



InterRidge

Steering Committee Meeting 1997 Report

**Paris, France
25-26 September, 1997**

**Chair:
Mathilde Cannat**

(January, 1998)

Table of Contents

List of participants.....	ii
Agenda	iv
InterRidge Steering Committee 1997 Report	1
1. Introduction and Welcome (Chair, M. Cannat).....	1
2. New Members	1
3. General organization of meeting and agreement on meeting agenda	1
4. Ratify InterRidge Program Plan Addendum 1996 and accept the Minutes of 1996 meeting	1
5. Matters arising.....	1
5.1 SOSUS	1
5.2 Science Funding	1
5.3 InterRidge Projects and Working Groups	1
6. Coordinator Report.....	1
6.1 InterRidge Office Transfer	1
6.2 InterRidge Membership.....	2
6.3 InterRidge WWW Pages	2
6.4 Working Group Communications.....	2
6.5 Activity in the InterRidge Office.....	2
7. National Updates.....	3
7.1 US - RIDGE (Von Damm).....	3
7.2 UK- BRIDGE (German)	3
7.3 France -DORSALES (Francheteau).....	3
7.4 InterRidge-Japan (Fujimoto).....	3
7.5 Germany - De-Ridge (Rihm).....	3
7.6 Spain (Dañobeitia).....	3
7.7 Portugal (Miranda).....	4
7.8 Norway (Sundvor).....	4
7.9 Canada (Juniper)	4
8. InterRidge Phase II Projects.....	4
8.1 SWIR (Mével, Chair).....	4
8.2 Arctic Oceans (Rihm, Chair).....	5
8.3 Global Digital Database (Blondel, Chair)	5
8.4 4-D Architecture of the Oceanic Lithosphere (Parson, Chair).....	6
8.5 Quantification of Fluxes (German, Acting Chair).....	7
8.6 Back-Arc Basins (Fujimoto, Prospective Co-Chair)	8
8.7 Biological Studies (Mullineaux, Chair).....	9
8.8 Undersea Cables (Chave, Chair)	10
8.9 Event Detection and Response/Observatories (Fox, Guest).....	11
9.0 Project Chairs.....	11
10. InterRidge liaisons with other programs.....	11
10.1 ILP (International Lithosphere Project).....	11
10.2 SOPAC (South Pacific Geosciences Applied Commission).....	11
10.3 SCOR (Scientific Committee on Oceanic Research).....	11
10.4 ODP (Ocean Drilling Program).....	12
11. InterRidge Steering Committee members.....	12
12. InterRidge Budget (Searle and Wilson)	12
13. 1998 Steering Committee Meeting.....	12
14. 1998 Calendar	14
Appendix: Summary of InterRidge Structure and Activities for 1997.....	15
InterRidge Membership and Steering Committee.....	16
InterRidge Phase II Projects	17
InterRidge Publications, Meetings and Workshops.....	18
InterRidge Mailing List	19

List of participants

1. **Mathilde Cannat**, Chair (1997)
Laboratoire de Pétrologie,
Université Pierre et Marie Curie (Paris 6),
4 place Jussieu,
F-75252 Paris Cédex 05, FRANCE
Tel: +33 1 44 27 51 92
Fax: +33 1 44 27 39 11
E-mail: mac@ccr.jussieu.fr
2. **Philippe Blondel**, *ad hoc* (1997)
Southampton Oceanography Centre,
European Way, Empress Dock,
Southampton, SO14 3ZH, UK
Tel: +44 1703 596 555
Fax: +44 1703 596 554
E-mail: pbo@soc.soton.ac.uk
3. **Alan D. Chave**, *ad hoc* (1997)
Department of Geology & Geophysics,
Woods Hole Oceanographic Institution,
Woods Hole MA 02543, USA
Tel: +1 508 289 2833
Fax: +1 508 457 2150
E-mail: alan@faraday.whoi.edu
4. **David M. Christie** (1997)
College of Oceanic & Atmospheric Sciences,
Oregon State University,
104 Oceanography Administration Building,
Corvallis OR 97331-5503, USA
Tel: +1 541 737 5205
Fax: +1 541 737 2064
E-mail: dchristie@oce.orst.edu
5. **Juanjo Dañobeitia**, NC (1995)
Instituto Jaime Almera de Ciencias de la Tierra,
Consejo Superior de Investigaciones Científicas,
C/Lluis Sole i Sabaris s/n,
08028 Barcelona, SPAIN
Tel: +34 93 330 2716
Fax: +34 93 411 0012
E-mail: jjdanobeitia@ija.csic.es
6. **Daniel Desbruyères**, *ad hoc* (1991)
Laboratoire d'Ecologie Abyssale,
Département de l'Environnement Profond,
Direction des Recherches Océaniques,
IFREMER Centre de Brest,
B.P. 70, F-29280 Plouzané Cédex, FRANCE
Tel: +33 2 98 22 43 01
Tel: +33 2 98 22 45 47;
Fax: +33 2 98 22 46 53
E-mail: ddesbruy@ifremer.fr
7. **Christopher G. Fox**, guest
NOAA/PMEL/VENTS Program,
S.E. OSU Drive,
Newport OR 97365, USA
Tel: +1 541 867 0276
Fax: +1 541 867 3907
E-mail: fox@pmel.noaa.gov
8. **Jean Francheteau**, NC (1991)
Département des Sciences de la Terre,
Université de Bretagne Occidentale,
6 Avenue le Gorgeu,
BP 809,
F-29287 Brest Cédex, FRANCE
Tel: +33 2 98 01 61 21
Fax: +33 2 98 01 66 20
E-mail: franch@univ-brest.fr
9. **Hiromi Fujimoto** (1997)
Ocean Research Institute,
University of Tokyo,
1-15-1 Minamidai,
Nakano-ku,
Tokyo 164, JAPAN
Tel: +81 3 5351 6429
Fax: +81 3 3377-3293
E-mail: fujimoto@ori.u-tokyo.ac.jp
10. **Christopher R. German** (1997)
Challenger Division for Seafloor Processes,
Southampton Oceanography Centre,
European Way, Empress Dock,
Southampton,
SO14 3ZH, UK
Tel: +44 1703 596 542
Fax: +44 1703 596 554
E-mail: cge@soc.soton.ac.uk
11. **S. Kim Juniper**, guest
Le Stang - rue Jim Sevellec
Ste-Anne-du-Portzic
29200 Brest
FRANCE
Tel: +33 2.98.05.06.71
Email: juniper.kim@uqam
(on sabbatical from Université du Québec, Montreal)
12. **Catherine Mével**, *ad hoc* (1997)
Laboratoire de Pétrologie,
CNRS-URA 736,
Université Pierre et Marie Curie, case 110,
4 place Jussieu,
F-75252 Paris Cédex 05, FRANCE
Tel: +33 1 44 27 51 93
Fax: +33 1 44 27 39 11
E-mail: cam@ccr.jussieu.fr

13. **Miguel A. Miranda**, NC (1996)
 Instituto Nacional de Invest Cientifica,
 Centro de Geofisica,
 Universidade de Lisboa,
 Rua da Escola Politécnica 58,
 PT-1250 Lisboa, PORTUGAL
 Tel: +351 1 396 1521 ext 209
 Fax: +351 1 395 3327
 E-mail: jmiranda@fc.ul.pt
14. **Lauren S. Mullineaux**, *ad hoc* (1995)
 Biology Department,
 Woods Hole Oceanographic Institution,
 Mail Stop 34,
 Woods Hole MA 02543, USA
 Tel: +1 508 289 2898
 Fax: +1 508 457 2134
 E-mail: lmullineaux@whoi.edu
15. **Lindsay M. Parson**, *ad hoc* (1996)
 Southampton Oceanography Centre,
 European Way, Empress Dock,
 Southampton,
 SO14 3ZH, UK
 Tel: +44 1703 596 541
 Fax: +44 1703 596 554
 E-mail: lmp@soc.soton.ac.uk
16. **Roland Rihm**, NC (1995)
 GEOMAR,
 Forschungszentrum für Marine Geowissenschaften,
 Wischofstrasse 1-3,
 Gebäude 12,
 D-24148 Kiel, GERMANY
 Tel: +49 431 600 2630
 Fax: +49 431 600 2978
 E-mail: rrihm@geomar.de
17. **Roger C. Searle**, NC (1994)
 Department of Geological Sciences,
 University of Durham,
 South Road,
 Durham,
 DH1 3LE, UK
 Tel: +44 191 374 2537
 Fax: +44 191 374 2510
 E-mail: R.C.Searle@durham.ac.uk
18. **Eirik Sundvor**, NC (1996)
 Institute of Solid Earth Physics,
 University of Bergen,
 Allegaten 41,
 N-5007 Bergen, NORWAY
 Tel: +47 55 58 3401
 Fax: +47 55 58 9669
 E-mail: eirik.sundvor@ifjf.uib.no
19. **Cara Wilson**, Coordinator (1997)
 InterRidge Office
 Université Pierre et Marie Curie,
 4 place Jussieu,
 F-75252 Paris Cédex 05, FRANCE
 Tel: +33 1 44 27 74 78
 Fax: +33 1 44 27 39 11
 E-mail: intridge@ext.jussieu.fr
20. **Karen L. Von Damm**, NC (1995)
 Department of Earth Sciences,
 University of New Hampshire,
 James Hall,
 Durham NH 03824-3589, USA
 Tel: +1 603 862 0142
 Fax: +1 603 862 2649
 E-mail: kvd@christa.unh.edu
- Absent Steering Committee Members:
 Peter M. Herzig (Germany)
~~X~~ Kensaku Tamaki (Japan)
 Tetsuro Urabe (Japan)

Agenda

- **Introduction and Welcome** (Cannat)
- **New Members**
Endorsement of Italy and Canada as new Associate Members and of their representatives to the Steering Committee. (Wilson)
- **General Organization of meeting**
- **Agreement on meeting agenda**
- **Ratify InterRidge Program Plan Addendum 1996**
- **Accept the Minutes of 1996 meeting** (Wilson)
- **Coordinator Report**
- **National Updates** (Von Damm)
 - RIDGE (German)
 - BRIDGE (Francheteau)
 - DORSALES (Fujimoto)
 - InterRidge-Japan (Rihm)
 - De-Ridge (Dañobeitia)
 - Spain (Miranda)
 - Portugal (Sundvor)
 - Norway (Juniper)
 - Canada
- **InterRidge Projects**
Receive project reports from Project chairs. Review progress made during the last year and discuss direction, membership and action for the upcoming year.
 - SWIR (Mével, Chair)
 - Arctic Oceans (Rihm, Chair)
 - Global Digital Database (Blondel, Chair)
 - 4-D Architecture of the Oceanic Lithosphere (Parson, Chair)
 - Quantification of Fluxes (German, Acting Chair)
 - Back-Arc Basins (Fujimoto, Prospective Chair)
 - Biological Studies (Mullineaux, Chair)
 - Undersea Cables (Chave, Chair)
 - Event Detection and Response/Observatories (Fox, Prospective Chair)
- **Make decisions on Chair(s) for the following Projects**
 - Back-Arc Basins
 - Event Detection and Response
 - Quantification of Fluxes
- **InterRidge liaisons with other programs**
 - ILP
 - SOPAC
 - SCOR (Mével)
 - ODP
- **InterRidge Steering Committee members and National Correspondents:**
 - Steering Committee
 - National Correspondents
- **InterRidge Budget** (Searle)
 - Receive final Durham Budget (Wilson)
 - Receive the 1997 financial report
- **Determine date and location of next Steering Committee Meeting** (Wilson)
- **Receive and, if necessary, update the 1998 Calendar**
- **Summary of Principal Conclusions**

InterRidge Steering Committee 1997 Report
Paris, France, 25-26 September, 1997

1. Introduction and Welcome (Chair, M. Cannat)

The Chair acknowledged the work of R. Searle, H. Sloan, and R. Williams who established most of the office structure that allowed for a smooth transition to the new office in Paris. The Chair welcomed everyone to the meeting, and introduced those participants who were observers or new steering committee members. A round table was conducted to identify all participants.

2. New Members

The Steering Committee endorsed Italy and Canada as new Associate Members to InterRidge. We have not yet received nominations for Steering Committee members from their national organizations.

Action: • Letters of welcome and confirmation will be sent to the new Italian and Canadian Steering Committee members.

3. General organization of meeting and agreement on meeting agenda

The general timeline of the meeting was established and the agenda was accepted.

4. Ratify InterRidge Program Plan Addendum 1996 and accept the Minutes of 1996 meeting

The Program Plan Addendum 1996 was ratified and the minutes of the 1996 meeting were accepted.

5. Matters arising

5.1 SOSUS

Karen Von Damm tried numerous times to contact SOSUS about the status of their Atlantic arrays but never received any response. The Atlantic arrays are effectively not operating.

5.2 Science Funding

The dwindling of science funds was a theme that came up recurrently in the European reports and throughout the meeting. This problem is evident on two levels, marine sciences in general, and ridge crest sciences specifically. Science on a fundamental level needs to be promoted within the European community. A more visible InterRidge could serve to promote the importance of ridge crest science. We need to make people, and funding agencies in particular, aware of what InterRidge does and what it has accomplished scientifically. The brochure being written by the SCOR 99 was also brought as a potential media for education about ridge science for a variety of audiences.

Actions: • InterRidge will write a lobbying letter to European funding agencies and program managers emphasizing the importance of ridge research and expressing our concerns. It will be circulated to the Steering Committee before being sent out.

- InterRidge will write a general article about InterRidge for EOS. The BRIDGE article that R. Searle wrote for BRIDGE can be used as a starting point. It will be circulated to the Steering Committee before being sent out.
- InterRidge will write a general letter outlining InterRidge goals and objectives and send it to funding agencies.

5.3 InterRidge Projects and Working Groups

The issue was raised during the meeting of what it means if we talk about a working group that has no members. For this reason the semantics have been changed and the term 'project' is used for the nine projects that were created at the 1996 meeting when the three themes, Global Meso-scale and Active Processes were broken down into these smaller components (Phase II projects). It was envisioned then that these projects would have working groups which would implement the project plan established for the project. Most of the projects do have working groups, and the term 'working group' is now used only to refer to those groups.

6. Coordinator Report

6.1 InterRidge Office Transfer

January 1997 marked the end of InterRidge's three-year term in Durham, and the office moved to the Laboratoire de Pétrologie at the Université Pierre et Marie Curie in Paris, France, where it will reside for the next three years. Mathilde Cannat took over as InterRidge Chair from Roger Searle. Ruth Williams, the assistant Coordinator during the Durham term, oversaw the office transfer and was acting Coordinator until March 1997 when Cara Wilson started as the InterRidge Coordinator. Hélène Horen is the current assistant Coordinator.

6.2 InterRidge Membership

Italy and Canada have definitely decided to upgrade to Associate Members in 1998, and India and Korea have been discussing upgrading as well. South Africa and Brazil have joined as new Corresponding members. Thus, at the end of 1997 InterRidge is composed of 21 member countries: 6 principal members (France, Germany, Japan, Spain, UK, and USA), 2 associate members (Norway and Portugal) and 13 corresponding members (Australia, Brazil, Canada, Denmark, Iceland, India, Italy, Korea, Mexico, Russia, South Africa, Sweden, and Switzerland).

6.3 InterRidge WWW Pages

Since the InterRidge web pages (<http://www.lgs.jussieu.fr/~intridge>) were transferred to Paris considerable effort has been put into restructuring and updating these pages. The primary changes have been to streamline the structure of the main home page, and to add more information that is published in *InterRidge News* (which follows the decision at the 1995 IRSC meeting to put *InterRidge News* on the web). Links have been made from the list of Steering Committee Members and National Correspondents to the electronic directory. However, very few steering committee members or national correspondents were on the electronic directory. Steering Committee members were encouraged to place themselves on the directory. Forms were available at the meeting to place oneself on the electronic directory. Almost everyone at the meeting who was not already on the directory filled one out. It was discussed that the community should be told again about this resource, with emphasis on the fact that it now contains over 200 entries, and it can be a useful resource.

Pages have been created for the almost all of the InterRidge projects (currently only Event Detection and Response & Observatories, and Hydrothermal Fluxes do not have one). These pages include the working group membership, a summary of current activities, and workshop reports. A list of all past InterRidge workshops, with links to a workshop summary (as written in the IRSC reports) has been added. Pages have also been created for most InterRidge member nations, which contain the most recent national update (as published in *InterRidge News*). So far, these pages have been made for the 16 countries for whom a recent update exists, and include the first bilingual page (Brazil's page has an English and Portuguese version). Member nations were encouraged to submit national updates for *InterRidge News*, which would also be placed on the web. Two principal members, Spain and Japan have not contributed an update since 1995 and an associate member, Portugal, has never contributed an update.

As before, the InterRidge web pages include the InterRidge Researcher Electronic Directory and Ridge Crest Biologist Directory, information about InterRidge program structure, a calendar of upcoming meetings and workshops, a list of InterRidge publications, the global Ridge-Crest cruise schedule and links to other relevant home pages.

There was discussion about the difficulty of accessing the InterRidge pages from the USA, and of European access problems to the Ridge page when the network is busy. It was suggested that Ridge and InterRidge set up mirror sites for one another.

- Actions:**
- The form in the *IR News* to be placed on the electronic directory will be revamped.
 - The InterRidge Office will contact the Ridge Office about the possibility of setting up mirror web sites.

6.4 Working Group Communications

One of the ongoing problems for the working groups is how to have productive interactions in the absence of formally scheduled workshops or meetings. Some working group members have expressed a frustration with determining what (if anything) is happening within their group. A possible solution to this problem is to establish electronic bulletin boards for the working groups, which would contain the working groups objectives and current plans for achieving those objectives. They would operate similar to web pages, except that each member has the ability to add items to the board, and members would be automatically notified of additions to the board. Preliminary investigation into what type of system/software requirements would be needed to do this have started, but needs more development. The Ridge Office has done some work with setting up a board like this for the EDR community, although it has not received much use because there is little awareness in the community of its existence. It was decided that the InterRidge Office should contact Chris Keeley in the Ridge Office for help on establishing bulletin boards for the working groups.

- Actions:**
- The InterRidge Office will contact Chris Keeley in the Ridge Office for more information on electronic bulletin boards.
 - An announcement about the Ridge EDR page will be in the next *IR News*.

6.5 Activity in the InterRidge Office

The office transfer, publication of *InterRidge News 6(1)*, organization of the First International Deep-Sea Hydrothermal Vent Biology Symposium and its abstract volume, working on workshop reports, and restructuring and updating the web pages were the major activities of the first portion of 1997. The Office continues to reply on a daily basis to e-mail inquiries from the international ridge crest research community, and to update and maintain the InterRidge database, which contains over 2200 entries.

7. National Updates

7.1 US - RIDGE (Von Damm)

RIDGE is in the process of revising the RIDGE science Plan for the next five years. It is likely that the new Science Plan will be organized around questions relating to various time and spatial scales, rather than the Program Element Committees (PECS) that currently exist. A draft of the revised Science Plan will be put on the RIDGE website for community input. A draft should be available prior to the Fall AGU meeting in San Francisco.

RIDGE has co-sponsored several workshops in the last year, including the Magnetization of the Ocean Crust in Orcas Island in October 1996 (a summary appeared in EOS, May 13), an Event Detection and Response Workshop in Washington in March 1996 (a report is in the draft stage), A Workshop on the Subsurface Biosphere in Washington, DC in March 1996, and the Summer School on MOR Processes in Iceland in August/September aimed at US participants. The next RIDGE meeting is the MELT Workshop on Mantle Flow and Melt Generation beneath Mid-Ocean Ridges in Providence, RI in October 4-6, 1997.

The new support vessel for Alvin and JASON, the *Atlantis*, came on-line this past June. This happened sooner than scheduled because of a breakdown on the *RV Thompson* which had been scheduled to conduct ROV operations with Jason and Alvin.

The Ridge Office will be rotating to another office next fall.

7.2 UK- BRIDGE (German)

The BRIDGE program is winding down. Since its inception in 1993, 40 proposals have been funded. There will not be a BRIDGE II in 98/99, although they will continue to fund InterRidge. Post-BRIDGE ridge research in the UK will be supported by core funding, and scientists will probably rely more on international collaboration.

A data synthesis is now being planned that will integrate data from the different geological, oceanographic, chemical and biological cruises. The BRIDGE Steering Committee has formed a small BRIDGE Data Committee to oversee the collation and integration of the data from all BRIDGE research and produce a definitive dataset for the BRIDGE geographical areas. This monumental task is being undertaken by Philippe Blondel of Southampton Oceanography Centre, InterRidge Steering Committee member and Chair of InterRidge's Global Ridge Bathymetry Database Project. It is expected that the unified BRIDGE data product will be available in CD-ROM format by the year 2000 and should have educational as well as research interest.

7.3 France -DORSALES (Francheteau)

DORSALES is now in its fifth year of a program that was initially set up for 10 years. It is currently undergoing a mid-life review by the funding agency. An international board has been set up to evaluate the program, which will be reviewed during a national symposium that will take place in Paris November 24-25.

7.4 InterRidge-Japan (Fujimoto)

The government in Japan is currently planning for reorganizing which has had ramifications on InterRidge-Japan. Their RIDGE FLUX program is half way through its six year program. They have compiled a video report of this project which was distributed at the meeting.

JAMSTEC (Japan Marine Science and Technology Center) is now preparing four cruises, two in the Mid-Atlantic Ocean and two cruises in the Indian Ocean in 1998 using the submersible "Shinkai 6500" and the surface ship "Yokosuka". In each ocean one cruise will be carried out under JAMSTEC-WHOI, while the other cruises are open for international proposals.

7.5 Germany - De-Ridge (Rihm)

Currently De-Ridge has no funding, the office is located in Kiel and shared between R. Rihm and C. Devey. Last March De-Ridge decided to focus on two major themes - (1) Evolution of oceanic crust and (2) Back-Arc Basins. Workshops were held last summer to further define these themes.

7.6 Spain (Dañobeitia)

The Institute of Earth Sciences (Jaime Almera) from the CSIC and the Marine Geosciences Group of the University of Barcelona (UB) started working on ridge-related studies in 1992, when the *R/V Hesperides* was launched as part of the Spanish Antarctic Programme. Seven geology-geophysics cruises have been made which concentrated on the NW Antarctic Peninsula - Bransfield Basin region, Galapagos Region, and the EPR at southern (Eastern Island) and northern latitudes around 22°N at the junction between Pacific and Rivera plates.

7.7 Portugal

(Miranda)

Portuguese ridge researchers have participated in MAST projects in the last year and a half. Proposals for projects on a national level proposals were not accepted. Funding agencies view the science as too expensive. We need to make funding agencies aware of the importance of our science.

The 1998 World Expo will be held in Lisbon in May/June, 1998. The theme is the Oceans. The SOC group will be represented there and it was discussed that InterRidge should also try to promote ourselves there.

Action: • InterRidge will look into having a presence at the World Expo.

7.8 Norway

(Sundvor)

Although Norway does not have a national ridge program, it has been involved in geophysical ridge research for the past thirty years. The research has focused mainly on seismic, gravitational and magnetics surveys of the nearby Knipovich and Mohs Ridges. Oil companies have financed a great deal of the research after the discovery of oil in Norwegian waters. Norway has a research vessel and ship time is relatively easy to acquire with international collaboration. Most of the nearby ridge system (140, km²) has been covered by side scan sonar, which happened in collaboration with the Naval Research Laboratory (US) in 1989 and 1990. Norway has collaborated with the French in putting OBSs on the Mohs Ridge and OBS data from the Reykjanes Ridge was collected in collaboration with the Japanese in 1995. A joint US, Russian and Norwegian team conducted geological and geophysical research on the Knipovich Ridge in 1996. A proposal has been written to dive on the Knipovich Ridge with the Russian MIR submersible next year. A lot of Russian data exists from the Knipovich Ridge which has never been published. This data will be compiled by a program involving the collaboration of the Univ. of Bergen, the Institute of Marine Geology at Bologna, Italy (E. Bonatti) and three Russian research institutes.

7.9 Canada

(Juniper)

Ridge research in Canada does not come under an official ridge program, but has been functioning on a proposal basis since 1983. Ridge research in the past 5 or 6 years has used the Canadian ROV ROPOS which was lost at sea in October 1996. The first cruise with the new ROPOS happened last June on Axial Seamount. In October 1997 there was a joint Canadian-Australian-American cruise to the Eastern Manus Basin. There is a joint USA/UK/Canadian project to sample around hole 735B on the SWIR in the Spring of 1998.

8. InterRidge Phase II Projects

8.1 SWIR

(Mével, Chair)

The first SWIR working group was set up to develop the SWIR Project Plan. Under C. Langmuir's direction this group outlined the primary scientific issues to address in the SWIR, which were published in the SWIR Project Plan in April 1997. The SWIR Implementation group was established last fall, with C. Mével as Chair, to implement that plan. Their specific mandate was:

- ◆ to set up WWW site with past and present cruise schedules, project plan, sample locations and data sets
- ◆ to coordinate and promote cruises

C. Mével tried contacting Indian investigators several times without any response. It seems their main focus is the Carlsberg Ridge and the Central Indian Ridge.

The project web page currently contains the project plan, the working group membership and a list of current cruises. The sample locations and data sets need to be incorporated into the web page.

Coordination and promotion of cruises to the SWIR has been successful, evident in the number of recent and current cruises taking place on the SWIR (see tables on next page).

The working group needs a biologist on it who is actively involved in the SWIR projects. The SWIR should be more actively promoted by InterRidge. The program plan should be formally presented to funding agencies. A meeting of the implementation group will take place at the 1997 AGU Fall meeting. InterRidge should organize a workshop of conference to discuss results from the SWIR in 1999.

- Actions:**
- Continue development of WWW site
 - Compilation of bathymetry and sample locations
 - Write a formal cover letter to accompany the project plan and send to funding agencies
 - Look into deployment of an array on the SWIR (see page 10)

SWIR Scheduled cruises

PIs	Country	Name/location	Objectives	Ship	Dates
Grindlay/Madsen	USA	KN145: 15°-35°E SWIR	Bathymetry, gravity and magnetic survey	Knorr	Feb-Mar 1996
Mével	France	EDUL: Rodrigues Triple Junction to 49°E	Dredges, rock cores and hydrocasts to look at regional and segment scale variations	Marion Dufresne	Aug. 1997
Mével/Tamaki	France/Japan	FUJI: east and west of Melville FZ	TOBI survey and OBS deployment	Marion Dufresne	Oct. 1997
Dick/Natland	USA	ODP leg 176 -hole 735B	Deepening of hole into more gabbros and hopefully ultramafics	Joides Resolution	Oct-Dec 1997
MacLeod/Dick/Allerton/Robinson	UK/USA/Canada	sampling around Hole 735B	Sampling using ROPOS ROV, deep-towed magnetics, MBARI rock drills	James Clark Ross	Mar-May 1998
	Japan	near 735B	diving	Yokosuka/Shinkai6500	Fall 1998
	Japan	to be determined after EDUL & FUJI	diving	Yokosuka/Shinkai6500	Fall 1998

SWIR Proposed cruises

PIs	Country	Name/location	Objectives	Ship	Dates
Grindlay/Klein	USA	15°-35°E SWIR	Dredging of the area mapped during KN145		
Patriat/Sauter	France	FRIMAS: triple junction trace around 63°E	Bathymetric and geophysical mapping of the crust generated from the axis	Marion Dufresne	1998
Halbach	Germany		Water sampling to locate possible hydrothermal activity	Sonne	
Kaul	Germany	cooperative program	heat flow, single channel seismic digital system, OBSs.		1998

8.2 Arctic Oceans (Rihm, Chair)

A sub-set of the participants of the Arctic Ridges Workshop in November of 1994 finished writing up the workshop report. Subsequently the InterRidge Office compiled and edited the report which will be published in October 1997. Prospective members for the working group were solicited in March 1997 to draft a project plan to help establish priorities for upcoming cruises. A workshop might be held to draft the project plan.

The group at Kiel is involved in a number of different approaches of Arctic research including the recent release of military data, submarine use, low budget drilling, ice breakers (Polarstern, Oden and Tully), and utilizing ice drift. In September there was a workshop held in St. Petersburg on Arctic bathymetry. The Canadians have plans for freezing an ice breaker in the ice next October. This project will be mainly a meteorological study, but there are also plans to acquire crustal structure data with a submersible. The SCICEX cruises with US Navy submarines continue to happen every summer, and this year the submarine will be equipped with a swath mapping system.

Action: • Organize a special session at the Fall 1998 AGU to discuss results

8.3 Global Digital Database (Blondel, Chair)

The mission of this working group is to compile a comprehensive database of high-resolution bathymetric data covering the entire 60,000 km of the MOR. Realizing this goal will necessitate collaboration with all of the national ridge programs and other international programs such as SCOR (particularly the SCOR 107, Improved Global bathymetry), SOPAC, GEBCO (GEneral Bathymetric Charts of the Ocean), NDGC (World Data ??) and the IOC/IHO (Intergovernmental Oceanographic Commission/International Hydrographic Organization) committee on Bathymetry.

The task can be broken down into two main steps:

- Catalog where there is data, and who has it
- Synthesize the data

Currently the biggest question to address is how the data is archived in each country. The highest priority is to catalog the data. Although it was mentioned at last year's meeting that InterRidge should compile the shiptracks of existing data, this is not a realistic possibility for the InterRidge Office given their current computing facilities. A summary of the situation on a national basis is given in the following table:

Country	Multibeam data availability
Canada	No MB data, excellent SB data
France	MB data centralized at SISMER
Germany	MB data collected on the <i>Sonne</i> , the <i>Polarstern</i> and the <i>Meteor</i> ; data is not centralized, one needs to contact the PI; there should be a lot of data from the MAR and CIR
India	Have a German Hydrosweep system
Italy	??
Japan	4 institutions have MB data (not centralized?)
Korea	have MB system (Finnish system)
Norway	centralized in a database at the University of Oslo; a lot of the Arctic data is in the recent atlas edited by K. Crane
Portugal	no MB data
Russia	Data should be Italian, contact Enrico Bonatti or Ron McNabb
Spain	a workshop at the end of August mandated that MB data will be collected on all cruises and data archiving will be centralized by the agency that runs the <i>RV Hesperides</i>
UK	BRIDGE is currently synthesizing all UK MB data
USA	Navy (classified); RIDGE database (which was always envisioned to be part of InterRidge); NOAA group compiling a database for the NE Pacific, Dawn Wright compiling for Endeavor

How the data will be synthesized is more problematic. Existing databases could be linked, but that will not include existing data that is not archived. Differing formats and resolutions of the data will further complicate the synthesis. It was discussed that international agencies which accept data could be utilized in the data synthesis of. Currently NDGC accepts unedited MB data. InterRidge should encourage people to submit their data there. They also have an embargo in place for the data, so that it is not released until a certain period of time after collection. There is a European funded program to scan and digitize paper seismic records to prevent losing this data. It is possible that this 'legacy of data' approach could be used to help fund making more accessible some of the unarchived data, particularly the German data. L. Parson will further investigate this matter.

In the US a project has been funded (Langmuir and Ryan) to expand the RIDGE MB database to include petrology data, and this is currently underway. The NOAA group is compiling a comprehensive database for the NE Pacific which includes shiptracks, dive locations, biological data etc. which is available on the web, so that outsiders can access the data and create a map of the data for themselves. Dawn Wright has received funding from RIDGE to do a similar project for Endeavor.

Each country was encouraged to think of the appropriate person to represent their country on the working group. Bill Ryan (USA) has worked on trying to compile a database, and he will be included in the working group. Juan Daniobeitia (Spain) agreed to be on the working group. Christine Deplus should be the French representative.

- Actions:**
- Define the membership of the working group
 - Compile catalog of where there is data and who has it
 - Implement bathymetric database
 - InterRidge will encourage people to submit data to NGDC
 - L. Parson will investigate possibility that there are European funds available for data archiving.

8.4 4-D Architecture of the Oceanic Lithosphere

(Parson, Chair)

This project started as a series of meetings and workshops which established the scientific objectives which were summarized in the workshop report published in 1995. Earlier this year a working group was established to work on the realization of those objectives.

The Hess Deep has been selected as the site for fast-spreading ridge experiments. Some work have been completed there and there are currently two proposals in the system to work at Hess Deep. The working group should push for drilling to happen in the Hess Deep. For this to happen proposals need to get into the next round (March 15, 1998).

For slow-spreading ridge experiments four possible sites have been determined: TAG, MARK, 29°N and 35°N (all on the MAR). While work has been going on in all these areas, the decision should be made soon which one to focus on. Recently there has been interest in the area around 15°N. However, while work at 15°N is related to the 4D objectives, it is really a different concept, focusing on examined the heterogeneity of mantle melting processes and sampling the serpentatized peridotites. Another factor is the issue of the corrugated surfaces that have been observed, as these features need to be drilled. It is not known if all these sites are drillable. The site decision could also arise naturally out of the proposal writing process.

There will be a special session at AGU on "Magma focusing and the segmentation of the Mid-Ocean Ridge at all spreading rates" convened by L. Parson and M. Cannat. There will be a poster and oral session, with an open discussion at the end of the session. Hopefully the discussion at AGU will result in a decision of which of the four areas will be selected.

The scientific results that have arisen out of the InterRidge's efforts in 4D Architecture need to be presented to the funding agencies.

Completed or Scheduled 4D Cruises

PIs	Country	Name/location	Objectives	Ship	Dates
		Hess Deep			
Bideau	France	OCEANAUT: MAR between 33.5°-35.25°N	submersible survey, rock samples, magnetic survey	Nadir/ Nautilie	Aug-Sep 1995
Searle/Mitchell/ Cowie	UK	CD99: 29°N axial segment, MAR	Quantification of total strain in a single spreading segment. Deep-towed side-scan and MB sonar, 3-component magnetics	Charles Darwin/ TOBI	Mar/Apr 1996
Cann/Blackman	UK	CD100: segment south of Atlantis FZ (30°N), MAR	Determine strain from indicators near a ridge-transform intersection, test low-angle serpentinite landslide zone vs. fault scarp mode, dredges	Charles Darwin/ TOBI	Apr/May 1996
Gente	France	TAMMAR: 22°N MAR	submersible study of mid-ocean ridge segmentation	Nadir/ Nautilie	Apr/May 1996
Fornari/Humphris Langmuir/ Van Dover	USA	LUSTRE: Lucky Strike, 37°18'N MAR	Mapping and sampling Lucky Strike hydrothermal field	Knorr/ JASON/ ARGO-II	Jul/Aug 1996
Sibuet	France	SARRidge: 33°-39° MAR	Mapping	Nadir/SAR	Oct. 1996
Detrick	USA	Bull's-Eye, MAR 34°- 37°N	Seismic experiment	Maurice Ewing	Oct/Nov 1996
Fouquet	France	FLORES: Azores, Mid-Atlantic Ridge		Atalante/ Nautilie	Jun/Jul '97

Future 4D Cruises

PIs	Country	Name/location	Objectives	Ship	Dates
Blackman		29°N MAR	Diving near Atlantis II FZ	Alvin	
Karson		Hess Deep			
Cannat/ Rommevaux	France	Sudaçores - MAR: 34° - 38°N, the axis and extending off-axis up to 10-13 myrs	examine influence of the Azores hot spot on the MAR with multibeam bathymetry, reflectivity, gravimetry, magnetism, single channel seismics survey, and dredges	Atalante	May/Jun '98

- Actions:**
- Use Fall 1997 AGU session to consolidate recent results
 - Need to select target area for experiments
 - Set up electronic bulletin board/information site
 - push for drilling to happen at Hess Deep
 - consider ultra-slow segment (SWIR)

8.5 Quantification of Fluxes (German, Acting Chair)

This project was initially conceived to design a holistic "box" experiment to measure all the fluxes over an entire segment. While initially this concept included magmatic fluxes (in addition to hydrothermal, chemical and biological fluxes), they were excluded from the discussion at the Cambridge workshop in 1995 as they were being addressed by the MELT experiments and by the InterRidge 4D lithospheric architecture experiments. It was hoped that the 4D project would therefore conduct their experiments at the same segment as the 'box' experiments.

Currently two segment-scale hydrothermal plume studies have been carried out. The BRIDGE Fluxes-Broken Spur Experiment examined biological, chemical and physical fluxes. The AMORES cruise last summer carried out the same measurements at Rainbow. One of the problems with the Broken Spur experiment is that the plume is small and the signal is hard to follow. By contrast, the Rainbow plume can be traced 25 km from the vent site versus 2 km at Broken Spur. However, the Rainbow site is located in a segment offset, and therefore is not a closed box, nor a segment. As such, the experiments carried out there were not the 'box' experiments originally envisioned.

At this point there are three possible paths to follow:

- (1) Continue to follow-up on the holistic approach by moving on to the magmatic fluxes, perhaps working in collaboration with, or becoming absorbed within, the 4D architecture project. The magmatic aspect is outside of C. German's expertise and for this approach we would need to find a more appropriate Chair. Some of these people were approached last winter about chairing this, but there was apparently no interest or respond.
- (2) The project holds one last wrap-up workshop to make conclusions on the experiments done, and then gracefully disbands, work concluded. While the 'holistic' approach on a segment-scale has not been realized, it appears there is little interest in the community to pursue this approach. InterRidge can encourage and promote ideas, however it can not create enthusiasm where there is none.
- (3) The project refocusses to address current issues such as:
 - Partitioning of hydrothermal activity on-axis versus off-axis. There is also nothing known about flank fluxes, a subject that has drilling possibilities.
 - Partitioning of hydrothermal activity along the global MOR.

The global distribution of hydrothermal activity remains unknown. The issue of global distribution is one that is best approached internationally, and thus is a natural question for InterRidge to take on. Proposals to try to fill this gap are often unsuccessful, as they are viewed as 'exploration' and not science. We need hypotheses to test to make it science. The question can be approached from the perspective of global heat fluxes, or vent biogeography, but care must be taken to ensure that the resulting proposals are scientifically plausible. Proposals which carry on extensive geophysical surveying sound contrived if they hang on the biological objectives. Global distribution could also be addressed by setting up remote detection systems. This issue really comes under the Global theme, rather than Meso-Scale, and it was discussed that the group could be absorbed in the SWIR project, focusing on the hydrothermal fluxes there.

C. German and C. Wilson will be convening a special session at the 1997 Fall AGU "Hydrothermal activity at all spreading rates". This session will focus on the two issues mentioned above (under #3). After the afternoon session a discussion is planned to discuss the direction of the group.

It was discussed that the projects need to have definite lifetimes. If the objective of the project has been realized, there is no reason not to dissolve it. However this project is the only one that provides links between crustal and magmatic processes and hydrothermal systems and biology, and for that reason it should be maintained. C. German will remain Chair dependent on the group's future direction as decided at AGU.

- Actions:**
- Use Fall 1997 AGU session to consolidate recent results
 - Use discussion at Fall 1997 AGU to determine future direction of the project

8.6 Back-Arc Basins *(Fujimoto, Prospective Co-Chair)*

K. Tamaki was Chair of this project until last May when he became too busy to continue as Chair. H. Fujimoto agreed to co-chair this project with someone else. A small meeting of people active in Back-Arc Basins was held last May at the CONCORD meeting in Japan, where a list of possible co-chairs was made. J.-M. Auzende has agreed to co-chair this project.

A draft of a project plan is currently being prepared by K. Tamaki, the former Chair. The primary goal of this project is to study the influence of subduction on ocean ridge processes. The three main sub-topics are (1) melt generation, (2) spreading processes and (3) energy and biological fluxes. The central idea in the Project Plan is that identical data sets should be obtained at typical back-arc basins. These data sets would consist of:

- mantle topography imagery using seismic activity at the nearby subducting slab
- bathymetry mapping
- magnetic and gravity data
- rock sampling
- hydrothermal water chemistry studies
- biological vent community studies

Four target basins have been selected for these studies:

1. Lau Basin Fast spreading (160 mm/yr)
2. Scotia Basin Medium spreading
3. Mariana Trough Slow spreading (30 mm/yr)
4. North Fiji Basin

A great deal of this data has already been collected. There needs to be effort put into synthesizing what has already been done, and what still needs to be done. For example, the Germans have a great deal of data on the Lau Basin, BRIDGE has set up a database for the Lau Basin, and the French have had many cruises to the North Fiji Basin. There should be a connection between this InterRidge project and the DeRidge Back-Arc Basin group, as well as an ODP connection for drilling proposals. There has been talk of drilling sulfide deposits in a back-arc basin but the specific basin has not been decided.

At the request of participants of the InterRidge BAB workshop in October 1993 a geochemical BAB 'database' was created on the WWW. However this 'database' is not really useful, containing only one set of data. It was decided that an

index of cruises and available data would be more useful and that the geochemical 'database' on the web will be removed and replaced with a comprehensive list of Back-Arc Basin cruises.

Prospective members of the working group were discussed and Roy A. Livermore, Chris MacLeod, Peter M. Herzig, Peter Halbach, Kensaku Tamaki, Robert Stern, Steve Scott, Eulália Gracia, Patricia Fryer, Jim Gill, and Ian Wright were suggested as possible members of the working group.

- Actions:**
- Establish membership of the working group
 - Remove current 'database' from WWW site
 - Compile index of cruises that have taken place in BABs in past years
 - Complete Project Plan
 - Contact BRIDGE about their Lau Basin database

8.7 Biological Studies (Mullineaux, Chair)

First International Symposium on Deep-Sea Hydrothermal Vent Biology

This Symposium was held October 20-24, 1997 in Funchal, Madeira, Portugal. Over 110 people from 12 countries attended the meeting, where 83 posters and talks were presented. There will be six different sessions covering Ecology/Micro-distribution/Temporal Evolution. Physiology/Adaptation, Biological Cycles/Larval dispersion/Plankton, Microbiology/Ultra-thermophiles/Bacterial Symbiosis, Cold Seeps, and Biogeography/Evolution/Genetics/Taxonomy.

International Sample Exchange Agreement

The working group has been concentrating on the developing the International Sample Exchange Agreement. It was first proposed at the InterRidge Biological Studies workshop in 1995 that an international exchange of biological samples could help answer fundamental questions about biodiversity and global biogeography of vent organisms. The first draft of the agreement was circulated to the National Correspondents of InterRidge for ratification, without any response. This lack of response was probably due to lack of interest, almost all of the National Correspondents being non-biologists. However the agreement was also worded rather formally and most probably did not feel that they had the authority to agree to it.

The agreement was subsequently revised to be less formal and was sent out to the National Curators, the biologists who would ultimately be responsible for carrying out the agreement. Recommendations were received from the curators on how to further modify and improve the agreement. The two biggest recommendations were to focus on clearly defined scientific questions and to customize the agreement to allow for the different curation processes in each country. Other concerns which were raised were that there should be a mechanism to ensure the altruism of the curators, and that priority would be maintained for the original collectors. Efforts to resolve this concerns by e-mail were not very effective and a meeting was scheduled during the First International Symposium on Deep-Sea Hydrothermal Vent Biology to further discuss modifications to the agreement.

Last July a proposal was submitted to SCOR to create a working group to further develop this agreement. However it was not accepted, because it was felt that it didn't encompass a scientific question, but rather addressed logistical and political problems. However, SCOR was very supportive of the idea, and offered to help us as much as they could.

Sanctuaries

It was decided at last years Steering Committee meeting that a letter would be written to EOS provoking a response to the issue of sea floor sanctuaries. The issue is difficult, as often multiple, conflicting claims of sanctuaries are laid. There is an obvious conflict between scientists who want to observe organisms in their natural, undisturbed setting, and those who want to collect large numbers of specimens. It was decided that D. Desbruyères would help L. Mullineaux write the article which would be co-signed by M. Cannat, as InterRidge Chair. There also needs to be a unified location place where one can lay claim to a sanctuary, give a brief summary of their scientific goals and objectives, and the requested limits of the sanctuary. It was proposed that the InterRidge web page is where this should occur, with the understanding that these would be endorsed by InterRidge, but obviously these sanctuaries would not be 'policed'. These discussions and agreements should happen within the scientific community, and not be placed on the ship's crew, as has happened in the past.

Bio-Boxes

V. Tunnicliffe will be the international supplier of bio-boxes. InterRidge will take a pro-active role in promoting their use.

Handbook of deep-sea hydrothermal vent fauna

InterRidge has received 29 copies of this handbook, which will be distributed to submersibles and ROVs. These copies should be well marked with the name of the submersible or ROV to try to prevent them from being stolen. It was also decided that H. Sloan and R. Williams should each receive a copy for their efforts into it. D. Desbruyères will be making a CD-ROM of this volume as well.

- Actions:**
- L. Mullineaux and D. Desbruyères will write an EOS article about sanctuaries, which will be co-signed by the IR Chair.
 - InterRidge will establish and maintain a list of proposed sanctuaries on the web site.
 - Have a workshop in 1999 to establish scientific goals, which will most likely emphasize global vent biogeography.

