

(Title page to be provided by ISO)

Contents

Page

Introduction.....	vi
1 Purpose	vi
2 Application	vi
3 Profiles and levels	vi
4 The scalable and the non-scalable syntax.....	vii
1 Scope.....	1
2 Normative references.....	1
3 Definitions	3
4 Abbreviations and symbols	11
4.1 Arithmetic operators	11
4.2 Logical operators.....	11
4.3 Relational operators	11
4.4 Bitwise operators.....	12
4.5 Assignment	12
4.6 Mnemonics	12
4.7 Constants	12
5 Conventions	13
5.1 Method of describing bitstream syntax	13
5.2 Definition of functions	14
5.3 Reserved, forbidden and marker_bit.....	14
5.4 Arithmetic precision.....	15
6 Video bitstream syntax and semantics.....	16
6.1 Structure of coded video data.....	16
6.2 Video bitstream syntax	29
6.3 Video bitstream semantics.....	45
7 The video decoding process.....	76
7.1 Higher syntactic structures	76
7.2 Variable length decoding.....	77
7.3 Inverse scan	80
7.4 Inverse quantisation	82
7.5 Inverse DCT.....	86
7.6 Motion compensation	87
7.7 Spatial scalability	107
7.8 SNR scalability.....	122
7.9 Temporal scalability.....	129
7.10 Data partitioning	134
7.11 Hybrid scalability	136
7.12 Output of the decoding process.....	138

© ISO/IEC 1995

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 the publisher.

ISO/IEC Copyright Office • Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

8 Profiles and levels.....	141
8.1 ISO/IEC 11172-2 compatibility	142
8.2 Relationship between defined profiles.....	143
8.3 Relationship between defined levels	145
8.4 Scalable layers.....	145
8.5 Parameter values for defined profiles, levels and layers	148
Annex A Discrete cosine transform.....	152
Annex B Variable length code tables.....	153
B.1 Macroblock addressing	153
B.2 Macroblock type	154
B.3 Macroblock pattern.....	159
B.4 Motion vectors.....	160
B.5 DCT coefficients.....	161
Annex C Variable length code tables	170
Annex D Features supported by the algorithm	176
D.1 Overview.....	176
D.2 Video formats.....	176
D.3 Picture quality	177
D.4 Data rate control.....	178
D.5 Low delay mode	178
D.6 Random access/channel hopping	178
D.7 Scalability	179
D.8 Compatibility	186
D.9 Differences between this specification and ISO/IEC 11172-2.....	187
D.10 Complexity.....	189
D.11 Editing encoded bitstreams	190
D.12 Trick modes	190
D.13 Error resilience.....	191
D.14 Concatenated sequences.....	200
Annex E Profile and level restrictions.....	202
E.1 Syntax element restrictions in profiles.....	202
E.2 Permissible layer combinations	213
Annex F Patent statements	239
Annex G Bibliography	242

Foreword

(Foreword to be provided by ISO)

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.