Masterstudium: Business Informatics

Diplomarbeitspräsentation

Business Model Driven ERP Customization

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Motivation

ERP Systems

What happens when the market demands change?

- Administration of resources (e.g., material, employees, finance)
- Data integrated in one common database
- Optimized business processes
- Time- & cost reduction
- Improved planning & control

- Complicated, time-consuming customizing
- Customization errors induce high follow-up costs
- Lack of flexibility to support changed business needs

SOLUTION

REAList project:

- Database represents current and future business needs as business models
- Data structure based on Resource-Event-Agent (REA) ontology
- Specification of business needs with REA-DSL
- Individual ERP customizations based on saved business models

Goals of this thesis:

- Mapping REA-DSL business models to REA database
- Generate user interfaces based on saved business model data

REA-DSL

Description of tenant specific business models for customizing

UI generation prototype functionality:

- Administration of resources and agents
- Automated generation of user interfaces based on saved business model data
- Ability to specify business case data in generated masks and persist it

Evaluation

Evaluation of created artifacts based on 12 extensive REA-DSL business models:

- Based on real companies in the United States
- Encompass all relevant REA concepts
- Differ in complexity and size

Outcome:

- Created SQL scripts are complete and flawlessly populate the database when executed
- Generated UIs include all concepts of the underlying business models
- Business case data is correctly persisted

Conclusion

We demonstrated an approach to:

- Map REA-DSL models to a REA database
- Use persisted business model data to generate user interfaces and therefore ease customization tasks

Extensions & future work:

- Extend UI generation to support all REA concepts
- Support multi-tenancy
- Optimize generated user interfaces

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