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Software Engineering — Guide to the Software Engineering Body of Knowledge (SWEBOK)

Ingénierie du logiciel — Guide du corps de connaissance de l'ingénierie du logiciel (SWEBOK)

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The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

In exceptional circumstances, the joint technical committee may propose the publication of a Technical Report of one of the following types:

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC TR 19759, which is a Technical Report of type 3, was prepared by the IEEE Computer Society as the *Guide to the Software Engineering Body of Knowledge*, 2004 Version, and was adopted without change by ISO/IEC JTC 1/SC 7, Software and Systems Engineering.

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Introduction

The purpose of the Guide to the Software Engineering Body of Knowledge is to provide a consensually validated characterization of the bounds of the software engineering discipline and to provide a topical access to the Body of Knowledge supporting that discipline. The Body of Knowledge is subdivided into ten software engineering Knowledge Areas (KA) plus an additional chapter providing an overview of the Knowledge Areas of strongly related disciplines. The descriptions of the KAs are designed to discriminate among the various important concepts, permitting readers to find their way quickly to subjects of interest. Upon finding a subject, readers are referred to key papers or book chapters selected because they succinctly present the knowledge.

An emphasis on engineering practice leads the Guide toward a strong relationship with the normative literature. Most of the computer science, information technology and software engineering literature provides information useful to software engineers, but a relatively small portion is normative. A normative document prescribes what an engineer should do in a specified situation rather than providing information that might be helpful. The normative literature is validated by consensus formed among practitioners and is concentrated in standards and related documents. From the beginning, the SWEBOK project was conceived as having a strong relationship to the normative literature of software engineering. The two major standards bodies for software engineering (IEEE Computer Society Software and Systems Engineering Standards Committee and ISO/IEC JTC1/SC7) are represented in the project. Ultimately, it is hoped that software engineering practice standards will contain principles directly traceable to the Guide.

The Guide is oriented toward a variety of audiences, all over the world. It aims to serve public and private organizations in need of a consistent view of software engineering for defining education and training requirements, classifying jobs, developing performance evaluation policies or specifying software development tasks. It also addresses practicing, or managing, software engineers and the officials responsible for making public policy regarding licensing and professional guidelines. In addition, professional societies and educators defining the certification rules, accreditation policies for university curricula, and guidelines for professional practice will benefit from the SWEBOK Guide, as well as the students learning the software engineering profession and educators and trainers engaged in defining curricula and course content.

Software Engineering — Guide to the Software Engineering Body of Knowledge (SWEBOK)

1 Scope

This Technical Report characterizes the boundaries of the software engineering discipline and provides topical access to the literature supporting that discipline.

2 Recommendations

As a type 3 Technical Report, this document does not make technical recommendations. The information provided is that contained in the following publication (reproduced on the following pages), which is adopted as a Technical Report:

Guide to the Software Engineering Body of Knowledge, 2004 Version, IEEE Computer Society.

3 Revision of the IEEE Computer Society publication

It has been agreed with the IEEE Computer Society that ISO/IEC JTC 1/SC 7 will be consulted in the event of any revision or amendment of this IEEE Computer Society publication. Consultation will be accomplished by the existing Category A liaison relationship between SC 7 and IEEE Computer Society.

4 Publication

The report of the IEEE Computer Society appears on the following pages.