

EDITORIAL

In February I visited the International Film Festival in Rotterdam. One of the most impressive and touching movies I visited was "Last Night" by the Canadian director Don McKellar. The movie shows how some people spend their last hours in a world that will stop to exist at 24:00. Original for the script is that there is hardly any panic and that no "star wars" like actions are being taken; people just accept the fact that it will be over and come out on the street to be together. The question not answered in the movie is the origin of the ending of the world. The only thing we observe is that light and temperature are increasing during the night. Now, from reading Wim Bakker's contribution in this Newsletter, I found out: it should have been a Gamma Ray Burst: a burst of energy caused by some type of supernova. Also today we are faced with this phenomenon, however, in very light and non destructive ways.

What more do we have to offer in this Newsletter ? The EARSeL Bureau and the Council met in Paris and reports, including those of national representatives, are given in Chapter 2. With respect to organisation much is going on. In section 3.1 Preben Gudmandsen reports on the ESA programmes. In May there will be a ministerial Council meeting to discuss and decide on the future structure and financing of ESA based space activities; at this moment, at the national level the member countries are preparing for this conference. We do not need to forget: Earth Observation only being one of the activities in space. Since part of the proposal of ESA regarding EO addresses a 10 year time period programme the result of the conference (either way) will have significant implications for role and position of European in the international space 'market'.

During the EARSeL Council meeting in Paris, Jacques Megier gave an overview of the changes incurred by the 5th framework programme for the JRC Space Application Institute: in the next period the focus will be much more on delivering information for policy making to the DG's. The JRC SAI has been regrouped in terms of units and projects: there are 6 units and 11 projects remaining. In section 3.2. the effect of the 5th framework programme related to the work of the CEO (JRC) is shortly explained. This is followed by project description of a CEO-sponsored project on data policy: EOPOLE. I think that within ESA the item of data policy still does not get the attention it should have: it can make all the difference for data being intensively used or stored in the cupboard.

And then, there is the usual bits and pieces on developments in other organisations, new projects and new publications. At this moment I already want to let you know that the December Issue of EARSeL will be dealing with distance learning and Remote Sensing (either dealing with CD-ROM or Web-based methods). If you are involved in such activity and you are interested to shortly present your project or operational service: you are welcome to do so. Please let me know - deadline for submission of the December Issue: 1 November.

The Editor.

NEWS FROM THE ASSOCIATION AND ITS MEMBERS

2.1 EARSeL Bureau and Council meetings - Paris, 14-15 January 1999

These regular meetings were attended by the Bureau and the national representatives of Austria (Dr. E. Mondre), the Czech Republic (Dr. T. Benes), Denmark (Prof. (em.) P. Gudmandsen, France (Dr. G. Bégni, Chairman of the S.F.P.T.), Germany (Prof. Dr. G. Konecny), Hungary (Dr. P. Winkler), Italy (Prof. S. Vetrella), Netherlands (Dr. L. Janssen), Sweden (Prof. B. Lundén), Switzerland (Prof. Dr. E. Parlow) and the United Kingdom (Dr. Kathie Bowden, Chairman of The Remote Sensing Society). The European Space Agency was represented by Mr. Guy Duchossois, the European Commission/Joint Research Centre by Dr. Jacques Mégier and UNESCO by Mr. Robert Missotten of the Earth Sciences Division of that organisation. Invited guests were Dr. Mario Gomasca of the Italian Remote Sensing Society and Dr. C. Chenez, Secretary-General of EUROGI. Each member present gave a short overview of recent and planned activities in their country. Discussions then continued focusing on recent and planned activities of the Special Interest Groups (SIGs), as reported below. The calendar of events organised by EARSeL and others in which EARSeL is participating were also discussed. One of the main points of discussion concerned how to increase the positive advantages EARSeL can offer to the various categories of members. It was decided that in future a greater difference will be made between the registration fees at EARSeL meetings for members and others from outside the membership. Corporate members would be offered a cheaper rate for exhibiting at EARSeL symposia than non-members. An innovation this year will be an expert tutorial within the symposium programme, offered free to members and students. The topic this year will be "Data Fusion Techniques" and the tutorial will be offered by Dr. Lucien Wald, our Secretary General. The EARSeL Web pages (<http://www.earsel.org>) are also being enhanced and made more useful to our members. A suggestion was also made to set up a discussion forum on important issues affecting the members. The Treasurer presented the finances for 1998 and a provisional budget for 1999 and these were approved.

2.2 EARSeL Special Interest Groups

2.2.1 Geological Applications (SIG-GEO)

EARSeL's Special Interest Group "Geological Applications" is a new Special Interest Group formed recently to act as a forum for international discussion amongst Earth scientists. The SIG-GEO promotes geologic remote sensing and Earth observation and tries to bridge the gap between technology and applications by bringing together experts from universities, institutes and commercial enterprises at scientific meetings. Furthermore, the SIG-GEO supports exchange of views through in-depth workshops and tutorials on topics related to geological remote sensing. Objectives of the SIG-GEO are:

- The SIG-GEO intends to organise workshops, tutorials and special conference sessions to disseminate geologic remote sensing knowledge
- The SIG-GEO aims at bringing together experts from the various remote sensing agencies (institutes, universities and commercial enterprises) in Europe
- The SIG-GEO aims at creating a forum for international discussion to better prepare the geologic remote sensing community for new developments in technology and application-oriented research

The SIG-GEO has just started its mission in January 1999! As a consequence, there are no events that can be listed here. We do hope that in the coming years the SIG-GEO will contribute to major scientific meetings promoting its activities in-line with the objectives. Initiatives and suggestions for topics of future events are strongly encouraged. At present, the SIG-GEO is constructing its webpages which will be posted on the EARSeL general homepage shortly. Thereafter by means of a mailing and an announcement in the EARSeL Newsletter the SIG-GEO will start to promote its activities and solicit members to join the group. For more information or to register as a member of the Special Interest Group please contact your chairperson or the EARSeL Secretariat.

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2.2.2 Forest Fires (RSFF-SIG)

Report by Patrick J. Vaughan (Secretary of the EARSeL RSFF-SIG). Following the III International Conference on Forest Fire Research, which took place in Luso, Portugal, there was a session held for the EARSeL Remote Sensing and Forest Fire Special Interest Group. In this short seminar three keynote speeches were addressed, each followed by an informal discussion on the topic presented and relevant issues concerning it.

Michel Deshayes presented a lecture on the Evaluation of Different NOAA-AVHRR Derived Indices for Fuel Moisture Estimation. He reviewed the main efforts currently being undertaken in the estimation of foliage moisture content from remotely sensed data, pointing out the shortcomings and the future lines of progress. The lecture received a variety of comments. Some were to do with the future advantages of using data from satellites such as the IKONOS (which could be more operational for fire use and would improve understory data), or the METEOSAT 2nd generation, rather than AVHRR. The pros of the latter one concern its higher temporal resolution and increased number of bands. Also there was a certain amount of discussion on which parameters were most significant and the appropriateness of using Moisture Content, Water Stress and vegetation indices. Fuel type mapping was also briefly talked about, mainly regarding Mediterranean shrubland and the difficulties derived from the presence of pines. The second keynote speech, Space Technology for Fire Detection, was addressed by Cristóbal Martín Rico, and was very much based on the upcoming FUEGO project. This project includes the launching of various satellites, specifically designed to obtain information for forest fire detection (and location), at 700ş K, with a 15-30 min revisiting time, and at a reasonable cost. Overall, the general impression was detection and reducing false alarms. In addition, Cristóbal Martín also raised interesting issues to be addressed henceforth, such as the use of multispectral identification of trace gases in order to identify fire types, the role of smoke in detection improvement, or possible outlooks in the field of microwave signatures, using passive radiometers like the MIMER and MIMAS. Jose Miguel Pereira addressed the third and final keynote lecture: Burned Land Mapping using NOAA-AVHRR

Satellite Imagery. The session concentrated on comparing the use and results of various spectral channels and indices to map fire scars in both Portugal and the Sudanese Sahel. Pereira pointed out that there was very little available data on spectral properties of burned areas. As a result of these comparisons, three main variables were selected and ranked in this order of importance: albedo, channel T4, and the GEMI vegetation index. J.M. Pereira stated that in spite of the satisfactory results, AVHRR data were not good for burnt area mapping. Furthermore, he believed that what is good for vegetation monitoring is not good for burned area indices. The last period of the seminar was devoted to bringing up proposals mainly in order to strengthen links among EARSeL SIG members as well as to widen our contacts. This was a great chance to discuss what was needed and what could be offered in our field. The first key issue was on how to improve our web page. In this respect, suggestions were made to include a professional profile on EARSeL members, which should have hypertext links to other web sites and other relevant information namely databases, sources of imagery, ground data statistics, algorithms and software. In addition, some attendees recommended the creation of another information sector dealing with international activities and projects, as well as employment and job opportunities. Shortly a form to be filled in by SIG members will be included in the Web page of the RSFF-SIG. Another item that was discussed was the access to each other's publications. Someone suggested that the SIG could act as scientific peer review of papers written by members. The general opinion was more favourable to contacting the potential reviewers directly.

The possibility of exchanging students among the member institutions received a warm welcome. More specific agreements on this proposal would obviously rely entirely on the institutions involved but the general idea would be something similar to the existing ERASMUS and SOCRATES programmes. Two other proposals were examined. The first one was in the realms of exploring concerted action, research networks and web discussion lists. A second idea was which was put forth was the chance to join efforts for receiving fieldwork funding, in order to get good data sets to validate results.

The final issue that had to be dealt with was the date and place of our next RSFF-SIG meeting. It was strongly recommended to allow a lapse of time between meetings so as to be able to come up with reasonably new and validated results. The formula of fitting the RSFF-SIG meeting into an already organised congress was widely accepted. The Delphi Symposium, which will be held on 18th of November 1999 in Athens, is a strong candidate.

If you are interested in joining this SIG please contact:

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2.2.3 Forestry and Land-Use

Chairperson: Prof. Dr. Barbara Koch. This group will participate in the joint EARSeL/ISPRS Workshop on "Fusion of Sensor Data, Knowledge Sources and Algorithms for extraction and classification of topographic objects", which takes place 3-4 June in Valladolid, and also in the conference on "Remote Sensing and Forest Monitoring " to be held in Rogow, near Warsaw, Poland, from 1-3 June.

More information from: ferninfo@sun2.ruf.uni-freiburg.de

2.2.4 Land Ice and Snow

This group has a new chairperson, Dr. Stefan Wunderle, who is now heading the Remote Sensing Research Group at the Department of Physical Geography at the University of Bern, Switzerland. He will be assisted by Dr. Thomas Nægler of the Institute of Meteorology and Geophysics at the University of Innsbruck, Austria. Persons wishing to join or re-join this group should contact Dr. Wunderle at:

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2.3 Reports to Council from national representatives

Those national representatives members present at the regular January Council meeting gave an overview of recent and future activities in the field of Earth Observation in their respective countries. Some members submitted these in written form, so that we can reproduce them here. All reports will be published in the Annual Report 1998/1999 following the General Assembly at the beginning of June.

2.4 The EARSeL Web Server (by Lucien Wald, Web master)

The EARSeL Web server <www.earsel.org> is slowly but surely developing towards providing a better service to the EARSeL membership. Efforts have recently focused on two items: the Special Interest Groups (SIGs) and the Invitations to Tender.

Special Interest Groups: the structure has completely changed. The server now has one page introducing the SIGs as a whole and listing the current ones. SIG convenors have now established their own server for presenting their SIG, its activities and documents, and links have been set up in the EARSeL server directing readers to the SIG server. This decentralised structure allows better development of the Web as a working tool for the SIGs. It helps in fostering co-operation between members of a SIG, it increases the efficiency of the co-operation, it attracts new members and enhances dissemination of the outcomes of SIG events, increasing its visibility among the Earth Observation community.

Invitations to Tender: taking into account that most of its members are obliged to partly fund their activities by seeking support on a competitive basis, EARSeL has decided to help in advertising invitations to tender issued by ESA, the European Union (including the European Commission), Eumetsat and other bodies (e.g. CNES, DLR, NASA, etc.).

Of present interest is the establishment by the European Commission, DG XII, of the list of experts who may be selected by the Commission for the assessment of the proposals received with the 5th R&D Framework Programme. This list is constantly updated and applications can be received at any time. Though only applications received before February 1 1999 will be retained for the assessment of the proposals received in 1999, in response to the calls issued by DG XII during this year, EARSeL members (including non-European Union members) are encouraged to submit now for the years to come. Experts may belong to research institutes, companies, institutional bodies, etc.

2.5 EARSeL Symposium in Valladolid, 31 May - 2 June 1999

EARSeL is initiating a series of tutorials introducing PhD or MSc students, engineers and researchers to topics at the leading edge of research in Earth observation. These tutorials will be held as part of the annual EARSeL Symposium each year. They will be delivered by EARSeL members who are experts in the particular field of the chosen tutorial. These tutorials will be open to anyone who has registered in due time. They will be free for students (student card mandatory), EARSeL members and to members of any co-organising societies.

The first tutorial will be given in Valladolid on Tuesday 1st June 1999 by L. Wald and will last two hours. A text will be provided in English (a French version is also available upon request). The tutorial is entitled "Introduction to Data Fusion". It aims at introducing data fusion, setting a clear picture of what data fusion is. The first part will be devoted to fundamentals (definitions, terms of reference, alignment of data, properties, architectures, including many examples). The second part will focus on one aspect of data fusion: merging images of different spatial resolutions. Common tools will be presented and analysed (IHS and PCA methods; the relative spectral contributions method, including the CNES "P+XS" method; the ARSIS concept, including several wavelet-based methods and the HPF method).