International Cartographic Association
Association Cartographique Internationale

ICA Commission:
SDI & Standards

Presented by Serena Coetzee, University of Pretoria
Chair: ICA Commission on SDI & Standards

SDI-Open 2017, George Washington University, Washington DC
1 July 2017

WE MAPS
INTERNATIONAL MAP YEAR 2015–2016

Terms of reference

- **Collaborate** with other ICA Commissions
- **Research**
  - Impact and use cartography in SDI, e.g. standards, spatial semantics, ontologies, volunteered geographical information (VGI), data quality; continue work on extending, improving and applying the **ICA's SDI model**.
- **Publish**
  - Reports, conference presentations and/or journal articles on our work
- **Workshops** on SDI and standards
- Contribute to the **International Map Year**
- **Meetings** at suitable meetings and conferences
- **Liaison** with other organizations, ISO/TC211, GSDI, …

Who are we?

Commission Chairs

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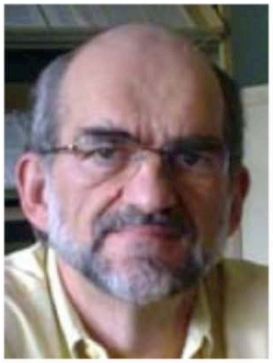
Who are we?



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Executive Committee

Executive Committee liaison: David Forrest

Who are we?


Joep Crompvoets
Olaf Østensen
Ziggy Vannlishout
Jan Hjelmager
Anders Nielsen
Jan Laporte
Ulrich Düren
Adam Iwaniak
Suchith Anand
Jean Brodeur
Iwona Kaczmarek
Dominique Laurent
Petr Rapant
Harold Moellering
Paloma Abad
Milan Konecny
Dave Danko
Alberto Neves
Rumiana Vatseva
Tatiana Delgado
Olivier Ertz
Ammatzia Peled
Samy Katumba
Gaby van Wyk
Ionut Iosifescu
Abbas Rajabifard
Marna Roos
Kisco Sinvula
Serena Coetzee
Giannina Reyes
Julierme Pinheiro
Victoria Rautenbach
Joselyn Robledo Ceballos
Stefan Steiniger
Antony Cooper
Geoff O'Malley
United States of America
Argentina
Australia

In a spatial data infrastructure…

Users want to **find** spatial data

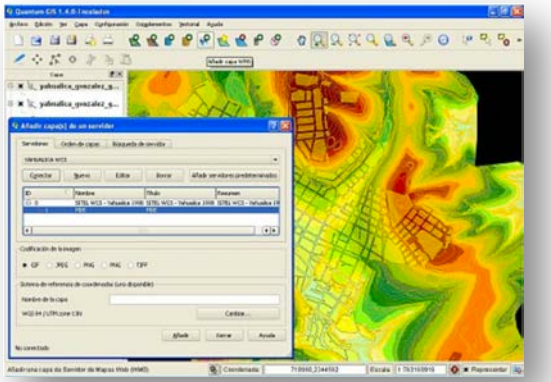
Metadata, catalogues, discovery, portals…

Users want to **access** spatial data

Web services, licenses, costs, interoperability…

Users want to **use** spatial data

Quality, update frequency, report errors…



www.qgis.org, http://maps.me/en/home, http://www.linz.govt.nz, www.bigthink.com

ICA's SDI model

Describes an SDI from different viewpoints (based on ISO 10746-1:1998) …

Viewpoints	
✔ **Enterprise**	Concerned with the **purpose, scope and policies governing the activities of the specified system** within the organization of which it is a part
✔ **Information**	Concerned with the **kinds of information handled by the system** and constraints on the use and interpretation of that information
✔ **Computational**	Concerned with the **functional decomposition of the system into a set of objects that interact at interfaces** – enabling system distribution
Engineering	Concerned with the **infrastructure** required to support system distribution
Technology	Concerned with the choice of **technology** to support system distribution

Enterprise viewpoint

ICA's SDI model

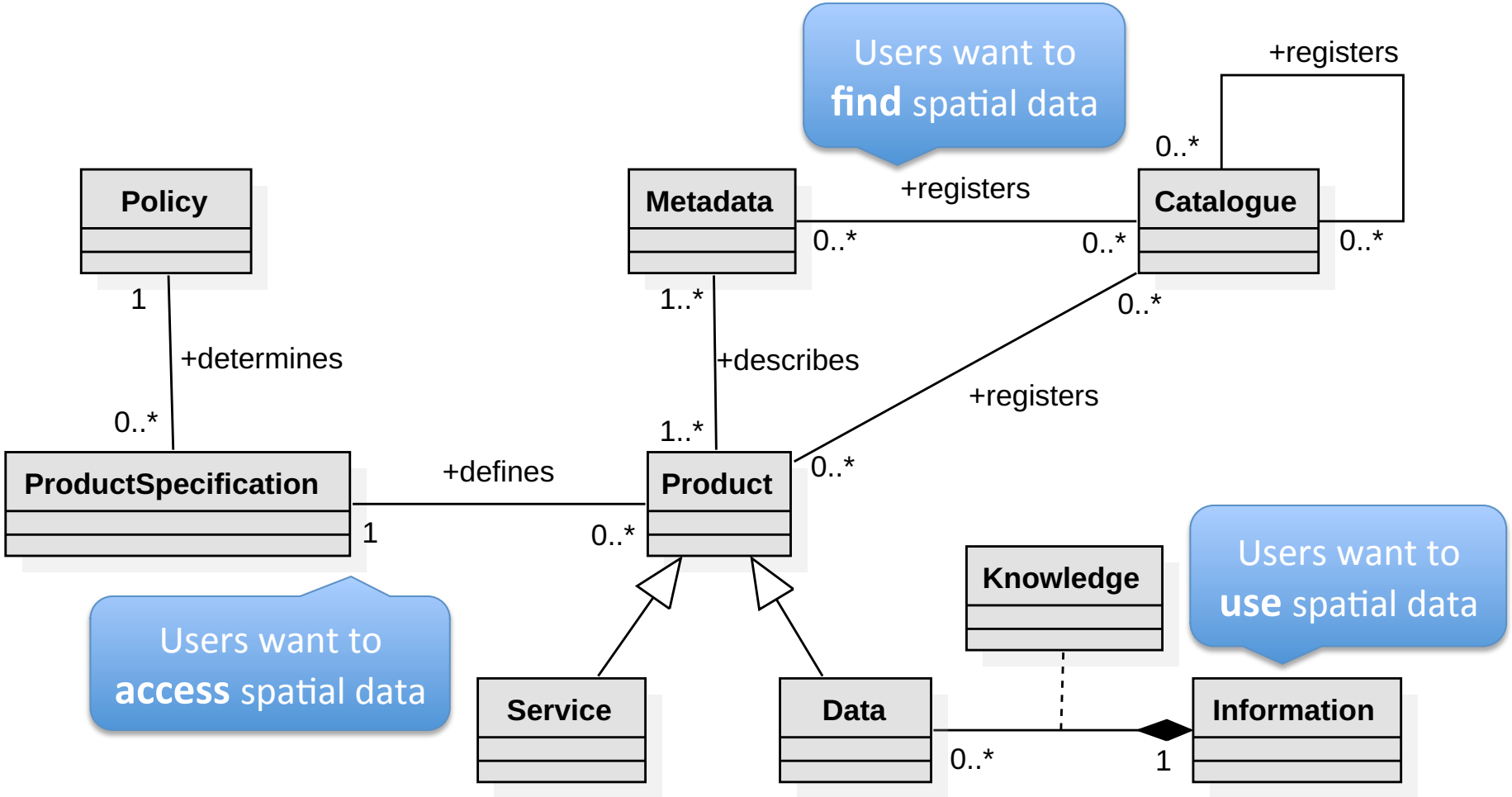
SDI stakeholder

- individual or organization with an interest in the SDI achieving its purpose
- impacts and influences the SDI or is affected by the SDI

SDI Stakeholders	
Policy Maker	Sets the policy pursued by an SDI and all its stakeholders
Producer	Produces SDI data or services
Provider	Provides data or services to users throughout SDI
Broker	Brings users and providers together and assists in the negotiation of contracts between them
Value-Added Reseller	Adds some new feature to an existing product or group of products, and then makes it available as a new product
User	Uses the SDI for its intended purpose

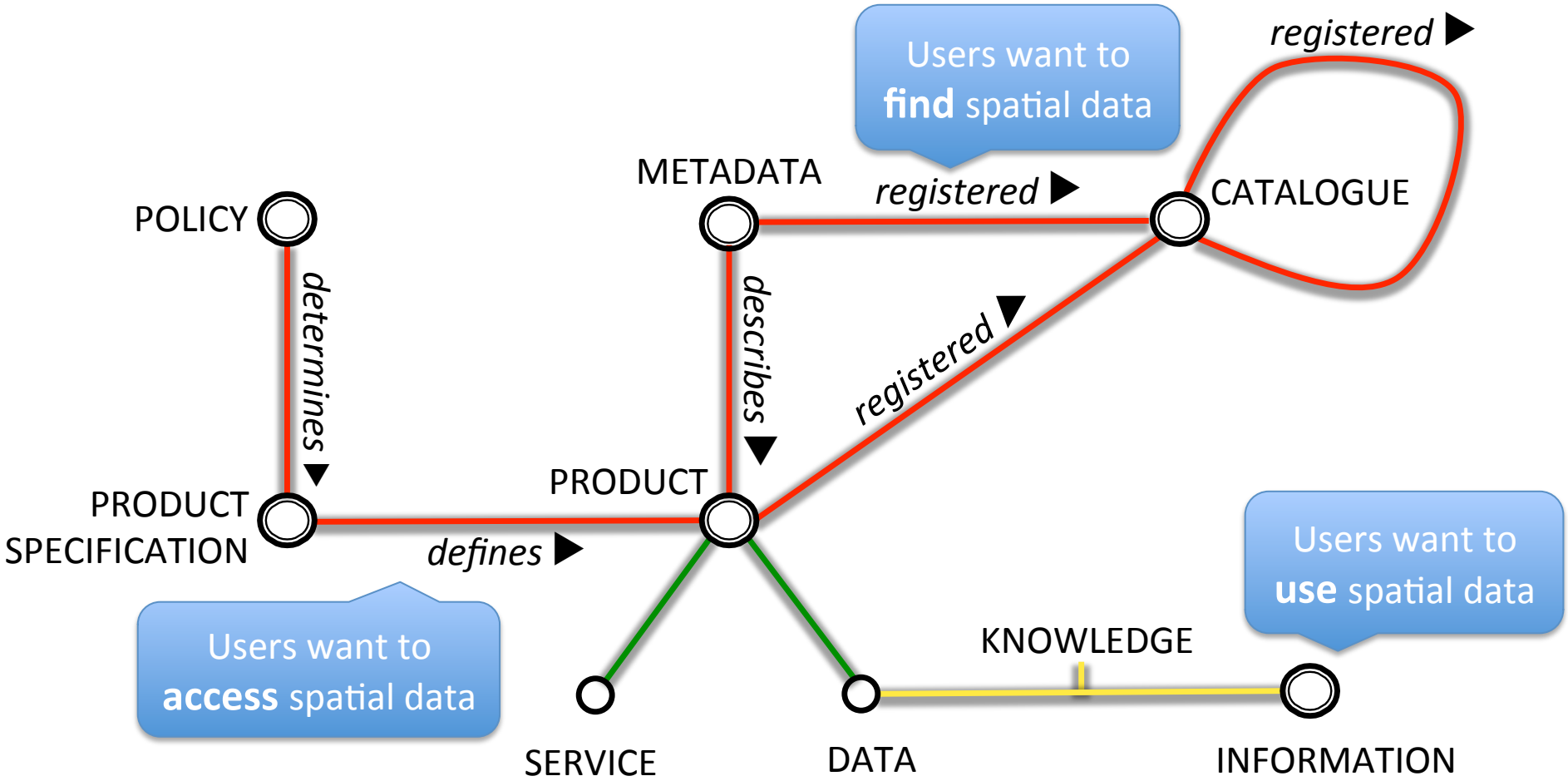
Information viewpoint

ICA's SDI model

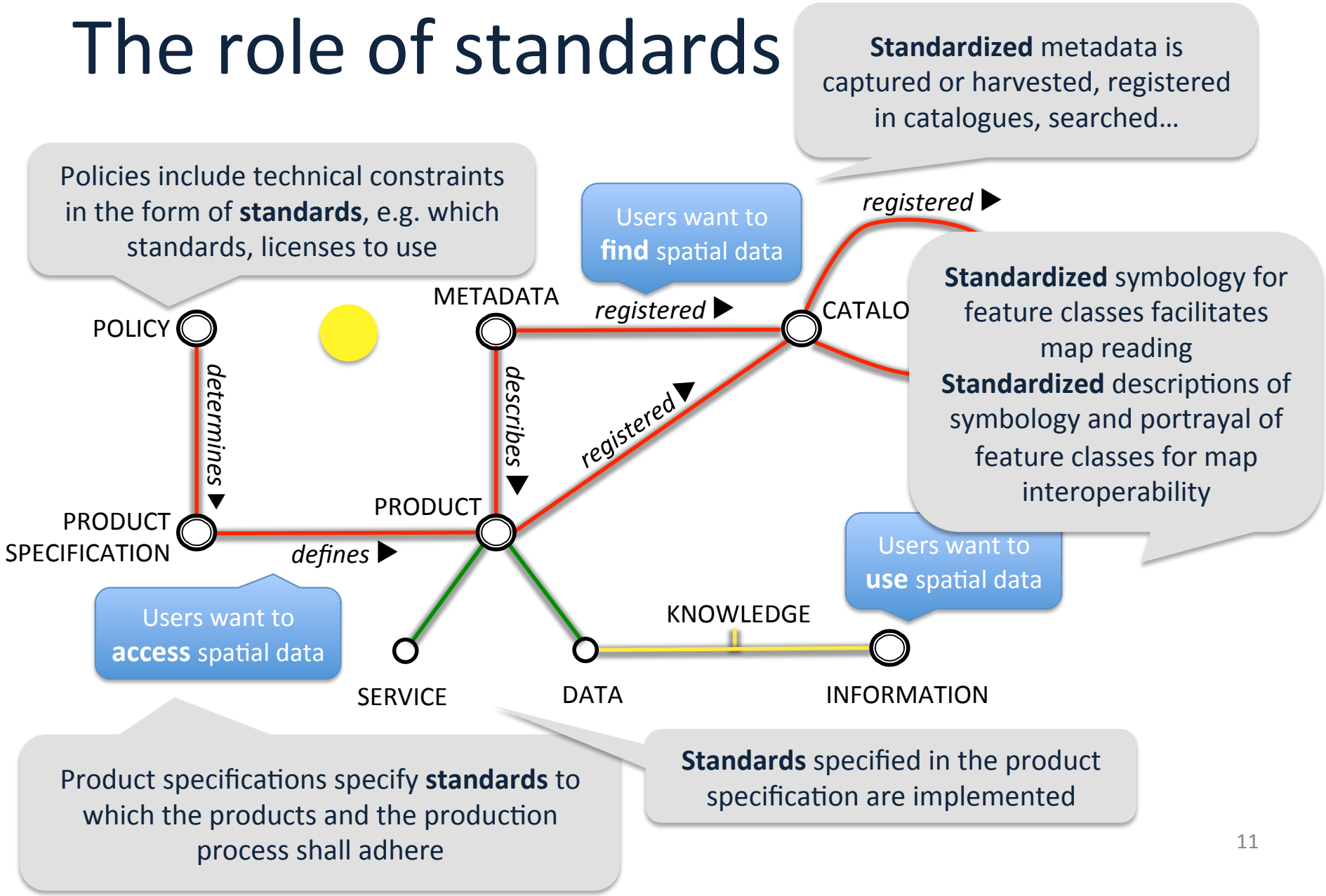


Information viewpoint

ICA's SDI model



The role of standards



Academic SDI

Oral presentation @ ICC 2017
Wednesday, 7 July 2017 8:30
Maryland A

- Towards understanding SDIs for research and education
- Review SDI implementations at universities and research institutes Czechia, Netherlands, Poland, South Africa
  - Purpose
  - Identified stakeholders according to ICA's SDI model
  - Lessons learnt
- Present model of the 'Academic SDI'

Schedule includes 36 presentations related to standards

38 presentations related to SDIs

ICC 2017 WASHINGTON

JULY 2-7, 2017 / WASH

Home | Login

- Registration
- Hotel and Travel Information
- Full Schedule
- Browse Full Schedule
- International Cartographic Exhibition
- Exhibitors
- My Schedule
  Login required

All Days | Sat, Jul 1 | Sun, Jul 2 | Mon, Jul 3 | Tue, Jul 4 | Wed, Jul 5 | Thu, Jul 6 | Fri, Jul 7

Search for: standards

76 results found.

standards

Saturday, July 1, 2017

Sunday, July 2, 2017

Monday, July 3, 2017

Tuesday, July 4, 2017

1:30 PM - 2:30 PM	TECHNICAL SESSIONS - 4500s
1:30 PM - 1:50 PM	4506.1 - Challenges in sharing of geospatial data by data custodians in South Africa Location: Maryland A SDI and Standards
1:50 PM - 2:10 PM	4506.2 - 3D topography, part of the key register Topography in the Netherlands? Location: Maryland A SDI and Standards

United Nations
Economic Commission for Africa

International Cartographic Association
Association Cartographique Internationale

- **Mapping Africa for Africa**
  - Initiative of UN ECA CODIST-Geo
  - Endorsed and supported by the ICA

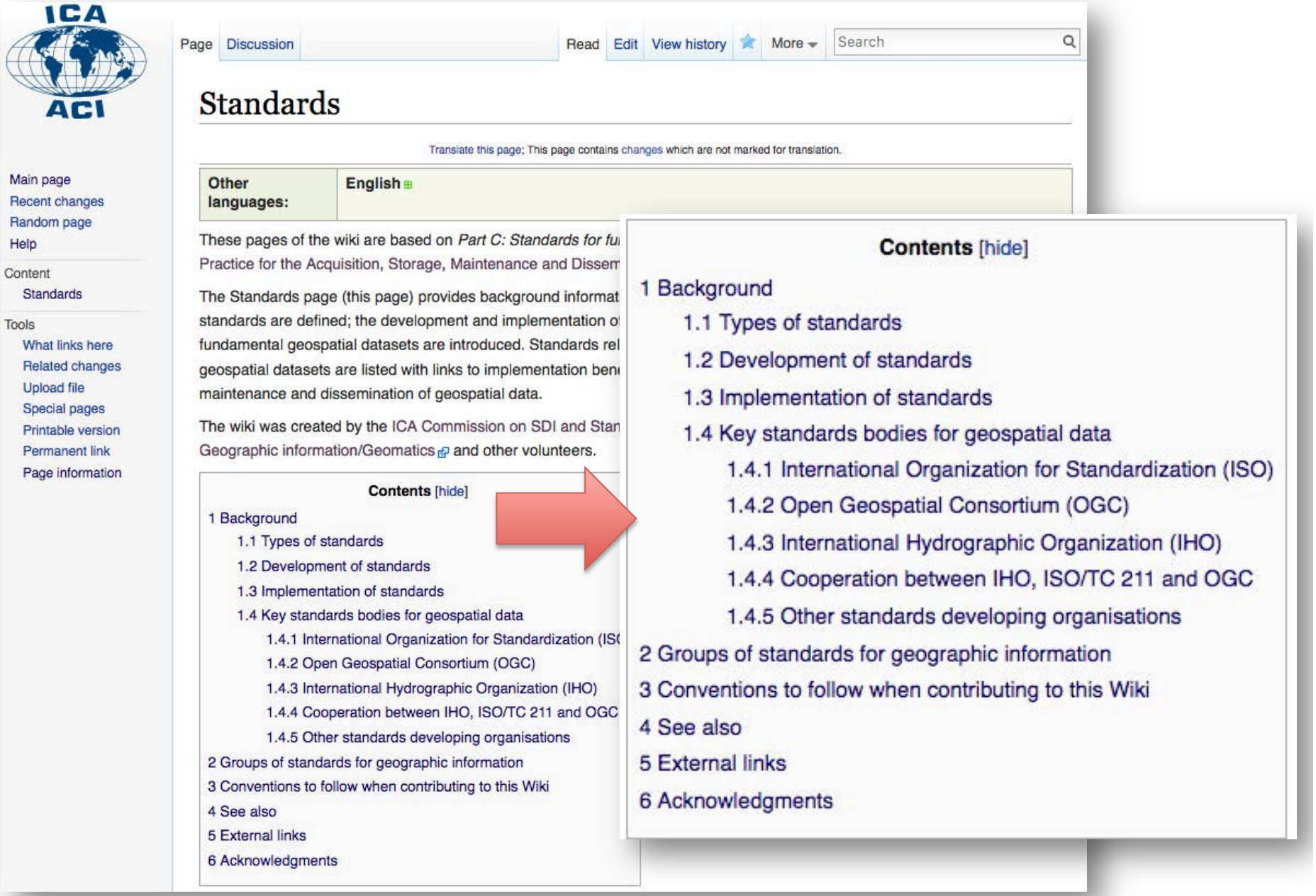
- **Guidelines of Best Practice for the Acquisition, Storage, Maintenance and Dissemination of Fundamental Geo-Spatial Datasets**
  - Target audience: practitioners in African countries
    - Usually but not always from national mapping organizations
    - Take account of conditions experienced in African countries
  - Open resource
  - Practical, 'hands-on' guide
  - Edited by Derek Clarke, former ICA Vice-President

Guidelines of Best Practice for the Acquisition, Storage, Maintenance and Dissemination of Fundamental Geo-Spatial Datasets

Editor: Derek Clarke

http://wiki.icaci.org

Part A: **Introduction**
Part B: **Ontology** of fundamental geo-spatial datasets
Part C: **Standards** for fundamental geo-spatial datasets
Part D: **Acquisition** of fundamental geo-spatial datasets
Part E: **Storage** of fundamental geo-spatial datasets
Part F: **Maintenance** of fundamental geo-spatial datasets
Part G: **Dissemination** of fundamental geo-spatial datasets
Part H: **Organizational issues**
Part I: **Users perspective** of fundamental geo-spatial datasets
Part J: **Versioning** of document
Annexures
References



Page Discussion Read Edit View history More Search

Standards

Translate this page; This page contains changes which are not marked for translation.

Other languages:	English

Main page
Recent changes
Random page
Help

Content
Standards

Tools
What links here
Related changes
Upload file
Special pages
Printable version
Permanent link
Page information

These pages of the wiki are based on *Part C: Standards for fu*
Practice for the Acquisition, Storage, Maintenance and Dissem

The Standards page (this page) provides background informat
standards are defined; the development and implementation o
fundamental geospatial datasets are introduced. Standards rel
geospatial datasets are listed with links to implementation ben
maintenance and dissemination of geospatial data.

The wiki was created by the ICA Commission on SDI and Stan
Geographic information/Geomatics and other volunteers.

Contents [hide]

Contents [hide]

Page | Discussion | Read | Edit | View history | More | Search

ISO 19157:2013 Geographic information - Data quality

Main page
Recent changes
Random page
Help

Content
Standards

Tools
What links here
Related changes
Upload file
Special pages
Printable version
Permanent link
Page information

Contents [hide]

Implementation guidelines

Overview [edit]

Full name	ISO 19157:2013, Geographic information - Data quality
Version	Edition 1
Amendments	None
Corrigenda	None
Published by	ISO/TC 211
Languages	English
Online overview	https://www.iso.org/obp/ui/#iso:std:iso:19157:ed-1:v1:en
Derived ontologies	https://github.com/ISO-TC211/GOM/tree/master/isotc211_GOM_harmonizedOntology/19157/2013
Type of standard	ISO International Standard Meta level
Application	The standard specifies the description, evaluation and reporting of the quality of geographic data.
Conformance classes	Data quality evaluation process Data quality metadata Standalone quality report Data quality measure

SDI & standards make data available for maps

Data collection

Data manipulation and preparation

Spatial data infrastructure and standards

Cartographic products

Posters are available for download at
http://icaci.org/maps-and-sustainable-development-goals/

Upcoming

Commission Meeting
Thursday, 6 July 2017 11:40 – 12:30
Maryland A

- Further collaborative research on Academic SDI
- Chapter in proposed book
  - Mapping the sustainable development goals – ICA best practice
- 2018
  - Commission Meeting (location to be decided)
  - Mini-meetings at other events, e.g. ISO/TC 211 plenary week
- ICC 2019 in Tokyo
  - Pre-conference workshop
  - Conference paper by Commission members?

ICA Commission on SDI & Standards

http://sdistandards.icaci.org/

- Website
  - Resources: List of publications
- Join
  - Mailing list for discussions
    - ica-sdistandards@lazarus.elte.hu
  - WordPress Registered Subscribers for notifications
    - http://sdistandards.icaci.org
  - If you want to join, email one of the Chairs
    - serenacoetzee@gmail.com or franz-josef.behr@hft-stuttgart.de