InterRidge

Steering Committee Meeting Report

University of Washington
Seattle, WA USA
October 27 & 28, 1993

Convenrs:
D.H. Needham, InterRidge Co-Chair
J.R. Delaney, InterRidge Co-Chair

Contents

InterRidge Steering Committee Meeting
Participants

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Absent: Jean Francheteau, Hans Schmicke, Martin Sinha, Kensaku Tamaki

InterRidge Steering Committee Meeting
Seattle, October 27&28 1993
Agenda

Wednesday, October 27

9:00	Introduction and Discussion of Agenda
	Status of Global and Active Processes Projects
	Report on Meso-Scale Project : Symposium and Workshops, Durham
	Back-Arc Basin Meeting, Seattle
Break	
	Identification and discussion of major questions arising from Workshop Reports
12:15	Lunch
13:45	-Progress of InterRidge Constitution; membership dues administrative contacts
	-Memorandum on InterRidge Aims, Organization and Budget
	-Possible additions to membership of Steering Committee and Working Groups
Break	
	-Possible new member nations; non-member nations
	-Altermates for National Representation
	-SCOR Working Group 99
	-Interaction with other international projects and organizations

Thursday, October 28

9:00	Comments on items discussed on Wednesday
	Progress of Active Processes Project
Break	
	Report on Global Workshop
	Summary of integration of biological efforts within the InterRidge Plan
12:15	Lunch
	-InterRidge Office
	-Next General Meeting and provisional calendar of other meetings
	-InterRidge News
Break	
	Finalization of the InterRidge Program Plan

InterRidge Steering Committee Meeting Report
October 1993

The meeting was attended by the following members of the Steering Committee: John Delaney (co-chair), H.D. Needham, (co-chair), C.H. Langmuir, R.S. Detrick, D. Désbruyères, P.J. Fox. Members of the Steering Committee unable to attend the meeting were J. Francheteau, H. Schmincke, M. Sinha and K. Tamaki. Japan was represented by T. Matsumoto, Germany by R. Rihm and the UK by R. C. Searle. T. Stroh, outgoing InterRidge Coordinator, attended the morning session on the first day of the meeting. H. Sloan attended as Acting InterRidge Coordinator and D. Epp as an observer from the US National Science Foundation.

1. InterRidge Office

The Steering Committee expressed its appreciation to T. Stroh who has been coordinator of InterRidge since the initiative began in 1989 and who left the InterRidge Office at the beginning of October 1993. The Office will move from the University of Washington to the University of Durham in January 1994 when R. Searle will take over as Chair of InterRidge. H. Sloan will be Acting Coordinator at the office in Seattle until December 1994 and then move to Durham as InterRidge Coordinator.

2. Reports on InterRidge Projects

2.1 Global Project Workshop, Paris, April 8-9 1993

This workshop followed a 1992 request to the community for letters of interest concerning reconnaissance of the least known areas of the Mid-Oceanic Ridge. All who submitted letters were invited to the workshop which was attended by forty seven people from six countries. The meeting focused on three geographic areas of interest: the Southwest Indian Ridge, the Southeast Indian Ridge and the Pacific-Antarctic Ridge. In general, it was felt that particular priority needed to be assigned to the Pacific-Antarctic Ridge as the most unknown region for which investigation cannot easily be justified in a typical research proposal. Speakers gave the broad setting of each of these ridges after which participants were invited to give a summary of projects of particular interest to them in these areas. Working groups were formed by subdivisions corresponding to the three mega-segments and each group produced a report including summaries of interesting aspects of the areas and of what is already known about them, a discussion of the exciting scientific problems pertinent to each particular area and a list of priority targets for study. New project proposals were discussed at the meeting, two of which have since been funded.

Positive aspects of this meeting included the identification of a number of challenging scientific problems, a broader awareness of the work that has been done, or is about to be done, in these areas, and the galvanization of participants to go out and write their own proposals. The meeting underscored the reality that international cooperation rests on the personalities of the people involved as well as on planning documents. It brought to light, for example, the conflict that can arise between the preference of the individual investigator to pursue his or her own project unfettered, and the constraints of the effort required by a cooperative project designed to benefit the greater good of the community and improve the overall coherence of scientific strategy.

Participants in the Global meeting listed a number of areas in which InterRidge could contribute to the advancement of ridge science: information exchange, data management, development of a global data base, compilation of an InterRidge global mid-oceanic ridge atlas for bathymetry, magnetics, gravity, petrology, etc. This last item was cited as effort in which InterRidge could make a valuable, concrete contribution of historical importance, and which could be accomplished only through coordinated international cooperation. The atlas would be available both on line, and as a bound volume, and would establish protocols for data formats and syntheses of existing data.

There were reservations about the formal role of InterRidge as an initiative which does not provide funds for research projects at sea. A discussion at the end of the meeting of possible mechanisms for initiating cooperative projects resulted in the following suggestion: letters of intent to work in a specific area or on a specific project would be addressed to the InterRidge office; summaries would be published or, if requested, remain confidential; the letters would be reviewed in some appropriate way by InterRidge and receive, or not, an InterRidge endorsement indicating that the proposed work is consistent with the priorities and objectives of the InterRidge program.

There is a significant number of people ready to undertake global studies of Arctic ridges. These were not considered at the Paris meeting and will need to be discussed in a future workshop.

2.2 Meso-Scale Project

2.2.1 Segmentation and Fluxes Symposium and Workshops, Durham, September 22-25 1993.

The symposium and the workshops were widely advertised and together attracted about a hundred and fifty people. Feed-back has been very positive. The symposium was timely in that investigators interested in the segmentation and fluxes of ridges were at a point where exchange of information and discussions of the kind facilitated by the Durham meeting, and the way it was structured, were particularly useful. Four invited keynote addresses were given in each of three aspects of segmentation: a) tectonic/geophysical/observational; b) geochemical/petrological; c) theoretical and modeling. Thirty minutes were allowed for discussion after each keynote address, which provided time for stimulating debates. This type of meeting formula is recommended for encouraging discussion. In addition to the keynote talks there were over 70 contributed presentations in the form of posters.

The workshops were convened immediately following the two-day symposium. The Segmentation Workshop was sub-divided into three groups focusing on the dimensionality of mantle flow and melt delivery; the 4-D architecture of the lithosphere; and temporal variability. The Fluxes Workshop particularly emphasized the quantification of all fluxes occurring along a ridge segment and the definition of methods to achieve this.

The need to develop integrated investigations (including long-term monitoring) on a few selected segments was re-iterated in the workshop discussions. Participants declined to specify particular locations. Extensive data coverage is one criterion but sites would need to be selected as geologically "representative" with respect to spreading rate and other variables, and no one site would necessarily be the best for all types of investigation. The development of predictive physical and chemical models appeared repeatedly as being important in the near and medium term. The need for seismological studies (both passive and experimental) figured prominently.

In general, participants in the workshops expressed reticence about defining the specifics of an InterRidge program in the research areas considered in Durham, and about proposing formal procedures for implementing a research plan. That InterRidge does not have funds to carry out projects at sea and that these are ultimately decided upon at the national level are evidently among the important factors here. There was full recognition that InterRidge could have a very positive role in the sharing of ideas and information, in proposing priority areas for research efforts, in encouraging collaboration, and in certain efforts of co-ordination. International meetings and workshops would be an important vehicule for attaining these objectives.

2.2.2 Back-arc Basin Workshop, Seattle October 11-13 1993

The workshop was attended by twenty one people from half a dozen countries. The focus was on the influence of subduction on crustal formation in back-arc basin settings. The workshop was organized around presentation of general summaries of current knowledge of marginal basins and of activity reports, followed by separate and joint working group meetings on a) spreading processes b) melt generation and c) biogeochemical fluxes.

Recommendations coming out of the workshop were a) that an index of existing and planned databases from back-arc basins be compiled, administrated, and distributed by the InterRidge Office, b) that geophysical and geochemical database archives be compiled by scientists working in back-arc basins and be administrated through the InterRidge Office, c) to target along segment variations by encouraging particularly swath bathymetric, gravity and seismic refraction studies and additional tomographic (other than in the Lau basin) investigations as well as rock sampling for geochemical work, d) long-term monitoring of mass and energy fluxes, including hydrothermal fluxes and seismic activity, particularly using abandoned sea-floor communication cables. It was recommended at the workshop that InterRidge studies of marginal basin accretion be linked as much as possible with ODP. Hydrothermal deposits of the Okinawa Trough were cited as one possible target to be proposed for drilling.

2.3 Active Processes Project

It was agreed upon at the 1992 General InterRidge meeting in York that the Active Processes project would take longer to initiate than the Global and Meso-scale projects. Considering the discussions already held both at the Brest and York meetings, J. Cann (Active Processes W.G. chair), has suggested that a white paper be prepared to serve as a support for any future meeting concerning Active Processes. This will be the initial task of the Active Processes Working Group, to be followed by a workshop, which is planned to be convened in Spring 1994. A tentative venue is the Woods Hole Oceanographic Institute.

3. Conclusions from the workshops: InterRidge policy

The Global and Meso-scale workshops held in 1993 were oriented towards encouraging communication and exchange within the international ridge sciences community with the objective of better identifying the principal scientific questions concerning current ridge research, and of translating the general ideas into draft outlines of an implementation plan. With the achievement of this first, workshop stage, it is appropriate that the

Steering Committee uses the results of the workshops to re-align, if necessary, the direction and approach of InterRidge concerning the organization of the scientific program in the near future. After debate of the issues, the following decisions were taken:

- Symposia and Workshops: InterRidge will continue to act as a facilitator of international communication and exchange of ideas, plans and information through the organization of symposia and workshops. Such meetings, with well-defined aims (general or highly focused) and constructed as a complement to various international meetings (e.g. AGU) have already demonstrated their usefulness, and appear to have wide support in the community.
- InterRidge Stamp: While InterRidge will aid in the coordination of multi-national and bi-lateral projects initiated by individual groups or nations, it will not at this time proceed further with the idea of issuing a formal InterRidge endorsement to specific funding proposals. The InterRidge Program Plan, together with other documents such as workshop reports, will serve to define the broad objectives of InterRidge and, coupled with a rolling addendum, may be used by investigators, reviewers and funding agencies to evaluate the "InterRidge relevancy" of a research proposal.
- Initiation and coordination of an InterRidge Project: InterRidge will seek to define, initiate and eventually co-ordinate actions within the Global, Meso-scale and Active Processes projects. The priority will be to develop strategies to address problems which are too complex or too large to be effectively undertaken using the resources of any one nation. In this regard, coordinated, "non-directed" science projects with a written science plan of the Fara type can help the ridge sciences community and appear to be well viewed by funding agencies. InterRidge projects would be based on compelling scientific questions identified as being of international interest in workshops and meetings, and in consultation with InterRidge countries. To advance this kind of "non-directed" science, InterRidge will need to play a pro-active/reactive role. Action along the following lines should begin in 1994:
  1. Send to National Correspondents (for circulation among national institutions and groups, and for discussion by the scientific committees of national programs) a list of proposed project themes and possible geographic foci drawn from InterRidge Global and Meso-scale Workshops. InterRidge countries would be asked what they see as appropriate targets for a collaborative InterRidge effort, and whether and how they would be interested in participating.
  2. Adjust the project(s) according to responses received from InterRidge nations.
  3. Publicize the resulting InterRidge project or projects and organize the necessary workshops to develop strategies and concrete implementation plans. These would be a reference for proposals submitted to various national funding agencies. Project co-ordinators and convenors for the workshops would be chosen by discussion between the Steering Committee and the InterRidge working group concerned. InterRidge should aim to be able to include in its budget a travel fund to help bring participants to meetings and workshops or to bring investigators from different nations together to collaborate on specific actions.

  Possible themes/geographic foci for InterRidge Project(s) coming out of the Global and Meso-scale Workshops include:
  - Fluxes on a segment scale
  - 4-D architecture of the lithosphere
  - Mapping/sampling in the Indian Ocean: Southwest Indian Ridge, Southeast Indian Ridge and the Australian-Antarctic Discordance.
  - Tomography experiment in the Lau Basin
  - Compilation of a comprehensive Global Mid-Ocean Ridge Atlas.
- Information Data Base: Following well received initial publication of track lines of recent and funded mid-oceanic ridge projects at sea (see InterRidge News), the InterRidge Office will compile an information data base consisting of a geographical index of surveys, sample locations and other data. Information would be solicited from principal investigators and it would be accessible, for example, by anonymous ftp or gopher. (This catalog would serve as the first phase of a three phase project if the decision is taken at some later date to expand the information data base into a data archive.) The second step would be to integrate and archive data bases collected as part of the InterRidge research effort. This work would be "science-driven" rather than purely archival; a possible InterRidge role would be to help to prepare proposals which focus on integration of data sets from a particular geographical area specified in an InterRidge project. The third phase would concern the compilation of historical data sets dating from the '80s onward, starting with the most recent and working backwards. Important unpublished data bases exist (in Germany and Russia for example). This would be the most time consuming and costly of the three phases. However, a number of data base archives already exist, for example at LDGO, and would not need to be duplicated but merely referenced through the information/index system. To encourage investigators to contribute their data sets, InterRidge could help in

the coordination of cooperative projects or publications, thereby providing "feedback" to contributors. Through the organization of meetings where investigators present their data bases, InterRidge could provide incentive and opportunity to publish or make available these data. Germany is suggested as a possible venue for a first such meeting.

4. Integration of Biological Efforts within the InterRidge Plan

Since the inception of InterRidge, biology has been deliberately integrated with the geosciences. Whereas an interdisciplinary approach within the geosciences has been fruitful, this is not so evident for ridge biology with respect to the geosciences. It appears that links between the two communities at the present time are limited by the absence of well-defined, fundamental scientific problems necessitating a combined approach to resolve them. On the other hand, it is clear that appropriate integration of biological ridge research within InterRidge should be encouraged not only at the logistical level but also to prepare the eventual development of real interdisciplinary cooperation in the future.

The Steering Committee recommends the creation of an InterRidge Standing Committee for Biology, complementary to the existing InterRidge working groups. D. Desbruy□res will act for the Steering Committee to consult with biological colleagues in order to test support for this action and with a view to an InterRidge biological workshop in late 1994. The workshop would be charged with identifying principal scientific questions in the field and clarifying an InterRidge strategy for biology. The strategy will need to take into account relationships with the largely geosciences-driven Integrated InterRidge projects (Global, Meso-scale, Active processes).

5. Interaction with other programs/organizations

5.1 SCOR Working Group 99

A final proposal has now been submitted to SCOR by Martin Sinha (WG chair), with a reduced list of potential members, as requested by the SCOR Executive Committee. It is expected that the WG (Linked Mass and Energy Fluxes at Ridge Crests) will be approved and activated at the next SCOR meeting. M. Sinha has requested a first meeting of this group in Spring 1994. This working group will be able to give an independent view about how to advance research in the area concerned. It represents a first link for InterRidge with ICSU, which is important for nations with smaller oceanographic programs, and offers a potential means for achieving a larger circulation of InterRidge related information and wider publicity.

5.2 ODP

InterRidge was initially approached by B. Malpas requesting that InterRidge name a scientist to improve liaison with ODP. J. Fox and J. Francheteau were designated to represent the InterRidge Steering Committee. J. Bender was subsequently named to assure a liaison for ODP. Although there is no official liaison, InterRidge is well represented on the PCOM and has a strong influence. ODP represents a resource which InterRidge could exploit for the use of the drilling capability, for the types of surveys ODP is capable of carrying out and eventually as a possible source of funding for certain ridge crest research projects. This is a critical time in deciding the future of the ODP: expression of InterRidge interest could help insure its continued existence. It is also an opportune time for InterRidge to state the priorities of the ridge sciences community within the drilling program as expressed by the workshops. One suggestion is to hold a RIDGE-hosted InterRidge workshop in 1994 aimed at developing ways to utilize ODP and to stimulate the writing of drilling proposals. In the longer term, InterRidge will need to determine how important ocean drilling is to the ridge sciences community and what capabilities should be developed. R. Searle will address the next PCOM meeting in Iceland on behalf of InterRidge.

5.3 Amongst Others the Following

-Global Digital Seismic Network (GDSN)
No specific action on the part of InterRidge at this time; developments need to be followed.

-Marine Environmental Systems (MESH)
A national program linked to international environmental programs. InterRidge to stay informed.

-Margins
Largely a US program, which is moving in the same direction as RIDGE, and concerning all aspects of continental margins. There is some similar interest in other countries.

-International Lithosphere Panel (ILP)
Mutter is the Chair of the IPL and represents InterRidge affairs on this panel, which has been relatively inactive recently.

6. InterRidge Organization and Representation

6.1 InterRidge Membership

Background:

In July of 1992, a letter was sent to countries known to be interested, inviting them to become charter members of InterRidge. A further memorandum was sent to National Correspondents in April 1993 requesting that an administrative contact be identified for their country to whom invoices for membership dues could be sent. Finally, invoices were sent out by NSF directly to the National Correspondents of the countries which had confirmed their InterRidge membership or had indicated their interest in becoming Principal or Associate members.

Current status:

1993 Membership (confirmed)

Principal: France, Japan, UK, US, Spain(?)

Associate: Portugal

1994 Membership (agreed or potential)

Principal: France, Germany, Japan, Spain, UK, US.....

Associate: Australia, Canada, Iceland, Portugal.....

Possible new members:

Italy, Korea, Mexico, Norway, Sweden (all of whom have InterRidge National Correspondents) as well as India, Pakistan, South Africa among others.

Non-member nations:

As of 1994, the InterRidge group of nations will appear clearly as limited to those countries who are paid-up members. A list of national correspondents of non-member countries will be appear separately in InterRidge News.

6.2 Administrative Committee

InterRidge will re-iterate its request to member nations to name a national administrative representative who can deal formally with InterRidge budgetary and related matters for the national agencies concerned. Only three countries have so far responded to this request made in 1992. Administrative representatives would form an InterRidge administrative group, a list of whose members will be circulated among the group and published in InterRidge News. The Administrative Committee would receive relevant InterRidge mailings and be informed of all General and Steering Committee meetings.

6.3 Alternates for national representation

Referring to the Memorandum of July 1992 to National Correspondents, InterRidge member countries will be asked again to supply the name of an alternate National Correspondent in order to avoid difficulties for InterRidge caused by long delays in correspondence and so forth due to absence etc.

6.4 Membership of Steering Committee

Incoming Steering Committee members will be selected by the Steering Committee in consultation with the Principal Member National Correspondents. Each Principal Member nation has the right to one representative on the Steering Committee. Representatives of Associate Member nations have the right to participate in Steering Committee and General Meetings without a vote. The Steering Committee reserves the right to invite representatives of non-principal Member nations to participate in Steering Committee and General Meetings. Steering Committee membership will be limited to about 12 people.

6.5 Membership of Working Groups

The membership of the Working Groups will remain unchanged for the present. Modifications will be open to discussion during to 1994.

7. Documents in hand and workshop reports

7.1 Memorandum on InterRidge Aims and Organization and Budget

Countries who have confirmed their intention to become members, or possible interest in doing so, will be sent a memorandum of InterRidge Aims and Organization before the end of the year; for countries with a confirmed interest in 1993 membership, this will include budgetary information and will be sent before mid-November. In the future, invoices will be accompanied by updates of these supporting documents.

7.2 InterRidge News

An abbreviated issue of InterRidge News will be published before the end of the year containing an update of information and brief summaries of the recent Workshops. An invitation will be made to send scientific contributions to the InterRidge Office in Durham for the Spring issue.

7.3 InterRidge Initial Program Plan

The existing document requires shortening and updating. Once these alterations have been made the document will serve as a general reference for the current (end of 1993) stage of InterRidge.

7.4 Workshop Reports

Reports from the Global and Meso-scale (Segmentation, Fluxes and Back-arc Basins) Workshops will be published in two volumes early in 1994.

8. Next General InterRidge Meeting

The next InterRidge General Meeting will be held in 1995 after the scheduled end of the first stages of InterRidge development. The provisional location and date are Germany in early June.

9. Next Steering Committee Meeting

The next Steering Committee meeting will be held in late Summer/early Automn 1994.

10. Summary of 1994 Calendar

January 1 1994 : Transfer of the InterRidge Office to the University of Durham. R. Searle will take up his duty as InterRidge Chair and H. Sloan hers as InterRidge Coordinator.

Early 1994: Publication of the Global and Meso-scale (Back-arc Basin, Segmentation and Fluxes) Workshop Reports.

Spring1994: The Active Processes Working Group will convene a workshop, provisionally in Wood's Hole.

Spring and Summer 1994: The first workshops focusing on specific themes/questions identified in the Global and Meso-scale Workshops are tentatively planned for this period.

Arctic Mapping
4-D Architecture of the Lithosphere at the Segment Scale: Experiment Design
Segment Scale Flux: Experiment Design

September 1994 : Provisional scheduling of A Steering Committee Meeting in Japan.

Late 1994: Provisional scheduling of an InterRidge Biological Workshop.