COMPETITIVE ADVANTAGE BY INTEGRATED ERP-ADONIS IN MASTER PROGRAMMES CURRICULA

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Abstract

This paper present ERP-ADONIS package (overview, structure, documentation) and conceptual framework for the development, integration and evaluation of this package into teaching education program. ERP-ADONIS was specifically designed for the particular needs of financial services organizations and provides functionality primarily for the following application areas: Business Process Optimization; Quality Management, Process Costing, Personnel Management, Organization Management, Information Management, Creation of electronic handbooks which can be made available over an intranet with the use of powerful multi media functionality, Evaluation of Business Processes etc. ERP-ADONIS is a client/server multi-user system, which has an object-oriented structure.

1. The place and role of ERP-ADONIS in the promotion of a sustainable Information Society

Successful and dynamic enterprises can realized decisive competitive advantage through the ability to adapt their Business Processes quickly to the changing market conditions and through the active arrangement of their core competencies. The increasing dynamic, globalization and increasing competition makes efficient Business Process Management an essential goal. To enable this, the procedural Modeling, Analysis, Simulation and Evaluation of Business Processes is an authoritative success factor. The goals of Business Process Management are the optimization of both the processes of an enterprise as well as the resources and technology which execute those processes.
ERP-ADONIS offers a wide-range of various functionalities – in the following operational areas:

E-Business:
E-business application development, as well as a constant and integrated Modeling of business models, Business Processes, products, IT systems and IT infrastructures.

Business process management:
Acquisition, Modeling, Analysis, Simulation, Evaluation, documentation and realisation of Business Processes.

Process-based application development:
Application development with workflow, CASE, groupware and object technology as well as process-based introduction of standard software.

Process Warehouses:
Operational data management and Evolution based on business process and integrated solutions with different workflow products.

Knowledge management – Training and Learning:
Production and training supports through graphics models and process oriented knowledge management.

ERP-ADONIS is a client/server multi-user system, which has an Object Oriented Design structure. Additionally, ADONIS has a remarkable adaptation possibility, so it can be configured accordingly to needs and developed following requirements ("ADONIS -CUSTOMING").

ERP-ADONIS was specifically designed for the particular needs of financial services organizations and provides functionality primarily for the following application areas:

➢ Business Process Optimization/ Business Process Re-engineering (BRP)
➢ Quality Management/ ISO9000 Certification and Maintenance
➢ Controlling (Process Costing)
➢ Personnel Management (Personnel and Resources planning)
➢ Organization Management (Enterprise documentation, job description etc.)
➢ Information Management (Creation of technical concepts for IT systems, Interfaces to Workflow and CASE systems, Introduction of ERP Systems)
➢ Creation of electronic handbooks which can be made available over an intranet with the use of powerful multi media functionality
➢ Evaluation of Business Processes (Benchmarking, Monitoring, "Should-be" comparison)

2. ERP-ADONIS Components

ADONIS, as tool for business process management and optimization complies with the Requirements for Software ergonomics, can be configured to optimally suit the particular requirements of any user. The ADONIS Business Process Management toolkit consists of the following components:

Acquisition
Information acquisition supports in gathering information, which is important to successfully model your Business Processes and Working Environments. One of the methods provides is the use of the acquiring tables or Homer component, which runs through a link to Microsoft Excel. Data can be entered in these tables (excel sheets) and this data can be then be exported to an ADL file and imported into ADONIS Business Process Management toolkit.
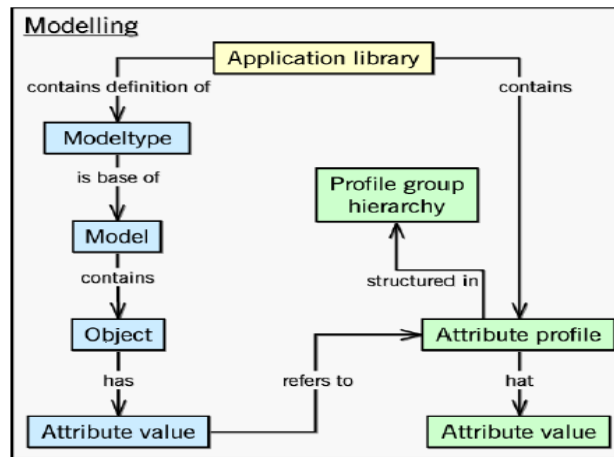

 Fig.1: Attribute profiles in Business Process Management toolkit

Modeling
The Modeling component is the heart of the ADONIS Business Process Management toolkit. The Modeling components allows you to build the models you require. It can create ERP-ADONIS is a client/server multi-user system, which has an Object Oriented Design structure and can amend your Owen models using the graphical editor (model editor) provided. Additionally, it is possible to input attribute value through a tabular view of the model. Some basic tips to ensure the clarity and quality models can be found in " Fundamentals of Modeling".
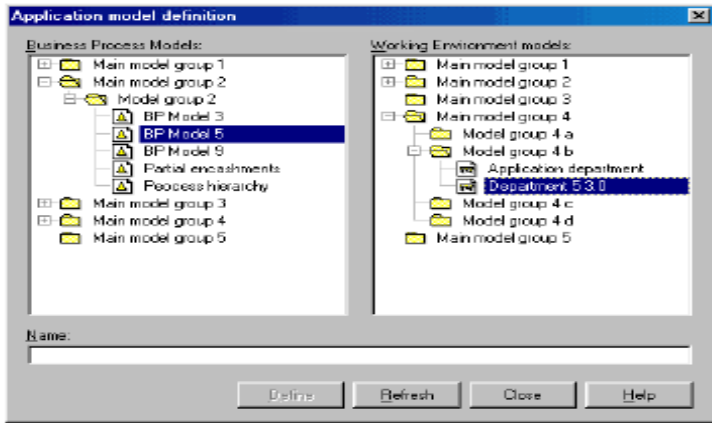
Fig. 2: Add application models

Analysis

Within the Analysis component, queries on your ADONIS models can be run and relation tables or predefined charts can be produced. The query language in ADONIS is AQL (ADONIS Query Language). The results of the query can be displayed either as a table or graphically. The results can be exported to an ASCII file and can be use in another application.
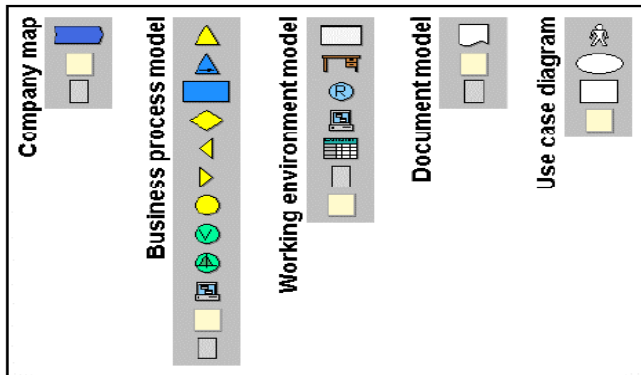

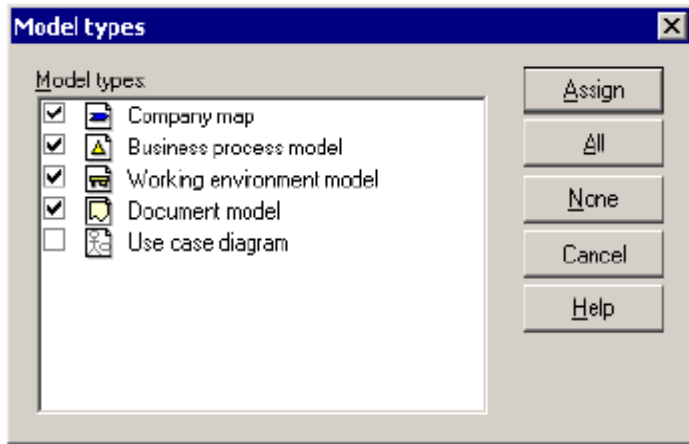**Fig. 3: Class panel of the ADONIS Standard Application Library**

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Fig. 4: Model types of the

ADONIS standard library

Evaluation

The Evaluation component offers mechanisms for the Evaluation of "should-be" models as real running processes. The Evaluation component provides the following areas of functionality comparative representation of results. Evaluation of real-time audit trails of the workflow management system MQ Series Workflow (IBM) and pre-defined Evaluation queries. In the ADONIS Process Costing component can be integrated dynamic Evaluation modules with the toolkit. Dynamic Evaluation modules, based on the Simulation algorithm "capacity Analysis", enable the period-related Evaluation.
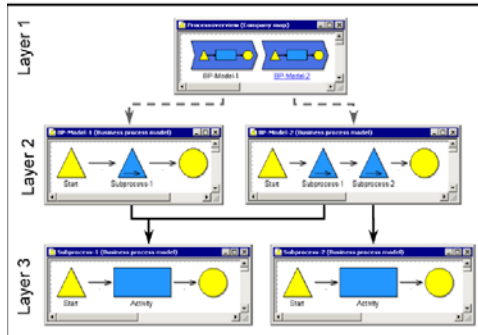

Fig: 5: Example of reference tree

Import/Export

The Import/Export component provides the possibility of exporting ADONIS models, model groups an application models into ADL files as well as importing them into an ADONIS database from ADL files. ADL stands for ADONIS Definition Language. With the help of ADL-import and ADL-export, you can transfer ADONIS models, model groups and application models into a different ADONIS databases. Additionally, ADL-Export can serve as a back-up mechanism for your models, model groups and application models.

The Documentation component provides you the possibility to transfer your ADONIS models into an electronic model documentation (e.g. HTML, XML data) or in a paper documentation (e.g. RTF data for MS Word). In this way it is possible to distribute the contents of your models either in document format (through a word processing program) or over an Intranet.

3. ADONIS Overview

Modeling Component:
- Graphical modeling editor;
- Tabular input of information into the notebooks;
- References to external programs;
- Model comparison, model administration via model attributes;
- Views and modes;
- Macro language to specify user-definable commands.

Analysis Component:
- AQL : ADONIS Query Language:
  - pre-defined queries;
  - ad-hoc queries (user-defined).
    Used for specific evaluation purposes as well as for completion control

Simulation Component:
- Path Analysis;
- Capacity Analysis;
- Workload Analysis;
- Activity-based Costing;
- Call Center Simulation

- <u>**Results:**</u>
- Critical Process Path
  - Capacity Profiles
- Manpower Requirements
  - Workloads of Roles
  - Dynamic Waiting and Cycle Times
  - Process Costs
  - Needed Skill

Documentation Component:
  - SP Expertise

4. Using the ERP - ADONIS Manuals

There are three different user groups who use ADONIS :
- **System Administrators: Installation and Database administration manual**
- **ADONIS Administrators:**
  - Administration manual
  - Method manual
- **ADONIS Users.**
  - Introduction
  - User manual
  - Method manual

The System Administrators install ADONIS and create the ADONIS databases. Additionally you can save and restore ADONIS database. To administrate your databases use ADONIS Database Administration.

ADONIS Administrators are relevant for the configuration of ADONIS as well as for the administration of users, libraries, models and components.

ADONIS Users work with the ADONIS Business Management toolkit. They acquire information, model and document their Business Processes and Working Environment (Organizational structures). In addition, the Business Process and Working Environment models constructed can be analyzed, simulated, evaluated an if necessary transformed into an operative basis.

4.   References

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- www.dke.univie.ac.at
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