http://www.egy.org/

*e*GY News No. 2 November 2004

Welcome

We have an editor for ***e*GY News** - me. If anyone else would like this job, just let me know. In the meantime, I'll do my best to keep you informed about *e*GY and *e*GY-related developments, activities, and events. Input from *e*GY participants is most welcome; just send news items or suggestions to: papita@umich.edu.

From time-to-time *e*GY News will profile one of the *e*GY-participating bodies or related programs. The aim is to broaden the exposure of readers to the abundance and diversity of *e*GY-related activities in the hope that this will lead to cooperation and sharing.

We also plan to describe the existing and developing Virtual Observatories, and provide some definitions (e.g., data repositories, data access, data release, etc.) which are used in this field. Let us know if a new VxO appears on the Web.

Please do not forget to circulate this newsletter to your colleagues and acquaintances. Add your name to any of the *e*GY mail lists (see below) if you wish to receive *e*GY News directly by email.

Vladimir (Volodya) Papitashvili, Editor

*e*GY nomenclature

Electronic Geophysical Year – the proper name for our enterprise; all three words are capitalized.

***e*GY** – acronym for the Electronic Geophysical Year (note the *e* is in lower case italics)

***e*GY Team** – the inner core of the IAGA *e*GY Task Force.

***e*GY Participants** – individuals/bodies/programs who contribute to the development/implementation of *e*GY.

***e*GY Observers** – people who are supportive of *e*GY and wish to be kept informed of main developments, but who do not expect to play an active role.

eGY e-mail lists – a reminder

Tier-1: <eGY_Team@ihy.gsfc.nasa.gov> for general business correspondence, notices, and newsletters.

Tier-2: <eGY_Participants@ihy.gsfc.nasa.gov> for main items of communication, all notices and newsletters.

Tier-3: <eGY_Observers@ihy.gsfc.nasa.gov> for main notices and newsletters.

Messages sent to Tier-2 go automatically to Tier-1; those to Tier-3 will go to Tier-2 and Tier-1. To subscribe or change affiliation, go to:

http://ihy.gsfc.nasa.gov/mailman/listinfo/eGY_Team/
http://ihy.gsfc.nasa.gov/mailman/listinfo/eGY_Participants/
http://ihy.gsfc.nasa.gov/mailman/listinfo/eGY_Observers/

Virtual Observatories and *e*GY

The purpose of a Virtual Observatory is to enable new science by greatly enhancing access to data and processing capability. A Virtual Observatory may have a single subject (e.g., Virtual Solar Observatory, http://vso.nso.edu/) or several grouped under a theme (the US National Virtual Observatory, http://www.us-vo.org/ for astronomy). A Virtual Observatory will typically take the form of an Internet portal offering users the following features:

- Tools that make it easy to locate and retrieve data from catalogs, archives, and databases worldwide.
- Tools to compare observations with results obtained

from models, simulations, and theory.
- Tools for data analysis, modeling, simulation, and visualization.
- Interoperability: data services that can be used regardless of the client's computing platform, operating system, and software capabilities.
- Access to data in near real-time when necessary, as well as archived and historical data.

Virtual Observatories may also offer additional information - documentation, user-guides, reports, publications, news, and so on. Virtual Observatories are in varying states of development around the world.

In some areas Virtual Observatories are relatively well developed; in other areas they are a novelty. In the former case, *e*GY can be useful for publicizing and promoting greater use of the existing capabilities. In the latter case, *e*GY can be used to justify and stimulate the development of new virtual observatories. In all cases, *e*GY can be useful for informing the provider/user communities, for coordinating activities, and for promoting international standards.

Partner Profile – CODATA

CODATA (Committee on Data for Science and Technology) is an interdisciplinary Scientific Committee of the International Council for Science (ICSU). Established more than 30 years ago, CODATA works to improve the quality, reliability, management, and accessibility of data of importance to all fields of science and technology. Particular emphasis is given to data management problems common to different disciplines and to data used outside the field in which they were generated. CODATA objectives include:

- The improvement of the quality and accessibility of data, as well as the methods by which data are acquired, managed, analyzed, and evaluated, with a particular emphasis on developing countries;
- The facilitation of international cooperation among those collecting, organizing, and using data;
- The promotion of an increased awareness in the scientific and technical community of the importance of these activities; and
- The consideration of data access and intellectual property issues.

CODATA activities include:

- Sponsorship of a biennial CODATA International Conference on data, which attracts 250-300 scientists and data specialists from around the world;
- Specialist meetings of scientific data experts to address issues specific to one discipline or topic;
- An online, open access, peer-reviewed journal, *Data Science Journal*, http://www.datasciencejournal.org/;
- Sponsorship of a biennial CODATA Prize to recognize outstanding leadership and scientific contributions related to data; and
- Organization of international Task Groups that address specific data issues such as access to biological collection data, data information and visualization, preservation and archiving in developing countries, virtual laboratories in Earth and environmental sciences, fundamental physical constants, global species data, and data on natural gas hydrates.

CODATA has played a strong role in raising the scientific community's concerns about data access and preservation in ongoing debates about intellectual property rights. CODATA is also taking a lead role in addressing the "e-Science" issues described in the Agenda for Action for the World Summit on the Information Society (WSIS).

CODATA has more than 20 national members and 20 delegates from International Scientific Unions and other ICSU bodies. The President of CODATA is Prof. Shuichi Iwata of the University of Tokyo. CODATA's Vice Presidents are Prof. Alexei Gvishiani of the Russian Academy of Sciences and Dr. Krishan Lal of the National Physical Laboratory in India. CODATA's Secretary General is Dr. Robert Chen of Columbia University, and its treasurer is Dr. Jean-Jacque Royer of Ecole Nationale Supérieure de Géologie in France.

The CODATA Secretariat, led by Executive Director Kathleen Cass, is co-located with ICSU at 51, Blvd. de Montmorency, 75016 Paris, France (codata@dial.oleane.com). Further information is available at the CODATA Web site at: http://www.codata.org/.

From Robert Chen, bchen@ciesin.columbia.edu

Baird Petrophysical International funds *e*GY

We are grateful to Ralph Baird, President of Baird Petrophysical International (http://www.bairdpetro.com/) for providing a grant to *e*GY. The grant will be channeled through the Foundation of the Society of Exploration Geophysicists (http://www.seg.org/) and will be used for development of the *e*GY Web site and researching content.

Report on eGY Planning Meeting Paris, 23 July 2004

On the day before the planning meeting, discussions about *e*GY were held at ICSU's headquarters at 51 Boulevard de Montmorency, Paris, with Thomas Rosswall (Executive Director) and Carthage Smith (Deputy Director). ICSU is strongly supportive of *e*GY and sees a role for *e*GY in the implementation of many of the recommendations of the PAA Panel for Data and Information, including modernization of the World Data Centers.

The *e*GY planning meeting occupied a half-day on Friday 23 July 2004 at the end of the 35th COSPAR Conference in Paris. The following persons attended the meeting.

Charlie Barton	IAGA President
Bengt Hultqvist	IAGA Secretary-General
IAGA eGY Task Force	
Dan Baker, Chair	Chair, *e*GY Task Force, Member of IUGG's IGY+50 Committee
Brian Fraser	Univ. of Newcastle, Australia
Eigil Friis-Cristensen	IAGA Vice-President
Yohsuke Kamide	IAGA Vice-President, CAWSES
Jan Lastovicka	IAGA Executive
Volodya Papitashvili	IAGA Executive
Alan Rodger	SCAR, BAS
Joe Allen	SCOSTEP Sci. Sec.; CAWSES
Others	
Maurizio Candidi	SCAR; SCOSTEP
Mioara Mandea	IAGA, Div. V
Gurbax Singh	IAGA Executive
Carthage Smith	ICSU Deputy Director
Ferris Webster	Chair, ICSU Panel for WDCs

Presentations were made by Dan Baker on *e*GY, Charlie Barton on *e*GY and IAGA, Ferris Webster on the WDCs and GOSIC (Global Observing Systems Information Center), Carthage Smith on ICSU and the PAA Panel on Scientific Data and Information), Joe Allen on SCOSTEP and CAWSES, Alan Rodger on IPY, Vladimir Papitashvili on a Virtual Antarctic International Magnetometer Network, and by others present on their particular areas of interest.

The meeting was devoted to a discussion about the *e*GY concept and then focused on the questions:

- What value will *e*GY add? (deliverables, benefits)
- Who will benefit? (organizations, individuals, disciplines, data centers…)
- How will *e*GY accomplish this? (operational model, governance, finance)
- What ownership? (partners, sponsors/host for secretariat, champions?)
- When? (specify a timetable for action)
- What action items? (Now and for the near future)

The outline of a business plan for *e*GY was drafted. The main outcomes are encapsulated in the descriptive information about *e*GY and the Power Point presentation by Baker and Barton that appear on the *e*GY website.

(Report submitted by Charlie Barton)

Report on eGY Planning Meeting Boulder, Colorado, 3 September 2004

The Paris planning meeting was followed by a similar one-day meeting in Boulder, Colorado on 3 September 2004. The meeting was held at the Laboratory for Atmospheric and Space Physics at the University of Colorado, chaired by Dan Baker, and attended by:

Joe Allen, SCOSTEP Scientific Secretary, CAWSES
Dan Baker, LASP, Director, Chair of *e*GY Task Force, IUGG Committee for IGY+50
Charlie Barton, IAGA President
Robert Chen, CODATA Exec. Member, Deputy Director, CIESIN
Mike Chinnery, WDC Panel (ICSU), ex. NOAA
Bonnie Kae Grover, LASP, Assistant to Dan Baker
Barbara Thompson, NASA, *e*GY Task Force
Craig DeForest, Southwest Research Institute
Chris Fox, Director, NOAA/NGDC
Ernie Hildner, Director, NOAA, Space Environment Center, Boulder
JoAnn Joselyn, IUGG Secretary General
Yohsuke Kamide, STEL Director, Nagoya Univ., AOGS; IAGA Executive
Eric Kihn, NGDC (VO project, SPIDR), Boulder
Mark Parsons, National Snow and Ice Data Center, WDC Glaciology
Marissa Rusinek, LASP, *e*GY Website Coordinator
Ron Weaver, National Snow and Ice Data Center, CIRES, University of Colorado

The aim of the meeting was to brief newcomers about *e*GY, articulate the need for and role of *e*GY, identify potential new partners and participants, determine how to run *e*GY during the coming 6 – 12 months (particularly establishment of a Secretariat), and expand the business plan.

Formal briefings were given by Dan Baker on *e*GY; Ernie Hildner on IGY objectives; Charlie Barton on outcomes of the Paris planning meeting; Mike Chinnery on WDCs; Bob Chen on CODATA and the WSIS agenda; Barbara Thompson on IHY; Eric Kihn on Virtual Observatories, SPIDR and metadata standards; Ron Weaver and Mark Parsons on the National Snow and Ice Data Center, WDC Glaciology; Craig DeForest on Data Systems, Virtual Observatories, and thin-client servers; and JoAnn Joselyn who described the strong interest in and support for *e*GY by IUGG and the Geosciences Unions (IUGG, IUGS, IGU, ISPRS).

The Boulder meeting resulted in an improved formulation of the draft Business Plan, which is encapsulated in the descriptive information about *e*GY and the Power Point presentation by Baker and Barton that appear on http://www.egy.org. New areas that have become highlighted as a result of the Boulder meeting are the need for greater emphasis on capacity building in countries in need to help bridge the "digital divide", outreach activities (Capacity Building and Outreach are added as themes), de-emphasis of data access as the dominant theme with equal ranking of all themes, the value of accessing past and historical data in virtual observatories, *e*GY as a vehicle for establishing codes of best practice and as a stamp of compliance, and a clearer statement of the expected legacy of the *e*GY.

Chris Fox thought that providing office support for an *e*GY Secretariat in Boulder should not be a problem. Further discussions are to take place between Dan Baker, Chris Fox, and Greg Withee (NOAA) to resolve the issue of the Secretariat. Marissa Rusinek agreed to be the website custodian. Barbara Thompson is setting up an email list system for circulation and will organize the next planning meeting, to be held early in 2005.

(Report submitted by Charlie Barton)

Report on Virtual Observatories in Space and Solar Physics: A Community Workshop

To help the space and solar physics community arrive at a clear plan for its data environment, NASA's Living With a Star Program sponsored a multi-agency, international workshop on October 27-29, 2004, in Greenbelt, Maryland (USA). The new challenges in solar and space physics, including linking solar phenomena to human consequences as studied in LWS, will require unprecedented integration of data and models across many missions, data centers, agencies, and countries.

Accomplishing this requires a coordinated effort to link data and service providers to scientific users through software that uses descriptions of resources in a largely universal language to give a uniform face to an underlying heterogeneous and distributed set of sources. Such three-part entities (front-end software linked to repositories and services through "gateways" or "brokers") represent a generalization of the ideas behind the "virtual observatory" intended to give (let say) astronomers virtual access to all observations of the sky.

The workshop brought together nearly 100 scientists and technologists to come to basic agreements on how to proceed to build a robust data environment for future research based on the virtual observatory paradigm. Some of the basic ideas had been in the community by other names for over a decade, but new Internet connectivity, greater emphasis on global problems to be solved with multiple spacecraft data and models, and increased support by agencies has brought us to a point where the need and means are clearer for realizing a vision of an integrated data environment. The LWS Data Environment Web site (http://lwsde.gsfc.nasa.gov) provides background information, links to the talks and posters presented at the workshop, and links to a large number of current projects. A report from the workshop is in progress, and will be posted on the LWS DE site in the near future.

From Aaron Roberts, aaron.roberts@nasa.gov

Report on CODATA Conference Berlin, 7-10 November 2004

CODATA - ICSU's Committee on Data for Science and Technology (http://www.codata.org) held its 19th biennial International Conference in Berlin earlier this month. Several persons who are engaged in *e*GY attended: Bob Chen, Carthage Smith, Charlie Barton, Eric Kihn, Herb Kroehl, Mark Parsons, and Roberta Balstad.

Presentations were made about *e*GY and *e*GY-related developments at the conference and also to the open session of the General Assembly (the meeting of the CODATA Executive and the national delegates that followed the main conference). The report of ICSU's CSPR PAA Panel on Data and Information, which was chaired by Roberta Balstad, attracted widespread interest and a well-considered response from CODATA.

CODATA is acquiring a renewed lease of life as a consequence of the growth of e-Science, world-wide interest in the so-called "Information Society", and the concerns of ICSU and other bodies about how to address modern challenges of data and information management. As a consequence of the large overlap between the objectives of *e*GY and CODATA's agenda for the future, CODATA is interested in the opportunities offered by *e*GY.

The CODATA Task Group: *Virtual Laboratories in Earth Physics and Environmental Sciences* (Co-chairs: Jean Bonnin and Herb Kroehl) will be responsible for *e*GY activities within CODATA and for liaison between CODATA and the whole eGY community. The Task Group will consider taking on the job of developing "*e*GY" codes of best practice and adopting an *e*GY label of compliance.

The other good news is that Bob Chen, who participated in the *e*GY planning meeting in Boulder, has been elected as the new Secretary General of CODATA.

The need for an *e*GY Charter arose from several discussions about *e*GY – a statement of *e*GY principles and aspirations that would capture the essence of what *e*GY hopes to help achieve, framed around the *e*GY themes.

A complete morning was scheduled for discussion about the World Summit on the Information Society (WSIS), which is driven by UNESCO and has widespread Union and inter-agency support. Provisional arrangements were made for an *e*GY session at the forthcoming 2nd World Summit in Tunis.

(Report submitted by Charlie Barton)

Forthcoming eGY Meetings

13-17 December 2004: Fall AGU – *e*GY discussion.
Jan/Feb 2005: NASA – *e*GY Symposium and Workshop.
23-27 May 2005: Spring AGU/SEG/NABS/SPD/AAS; New Orleans, USA; U08 *e*GY: e-Science for Geoscience.
18-29 July 2005: IAGA Scientific Assembly, Toulouse – *e*GY special session.
13-15 November 2005: WSIS, Tunis – *e*GY session.

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