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Towards a Software Metric for OSGi

Graduation Thesis

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*“If I have seen farther than others,
it is because I stood on the shoulders of giants.”*

— SIR ISAAC NEWTON

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LIST OF ABBREVIATIONS AND ACRONYMS

SMP	Symmetric Multi-Processor
NUMA	Non-Uniform Memory Access
SIMD	Single Instruction Multiple Data
SPMD	Single Program Multiple Data
ABNT	Associação Brasileira de Normas Técnicas

ABSTRACT

Este documento é um exemplo de como formatar documentos para o Instituto de Informática da UFRGS usando as classes \LaTeX disponibilizadas pelo UTUG. Ao mesmo tempo, pode servir de consulta para comandos mais genéricos. *O texto do resumo não deve conter mais do que 500 palavras.*

Keywords: Formatação eletrônica de documentos, \LaTeX , ABNT, UFRGS.

RESUMO

This document is an example on how to prepare documents at II/UFRGS using the L^AT_EX classes provided by the UTUG. At the same time, it may serve as a guide for general-purpose commands. *The text in the abstract should not contain more than 500 words.*

Palavras-chave: Electronic document preparation, L^AT_EX, ABNT, UFRGS.

1 INTRODUCTION

1.1 Context

This section defines the context of the work

1.2 Objectives

This section defines the objectives

1.3 Organization

This section shows how this paper is organized

2 STATE OF ART

2.1 Introduction

This section will talk about Java, OSGi and quality analysis

This chapter presents an overview of the concepts and technologies that were studied and used on the development of this work. Section 2.1(TODO reference subsection) introduces Java in the context of modular applications(OSGi), 2.2 present the concepts of code quality analysis.

2.2 Java and OSGi

This section will talk about Java and OSGi solution

2.3 Java Quality Analysis

This section will talk about Java quality analysis

3 MORE STATE OF ART

more state of art

4 INTRABUNDLE - AN OSGI BUNDLE INTROSPECTION TOOL

4.1 Implementation Overview

4.2 Collecting Bundle Data

4.3 Metrics Calculation

5 BUNDLE INTROSPECTION RESULTS

This chapter will make a deep analysis of results and prove that my contribution is valid(or not)

6 CONCLUSION

REFERENCES

- ANDREWS, G. R. **Concurrent programming: principles and practice**. Redwood City, USA: Benjamin/Cummings, 1991. 637p.
- ASSENMACHER, H.; BREITBACH, T.; BUHLER, P.; HÜBSCH, V.; SCHWARZ, R. Panda—supporting distributed programming in C++. In: EUROPEAN CONFERENCE ON OBJECT-ORIENTED PROGRAMMING, 7., 1993, Kaiserslautern, Germany. **Proceedings...** Berlin: Springer-Verlag, 1993. p.361–383. (Lecture Notes in Computer Science, v.707).
- BAKER, L.; SMITH, B. J. **Parallel programming**. New York: McGraw-Hill, 1996. 381p.
- CAROMEL, D.; KLAUSER, W.; VAYSSIÈRE, J. Towards seamless computing and meta-computing in Java. **Concurrency: Practice and Experience**, West Sussex, v.10, n.11–13, p.1043–1061, Sept./Nov. 1998.
- FURMENTO, N.; ROUDIER, Y.; SIEGEL, G. **Parallélisme et distribution en C++: une revue des langages existants**. Valbonne, FR: I3S, Université de Nice Sophia-Antipolis, 1995. (RR 95-02).
- INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS. **Information Technology—Portable Operating System Interface (POSIX), Threads Extension [C Language]**, IEEE 1003.1c-1995. New York, 1995.
- SILBERSCHATZ, A.; PETERSON, J. L.; GALVIN, P. B. **Operating system concepts**. 3.ed. Reading, USA: Addison-Wesley, 1991. 696p.
- UTUG. **Página do grupo de usuários T_EX da UFRGS**. Disponível em: <<http://www.inf.ufrgs.br/utug>>. Acesso em: maio 2001.
- WILSON, P. C. **Um método ótimo para o preparo de café em laboratório baseado na reciclagem de filtros**. 2001. 123p. Dissertação (Mestrado em Ciência da Computação) — Instituto de Informática, Universidade Federal do Rio Grande do Sul, Porto Alegre.