

This is a preview of "ISO/IEC TR 19566-1:2016". Click [here](#) to purchase the full version from the ANSI store.

First edition  
2016-03-15

---

---

## Information technology — JPEG Systems —

### Part 1: Packaging of information using codestreams and file formats

*Technologies de l'information — Systèmes JPEG —*

*Partie 1: Emballage des informations utilisant les flux de codes et les formats de fichier*



Reference number  
ISO/IEC TR 19566-1:2016(E)

© ISO/IEC 2016



**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

This is a preview of "ISO/IEC TR 19566-1:2016(E)". Click here to purchase the full version from the ANSI store.

## Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Terms, definitions, abbreviated terms and symbols</b> .....	<b>1</b>
2.1 Terms and definitions.....	1
2.2 Symbols.....	5
2.3 Abbreviated terms.....	5
<b>3 Conventions</b> .....	<b>6</b>
3.1 Operators.....	6
3.1.1 Arithmetic operators.....	6
3.1.2 Logical operators.....	7
3.1.3 Relational operators.....	7
3.1.4 Precedence order of operators.....	7
3.1.5 Mathematical functions.....	7
<b>4 General</b> .....	<b>8</b>
<b>5 Background</b> .....	<b>8</b>
5.1 General.....	8
5.2 Organization of information.....	10
<b>Annex A (informative) Organization of information — Signalling, packaging and storage</b> .....	<b>11</b>
<b>Annex B (informative) Concept of boxes</b> .....	<b>13</b>
<b>Annex C (informative) Box-based file format structure</b> .....	<b>16</b>
<b>Annex D (informative) Codestream syntax</b> .....	<b>19</b>
<b>Annex E (informative) Codec/codestream functionality guidelines</b> .....	<b>22</b>
<b>Bibliography</b> .....	<b>26</b>

## 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](http://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](http://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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

This is a preview of "ISO/IEC TR 19566-1:2...". [Click here to purchase the full version from the ANSI store.](#)

## Introduction

This part of ISO/TR 19566 provides an overview for users of ISO/IEC standards in the use of common JPEG syntax elements at the systems layer for current and future International Standards developed by ISO/IEC.

With the development of coding technologies, ISO/IEC has defined a number of different file formats and multiple variants of codestream syntax. Many of these are specialized to dedicated use cases or compression algorithms. Consequently, it is difficult to maintain an overview about existing file formats, their capabilities and their architectures.

This part of ISO/TR 19566 aims to describe common architectural concepts for file formats and codestream formats. By these means, it lays out guidelines for future file formats and codestream syntax. By observing these guidelines, future International Standards may fit into an overall operable Systems infrastructure that can handle all tools standardized by the ISO/IEC body.