

Oponentsky Posudek Doktorske Disertacni Prace

Metodika Integracnich Projektu a Jejich Charakteristika

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The thesis addresses an important topic dealing with intra-enterprise integration projects and attempts to characterize such projects and to devise a suitable project methodology.

Vedecky Vyznam

The author states the academic benefits of the thesis in the abstract:

“ Academic benefit is seen in the detail characterization of integration projects, that fixates the content and the terminology of these projects and that enables a comparative analysis with other IT projects. At the same time this characteristics also enables to compose the specific methodology for integration projects, whose parts can be adopted into the complex projects of IS development. Methodology itself enlarges the family of methodologies that are focused on certain areas of IT and it designs the specific approaches and methods for integration projects.”

This is a practice-oriented thesis with rather limited scientific impact. The candidate demonstrated extensive knowledge of the research area under consideration; however it is difficult to identify significant theoretical outcomes of this research. The thesis identifies the characterization of integration projects (charakteristika integracnich projektu) and a methodology for integration projects (metodika integracnich projektu) as the main scientific contributions (section 1.3 page 19). While the thesis reviews numerous integration approaches and covers a range of methodological issues throughout, it does not formally describe a comprehensive methodology.

Aktualnost

The thesis is up-to-date and uses extensive list of recent references. More emphasis should be placed on discussion of integration in the context of Service Oriented Architecture.

Prakticky Vyznam

The thesis draws on practical project experience of the candidate and relies primarily on practitioner-oriented publications, many sourced from the Web. The outcomes presented in the thesis will be mainly of interest to the practitioner community.

The author states the in the abstract:

“The methodology arose from, and has been retrospectively verified on, four large commercial integration projects.”

The case studies presented in section 17.6 (Případové studie) do not however provide sufficient detail to show how the proposed methodology was applied and how the specific conclusions were arrived at. References are made to confidential (NESS) internal project documentation. Adequate summary avoiding confidential information should have been provided in the thesis to clearly show how the proposed methodology can be used in a practical situation.

It is not clear if these case studies represent verification of the methodology, or were used mainly as inputs into formulating the methodology in the first place. It is problematic to draw inputs for the formulation of the methodology and simultaneously attempt to verify the method using the same projects – these two activities need to be separated.

Vymezení Zkoumané Oblasti

The scope of the thesis is too wide and this results in lack of depth in the discussion of important areas of methodology support for integration projects. For example, there seems to be an implicit assumption that data integration is a matter of transferring data from one application to another via some data interface as described in section 17.1.2 (Datová koncepce). This is a highly simplified view that treats data integration purely from a technical perspective neglecting fundamental issues such as structural and semantic inconsistencies between schemas associated with different data sources.

Figure 29 (obrázek 29 - Model komplexní integrované architektury PIS) is another example of lack of detail in the analysis. It is not clear why the particular components: Operacní datový sklad, Datawarehouse, and EII Xquery Gateway were chosen for the Data component of the model. The components seem to be randomly chosen, rather than based on some fundamental analysis.

The thesis would greatly benefit from narrowing the focus of research.

Vymezení Cíle Práce

The author states the aim of the thesis in the abstract as:

1. “The aim of the thesis is to identify the specific characterization of integration projects inside the business. The common project of the information system implementation has been chosen as a comparative etalon.”
2. “The secondary aim of this thesis is to compose the specific methodology for the implementation of an integration platform and to suggest the effective methods and models for the requirements of the methodology based on the integration projects understanding.”

The aims and objectives of thesis are clearly stated and are relevant to the current developments in enterprise application integration.

Metodika

Research methodology is based on extensive literature survey and practical experience of the candidate on integration projects as stated in the abstract:

“The methodology arose from, and has been retrospectively verified on, four large commercial integration projects.”

As already noted above, it is difficult to see how a methodology can be developed from and at the same time verified on identical projects. There should be some discussion of how successful the application of the methodology on case studies was and what was learned from the exercise.

Definice Pojmu

Comprehensive definition of project integration terminology is provided in the thesis.

Struktura Textu a Jasnost Vyjadrovani

The thesis is well-formatted and the overall quality of the presentation including headings, tables, and figures is good. However, the structure of the thesis makes it difficult to identify the original contribution of the author as all chapters contain substantial contributions from referenced sources. A separate chapter that describes the proposed methodology and clearly demonstrates the original contribution of the candidate and the scientific merit of the proposed methodology would highly benefit the thesis.

Formalni Uroven Prace

The standard of the work corresponds to the level expected for this type of thesis.

Conclusion

The candidate has demonstrated extensive knowledge of the area of project methodologies for enterprise application integration, and has shown the ability to present this complex topic in the form of a thesis. The thesis is well written and presented, and makes a contribution to the knowledge in this area. Notwithstanding the deficiencies in the thesis pointed out in this report, the quality and extent of the work justifies its presentation for defense. I recommend that the thesis is presented for defense in front of the relevant committee.

Praci doporucuji k obhajobe pred prislusnou komisi.

During the defense the candidate should be given the opportunity to provide clarification for the following points:

- i) State precisely what constitutes the proposed methodology and identify the sections of the thesis that provide its description.
- ii) Discuss the lessons learnt by practical application of the methodology in the case study context.

- iii) Discuss the suitability of the proposed methodology to SOA (Service Oriented Architecture).

Sydney, Australia 25 August, 2006



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