
**Information technology — Streaming
Lossless Data Compression algorithm
(SLDC)**

*Technologies de l'information — Algorithme de compression sans perte de
données en mode continu (SDLC)*



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS

© ISO/IEC 2002

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.ch
Web www.iso.ch

Printed in Switzerland

Contents

1	Scope	1
2	Conformance	1
3	Normative reference	1
4	Terms and definitions	1
4.1	Access Point	1
4.2	Control Symbol	1
4.3	Copy Pointer	1
4.4	data byte	1
4.5	Data Symbol	1
4.6	Displacement Field	1
4.7	Encoded Data Stream	1
4.8	Encoded Record	1
4.9	End Marker	2
4.10	End Of Record Symbol (EOR Symbol)	2
4.11	File Mark	2
4.12	File Mark Symbol	2
4.13	Flush Symbol	2
4.14	History Buffer	2
4.15	Literal 1	2
4.16	Literal 2	2
4.17	Matching String	2
4.18	Match Count	2
4.19	Match Count Field	2
4.20	Pad	2
4.21	Record	2
4.22	Record Segment	2
4.23	Reset X Symbol	2
4.24	Reset 1 Symbol	2
4.25	Reset 2 Symbol	2
4.26	scheme 1	2
4.27	Scheme 1 Symbol	2
4.28	scheme 2	3
4.29	Scheme 2 Symbol	3
4.30	user data	3
5	Conventions and Notations	3
5.1	Representation of numbers	3
5.2	Names	3
6	Acronyms	3
7	Algorithm Overview	3
7.1	Scheme 1 Encoding	3
7.2	Scheme 2 Encoding	3
7.3	History Buffer	4
8	Encoding Specification	4
8.1	User Data	4
8.2	History Buffer	4
8.3	Encoded Data Stream	4

8.3.1	Access Point	5
8.4	Data Symbols	5
8.4.1	Literal 1 Data Symbols	5
8.4.2	Copy Pointer Data Symbols	5
8.4.3	Literal 2 Data Symbols	6
8.5	Control Symbols	7
8.6	Pad	8

This document is a preview generated by EVS

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 3.

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 International Standard 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 22091 was prepared by ECMA (as ECMA-321) and was adopted, under a special “fast-track procedure”, by Joint Technical Committee ISO/IEC JTC 1, *Information Technology*, in parallel with its approval by national bodies of ISO and IEC.

This document is a preview generated by EVS

Information technology — Streaming Lossless Data Compression algorithm (SLDC)

1 Scope

This International Standard specifies a lossless compression algorithm to reduce the number of 8-bit bytes required to represent data records and File Marks. The algorithm is known as Streaming Lossless Data Compression algorithm (SLDC).

One buffer size (1 024 bytes) is specified.

The numerical identifier according to ISO/IEC 11576 allocated to this algorithm is 6.

2 Conformance

A compression algorithm shall be in conformance with this International Standard if its Encoded Data Stream satisfies the requirements of this International Standard.

3 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC 11576:1994 *Information technology — Procedure for the registration of algorithms for the lossless compression of data*

4 Terms and definitions

For the purpose of this International Standard the following terms and definitions apply.

4.1 Access Point

A location in the Encoded Data Stream at which data may be decoded.

4.2 Control Symbol

A Control Symbol may change the compression scheme, reset the History Buffer, mark the end of a Record, indicate a File Mark, or indicate the termination of an Encoded Data Stream.

4.3 Copy Pointer

A part of the Encoded Data Stream output in scheme 1 that replaces a string of data bytes with a specification of a Matching String.

4.4 data byte

An element of user data that is to be encoded.

4.5 Data Symbol

An element of an Encoded Record that represents one or more data bytes.

4.6 Displacement Field

A field in the Copy Pointer that specifies the location within the History Buffer of the first byte of a Matching String.

4.7 Encoded Data Stream

The output stream after encoding User Data.

4.8 Encoded Record

The output stream after encoding one Record of user data.