AS/NZS ISO 19153:2015
ISO 19153:2014

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Australian/New Zealand Standard™

Geospatial Digital Rights Management Reference Model (GeoDRM RM)

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-004, Geographical Information/Geomatics. It was approved on behalf of the Council of Standards Australia on 12 December 2014 and on behalf of the Council of Standards New Zealand on 20 January 2015.
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The following are represented on Committee IT-004:

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Australian Bureau of Meteorology
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Australian Hydrographic Office
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS ISO 19153:2014.

Australian/New Zealand Standard™

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-004, Geographical Information/Geomatics.

The objective of this Standard is to define:

(a) A conceptual model for digital rights management of geospatial resources, providing a framework and reference for more detailed specification in this area.

(b) A metadata model for the expression of rights that associate users to the acts that they can perform against a particular geospatial resource, and associated information used in the enforcement and granting of those rights, such as owner metadata, available rights, and issuer of those rights.

(c) Requirements that are placed on rights management systems for the enforcement of those rights.

(d) How this is to work conceptually in the larger DRM context to ensure the ubiquity of geospatial resources in the general services market.

This Standard is identical with, and has been reproduced from ISO 19153:2014, *Geospatial Digital Rights Management Reference Model (GeoDRM RM)*.

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

(i) In the source text 'this International Standard' should read 'this Australian/New Zealand Standard'.

(ii) 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/New Zealand Standard*	
ISO/IEC		AS ISO/IEC	
15408	Information technology—Security techniques—Evaluation for IT security	15408	Information technology—Security techniques—Evaluation criteria for IT security
21000	Information technology—Multimedia framework (MPEG-21) (series)	21000	Information technology—Multimedia framework (MPEG-21) (series)
21000-5	Part 5: Rights Expression Language	21000.5	Part 5: Rights Expression Language

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

CONTENTS

INTRODUCTION

To create a marketplace, individuals who own something of value (here a resource) shall have some level of assurance that they will be able to obtain fair value for its use or purchase. In a digital world, due to the nature of digital resources and commerce, most digital entities are not sold in the usual sense. When a user acquires an application, he actually acquires the right to use a copy of the application. Possession does not equate with ownership, and a system of software and resource licensing has grown up in the digital world that ensures the following types of things:

— The user can legitimately act upon a resource if he has a corresponding licence for that act.

— The owner will maintain the resource, fixing errors ("bug-fix") and assuring a guaranteed level of functionality.

— Optionally, the user can be asked to pay the owner of the resource based upon agreed criteria, whether that is a one-time fee, a per-machine fee, a usage fee, or some other mechanism stated in the legal contract or licence between user and owner.

— The user agrees to protect the owner's rights based on the agreement. This usually means he cannot backward engineer code or resource, nor redistribute the resource without proper permission.

— The owner agrees to maintain the resource and allow a reasonable access to the users for any fixes that can be required. Again, the extent or degree of maintenance is stated in the user agreement.

— To create and support a large-scale, open market in geospatial resources, this type of protection is needed to ensure that a "fair value for work (investment)" ethic can be guaranteed so that suppliers can be sure of fair return on individual sales, and users can be sure of fair value for purchases of uses of resources.

This International Standard describes how this is to be done.

This International Standard does not replace any previous ISO or OGC international standards, but it is dependent upon them. Each resource and service standard that exists or will exist becomes a resource description in this International Standard, and hopefully will be subject to the same sorts of protection that are afforded to other digital resources.

AUSTRALIAN/NEW ZEALAND STANDARD

Geospatial Digital Rights Management Reference Model (GeoDRM RM)

1 Scope

This International Standard is a reference model for digital rights management (DRM) functionality for geospatial resources (GeoDRM). As such, it is connected to the general DRM market in that geospatial resources must be treated as nearly as possible like other resources, such as music, text, or services.

This International Standard defines:

— A conceptual model for digital rights management of geospatial resources, providing a framework and reference for more detailed specification in this area.

— A metadata model for the expression of rights that associate users to the acts that they can perform against a particular geospatial resource, and associated information used in the enforcement and granting of those rights, such as owner metadata, available rights, and issuer of those rights.

— Requirements that are placed on rights management systems for the enforcement of those rights.

NOTE A rights management system must be necessary and sufficient: it must implement only those restrictions necessary to enforce the rights defined therein, and it must be sufficient to enforce those rights.

— How this is to work conceptually in the larger DRM context to ensure the ubiquity of geospatial resources in the general services market.

A resource in this context is a data file, or service for geographic information or process.

This abstract descriptive International Standard builds on and complements the existing standards, and defines at an abstract level a rights model to enable the digital rights management of standards-based geospatial resources. Future GeoDRM standards will be written to implement the concepts defined in this International Standard.

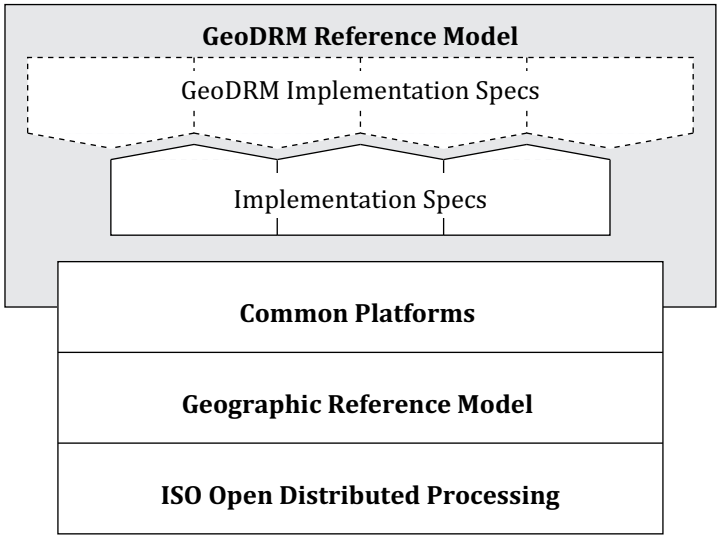

Figure 1 — GeoDRM reference model context

Figure 1 shows a simplified view of how this International Standard, the Geospatial Digital Rights Management Reference Model (indicated in grey), relates to the ISO Open Distributed Processing