

## Report on the 12th CEOS Plenary at Bangalore Dr. Krishnaswamy Kasturirangan, ISRO Mr. Mukund Rao, ISRO

he 12th Plenary Meeting of the Committee on Earth Observation Satellites (CEOS) was held in Bangalore during November 10-12, 1998. The Plenary was inaugurated at a glittering Inaugural Session, which started off with a welcome dance, Swagatham, in honour of the CEOS delegates.



Participants of the 1998 CEOS Plenary in Bangalore

The symbolic inaugural lamp was lit by the Chief Guest, Dr Murli Manohar Joshi, Minister of Human Resource Development and Science & Technology, Government of India and the other dignitaries, including Dr K Kasturirangan, Chairman, ISRO and CEOS Chair; Dr Jean-Louis Fellous, previous CEOS Chair; Dr Tillmann Mohr, Incoming CEOS Chair; Dr Brian Embleton, SIT Chair and Mr K R Sridhara Murthy, Director, EOS, ISRO. The Plenary was attended by 74 representatives of 38 space and user agencies.

The Plenary had on its agenda important issues of coordinating the Integrated Global Observing Strategy (IGOS) and planning for its further development and implementation. IGOS aims to harmonise the space component and in-situ component of the observation requirements towards meeting the specific requirements of users for global applications and environment monitoring. IGOS also aims at developing a global database of required parameters for applications - which in turn will get utilised for monitoring the changes in the earth's environment.

IGOS, earlier being coordinated by CEOS, has now developed into a Partnership amongst Sponsors of the Global Observing Systems (ICSU, FAO, UNEP, UNESCO-IOC, WMO); Global (Climate / Ocean / Terrestrial) Observing Systems (GCOS, GOOS, GTOS) Program Offices; Committee on Earth Observation Satellites (CEOS; comprising member space agencies contributing to an IGOS); International Group of Funding Agencies (IGFA); International Geosphere - Biosphere Programme (IGBP) Program Office and World Climate Research Programme (WCRP) Program Office.

At the 12th Plenary, CEOS formally endorsed its participation in the IGOS Partnership and prepared its own strategy for the development of the space component in support of IGOS. Similarly, Global (Climate/Ocean/Terrestrial) Observing Systems would address the in-situ component strategy in support of IGOS. Hopefully, the two strategies, when integrated, would provide, in an evolutionary manner, assured commitments of observation - leading to establishment of global databases of essential parameters as required by users.

The Plenary also endorsed that the Strategic Implementation Team (SIT) should continue, under the Chairmanship of Mr. Robert Winokur of NOAA, for developing the space component strategy. The SIT would work out the strategy for evaluating the IGOS projects and also guide them for development under the framework of the IGOS Partnership. The SIT has been charged to address these issues and report at the 13th CEOS Plenary.

The Plenary also reviewed the status of the 6 proto-type projects identified for definition of the IGOS concept - Long term continuity of Ozone Measurements; Upper Air Measurements; Global Ocean Data Assimilation Experiment (GODAE); Global Observation of Forest Cover (GOFC); Long term ocean biology measurements and Disaster Management Support. Specific observation requirement analysis have been conducted by these projects and now CEOS would evaluate the space-based strategies required to meet those requirements. Hopefully, CEOS agencies would assimilate these requirements into their mission plans and thus ensure a committed observation (to be continued on Page 2)



Participants of the 1998 CEOS Plenary in Bangalore

# **CEOS New Membership Categories and Mechanism to Develop Interaction with the Private Sector**

Dr. Jean-Louis Fellous, CNES Ms. Dominique Fourny-Delloye, CNES

ollowing a recommendation from the 11th Plenary, Dr. K. Kasturirangan, in his position of CEOS Chair, asked Dr. J.-L. Fellous from CNES, early January 1998, to lead a task team which would consider "the need to improve the exchange of information and dialogue with currently not eligible entities like international organizations", integrating "the general need to also enhance interaction with the commercial sector".

> At the same time, the task-team should consider whether the current CEOS membership organized in three categories of "Members, Observers and Affiliates" remained appropriate with regard to the role played by the different entities, especially in the development of an IGOS. The task team was asked to report to the 12th Plenary for consideration.

> The task team, composed of Secretariat members (\*), was established in March 1998 and decided to consult CEOS participating agencies to get their feelings and remarks about these issues.

> Concerning the membership criteria, most agencies agreed on the necessity to reshape CEOS into two categories, namely Members and Associates, although they felt comfortable with the current three categories, but they admitted that it would constitute a step forward and improvement of CEOS management. After some discussion, the 12th Plenary decided to simply combine the current Observers and Affiliates into one single category, while keeping the Members category as formerly defined.

> It must be stressed that one of the major outcomes of this survey is the statement that CEOS was facing an evolution and that its participating agencies are moving in that direction. As an example, there was some suggestion to

> \*Brent SMITH (NOAA), Leslie CHARLES (NASA), Yukio HARUYAMA (NASDA), Harald AREND (ESA), Mukund RAO (ISRO), Dominique FOURNY-DELLOYE (CNES)

distinguish between Members and Associates on the basis of their degree of contribution and commitment to help advance CEOS goals. Furthermore, it was mentioned that regarding the foreseen evolution of the Earth Observation community, membership criteria might not differentiate between government and private sector.

This trend was confirmed when it came to considering the interaction with the private sector. CEOS participating agencies recognized that commercialization of Earth Observation data was a growing feature and should become a major component in their activities, and fully supported the development of interaction with the private sector, but stressed the importance for CEOS to remain a manageable group. In that respect, the 12th Plenary agreed on the organization of a structured framework that would remain under the control of the CEOS Secretariat. This recommendation adopted, as a first step, the setting up of dedicated workshops at the occasion of major events, such as IAF or ISPRS, as well as organization of meetings for specific exchange of views and information on topics of common interest, or for participants based in the area of location of CEOS meetings, in particular through CEOS Working Groups, WGCV and WGISS. The CEOS Secretariat was tasked to submit to the Plenary a program of such events for the forthcoming year.

With regard to the change of CEOS Membership criteria, the 12th Plenary adopted new Terms of Reference taking into account the new definition of Members and Associates, and incorporating the 11th Plenary resolution to include in the CEOS secretariat the past and forthcoming CEOS Chairs.

New Terms of Reference are available in this newsletter for information.

#### (continued from Page 1)

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system for the requirements. This would be an important element of the space component strategy. The plenary also endorsed, in general, the approach outlined by EUMETSAT, which identifies the roles of the IGOS Partnership; of GOSSP, through its Sponsors; and of SIT through CEOS, in the implementation and development of the IGOS

The CEOS Plenary also decided to participate in the UNISPACE Exhibition and also to organise, jointly with the



At CEOS plenary Exhibition in Bangalore

other members of the IGOS Partnership, a one day IGOS Forum at the forthcoming UNISPACE III Conference being organised by United Nations in July 1999. The Forum will focus on the concept of IGOS and Projects that would demonstrate the benefit of a global strategy of observations to meet the user needs.

The Plenary also endorsed the need for re-categorisation of its membership, which earlier included, 3 categories of agencies - Members (currently operating EO Missions, or in an advanced stage of development), Observers (with a Phase A or equivalent system development or having ground segment activities) and Affiliates (International Programmes - mainly users and Inter-Governmental Organisations). With the resolution in the 12th Plenary, the Observers and Affiliates have been re-categorised as "Associates" with a focus on active cooperation between the Members and Associates. These cooperative activities would be towards Space Segments, Ground Segments, Application Segments or Services.

The Plenary also endorsed the admittance of Satellite

# **Second IGOS Partners Meeting held in Bangalore**

### Dr. Krishnaswamy Kasturirangan, ISRO Mr. Mukund Rao, ISRO

he 2nd IGOS Partners Meeting was held in Bangalore on November 10, 1998, under the Chairmanship of Dr. K Kasturirangan, Chair of CEOS for 1998. Apart from CEOS, the host for the meeting, FAO, IGBP, UNEP, WMO, WCRP, IGFA, GCOS, GOOS and ICSU attended the meeting.

> The Partnership, recently formed in June, 1998, will now champion the IGOS and progress activities for its implementation and development through the activities of its members.

> The Partnership noted that letters of endorsement and commitment to IGOS had been exchanged by CEOS, IOC, GCOS, GOOS, WCRP and WMO. Other agencies were in the process of confirming their participation in IGOS.

> The focus of the Partners Meeting was to address the completion of the strategy document of space component and the ground-based in-situ observation.

> The Partners also recognised the value of the mechanisms of projects, to be championed by the inter-governmental space user agencies. A task group, led by Dr. Ghassem Asrar, Associate Administrator of NASA will now develop guidelines for initiating projects. The projects would start with definition of the information requirements. CEOS would address the compliance from Space based Earth Observation (EO) and the Global Observing Systems for compliance by ground based observation networks. These evaluations would be basic for the definition of the space component and in-situ component strategies. Commitments from the Partners would enable the implementation of the projects. The Partners also recognise the need to channel these projects into national programmes.

> Application Centre, South Africa as an Associate of CEOS. With this, CEOS has a total membership of 20 Members and 18 Associates.

> The CEOS Plenary also reviewed various activities of its two working groups - Working Group on Calibration and Validation (WGCV) and Working Group on Information Systems and Services (WGISS).

> The Plenary also recognised that CEOS should work to develop mechanisms for establishing a forum for private sector participation and interaction. Initially, the plan is to focus on jointly organised CEOS and private sector events either as Workshops or Symposia Sessions, together with the International Society of Photogrammetry and Remote Sensing (ISPRS), in major international events.

> Dr Tillmann Mohr was "annointed" Chair for 1999 in a traditional Indian manner and was handed over the "CEOS gavel" by Dr Kasturirangan – signifying ISROs handing over the CEOS Chair to EUMETSAT. Dr Tillmann Mohr of EUMETSAT confirmed that EUMETSAT would be hosting the 13th CEOS Plenary, in coordination with the Swedish National Space Board, at Stockholm between November 10-12, 1999. For the year 2000, INPE, the Brazilian Space

The Partnership also decided to organise a one day International Forum on IGOS at the forthcoming UNISPACE Conference being organised in Vienna in July 1999. Dr. He Changchui, FAO leads a task team for coordinating and organising this event. The Forum will focus on the concept of IGOS and Projects that would demonstrate the benefit of a global strategy of observations to meet the user needs. Presentations on specific activities of the partnership agencies would bring out the focus of multi-agency towards the development of IGOS.

Realising the need for a technical analysis of the user requirements and defining the space observation needs, revitalisation of the Global Observing Space Systems Panel (GOSSP) has also been endorsed. The GOSSP will interface with the SIT of CEOS to focus project requirements and development under IGOS. CEOS has also been invited to nominate 2-3 experts to serve on GOSSP.

The next meeting of the IGOS Partners will be held in conjunction with the G3OS Sponsors Group meeting to be held in June, 1998 in Rome.



Agency will Chair the CEOS and in 2001, STA / NASDA will be Chairing CEOS.

Dr Kasturirangan, in his closing remarks, thanked the CEOS Members and Associates for their unstinted support in furthering the CEOS activities 1998. He mentioned that the value of CEOS was its participants that made the Committee a vibrant and effective forum. He also thanked the IGOS Partners for having given the opportunity of leading the 2nd meeting and also for their cooperation and guidance.



The Closing Ceremony

# IGOS and the Strategic Implementation Team: The Way Forward

Mr. Robert S. Winokur, SIT Chair, NOAA Dr. D. Brent Smith, SIT Organizing Committee, NOAA

harged by the twelfth CEOS Plenary to implement and further develop the Integrated Global Observing Strategy (IGOS) space component, the Strategic Implementation Team (SIT) held its fourth meeting, January 14-15, 1999, at the Scripps Institution of Oceanography, La Jolla, California, under the chairmanship of Robert Winokur, NOAA's Assistant Administrator for Satellite and Information Services. CEOS is one of several Partners in the IGOS Partnership established in June 1998.

> The Integrated Global Observing Strategy (IGOS) unites the major satellite and ground-based systems for global environmental observations of the atmosphere, oceans and land. It is a strategic planning process, involving many partners, that links research and operational programs, as well as data producers and users, in a framework that delivers maximum benefit and effectiveness. Under the leadership of Brian Embleton, SIT and its organizing committee continued during the second half of 1998 in efforts to further define the IGOS space component and to interact with the six prototype projects selected in conjunction with its February 1996 first meeting. These activities complemented the efforts of then-CEOS Chair K. Kasturirangan to obtain formal agreement on moving forward on IGOS with other members of the IGOS Partnership. As of the end of January 1999, letters endorsing a common annex in connection with the IGOS Partnership established in June 1998 in Paris have been exchanged among CEOS, the World Meteorological Organization, the Global Climate Observing System, the World Climate Research Organization, the International Geosphere/Biosphere Program, the Global Ocean Observing System/Intergovernmental Oceanographic Commission, and the International Council for Science (ICSU).

The 12th CEOS Plenary, meeting in November 1998 in Bangalore, received reports from the Chair of SIT and the six prototype projects as well as a report by a representative of the Global Observing Systems Space Panel (GOSSP). In a formal resolution, CEOS re-affirmed participation in the IGOS Partnership and recognized the need to further the progress already achieved through SIT and to continue to contribute at levels consistent with the goals of IGOS. The Plenary endorsed in general a proposal outlined in a paper by the incoming CEOS Chair, Tillmann Mohr of EUMETSAT, to restructure IGOS activities along the lines of broad themes. It recognized GOSSP as an important contributor to the formulation of requirements for IGOS and agreed that the CEOS Chair should appoint two or three experts as CEOS observers to GOSSP. The CEOS Chair was tasked to lead a delegation, including the previous and next CEOS chairs and the SIT Chair, to upcoming IGOS Partnership Meetings. The Plenary agreed to continue SIT as an ad hoc group during 1999, participation being open to CEOS Members who commit to contribute to IGOS activities. Thanking Brian Embleton for his efforts as SIT Chair, the Plenary appointed Robert Winokur of NOAA as SIT Chair and Jean-Louis Fellous of CNES as Vice-Chair, charging them to provide a detailed progress report and recommendations in time for the 13th Plenary.

Specifically, SIT was tasked by Plenary to:

- Implement and develop the IGOS space component, taking into account the need for incremental steps and the use of themes in this work;
- Develop appropriate working relations with CEOS Members and IGOS Partners including GOSSP; and
- Together with the IGOS Partnership, to evaluate the lessons gained from the Pilot Projects and to decide as soon as practicable their future role within IGOS.

The IGOS Partnership at its second meeting, November 10, 1998, held in conjunction with the CEOS Plenary in Bangalore, requested SIT to coordinate and develop an IGOS space component strategy in time for the November 1999 CEOS Plenary. A comparable in situ component strategy will be coordinated by the G30S Sponsors. SIT was also asked to review and evaluate the six IGOS prototype projects, with the Partners agreeing that projects and future IGOS activities should be brought under the Partnership framework. An IGOS Projects Definition Team, chaired by Dr. Ghassem Asrar of NASA, was constituted to define guidelines and mechanisms for IGOS activity definition for consideration by the Partners at their next meeting in June 1999. IGOS Partners, at this meeting, also discussed and outlined steps for IGOS outreach activities and set up an IGOS Partners Liaison Group to support the preparation of future Partnership Meetings and coordinate day-to-day Partnership activities.

The fourth meeting of SIT was held in La Jolla, California, January 14-15, 1999, with SIT Principals meeting to review progress to date, take an objective look at the IGOS process, making changes as appropriate to get on an implementation track. The six prototype project leaders or their representatives were invited to participate. SIT Principals had been asked to come prepared to respond to the requirements put forth by the projects. Dialogue on the projects and their future resulted and SIT Principals took an action to provide formal agency commitments in writing for collation and iteration with project leaders who will in turn provide a time line for estimated completion of the IGOS portions of their projects. Ghassem Asrar elaborated and secured SIT support on his task force's draft criteria for transitioning current projects and selecting future IGOS activities. In responding to the November 1998 CEOS Plenary charge, SIT accepted the task to undertake development and implementation of the IGOS space component strategic plan with an initial draft expected in the Summer 1999 time frame. SIT discussed and adopted the broader thematic approach proposed by CEOS Chairman, Tillmann Mohr, to cluster projects and activities, with "oceans" adopted as a prototype theme to be pursued as an example for discussion at the June 1999 IGOS (to be continued on Page 5)

# Introduction to the Satellite Applications Centre of the South African Council for Scientific and Industrial Research (CSIR)

Mr. Alan Caithness SAC, MIKOMTEK, CSIR

he CEOS Plenary, at its meeting in November 1998 in Bangalore, invited the Satellite Applications Centre of the CSIR in South Africa to participate in CEOS as an Associate Member. We are pleased and honoured at being recognised within the CEOS community and believe that this association will be to our mutual benefit, especially in the promotion of the practical use of Earth observation data in the African region.

#### **CONTEXT WITHIN THE CSIR**

The CSIR is Africa's largest scientific and technological research, development and implementation organisation and is committed to delivery of creative solutions and information to support sustainable development and economic growth in the context of national priorities.

The mission, policies and priorities of the CSIR are set by the Board, whose members are appointed from the private sector by the Minister responsible for administering the Scientific Research Council Act, 1988.

Nine major market orientated operating divisions make up the CSIR's "engine room". In addition, by increasingly striving towards being a "boundary-less" organisation, there are many cross-cutting and integrating initiatives which draw on skills from across the organisation.

The Satellite Applications Centre (SAC), situated at Hartebeesthoek south-west of Pretoria, operates as a programme within the CSIR's Division of Information and Communications Technology (Mikomtek) and has two main areas of business.

• Tracking Telemetry and Command (TT&C) services to international satellite operators and launch agencies.

• Earth Observation: the reception, processing, archiving and commercialisation of image data from a range of remote sensing satellites.

#### TRACKING TELEMETRY & COMMAND SERVICES

The SAC has been active in TT&C since the early 1960's and its services are available on a contract basis to launch agencies and the owners and operators of satellites. These services are rendered by an experienced team on a 24-hour per day basis throughout the year.

#### (continued from Page 4)

Partnership Meeting. "Disaster Management" is another theme (building upon the current "Disaster Management Support" prototype project) considered ready for early development.

The broader issues of links to the other IGOS Partners and how to increase IGOS visibility were also discussed at the La Jolla SIT Meeting. The CEOS Chairman will contact IGOS Partners to initiate a preliminary discussion on the development of IGOS themes and will also undertake to complete the exchange of letters endorsing a common IGOS annex with those Partners who have not yet responded. A number of ideas were put forward for increasing IGOS visibility, each of which would require full In this context SAC is part of the 2 GHz network of the French National Space Agency, CNES. It also has service contracts with world leading private companies involved in Aerospace business.

The S-band TT&C services were supplemented with Ku/Ka - band capabilities during 1998.

#### EARTH OBSERVATION

As the leading earth observation centre in southern Africa, the SAC receives, processes, archives and distributes data and map format products from a number of Earth observation satellites such as Landsat, SPOT, the European ERS, NOAA and OrbView-2. The SAC is also a distributor of data from Canada's RADARSAT. These activities are the responsibility of the Data Access, Archiving and Distribution Group (DAAD).

The SAC is continually evaluating reception, archiving and distribution of data from all new Earth observation satellites, including the high-resolution optical systems expected to be operational soon.

The SAC's archive contains digital data from as early as 1972 in some cases and is kept current by the daily addition of new data sets.

Customers can access SAC's on-line catalogue and browse images through the World Wide Web at http://www.sac.co.za.

The Geo-Information Products and Applications (GIPA) Group concentrates on high level value added products as well as entering into EO based projects with government and private sector clients. Areas of interest where the SAC is actively promoting the use of EO data in South Africa and other African countries include rural (small-scale) farming, water resource management and land use policies.

In order to promote the use of EO data, training seminars catering for students from all over Africa are organised at least twice per annum. These are designed and presented jointly by the SAC and selected partners.

More information on the CSIR and the SAC respectively is available at the web sites http://www.csir.co.za and http://www.sac.co.za

coordination with the other IGOS Partners. NASDA is prepared to lead an effort to produce by early Summer 1999 an IGOS brochure for outreach purposes to key national and international decision makers as well as for use at the July 1999 UNISPACE-3 Conference and other international meetings. CNES will prepare a proposal for an IGOS newsletter or bulletin for discussion at the upcoming June 1999 IGOS Partnership Meeting. Other venues for promoting IGOS and IGOS activities were also discussed, including the G8 Economic Summit and the Conference of the Parties for international conventions on topics such as climate and biodiversity.

The next SIT meeting is planned for early June in Rome, following the IGOS Partnership Meeting.

# Working Group on Information Systems and Services (WGISS)

Mr. Takashi Moriyama, WGISS Chair, NASDA Mr. Hiroshi Ishiguro, WGISS Secretariat

he 7th plenary meeting of the CEOS Working Group on Information Systems and Services (WGISS) was held in Kyoto, Japan from October 21-23, 1998, in conjunction with a special workshop to discuss "Promotion and Management of EO data with respect to developing country needs" on October 20.

#### 1. WGISS Pilot Project Plan

WGISS decided to support a new framework of "IGOS Partnership" framework by implementing the WGISS pilot projects. The Pilot Project Support Task Leaders for Ocean Biology, Global Observation of Forest Cover and Disaster Management have been confirmed and have reported on progress.

The IGBP Data Integration project will be supported in the framework of WGISS subgroup activities. As part of the collaborative links and pilot projects plans, there was a presentation on the topic of the International Steering Committee for Global Mapping (ISCGM) project. There was a proposal that WGISS consider the establishment of a project to address the issue of a global mapping dataset. This activity would cover both the ISCGM activity and the initiative of the Institute for Global Mapping and Research (IGM) of the European Academy of Sciences and Arts which has the target of production of a digital satellite image map of the Earth in a scale of 1:1,500,000.

#### 2. Collaborative links

For WGISS, it is important to keep various active links with relevant organizations so that the necessary information exchanges and a possible collaboration can be achieved. WGISS has been working with and monitoring the following organizations activities;

- The International Society for Photogrammetry and Remote Sensing (ISPRS)

- The Consultative Committee for Space Data Systems (CCSDS) and International Organization for Standardization (ISO)

- The G8 Information Society, Environment and Natural Resources Management project

#### 3. Promotion Plan

The way ahead for the WGISS promotional activities and materials was another important topic. Momentum has been



WGISS-7 meeting in Kyoto

developed on the issue of WGISS publicity and further efforts - including new materials - are expected before WGISS-8.

A new-look WGISS WWW site is available at http://wgiss.ceos.org which includes the WGISS Newsletter.

#### 4. Developing Countries Issue

An ad-hoc WGISS panel on developing countries was suggested and was endorsed to exist for a year in WGISS. The developing countries panel activity is ongoing and a concrete project proposal exists in the form of the offer from UNEP - the new User Vice Chair. It was agreed that there are many issues to resolve regarding the approach WGISS should take to increase developing country efforts and that a lot more focus is necessary in order to make practical progress.

#### 5. Special Session; Catalog Interoperability

The aim of this special session was to review an area where WGISS had invested considerable effort, namely catalogue interoperability, and to identify the status of uptake of WGISS results by the member agencies, identifying where improvements might be made and how they could be made.

Based on the fact that CIP Version 2.4 was ratified in June after a lot of effort and is now at a stage where widespread adoption is feasible, a range of participating and interested agency reports covering the use and adoption of the CIP were presented. Various interfaces to the main information systems of these agencies (ECS, MUIS etc) have been developed. It is hoped that, in the future, more emphasis will be given to supplying data providers with the tools and information that they need to connect to the 'CIP world'.

#### 6. Special Session; Data Access

The aim of this special session was to examine the emerging issue of on-line access to EO data. The internet offers member agencies the ability to disseminate EO data widely and cheaply. WGISS made sure that it is able to support them in doing so. The session featured presentations summarizing the issues involved and the current plans of member agencies, followed by a discussion of how WGISS can offer practical support and services.

#### 7. Updated Reports on Subgroups and Task Teams

WGISS Subgroups and Task Teams have been actively working on their technical discussion and activities. Access, Data and Network Sub-Groups all held meetings in Boulder, USA on September 21-25, 1998, sponsored by NOAA. The WGISS-7 meeting gave a necessary direction and guidance in response to each status update.

The results of WGISS-7 and the CEOS Plenary will be provided at the subgroup meetings in Osaka, Japan in March and at WGISS-8 in UK in May, 1999.

# Activities of International Society for Photogrammetry and Remote Sensing (ISPRS)

Dr. Lawrence W. Fritz. ISPRS President



ounded in 1910, the International Society for Photogrammetry and Remote Sensing is a non-governmental organization (NGO) devoted to international cooperation for the advancement of knowledge, research, development and education, in the application and integration of photogrammetry and remote sensing and the spatial information sciences, to support the well being of humanity and the sustainability of the environment.

> Photogrammetry and Remote Sensing is the art, science and technology of obtaining reliable information from noncontact imaging and other sensor systems about the Earth, its environment, other physical objects and processes through recording, measuring, analyzing and representation. At the beginning of 1998, the ISPRS was formally welcomed into CEOS as an Affiliate (now Associate) Member.

> The Society's interests are in the acquisition and use of imagery to support applications in the spatial information sciences and technologies (S&T). These interests include applications in GIS, cartography, geodesy, surveying, Earth and engineering sciences, environmental monitoring and protection, etc. Further close-range imaging applications include visualization, metrology, machine vision, industrial design, architecture and monument preservation, medicine and others.

> In pursuit of these interests during the 1996-2000 term, the ISPRS is conducting its research activities though its seven Technical Commissions and 45 domain specific Working Groups (WG). Other accompanying ISPRS activities include: conducting scientific and technologic conferences, workshops, etc.; publishing a peer-reviewed bi-monthly "Journal of P&RS", a quarterly news bulletin "ISPRS Highlights", and the International Archives of P&RS; facilitating educational opportunities in the imaging and spatial information sciences; and actively promoting international S&T cooperation and coordination with relevant organizations of the UN and with other international science and engineering societies and organizations. ISPRS is funded by modest dues assessed to Member Organizations. All of its activities are conducted and managed by volunteers.

During 1998, El Salvador became the 100th national

## **News Highlights**

Led by CEOS Information Infrastructure (CII) Task Team of WGISS, the CEOS Home Page will be available at http://www.ceos.org (effective in April).

The CII task team has been further developing the CEOS Infosys and CEOS on line WGISS Directory, and working to provide comprehensive and up to date online information resources for CEOS to use for external outreach and for internal management.

The new CEOS Home page features member's WWW

representative organization to join ISPRS and seven companies/institutions have joined which increases Sustaining Membership to 48. New applications pending for national representation have been received from Bangladesh and Benin; for Regional Membership by AGRHYMET (nine Sahel countries); and for Associate Membership by the Indian Cartographic Association.

The ISPRS Commissions convened their quadrennial Symposia during 1998 in India, Japan, USA, UK, Hungary and Germany. Special sessions on CEOS were included in the Bangalore, Cambridge (UK) and Budapest Symposia. The seventh Symposium in Bandung, Indonesia will convene 15-17April 1999. Summaries of these and other activities (including WGISS) are presented in the December 1998 "ISPRS Highlights." Relations with CEOS Working Groups on Information Systems and Services (WGISS) and Calibration/Validation (WGCV) began by sharing terms of reference and by designating official points of contact. Working relations are underway for joint participation in, and joint sponsorship of, several activities of mutual interest. Further information may be accessed via the ISPRS Home Page <www.geod.ethz.ch/isprs>. It is continuously updated and contains a new international jobs directory, a monthly updated international events calendar, and pointers to activities relevant to both CEOS and ISPRS members.

In 1999, ISPRS WGs are convening more than 20 Workshops and Conferences. In addition, ISPRS will be actively participating in the 1999 UNISPACE III Conference in Vienna. Current UNISPACE preparations include joint sponsorship of an "ISPRS/NASA Seminar on Environment and Remote Sensing for Sustainable Development," and an "ISPRS/EARSeL Workshop on Remote Sensing for the Detection, Monitoring and Mitigation on Natural Disasters," plus an "ISPRS Workshop on Resource Mapping from Space."

These sessions complement three UNISPACE III background papers prepared in 1998 by ISPRS officers. Also in 1999, ISPRS will be exploring with CEOS opportunities to create a joint forum to address commercial EOS issues and activities.

sites and provides one-stop access to various advanced search and find services such as CIP, IDN, CILS. The Subdomain name, CEOS.ORG is also used to make the CEOS home page easier to find. Those who host CEOS related information are requested to register for the use of CEOS.ORG.

For further information or inquiry, please e-mail to cii@eoc.nasda.go.jp.

# From the CEOS Chairman



## Dr. Tillmann Mohr Chairman of CEOS

It is very comforting to take over a ship where the crew members all know their jobs and the previous captains have been efficient and effective. This is certainly the case with the good ship CEOS, and I gladly pay tribute to the work of my

predecessors and the members of the CEOS Secretariat dispersed around the globe for the way they have progressed activities during 1998.

This does not mean, however- to continue the metaphor – that CEOS is going to cruise along quietly in 1999. I see this year as one in which, if we continue our collective efforts, we will be able to make visible progress in a number of key areas. Top priority, for me, and I am sure for all our Members and Associates, is to implement the Integrated Global Observing Strategy (IGOS), and for this we are fortunate in having Bob Winokur, of NOAA, as Chairman of the Strategic Implementation Team (SIT), with Jean-Louis Fellous, of CNES, as Vice-Chairman.

Key to success is the functioning of the IGOS Partnership, which brings together CEOS members and senior representatives of the global user programmes, such as G3OS, WMO, FAO, UNEP etc. The second meeting of the Partnership was held in Bangalore during the 12th CEOS Plenary, and we are scheduled to have a third meeting in Rome in June this year. We have also appointed a small group to carry actions forward between the meetings. It is very pleasing to see how good the relations between the various parties currently are, and I look forward to further fostering these relations during 1999.

CEOS has for some years wrestled with the problem of how best to interact with the growing commercial Earth Observation sector. Whilst this is an important area, I personally do not think that it would be appropriate at the present time to invite commercial companies to seek membership of CEOS, but I am very anxious to encourage a more systematic exchange of views with the private sector. We shall be working to this end in the coming months.

Through the efforts of the individuals involved within CEOS, the working groups have over a number of years performed much of the basic work of CEOS. This should not be forgotten even if it is true that the annual plenary meeting attracts the most attention. I hope during my period in the CEOS chair to give support to these groups, and to urge all CEOS Members and Associates to make the maximum use of their work.

A significant event for 1999 is UNISPACE –III, to be held in Vienna in July. This will be a major political event, and CEOS intends to play an appropriate role in making the event the success it deserves to be. With our partners in the IGOS we will be cohosting a workshop on IGOS. The purpose of this is to broaden awareness of the issues involved in particular at the political level.

Meanwhile preparations have started for the 13th CEOS Plenary which is to be organised in Stockholm, Sweden, from 10-12 November 1999. I take this opportunity of wishing you all a happy and successful 1999, and count on all Members and Associates for their continued support to make 1999 a really good year for CEOS.

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 : ceosj@eoc.nasda.go.jp

http://www.eoc.nasda.go.jp/guide/ceos/ceosnews\_menu\_e.html

Activities	1999										2000		
	March	April	May	June	July	/ August	September	October	November	December	January	February	March
CEOS Plenary									▲ 10-12 13th Plenar EUMETSA	) y T/SNSB/Stockh	olm		
CEOS WGISS (Working Group on Information Systems & Services) Subgroups Task Team	▲ 9-12 SG-6 NASDA/Osaka	a, Japan	MGISS-8 BNSC/UK					▲ 4-8 WGISS-9 UNEP/Kenya					
CEOS WGCV (Working Group on Calibration and Validation) Subgroups	MSSG NASA/GSFC	14-16 WGCV-15 IVOS SG Norway						2	SAR SG Toulouse, Fra	ince	WGCV-16 ISRO/India		
IGOS/SIT (Strategic Implementation Team)				▲9 SIT-5 FAO/Rome, It								~	
IGOS/Partners				A IGOS/P-3 Mtg. FAO/ Rol	ne UI	▲ 21 OS Forum NISPACE-III							
Others	▲ 3-12 Freq. Spect. 0 MTG., Genev	Cord.		▲ 7-8 G3OS Spons FAO/Rome	UN	19-23 IISPACE-III -OOSA/Vienna	SFCG	AF Amsterdam		A 2-8 ESCAP Minist, Conf./N	vew Delhi		

Published by Office of Earth Observation Systems National Space Development Agency of Japan (NASDA) World Trade Center Bldg., 2-4-1, Hamamatsu-cho, Minato-ku, Tokyo 105-8060, JAPAN

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