

# Methodology for Assessing the State of the Practice for Domain X

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## Abstract

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## 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]
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- 8.14 **Visibility/Transparency** [owner —AD]
- 8.15 **Reproducibility** [owner —SS]
- 8.16 **Productivity** [owner —AD]
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- 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).