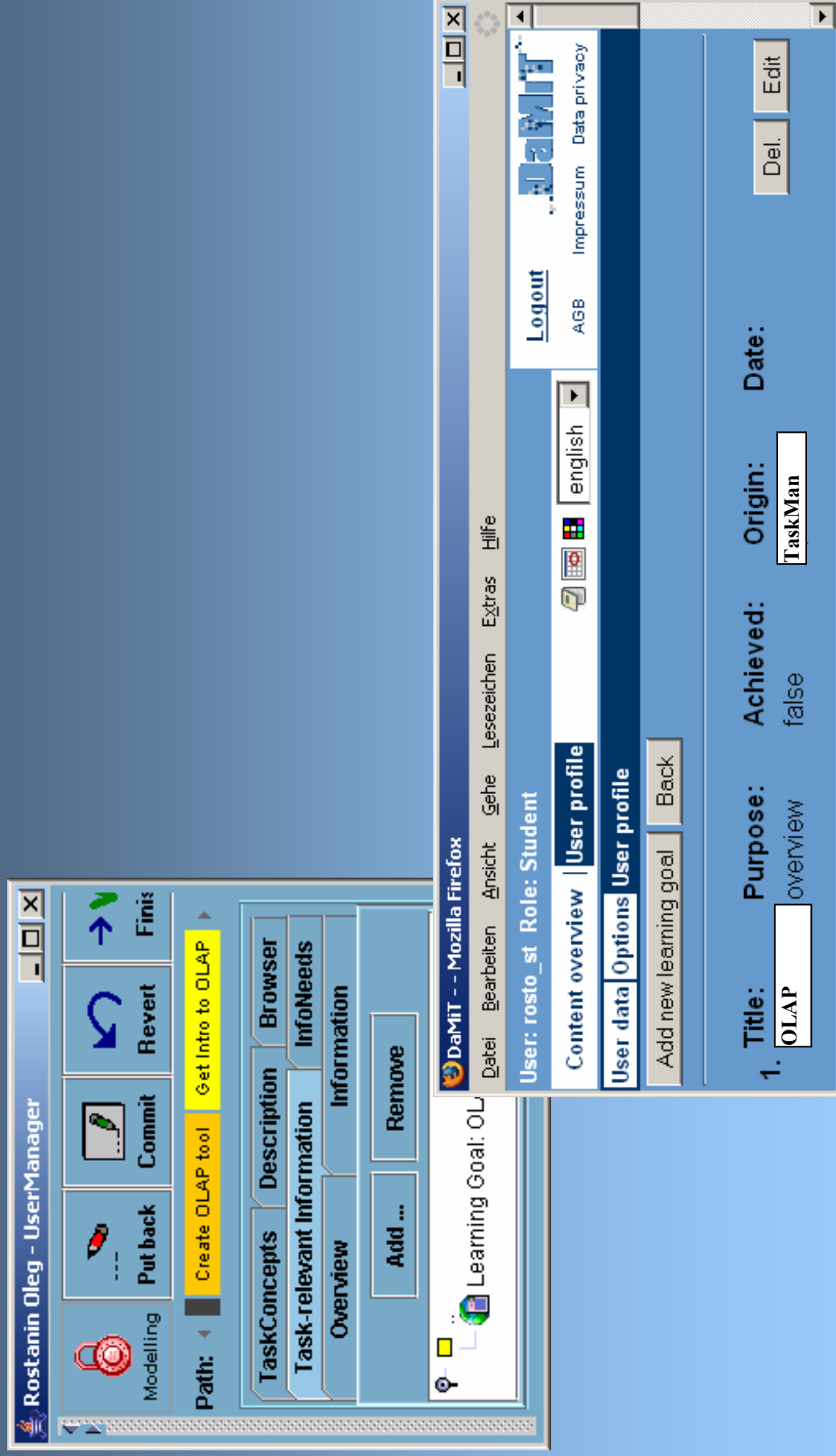
Sample Scenario: Create OLAP Tool



Sample Scenario: Learning Goal Retrieval



Sample Scenario: Learning Goal Retrieval



Sample Scenario: Learning

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Page 16 of 109 **Data Warehouse und OLAP: Begriffe: Was haben Data Warehouse und OLAP miteinander zu tun?**

Was haben Data Warehouse und OLAP miteinander zu tun?

Obwohl Data Warehouse und OLAP grundsätzlich unabhängig voneinander sind, sind beide Technologien ungefähr zur gleichen Zeit entstanden und haben sich gegenseitig zum Erfolg verholfen [Mar98b, Kap. 1.3]. Heutzutage werden beide Begriffe häufig in einem Atemzug genannt. Die Grenze, an der Data Warehouse aufhört und OLAP beginnt, ist vage. Dies ist insbesondere deswegen der Fall, weil die Hersteller meistens auf beiden Gebieten arbeiten und Komplettlösungen aus einer Hand anbieten. Normalerweise grenzt man die beiden Begriffe so voneinander ab, dass man unter einem Data Warehouse nur die Datenbasis versteht (dies entspricht auch der Definition), die als Datenquelle für OLAP dient. Unter OLAP werden nur OLAP-Clients, also Front-End-Werkzeuge, verstanden. Zwischen einem Data Warehouse und den OLAP-Clients kann jedoch zusätzlich ein OLAP-Server geschaltet werden, der die multidimensionale Aufbereitung der Daten übernimmt. Man muss aber noch einmal betonen, dass OLAP nicht unbedingt auf ein Data Warehouse aufsetzen muss. Ein Data Warehouse war auch im Konzept von Codd nicht vorgesehen. Genau so kann ein Data Warehouse nur als Quelle für statistische Berechnungen oder Data Mining verwendet werden, die traditionell nicht zu OLAP zählen. In der Regel basiert OLAP aber auf einem Data Warehouse.

Lesson preferences:
 Presentation type:
 Presentation style:
 Language:

Glossary:
Last search results:

Page 16 of 109 **Data Warehouse und OLAP: Begriffe: Was haben Data Warehouse und OLAP miteinander zu tun?**

Thank You for Attention !