Methodology for Assessing the State of the Practice for Domain X

Spencer Smith
McMaster University, Canada
smiths@mcmaster.ca

Jacques Carette
McMaster University, Canada
carette@mcmaster.ca

Olu Owojaiye
McMaster University, Canada
owojaiyo@mcmaster.ca

Peter Michalski
McMaster University, Canada
michap@mcmaster.ca

Ao Dong
McMaster University, Canada

Abstract

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Contents

1 Introduction

Purpose and scope of the document. [Needs to be filled in. Should reference the overall research proposal, and the "state of the practice" exercise in particular. —SS]

2 Overview of Steps in Assessing Quality of the Domain Software

1. Identify domain. (Provide criteria on a candidate domain.)
2.

3 Identify Candidate Software

4 Domain Analysis

Commonality analysis. Follow as for mesh generator (likely with less detail).

5 Empirical Measures

Measures that can be extracted from on-line repos.

6 User Experiments

Describe experiments with users to assess usability, performance etc.

7 Analytic Hierarchy Process

Describe process. Domain expert review.

8 Quality Specific Measures

8.1 Installability [owner —OO]

8.2 Correctness [owner —OO]

8.3 Verifiability/Testability [owner —OO]

8.4 Validatability [owner —OO]

8.5 Reliability [owner —OO]

8.6 Robustness [owner —PM]

8.7 Performance [owner —PM]

8.8 Usability [owner —JC]

8.9 Maintainability [owner —PM]

8.10 Reusability [owner —PM]

8.11 Portability [owner —PM]

8.12 Understandability [owner —JC]

8.13 Interoperability [owner —AD]

8.14 Visibility/Transparency [owner —AD]

8.15 Reproducibility [owner —SS]

8.16 Productivity [owner —AD]

8.17 Sustainability [owner —SS]

8.18 Completeness [owner —AD]

8.19 Consistency [owner —AD]

8.20 Modifiability [owner —JC]

8.21 Traceability [owner —JC]

8.22 Unambiguity [owner —SS]

8.23 Verifiability [owner —SS]

8.24 Abstract [owner —SS]

9 Using Data to Rank Family Members

Describe AHP process (or similar).