

MINUTES OF THE 8TH MEETING OF THE ADVISORY BOARD (ABLOS)

INTERNATIONAL HYDROGRAPHIC BUREAU, MONACO
17 OCTOBER 2001

Attendance

Members

Mr. Samuel BETAH (IOC) Cameroon
Mr. Chris CARLETON (IHO) UK, Chairman
RAdm. Neil GUY (IHO) IHB
Dr. Bjorn Geirr HARSSON (IAG) Norway
Dr. Tadahiko KATSURA (IHO) Japan
Mr. Ron MACNAB (IOC) Canada, Vice-Chairman
Dr. Chris RIZOS (IAG) Australia
Dr. Petr VANICEK (IAG) Canada
Mr. Alexei ZINCHENKO (DOALOS) UN

Absent

Dr. JIN Xianglong (IOC) China

Observers

Ms. Dienaba BEYE (IOC) UNESCO
Ms. Charlotte BREIDE (D.J. Freeman) UK
Dr. John BROOKS (SOC) UK
Mr. Tim DANIELS (D.J. Freeman) UK
Mr. Brian MURPHY (GeoFix Pty Ltd.) Australia
Dr. Phil SYMONDS (AGSO) Australia

1. Agenda Item 1: Welcome and administrative arrangements

On behalf of the IHB, RAdm Guy welcomed Members and Observers to the Meeting, wishing them a day of successful deliberations. He reiterated the importance of the Advisory Board 's task in reviewing the technical complexities of UNCLOS, and in advising their parent bodies of possible courses of action for dealing with these issues.

RAdm Guy reviewed the arrangements for the Business meeting and touched briefly upon the ABLOS Conference, which was scheduled to take place in the IHB Conference Room over the following two days. He also reminded his listeners that a two-day pre-Conference Workshop on the use of GIS for Maritime Boundary Delimitation was currently in session, having been organized by CARIS under ABLOS sponsorship.

Chairman Carleton called for revisions and/or additions to the Agenda (Attachment 1). Mr. Macnab requested an opportunity to introduce an IOC statement on training and capacity building (new Item 5), and Dr. Vanicek requested a discussion concerning the Global Vertical Reference System (new Item 11).

2. Review of the Minutes of the 7th ABLOS Business Meeting

No errors or corrections were reported, however a few items prompted feedback or questions:

Item 3) TALOS Manual. Work on this had ceased following the unexpected departure of IHB Director John Leech. The IHB presently lacks resources that it can commit to the task.

Item 6) IHO/IOC Textbook on Continental Shelf Delimitation. The IHB received its copies and distributed same to Member States of IHO. It was unclear whether IOC had done the same, and Mr. Macnab offered to make inquiries. Dr. Vanicek proposed, and Members endorsed, a vote of thanks to the Editors and Contributors of the Textbook.

Item 14) Other Business - Forwarding of Members ' CVs to the ABLOS Chairman and to DOALOS. Correspondence

prior to the Meeting and subsequent discussion indicated some confusion over the genesis of this decision. It was agreed that it might be useful to maintain a list of LOS experts for the general information of those needing specialized advice and assistance, however it was suggested that the IHB could update its list of AExperts in Maritime Boundary Delimitation, last revised in 1995.

3. Updated edition of the TALOS Manual

In 1999, the following Members were appointed to an Editorial Board to deal with the components of the Manual that addressed four different disciplines: Mr. Carleton, Boundary Delimitation; RAdm Guy, Hydrography; Mr. Macnab, Geoscience; and Dr. Vanicek, Geodesy. It was agreed that the next edition would be produced and distributed in digital form, on CD-ROM or on the World Wide Web.

RAdm Guy explained that from IHB's perspective, no significant progress in updating the Manual could be expected until 2002, when the new slate of Directors will be in place. In the interim, he may request that IHB recruit some specialized assistance on a contractual or secondment basis to maintain at least a modest level of activity. He would also canvass IHO Member States for their views and expectations concerning the contents and format of the new edition, and advise ABLOS prior to its next meeting. In the meantime, it was agreed that IHB would provide members of the Editorial Board with digital versions of the existing Manual (along with the separate Geodetic Commentary) so they could begin the processes of reviewing and revising the sections that related to their respective disciplines. CD-ROMs containing the necessary information were accordingly distributed to members of the Editorial Board prior to the end of the meeting.

A short gathering of the Editorial Board was scheduled for the following day, to discuss possible mechanisms for publication, to devise a general work plan and timetable, and to schedule a follow-up meeting that would review progress and develop a more detailed work plan prior to the 2002 ABLOS Business meeting. [This meeting took place as scheduled, and its deliberations are summarized in separate minutes.]

While the ABLOS Chairman has oversight responsibility for the work of the Editorial Board, it was agreed that it would be desirable for the Board to have its own Chairman who could monitor progress and keep the undertaking on track. A volunteer was called for, but none stepped forward.

4. IOC Advisory Body of Experts on the Law of the Sea (ABE-LOS)

Chairman Carleton reported on his attendance at the First Meeting of ABE-LOS in Paris, June 11-13, 2001, where he made a presentation that outlined the composition and purpose of ABLOS. He commented on the ambiguity that is likely to arise from the two groups' similar names, and expressed concern about the possibility of confusion among non-members concerning the groups' respective identities and mandates. He also pointed out that ABE-LOS has more members than ABLOS, which may well suit its role as a forum for discussion, but less so as an agent for action.

For the time being, it appears that ABE-LOS will concentrate on issues that are related to Marine Scientific Research; these could offer opportunities for the pursuit of interests that are shared with ABLOS. As an example, Chairman Carleton alluded to ABE-LOS concerns about instituting a global mechanism for advising coastal states whenever research buoys drift into EEZ's or Territorial Seas; one methodology that is presently under consideration would rely on a commercially-available data base of maritime boundaries that is known to be inaccurate. This is an area where ABLOS should be able to provide sound technical advice and guidance.

It was decided that the Chairman of ABLOS will communicate with the Executive Secretary of IOC, drawing the latter's attention to the ambiguity in names, and offering to collaborate with ABE-LOS across a range of common interests in an arrangement similar to that provided for in the IOC/IHO Memorandum of Understanding.

5. IOC Statement

A copy of a Statement approved by the IOC Executive Secretary was distributed to participants, outlining the history and objectives of IOC's involvement with ABLOS (Attachment 2). It also underscored IOC's intention to focus on the rendering of assistance to developing countries in the field of marine science, and on the building of capacity through the design and delivery of training courses on the implementation of UNCLOS Article 76. Such initiatives would be undertaken in close consultation with ABLOS.

This document triggered a lengthy discussion concerning the nature and the scope of the interactions between ABLOS and its parent bodies, and the definitions of their respective mandates. It was agreed that ABLOS would respond to IOC with a letter articulating a positive response to the Statement, and suggesting a complementary approach for achieving the IOC 's declared objectives by pursuing them as part of a broader program for upgrading the capacities of regional scientific and technological centres in developing countries, in accordance with the provisions of UNCLOS Article 276 and 277.

6. Reports from Members on requests and information concerning continental shelf limits

Mr. Zinchenko gave a short briefing on the extension to 2009 of the time limit for presenting continental shelf submissions to the Commission on the Limits of the Continental Shelf. He referred Members to UN Documents SPLOS/64, 72 and 73 for particulars. He also announced that CLCS and ITLOS elections would take place during the next (12th) Meeting of States Parties, April 16-26, 2002; the 10th Session of the Commission would be of three weeks' duration (starting with the week of 25 March 2002), in case there was a submission. If no submission were received or ready to be considered, the 10th Session might be reduced to one week, or cancelled altogether, depending on the workload of the Commission. In view of the forthcoming election of 21 members of the Commission, the CLCS proposed that the 11th Session of the Commission in its new composition should be held from 24 to 28 June 2002.

Members reported no direct requests from coastal states for assistance in determining continental shelf limits, however the representatives for DOALOS and IHO reported queries from several states for information and clarification concerning the implementation of Article 76. They and other Members also shared information which they had received concerning the status of continental shelf delimitation in several parts of the world.

7. Arrangements for the Second ABLOS Conference, October 18-19

RAdm Guy outlined general arrangements for the Conference. He noted that the deadline for the release of the Conference Proceedings was October 31, and that not all speakers had submitted their presentations; he asked session conveners to emphasize to delinquent speakers the need to deliver their manuscripts (formatted in accordance with Instructions to Authors) in time for inclusion in the Proceedings. The Proceedings will not be reviewed; they will be circulated on CD-ROM, with posting on the ABLOS Website suggested as a complementary means of distribution.

Dr. Vanicek proposed and Members endorsed a vote of appreciation to Conference Chairman Chris Rizos and to his assistants Hans-Peter Rohde and Joel Barnes for a job well done.

8. Defining Territorial Seas Baselines in ice-covered areas

Dr. Harsson gave a presentation (see Attachment 3) concerning the difficulties of defining Territorial Seas Baselines in areas where the coastline is characterized by permanent or persistent ice cover. Illustrating with examples from Svalbard and Antarctica, he pointed out that the problem is not specifically dealt with in UNCLOS, and suggested that ABLOS play a role in seeking a solution. Members were asked to provide feedback on the issue, addressing specifically the feasibility of developing a special section in the next edition of the TALOS Manual. In the meantime, Dr. Harsson and Mr. Macnab were requested to gather information on current state practice in the Arctic, while RAdm Guy offered to do likewise in Antarctica.

9. ABLOS Website

Members agreed that the Website is providing good service, and expressed their appreciation to Dr. Rizos for maintaining this important communication channel. Mr. Zinchenko recommended that all ABLOS Conference Proceedings be posted on the site. Other suggestions were offered as well: (a) that a section on Frequently Asked Questions (FAQs) be instituted; (b) that Members ' CVs be posted to the site; and (c) that a link be established to the IBRU discussion list. Dr. Rizos promised to consider this feedback and to take appropriate action.

It was agreed that the obituary for Jack Weightman which now appears on the Website would be included in the Minutes of this meeting, along with relevant correspondence from family members (Attachment 4).

10. ABLOS secretarial services at IHB

It was agreed that IHB is providing a good level of service to ABLOS, but it was recognized that maintaining levels of communication can be difficult at times when the Bureau's representative is in extended travel status. RAdm Guy indicated the latter problem will be resolved by appointing an alternate member of IHB staff to monitor e-mails related to ABLOS.

Mr. Macnab reported that with his impending retirement, he may not be in a position to maintain the ABLOS e-mail alias on his current institutional mail handler. He suggested that it would be desirable to transfer this alias to the IHB's mail handler, and indicated that he would communicate directly with IHB staff concerning the matter.

While ABLOS Members who represent IAG benefit from the secretarial services provided by IHB, it was pointed out that unlike their IHO and IOC counterparts, they receive no support from their parent organization for involvement in ABLOS activities. It was agreed that ABLOS will contact the IAG executive to draw their attention to this situation, and to suggest they consider providing support that will facilitate the participation of their representatives.

In responding to a query concerning the state of ABLOS finances, RAdm Guy reported a balance of 31,393 FFR in the ABLOS Conference Fund. This reflected a 5,000-6,000 FFR holdover from the 1999 Conference, bolstered by registration fees received to date for the 2001 Conference. It was agreed that a financial report will be delivered at every future Business Meeting, to be introduced as a standing item in the Agenda.

11. Global Vertical Reference System

Dr. Vanicek reported that IAG, with the blessing of the IUGG, might recommend the adoption of the Global Vertical Reference System. It was noted that IHO Member States were being asked to comment on this proposition, and it was suggested that it would be useful to give ABLOS Members a similar opportunity. RAdm Guy agreed to provide ABLOS Members with a copy of the IHO's call for comments.

12. Election of new Vice-Chairman

Dr. Rizos was elected Vice-Chairman by acclamation, to replace Mr. Macnab upon the latter's accession to the Chairman's position.

13. Other business

A brief discussion explored options for inviting other organizations with UNCLOS interests to participate formally in the activities of ABLOS, e.g. the International Geographical Union, the International Law Association. No specific decisions were reached, however Members were requested to consider the pros and the cons of expanding the disciplines that are represented by the ABLOS membership, and to make their views known.

It was agreed that the next ABLOS Conference will take place in 2003 in Monaco. The theme and members of the Organizing Committee will be determined during the 2002 Business Meeting.

Subsequent to the Meeting, Mr. Carleton circulated a notice relating to the present and future composition of ABLOS (Attachment 5).

14. Date and venue of next Business Meeting

Subject to formal confirmation from Japanese authorities, Dr. Katsura invited Members to consider holding the next Business Meeting at the Headquarters of the Hydrographic Department, Japan Coast Guard, in Tokyo. He suggested a three-day program from October 23 to 25 (Wednesday to Friday) which would feature the following activities: (a) the Business Meeting; (b) reciprocal presentations by staff of the Japanese Hydrographic Service and Members of ABLOS; and (c) an excursion to facilities of the Japanese Hydrographic Service, including a visit to a survey vessel.

15. Close of Meeting

With all business attended to, the Chairman expressed his appreciation to Members for their lively participation, and to the IHB for its efficient hosting of the gathering. He then closed the Meeting.

Attachment 1

AGENDA: 8th ABLOS BUSINESS MEETING

0930, 17 October 2001

International Hydrographic Bureau
Monaco

1. Welcome and administrative arrangements - IHB.
2. Review of the Minutes of the 7th ABLOS business meeting - Chairman.
3. Discuss and plan the work programme for the electronic version of the updated edition of the TALOS Manual - ABLOS Members
4. Report on the first meeting of the IOC ABE-LOS working group - Chairman.
5. IOC Statement on training and capacity building - IOC.
6. Report from Members on requests concerning continental shelf limits, including information regarding submissions and the effect of the extension in the time limit - ABLOS Members.
7. Report on the arrangements for the 2nd ABLOS Conference - IHB.
8. Discussion on the problems of defining the territorial sea baseline including those areas covered by ice. A new section in the TALOS manual perhaps? - ABLOS Members.
9. Update on the ABLOS Web Site. Do we need improvements - Web Master.
10. ABLOS Secretariat Services - IHB.
11. Global vertical reference system - IAG.
12. Election of the new vice-chairman - an IAG candidate - ABLOS Members.
13. Any Other Business - Chairman.
14. Date and venue of next meeting - Japan.
15. Close of meeting - Chairman.

Attachment 2

IOC STATEMENT ON TRAINING AND CAPACITY BUILDING

It was at the invitation of the IHO that the 29th Session of the IOC Executive Council decided in 1996 that IOC would join the Advisory Board on the Law of the Sea (ABLOS) where IOC is represented by Dr. Samuel Betah of Cameroon, Dr. Jin Xianglong of China, and Mr. Ron Macnab of Canada.

Where the Law of the Sea is concerned, the function of the IOC is to “respond, as a competent international organization, to the requirements deriving from the United Nations Convention on the Law of the Sea (UNCLOS)” (Article 3, 1 (c), *IOC Statutes*). It consists, among other things, of making recommendations and coordinating programmes in education, training and assistance in marine science, ocean, and coastal observations and the transfer of related technology (Article 3, 1 (d)), and also mapping projects development.

For this purpose, “the Commission will collaborate with international organisations concerned with the work of the Commission, especially with those organizations of the United Nations system which are willing and prepared to contribute to the purpose and functions of the Commission and/or to seek advice and cooperation in the field of ocean and coastal area scientific research, related services and capacity building.” (Article 2 – 2, (*IOC Statutes*).

IOC plays a catalytic role in the technical and scientific assistance provided to its member states. In this regard, IOC, through its three sections (Ocean Sciences, International Ocean Data Exchange and GOOS) develops and strengthens the capacity of its member states, particularly those from developing countries in order to allow them to access to appropriate data and knowledge in the field of marine sciences.

An IOC survey on member states’ practices in the field of marine scientific research and in the transfer of technology indicates that capacity building is one of the priority items to be addressed. This information confirms the outcome of discussions during the recent UN Informal Open-Ended Consultation Process (UNICPO II) and the UN General Assembly (UNGA Resolution a/55/7).

In this light, during the coming biennium when IOC will chair the ABLOS, IOC proposes to concentrate on capacity building. This could be done through the design of training courses on the implementation of Article 76 of UNCLOS as recommended by the Commission on the Limits of the Continental Shelf and the 11th Meeting of States Parties to UNCLOS. These courses would be based upon the CLCS Scientific and Technical Guidelines adopted in May 1999. In concert with ABLOS, IOC in cooperation with member states, would put into practice the recommended curriculum on the implementation of Article 76 of UNCLOS, and organize training courses in this topic, particularly for developing countries.

This curriculum should be in particular targeted to serve as an IOC training tool for national experts responsible for submitting scientific and technical data to the Commission on the Limits of the Continental Shelf.

The First Meeting of the IOC Advisory Body of Experts on the Law of the Sea (ABE-LOS I) was held in Paris in June 2001, and expressed appreciation for the existing relationship with ABLOS. During ABE-LOS I, the outgoing Chairman of ABLOS, Mr. Chris Carleton, presented the potential areas of cooperation between the two committees, among others the offering of “technical advice to members of ABE-LOS [...] for questions concerning the limits of [...] the outer limits of the continental shelf in accordance with the Guidelines laid down by the CLCS”. The development of the proposed IOC curriculum would provide an excellent opportunity to realize this cooperation.

TERRITORIAL SEAS BASELINES IN ICE-COVERED REGIONS



Example of a glacier at Austfonna, on the NE coast of Svalbard. Glaciers in this and other Arctic locations tend to break up at or near the coastline. Photo Norwegian Polar Institute.



Example of a glacier in the Antarctic. Glaciers in this region are often thick, with edges in the open ocean at some distance from the coastline. Photo Norwegian Polar Institute.

OBITUARY: JACK ARTHUR WEIGHTMAN -- 1928-2001

It is with deep regret that we record the death of Jack Weightman in Glasgow on 15 January 2001. Born in London on 7 July 1928, he leaves a widow, Joy, and three children. His education began at Highbury County Secondary School where he obtained a distinction in Pure and Applied Mathematics in his Higher School Certificate. From there he went to Queen Mary College London from 1946-1949 where he achieved a BA with 1st Class Honours in Mathematics. He then took the Diploma course in Surveying at University College London. There his final report contained such comments as "In an intellectual class much above the remainder"; "Knows the subject thoroughly and has generally achieved 80 - 90% on topographic and geodetic test papers." Such prowess did however come with a down side described as "Liable to lose marks to examiners who prefer a straight answer to a survey question rather than a discourse on points of higher mathematics."

In 1949 he took a Colonial Survey appointment in Tanganyika where, after a spell in Dar Es Salaam, he worked as a District Surveyor in Mtwara and Morogoro. While there he gained proficiency in Swahili to add to his other language skills in French, Latin, German and Russian.

In July 1954 he transferred from the local Survey Department to the Directorate of Colonial Surveys which had a party in Tanganyika starting an extensive programme of primary and secondary triangulation, including the primary chain which extended from the German stations around Morogoro south to the Mocambique border and across to Nyasaland. Whilst in Tanganyika he was involved in the determination of one of the last catenary measured primary baselines - that at Nachingwea, where he was a tape reader and wrote the report on the field computations.

In October 1955 he was posted to The Gambia to take over the precise traversing. They were doing catenary taping by day and angular measures early morning and late evening. Working in temperatures that often topped 100° F during the day and the mid to low 90s at night was not at all pleasant. With no refrigerator, limited fresh food available, plagued with flies by day and mosquitoes by night, Jack was unfailingly cheerful, always having the mot juste for the situation. In May 1957 he joined the Nyasaland party. There he organised the rather difficult primary triangulation crossing of Lake Nyasa. This involved a braced quadrilateral with as near as possible simultaneous observations from two primary stations on the Tanganyikan side manned by Royal Engineers, and two primary stations on the Nyasaland side manned by himself and Robin Auld. The distance across the Lake was about 70 - 80 miles and the whole procedure took about six weeks. He showed great determination in seeing the job through when the weather conditions caused problems and he willingly undertook the two/three day walk to his observation point at Mpanda.

Overall his experience in Africa covered most aspects of primary and lower order survey with all the associated manual computations and adjustments. Around January 1959 he joined the Military Survey Service at Feltham where he became a Principal Scientific Officer (1962) in the Geodetic Office. From 1960 to 1964 he was seconded to the Joint Air Reconnaissance Intelligence Centre. On returning to Geodetic Office he became Head of the Satellite, Astronomy and Gravity Branch.

He was a member of the Western European Sub-Commission of the International Commission for Artificial Satellites, which was organising the programme of optical observations to the balloon satellite Echo throughout Western Europe. General Kelsey was its secretary and Jack was in charge of one of the two computing centres; the other being in Munich. He was later responsible for the computation of the median and tri-point position for Norway, Denmark and the UK in the North Sea for the division of the oil and gas assets. From 1960-1964 he was UK Rapporteur to Commission III of the International Society of Photogrammetry.

He was much respected by the U.K.O.O.A. Positioning Fixing Committee as a Government Adviser on geodesy, particularly satellite positioning in the North Sea area - a subject with which all in the industry were struggling. He had great enthusiasm for the offshore oil industry and took to it like a duck to water, ever ready to go to sea if the need should arise. As a result he was recruited in 1978 to Burmah Oil in Swindon as their Geodetic Adviser. This organisation was to become B.N.O.C. and later BritOil and Jack moved to the Glasgow office as Geodetic Adviser and Chief Surveyor. As this organisation grew so the post was split with Jack remaining the backroom specialist and mostly attending seminars and conferences. He stayed with them until he was offered early retirement in 1983, when he set himself up as a sole trader consultant.

In 1965 he was mathematics Editor for the translation of a 392 page Russian text on the Theory of Energy and Mass Transfer. He vetted various other publications, acted as examiner for the R.I.C.S. and advised on the justification for continuation of the UK optical tracking of artificial satellites. For many years from 1971 he served on the Geodesy Sub Committee of the Royal Society's British National Committee for Geodesy and Geophysics (the National Committee being the UK body corresponding to the I.U.G.G., and the Sub Committee corresponded with the I.A.G. - International Association of Geodesy). He was also a long standing member of the Sub Committee's Working Group on Satellite Geodesy and also served on the West European Satellite Triangulation Sub-Commission of I.A.G.

He was passionately opposed to the introduction of computers into geodetic computations especially those involving the adjustment by least squares of survey networks. He regarded the "put it all into the melting pot" approach as not the way to go. He favoured hand computations as he felt these gave a feel for the work. He reminded colleagues that in the old days, much time and effort would be spent in deriving the best computational path for an adjustment. If the observations were of differing weights he was probably right. He certainly had no affinity for computers.

He was an enthusiast for having to hand every reference work that might just be of use to him. So much so, that on entering his office one had to optimise the route to cross the floor to get to his desk via the piles of books, periodicals, photostats and the like.

He built up an unimpeachable position as an authority in the world of international geodesy, where his contributions to the early development of the use of photographs of satellites against a star background for positioning were substantial and original. He was particularly given to lateral thinking such as the use of buried masses to model the geoid. Whether it was practical field survey, photogrammetry, satellites, computers or just pure geodesy he would gladly turn his hand and able mind to making some advance in the overall knowledge of the subject. He took great pride and pleasure in mixing on equal terms with his heroes in the specialised world of Geodesy and Geophysics.

He always strove to get the ultimate accuracy out of a computation sometimes making the task last longer than anticipated. It has been suggested that in Tanganyika even simple traverses were subjected to major readjustments. He could be pedantic at times with the formulae he was forever trotting out, but he had a heart of gold and was always anxious to get things exactly right.

He always gave you the feeling that he valued your contribution. He had a great sense of humour, ready to laugh, particularly at himself, often one of the first to ask a question, usually with a humorous verbal twinkle at the end. He was interesting, witty and good company but a slightly controversial figure and those humble land surveyors who had minimal mathematics ability were in awe of his abilities. He had a whimsical sense of humour and affected what can only be described as a boffinish approach to life. He will be remembered as a genuine character, an engaging person,

rather professorial in nature, possessing a brilliant mind capable of holding his own in advanced mathematical and scientific discussions, but on the other hand administration did not come to him easily. It is all too easy to picture that soberly dressed, bearded figure with an impish gleam in the eye as he developed some outrageous speculation for the sheer pleasure of seeing how far he could take it before it became untenable. Although he could be intensely irritating to chairmen with his pedantic interjections, he could always by counted on to bring a smile to the faces of other participants and introduce a measure of levity to the proceedings.

He was good company, being a gourmet and with many interests outside geodesy. He was a competent sailor and crewed frequently for Colonel Robin Gardiner-Hill, when both of them worked in a top security area of the Survey Production Centre R.E. On one occasion when driving down to Beaulieu to catch the tide for a crossing to France it became clear that each thought the other had loaded the hamper of provisions from Fortnum's, which therefore had to remain securely locked up over the weekend! They existed on iron rations on that trip.

For many years he was a regular attender at gatherings of I.U.G.G./ I.A.G. and a very active participant in discussions. In 1979 he was on the Special Study Group 1.26 for Contributions from Satellite Geodesy to Terrestrial Geometric Geodesy. In the 1990s he was President of the Special Study Group of I.A.G. on History of Geodesy and was also the I.A.G. representative on the Advisory Board of the Law of the Sea (ABLOS) until his death. During 1987-91 he was UK representative to R.E.U.N. - the Levelling Sub-Commission of I.A.G. Commission X. He became a Fellow of the R.I.C.S. in 1971, and served on its Land Surveying Divisional Council 1979-86; 1989-9 and 1992-01. He was an active R.I.C.S. member in Scotland where he was on the Scottish Council 1983-7; 1992-3 and 1995-2001, and

the Scottish L.H.S. Committee 1982-91 (Chairman 1984-6). In addition he was on the Glasgow and West Scotland Area Committee 1987-2001 (Secretary 1988-1993; Chairman 1993-1994; 1996-1997; V. Chairman 2000-2001).

He belonged to many other societies including:-

Royal Geographical Society from 1950;

Royal Astronomical Society from 1963;

Photogrammetric Society from 1954;

Field Survey Association from 1955;

Hakluyt Society from 1957;

Chairman of the Association of British Geodesists 1972-74;

British Interplanetary Society from 1964;

British Computer Society from 1959;

London Mathematical Society from 1948;

Hydrographic Society from 1980;

Institution of Civil Engineering Surveyors from 1975 and a Chartered Engineer.

About the time he resigned from the Scientific Civil Service he surprised all his friends who had considered him a confirmed bachelor, by marrying, and with his wife Joy they faced the task of moving his collection of the Times newspapers, which spanned scores of years, up to Glasgow. There, aside from his professional interests, he was active in the local Hillhead Methodist Church in Glasgow.

Compiled with assistance from many of his friends and colleagues.

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ACKNOWLEDGMENT FROM RIK WEIGHTMAN

Having just got 'on-line' - I like to fly in the face of technology in a similar way to my father (!), I have just read the kind obituary which your organisation has posted in respect of Dad. In contradiction of the old adage, time is unfortunately not the best healer, however the immense support that we have all received - myself, Brian, Frances, and Joy - has been overwhelming, and indescribably helpful.

As you are aware, Dad was one of the kindest, most modest men on this planet, and would never have anticipated the level of reaction to his untimely death. I know he is very proud even now. Although I will never have his way with words, I cannot tell you how comforting it is for all of us to know that there are so many people out there who are remembering him as we are.

With his never ending optimism and faith in human kindness, I am only glad that he is not around to see the atrocities of the last few days. Once again, thank you, my thoughts are with you.

Attachment 5

SUBSEQUENT COMMUNICATION FROM MR. CARLETON CONCERNING ABLOS MEMBERSHIP

Circulated October 30:

One matter we did not address at the 8th Business Meeting was the present membership of ABLOS. As I understand it at the moment the position is as follows:

IHO Members

Neil Guy	Until 2003
Chris Carleton	Until 2003
Tadahiko Katsura	Until 2003

IAG Members

Petr Vanicek	Until end of 2001 (subject to confirmation)
Bjorn Geirr Harsson	Until 2003
Chris Rizos	Until 2003

IOC Members

Ron Macnab	Until 2003
Samuel Betah	Until 2003
Jin Xianglong	Lapsed 2001

DOALOS

Alexei Zinchenko Ex-Officio

Corresponding Members

Shin Tani	Japan
Jerome Sheppard	New Zealand
Iain Lamont	New Zealand
Dick Gent	UK
Daniel Rio	France

The IAG and the IOC will be required to nominate replacements for Dr. Vanicek and Dr. Jin this year. During 2002, all three organisations will have to canvass their membership for nominations for all posts due for re-election in 2003. It would be very helpful if ABLOS had an input into the choice of the nominated members if there are more candidates than places. It is assumed that Chris Rizos will be automatically re-nominated by IAG as he takes over the chairmanship in 2003.