Proceedings

of the

1996 National Research and Development Conference

Industry meets Academia

Interaction Conference Centre, University of Natal, Durban.
26 & 27 September

Edited by
Vevek Ram
FOREWORD

This book is a collection of papers presented at the National Research and Development Conference of the Institute of Computer Scientists and Information Technologists, held on 26 & 27 September, at the Interaction Conference Centre, University of Natal, Durban. The Conference was organised by the Department of Computer Science and Information Systems of The University of Natal, Pietermaritzburg.

The papers contained herein range from serious technical research to work-in-progress reports of current research to industry and commercial practice and experience. It has been a difficult task maintaining an adequate and representative spread of interests and a high standard of scholarship at the same time. Nevertheless, the conference boasts a wide range of high quality papers. The program committee decided not only to accept papers that are publishable in their present form, but also papers which reflect this potential in order to encourage young researchers and to involve practitioners from commerce and industry.

The organisers would like to thank IBM South Africa for their generous sponsorship and all the members of the organising and program committees, and the referees for making the conference a success. The organisers are indebted to the Computer Society of South Africa (Natal Chapter) for promoting the conference among its members and also to the staff and management of the Interaction Conference Centre for their contribution to the success of the conference.

On behalf of the Organising Committee
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Pietermaritzburg, September 1996
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PROJECT MANAGEMENT IN CASE

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Abstract

Thoughts are exchanged on Project Management in practice, specifically regarding projects analysed and systems developed with the Composer by IEF CASE tool. The information engineering methodology (IEM) that is being used includes all aspects around the project and the roles and responsibilities of team members.

Project management is NOT just acting according to the book in analysing a business area and developing a system. Use books only as guidelines. It is being pro-active and to manage a team to implement a solution according to the users' requirements. The importance of standards has to emphasised as well.

A proper analysis cuts down on maintenance time and effort after a computerised system has been implemented. The data model, which is the output from the analysis project, becomes the input for the construction project ... in the same CASE tool.

Abbreviations

BAA  Business Area Analysis
BSD  Business System Design
BSI  Business System Implementation
CASE  computer-aided software engineering
CRUD  create, read, update, delete
DBA  database administrator
DLC  development life cycle
FPA  function point analysis
IEF  Information Engineering Facility™
IEM  Information Engineering Methodology
IRM  Integration Resource Management
JAD  joint applications development
QA  Quality assurance

Introduction

Where does a project start? It starts with the approval of a request for a solution. The project scope must be documented and this is when the project manager is appointed. Along with this appointment the user project manager is identified as well.

According to the book one has to start off with the analysis, report on the feasibility and then design, construct and implement the solution. To be more practical, first you have to realise that each project is unique. What has worked for another project may not work for your project, though you should still follow a generic plan and fill it in as you progress.

You may be lucky to be able to select your team members, though more often you have to take who is available. After the office has been set up, every team member has to study the project standards, e.g. Naming Conventions. This is extremely important for the team to be able to speak and understand the same language amongst each other but also with other developers and the maintenance team. Standards are NOT rigid rules; it is a basis or a guideline to work with. Now the team has to be organised and responsibilities assigned to team members with the relevant skills.
Often skills may be needed that can not be taught in formal training and then a consultant is appointed as an extra team member.

<table>
<thead>
<tr>
<th>Roles</th>
<th>User</th>
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<th>Project Manager</th>
<th>DBA</th>
<th>IRM</th>
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<td>Scope project</td>
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<td>Interview users</td>
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<tr>
<td>Define model</td>
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<td>Analyse processes</td>
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<td>Facilitate QA reviews</td>
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<td>Design dialogs</td>
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</table>

Table 1: Examples of Roles and Responsibilities

It is amazing how much more effective a team operates if everybody knows what is expected from everybody.

Analysis

Identify and contact people that may provide input to the analysis process.

Now we start to touch the CASE tool. Questions are prepared and afterwards the answers are analysed and entered into the analysis toolset of Composer by IEF. It will depend on your type of project whether you conduct interviews or facilitate JAD sessions or both. The project we completed just now is a tool to support information architecture functions, the entry-point of all development projects. It provides a centralised corporate, as well as hierarchical view of where projects, applications, business objects and objectives of our company reside. It is a specialised field and therefore it was more worthwhile to interview strategists and information managers of different business units separately, opposed to facilitating JAD sessions with groups of users. It was more personal and valuable information was gathered in this manner.

How can CASE tools help this project phase?

After the interviews, a visual layout is designed from the data. The following day can the business expert already review if all the input was interpreted correctly.

After each session this data model grows and becomes more complete. When sign-off time comes, a proper QA session is arranged with the integration resource management section to confirm standards, conformity and to ensure that duplication is managed in a controlled environment. The bottom line is - everybody speaks the same language.

Deliverables

Documentation needs to be done and approved at various checkpoints during the DLC. The most important document about your project is the project definition or project charter. This is done up front about your project and can't be done from within the tool. As nobody enjoys doing documentation, the tool comes in handy with some diagrams. The descriptions and activities were entered during the analysis phase and can now just be extracted in a presentable format and circulated for approval or passed of information. The CRUD matrix and dialog flows can also be accessed through the tool.
A feasibility study report is compiled after the analysis to document the decisions that are made in workshops held with the following sections: capacity planning, business efficiency, networks, business continuity, software support, operations and production. It includes the acceptance of the continuation of the development project and confirms the implementation platform. You have to involve people from other sections from the start in your project. It won’t help much that you have this brilliant hi-tech system but the production and network’s sections can’t help with the roll-out throughout the company. What if the capacity planning section tells you what there isn’t space for your users’ precious data?

The approved data model is called the business model and is the direct deliverable of the BAA. It will now be scrutinised to optimise normalisation and to add special design features. The crux of this CASE tool is that the analysis is used as INPUT for the design and construction phase. Multiple business systems may be identified for possible implementation. These BSI projects can run simultaneously or be completed in sequence.

The implemented system is the ultimate deliverable!

Checkpoints

Reviews should be conducted throughout the project to ensure quality and to confirm that the contents are according to the user’s specifications.

Types of meetings:
- Business user reviews: confirms requirements, accepts prototype, confirms test scripts, approval
- Management reviews: determine scope of BAA and BSI
- Integration reviews: QA, scrutinise design, query duplication
- Function point count: determine productivity figures
- Technical reviews: focus on performance and operational requirements, prepare for production

Why is time keeping important?

You have to practise to schedule better and more realistic. You need history to become more experienced. A baseline is established in the company and each new project can be measured against these productivity figures. A function point count is done on each project on two occasions: after the analysis (the FPA can be used to schedule the construction phase) and after implementation. Better results are achieved when detailed time allocations are reflected against the activities.

The project manager would monitor the tasks. It is the project manager’s responsibility to enable the team to do their work and straighten out problems before it can impact the schedule.

References


