Media

Stefan Hartweg

# A Project Management Methodology for Multimedia Projects

## Analysis of Existing Strategies and Creating of a New Concept

Diploma Thesis

Examicus

# A Project Management Methodology for Multimedia Projects

## Analysis of Existing Strategies and Creation of a New Concept

**Eine Diplomarbeit von Stefan Hartweg**

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# Contents

# 1 Preface

The development of multimedia applications is not new. Nor is the management of projects. More and more people have been analysing the management of projects in order to streamline the processes involved, as well as to ensure that the best tools and practices are utilised to develop and deliver products on time and within budget. People have introduced frameworks, processes, methods and methodologies for project management to give guidance to project managers and the right tools to master their day-to-day tasks.

However, whilst a lot of attention has been given to the development of project management processes in IT and software development, the related area of multimedia production has only received minor interest in defining a standard for the task of project management, which makes the development of multimedia applications a risky business both for the client and the production company.

This paper deals specifically with project management in multimedia development. The aim of this paper, after describing the process of gaining an understanding of the requirements to manage multimedia projects, is to present a strategy to analyse existing project management methods in regards to their suitability for multimedia projects. Furthermore, one existing method will be taken as an example and recommendations will be made on how best to adapt this method to suit the management of multimedia production.

This thesis paper has been written as part of the curriculum of the Medieninformatik (applied computer science and media) course at the Fachhochschule Furtwangen (University for Applied Sciences, Furtwangen) and was kindly guided and supported by Prof. Dr. Christoph Zydorek and Prof. Dr. Fritz Steimer.

Thanks also needs to be given to Mr. Bruce Hodgen, senior consultant and lecturer at Griffith university, who initially sparked my interest in project management and who was not only prepared to provide me with his view on the

subject but also helped me out with materials that were not readily accessible through the university library.

Redefine and DCG deserve mention and thanks, as they were the only two multimedia development agencies in Brisbane that were willing to share an overview of their project management method.

The thesis has been mostly developed and written in Brisbane, Australia. The final revision has been undertaken in the German hometown of the author.

Stefan Hartweg 23.02.2002

# 2 Introduction

The following pages serve as an introduction to the topic of this thesis. A brief overview of the problem in multimedia project management will be given, followed by a description of the further structure of this document. Furthermore, the initial hypotheses and resulting findings of this thesis will be described briefly.

The term multimedia will be defined and different types of multimedia applications will be mentioned. In the area of project management there is some confusion in regard to the uniform usage of certain terms. These terms will be explained to avoid misunderstandings.

## 2.1 The Topic of this Thesis

I came into contact with project management during my studies of Medieninformatik at the Fachhochschule Furtwangen in Germany. At that time, I regarded project management as yet another couple of dozen pages containing text and diagrams that I had to learn in order to pass the exam at the end of the semester.

Two semesters later, I had the chance to leave Germany and to study a multimedia course a Griffith University in Australia. The curriculum of this course included a two semester (almost a calendar year) long project, where small groups of four to six students worked with an industry partner to create a multimedia product. After the students had been divided into groups, we were required to set the basic roles within the project team. With no one else in the team being overly keen on taking on the part as project manager and me already having had a lecture on project management, it didn't require long discussion until I was assigned the role of project manager. The lecturers for the project had created Multimedia

Pathways[1], which they prescribed as the project management method to use in our projects, as it contained all the necessary templates for documentation. We were also provided with a calendar that showed the due dates of the different documents, as well as prototype and product presentations.

Brutal honesty would describe the project overall as a disaster: the team was basically rushing from one due date for documentation to the next; barely able to fill the gaps in the templates let alone anything else. Close to the supposed project hand over we finally had to admit, despite research and prototyping at the beginning of the project, that the most important feature did not work and perform properly and that there was no solution available to fix the problems, which resulted in a rather poor quick fix with less functionality. This led to tensions within the team, liberal laying of blame for not having done a proper job in the first place, as well as the delay of planned tasks, because previous tasks had to be redone or took longer than initially expected. More issues arose when the client presented a list of further items, which, in their opinion, did not fulfil the original agreement. The student team on the other hand pointed towards the product specification description in the design document and tried to make it clear that the requirements had been fulfilled according to what had been specified. The different interpretations from team and company regarding the textual specification could not be resolved. In the end, the product was not handed over to the client because they were not prepared to pay a license fee for a product that did not meet their requirements.

In talks with the other student groups it became apparent that similar problems had occurred during their projects as well, especially regarding the abundance of documentation, agreeing on the product specification and exceeding the initial estimated task durations by far.

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[1] Impart Corporation. *Multimedia Pathways – A Development Methodology for Interactive Multimedia and Online Products for Education and Training*. Internet Source: http://www.impart.com.au/pathways/

It is fair to say that these problems also exist within the professional multimedia industry. While problems in student projects allow students the possibility to learn from their mistakes and gather experience, these same issues could well destroy a company. When changes occur in specification during the project, when rework needs to be done, when tasks take longer than anticipated, then projects tend to overrun their initial budgets – and at the moment this approach seems to be far more common than being paid on a time required basis. This then becomes a serious issue for the producer because they have to either find a way to convince their client to take on the additional costs or carry them themselves, which can financially ruin the company, especially if it happens in several projects.

It is the responsibility of the project management to deal with these issues and to make sure that the project will be completed successfully, i.e. in time, on budget and high quality. The project managers need to be equipped with a set of processes, tools and strategies that allow them to efficiently avoid and if necessary address and solve problems as described above. The combination of these is generally described as a project management method or framework and have been developed both as generic and specific solutions.

This paper tries to define a concept for managing multimedia projects efficiently and takes the suitability of existing methods into account.

Developing a valid solution makes it necessary to look at project management as a generic discipline first and then apply the results to the multimedia discipline. Only then can we be sure that no important aspects of project management have been forgotten, nor that existing and working strategies, which could be applied to multimedia projects, have been ignored. This paper therefore defines project management and generally describes its areas of responsibility. The question of whether project management is necessary and beneficial needs to be addressed as well. After project management and the necessity to actively apply it in some form has been understood in general, a specific focus on the existing information for multimedia project management will be undertaken. It will become apparent that different viewpoints exist as to whether multimedia project management should apply project management methods of related industry areas, such as software

development. This will justify the need to compare multimedia projects with software development projects. After having gained an insight into project management as well as the characteristics of multimedia projects, it is possible to determine the demands that a project management method needs to be able to meet, to successfully manage multimedia projects. It would be beyond the scope of this thesis to analyse every existing method. Instead, one method will be analysed as an example. The useful aspects of the analysed method will be identified along with its shortfalls in relation to multimedia development. Finally, recommendations on how the shortfalls could be corrected will be made, so that a project manager will be able to use the examined method, specifically suited to multimedia projects.

As already mentioned in the preface, most of the work for this paper was conducted in Brisbane, Australia and using the research resources that were available to the author there, mainly the Griffith university library, internet and e-mail, as well as a small number of interviews and face to face discussions. The materials utilised and information contained in this paper are mostly drawn from the information, knowledge and experience available for the English market. German literature could not be taking into consideration, due to lack of accessibility and the finite time frame.

## 2.2 Hypotheses and Findings

This chapter outlines the main hypotheses and the findings of the thesis. The hypotheses were established before the actual development of this paper and formed the initial justification for conducting further research on this topic. The findings presented here were developed during the research and analysis process and are presented in greater depth in the subsequent chapters.

Project management is necessary and beneficial:

In the course of the thesis, it can be proofed that this hypothesis is correct. After the basic components of project management have been outlined in Chapter 4, it is possible to analyse the beneficial effects in Chapter 5. Here it becomes apparent that an informal approach to project management is applied by people to successfully conduct projects naturally. The additional benefits of having a formal

method, such as being able to coordinate larger projects and to facilitate planning, quality control and communication are detailed.

Traditional project management is different from multimedia project management:
It becomes clear that traditional project management shares little similarities with multimedia project management, after comparing construction development with multimedia development in Chapter 7. In traditional project management, the phases of the life cycle can be separated more clearly. This is different from multimedia productions, especially for the design and development/construction phases, because the specifications of a multimedia project are harder to define.

Differences between software project management and multimedia project management exist; multimedia projects can thus not be managed with an unadapted software project management method:
During the analysis of existing material on multimedia project management, it already became apparent that different opinions as to whether the same methods can be applied to both multimedia and software projects exist. This is taken further in Chapter 7, where software development projects are compared to multimedia projects. It is shown that the software project life cycle can be similar to the life cycle of a multimedia project. Software development however only forms one component of multimedia development. The processes used in software projects can therefore not automatically be transferred and applied to multimedia projects.

There is little information available on multimedia project management:
The research for existing and useful information, as described in Chapter 6, proofed that there is not a lot available on multimedia project management. Only a small amount of relevant written material could be found. This situation was further aggravated by the reluctance of the Australian multimedia developing industry, which at large parts were not prepared to provide insight into their project management practices and to support this thesis with their practical experience.

The available information will not be comprehensive enough to describe a full project management method for multimedia projects. This will justify the development of new concept:

The analysis of the existing material showed that no project management method for multimedia exists that can be applied as is. Most of the information does not qualify as being a management method in the first place. Some of the sources describe the life cycle component, while others provide information on the knowledge areas required in multimedia. While this is useful information, a comprehensive description of the required processes, including how they interact with each other, and their application during the stages of the project life cycle has not been addressed in any resource but one: Multimedia Pathways. Multimedia Pathways is a project management method developed for multimedia projects. This method cannot be used in its current state however. Not only the author of this thesis had trouble in applying the method, but also one of the developers of the method admits that adaptation and updating would be required. With these findings, it is therefore necessary to decide on the most suitable existing method that should be analysed and adapted accordingly, which will form the new concept.

## 2.3 Definition of Multimedia

It is necessary to define the terms multimedia and project management to prevent ambiguity.

To some people it might seem as a matter of course that multimedia incorporates the use of a computer. This may be partly because the term ‘multimedia’ has been used largely by the computer industry to advertise its products, be it real multimedia or not.[2]

[2] Tannenbaum, Robert S. (Robert Sher) (1998). *Theoretical Foundations of Multimedia*. New York: Computer Science Press, p. 3