BUSINESS PROCESS MODELLING

Fact Based Collaboration Modelling and its Application

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Introduction

In order to determine the validity and completeness of software requirements, it is necessary to check that those software function requirements are consistent with management goals and business processes (Kokune et al.).

These management goals are usually modelled using methodologies such as the Balance Scorecard (BCS).

The Balance Scorecard

The Balance Scorecard (BCS) is a modelling methodology used to develop business strategies (Kokune et al.). The BSC gives management a fast but comprehensive view of the business and allows management to look at the business from 4 important perspective (Kaplan and Norton, 1992):

➢ How do customers see us?
➢ What must we excel at?
➢ Can we continue to improve and create value?
➢ How do we look to shareholders?

The Balance Scorecard (Con't)

The BCS maybe a good management strategy planning tool however as Kokune et al. emphasise, methods to verify the strategy from the view point of real business fields and data haven't been developed thus resulting in failure to develop software function requirements that meet the management strategy and goals of software development. In other words this method fails to assist in aligning an organisations' software development goals with that of its business strategies.

Proposed Solution

Kokune et al. have proposed the Fact Based Collaboration Modelling Methodology (FBCM) which is a technological approach to defining non-functional requirements that are used to set the business goals.

This model consist of two elements:
➢ Business goals extracted based on enterprise goals and vision (Strategic Goals)
➢ Performance indicators (PI) used to measure the degree of achievement of a goal (KPI)

Fact Based Collaboration Modelling Methodology

The following steps are used in the FBCM:

➢ Visualisation of strategy: strategic goals are extracted from existing papers such as actions plans.

➢ Elicitation of strategic goals by facts: additional goals are discovered by observing the actual field.

➢ Strategy structure analysis: causal relation-ships between strategic goals are established.

➢ Verification of strategy structure: Evaluation of the relationships between the strategic goals.

Case Study

The FBCM was applied to a Japanese automobile company whose business processes includes the following:

➢ Production Organisation
➢ Logistic organisation
➢ Maintenance organisation
➢ Logistics bases
➢ Stores
➢ SCM Organisation

Case Study (Con't)

Many KPI had been set up in the company however, it was still difficult to assess the effectiveness of the KPIs for their business process.

The four step of the FBCM was applied resulting in the following:

Step 1: Visualisation of Strategic Goals

10 strategic goals were selected from this organisation's publications and from interviews from persons concerned.

Step 2: Elicitation of Strategic Goals by Facts

Some interviews were held with some workers about their business processes and the objective at their fields.

Step 3: Strategy Structure Analysis

Some interviews were held with members of the organisation, causal relationships between strategic goals were defined, and KPIs were assigned to each strategic goal.

Step 4: Evaluation for the Validity of Strategy Structure

Statistical analysis of data of 30 KPIs that were accumulated over one year was performed which indicated that the validity of the relationships between KPIs must be confirmed by correlation analysis.

Results of Case Study

After having selected 10 strategic goals from existing materials, observing actual fields to create 60 field observation cards and thereafter extracting 5 strategic goals and defining 11 causal relations the study arrived at the following 3 conclusions:

➢It was not possible to visual as a process the strategies defined.
➢Relationships among KPIs were made clearer
➢Strategies could now be developed based on real situations in the business field.

Conclusion

FBCM is:
- A modelling methodology
- Available for any type and scale of business
- Enables business persons to develop enterprise strategic models from the viewpoint of collaboration between organisations.

In order to use FBCM in Business Process Reengineering and IT development it is necessary to clarify which parts of the business process must be changed thus fostering alignment between IT and organisational strategies.

USABILITY OF VORD FOR WEB APPLICATION REQUIREMENTS

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Introduction

* VORD is the viewpoint oriented requirements definition method.

* VORD is used to elicit and formulate web application requirements.

* VORD solves the problem and issues of web business applications.

* Business strategy is not considered in the elicitation of requirements.

KEYPOINTS OF VORD

* It is adopted for service oriented model i.e. system delivers services to VP and VP passes control information and associated parameters to the system end-users or to other systems interfaced to it.

* Concentrates on three interactive i.e. viewpoint identification and structure, viewpoint documentation, and view point requirements analysis and specification.

* Covers RE process from initial requirements discovery to detailed system modelling

REASONS FOR VORD IN WRE

* Meeting stake holder's need
* For interactive system where requirements are mapped to services provided by the system.
* Aids in identification of stakeholders
* Provides fairly complete structure for the requirements specification document
* Enhances traceability by explicit association of requirements with the viewpoints from which they are derived
* VORD structures non-functional requirement around up and services
* VORD recognizes that requirements are built gradually and evolve throughout the components life cycle

LIMITATIONS OF VORD

In illustrating VORD, a study of the requirements for a WebApp for the management of Entertainment and Sports event was carried out, resulting in the following observations that limits VORD:

* VORD cannot be directly applied

* Has to be modified and extended and extended to meet the peculiarities of such applications

* Lacks the ability to capture vision and strategy of a business

* Lacks the ability to capture daily business

ENHANCEMENTS TO VORD

* Capture the business strategy and vision the webApp i.e. aligning business activities to the strategy and monitoring performance of strategic goals overtime
* Need to extend VORD to capture business processes not only automated services
* Utilise scenarios to capture services
* Create a way to map services to the WebApps requirements specifications documents
* VORD should later for new types of web

SUMMARY

* VORD focus on the separation of concerns, multi viewpoints, standardisation and integration of viewpoints, standardisation and integration of viewpoints, services, non-functional requirements and event scenarios.

* VORD captures content, path, user interface, and access for each viewpoint.