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Australian STANDARD

Information technology—Computer graphics and image processing—Image Processing and Interchange (IPI)—Functional specification

Part 2: Programmer's imaging kernel system application programme interface

STANDARDS Australia

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Australian Standard®

Information technology—Computer graphics and image processing—Image Processing and Interchange (IPI)—Functional specification

Part 2: Programmer's imaging kernel system application programme interface

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PREFACE

This Standard was prepared by the Standards Australia Committee IT-031, Computer Modelling and Simulation.

The objective of this Standard is to establish the specification for the application programme interface (API) called the Programmers Imaging Kernel System (PIKS). PIKS is intended to provide a rich set of both low-level and high-level services on image and image-derived data objects that can be used as building blocks for a broad range of common imaging applications.

This Standard is identical with, and has been reproduced from ISO/IEC 12087-2:1994, *Information technology—Computer graphics and image processing—Image Processing and Interchange (IPI)—Functional specification*, Part 2: *Programmer's imaging kernel system application program interface* and its Corrigendum 1 (1997) which has been added at the end of the source text.

As this Standard is reproduced from an International Standard, the following applies:

(a) In the source text 'this part of ISO/IEC 12087' should read 'this Australian Standard'.

(b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian Standard*	
ISO/IEC		AS ISO/IEC	
12087	Information technology—Computer graphics and image processing—Image Processing and Interchange (IPI)—Functional specification	12087	Information technology—Computer graphics and image processing—Image Processing and Interchange (IPI)—Functional specification
12087-1	Part 1: Common architecture for imaging	12087.1	Part 1: Common architecture for imaging
12087-3	Part 3: Image Interchange Facility (IIF)	12087.3	Part 3: Image Interchange Facility (IIF)

Only normative references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annexes to which they apply. A 'normative' annex is an integral part of a Standard, whereas an 'informative' annex is only for information and guidance.

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Part 2:
Programmer's imaging kernel system application programme interface

1 Scope

This part of ISO/IEC 12087 establishes the specification of the application program interface (API), called the Programmer's Imaging Kernel System (PIKS). ISO/IEC 12087-1 establishes the conceptual and architectural definitions of the Common Architecture for Imaging (CAI). ISO/IEC 12087-3 establishes the specification of the Image Interchange Facility (IIF).

PIKS is intended to provide a rich set of both low-level and high-level services on image and image-derived data objects. These services can be used as building blocks for a broad range of common imaging applications.

A conscious effort has been made by the developers of PIKS to create a standard that does not favor any particular computing system. Implementations of PIKS should be possible on computing systems ranging in architecture from general purpose computers to specialised hardware accelerators, ranging in size from personal computers to mainframe supercomputers, and ranging in connectivity from stand-alone machines to distributed computing networks.

Where applicable, PIKS relies on other APIs and data format standards to provide capabilities that are not unique to imaging. The following lists contain a summary of technological capabilites provided by PIKS and not provided by PIKS. However, it should be noted that PIKS functionality may be useful as a pre-processor or co-processor for many of the technologies in the "Not provided by PIKS" list.