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Title:

***Study of optimization for vibration absorbing devices
applied on airplane structural elements***

Document content: BUDGET

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1. Introduction

This document presents the budget of the study.

The concepts in the budget are divided in three groups:

- Personnel: expenses related with the hours of engineering.
- Software: expenses related with the cost of the legal license of the software used to develop the study and its amortization.
- Hardware: expenses related with the cost of the hardware used to develop this study and its amortization.

To the sum of all this expenses it is applied a 10% of indirect costs in order to cover the costs related with the maintenance of the hardware and the working facilities as well as those related with the personnel (transport, telephone,...).

The final relation of costs is presented in table 2.1.

2. Budget

CONCEPT	Cost	Amortization	Price per unit tim
Personnel			
Aerospace engineer			40.00 €/ /
Software			
MATLAB	2000 €	36 mo	55.56 €/ / m
MATLAB Parallel Computing Toolbox	1000 €	36 mo	27.78 €/ / m
IBM ILOG CPLEX	313.19 €	12 mo	26.10 €/ / m
Hardware			
Personal computer (code development and analysis)	870 €	36 mo	24.17 €/ / m
Personal computer (calculus and simulations)	2200 €	36 mo	61.11 €/ / m
Indirect costs			
TOTAL			

Table 2.1 : Budget