AS/NZS ISO 19142:2011
ISO 19142:2010

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Australian/New Zealand Standard™

Geographic information—Web Feature Service

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 15 November 2011 and on behalf of the Council of Standards New Zealand on 14 November 2011.
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The following are represented on Committee IT-004:

ANZLIC—The Spatial Information Council
Australasian Fire and Emergency Service Authorities Council
Australian Antarctic Division
Australian Hydrographic Office
Australian Map Circle
CSIRO Exploration and Mining
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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.

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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 specify the behaviour of a web feature service that provides transactions on and access to geographic features in a manner independent of the underlying data store.

This Standard is identical with, and has been reproduced from ISO 19142:2010, *Geographic information—Web Feature Service.*

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

(a) Its number appears on the cover and title page while the International Standard number appears only on the cover.

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

(c) 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/TS 19103	Geographic information—Conceptual schema language	AS/NZS ISO 19103	Geographic information—Conceptual schema language
ISO 19143	Geographic information—Filter encoding	19143	Geographic information—Filter encoding

Only documents 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 annex 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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INTRODUCTION

The Web Feature Service (WFS) represents a change in the way geographic information is created, modified and exchanged on the Internet. Rather than sharing geographic information at the file level using File Transfer Protocol (FTP), for example, the WFS offers direct fine-grained access to geographic information at the feature and feature property level. Web feature services allow clients to only retrieve or modify the data they are seeking, rather than retrieving a file that contains the data they are seeking and possibly much more. That data can then be used for a wide variety of purposes, including purposes other than their producers' intended ones.

In the taxonomy of services defined in ISO 19119, the WFS is primarily a feature access service but also includes elements of a feature type service, a coordinate conversion/transformation service and a geographic format conversion service.

AUSTRALIAN/NEW ZEALAND STANDARD

Geographic information—Web Feature Service

1 Scope

This International Standard specifies the behaviour of a web feature service that provides transactions on and access to geographic features in a manner independent of the underlying data store. It specifies discovery operations, query operations, locking operations, transaction operations and operations to manage stored parameterized query expressions.

Discovery operations allow the service to be interrogated to determine its capabilities and to retrieve the application schema that defines the feature types that the service offers.

Query operations allow features or values of feature properties to be retrieved from the underlying data store based upon constraints, defined by the client, on feature properties.

Locking operations allow exclusive access to features for the purpose of modifying or deleting features.

Transaction operations allow features to be created, changed, replaced and deleted from the underlying data store.

Stored query operations allow clients to create, drop, list and describe parameterized query expressions that are stored by the server and can be repeatedly invoked using different parameter values.

NOTE This International Standard does not address the access control issues.

This International Standard defines 11 operations:

— GetCapabilities (discovery operation);

— DescribeFeatureType (discovery operation);

— GetPropertyValue (query operation);

— GetFeature (query operation);

— LockFeature (locking operation);

— GetFeatureWithLock (query and locking operation);

— Transaction (transaction operation);

— CreateStoredQuery (stored query operation);

— DropStoredQuery (stored query operation);

— ListStoredQueries (stored query operation);

— DescribeStoredQueries (stored query operation).