Committee on Earth Observation Satellites http://www.ceos.org

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# Report on the 15th CEOS Plenary at Kyoto

Mr. Tomiji Sugawa, MEXT (Japan)
Dr. Yoji Furuhama, NASDA, Former CEOS Co-Chairmen

EXT/NASDA hosted the 15th CEOS Plenary meeting in Kyoto, Japan from 6-7 November, 2001. More than 110 participants from around the world attended the first CEOS Plenary in the 21st century in Kyoto. The meeting reached a number of decisions, further reaching out to initiatives such as the World Summit on Sustainable Development (WSSD) to be held in Johannesburg in 2002.



The 15th CEOS Plenary Participants in Kyoto

A major discussion at the 15th Plenary was the CEOS Review. At the 14th Plenary, the CEOS Chair was charged to appoint a group to conduct a review of CEOS structure and activities, especially of its participation in the IGOS Partnership. The 15th Plenary endorsed the CEOS Review Team Report recommendations, and decided to extend the mandate of this Team under ESA Chairmanship to address the full range of activities and CEOS structures, and to develop a new CEOS Strategic Plan. It was also decided to replace ad-hoc SIT with a standing working group - retaining the Strategic Implementation Team (SIT) name with a new set of ToRs.

The CEOS Working groups provided updates on their activities and future directions were discussed. The Working Group on Information Systems and Services (WGISS) gave a demonstration of the WGISS Test Facility for GOFC, highlighting how the various WGISS tools could be put to use for data discovery, searching, access, and inter-use in important and practical applications. CEOS directed WGISS to continue to pursue such work with interested parties and to report back to Plenary 2002.

A report on the CEOS Working Group on Calibration and Validation (WGCV) was given, including the development of a new three-year work plan for WGCV, covering 2000-2002. CEOS endorsed the establishment of a new subgroup of WGCV on atmospheric chemistry. CEOS also encouraged close collaboration between WGCV

and CEOS working groups.

The CEOS Plenary extended its approval of the ad hoc Disaster Management Support Group (DMSG) for a final year, and directed DMSG to present to CEOS Plenary 2002 a final report with specific recommendations for the way forward in this area.

The Plenary adopted the CEOS Strategy for Earth Observation Education and Training as proposed by the ad hoc Working Group on Earth Observation Education and Training (WGEdu), and a three-year action plan for implementing the strategy. The term of the ad hoc WGEdu was extended for three years to carry out this task.

The Strategic Implementation Team (SIT) reported the developments since the last Plenary. The SIT Chair also updated the meeting on the proposals for new IGOS Themes - relating to Water Cycle, Coral Reefs, and Geological/Geophysical Hazards. CEOS offered sincere thanks to Dr. Jean-Louis Fellous of CNES, the retiring Chairman of SIT, and appointed Dr. Tillmann Mohr (EUMETSAT) as Chairman of the re-constituted SIT.

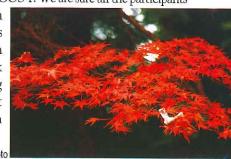
A significant initiative for future planning was the efforts towards WSSD2002. It was decided to establish a small drafting group, under the leadership of the CEOS Chairman, focused on preparations for WSSD2002.

At the 15th Plenary, CEOS welcomed two new agencies from Asia. The Korea Aerospace Research Institute (KARI) joined as a Member of CEOS, and the Geo-informatics and Space Technology Development Agency of Thailand (GISTDA) as an Associate of CEOS.

The CEOS Chairmanship was handed over to Dr. Stephen Briggs of ESA. The coming year 2002 will certainly be a challenging time for CEOS, for the conclusion of the CEOS Review Team efforts and strengthening the CEOS relationship with IGOS-P. We are sure all the participants

left Kyoto with pleasant memories of its autumn beauty, and look forward to meeting everyone again at the 16th Plenary in Frascati.







# Report on the 8th IGOS Partners Meeting

Dr. Yoji Furuhama

NASDA (Japan) former IGOS-P Chairman

Year 2001 would perhaps be remembered as a milestone year for IGOS-P. We have strengthened the management processes with the establishment and operation of an IGOS-P Secretariat and have agreed and proven mechanisms for the emergence and development of IGOS Themes.

As a significant initiative in 2001, an 'IGOS Open Session' was organised on the day before the Partners meeting at the Kyoto International Conference Hall on 7 November 2001, in order to promote IGOS-P activities to the media, policy makers and the public. The event had been a great success, inviting distinguished speakers from IPCC, CEOS (EUMETSAT, NASA), IGBP and WMO, and as many as 170 participants from around the world. A Statement of the Chairman was announced at the closing. The Open Session had been broadcasted through the Internet. We are extremely grateful to all contributors, and hope that this event would lead to the future development of IGOS.

(Presentations available at

http://www.ceos.org/pages/igosopen.html)



The 8th IGOS Partners meeting was held the following day, on 8 November 2001 at the Kyoto International Conference Hall. At the opening of the session, there was an announcement from four CEOS agencies, CNES, EUMETSAT, NOAA and NASA, on a joint declaration to support continuation of high precision altimetry for a JASON-1 follow-on. This was noted as an excellent achievement demonstrating the value of IGOS collaboration.

At the IGOS-P8 meeting, substantial discussions took place over the future structure and management of IGOS-P. The meeting decided to adopt recommendations on the principal objectives of the strategy, its implementation and on the "theme" approach process. GOS/GAW (Global Observing System/Global Atmosphere Watch) of WMO were accepted as a new partner in IGOS-P. It was also decided to convene the originally semi-annual IGOS-P meetings once a year, and thus adopt a co-chairmanship



system with immediate effect after IGOS-P-8, appointing UNESCO and CEOS (ESA) as the first co-chairs.

The Partners also discussed how IGOS-P should promote its activities and interface with the scientific and decision-making bodies, especially towards the World Summit on Sustainable Development in September 2002. It was decided that all IGOS Partners should support GCOS in developing the integrated approach to global climate observations; and in its preparation of the second Report on the Adequacy of the Global Climate Observing Syst The Partners agreed to establish an ad-hoc IGOS Visibinty Group to define and prepare IGOS activities for the WSSD 2002 and its preparatory process. IGOS-P needs to continue to develop the ability to co-ordinate our long term planning and to demonstrate the benefits that this co-ordination can deliver.

The existing IGOS Themes - Ocean, Carbon, and Atmospheric Chemistry were reported respectively on their achievements and future development. WCRP presented a proposal on the Integrated Global Water Cycle Observations (IGWCO) Theme to IGOS-P-8 for the formal adoption of the activity, and was approved as a new IGOS Theme. A new Coral Reef Sub-Theme was also approved under the leadership of UNEP, as the first component of an expected broader IGOS Coastal Theme to be pursued by UNEP, IOC-UNESCO, CEOS (NOA A) and other interested parties.

At the end of the meeting, Chairman Dr. Yoji Furuhama formally handed over the Chairmanship of the IGOS Partnership to the new Co-Chairmen - Dr. Walter Erdelen (UNESCO) and Dr. Stephen Briggs (CEOS/ESA). The Co-Chairmen expressed the hope that the new Co-Chairmanship scheme, representing both the space and insitu communities, would mark the beginning of a new era of success for IGOS-P efforts. The next IGOS-P9 meeting is to be held in Paris at the end of May 2002.



UNESCO, ESA and NASDA present Co-Chairmen and past Chairman of the IGOS-Partnership

# SIT/ the way ahead

Dr Tillmann Mohr

EUMETSAT (Germany) Chairman SIT & CEOS Vice-Chairman for IGOS Affairs.

In Kyoto in November, 2001, the 15th Plenary of CEOS decided to make the Strategic Implementation Team into a permanent CEOS working group, and invited me to take the chair for two years. (I had previously been vice-Chairman of SIT under the much-appreciated chairmanship of Dr Jean-Louis Fellous of CNES.)

SIT, may I remind readers, is the CEOS body created in 1997 to coordinate CEOS contributions to the implementation of the Integrated Global Observing Strategy (IGOS).

Prior to the decision in 2001, SIT had existed on a series of annually renewed mandates. This does not indicate that CEOS was in any way half-hearted about the work of SIT; indeed, CEOS has always been very clear in its determination to support IGOS. The most appropriate CEOS structure to achieve this support was not, however, obvious. During 2001 the Chairman of CEOS led a Review Team charged with looking at the way CEOS operates in general, and in particular how best to interface with the IGOS Partnership - of which CEOS is, of course, one of the founder Partner The Review Team's Report recommended

making SIT a permanent body, and the 15th CEOS Plenary agreed. It was recognised that a body such as SIT was essential to ensure the continued commitment of senior staff in space agencies to provide the space observations required by the various "Themes" approved by the IGOS Partnership.

The IGOS Partnership now has four approved Themes, and several more proposals at different stages of development. It is therefore necessary for the space agencies in CEOS to have a mechanism for regularly considering how best to use their necessarily limited resources in order to produce the optimal effect.

It is my aim to ensure that SIT continues to play an important role in developing IGOS. Now that the time for action and commitment has come, we must avoid SIT degenerating into a comfortable "talking shop". Meetings need to bring together senior representatives of space agencies willing and able to commit to providing specific observations, and so build a bridge between the requirements of Themes and the available space resources. The considerable efforts already made by space agencies gives one hope that they will continue to answer "Present!".

## The CEOS Review

Dr. Yoji Furuhama, NASDA, Former CEOS Chairman

The 14th CEOS Plenary in Rio recognised that IGOS-P has become the major focus for CEOS programme harmonisation efforts and that the CEOS interface to IGOS-P needs to be reviewed, in light the rapid evolution of IGOS-P, and the duplication which has emerged in the last year or so between the various CEOS and IGOS-P meetings.

To fulfil this action, a CEOS Review Team was established under the CEOS Chair's chairmanship, comprising members who volunteered from INPE, ESA, NASA, CNES, EUMETSAT, NASDA, ISRO and NOAA. The Team met once in Paris on May 30th to discuss their initial findings, and otherwise worked through teleconferences and E-mail communication. The final report based upon a year of hard work, interviews and discussions by the Team was presented to the 15th CEOS Plenary.

A set of recommendations was contained in the final report including that:

1. CEOS should not try to alter its status, and should remain a "best efforts" organisation; this allows CEOS a degree of flexibility in its activities that a more formal structure may deny; and that

CEOS should remain an active, but independent, Partner of IGOS-P, and should strengthen the way it prepares and interacts with the IGOS Partners. The 15th Plenary agreed that the ad-hoc SIT should be replaced with a standing working group - retaining the Strategic Implementation Team (SIT) name. The CEOS formal representation to IGOS-P will be the CEOS Chairman (ESA) and the SIT Chairman who will be Dr. Tillmann Mohr of EUMETSAT for the next two years.

At the outset it was noted that the focus of the Review Team, and therefore of its report, had been on improving the CEOS side of the interface between CEOS and the IGOS-Partnership. This became all the more imperative after June 2001, when several IGOS Partners suggested alternative ways of structuring and managing the Partnership, as the proposals would affect CEOS' interface. Therefore, the Review Team recommended that the 15th CEOS Plenary renew the Team for another year. It was thus decided to extend the mandate of the CEOS Review Team under ESA Chairmanship to address the full range of activities and structures within CEOS, including the CEOS Working Groups, and to develop a new CEOS Strategic Plan.

The results of these challenging tasks for the CEOS Review in 2002 will be reported to the 16th CEOS Plenary.

# The Working Group on Information Systems and Services

Mr. Terry Fisher CCRS (Canada) Chair, WGISS

The Working Group on Information Systems and Services (WGISS) held its 5th annual EO/GEO Workshop in Fredericton, New Brunswick Canada in June 2001. EO/GEO was one of the technical tracks of the Digital Earth Conference attended by 650 international delegates. EO/GEO was the best-attended technical track of this conference and received very favorable reviews concerning its technical content. The 6th EO/GEO Workshop will be held May 13-15, 2002, at the Joint Research Center in Ispra, Italy

EUMETSAT hosted the WGISS Subgroup meeting in Darmstadt, Germany, September 3-7, 2001. More than 50 delegates attended this meeting. In addition to the regular review of the work of the Task Teams, the Subgroups worked on the WGISS Test Facility demonstration for the November Plenary in Kyoto (more about this later). The next Subgroup meeting will be hosted by ESA/ESRIN at Frascati, Italy in May 2002 and will be preceded by a workshop on GRID, a new distributed computing initiative. Many thanks to EUMETSAT, in particular to Walter Dillen, for hosting the Subgroup meeting and for the wonderful medieval meal in the castle!

The thirteenth meeting of the WGISS was postponed in

the aftermath of the events of September 11, 2001. This meeting was reconvened February 12-15, 2002, and was hosted by NASDA in Tokyo, Japan.

WGISS, in co-operation with the Global Observation for Forest Cover (GOFC) project, presented a highly successful demonstration at the CEOS Plenary meeting in Kyoto. The demonstration focused on fires in Southeast Asia and showed fire data being accessed from a distributed network of data sources in Asia, Europe and North America. This demonstration highlighted the co-operation between WGISS and GOFC, the strong participation of the Southeast Asian agencies and the interoperability of the WGISS tools. A of the demonstration was posted on the WGISS web site early in 2002.

Terry Fisher from the Canada Centre for Remote Sensing began a 2-year term as the chair of WGISS at the Kyoto Plenary. The CEOS Plenary approved John Faundeen from the United States Geological Survey as the WGISS Vice-Chair. Further information on WGISS can be found at http://www.ceos.org under the Subsidiary Groups button or directly at http://wgiss.ceos.org.

## Disaster Management Support Group Moves Towards Completing Mandate from CEOS Plenary

Ms. Helen Wood, Chair, DMSG

Mr. Richard Ohlemacher, DMSG Secretariat, NOAA (USA)

The 15th Plenary of the Committee on Earth Observation Satellites extended its approval of the ad hoc Disaster Management Support Group (DMSG) for a final year, accepting NOAA's offer to provide the Chair (Helen Wood) for 2002. The DMSG is directed to provide a final report to the 2002 Plenary with specific recommendations for the way forward in the disaster management area. CEOS agreed to cosponsor (with the United Nations Office of Outer Space Affairs) regional workshops on the use of Earth observing satellites for disaster support. The CEOS members and working groups are encouraged to support these workshops through participation of technical experts and funding. CEOS Members were also tasked to consider and respond, by February 15, 2002, to the recommendations contained in the 2001 DMSG report.

#### Final DMSG Annual Report

The DMSG has completed its work plan for the year as devised in Paris in January 2001 and further implemented in Brussels in June 2001. Leaders of the DMSG Hazard Teams, in collaboration with actual users and other experts from around the world, have pulled together final recommendations to space agencies and emergency scenarios in support of the "International Charter for Space and Major Disasters" for each hazard area. These are to be published in March 2002, in the last of a series of annual reports, entitled: The Use of Earth Observing Satellites for Hazard Support: Assessments and Scenarios.

# DMSG Mandate & Support to International Charter on Space and Major Disasters

Since its inception in 1997, the work of the DMSG has evolved from its primary objective to define user requirements and provide specime recommendations to CEOS agencies for addressing gaps in observations, products, and services to meet those requirements. The DMSG has addressed investigation and demonstration of technical coordination of civil satellite systems in support of disaster management, and progressed to defining Emergency Scenarios to specifically assist in supporting the "International Charter on Space and Major Disasters." This accomplishment also helps to promote implementation of the recommendations of the DMSG through collaboration with the International Charter.

#### **DMSG Transition**

The efforts of the DMSG have served to demonstrate the great value of inter-regional facilitation and cooperation. The final phase of work for the DMSG is focusing on completing the mandate from the CEOS Plenary, addressing areas where there is a need for refinement, and defining the way forward in an orderly fashion. The work of the DMSG will continue in various other groups with which it has actively collaborated and supported in the past (namely the Integrated Global Observing Strategy (IGOS), UN OOSA and UN ISDR. Specifically, one area of continuing activity will occur under the

# Working Group on Calibration Validation

Mr. Yves-Louis Desnos European Space Agency, ESRIN (Italy) Chair, WGCV

At the 15th CEOS plenary in November 2001, the WGCV presented an activity report that focused on its achievements, and its revised three-year work plan. At the meeting the creation of a new WGCV subgroup on atmospheric chemistry was endorsed. This new group will aim to ensure high quality, traceable calibration of atmospheric chemistry data from Earth Observation satellites and the validation of higher level products. The chair of this new subgroup is Dr. Ernest Hilsenrath (NASA/GSFC) and he will ensure close coordination with the relevant IGOS theme (IGACO).





Dr I. Barton (CSIRO, Australia) and Dr P. Minnett (University of Miami, USA) from the IVOS subgroup presented a special report on the Second International Infrared Radiometer Calibration and Inter-comparison. This campaign was originally proposed at CEOS plenary 14 and some 20 scientists from CEOS member agencies/organisations took part in the campaign. The participation of many key scientists, together with direct support from EUMETSAT, NOAA-NESDIS and ESA, was vital to ensure that a complete calibration and inter-comparison was achieved for infrared radiometers that will be used in future activities to validate surface temperature products from satellite instruments.

The WGCV are actively seeking to work closer with other CEOS working groups in an attempt to achieve greater efficiency and eliminate duplication of work. Greater collaboration between the WGCV and WGISS has been recognised as potentially very beneficial for data sharing and calibration and validation activities. A joint activity defining "CEOS Land Product Validation Core Sites" has been proposed to plenary by WGCV, and WGISS have been asked to consider it for adoption. The proposal concerns the provision of web-based access and value-added Earth Observation (and other) data over a set of core validation sites in support of global land product inter-comparison activities. The LPV subgroup chair, Dr J. Privette (NASA) will ensure coordination of the WGCV activities.

The WGCV is also seeking closer alliance with other organisations, with science projects and with the IGOS

theme teams. A joint ISPRS/WGCV taskforce is already being established to address geometric and radiometric standards, and the WGCV presented its activities in the September 2001 ISPRS workshop in Hannover, Germany.

The Microwave subgroup met on 6 November 2001 in Boulder, Colorado, USA convened by its new chair Dr M. Martin-Neira (ESA). The group is focusing on the need to standardise terminology in the field of microwave radiometry, and is also addressing the issue of multi-mission test sites, such as Antarctica, for validation. The Microwave subgroup will meet again in October 2002 in conjunction with the Second International Microwave Radiometer Calibration workshop in Barcelona, Spain.

In October 2001, the SAR subgroup, chaired by Dr M. Shimada (NASDA), published the proceedings of the CEOS WGCV SAR workshop 2001 on CD-ROM. The next SAR subgroup workshop will take place in London, UK, at the end of September 2002, and will be hosted by BNSC. The workshop will offer an opportunity to present the early calibration /validation results form the ESA ENVISAT Advanced Synthetic Aperture Radar (ASAR).

There has been increased effort to promote the WGCV and its subgroups. Brochures and promotional bookmarks have been produced, and these were distributed at CEOS plenary 15th in Kyoto, Japan. A copy of the brochure may also be obtained by filling in a request form on the WGCV website at www.wgcvceos.org.

The 19th WGCV plenary meeting will be hosted by CCRS in Ottawa Canada from 1st to 3rd May 2002, where, thanks to international co-operation and co-ordination, the working group will continue to focus on ways to ensure long-term confidence in the accuracy and quality of Earth Observation-derived data and products.

For more information, see the WGCV web site at http://www.wgcvceos.org or contact the WGCV Chair, Yves-Louis Desnos (email: Yves-Louis.Desnos@esa.int).

prospective IGOS Geohazards Theme, in which there is involvement of a number of experts from the DMSG Hazard Teams. The achievements of the DMSG over the last few years have supported the related efforts of UN ISDR, which will serve as a forum to continue and enhance the work of the DMSG. In addition, CEOS will be cohosting Regional Workshops, in collaboration with UN OOSA, on "The Use of Space Technology for Disaster Management." The workshops will bring together practitioners and space agencies that have developed space technology solutions, including those responsible for dealing with disaster management and space technology in developing countries. These workshops will, among other things, enhance the

awareness of managers and decision-makers involved in disaster management to the potential benefits of using space-based technologies.

For further information please see the web-site at disaster.ceos.org; or please contact:

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#### Dr. Zeen-Chul Kim

Director, KARI (Republic of Korea) CEOS New Member

he Korea Aerospace Research Institute (KARI) has solidified its infrastructure and has undertaken research and development since its establishment in October of 1989. KARI was established as a research institute concentrating exclusively on aerospace technology in accordance with the National Aerospace Development Plan in Republic of Korea. From the establishment, KARI has been pursuing the following roles.



Orbit Environment Test Hall in SITC

- Basic, applied and general studies of aerospace technology
  - Advanced aircraft, satellites, launch vehicles
- Support of national commissioned tasks and of development policy
  - National Aerospace Development Policy
- Support of industrial bodies and technology transfer
- Technology transfer of the outcome of research For those purposes, KARI consists of each functional division; Aircraft, Satellite, Space Technology Research & Development, Propulsion System Research & Development, Satellite Operation & Application and Quality & Certification. Current president of KARI is Dr. Dong-Whan Choi.

KARI takes the role of the representative institute for space development in Korea and is responsible for civil Earth observation satellite program. For that purpose, KARI has several facilities for developing, maintaining and utilizing satellites. KARI has been maintaining Satellite Integration and Test Center



(SITC), and has developed KOMPSAT-1 Ground Station. SITC is equipped with an alignment system, electromagnetic vibrators, a mass property measurement system, a high intensity acoustic chamber, thermal vacuum chambers and an EMI/EMC chamber.

The Republic of Korea established the long-term national plan to develop a series of satellites and KARI would play an important role in developing and operating these satellites. According to the plan, as the first satellite, KOMPSAT-1 was launched on 21 December 1999. The KOMPSAT program aims to develop core parts of payload and bus of Low Earth Orbit (LEO) satellites. The Paylo of the KOMPSAT-1 are an Electro-Optical Camera (EOC) and an Ocean Scanning Multi-Spectral Imager (OSMI). Also, a Space Physics Sensor (SPS) is equipped in KOMPSAT-1. Up to now, KARI has been producing and utilizing the satellite image data of KOMPSAT-1 successfully. As a successor of KOMPSAT-1, the KOMPSAT-2 Program was started from December 1999.

In the 21th century, KARI will work in more humancentered fields which include development of satellites, satellite application, sounding rockets and satellite launch vehicles. Also, based on the developed space technology, KARI is willing to participate in the international space community, especially in the Committee on Earth Observation Satellite (CEOS).



KOMPSAT-1

# **CEOS Strategy on EO Education and Training**

Mr. Mukund Rao, ISRO (India), Chair, WGEdu

CEOS Plenary, at its 15th Meeting held in Kyoto in November 2001, has adopted the CEOS Strategy on EO Education and Training (http://www.isro.org), which has been prepared by the CEOS Working Group on EO Education and Training (WGEdu). The CEOS Strategy for EO Education and Training is a way forward for focussed efforts and initiatives for CEOS Members and Associates in support of EO Education and Training. The key objective of the Strategy is to facilitate activities that substantially enhance international education and training in EO techniques, data analysis, interpretation, use and application.

WGEdu would work on two fronts to implement its Strategy action plan. Nationally, CEOS agencies could continue working with education, training and development agencies by providing guidance, materials and experts. Internationally, CEOS should encourage its agencies to support the UN Regional Centres for Space Science and Technology Education and other international institutions providing EO education and training. WGEdu feels that the UN Centers would be an opportunity for CEOS Members/Associates to further the EO Education and Training Strategy and support the outreach mechanism of the Center appropriately. The strategy will:

- Allow space agencies, education and training providers, UN agencies and other entities to coordinate activities for specific education and training programmes and to exchange experiences and information;
- Provide opportunities for CEOS agencies, as they find appropriate, to network with educational and training institutions;
- Provide for the timely integration and refresh of EO data, information and techniques into education and training programmes;
- Provide an opportunity to CEOS agencies to disseminate materials, data, information, experts and guidance, as appropriate, for improving EO training and education around the world;
- Promote a growing cadre of specialists in EO who will address the growing environmental questions facing the world;
- Enable better and more far-reaching outreach to the larger

## GISTDA's Activitites

### Dr. Suvit Vibulsresth

Director General, GISTDA (Thailand) CEOS New Associate

The Geo-Informatics and Space Technology Development Agency(GISTDA) is a public organization under the responsibility of Ministry of Science Technology and Environment(MOSTE), the Royal Government of Thailand. This public organization engages all functions in remote sensing and GIS services and development activities in Thailand.

The country has been involved in the earth observation activities, originally through Remote Sensing Division of National Research Council of Thailand, for more than three decades. In November 2000, GISTDA was established by combining this division with GIS Coordinating and Promotion Section, MOSTE. GISTDA consists of four cooperative sectors, i.e. Space Technology Center, Geo-Informatics Center, Office of Business Development, and Office of Administration. Our main activities include satellite data acquisition, processing and distribution, conducting research, oceanography, and training. For the time being, GISTDA can be considered as the national focal point in the space technology business in Thailand.

GISTDA ground receiving station locates in Ladkrabang, Bangkok. This station can receive and process remotesensing data within the coverage area of 2,800 kms. in radius, covering 17 countries in Southeast Asia. The station recently receives and processes data from Landsat-7, IRS, and Radarsat. It is also planned for the forthcoming ALOS of Japan and other major satellites in the near future. GISTDA has been archiving satellite imageries for more than twenty years such as imageries from the Landsat and SPOT series, ERS1-2, MOS-1, NOAA, JERS-1, and etc. GISTDA also has an agreement with international academic institutes on archiving and distributing MODIS data. With the facilities of high-end technology standard, products generated by this station are of a high geometric and

radiometric quality. In many cases, the most up-to-date remote sensing data are required, the (near) real time delivery system is therefore one of our projects to be launched in the near future.

Diverse applications on satellite images have been accomplished, throughout the country, in several fields such as mapping, natural resource management, illicit crop detection, and etc. In order to optimize the value of satellite data, GISTDA often does projects to develop and implement total solutions in close collaboration with researchers from other organizations. GISTDA has also offered a number of training courses for professionals, scientists and students. To give convenience to users for browsing data and orders, GISTDA has provided the catalogue browsing system on the Internet. The office of business development plays role as a vital window of GISTDA for facing to the customers. Consultation service is offered to the users, if required, such that they can optimally make use of the data. Last November, GISTDA convened the first user conference in Bangkok. As the consequence, we earn users' opinions and suggestions on our services. We intend to hold such a precious conference annually so that we can continuously improve our service quality.

The missions of CEOS in Earth Observation activities are very beneficial to mankind. We are proud to be part of the team. Since being established, GISTDA has participated in various CEOS activities. Most are involved in WGISS. GISTDA realizes that the interconnectivity and the exchange of satellite information are important. We hence periodically upgrade the networking system. It is expected to be use extensively in the future, for transferring information across the country.

international community and general public;

 Underscore the relevance of EO for formulating policy and for addressing environmental and developmental issues at local, national, regional and global levels.

CEOS Plenary has extended the term of WGEdu for 3 years to initiate the implementation of the CEOS Strategy into 3-year action plan. In 2002, WGEdu will continue its informal meetings (telecon, email) and will formally meet once to review the progress of implementing the Strategy and action plan.

CEOS WGEdu also plans to continue the following activities:

• CEOS WGEdu, in collaboration with ISPRS TC VI and sponsorship

from ISRO, is developing a proto-type of a Internet based EO and GIS training programme.

- CCRS/NASDA/ISRO are coordinating for preparing an inventory
  of available EO materials with CEOS agencies for distribution.
  NASDA is hosting website of WGEdu activities. The design of a web
  page and pointers to available materials is being worked out by CCRS.
  It is planned to link this with the CEOS home page ultimately.
- Focus on special training programmes on relevant and important topics - especially for developing countries through CEOS agencies, UN Centers and other institutions.



## From the **CEOS Chair**

Dr. Stephen Briggs ESA/ESRIN (Italy) CEOS Chairman (until 31 March 2002)



Prof. José Achache ESA HQ (France) CEOS Chairman (after 1 April 2002)



2002 will be a challenging year for CEOS. During the excellent Chairmanship of NASDA in 2001, a very successful review of CEOS and IGOS-Partnership activities was undertaken which has clarified and made much more effective the interaction between the two bodies. The benefits of this clarification were evident in the efficient running of the CEOS Plenary in Kyoto in November 2001. In the coming year, the review of CEOS will be extended, including a reconsideration of the strategic approach to be adopted by CEOS.

In 2002, the World Summit on Sustainable Development will take place in Johannesburg between August 26th and September 4th. This will be an event of great significance for Earth observation agencies worldwide. The focus of the Summit will be a review by world leaders of the progress made in global sustainable development since the Rio Conference (UNCED) of 1992. At the original Conference, CEOS was able to help emphasise the importance of Earth observation in monitoring and managing the Earth under sustainable conditions. Since then, there has been enormous progress in our capability to observe the Earth from space. It will be a major challenge to ensure that the contribution to supporting sustainable development by Earth observation is recognised and that the full benefits to be derived from Earth observation can be secured. In helping to meet this challenge,

Contributions for future issues of the CEOS Newsletter from the CEOS Members and Associates, and subscriptions to the CEOS Newsletter, please contact CEOS Japan Secretariat ceos-jpn@nasda.go.jp, or misawa@restec.or.jp

http://nasda.ceos.org/ceosnews\_menu\_e.html

CEOS will be working very closely with our partners within the IGOS Partnership many of whom have specific interests in the issue of sustainable development.

These will be the foci of CEOS actions in the coming year, but the very important work of CEOS in its working groups and through its regular interactions between member agencies will continue to underpin all other actions. ESA is proud to be the Chair of CEOS in 2002, the year which will see the launch of Europe's most ambitious and important Earth observation satellite, Envisat. The Chairmanship will culminate in the 2002 Plenary in Frascati, Italy, on November 19-21 to which we warmly invite all Members and Associates. In addition to the regular business of CEOS, the Plenary meeting will include an adjacent agency Summit on Training and Education and a review of the outcomes of the Johannesburg meeting and their impact on E observation.

I would like to take this opportunity to congratulate the previous CEOS Chair, NASDA, for their excellent and tireless efforts on behalf of CEOS during 2001. I hope that ESA as the 2002 Chairman will be able to live up to their example.

The 2002 IGOS Brochure, entitled "For the Monitoring of our Environment from Space and from Earth," was issued in January 2002 by NASDA on behalf of IGOS. Please refer to the following IGOS website: http://www.igospartners.org

Meeting Calendar

As of Feb. 2002

Activities	2001					0 - 1)	April May June			July August		September October	
Activities	November	December	January	February	March	n April	29A	June	July	August	Gepternber	COLODO	November ▲19-2
EOS Plenary	▲ 6-7 15th Plenary MEXT/NASDA, F	(voto					CRT Paris						16th Plenar N, Frascati, Ital
EOS WGISS forking Group on Information islems & Services) ubgroups/Task Team					Workshop WGISS-13 Tokyo			rkshop , ESA/ESRIN, F EOGEO 2002, .	10.00		WG	3-27 ISS-14 olulu, Hawaii	(
EOS WGCV orking Group on Calibration of Validation) obgroups	△ Microwave RS of Boulder, Colorad			▲ 6-7 IVOS ESA-ESTEC/N	oorwiik (	29-30▲ AC First SG CCRS/Ottawa, Canada				BNSC/I		▲9-11 MW SG Barcelona, Spain	#2 IMRC Workshop
EOS DMSG d Hoc Working Group on saster Management Support)	Boulder, Colorac								△1-5 UN Regional UNOOSA/Add	Workshop lis Ababa, Ethiopia			Workshop Thailand
EOS WGEdu d Hoc Working Group on EO ducation and Training)													
EOS SIT itrategic Implementation eam) hemes:		▲4-7 GODAE-STS Gulfport, USA		4- azards Worksh ESA, Frascati, II	6 ▲ ▲6-8 op CEOP I	△18-19 SIT-10 EUMETS/ NASA/Cal  (ick-off /EORC, Tokyo	AT ifornia		Conf. 2002 arritz, France				
GOS Partners	▲ 8 IGOS-P8 MEXT/NASDA, I	Cyoto					31▲ IGOS Paris						
Others	10/29-9 A 27-29 UNFCCCI RPAP COP-7 Cambodia Marrakech Morocco		CSD10 PrepCom II New York  APAN Workshop  UNCOPUOS UN Office/Vienna  VNCOPUOS UN Office/Vienna  PrepC UN Office/Vienna  PrepC New Y			A25-4/5 PrepCom III New York A1-5 Regional Works UNOOSA/Chile	27-6/7 PrepCom IV Jakarta, Indonesia  /orkshop hile  ▲: determined △: to			26-9/8 A 8/26-4 APAN Workshop Shanghai, China Johannesburg		t (SD) South Africa open only to designated participan	

For further information contact in each area allocated:

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