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Software engineering — NESMA functional size measurement method — Definitions and counting guidelines for the application of function point analysis

Ingénierie du logiciel — Méthode de mesure de la taille fonctionnelle NESMA — Définitions et manuel des pratiques de comptage pour l'application de l'analyse des points fonctionnels

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by NESMA and was adopted, under the PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information Technology*, in parallel with its approval by national bodies of ISO and IEC.

This International Standard is the latest release in the continually improving Nesma method. This method is a consistent interpretation of functional size measurement in conformance with ISO/IEC 14143-1:2007. The Nesma functional size measurement method is known as Function Point Analysis (FPA)[1)] and the unit of functional size is called Function Point.

This second edition cancels and replaces the first edition (ISO/IEC 24570:2005), which is now obsolete. Functional size measurements as determined based on this new edition of the standard are identical to those based on the previous edition of the standard. Results obtained in the past do not need to be updated.

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1) In this document the abbreviation FPA is used for the term Function Point Analysis.

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Introduction to this Standard

Reason for this International Standard

Over the years a number of "dialects" have arisen for function point analysis. These dialects complicate the goal of determining the number of function points and make it almost impossible for organizations to compare results. One insufficiently acknowledged reason for this is that different interpretations of the "Albrecht" method have arisen.

This International Standard provides clarity by formulating standards for the definitions and counting guidelines that pertain to FPA.

Intended audience

This International Standard is meant for everyone who performs function point analyses. It is assumed that the reader has some knowledge of function point analysis. Nevertheless, we have attempted to produce an International Standard that is both complete and includes sufficient introductory material and explanation for the new user.

Application of this standard in practice

This International Standard is one component in the Nesma publications. It is recommended that it be read in conjunction with the other Nesma publications. These provide guidance to application of the rules specified within this International Standard and background information to aid in understanding the use and applicability of the resulting functional size. Supporting Nesma publications include the following:

— Examples to illustrate the use of the Nesma method in specific situations and a fully documented Hotel case.

— Nesma website at nesma.org which contains a number of documents that can be used in a specific context, for example guidelines how FPA can be used in a Data Warehouse environment, with UML documentation, or different aspects in contracts.

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Organization of this International Standard

Clause 1 describes the scope of this International Standard.

Clause 2 provides an introduction to FPA and in which the functional aspect of FPA is emphasized. It will also spell out briefly what FPA is and explains the terms that form the basis for the concept of FPA. Matters such as distinguishing between an application function point analysis and a project function point analysis are examined, just as are other various types of function point analyses, the role of FPA during a project, users, and function point analysis.

Clause 3 provides an overview of the position of FPA in a project and explains the types of function point analyses that can be carried out during the life cycle of an application. In other words, the clause explains when FPA can be applied and what information is needed minimally in order to count. The clause will also give a step-by-step plan for performing a function point analysis and indicates how projects, applications, and packaged software should be counted. Each of these requires their approach.

Clause 4 states general counting guidelines for a function point analysis.

Clauses 5, 6, 7, 8 and 9 successively give the definitions and guidelines used to identify function types and to determine the complexity of function types for internal logical files, external logical files, external inputs, external outputs, and external inquiries. The guidelines are broken down per function type for identifying the function type concerned, for determining the number of data element types, and for determining the number of record types or referenced logical files.

Annex A is meant to be a short summary of the guidelines and contains the most important features of each function type, as well as the tables for valuing the function types.

Annex B contains the definitions of the terms in this International Standard.

Annex C describes the mechanisms behind the increase in functional size.

This International Standard has been set up in such a way that the reader does not necessarily have to start at Clause 1 before continuing on to Clause 2, then 3 and 4 etc. Instead, the reader can look up what is important to him. For one reader, specific counting guidelines for a particular function type may be important, while someone else may want a more general frame of reference for an initial introduction to FPA.

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Software engineering — NESMA functional size measurement method — Definitions and counting guidelines for the application of function point analysis

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1 Scope

1.1 Purpose

This International Standard specifies the set of definitions, rules and guidelines for applying the Nesma Function Point Analysis (FPA) method.

1.2 Conformity

This International Standard is conformant with all mandatory provisions of ISO/IEC 14143-1:2007.

1.3 Applicability

This International Standard can be applied to all functional domains.

1.4 Focus

The International Standard focuses on how the functional size of an application is determined. The International Standard does not go into any of the aspects that play a role when project budgets are established on the basis of this functional size (e.g. productivity standards and productivity attributes).

The figure below indicates what this International Standard *will* and *will not* cover.

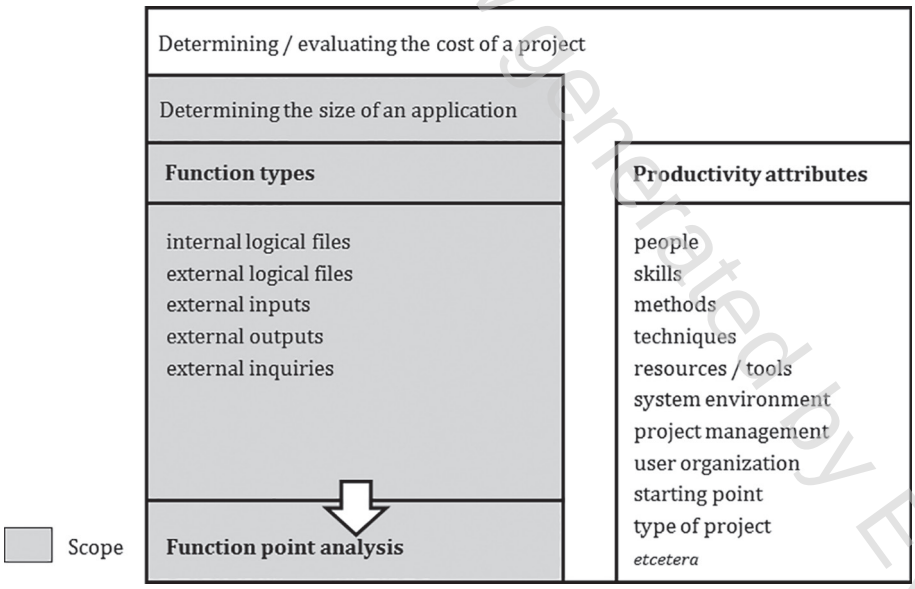

Figure 1 — Scope of the International Standard

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