INTERNATIONAL STANDARD

ISO/IEC 10118-3

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Information technology — Security techniques — Hash-functions —

Part 3: Dedicated hash-functions

Technologies de l'information — Techniques de sécurité — Fonctions de brouillage —

Partie 3: Fonctions de brouillage dédiées

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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.

ISO/IEC 10118-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 27, *IT Security techniques*.

This third edition cancels and replaces the second edition (ISO/IEC 10118-3:2003), which has been technically revised.

ISO/IEC 10118 consists of the following parts, under the general title *Information technology — Security techniques — Hash-functions*:

— *Part 1: General*

— *Part 2: Hash-functions using an n-bit block cipher*

— *Part 3: Dedicated hash-functions*

— *Part 4: Hash-functions using modular arithmetic*

Introduction

The International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) draw attention to the fact that it is claimed that compliance with this International Standard may involve the use of patents.

ISO and IEC take no position concerning the evidence, validity and scope of this patent right.

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ISO/IEC JTC 1/SC 27 Standing Document 8 (SD8) "Patent Information"

Standing Document 8 (SD8) is publicly available at: http://www.ni.din.de/sc27

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights other than those identified above. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Information technology — Security techniques — Hash-functions —

Part 3:
Dedicated hash-functions

1 Scope

This part of ISO/IEC 10118 specifies dedicated hash-functions, i.e. specially designed hash-functions. The hash-functions in this part of ISO/IEC 10118 are based on the iterative use of a round-function. Seven distinct round-functions are specified, giving rise to distinct dedicated hash-functions.

The first and third dedicated hash-functions in Clauses 7 and 9 respectively provide hash-codes of lengths up to 160 bits; the second in Clause 8 provides hash-codes of lengths up to 128 bits; the fourth in Clause 10 provides hash-codes of lengths up to 256 bits; the sixth in Clause 12 provides hash-codes of a fixed length, 384 bits; and the fifth and seventh in Clauses 11 and 13 respectively provide hash-codes of lengths up to 512 bits.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 10118-1:2000, *Information technology — Security techniques — Hash-functions — Part 1: General*