TECHNICAL REPORT

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Software engineering — Mock up and prototype — A categorization of software mock up and prototype models and their use

Ingénierie du logiciel — Maquette et prototype — Un classement des maquettes et prototype logiciels et leur utilisation

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Contents

Page

Foreword

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In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

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ISO/IEC TR 14759 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software engineering*.

Introduction

Mock up and prototypes are commonly confused. This stems from the English word "prototype" which covers the two French terms "maquette" (mock up) and "prototype" (prototype). An examination of the meaning given to the two words mock up and prototype in the aeronautical industry reveals that the first stipulates a version of the plane which cannot be piloted and the second a version which can be piloted. Using this analogy, a software mock up is defined as a provisional product that cannot be piloted by users, is not intended to evolve into a fully operational product and may be thrown away once its objective has been achieved. A software "prototype" is defined as something that can be piloted, is developed as a part of the target product and may evolve into an operational product.

Besides this first distinction between mock up and prototype, two additional distinctions have been introduced to address specific features of software issues:

— "illustrative" (related to realistic graphic representation, as in HCIs) versus "functional" (capable of performing computations) address the objective of the mock up and prototype development.

— "demonstrative" (serving to prove the relevance of a solution) versus "operational" (fit for proper functioning in real conditions of operations) address the level of refinement of the deliverable.

Software engineering — Mock up and prototype — A categorization of software mock up and prototype models and their use

1 Scope

This Technical Report applies to any project which uses evolutionary development.

This Technical Report sets out the concepts associated with the production of mock ups and prototypes by identifying and describing the various deliveries which result.

The Technical Report is written for user representatives, developers, managers, quality assurance practitioners of systems and software products and services.

1.1 Purpose

The purpose of this Technical Report is to define the boundaries of mock up and prototype oriented projects.

The purpose of this Technical Report is to reduce risk in critical projects.

1.2 Field of Application

The purpose of this Technical Report does not provide the reader with a normative definition of a specific software life cycle model.

The Technical Report applies to any project which involves uncertain conditions, e.g. safety critical software, user interfaces, new algorithms.

2 References

This Technical Report includes references to other publications. The latest edition of the publication referred to applies.

ISO/IEC 9126:1991, *Information technology — Software product evaluation — Quality characteristics and guidelines for their use.*

ISO/IEC 12207:1995, *Information technology — Software life cycle processes.*