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## Information technology — Guideline for the evaluation and selection of CASE tools

*Technologies de l'information — Lignes directrices pour l'évaluation et la  
sélection d'outils CASE*

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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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.

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 14102 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

This second edition cancels and replaces the first edition (ISO/IEC 14102:1995), which has been technically revised.

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## Introduction

Within systems and software engineering, Computer-Aided Software Engineering (CASE) tools represent a major part of the supporting technologies used to develop and maintain information technology systems. Their selection must be carried out with careful consideration of both the technical and management requirements.

This International Standard defines both a set of processes and a structured set of CASE tool characteristics for use in the technical evaluation and the ultimate selection of a CASE tool. It follows the software product evaluation model defined in ISO/IEC 14598-5:1998.

This International Standard adopts the general model of software product quality characteristics and sub-characteristics defined in ISO/IEC 9126-1:2001 and extends these when the software product is a CASE tool; it provides product characteristics unique to CASE tools. This larger set of characteristics is then organized into four groups. This grouping provides a more manageable approach to the overall evaluation and selection process.

The technical evaluation can indicate how well a CASE tool meets its user's stated requirements. It can also indicate how well the tool meets its claimed functionality.

The objective of the technical evaluation process is to provide quantitative results on which the final selection can be based. Measurement assigns numbers (or other ratings) to attributes of entities; a major activity of evaluation is to obtain these measurements for use in selection. The final selection results should aim to achieve objectivity, repeatability and impartiality. These objectives and the confidence in the outcomes will in part depend on the resources allocated to the overall evaluation and selection process. The user of this International Standard is asked to deal with these issues at an early stage.

To be widely acceptable, these CASE tool evaluation and selection processes must be of value to the users of CASE tools and to the suppliers of CASE to the community at large. The information outlined in this International Standard should lead to more cost-effective selections of CASE tools and to a greater uniformity in how CASE tool functions and features are described.