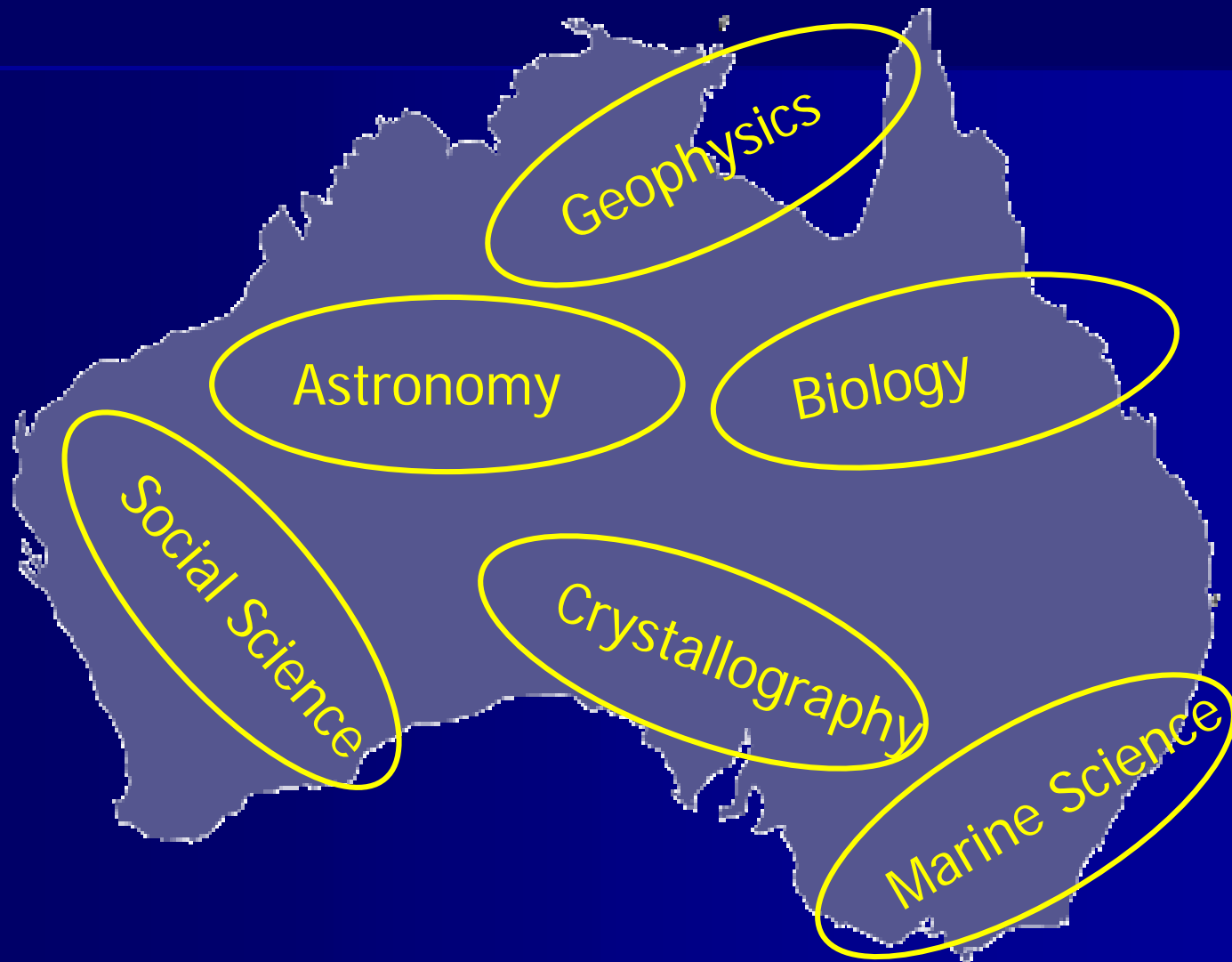


International Contexts for an Australian Data Policy Framework

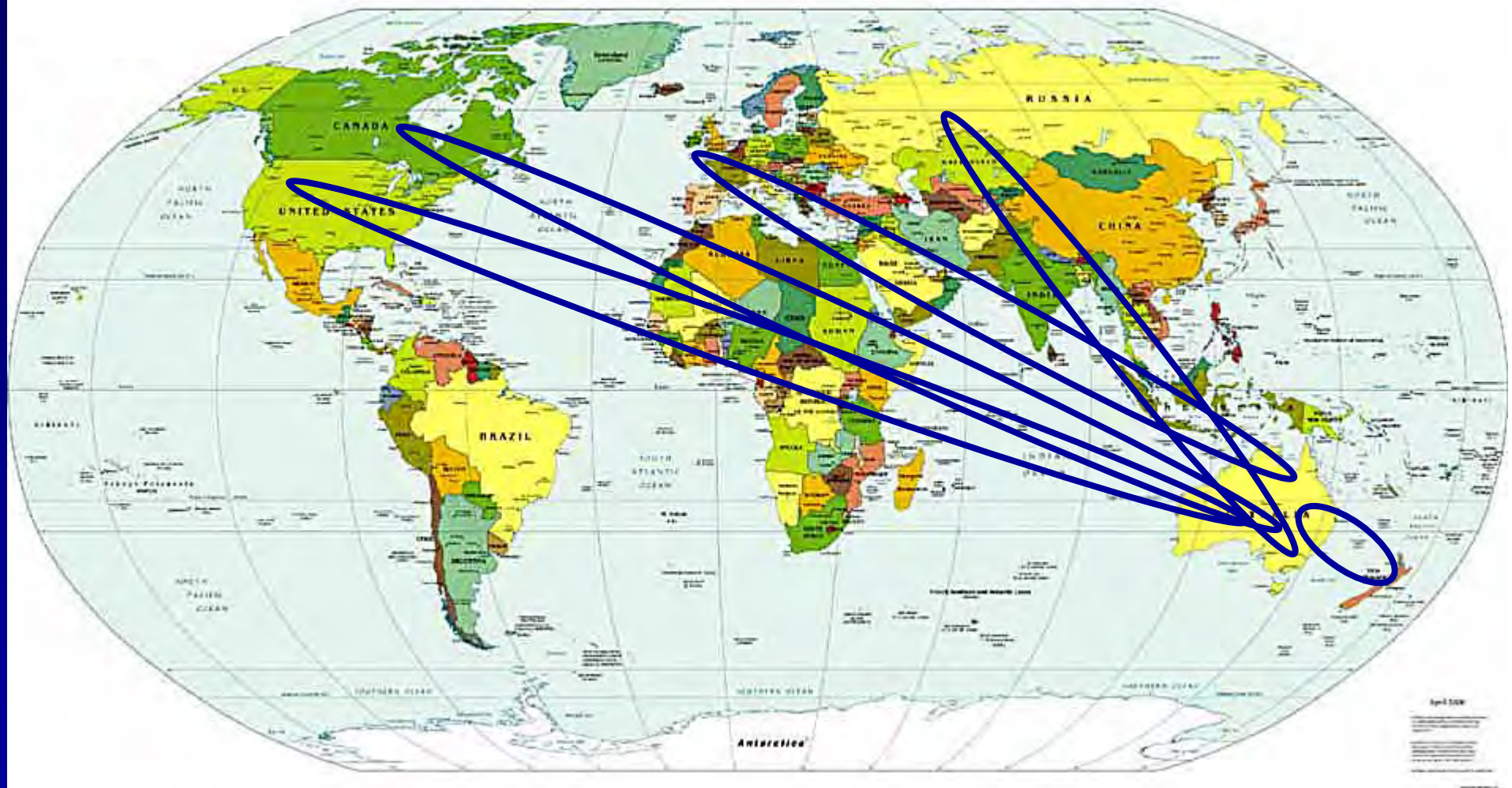
*Ray Norris,
CSIRO Australia Telescope National Facility*



Each discipline tends to invent its own wheels



Excellent international linkages within disciplines

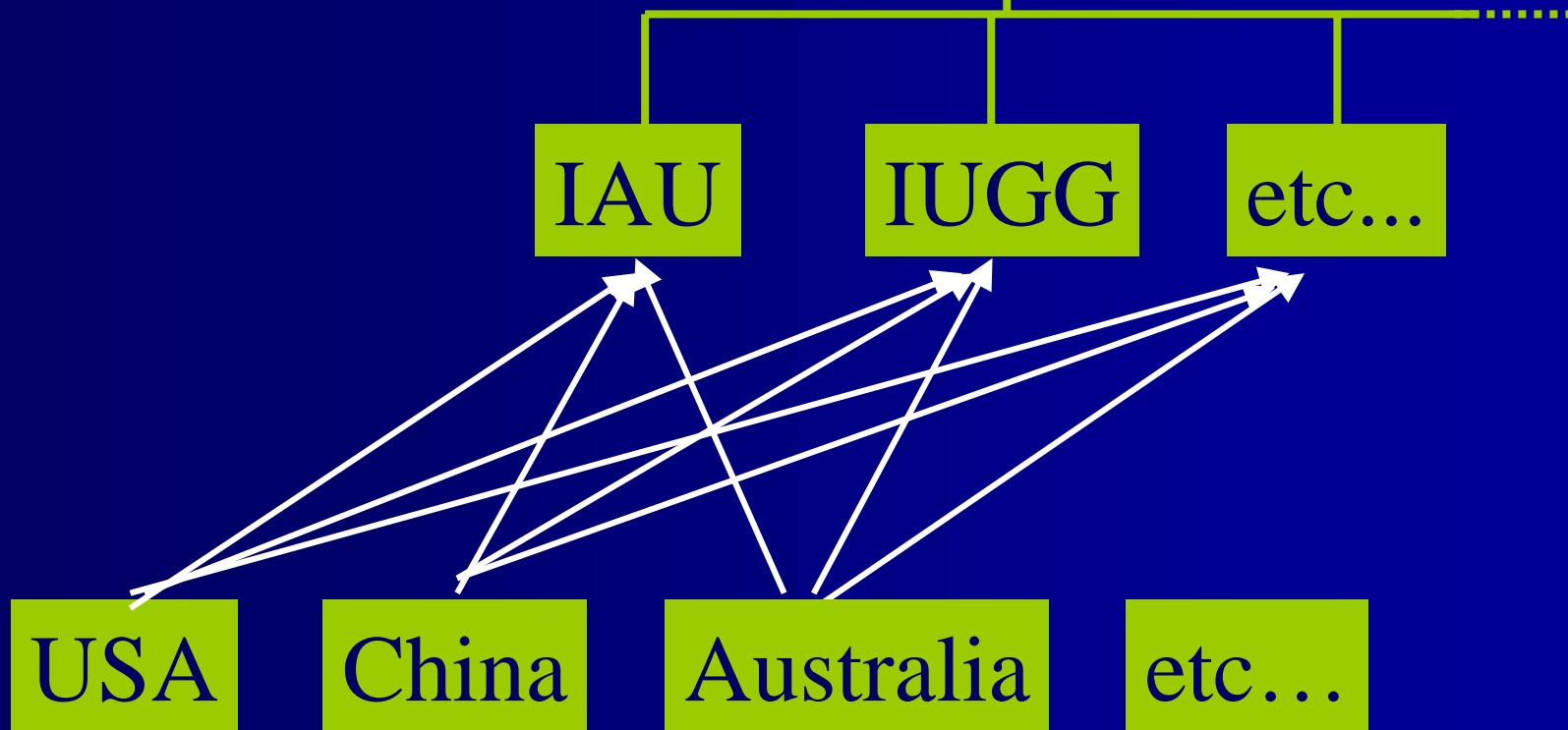


Excellent strategic international linkages within disciplines

United Nations



International Council of Science



United Nations

ICSU's
Committee on Data
for Science and
Technology

International Council
of Science

ICSU

CODATA

IAU

IUGG

etc...

National Representatives

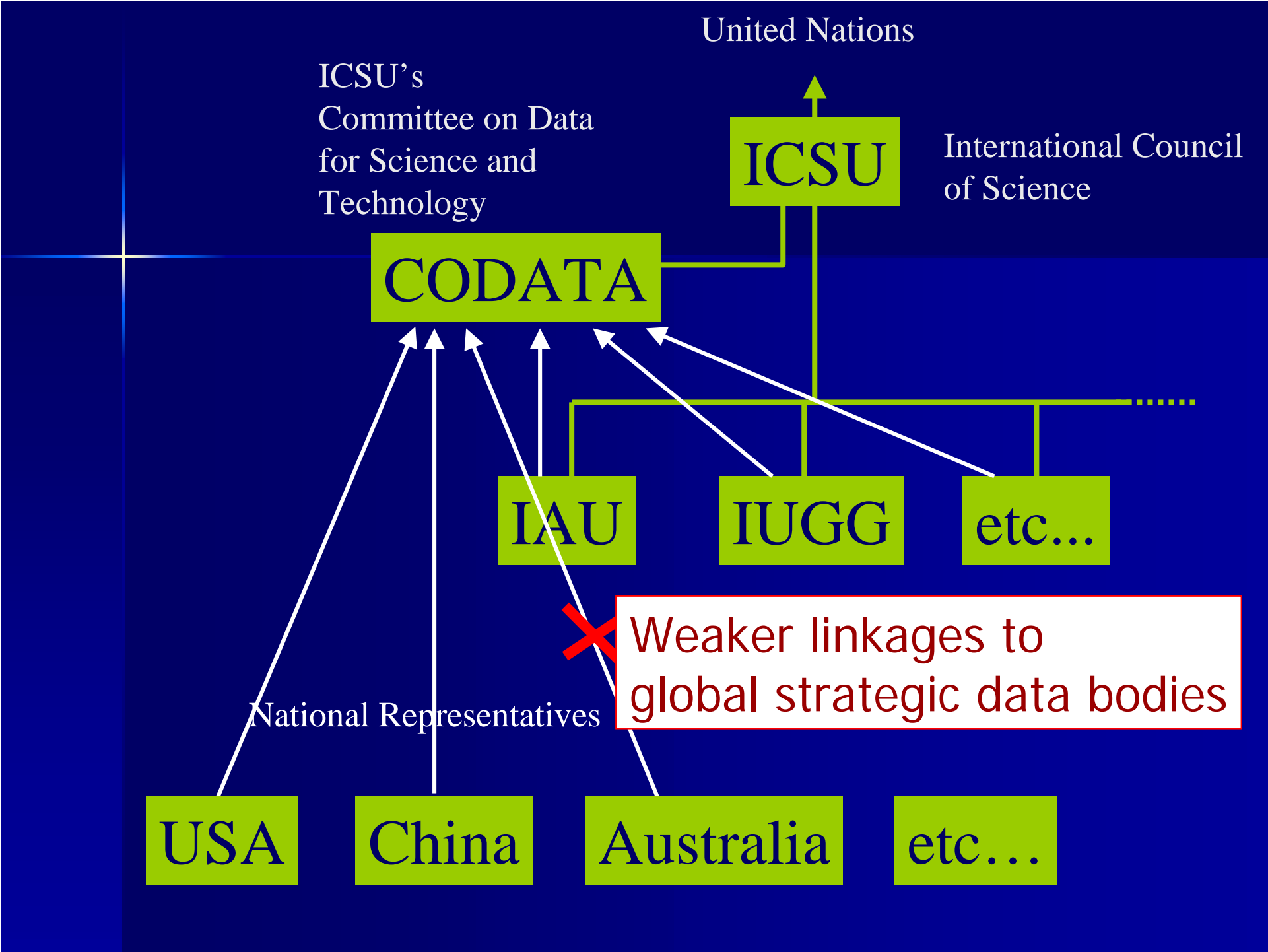
USA

China

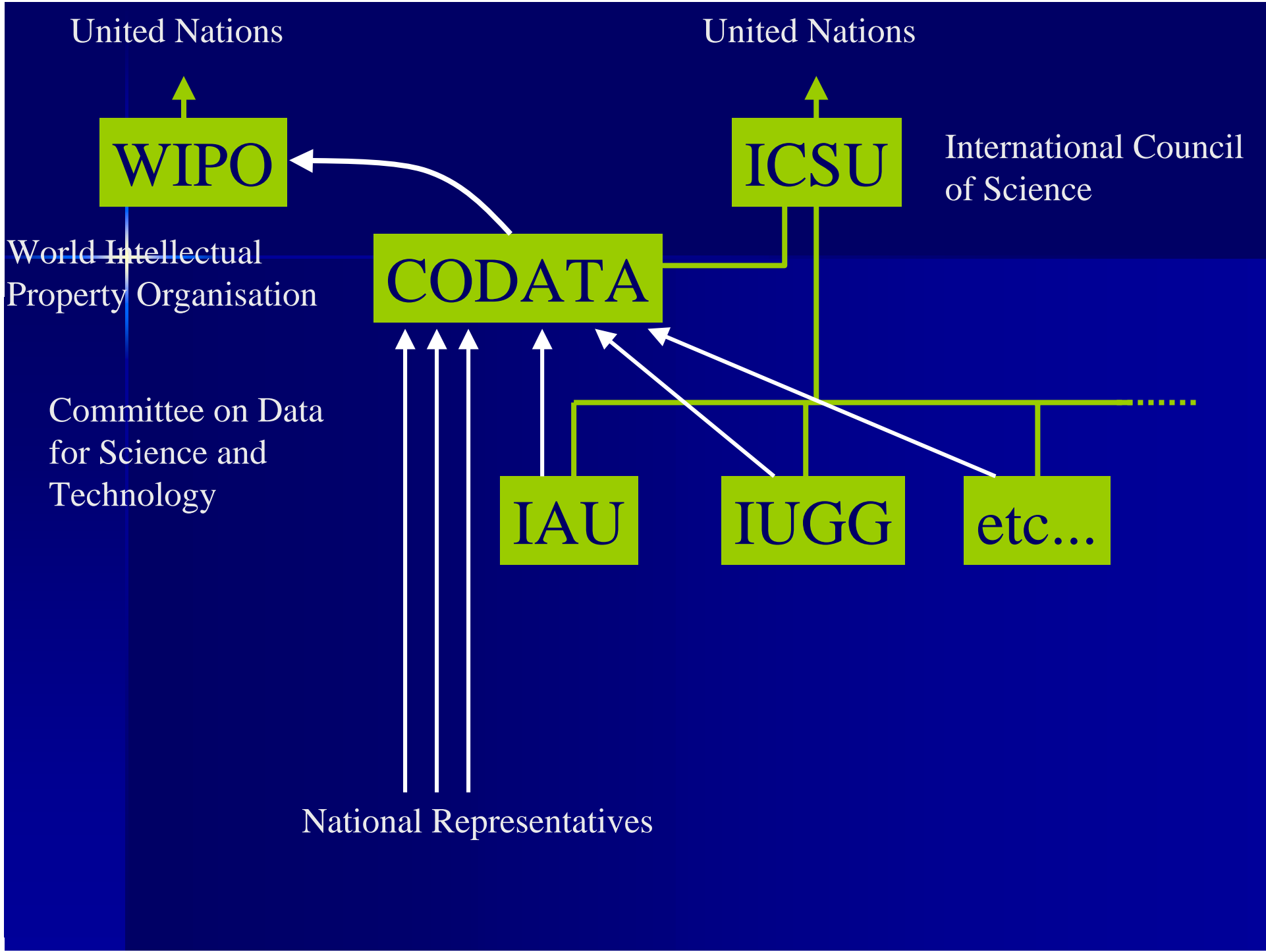
Australia

etc...

**✗ Weaker linkages to
global strategic data bodies**



Does it matter?



United Nations

United Nations

WIPO

ICSU

International Council of Science

World Intellectual Property Organisation

CODATA

Committee on Data for Science and Technology

IAU

IUGG

etc...

National Representatives

Example: the WIPO proposal

- Proposal to help protect data providers
- Would protect information (about anything)
- No "fair use" provisions
- You could not cite someone else's data without obtaining their permission
- Each paper would need a paper-trail showing rights to cite data

An example of a past CODATA success

- Legislation would have made open access databases/journals prohibitively difficult & expensive
- Open data centres (e.g. the Virtual Observatory) would probably become unworkable
- Successfully defeated by CODATA
- CODATA recognized for this by NSF in its *Cyberinfrastructure Vision for 21st Century Discovery*

A wake-up call?

- The international scientific community needs to take data management seriously
- It needs to articulate its data policies
- The WIPO near-miss resulted from a failure to do this
- Most scientists were unaware that this battle for Open Access was being fought.

Not only individual countries, but also the international scientific community needs to have a clearly articulated framework for data management

What is ICSU?

The International Council for Science

- a non-governmental organisation
- includes 103 national members (including Australia)
- Includes 27 international scientific unions
- An international forum for scientific policy development.
- Represents international science at the highest policy levels
- Runs the World Data Centre system.

What is ICSU?

The International Council for Science

- *Delegates responsibility for Data Issues to its Committee on Data for Science and Technology (CODATA)*

In ~2003 recognised that there are urgent policy issues

- *2004: ICSU Report of the Priority Assessment Panel on Scientific Data and Information (PAA)*
- *2006: Strategic Committee for Information and Data (SCID)*

Priority Assessment Panel on Scientific Data and Information

Recommendations include:

- systems for data dissemination;
- interoperability;
- equitable access to data and information;
- intellectual property rights;
- metadata;
- data and information rescue;
- scientific publications;
- professional data and information management;
and
- archiving.

Priority Assessment Panel on Scientific Data and Information

Also

- Restructure the World Data Centre system and FAGS (Federation of Astrophysical and Geophysical Services)
- Revitalise CODATA
- Set up SciDIF to implement changes (Scientific Data and Information Forum)
(Changed to SCID)

Membership of ICSU's Strategic Committee on Information and Data (SCID)

Roberta BALSTAD [CSPR]	USA
Nicole CAPITAINE	France
Michael DIEPENBROEK	Germany
Kim FINNEY	Australia
Peter FOX	Australia/USA
Alexi GVISHIANI	Russia
Ray HARRIS [chair]	UK
Toshio KOIKE	Japan
Bernard MINSTER	USA/France
Ruth NEILAN	USA
Ray NORRIS	Australia
Alejandro PISANTY	Mexico
Daisy SELEMATSELA	South Africa

Example of likely SCID outcomes:

- Revitalisation of the World Data Centre system (and FAGS)
- Currently primarily Geophysical and Astronomical
- Should be extended to be attractive to other disciplines
- Should facilitate cross-fertilisation and provide expertise on data centre management, interoperability, etc.
- Should include Australian Data Centres
- Should link into ANDS etc.

What is CODATA?

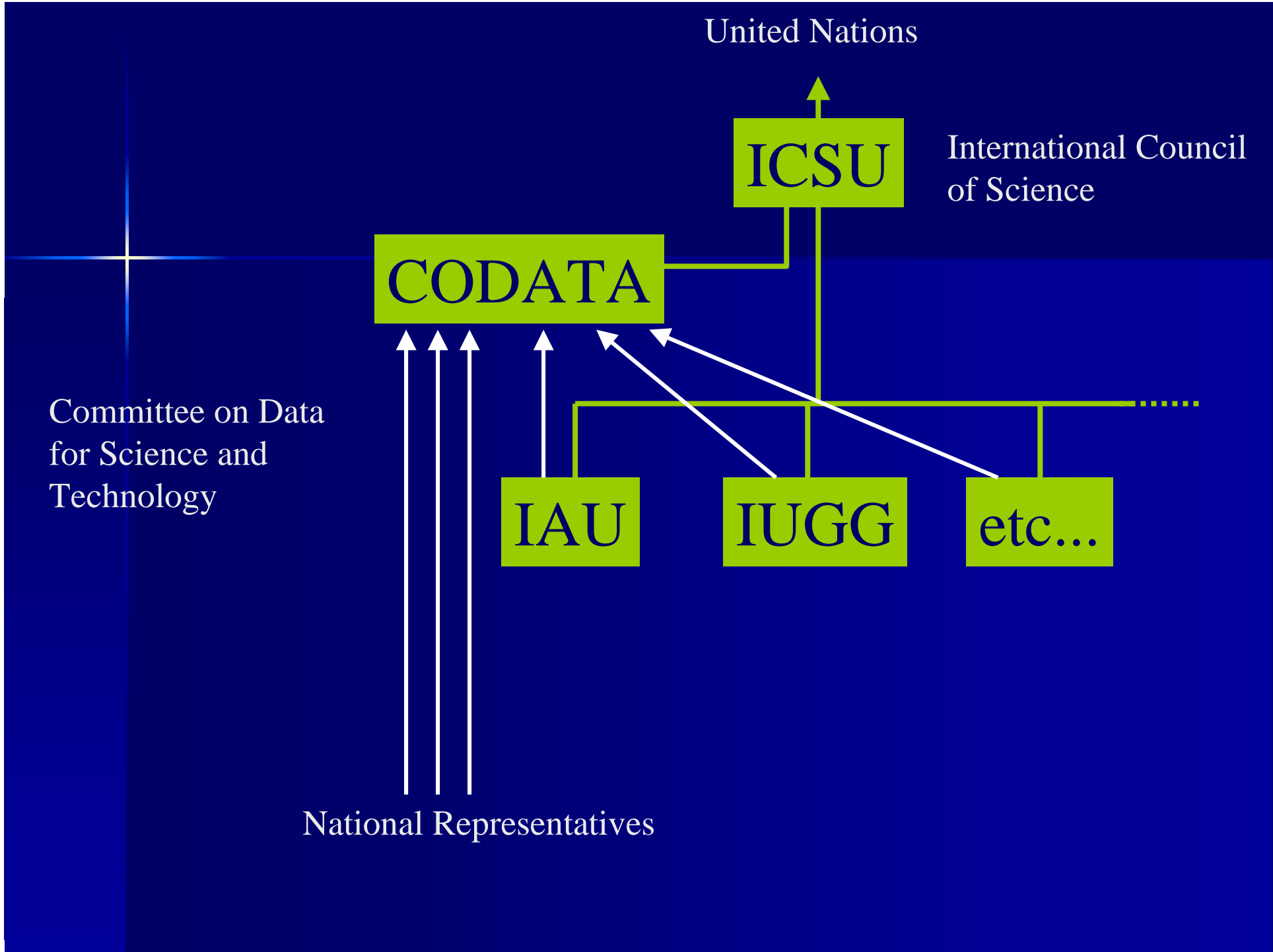
CODATA is a non governmental organization

24 Countries (not currently Australia)

15 International Scientific Unions

4 Co-opted Scientific Organizations

13 Supporting Organizations
(Industry, Government and Academia)



CODATA's Mission

*To strengthen international science for
the benefit of society by promoting
improved scientific and technical data
management and use*

How does CODATA Achieve its Mission?

- Task Groups
- National Member Activities
- Participation in Important International Initiatives, eg WSIS
- International Conferences
- CODATA Electronic Journal
- Publications
- Workshops
- Studies and Reports
- Co-operation and Liaison with Other Scientific Organizations

Task Groups

- Access to Biological Collection Data
- Anthropometric Data and Engineering
- Comprehensive Information System on Natural Disaster Mitigation
- Data Sources in Asian and Oceanic Countries
- Data Sources for Sustainable Development in SADC Countries
- Exchangeable Materials Data Representation to Support Scientific Research and Education
- **Fundamental Constants**
- Gas Hydrates
- Global Species Data Networks
- Polar Year Data Policy and Management
- Preservation of and Access to S&T Data in Developing Countries

Information of the foundation of
modern science and
technology from the [Physics
Laboratory of NIST](#)

CODATA Internationally recommended values of the

Latest (2006) values of the constants

[Version history and disclaimer](#)

Constants
Topics:
Values
Energy
Equations
Searchable
Bibliography
Background

(e.g. [electron mass](#) [most microwellings decay](#))

Search for value by name

Display alphabetical list, table (image), or table (pdf)

by clicking a **category** below

Find the [correlation coefficient](#) between any pair of constants
Data from the [least-squares adjustment](#) of the values of the constants

See also

[Searchable bibliography](#) on the constants
[Background information](#) related to the constants
[Links to selected scientific data](#)

[Helpful content](#) [About this reference](#) [Feedback](#)

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CODATA Data Science Journal

- A peer-reviewed electronic journal
- Publishing papers on the management of data and databases in Science and Technology
- The scope of the journal includes descriptions of data systems, their publication on the internet, applications and legal issues
- All of the Sciences are covered, including the Physical Sciences, Engineering, the Geosciences and the Biosciences, along with Agriculture and the Medical Science.

For more details see: <http://dsj.codataweb.org/>



DATA SCIENCE Journal

Welcome to the CODATA Data Science Journal

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The Data Science Journal is a Journal of the Committee on Data for Science and Technology (CODATA) of the International Council for Science (ICSU)

The CODATA Data Science Journal Volume 6 (2007) is now available.

Volume 6 of the Data Science Journal includes papers coming out of the 20th CODATA International Conference in Beijing, October 2006.

ISSN 1683-1470

The Data Science Journal is a peer-reviewed electronic journal publishing papers on the management of data and databases in Science and Technology. Details can be found in the prospectus. The scope of the journal includes descriptions of data systems, their publication on the internet, applications and legal issues. All of the Sciences are covered, including the Physical Sciences, Engineering, the Geosciences and the Biosciences, along with Agriculture and the Medical Science.

The journal publishes papers about data and data systems. It does not publish data or data compilations. However it may publish papers about methods of data compilation or analysis.

We would like to acknowledge with thanks the financial contribution of UNESCO to the funding of the journal.



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▼ Contents of Volume 6, 2007

- The relative efficiency of data compression by LZW and LZSS** 1-6
Yair Wiseman
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[\[Abstract\]](#) [\[PDF \(52K\)\]](#)
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Biennial International Conferences

- **Last Conference:**
Beijing 2006 (Over 600 participants from 30 countries)
<http://www.codata.org/06conf/index.html>
- **Forthcoming Conference:**
Kiev 2008

Tuesday, 24 October 2006

Keynotes - Chair Krishan LAL

08:30-09:15

Keynote

e-Science and Cyberinfrastructure
Tony HEY, Vice President for Technical Computing, Microsoft

09:15-10:00

Keynote

The Brief Introduction for the Project Construction of Medical Science Data Sharing
LIU Depel, President, Chinese Academy of Medical Sciences

10:00-10:30
Coffee Break / Poster Viewing

10:30-12:00

Key Session D1

Young Scientists

Chair: Robert CHEN and GUO Huadong

Compressing Data Cube in Parallel OLAP Systems
Sangster Award Recipient Bo-Yong LIANG, PhD candidate, Carleton University

Access and Use of Publicly Funded Geospatial Data in Latin America: Current Status and Potential Benefits for Sustainable Development (Study Design)
Raed SHARIF

Human Science Integration through the Cycle of Communication: Contents and Community
Mihoko OTAKE

Key Session D2

Scientific Data Archiving Practices: Past, Present, and Future

Chair: Bill ANDERSON and Liu CHUANG

All of the Data, All of the Time: Archival Practices in the Sciences
Geoffrey BOWKER

The New Milestone of China's Scientific Data Archiving and Access
Liu CHUANG

CASPAR: Early results and future goals
Davide GIARETTA

Key Session D3

Scientific Data and Science Innovation

Chair: YAN Baoping

CAS Scientific database and its application system
YAN Baoping

Data Grid Infrastructure for YBJ-ARGO Cosmic-Ray Project
CHEN Gang

Data Speed Up the Progress of Heihe River Basin Integration Research
ZHANG Yaonan

Docebo: The Italian open source company
Claudio ERBA

Key Session D4

InterAcademy Panel Special Session: Role of Scientific Data in Natural Disaster Management

Chairs: Wang ANGSHENG & Robert HAMILTON

Information for Natural Disaster Loss Reduction
Robert HAMILTON

Global Disaster Reduction and the Comprehensive Scientific System for Disaster Mitigation
WANG Angsheng

Two Weeks That Changed Sweden
Lars HENROTH

12:00-13:00
Lunch

13:00-14:30
Contributed Sessions E1 - E8

Collaboration With International Organizations

(A Sample)

- International Council for Science (**ICSU**)
- **UNESCO**
- Org. of Economic Cooperation & Development (**OECD**)
- Global Biodiversity Information Framework (**GBIF**)
- Global Earth Observation Systems of Systems (**GEOSS**)
- International Association of Networking Publications (**INASP**)
- International Council for Scientific and Technical Information (**ICSTI**)
- **Science Commons**

Active Participation In International Meetings And International Publications

(A Sample)



CODATA took the role of representing
ICSU (and thus the scientific
community)

The Future

Three New Initiatives:

- The Global Information Commons for Science Initiative (GICSI).
- The Scientific Data across the Digital Divide (SD3) Program.
- Advanced Data Methods and Information technologies for Research and Education (ADMIRE).

GICSI (Global Information Commons for Science Initiative)

- Listed by ITU as an official follow-up activity from WSIS
- Partners: ICSU, ICSTI, INASP, WDC, Science Commons (Creative Commons)
- Collaborators and potential funders: OECD, UNESCO
- Goal: facilitate development of Open Access Science Commons via standards, coordination, promotion

Conclusions

A great deal is happening internationally to promote

- Sound data management processes in science
- Global Information Commons for Science
-
- Data science journal and conferences

Conclusions

If Australia does not participate in these activities:

- We have no say in formulating international policy
 - e.g. the Declaration of Principles and Plan of Action that was endorsed by over 172 countries at the World Summit on the Information Society in Geneva in 2003.
- We fail to tap into the 98% of expertise outside Australia

Proposal for Australian membership of CODATA

Goal is to help Australian scientists to:

- influence international data science policy,
- capture recent developments for the benefit of Australian science,
- develop collaborations,
- attract foreign scientists of high calibre to Australia,
- raise the profile of Australian data science activities,
- provide better marketing internationally of Australian efforts, standards, and practices, thus increasing the likelihood of international adoption,
- take advantage of the CODATA infrastructure, including
 - CODATA International Conference
 - CODATA Data Science Journal,
 - CODATA Working Groups.

Australian CODATA Committee

- Under Australian Academy of Science
- Serves the user end of eScience
- Will promote cross-fertilisation across disciplines

The End

OECD DECLARATION ON ACCESS TO RESEARCH DATA FROM PUBLIC FUNDING

Adopted on 30 January 2004 in Paris

- The governments of Australia...
- *Declare their commitment to...*
- Work towards the establishment of access regimes for digital research data from public funding ...

CODATA Member Countries

- Brazil
- Cameroon
- Canada
- Chinese Academy of Sciences
- Academy located in Taipei
- Czech Republic
- France*
- Georgia
- Germany*
- India
- Indonesia
- Ireland
- Israel
- Italy
- Japan
- Korea
- Nigeria
- Poland
- Russia
- Senegal
- South Africa
- Thailand
- Ukraine
- USA

* Associate Member

Recently joined:

- Ukraine
- Czech Republic
- Ireland

PMSEIC data WG recommendation:

Recommendation 9:

- *That in the context of developing the strategic framework for scientific data management, Australia's intellectual property approaches be checked to ensure they do not impede the sharing of data.*
- *In particular, it should take into account the OECD Committee for Scientific and Technological Policy guidelines on access to research data and the International Council for Science statements about the benefits of sharing data.*