



InterRidge

Steering Committee Report, 2007

**InterContinental Hotel, Rio de Janeiro, Brazil
17 - 18 Nov. 2007**

**Chair, Jian Lin
Co-Chair, Chris German
Coordinators, Rhian Waller (2007), Stace Beaulieu (2008-2009)
Education/Outreach Coordinator, Kristen Kusek (2004-2007)**



IR Steering Committee in Rio de Janeiro, Brazil, Nov. 2007
Front (left to right) : R. Waller, S. Beaulieu, K. Kusek, J. Lin, C. German, S. Mello;
Middle: B. Ildefonse, S. Sichel, M. Maia, C. Devey, H. Kumagai, J.-I. Ishibashi, S.-H. Park;
Back: J. Diaz-Naveas, S. Hourdez, D. Blackman, F. Gaill

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InterRidge Office
Woods Hole Oceanographic Institution
Mail Stop #24
Woods Hole, MA USA.
Tel: +1 508 289 3821
Fax: +1 508 457 2150
Email: coordinator@interridge.org

List of Participants

1. **Stace Beaulieu**
InterRidge Coordinator 2008-2009
Woods Hole Oceanographic Institution
Mail Stop #24
Woods Hole, MA 02543 USA
Tel: +1 508 289 3821
Email: coordinator@interridge.org
2. **Donna Blackman (USA)**
Institute of Geophysics & Planetary Physics
Scripps Institution of Oceanography
University of California, San Diego
La Jolla, CA 92093-0225 USA
Tel: +1 619 534 8813
Email: dblackman@ucsd.edu
3. **Colin Devey (Germany)**
Leibniz-Institut für Meereswissenschaften
Wischofstr. 1-3
D-24148 Kiel Germany
Tel: +49 431 600 2257
Email: cdevey@ifm-geomar.de
4. **Juan Diaz-Naveas (Chile, new- Nat'l Corresp.)**
Escuela de Ciencias del Mar
Universidad Catolica de Valparaiso
Avda., Altamirano 1480
Valparaiso, 1020 Chile
Tel: +56-32-2274269
Email: jdiaz@ucv.cl
5. **Françoise Gaill (France)**
Laboratoire de Biologie Marine
CNRS UMR 7138
Universite Pierre et Marie Curie
7 Quai Saint-Bernard
75252 Paris France
Tel: +33 1 44 27 30 63
Email: francoise.gaill@snv.jussieu.fr
6. **Chris German (Co-Chair)**
Department of Geology & Geophysics
Woods Hole Oceanographic Institution
Woods Hole, MA 02543 USA
Tel: +1 508 289 1634
Email: cgerman@whoi.edu
7. **Stephane Hourdez (France)**
Station Biologique de Roscoff
B.P. 74
F-29682 Roscoff France
Tel : +33 2 98 29 23 45
Email : hourdez@sb-roscoff.fr
8. **Benoit Hldefonse (Working Group Chair, France)**
Géosciences Montpellier
CNRS, Université Montpellier 2
Montpellier, 34095 cedex 05 France
Tel : +33 4 67 14 38 18
Email : benoit@gm.univ-montp2.fr
9. **Jun-Ichiro Ishibashi (Japan)**
Department of Earth and Planetary Sciences
Kyushu University
6-10-1 Hakazaki, Higashi-ku
Fukuoka 812-8581 Japan
Tel: +81 92 642 2664
Email: ishi@geo.kyushu-u.ac.jp
10. **Hidenori Kumagai (Japan, alternate for N. Seama)**
IFREE, JAMSTEC
2-15 Natsushima-cho
Yokosuka, 237-0061 Japan
Tel: +81 46 867 9333
Email: kumagai@jamstec.go.jp
11. **Kristen Kusek**
InterRidge Education and Outreach Coordinator
225 Walden Street, Apt. 3M
Cambridge, MA 02140 USA
Tel: +1 617 354 1408
kristenkusek@aol.com
12. **Jian Lin (Chair)**
Department of Geology & Geophysics
Woods Hole Oceanographic Institution
Woods Hole, MA 02543 USA
Tel: +1 508 289 2576
Email: jlin@whoi.edu
13. **Marcia Maia (France, guest)**
Laboratoire Domaines Oceaniques
IUEM-CNRS-Universite de Brest
F-29280 Plouzane France
Tel : +33 2 98 01 61 70
Email : marcia@univ-brest.fr
14. **Sidney Mello (Brazil, host)**
LAGEMAR-UFF, Dept. de Geologia
Av. Litoranea s/n., sala 407
Gragoata, 24210-340 - Niteroi, RJ - Brazil
Tel: + 55 21 719.4241
Email: Sidney@igeo.uff.br
15. **Sung-Hyun Park (Korea)**
Korea Polar Research Institute
Songdo Techno Park
7-50 Songdo-dong, Yeonsu-gu
Incheon 406-840, South Korea
Tel: +82-32-260-6119
Email: shpark314@kopri.re.kr
16. **Susanna Sichel (Brazil, National Corresp.)**
Dept. de Geologia - Lagemar UFF
Av. Litoranea s/n 4 andar
CEP: 24210-340
Gragoata Niteroi RJ Brazil
Tel: +55 021 719 4241
Email: Susanna@igeo.uff.br

17. Rhian Waller

InterRidge Coordinator 2007
Dept. of Oceanography., SOEST
University of Hawaii
Honolulu, HI 96822 USA
Email: rwaller@hawaii.edu

Absent Steering Committee Members:

Fernando Barriga (Portugal)
Y. John Chen (China)
Nicole Dubilier (Germany)
Jerome Dymont (France)
Tim Henstock (UK)
Rosario Lunar (Spain)
Rolf Pedersen (Norway)
K. A. Kamesh Raju (India)
Alex Rogers (UK)
Steve Scott (Canada)
Nobukazu Seama (Japan)

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Appendices

APPENDIX I

**InterRidge Chairs and Coordinators; Steering Committee Members;
National Correspondents**

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APPENDIX II

InterRidge Budgets for 2006 – 2007 and projected for 2008

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Please refer to InterRidge News, Vol. 16, 2007, for:

- National Updates from 12 of the Member Nations (Canada, China, France, Germany, Japan, New Zealand, Norway, Philippines, Russia, Spain, UK, USA),
- Working Group Updates from all five active WGs in 2007 (Biogeochemical Interaction at Deep-Sea Vents, Biology, Deep Earth Sampling, Monitoring and Observatories, Ultra-slow Spreading Ridges), and
- list of upcoming cruises for 2008.

Meeting Agenda Day 1, Saturday, 17 Nov. 8:30AM – 5:30PM

Actual times given below

| | | |
|--------------------------------|--|--|
| 1 | 8:45: Welcome and Introduction | J. Lin / S. Mello |
| 2 | 9:00: Accept 2006 IR StCOM meeting minutes, Confirmation of 2007 steering committee members, and Agreement on 2007 meeting agenda | J. Lin |
| 3 | 9:05: Coordinator – Update | R. Waller / S. Beaulieu |
| 4 | 9:20: Education and Outreach – Update | K. Kusek |
| 10:30: Coffee Break | | |
| 5 | 10:45: Review of 2006 meeting Action List | J. Lin |
| 6 | 11:10: National Updates | |
| A | Principal members | China - J. Lin, France - B. Ildefonse / F. Gaill, Germany - C. Devey, Japan - J. Ishibashi / H. Kumagai, UK - C. German (Discussed on Day 2), USA - D. Blackman |
| B | Associate and corresponding members | Korea - S. Park (Discussed on Day 2) Brazil - S. Sichel New Zealand – C. German (Discussed on Day 2) |
| C | Status of potential membership upgrades/additions (Russia, New Zealand, Chinese Taipei, etc.) | J. Lin / R. Waller |
| 13:10: Lunch, provided on-site | | |
| 7 | 14:20: Current Working Groups – Updates | |
| A | Biogeochemical interaction at deep-sea vents | R. Waller |
| B | Biology | S. Hourdez |
| C | Deep Earth sampling | B. Ildefonse |
| D | Monitoring and observatories | R. Waller |
| E | Ultraslow spreading ridges | C. German / C. Devey (Discussed on Day 2) |
| 15:45: Coffee Break | | |
| 8 | 16:10 – 17:40: New Working Group Proposal Discussion G1 - “Evolution of lithosphere – seafloor weathering and hydrothermal alteration” G2 - “Imaging crustal and mantle structure beneath mid-ocean ridges” G3 - “Ridge evolution in geological time” G4 - “Rift to ridge: Evolution of the N.E. Atlantic under the influence of the Iceland hotspot” G5 - “Vent ecology” G6 - “Seafloor mineralization” (Discussed with Item 12 on Day 2) G7 - “Systematic long-range ridge exploration” | J. Lin |

Meeting Agenda Day 2, Sunday, 18 Nov. 8:30AM – 5:30PM

Actual times given below

| | | |
|-------------------------------------|---|--------------------------------|
| 9 | 8:40: Enhancing ridge research and cooperation in South American Countries | |
| A | Research presentations from Brazilian colleagues | S. Mello / M. Maia / S. Sichel |
| B | Research presentation for Chile Triple Junction | J. Diaz-Naveas / C. German |
| C | Discussion | J. Lin / C. German |
| 11:00: Group Photo and Coffee Break | | |
| | 11:20: Items 6A, 6B, 7E from Day 1 | |
| 10 | 12:45: Workshop and Meeting Reports 2007 | |
| A | May 2007 - Global Data Network for Studies of Earth Processes - Kiel, Germany | C. Devey |
| B | Sept. 2007 - InterRidge Theoretical Institute - Biogeochemical interaction at deep-sea vents - Woods Hole, MA USA | C. German |
| 13:15: Lunch, provided on-site | | |
| 11 | 16:30: Workshops and Meetings Proposed for 2008 | S. Beaulieu |
| 12 | 14:00: Discussion on InterRidge's stance on ethics, conservation and access to ridge sampling locations | C. German / J. Lin |
| 13 | 16:00: InterRidge Student Fellowship Program proposal | R. Waller / J. Lin |
| 14 | 17:00: InterRidge Website, E-mail lists, and Databases | R. Waller / S. Beaulieu |
| A | Website and users of email lists | |
| B | Member Database | |
| C | Update on Cruise and Vents Databases | |
| 15 | 15:00: InterRidge Budget | |
| A | IR budget 2006 | C. Devey |
| B | IR budget 2007 | J. Lin |
| C | Status of payment of billed nations | J. Lin |
| D | Projected IR budget 2008 | J. Lin |
| 15:45: Coffee Break | | |
| 16 | 17:30: Action List for 2008 | J. Lin |
| 17 | (Discussed at 11:00 on Day 1): Next Steering Committee Meeting Location | J. Lin / C. German |
| 18 | 17:45 Meeting adjourned | |

1 Welcome and Introduction

The agenda of the 2007 steering committee meeting was circulated electronically to all Steering Committee members and Working Group Chairs prior to the meeting. Our meeting in 2007 was hosted by Sidney Mello from the Dept. of Geology at LAGEMAR-UFF in Brazil. The InterRidge Office thanks Sidney, our Brazilian national correspondent Susanna Sichel, and guest Marcia Maia, for their efforts in organizing a successful meeting and enjoyable group dinner in downtown Rio.

2 Accept 2006 meeting minutes, Confirm 2007 StCOM members, and Acceptance of the 2007 meeting agenda

The 2006 Steering Committee Meeting Report was finalized in Oct. 2006 and is available on the IR website at: <http://www.interridge.org/stcom/reports>. In 2007, we had three new StCOM members: Dr. Sung-Hyun Park from Korea, who replaced Dr. Sang-Mook Lee; Dr. Alex Rogers from the UK, who replaced Dr. Paul Dando; and (in Nov. 2007) Dr. Jiabiao Li (Deputy Director of the 2nd Institute of Oceanography of the State Oceanic Administration), our new StCOM member from China. China upgraded to Principal Member Nation in Oct. 2007. Sung-Hyun acknowledged Sang-Mook Lee's contribution, and Colin Devey suggested that the StCOM send him an official letter of thanks for years of service. [Note: At the end of 2007, IR had a total of 18 StCOM members, including chair Jian Lin and co-chair Chris German from the USA (additional, on website: Dr. Steve Scott from Canada).] We agreed to the agenda, with a couple schedule changes to accommodate discussion of UK and Korea national updates in Day 2 of the meeting.

3 InterRidge Coordinator - Update

Dr. Rhian Waller served as InterRidge Coordinator from January - October 2007. Rhian first discussed the office handover from Germany to Woods Hole. Aside from the handover of the website (see Item 14, Day 2), the transition was very smooth. The biweekly email list was transferred from majordomo to Mailman (WHOI-supported email list), and the first of the biweekly e-news was sent out on January 29th, less than one week after the physical office was established at WHOI. A new email list, interridge-classifieds, was started on May 30th for job postings. A new InterRidge flier was prepared prior to the IRTI, and will need to be updated with new Working Groups in 2008.

A major activity for the Coordinator in 2007 was the IRTI Biogeochemical Interaction at Deep-Sea Vents, 10-14 Sept. 2007, 5 days with 3 days of talks and 2 days of workshop. 127 people from 10 countries attended the IRTI, with 80 attending workshop sessions and 47 posters. Rhian also acknowledged the aid of several others at WHOI who helped organize the conference: Christina Cuellar, Andrew Daly, and Julie Allen. Other activities of 2007 included:

- UN speaker for "Marine Genetic Resources" Panel in New York on 27 June 2007. Dr. Meg Tivey presented the IR statement of commitment to responsible research practices at deep-sea hydrothermal vents.

- New working group proposals. A call for new WG proposals was sent out in June 2007. Seven proposals were submitted and reviewed by the StCOM.
- Annual IR Newsletter. Dr. Stace Beaulieu, the new InterRidge Coordinator for 2008, edited and formatted the IR News 2007, Vol. 16 (and also took minutes during the 2007 StCOM meeting).

Following the Coordinator Update, Jian presented a gift to Rhian—geode book-ends.

4 InterRidge Education and Outreach – Update

Kristen Kusek presented the IR E&O program update for 2007. She provided a handout of major accomplishments for the previous four years (table in IR News 2007). Major accomplishments in 2007 included:

- Publication of the special issue of *Oceanography* magazine in March 2007.
- Co-sponsoring the public event in the Galapagos for the 30th anniversary of hydrothermal vents with the ChEss program in June (article in IR News 2007).
- Publication of several articles in WHOI's *Oceanus* magazine.
- Partnership with Ridge 2000 in the GLOBE/FLEXE program (Kristen contributed to the talk presented at AGU Fall Meeting 2007; see bullet 4.1 below).
- A successful proposal with the ChEss program for an outreach exhibit at ESOF 2008.

Other major efforts in 2007 included two proposals to support the Science Writer-at-Sea program, which unfortunately were not successful (see bullet 4.2 below). This resulted in discussion of the salary support for the IR Outreach Coordinator position in 2008 (see bullet 4.3 below), which was followed by discussion of outreach efforts in IR member nations and how to move forward with IR E&O in the future (see bullet 4.4 below).

For 2008 in addition to the outreach at ESOF 2008 in July, InterRidge will also be involved with the MATE International Student ROV Competition in San Diego in June (see bullet 4.5 below) and an exhibit at the WHOI Exhibit Center. A final outreach objective for 2008 may include the International Year of Planet Earth, a UN program for which John Chen, Jian Lin, Colin Devey, and Chuck Fisher are involved in the Ocean theme. *Note:* Francoise suggested a potential outreach effort for 2009, the “Year of Darwin”. She thinks the IR community is well-equipped to “follow” travel of Darwin around the earth, perhaps by highlighting a cruise in each ocean. As of Jan. 2008, there are several prominent Darwin celebrations planned for Feb 12, 2009, the 200th anniversary of Darwin's birth (e.g., <http://www.copusproject.org/yearofscience2009/>).

4.1. The GLOBE/ FLEXE program (<http://www.globe.gov/fsl/html/templ.cgi?flexe&lang=en&nav=1>) is an easy way for IR scientists to get involved with an existing education & outreach program. FLEXE (From Local to Extreme Environments) includes such activities as students measuring temperature in their local environments and comparing to temperature data from deep-sea vents. Other GLOBE activities include mentoring (e.g., online questions) or live interaction during cruises. StCOM members Donna Blackman and Colin Devey can be contacted for more information about this program. Donna added that the current FLEXE module is on energy transfer (temperature data from 9N EPR), but there will be other modules, e.g., mapping, that can be used in schools. Colin added that he was very positive about the international aspect of the GLOBE program. Working with the German national coordinator, he was quickly and relatively easily connected to teachers and students. The GLOBE Office helps you adapt the materials for different cultures. Benoit Ildefonse and Hide Kumagai

asked about translating materials into different languages. Hide also asked about what types of schools are involved, and Colin replied all ages. Colin re-iterated that the important thing is that the GLOBE structure is there already, e.g., with translation service and how to fit into school curriculum. Jian asked if there are any GLOBE representatives in Asian countries and suggested as an action item for IR Outreach Coordinator—to find out about local GLOBE coordinators in Asian countries.

- 4.2. For the Science Writer-at-Sea program in 2007, Kristen established a partnership with NOAA Teacher at Sea and submitted a proposal to NOAA Ocean Explorer (for \$50,000 US) and NOAA Environmental Literacy (\$700,000 US). Neither proposal was funded, and in fact, both of these granting programs at NOAA were cancelled for 2007. She also explored other funding possibilities including Volkswagen Foundation, and was contacted by Poynter Institute for Media Studies re: interest in the program.
- 4.3. Kristen presented a slide indicating the declining funding for the IR E&O Coordinator (reduced from \$60,000 in 2007 to \$35,000 in 2008). Jian talked about the challenges for obtaining funding for IR E&O. Donna said they discussed the challenge of a sustainable E&O position at the StCOM meeting in Moscow last year, i.e., some science funding agencies do not fund E&O (i.e., can only use a subset of IR \$ to pay E&O salary).
- 4.4. Discussion of outreach efforts in IR member nations and how to move forward with IR E&O in the future. Jian re-emphasized connecting with scientists in non-English speaking countries, for example—how would they like to see Outreach in Japan. Hide suggests keep maintenance of IR E&O at some level, but to put some effort into connecting to clear outcomes for individual countries. Jun-Ichiro talked about Japan IODP outreach efforts— young people know about IODP and the science is popular, but IODP has a large amount of funding as compared to IR. Colin commented that IODP came to IR for some ideas for E&O. He said that the fact that IODP is “big” in Japan is a definite advantage—to use IODP to transport the message about ridge research. Because of IR’s limited funding, Jun suggested focused effort. Colin mentioned that if you have 10 outreach ideas, only one or two will “work”—so it can be difficult to start out with focus—when you need to try many things. Jun thought the *Oceanography* special issue was very effective to distribute amongst scientists. Susanna mentioned efforts with primary and secondary schools in Brazil (Sidney also involved). Their one-year pilot program involves teaching the teachers some oceanography, at relatively basic level such as “What is an ocean ridge?”. The program will start with 10-20 public schools—not easy b/c teachers don’t want more work. She also says 3-4 private schools will be involved, to compare which was effective – public or private. Benoit Ildefonse mentioned an “Explorateurs des Mers” event organized by CNRS and coming up soon in Paris and would like Outreach to be more prominent on IR website. He suggested access to photos for teachers to use. Hide then added that the IR website could be vastly improved by small effort to enter from different languages—esp. for Japanese. Note: After the Nov. 2007 StCOM meeting, efforts are in progress to make IR website front pages in the languages of IR principal members: Chinese, English, French, German, and Japanese. Benoit said that developing web access on international basis would be great for little \$. Françoise asked about ChEss outreach—Kristen mentioned that they don’t have E&O Coordinator. Françoise inquired within CNRS about support for outreach activities, and they could provide limited support.

4.5. The MATE ROV competition (http://www.marinetech.org/rov_competition/2008/index.php), to be held at Scripps Institution of Oceanography in June 2008, is international in scope, with this year's theme: hydrothermal vents. Donna added that judges tend to be engineers but it might be interesting for IR scientists to be involved. Kristen suggested that IR get involved, for example with a monetary donation to support a student team. Colin suggested that if IR was to be involved financially, that it might be best to support advertising/outreach internationally and not just support one team. After further discussion at the StCOM meeting and over email following the meeting, it was decided for IR to provide monetary awards of \$250 each to two teams. Stace will represent IR to judge the competition at the MATE ROV event.

IR E&O Update as of Feb. 2008: Kristen has accepted a new position as director of public relations for the Earthwatch Institute (earthwatch.org). She'll be based at the international headquarters in Maynard, Massachusetts, and looks forward to keeping in touch with all of her IR colleagues and friends – especially since Earthwatch has branches in the UK, Australia and Japan.

Kristen writes: "I am so grateful to the IR leadership and community for the tremendous experiences I've had over the last four years. Not only has my passport evolved from a bunch of boring blue papers to the colorful, interesting storybook (!) it is today - but more importantly, I have grown a lot, professionally and personally, thanks to my IR experiences. I'll always be proud to have been IR's first education and outreach coordinator, and proud of the diverse outreach success stories we have accumulated since 2004." We appreciate the major contributions that Kristen has made to InterRidge and congratulate her on her new position. We hope to continue collaboration with Kristen.

The IR E/O program and activities will continue. Because of the IR budget constraints, we do not plan to hire a new IR E/O coordinator. If there are specific projects that need expert help, then we will contract with Kristen (if available) or elsewhere on the basis of individual projects. For tasks that can be done by the existing IR Coordinator, Stace will do so with appropriately increased allocation of work hours. Right now the IR budget is only sufficient for supporting Stace at half-time.

5 Review 2006 meeting action list

| 2006 Minutes item nr. | Subject | Action | Responsible |
|-----------------------|--------------------|--|--|
| 4c | New Office | Update bid with clear definitions of tasks of Chair and Co-Chair | JL/CG Checked. |
| 4c | New Office | Provide breakdown of components in Coordinator's salary | JL/CG Jian provided detailed budget for WHOI Office. |
| 4d | Next StCOM meeting | Contact Brazilian organizers to encourage participation of other S. Am. nations at StCOM as guests | CD Our 2007 StCOM meeting included 3 guests from Brazil and 1 from Chile. |
| 5a | Budget | Provide breakdown of E&O budget in 2006 | CD Colin sent that |

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| | | | out after the meeting in 2006. |
| 5b | Budget | Help national offices with their budget requests | CD Benoit suggested a basic table, sent once a year, with % \$ spent on each major item. (Action Item for 2008) |
| 8b | Russia | Add St. Petersburg presentation to website | Coord. Completed. |
| 9 | WG | Circulate new WG proposal procedure to WG Chairs | CD Colin sent. |
| 9 | WG | Circulate new WG proposal procedure to StCOM | Coord. Colin sent. |
| 10 | E&O | E&O presentation on website | Coord. posted to previous IR office website. |
| 11b | Russia | Put St. Petersburg abstracts on website | Coord. Checked. |
| 13a | SCOR | Give name of attendees at SCOR London workshop in December to Ed Urban of SCOR (Urban informed of office move) | JL/CG Chris attended the meeting |
| 16 | Budget | Breakdown of expenses for 2006 | Coord./CD Colin sent details after the Moscow meeting and updated through the end of 2006 during this 2007 meeting. |
| 16 | E&O | Sound out interest in IR E&O workshop | KK KK said there was no response to this idea. |
| 16 | E&O | Find funding for extra Oceanography copies | DB, JL, CD, KK Yes, had R2K, WHOI, and other support. |

6 National updates

As of the 2007 StCOM meeting, InterRidge maintained the same total number of regional and national members (28), with one nation (China) becoming a principal member nation on 1 Oct. 2007. National updates were presented at the StCOM meeting for all six principal member nations, one of the five associate member nations, and two of the 17 corresponding member nations. Please refer to InterRidge News, Vol. 16, 2007, for National Updates from 12 of the Member Nations (Canada, China, France, Germany, Japan, New Zealand, Norway, Philippines, Russia, Spain, UK, USA). After the StCOM meeting, Chile was accepted as a new Corresponding Member in Nov. 2007, followed by Chinese Taipei in Jan. 2008. As of Feb. 2008, the total IR regional/national membership is now at 30.

6.a Principal Members

China:

Jian Lin presented the Chinese national update for John Chen. He started with the important impact of an IR workshop in Beijing in Oct. 2003 on “Opportunities and Contributions of Asian Countries to InterRidge Next Decade Initiative”, which prompted China to become an Assoc. Member. China achieved its first major progress in mid-ocean ridge research and exploration with a 297-day global expedition in 2005-06 with the newly refurbished ship *R/V Dayang Yihao*. China achieved a major discovery in 2007 – discovery and investigation of the first high-temperature active hydrothermal vent field on the SWIR (see article by Tao et al. in InterRidge News 2007). Jian gave a brief synopsis of this discovery which involved collaboration with the USA, using WHOI’s autonomous underwater vehicle ABE. China is currently building a 7000-m HOV, 4500-m HOV, and 11000-m ROV, and AUVs. China’s first ROV was co-developed with Southampton, but was lost on sea trial. A replacement ROV has been built. The mother ship for the new 7,000-m HOV was refurbished at the end of 2007. An InterRidge-China joint meeting with InterMARGINS-China was held in Hangzhou in Sep. 2007. A COMRA delegation visited WHOI in Oct. 2007 and held a meeting with the IR Office.

France:

Benoit Ildefonse presented the French national update, starting with the cruises to the MoMAR area in 2007: BBMOMAR (Lucky Strike; mooring of OBS’s and recovery of EM stations), MARCHE 2 (Lucky Strike; recovery and redeployment of hydrophones), and MOMARDREAM-NAUT (Rainbow; *Nautile* dives for biology and some geology; see article by Gaill et al. in InterRidge News 2007). MOMARDREAM-NAUT was an abridged version of the originally planned cruise; due to a broken A-frame, there were no GRAVILUCK 2, RECO-07, or BATHYLUCK 0 operations. Then, he highlighted the SERPENTINE cruise to 15°N MAR in March 2007, which involved a collaboration with Russia and the use of ROV *Victor* for geological studies at hydrothermal sites. Finally, he presented plans for 2008, which include: 3 or 4 cruises to the MoMAR area, French participation on other cruises (e.g., *R/V Reville* to the CIR), a request to recover a hydrophone in the Indian Ocean, and a list of highly ranked French proposals for ridge-related studies.

Germany:

Colin Devey reported two major technology advances: ROV *Kiel 6000* in 2007 and AUV *ABYSS* expected in 2008. The ROV *Kiel 6000* includes lighting up to 4kW, HDTV, laser-ranging still camera, DVL navigation for station keeping and autopilot function, and a 4-container system for transport. The vehicle offers flexible deployment from ships-of-opportunity, and the vehicle control system is housed in a single container. In summer 2008 Germany expects delivery of a Hydroid 6000-m AUV which will be called “*ABYSS*”. The AUV will be used to search for vents, and may serve as part of the vision for AUVs in the new WG for long-range multi-vehicle exploration. German cruise planning for the end of 2007 into 2008 was affected by technical difficulties with the *R/V Merian*, which may be out of commission for 2-3 yrs. Germany is chartering the French ship *Atalante* for some upcoming MAR cruises. There are still cruises scheduled for *R/V Merian* in 2009 to Caribbean and Cape Verde submarine volcanoes, and *R/V Meteor* cruises to MAR in 2008 and offshore Chile in 2009. There will be an ocean sensors meeting in Germany 31 Mar – 3 April 2008 (www.oceansensors08.org).

Colin also commented that he received very positive reviews for the proposal for Germany's InterRidge Membership.

Japan:

Jun-Ichiro Ishibashi reported on Japan's website, domestic meetings, budget, and cruises for ridge and back-arc basin research. For domestic meetings in 2007, there was a regular session "Marine Geoscience" at the JGU annual meeting in May and a ridge study symposium in October supported by ORI (Ocean Research Institute) with 26 presentations—to encourage participation by young scientists. Additional meetings were for a ridge IODP project, JAMSTEC sponsored some young scientists to attend the IRTI in September, and for a new ridge research budget in July and October. This new InterRidge-Japan budget involves a plan for a 5-6 yr interdisciplinary project called Project TAIGA: Trans-crustal Advection and In-situ biogeochemical processes of Global sub-seafloor Aquifer (proposal was not successful this year, but hope for success next year). The target areas in the project are the Indian Ridge, S Mariana Trough, and Okinawa Trough. There were 4 Japanese ridge cruises in 2006FY: KR06-11 in S Mariana Trough, KR06-12 in Central Mariana Trough, YK06-13 in Manus Basin, and KH06-4 in Central Indian Ridge. Four ridge cruises were funded for 2007FY: YK07-10 in Mariana Trough had to be cancelled due to problems with *Shinkai*, NT07-11 and -13 in Okinawa Trough, KH07-2 in Parece Vela Basin, and KR07-16 is planned for the Mariana Trough. He presented some details for the Central Mariana OBEM Project with 40 OBEM sites. There are two *Hakuhou-maru* (ORI) cruises scheduled in 2008 and 2009 for SWIR 26°-39°E. There is space for additional scientists on these cruises—and there is enough lead time to obtain funding for international scientists to join (contact N. Seama, K. Okino). The 2008-09 JAMSTEC schedule was not out yet. Japan's IR funding in 2007 came from individual PIs at three organizations: ORI, JAMSTEC, and Niigata University. Rhian also mentioned the combination of interridge-mail and IntRidgeJapan emailing lists for biweekly news from the IR Office.

UK (from Day 2):

Chris German reported on recent success with the ROV *Isis*, recent cruises with the new ship *James Cook*, and an upcoming series of cruises to the Southern Ocean. In 2007, two ridge-related cruises were on the new ship *James Cook*: MAR 15°N (Searle) and MAR-ECO (Priede; first time *Isis* went to a mid-ocean ridge). Two ridge-related cruises are planned for 2008: Hess Deep (MacLeod), and MAR 45°N (Searle). A new campaign for the Southern Ocean in 2009-12 involves a consortium of five universities from UK, headed by Paul Tyler. One of these cruises will be headed by Alex Rogers, our new IR StCOM member. Chris mentioned enhancing international participation for this series of cruises. ACTION ITEM: IR should stay involved with this, esp. because Korea has more plans for hydrophone array in the Bransfield Strait area. Colin said this might even be helpful in securing member payment(s) to IR. Also, Chris mentioned the importance of WOCE data for plumes from Chile Ridge as basis for larval connection of E Scotia Ridge to Chile Ridge.

USA:

Donna Blackman provided an update for the Ridge 2000 (R2K) Program, starting with the Integrated Studies Sites (ISS's). Field programs at the EPR ISS included two 1-week rapid response cruises for the eruption that occurred in late 2005-early 2006 and four additional cruises for: 1- larval dispersal studies (Mullineaux, Thurnherr), 2- microbiology and chemistry (Sievert, Ding), 3- vent fluid chemistry (Von Damm), and 4- seismic

imaging (Carbotte). R2K will continue to support integrative analyses of the EPR ISS, but field programs will now be proposed to core NSF programs. Colin asked why there will be no more R2K field support for EPR—was it just due to funding? Donna said the original R2K plan was to go to 6 different types of ISS's. Colin/Donna confirmed that exciting science is not “done” at EPR. Donna next discussed the second round of funded field research at the Eastern Lau Spreading Center ISS. There was one biology cruise in 2006, and a series of additional cruises is planned for 2008-09 to include microbiology (Reysenbach), macrobiology (Fisher), geological mapping (Martinez), and mantle and lower crustal imaging (Wiens). This ISS is in Tongan waters, an area in which Nautilus Minerals has received permission from Tonga for exploration. Moving on to the Endeavour ISS, there were several cruises in summer 2006 and 2007 involving micro- and macrobiology, acoustic plume imaging, and seismic studies. The NEPTUNE Canada cable is now in place, and nodes are expected to be deployed in 2008. The US component (OOI regional cabled observatory) is not expected until 2010; Deb Kelley is Chief Sci. for RCO. After the 2008 funding round, field programs for Endeavour will have to be submitted to core programs at NSF. Donna then provided some details for R2K program logistics. As of fall 2006, Adam Schultz is the new NSF program manager for R2K. The funding situation looks good for 2009 (still low in 2008). There will be a mid-term review of R2K in early 2008. Although the outcome is not 100% certain, the prognosis looks good for renewing R2K for the next cycle. There are plans for a new ISS at the MAR 35°-37.5°N, depending on a positive R2K mid-term review. Finally, Donna listed 2006-2008 R2K meetings, from the June 2006 R2K Theoretical Institute “Modeling Mid-Ocean Ridge Hydrothermal Processes: Magma to Microbe” (AGU Monograph, in press) to the March 2008 set of two, 2-day meetings including the MAR ISS Implementation Plan Workshop. The Implementation Plan Workshop in March 2008 will consider various approaches for collaborative work at the MAR site; she highlighted the importance of data sharing—even at the metadata level will be very useful. This workshop is expected to commence with overview talks of InterRidge work at MoMAR, given by Javier Escartin (Lucky Strike), Francois Gaill (Rainbow), and Ana Colaco and Pierre-Marie Sarradin (ESONET and Azores partnerships). Donna also invited Mathilde Cannat (MAR coordinator in France/Europe). Francoise/Benoit also suggested Jerome Dyment as a contact for the MAR cruise schedule.

6.b Associate and Corresponding Members

Korea (from Day 2):

Sung-Hyun Park presented an overview of the past, present, and future of mid-ocean ridge studies in Korea. Ridge-related studies in Korea in the past have been focused mainly on the western Pacific marginal basins (Ayu Trough, Manus, eastern Woodlark, north Fiji and Lau Basins). He highlighted studies in the Ayu Trough (PI Sang-Mook Lee, 2000-03). Present ridge-related activities in Korea include geochemical investigations of the Phoenix ridge (fossil mid-ocean ridge near Bransfield Strait, Antarctic Peninsula; PI: Lee), geochemical investigations along the axis of the Bransfield Strait (PI: Lee), and hydroacoustic observations from 2005-07 in the Bransfield Strait / east Scotia Sea region (PI: Park, collaboration with NOAA and OSU). A new icebreaker under construction for the Korea Polar Research Institute (KOPRI) will lead to more Antarctic and Arctic mid-ocean ridge studies in the near future, with launch expected in 2008 and sea trials in 2009. Preparations are underway at KOPRI for a Korea Polar Ridge Expedition (KOPRIDGE). There will be a call for Polar Ridge proposals for Korean and international scientists expected in 2010 (ACTION ITEM for IR Office). Tentative

target areas for KOPRIDGE include the Pacific-Antarctic Ridge and Chile Ridge in the Antarctic and the Mohns Ridge and Gakkel Ridge in the Arctic. Jun-Ichiro pointed out that there seems to be many countries interested in the Chile Ridge. Sung-Hyun also mentioned developing E&O programs for KOPRIDGE. Since KOPRI is a government-funded research institute, Jian asked about university involvement and interest in ridge research. Sung-Hyun said that there is limited funding for university professors.

Brazil:

Susanna Sichel started by presenting a recent morpho-structural study of the SMAR 0 - 50° S (by Stanton, Mello, and Sichel, 2006, RBGf). She highlighted additional Brazilian studies, for example the gravimetry of Ascension Transform Fault and crest of the Mid-Atlantic Ridge between 6°20' - 10°05' S (J. Palma, 1998) and tectonics and volcanism at the Mid-Atlantic Ridge 45° N (S. Mello, 1999), and mentioned some talks to be given on Tuesday at the SGB conference. In particular, there is interest in the St. Peter and St. Paul Archipelago (in Brazil's EEZ) which are an abyssal mantle exposure, not of volcanic origin. Past projects for this region and the St. Paul Transform were: CAPES/COFECUB (1997-2000 and 2003-04; involved dives with Ifremer's *Nautile*). Unfortunately, there is a very low budget for 2005-08 (\$6000 US per yr). A meeting is planned for 25-30 Nov. 2007 to determine support to continue this series of projects.

New Zealand (from Day 2):

Chris German just returned from a visit to NZ, where he spoke with IR correspondent Ian Wright. He reported on a recent cruise to Brothers Volcano (Chief Sci: Colin Devey), which involved ROV sea trials as well as NOAA OE funding to use WHOI's AUV ABE. The New Zealand government is interested in arc volcanoes just to the N (links with Nautilus Minerals), and there is definite interest in the new Seafloor Mineralization WG. New Zealand is also interested in AUV technologies for exploration. Colin also expressed NZ interest in mineral deposits and likelihood to obtain ROV in near future. Chris explained to Ian that for \$5K they could have a StCOM member on IR, too, in addition to the ChEss program. ACTION ITEM: cautiously optimistic for associate member for 2008. Jian asked about university research involvement and E&O. Colin said that the NZ public is very aware of underwater volcanoes. Kristen did a story on Brothers Volcano expedition for NOAA. Some newspapers picked this up. Jun-Ichiro mentioned Victoria Univ. Wellington for geochemistry lab eager to study Kermadec Arc.

6.c Status of potential membership upgrades / additions

China upgraded to Principal Membership in 2007. Jian suggested encouraging India to become the next potential Principal Member, considering the rapidly growing economy and likely interest in the new seafloor mineralization WG (and Chris German on Day 2 mentioned commissioning of a 4500-m HOV and hosting the deep-sea biology meeting in Goa in 2009). For upgrades to Associate Memberships, our discussion included Russia and New Zealand. There was a unanimous decision of participants in the June 2007 R-Ridge Workshop on the need to upgrade Russian membership in InterRidge. Colin suggested that Russia would have a strong interest in the new seafloor mineralization WG, which probably would help raise the \$5000 contribution. Jian has been in contact with Sergei Silantsev regarding a proposal submitted in summer 2007 for this funding. ACTION ITEM for 2008: to ensure Russian membership. Current and previous Assoc. Members that were not able to pay \$5000 US in 2007

were Portugal, Spain, and Canada. Donna suggested Ana Colaco as an alternate person to contact re: Portugal membership (and was seconded by Françoise and Stéphane; *however, see note below*) and also mentioned Portuguese interest in AUVs for rapid-response cruises. Ana will be at the R2K MAR implementation meeting in March 2008. *Note: after the StCOM meeting, Chris German was able to talk with F. Barriga at the AGU Fall meeting re: Portugal's 2008 Assoc. Membership.* Donna also suggested Anna Metaxas as contact for Canadian membership. We discussed the possibility for new Corresponding Members: Chinese Taipei and Chile (on Day 2). Rhian met with Taiwanese group led by Dr. Saulwood Lin when he visited WHOI in summer 2007. Jian discussed the international practice of using “Chinese Taipei” as in the case of the Olympics and former ODP Program. Another potential Corresponding Member is Hong Kong, which is a region of China, but has its own funding structure.

7 Current working groups – Updates

At the end of 2007, there were four active IR working groups; the Biology WG disbanded in 2007.

7.a Biogeochemical Interaction at Deep-Sea Vents

Rhian thought that this was the most active WG in 2007. See Item 10.b. for summary report of the IRTI in Sep. 2007.

7.b Biology

Stéphane Hourdez presented the Biology WG update; Stéphane and Chuck Fisher proposed the new WG in Vent Ecology for 2008 (see Item 8 - G5). Stéphane joined the Biology WG at the last meeting of the group - the international vent/seep biology meeting in 2005 at Scripps Institution (USA). The past year, since the drafting of the InterRidge Statement of Commitment to responsible research practices at hydrothermal vents, saw a lot of discussion over email about the future of the Biology WG. The WG disbanded because there was not much happening in the WG anymore, people felt there was a lot of overlap with ChEss (although the IR WG included more than biodiversity and biogeography), and there was a strong need to interact between different disciplines within biology. The Biology WG was distinct from, but with some overlap with the Biogeochemical Interaction WG (that WG is more from geochemical to microbial), while the Biology (and new Vent Ecology) WG is more for macrofauna (microbes to macrofauna).

7.c Deep Earth Sampling

Benoit Ildefonse presented the Deep Earth Sampling WG update. He listed 14 WG members, and 7 associated scientists. Jian mentioned that Dr. Huaiyang Zhou was recommended by InterRidge-China as a new member from China for this WG. Benoit linked the rationale of this WG to the IR Science Plan 2004-13, and stated an overarching goal “to determine where to drill with regard to mid-oceanic ridges, and then come out with proposals that will feed in to other initiatives such as IODP”. He highlighted five topics covered by this WG: Drilling of Active Hydrothermal Systems, Zero-age Ocean Crust and Axial Mantle, The Deep Biosphere, Drilling in Ophiolites, and An International Crustal Penetration Drilling Project. The WG fills a need for drilling into zero-age

ocean crust that is lacking in IODP. Benoit stated that there has been a lot of activity for this WG, despite difficulty in gathering members together, even when calling a meeting in conjunction with Fall AGU. IR partly sponsored a workshop “Mission Moho: Formation and Evolution of Oceanic Lithosphere” in Sept. 2006, although it was mostly funded by IODP (\$70K), JOI, and R2K (\$20-25K each). This particular workshop would have happened without the WG, but probably was strengthened by the IR WG. He listed workshop deliverables in 2007, including the full report available on the IR website. Benoit and co-PIs submitted a proposal in April 2007 for an IODP mission for Mission Moho (1 of 3 proposals). Although recommended by the External Review Committee, no mission was funded by the IODP Science Planning Committee (SPC) in Aug. 2007, and Benoit recently received an email saying that there will be no call for missions in 2008. For 2008-13, the IODP implementation plan looks like there will be reduced access to JOIDES Resolution. Technology development for riser capability to be extended from 2500- to 4000-m water depth looks to be one of 5 domestic science and technology priorities for the Japanese government. He suggested that there needs to be some more communication with scientists/engineers in oil industry for deep drilling. Benoit asked, “How can InterRidge help in triggering technology planning that is requested for very deep drilling in ocean crust?” He stressed the need for scientists to have a voice to improve the technology (one message that was clear in the Mission Moho workshop report).

The remainder of the discussion was about the future of this WG. Benoit suggested that in addition to the very deep penetration of the ocean crust, there might be a future direction for the WG towards hydrothermal sites and mineral deposits and/or the deep biosphere and hydrothermalism. Jian said if the WG has done its job (held a workshop and submitted an international, collaborative proposal), and the current goal is not specific, then the WG should decide if necessary to continue. ACTION ITEM: Benoit suggests to go back to his WG and conduct a survey over email like Biology did this past year. There was general agreement that the WG should not stay the same way it is now. Hide and Colin suggested that this particular WG should continue in a new form, but not completely disband due to the importance of the link to IODP. Colin suggested there should be a formal liaison between IODP and IR. Donna said it may be enough if there are people involved with IODP that are on other IR WGs. Colin suggested formally inviting the SPC chair (next: Jim Mori) or designated ridge-related representative from IODP to attend IR StCOM meetings. Alternatively, Benoit suggested that an IR StCOM Member could attend SPC meetings (he used to serve on that committee).

7.d Monitoring and Observatories

Rhian provided a brief update, expressing Javier’s interest in coordinating with R2K for MAR activities. Francoise, P-M Sarradin, and Javier are all expected to attend the R2K MAR meeting in March 2008. Javier requested that IR designate some funds for international travelers to attend the 2nd workshop specific to the MAR (resolution was \$2K; see Item 11 for more details). Colin said that \$3K was the maximum to give to WGs for workshops; has this WG received such funds already? Donna suggested evaluating this WG after the March 2008 R2K meeting.

7.e Ultraslow Spreading Ridges

(From Day 2)

Jon Snow is chair and- currently- the only member of this WG. Chris attended the Sestri Levante Polar Ridges workshop in 2006; Henry Dick and Jon Snow were co-conveners. The discussion started with general

agreement that this WG needs a clear mandate and expanded membership—but, after further discussion, the resolution was that in light of the recent activity in this field of research, there should be a community-wide call for proposals for a new Ultraslow WG. Benoit said that instead of “dissolving” the existing WG, we should rather recognize that the work was completed with the Sestri Levante workshop, and now we need a new phase for an Ultraslow WG. Jian said that the discovery of vents at ultraslow ridges provides impetus for the community to work together on new ideas. Although IR has never done a special call for a WG, and we just had a general call for WGs in 2007, there was consensus that the StCOM could be proactive and do a targeted call for proposals in this case. Colin suggested using the Sestri Levante workshop report as a springboard for the special call for WG proposals.

In terms of people who might be interested in an Ultraslow WG, Chris suggested K. Okino (Japan) and French researchers working on SWIR, for example. InterRidge-China recommended Dr. Chunhui Tao from China. Chris said that the new WG should have geo-scientists and those interested in hydrothermal activity as well. Stephane also mentioned pre-biotic chemistry in these systems, and microbes that utilize hydrogen as energy source.

In addition to discussing the WG, Chris and Jian gave a brief update on a summer 2007 cruise by US scientists to the Gakkel Ridge 85°E, in particular, that video showed fresh glassy lava and fragments over large area consistent with explosive volcanism.

8 New working group proposal discussion

In 2006 the IR StCOM recommended the following generic plan for how a WG should operate (published in the 2006 InterRidge Newsletter):

1. A group of up to 10 international proponents submits a proposal to the InterRidge Office for the formation of a WG.
2. Each proposal is considered by the InterRidge Steering Committee. If accepted, the InterRidge program will provide US \$2,000 "leverage money" to help a maximum of 10 people to meet, possibly flanking another major congress. The aim of the meeting is for these proponents to finalize a plan for a workshop.
3. The workshop plan is submitted to the InterRidge Steering Committee. If accepted, US \$3,000 is given for workshop support/leverage.
4. The WG may have two end-member outcomes: either it produces a clear plan for how InterRidge can help push forward science through a coordinated effort, or it concludes that national programs are dealing with the burning issues at present and InterRidge involvement is not absolutely necessary at the time. The former outcome could lead to a proposal to InterRidge to continue the WG; the latter outcome leads to the WG disbanding.

In 2007 we requested new WG proposals with deadline of 29 June (advertised in biweekly e-news and on IR website). This invitation was open to any member - or groups of members - of the international community. We received seven WG proposals with lead contacts from six different nations. Each of the proposals was first reviewed by the IR StCOM using a consistent set of review criteria, and reviews were compiled by the InterRidge Office. Each proposal was reviewed by at least 10 individuals. Donna asked about ranking—Jian answered ranking was based solely on StCOM ranks, excluding Jian and Chris. Based on ranking there were 4 proposals clearly separated from the remaining 3. These 4 were recommended as new WGs and were asked to submit a revised proposal by Dec

31, 2007 - to make sure that major questions were addressed. StCOM will give final approval if the major questions were addressed. At the time of the StCOM meeting, the reviews for G4 had not been sent out yet to the lead contact. During the StCOM meeting discussions of the new WGs, the proponents for each new WG stepped out of the room, to be fair to those new WG's that did not have members present.

G1 - "Evolution of lithosphere – seafloor weathering and hydrothermal alteration" (Contact: Hidenori Kumagai, Japan)

Although there was excitement about this potentially breakthrough science of the temporal evolution of new crust, off-axis, the WG plan needs to be more mature (for example, there were several comments about improving the links to microbiology). The StCOM saw potential for integration of this new WG with the Deep Earth Sampling WG-- or perhaps with the new WG proposal G3, below. There was also a suggestion that the IR Office could help identify other potential members by sending an abstract of the proposal to the IR e-mailing list.

Decision by IR StCOM in Nov 2007: Not recommended for new WG in 2007; encourage resubmission of suitably revised proposal to the next call for WG proposals.

G2 - "Imaging crustal and mantle structure beneath mid-ocean ridges" (Contact: Nobukazu Seama, Japan)

This new WG was highly recommended, especially because the international collaboration was seen as essential for conducting such a large scale project with so many resources. IR China recommended John Chen as a member for this new WG.

*Decision by IR StCOM in Nov 2007: **Recommended** for a new WG, pending approval by the StCOM of a revised proposal by Dec. 31, 2007.*

G3 - "Ridge evolution in geological time" (Contact: Sergey Sokolov, Russia)

The StCOM would like to encourage contribution of new WG proposals from Russian scientists. This particular proposal needed further development.

Decision by IR StCOM in Nov 2007: Not recommended for new WG in 2007; encourage resubmission of suitably revised proposal to the next call for WG proposals.

G4 - "Rift to Ridge: Evolution of the NE Atlantic under the Influence of the Iceland hotspot" (Contact: Bramley Murton, UK)

This proposal was ranked highly by several reviewers, but there was concern that the idea is already too mature for an IR WG. There is already a lot of activity on this subject, although an IR WG could help in coordinating existing efforts. Some StCOM members thought the proposal was too broad, others-- too specific. There was some discussion about approaching InterMARGINS for this particular WG. Several StCOM members agreed that SCOR might be a possibility to produce a synthesis on the impact of the Iceland hotspot on the N Atlantic. SCOR can provide more significant funding than IR for such synthesis efforts (~\$30K US).

Decision by IR StCOM in Nov 2007: Not recommended for new WG in 2007; encourage the proponents to contact SCOR.

G5 - “Vent ecology” (Contact: Chuck Fisher, USA, and Stephane Hourdez, France)

Earlier, during Item 7.b, Stephane Hourdez presented some background for the new vent ecology WG: “ecology” is multidisciplinary, present-day communities are the result of a complex history, and access to technology for live-animal experiments, high-throughput techniques in biology (all the “-omics”), in situ manipulations and monitoring are very limited. Primary goals of this new WG are to: establish/encourage cutting-edge collaborations for the understanding of vent ecology, combined in-vivo experiments and “-omics” studies, and collaborations between geologists, chemists, and ecologists. The WG intends to: promote sharing of samples and open access to data to maximize return on investment and minimize impact on vent communities, encourage sharing of collection and monitoring instruments, and cross-comparisons possible between studies.

This new WG is quite different from the ChEss program, especially because of the experimental work, physiological studies, and more molecular biology. For the proposal revision, the two main suggestions were to include members on the WG that study the environment (i.e., geologists/mapping), plus identify overlaps with the Biogeochemical interaction at vents WG.

*Decision by IR StCOM in Nov 2007: **Recommended** for a new WG, pending approval by the StCOM of a revised proposal by Dec. 31, 2007.*

G6 - “Seafloor mineralization” (Contact: Maurice Tivey, USA)

*Decision by IR StCOM in Nov 2007: **Recommended** for a new WG, pending approval by the StCOM of a revised proposal by Dec. 31, 2007.*

Discussion of this new WG was deferred to agenda Item 12.

G7 - “Systematic long-range ridge exploration” (Contact: Colin Devey, Germany)

Although most reviewers were very positive about the concept of this proposal, there was some concern about being specific to the SMAR. There was also a suggestion that the high-resolution mapping conducted during the long-range exploration would produce important results in addition to hydrothermal studies.

*Decision by IR StCOM in Nov 2007: **Recommended** for a new WG, pending approval by the StCOM of a revised proposal by Dec. 31, 2007.*

9 Enhancing ridge research and cooperation in South American Countries

9.a Research presentations from Brazilian colleagues

Sidney Mello’s presentation: “Marine Geology and Geophysics in Brazil”

- Brazilian university network in MG&G

Sidney listed institutions in Brazil involved with MG&G, discussed an exchange program for Brazilian PhD students, and listed national objectives including geology, fisheries, and mineral resources of the extended legal continental shelf.

- REMAC (1970’s) and LEPLAC (1980’s) Projects

The Remac Project was a joint effort to map the Brazilian continental margin, supported by Petrobras and the Brazilian government. During this time there were also surveys of the continental shelf (Geomar) and inner continental shelf (Geocosta) by universities. The Leplac project was submitted to the UN for Brazil's extended legal continental shelf. LAGEMAR now has a georeferenced database for all these old analog data. The current challenge is to extend the database to the continental slope (Petrobras data not available).

- Cooperative projects- AMASSEDS, CENTRATLAN, CAPES-COFECUB

- Ongoing projects: REMPLAC, Geo-Oceano, DSND Surveyor and new Research Ship (5-yr time frame)

The objective of REMPLAC - why they are equipping the existing ship and buying a new ship - is to update the data from the REMAC and LEPLAC projects at much higher resolution.

- Concluding remarks

Sidney talked about how they are doing education outreach to inform the Brazilian public about the need for oceanography ("improve sea mentality"). He suggested that IR E&O might help to increase opportunities for South American students to join summer classes and graduate programs. Brazilian scientists are eager to be involved with cooperative programs, especially in international waters. In particular, he thinks that the SMAR is a good target for science, especially south of 15°S on SMAR ("colder" not influenced by hotspot). With all the existing data for the Brazilian ELCS, there is the possibility for a complete section from the ridge axis to the Brazilian coast, a corridor in the South American plate from central SMAR to Brazilian margin. There was some discussion about the possibility for an international cruise under the arch of IR, and Sidney suggested that Brazil could offer—oil! for the cruise.

Marcia Maia's presentation: "Ridge related studies in the South Atlantic"

Marcia began by describing recent collaboration between France and Brazil, starting with the 1997 cruise to the St. Paul FZ and ridge (CAPES Cofecub program introduced by S. Sichel on Day 1). Now, Sidney (UFF) and Marcia (UBO) are sponsoring a Brazilian student in France for ridge-hotspot interaction studies, with a scholarship from the Brazilian government. They are comparing the Tristan da Cunha/SAR and the St. Paul Amsterdam/SEIR systems. She showed slides with bathymetric data compiled by the student for the South Atlantic, and the possibility of correlating the structure of fracture zones with the shape of the Brazilian continental margin. She listed key reasons why it is so important for Brazilian students to have training at sea (e.g., sea-going experience, data acquisition, team work, and experience abroad). She stressed the importance of including students on cruises in cooperative programs.

Susanna Sichel's presentation: "Saint Peter Saint Paul Islands"

Susanna built on some of her topics introduced on Day 1 (Item 6.b). She compared the "Atlantis Megamullion" to the St. Peter St. Paul "Megamullion" (there is some question about defining this as a megamullion). The St. Peter St. Paul Islands are the only locality in the world at which ultramafic rocks are exposed above sea level (abyssal peridotite). The research station at St. Peter St. Paul is quite remote, 2-3 days by sea only. She listed research goals for 2008-11 (pending funding from Petrobras), which include understanding serpentinization and hydrothermal alteration processes on abyssal mantle rocks, origin and evolution of the ultramafic rocks, studying plastic deformation processes of the upper most level of mantle, and defining the Saint Peter Saint Paul Megamullion by magnetometric, bathymetric and gravimetric studies.

9.b Research presentation for Chile Triple Junction

Chris German's presentation for the INSPIRE project

Chris started with a slide of the world's ridge system indicating biogeographic provinces of vent fauna. One of the key areas of interest for the ChEss program is the Chile Triple Junction, the only place in the world where you can study subduction of the mid-ocean ridge (E Chile Rise disappears under the Peru-Chile Margin). As an analogy, this is the precursor to the San Andreas Fault system. He showed a graphic of the Chile margin with hydrothermal vents (currently not known), cold seeps, whale migration routes, oxygen minimum zone, and large organic falls, all within a couple hundred km of each other. This certainly seems to be a good location at which to study the stepping stone concept for fauna reliant on chemosynthetic production. He was co-PI on a recent proposal to search ~200km of ridge for hydrothermal activity, using a nested survey approach from multibeam to sidescan to MAPR/CTD towyo, then to AUV ABE. There was some discussion of other nations interested in research in this area—for example, Hide mentioned Japanese interest for a cruise to this area in 2009, Benoit mentioned that Yves Lagabrielle at Université Montpellier 2 is interested in this area with PhD student from Chile, Françoise was interested in comparing fauna from this area to SEPR fauna, and Donna mentioned Korean work in the oceans off southern South America, too.

Juan Diaz-Naveas's presentation: "Chile Triple Junction: Opportunity of New Chilean Research Vessel"

Juan began by listing recent MG&G efforts in Chile, including universities, the Chilean National Oil Company, naval hydrographic service, and a joint institution gas hydrates project funded for 2001-05 and 2006-10. Most efforts have been concentrated on the continental margin. The EPR (Easter Island) and Chile Rise (Chile Triple Junction) have mainly been surveyed by US and French. There has been recent government interest in seamounts research, especially for fisheries. Funding from CONICYT (Chilean equivalent to NSF) includes FONDEF (applied science with partial industry support, e.g., hydrate exploration), DRI (international collaboration and travel), and EXPLORA (education). Chile is still using the R/V *Washington*, purchased from Scripps (USA) in 1993. They intend to purchase a new R/V which will belong to the Chilean Navy with delivery estimated 2010 (he thanked Captain Rodrigo Nunez Gundlach for information on the new vessel). The vessel will be designed by the Norwegian company Skipsteknisk AS (recently designed the UK vessel *James Cook*). The main cost to science will be oil, not salary for crew. The main requirements for the vessel include little noise (so as not to affect bathymetry, seismics, fisheries surveys) and a strong hull for activity in polar regions (although it will not be an icebreaker). Juan stressed that the MG&G community is growing in Chile. ACTION ITEM: Juan suggested Chile join IR as a new Corresponding Member. Stace mentioned Emilio Vera as the sole member from Chile at that time on the IR member database. Juan also suggested Luis Lara as a potential National Correspondent (experience with National Oceanographic Committee in Chile and SCOR).

9.c Discussion

As of 8 Nov. 2007, the IR Member Database listed the following numbers of members registered from South American countries: Brazil 5, Argentina 3, Venezuela 2, Chile 1, Ecuador 1, and Peru 1.

10 Workshops and meetings 2007 – Reports

10.a May 2007, International Data Exchange Workshop, Kiel, Germany

Colin Devey reported on this workshop, with report titled “Building a global data network for studies of earth processes at the world’s plate boundaries” available at <http://www.nsf-margins.org/Dataworkshop07/index.html>. Donna commented that the co-conveners of the meeting did a great job in gathering the scientists and IT people in creating this consensus document. The workshop was also summarized by Carbotte et al. in InterRidge News 2007.

Colin highlighted the following from the 1.5-days of presentations:

- a. Science Needs: Scientists outlined their needs for data access and defined data sets of broad interest for continental margin and ridge-related science.
- b. Data Resources: Representatives of data centers presented existing data systems available for academic research. These presentations were complemented by poster presentations and live demonstrations of the systems.
- c. Technologies: Information technologists reported about emerging technologies for interoperability and data sharing.

Colin then highlighted the following points from the 1-day workshop discussions:

- a. Science Needs: Scientists need data access; Archiving field or experimental data is essential for result verification; Open data access culture needs encouraging; Integration of data across disciplines and between terrestrial and marine; Data citation problems.
- b. Data Documentation/Publication: Standardising data acquisition at sea; Funding agency involvement in enforcing acquisition and submission standards; “doi”-type data set identification.
- c. Interoperability: Use common metadata standard; ISO-based standardised exchange between archives.
- d. “Low-hanging fruit”: Developing a site-specific data discovery service. Sites like MoMAR, Nankai, Costa Rica obvious examples; Data centres exposing data via web services; Collaboration tool development (like Google Earth); Standardise vocabulary. *Note:* Benoit commented that he was contacted by a junior high school teacher in France that was teaching students how to use Google Earth to present seafloor data.

Colin ended by listing key recommendations:

- Science will increasingly require across-discipline data access.
- Such access is only possible if data are freely available and well documented.

This requires:

- Automated, standardized meta-data production (ROCOP forms are NOT the future!) during collection,
- Clear credit (citation) for data production,
- Enhanced effort on seamless-transitions (data centre level).

10.b Sept. 2007, IRTI, Biogeochemical Interaction at Deep-Sea Vents, Woods Hole, MA USA

Chris German reported on the third InterRidge Theoretical Institute, organized by the Biogeochemical interaction at deep-sea vents Working Group. A brief summary of the IRTI by LeBris et al. is in InterRidge News 2007, and the full workshop report is available at the InterRidge website: <http://interridge.who.edu/IRTI/2007>. The Theoretical Institute featured two days of lectures, a poster session, and a three-day workshop with five working groups. More

than 127 scientists attended the lectures, and roughly 80 participants attended the working group discussions. Chris provided the following bullets for the major outcomes of the WG's at this meeting:

Working Group 1 - Regional-scale plume studies and water column chemistry/biogeochemistry: detailed planning for a new program, joint with GEOTRACES (another SCOR endorsed program) for vent- and plume-biogeochemistry studies on the Southern EPR.

Working Group 2 - The hidden biosphere: metabolic diversity, element fluxes and mineral signatures: identified key future projects, joint with IODP.

Working Group 3 - Life in extreme environments: strategies and adaptations: large scale biogeochemical flux expt. required; International study on the scale of a Ridge 2000 ISS; To be suggested to SCOR as WG?

Working Group 4 - Observatories: tools and strategies for long-term seafloor ecosystems studies: Identified key types of questions that can be addressed (successions, cycles & events; fluxes; linkages); Need for docking AUVs as part of an observatory; Common instruments at NEPTUNE & MoMAR; Potential to twin ESONET (EC) with OOI-Global (WHOI)?

Working Group 5 - New approaches and tools for biological and chemical sensing: Solid State = Voltammetry, Raman, GCMS & LIBS; Chem., 4 key measurements: pH, O₂, H₂S, H₂; Phys: Flow rate across a surface; Bio: FISH, cell counts, particle counts, organism identification.

For the Biogeochemical interaction WG, Nadine LeBris's first priority is to put together a volume of research papers from this IRTI for an online journal. Then, Chris expects to get feedback from Nadine regarding the direction for the WG, post-IRTI.

11 Workshops and meetings proposed for 2008

Meetings with some funding from InterRidge:

- Meetings for four new WGs: Last year's StCOM meeting decided on \$2K each for the first-time meeting of up to 10 people (e.g., add day onto existing meeting, and/or bring an extra person to the meeting) and then \$3K each for a larger meeting.
- Potential Theoretical Institute for young scientists (initially suggested by Nobi Seama in 2006): There was general agreement that this idea is not mature enough for support in 2008. There was support, in general, that such an IRTI would be useful for gathering young scientists together. Jian said that we should make an effort to ferment this idea into a clear concept. Donna will provide contact info for UK graduate students that are putting together their own workshop on hydrothermal vents. Rhian brought up that this sort of workshop needs to include career advice; however, Benoit and Stephane thought that this might be beyond the scope of IR. As example symposia, Stace mentioned experience with the "DIALOG" program for new PhDs in oceanography and limnology and a recent gathering of young scientists in polar research. There was some discussion about how much money this would cost. Jun-Ichiro suggested that there are several possibilities in Japan to apply for foundation \$ for such an international meeting. The Japanese funding year is April - March, so it is too late for 2008, but maybe possible for 2009. Chris pointed out that a 3-yr lead time is probably a good idea because of the planning for such a meeting (vs. a targeted science research IRTI). Benoit agreed

that it might take several years to gain enough \$ from different countries. *Note:* Much less expensive if use dormitory housing at university.

- MATE ROV competition at Scripps in June 2008: See Item 4, bullet 4.5.
- Also discussed in Item 7.d.:

Ridge2000 Integrated Studies Workshop, Portland, Oregon, March 25-26, 2008: Donna expects ~100 people for this workshop.

Ridge2000 MAR 35°-37.5°N Implementation Plan Workshop, Portland, Oregon, March 27-28, 2008: R2K has very limited funds to support travel to this workshop (\$ for only 5 IR scientists for 2nd workshop). There was general agreement that IR should support additional international scientists. The resolution was for IR to provide \$2K to the Monitoring and Observatories WG specifically for participation at this meeting. The WG Chairs would decide which or both of the two workshops for which to use the \$. The IR Monitoring and Observatories WG co-chairs, Javier Escartin and Santos Ricardo were informed of the IR \$2K funding in Jan. 2008.

Meetings sponsored, but not funded, by InterRidge:

- Special sessions at EGU 2008, Vienna, Austria, April 13-18, 2008.
- 4th International Symposium on Vent and Seep Biology in 2009 at JAMSTEC, Japan (Dr. Fujiwara). Hide mentioned lots of logistics necessary for this meeting-- date/venue undecided.
- Special mid-ocean ridge session at 5th Asia Oceania Geosciences Society Conference, Busan, Korea, June 16-20, 2008.
- ESOF2008 (joint outreach proposal with ChEss); July 18-22, 2008; Barcelona, Spain.

Other meetings listed as Upcoming Events on InterRidge website:

- AGU Fall Meeting, San Francisco, California, USA, Dec. 10-14, 2007
- 2008 Ocean Sciences Meeting, Orlando, Florida, March 2-7, 2008
- Reunion Annuelle des Sciences de la Terre, Nancy, France, April 21-24, 2008
- Québec 2008, Joint Annual Meeting GAC - MAC - SEG – SGA, Québec, Canada, May 26-28, 2008
- AGU 2008 Joint Assembly, Fort Lauderdale, Florida, May 27-30, 2008
- SCAR/IASC IPY Open Science Conference, St. Petersburg, Russia, Jul 8-11, 2008
- 2008 Western Pacific Geophysics Meeting, Cairns, Australia, Jul 29-August 1, 2008
- 33rd International Geological Congress, Oslo, Norway, August 6-14, 2008
- 6th International Conference on Asian Marine Geology, Kochi, Japan, August 29-Sept. 1, 2008.

12 Discussion on IR's stance on ethics, conservation and access to ridge sampling

Items suggested for discussion prior to the StCOM meeting (summary by Chris German):

- 12.1. How to coordinate international research in common work areas aboard multiple nations' research ships.
- 12.2. How to sustain "ethical" research by academics at e.g., seafloor vent-environments.
- 12.3. The role of InterRidge in influencing policy makers over all interactions at ridge-crests.

Under item 12.1, key issues seem most likely to arise at areas targeted by our "Monitoring & Observatories" working group. In 2007 there were already issues of different ships trying to work simultaneously at the Endeavour

segment of the Juan de Fuca Ridge and this is set to continue in 2008 both in the case of Endeavour where Canadian and US scientists continue to work under both Ridge2000 and NEPTUNE-Canada and in the MoMAR area, Mid-Atlantic Ridge where French and US cruises are already scheduled. In each case, complications arise because both research areas also include regions of seafloor that fall inside individual nations' EEZ's (Canada, Portugal) and – to add even further complexity – also include sub-regions that have been established as Marine Protected Areas. Sadly, full discussion for these specific areas will be hampered by the absence of StCOM representatives from either Portugal or Canada at our meeting. Nevertheless, continuing discussion of the role that InterRidge and the IR Office in particular should seek to play in mediating between competing nations' interests throughout the global ridge-crest (Lau Basin might be another good example of converging research interests – e.g. between US, Japan, and China) would undoubtedly be timely.

For item 12.2, our previous IR Chair (Colin Devey) pioneered development of an InterRidge policy on ethical scientific conduct around hydrothermal vents. Presumably this remains acceptable to all members.

Perhaps the most contentious issue for consideration, therefore, is what role – if any – InterRidge should play in influencing decision makers (national governments, international bodies) concerning non-research activities at the Mid-Ocean Ridge crest (i.e., item 12.3). This might be an obvious role for InterRidge to play, for example, with respect to future plans for marine mining of hydrothermal deposits as a natural complement to the research-specific processes which would be addressed by our new Working Group on “Seafloor Mineralization”. Under the United Nations Convention of the Law of the Sea (not necessarily recognized by all InterRidge member nations), jurisdiction of mineral extraction from the seafloor in “The Area” – all parts of the deep seafloor that lie outside any country's EEZ – resides with a UN body titled the International Seabed Authority.

InterRidge representatives have given evidence to the ISA on many occasions – notably at a special symposium on hydrothermal polymetallic sulfide deposits in 2000 and again at their 10th anniversary celebrations in 2004. Following the latter meeting there has been an open invitation for both InterRidge and the ChEss Project of the Census of Marine Life (dedicated to hydrothermal vent and cold-seep biogeography and biodiversity) to engage with the ISA. One possible model would be for InterRidge to agree to provide scientific *advice* to the ISA on matters related to commercial activities at the ridge-crest but to leave it to the ISA to make any decisions on *policy*. This same topic also received discussion at the most recent Steering Committee of the ChEss project in June 2007 (of which Chris German is also co-Chair). ChEss, at that time, agreed to await the outcome of this year's IR StCOM meeting before deciding whether the two programs could move forward together with a common vision or whether quite different opinions would be arrived at by the two differing programs, reflecting the inclinations of two overlapping but distinct research communities.

A draft document arising from the ChEss StCOM meeting is currently under revision for possible submission as a “News and Views” item for publication in *Nature*. The content of that draft essentially covers the following topics:

- ChEss recognises the potential economic importance of polymetallic sulfide deposits, internationally.
- ChEss also recognises that our knowledge of the location and nature of active submarine hydrothermal vent-systems is patchy at best with most of the world's ridge-crests still unexplored.

- But, the sites that *have* been investigated host biologically unique fauna, previously unknown to science: we have already identified ~600 species, classified into at least 6 distinct biogeographic provinces indicating genetic isolation one from another, both between and even within individual ocean basins.
- Even less studied are the fauna that might derive chemical energy from inactive hydrothermal deposits on the seafloor and the role that such “extinct” systems (which may outnumber active sites) might play.
- As private companies and government agencies begin to consider economic exploitation of inactive hydrothermal fields critical concern should focus on both what impact such exploitation might have on adjacent active vent-sites and communities *and* on inactive sites/ecosystems themselves.
- To that end ChEss recommends two new types of research initiative:
 - a) Development of new approaches for exploration for inactive as well as active hydrothermal fields.
 - b) Biological studies of fauna and ecosystem functioning at individual inactive hydrothermal fields.
- While ChEss recognises that key private-sector companies at the forefront of marine mining are making unprecedented attempts to approach this work in an environmentally responsible manner, ChEss would urge the international research community (as represented by, e.g., ChEss, CoML, InterRidge) and relevant authorities (e.g., the ISA) to work together and devise a dedicated pilot study or series of studies to move this process forward in both an environmentally and economically sustainable manner.

During the IR StCOM meeting, most of the discussion on Item 12 was focused on 12.3. We also had guidance from an email sent by Chuck Fisher, who could not attend the StCOM meeting.

12.1. How to coordinate international research in common work areas aboard multiple nations’ research ships.

We discussed the role of IR as serving to alert PIs when cruises from multiple countries are expected at the same area at the same time. Actual coordination of scheduling and research activities would remain the responsibility of national program offices. Donna Blackman noted that ship schedulers are in communication regarding the French and US cruises scheduled for the MOMAR area in summer 2008.

12.2. How to sustain “ethical” research by academics at e.g., seafloor vent-environments.

We discussed the importance of keeping current the IR statement of responsible research practices at vents, published in InterRidge News 2006. There was general agreement that new StCOM members should be encouraged to sign on, as individuals, to the statement.

12.3. The role of InterRidge in influencing policy makers over all interactions at ridge-crests.

To open the discussion of this item, Chris German prepared a PPT slide for Marine Mining with the following bullets:

- Process = IR Seafloor Mineralization WG domain; Policy = IR StCOM’s responsibility
- IR Policy should only be written by scientists with no conflicts
- National Agencies = Different from Private Sector
- IR WG Members to declare conflicts for transparency (personal income & privately-funded research)
- IR to meet with ChEss but maintain separate stances.

Summary 12.3: Our discussion touched on recommendations for the new IR WG for Seafloor Mineralization, but mainly focused on what should be declared as conflicts of interest when IR scientists are involved with private or

national agencies that engage in marine mining. Overall, there seemed to be a consensus that it is timely - now - for IR to prepare some guidelines regarding such conflicts of interest.

Discussion 12.3: Francoise mentioned that there are some complexities with the sponsorship of scientists by both academic and private industry e.g., Ifremer. Colin thought that the StCOM will need to make clear decisions on what is a conflict of interest if there is some funding from private industry. Hide was worried that a standard of conflict of interest might exclude a lot of scientists. As an example of involvement with a national agency pursuing marine mineral resources, Chris included declaring sponsorship from COMRA. Later in the discussion, Jian also mentioned his research collaboration with COMRA, and the need to make clear the conception of conflict of interest because he did go on COMRA cruises but was not directly funded by COMRA. Jian also pointed out that a lot of recent development in deep-sea research in emerging-market nations e.g., China, India, Korea, etc. was driven by national interest in mineral resources. Transparency is important, i.e., a scientist stating whether receiving personal income. Benoit said, 1) conflict of interest must be declared when carrying out IR activities, and 2) should distinguish funding by private industry on a regular basis or just as a one-time thing. Chris moved on to say that the IR StCOM should decide as individuals, not as representatives for countries, i.e., similar to the statement of responsible research practices at vents. Colin suggested that each IR StCOM member answer the question for his/her self - do I feel that I have a conflict of interest? Chris commented about economic geology on land 100 yrs ago - and that might be where the undersea mining is now for a lot of countries, although, of course, we have more awareness of environmental impacts now. Chris also mentioned funding from companies for doing environmental baseline studies that companies are interested in as they go “green”. Chris said that if IR does not have a policy statement, and just sticks to science, that a mining code might come out from ISA without the benefit of IR expertise and scientific input. There was general agreement that the new IR WG for Seafloor Mineralization should be science-centric, and not get into policy or advising. Chris suggested the new WG report to the StCOM every year what kind of mining activities had occurred or were in development.

13 InterRidge Student Fellowship Program Proposal

The IR StCOM approved a new “InterRidge Student Fellowship Program”. The initial funding of \$6K in 2008 will come from the IR budget, but the IR Office will submit grant proposals in 2008 to international funding agencies (e.g., foundations) for block funding of 15-20 of such fellowships spreading over 3-5 years. The two fellowships in 2008 (\$3K US each) will be used to demonstrate what the students can do with the money. The \$6K total will be drawn from WHOI’s contribution as a Principal Member to IR. (Both Donna and Francoise mentioned that there could be an issue with using funds from NSF or CNRS for these fellowships.) Rhian said that once IR StCOM approves of this concept, then we’d work with WHOI Development Office to identify foundations that would support such a project in the future. Rhian discussed 3 foundations to consider for a \$50K grant: 1) Nippon Foundation (keen on oceanographic projects with education), 2) Sloan Foundation (funds Census of Marine Life), and 3) Coca-Cola (also interested in education). (*Note:* After some discussion, we decided not to pursue Nippon Foundation further.) Jian mentioned that providing \$3K grants as “seed money” can engage students from developing countries. Sidney added that such a program would be motivation for more Brazilian students to get involved in ridge studies. Starting Jan. 2008, IR Office is in contact with the International Seabed Authority (ISA)

on the possibility of ISA support for IR student fellowships in the future. We discussed deadlines / deliverables to put into proposal. Fellowship reports would become a section of the IR News, with the sponsoring foundation's logo on the reports.

Following is the resulting call for proposals announced on 14 Jan. 2008 in the IR biweekly e-news:

2008 InterRidge Student Fellows

Call for Proposals

As part of InterRidge's mission to promote interdisciplinary, international collaboration of oceanic spreading centers, we invite proposals for two 2008 InterRidge Student Fellowships of up to \$3000 US each. These new fellowships are designed to encourage international collaboration on any aspect of ridge-crest science by students (undergraduate and graduate), fostering long-standing partnerships for their future careers. These fellowships can be used for any field of ridge-crest science. In particular these awards are encouraged to be used for international cruise participation, international laboratory use, and adding an international dimension to students thesis work.

Application Deadline: 31 March 2008.

Required Application Materials

- 2 page proposal from the student
- Budget and justification of required funds
- Letter from student's advisor
- Letter from host PI or Institution
- Student's CV

Amount and Duration of Fellowship

The amount awarded to each successful applicant will be determined based on the project needs and is up to \$3000 US per fellowship. The fellowship must be used during the time when the applicant is a registered undergraduate or graduate student and within 2 years (24 months) from the date the fellowship is awarded.

Proposal

Though there is no specific format to the submission, the two-page proposal should outline the nature of the work to be accomplished and demonstrate the international dimension of the project. Work can be either an addition to thesis work (by collection of new samples, additional methodology, etc.) or a separate project, but must not be an already funded part of your thesis – *the letter from student's advisor must certify that the above requirements are met for the application to be accepted into review.*

Proposal Review and Award Reporting Requirements

Proposals will be reviewed by 2 topic-relevant reviewers and final selection made by the InterRidge Steering Committee by 15 May 2008. IR Student Fellows will be featured in the InterRidge News and are required to submit one interim progress report and one final report upon completion of the Fellowship. The final report may be printed in InterRidge News.

14 InterRidge Website, E-mail lists, and Databases

14.a Website and users of email lists

Rhian discussed the transfer of the IR website to Drupal, a free and open source modular content management system. The IR website was the first Drupal website at WHOI; as of Nov. 2007, there were a dozen such websites at WHOI. Scripps Institution is considering doing their entire website in Drupal. One of the Drupal modules that we are exploring for the IR website is a language module. We expect in 2008 to post at least the entry homepage of the IR website in the languages of all Principal Member Nations. Users of Drupal websites are given certain “permissions” - for example, the IR Coordinator serves as a Site Administrator, and Members are currently given privileges to use the Member Directory. However, one item to explore in 2008 would be to allow WG members special permission to post messages to a WG blog. In particular, Stephane envisioned the new Vent Ecology WG using the website, for example, to ask if someone is sequencing a certain type of organism.

Daily activities at the IR office include posting new events and jobs to the website. Between 29 Jan. (start date) and 5 Nov. 2007 we posted 21 emails with IR bi-weekly news to the interridge-mail emailing list. As of Nov. 2007, there were 1613 members on this list, of which many were also registered online in the IR Member Database. In addition, the IR bi-weekly news e-mails are transmitted automatically to the InterRidge-Japan e-mail network. Between 30 May (start date) and 2 Nov. 2007, we posted 30 emails with job advertisements to the interridge-classifieds emailing list. As of Nov. 2007, there were 92 members on this list.

14.b Member Database

The Member Database is different than the interridge-mail emailing list. When you register online to become an IR Member, you are asked whether you would like to sign up to receive the biweekly e-news from the interridge-mail list. As of 8 Nov. 2007, the Member Database contained 2462 registered members, from 58 different countries. The ten countries with greatest numbers of members in rank order were: USA 952, France 271, Japan 193, Germany 186, UK 182, Russia 110, Canada 69, Portugal 65, China 52, and India 46.

14.c Update on Cruise and Vents Databases

In Nov. 2007, the IR cruise database (1992 through 2005, some 2006) was transferred to the Drupal-based website. In Jan. 2008, we added ~50 cruises for 2006-2007 and announced the database in the biweekly e-news. Members are able to access a cruise metadata entry form from the IR website. In 2008, we plan to update the vents database for those vents discovered in 2002-2007, transfer the database to the Drupal-based website, and format the data for visualization in Google Earth (using another Drupal module). One comment for the Vents Database – include citation for discovery of each vent site.

15 InterRidge Budget

15.a IR budget 2006

Colin Devey presented the 2006 budget report (Appendix II). Colin commented that IR is sustainable at the level of memberships that exist now (6 principal members). The IR Office in Germany transferred \$57,972.07 US of gross

surplus to the Woods Hole Office, minus \$5,450.64 of costs (IR contributions to *Oceanography* magazine and IR E&O shipping) already committed in 2006 and paid by the IR Woods Hole Office in 2007. Thus the net surplus transferred from the IR German Office to Woods Hole Office was \$52,521.43 US.

15.b IR budget 2007

Jian Lin presented the 2007 IR budget (Appendix II). As expected, moving of the IR office added significant costs related to the purchase of essential computers/data storage devices/office supplies, etc. as well as labor costs for re-designing and updating the IR website and databases. However, most of these extra costs were covered using part of WHOI's committed extra contributions to the IR Office.

Two IR Associate Members (Portugal and Spain) were unable to pay for their \$5K each membership fees for 2007. To partially compensate for these losses, \$5K US was taken out from the IR surplus funds to contribute to the 2007 budget. Thus as of Jan. 1, 2008, the total IR surplus fund is \$47,521.84 US.

Two items in the budget drew discussion at the StCOM meeting: the IRTI budget and the IR Coordinator salary. Jian presented a separate budget table for the IRTI. Colin commented that the standard IR contribution to workshops was only up to \$3K. With regard to the Coordinator salary, Jian mentioned that IR could not pay for a full IR Coordinator position given the overhead rate at WHOI. Rhian was paid at $\frac{3}{4}$ time in 2007, and Stace will be paid at $\frac{1}{2}$ time in 2008. Chris German mentioned that Rhian needed additional time in 2007 for establishing the new office and coordinating the IRTI. Hide requested some different wording in IR Coordinator salary for "benefits"; response from European scientists was that it was normal for the salary to have large amounts taken out for benefits.

15.c Status of payment of billed nations

Two IR Associate Members were unable to pay membership fees in 2007: Portugal and Spain. All other Principal and Assoc. Membership fees were received or committed.

15.d Projected IR budget 2008

We anticipate the 2008 IR budget will be balanced (Appendix II). There are a couple of noticeable changes from 2007: 1) China becoming an IR Principal Member will add new money to the IR budget; 2) The budget for IR Education & Outreach Coordinator is reduced to \$30-35K; 3) The IR Office plans to seek external funds to cover the costs of the new IR student fellowship program as described above. In addition to the above, we hope that the Assoc. Member status of Portugal and Spain (unable to pay in 2007), Canada (restoration), Russia and New Zealand (upgrade) will be resolved in 2008.

Two items on 2008 budget drew more discussion: the IR E&O Coordinator salary and the surplus fund. Jian stated that the most difficult decision for 2008 was reducing the salary for the E&O Coordinator. Donna asked about the "vision" for the surplus \$47.5K (i.e., "rainy-day fund"). Jian replied that the StCOM should decide on the use of the surplus. Chris recognized that Colin turned over that amount because he thought two principal member nations would not be able to pay. Donna said that the \$ would "buy" time / stability for the IR program. There was a suggestion that the IR Office report to the StCOM in spring 2008 if all payments received / expected. Chris commented - if you can balance the budget at a very expensive place like WHOI, then probably don't need as much surplus \$ at other offices. Benoit mentioned potential use of extra \$ for E&O. As reported in Item 4, Kristen Kusek

has accepted a position at Earthwatch Institute for 2008. The allocated \$30-35K for E/O for 2008 will be partly used for paying Stace's working hours on E/O activities. IR budget is only sufficient to provide salary support of 50% Stace's time as regular IR Coordinator.

16 Action List for 2008

| Agenda Item no. | Action Item |
|---------------------------|--|
| 2 2007 StCOM members | StCOM - Send a group message of thanks to Sang-Mook Lee and Paul Dando for their service. |
| 3 Coordinator | Coord. - Update IR flier with new WGs in 2008. |
| 4 IR E&O | Coord. - Find out local coordinators for GLOBE Program in Asian countries. |
| 4 IR E&O | Coord. - Check with Susanna Sichel in 2008 for the outcome of their pilot E&O program with teachers in Brazil. |
| 4 IR E&O | Coord. - Revise E&O pages on IR website to include France's "Explorateurs des Mers" event and link to sources of vent images for teachers. |
| 5 2006 item 5b budget | Jian/Coord. - Provide basic table with % \$ spent on each major item when we send out the 2008 invoices. (Update—tables were sent to the StCOM members of each Princ. and Assoc. Member when we requested invoices in 2008.) |
| 6a UK | Alex Rogers and Sung-Hyun - UK and Korea should keep in contact regarding cruises scheduled for Bransfield Strait / E Scotia Ridge area. |
| 6b Korea | Coord. - IR Office can help with advertising the call for proposals and E&O for the upcoming KOPRIDGE project. |
| 6b New Zealand | Chris German / Coord. - Invoice for Associate Membership in 2008. |
| 6c Portugal | Chris German - Met with Fernando Barriga at AGU Fall Meeting, Dec. 2007. |
| 6c Russia | Jian - Work with Russian colleagues on Assoc. Membership in 2008. |
| 7c Deep Earth Sampling WG | Benoit - Conduct email survey of current WG Members and report back to StCOM re: future mandate for this WG. |
| 7c Deep Earth Sampling WG | Colin/Benoit/Jian - Explore formal liaison between IODP and IR (e.g., invitation for SPC chair to IR StCOM meeting, or IR Member invited to SPC). |
| 7d MoMAR WG | Javier/Ricardo - Evaluate this WG after the March 2008 R2K meeting. |
| 7e Ultraslow WG | Jian/Chris - Proactive call for new Ultraslow WG proposals with new focus and inclusion of more disciplines. |
| 8 new WG proposals | Jian/Colin/Chris - Offer recommendations (e.g., SCOR WG) and send out review for new WG4. |
| 8 new WG proposals | Jian/Chris - For 4 new WGs recommended - Send out additional recommendations for revision of WG proposals, esp. G6 Seafloor Mineralization (from Item 12) - restrict scope to science not policy. (Update—already completed by Jan. 2008.) |
| 8 new WG proposals | Jian/Coord. - For next call for WG proposals, get in |

InterRidge 2007 Steering Committee Report

| | |
|--|---|
| | contact with proponents of the 3 WG proposals that were not recommended in 2007. |
| 9b Chile | Jian – Invited Chile to become Corresponding Member (Juan Diaz-Naveas and Luis Lara accepted Nov. 2007). |
| 10b IRTI | Chris - Feedback from Nadine LeBris for the direction for the Biogeochemical interaction WG, post-IRTI. |
| 11 Workshops / Meetings 2008 | Jian/Chris - Ask new WGs at end of 2008 if the initial \$2K was useful in organizing the WG. |
| 11 Workshops / Meetings 2008 | Jun-Ichiro / Nobu / Jian – Start planning Young Scientist IRTI for ~2010. |
| 11 Workshops / Meetings 2008 | Donna - For Young Scientist IRTI— contact info for UK grad students that are putting together their own workshop on hydrothermal vents. |
| 11 Workshops / Meetings 2008 | Kristen/Jian - Explored IR sponsorship of MATE student ROV competition 2008. (Update—IR will provide two \$250 awards; Stace will serve as judge.) |
| 11 Workshops / Meetings 2008 | Jian – Contacted Javier/Ricardo - IR will provide \$2K for MoMAR WG to use for the R2K workshop in March 2008. |
| 11 Workshops / Meetings 2008 | Stace – Contact Hide re: coordinator of 2009 Vents/Seeps Bio Symposium. |
| 12 Ethics | Jian/Coord. - New StCOM members should be asked to sign on, as individuals representing themselves, to IR Code of Conduct published 2006 to keep the statement current (Sung-Hyun Park, Alex Rogers, Jiabiao Li). |
| From 9a Brazil for 13 Student Fellowship | Coord. – Include in grant proposal(s) letters of support from nations that would benefit from IR Student Fellowships (e.g., Sidney/Marcia comments for Brazil). |
| 13 IR Student Fellowship | Jian/Coord. - Released call for 2 fellowships in Jan. 2008. We need to choose fellows early in year to have preliminary data on applicants to include in grant proposals to foundations. |
| 14a Website | Coord. - Entry page in languages of – at least - principal members. (Update—French completed Mar. 2008.) |
| 14a Website | Coord. - WG blogs and permissions. |
| 14c Vents Database | Coord. - include citation for discovery of each vent site. |
| 15d 2008 IR budget | IR Office - Report to the StCOM in spring 2008 if all payments received / expected. |
| 17 Next meeting location | Coord. - Arrange 2008 IR StCOM meeting at WHOI just prior to SCOR meeting. |
| 17 Next meeting location | Coord. – Contact WHOI’s DOEI re: sponsoring talk(s) from international scientist(s) as part of IR outreach and helping to pay partial travel costs for limited attendance at StCOM meeting. |

17 Next StCOM meeting location

Jian suggested that we host the 2008 StCOM meeting at WHOI, pointing out that we would save money if the IR office did not have to travel. The last IR meeting at WHOI was in 1999 (will be 9 yrs prior). Also, costs will be lower if we choose a university rather than a convention center. WHOI will not charge us for using conference rooms for the IR StCOM meeting. Françoise added that it is a tradition for the new IR office to host the StCOM meeting. The SCOR 50th anniversary event and General Assembly are scheduled to be held in Woods Hole on 20-21 Oct. and 22-24 Oct. 2008, respectively. We decided to hold the IR StCOM meeting prior to these SCOR events on Fri.-Sat., 17-18 Oct. 2008. Susanna asked how to get \$ to go to the meeting. Donna said that there is some NSF \$

for international collaboration. Susanna said a formal invitation to present science would be necessary to get \$ from Brazil. Benoit suggested the possibility of IR outreach through special lectures at the university or host of StCOM meetings (ACTION ITEM for 2008).

18 Meeting Adjourns

Rhian thanked the StCOM for this past year as IR Coordinator. Jian formally expressed appreciation to Sidney and Brazilian colleagues, and Sidney thanked the IR Office and meeting participants. Both Jian and Sidney thought that there would be lasting impacts of hosting the IR StCOM meeting in Brazil.

**InterRidge Steering Committee Meeting 2007
Appendices**

APPENDIX 1

InterRidge Chairs and Coordinators – Past and Present

InterRidge Chairs

| | |
|-------------------------------------|----------------|
| Jian Lin, chair (USA) | 2007 - present |
| Chris German, co-chair (USA) | 2007 - present |
| Colin Devey (Germany) | 2004 - 2006 |
| Kensaku Tamaki (Japan) | 2000 - 2003 |
| Mathilde Cannat (France) | 1997 - 1999 |
| Roger Searle (UK) | 1994 - 1996 |
| John Delaney, co-chair (USA) | 1991 - 1993 |
| H. David Needham, co-chair (France) | 1991 – 1993 |

InterRidge Coordinators

| | |
|------------------------------------|------------------------|
| Stace Beaulieu | Oct. 2007 - present |
| Rhian Waller | Jan. – Oct. 2007 |
| Sabine Lange | July – Dec. 2006 |
| Valérie Epplé | May – July 2006 |
| Kristen Kusek (Education&Outreach) | March 2004 – Dec. 2007 |
| Katja Freitag | March 2004 – May 2006 |
| Agnieszka M. Adamczewska | Nov. 1999 – March 2004 |
| Cara Wilson | March 1997 – Nov. 1999 |
| Ruth Williams (acting) | Oct. 1996 - March 1997 |
| Heather Sloan | Oct. 1993 - Oct. 1996 |
| Trileigh Stroh | 1991 - Oct. 1993 |

InterRidge Steering Committee Members - Past and Present

Canada

| | |
|----------------|-------------|
| Steve Scott | 2004 - 2006 |
| S. Kim Juniper | 1998 - 2004 |

China

| | |
|------------|---------------------|
| John Chen | 2004 – present |
| Jiabiao Li | Oct. 2007 - present |

France

| | |
|-----------------------------------|----------------|
| Jérôme Dymont | 2001 - present |
| Françoise Gaill | 2004 - present |
| <i>ad hoc</i> | 1998 – 2004 |
| Javier Escartin, <i>ad hoc</i> | 2002 - 2004 |
| Mathilde Cannat | 1997 - 2000 |
| Catherine Mével | 1997 - 2003 |
| Daniel Desbruyères, <i>ad hoc</i> | 1991 - 1997 |
| Jean Francheteau | 1991 - 1998 |
| H. David Needham | 1991 - 1994 |

Germany

| | |
|-----------------|----------------|
| Nicole Dubilier | 2005 - present |
| Colin Devey | 1999 - present |
| Peter M. Herzig | 1996 - 2000 |
| Roland Rihm | 1995 - 1998 |

India

| | |
|-------------------|----------------|
| K. A. Kamesh Raju | 2005 - present |
|-------------------|----------------|

| | |
|-----------------------|-------------|
| Abhay V Mudholkar | 2002 - 2005 |
| Ranadhir Mukhopadhyay | 2000 - 2001 |

Italy

| | |
|----------------|-------------|
| Enrico Bonatti | 1998 - 2004 |
|----------------|-------------|

Japan

| | |
|----------------------|----------------|
| Jun-ichiro Ishibashi | 2005 - present |
| Nobi Seama | 2005 - present |
| Masataka Kinoshita | 2002 - 2005 |
| Toshitaka Gamo | 2001 - 2005 |
| Kantaro Fujioka | 1999 - 2001 |
| Hiromi Fujimoto | 1997 - 2000 |
| Tetsuro Urabe | 1995 - 1998 |
| Kensaku Tamaki | 2000 - 2004 |
| | 1992 - 1997 |

Korea

| | |
|-----------------|----------------|
| Sung-Hyun Park | 2007 - present |
| Sang - Mook Lee | 2001 - 2007 |

Norway

| | |
|---------------|----------------|
| Rolf Pedersen | 2001 - present |
| Eirik Sundvor | 1996 - 2000 |

Portugal

| | |
|------------------|----------------|
| Fernando Barriga | 2001 - present |
|------------------|----------------|

| | | | |
|---------------------------------|----------------|-----------------------------------|----------------|
| Ricardo Santos, <i>ad hoc</i> | 2002 - 2004 | USA | |
| Miguel Miranda | 1996 - 2000 | Jian Lin, chair | 2007 - present |
| | | <i>ad hoc</i> | 1999 - 2004 |
| Spain | | Chris German, co-chair | 2007 - present |
| Rosario Lunar | 2005 - present | Donna Blackman | 2005 - present |
| Juan José Dañoibeita | 1995 - 1998 | Charles Fisher | 2002 - 2006 |
| Miquel Canals | 1995 - 1998 | Deborah Smith | 2003 - 2005 |
| | | Spahr C. Webb, <i>ad hoc</i> | 2001 - 2004 |
| UK | | Christopher G. Fox, <i>ad hoc</i> | 1998 - 2001 |
| Alex Rogers | 2007 - present | David Kadko | 1998 - 2001 |
| Tim Henstock | 2004 - present | Alan Chave, <i>ad hoc</i> | 1997 - 2001 |
| Paul Dando | 1999 - 2007 | Dave Christie | 1997 - 2001 |
| Christopher R. German | 1997 - 2002 | Karen Von Damm | 1996 - 1998 |
| Philippe Blondel, <i>ad hoc</i> | 1997 - 2002 | Lauren Mullineaux, <i>ad hoc</i> | 1996 - 2000 |
| Lindsay Parson, <i>ad hoc</i> | 1996 - 1998 | Robert S. Detrick | 1992 - 1995 |
| Roger C. Searle | 1994 - 1998 | John Delaney | 1991 - 1994 |
| Martin Sinha | 1991 - 1996 | P. Jeff Fox | 1991 - 1994 |
| | | Charles H. Langmuir | 1991 - 1996 |

InterRidge National Correspondents - current

Principal Members:

(Oct. 2007) China – J. Chen (confirmed in 2007)
 France – Jérôme Dymont (confirmed in 2007)
 Germany - Colin Devey (confirmed in 2007)
 Japan – Kyoko Okino (confirmed in 2007)
 UK – Tim Henstock (confirmed in 2007)
 USA – Donna Blackman (confirmed in 2007)

Associate Members:

India – K. A. Kamesh Raju (confirmed in 2005)
 Korea – Sung-Hyun Park (confirmed in 2007)
 Norway - Rolf Pedersen (confirmed in 2007)
 Portugal - Fernando Barriga
 Spain - Rosario Lunar (confirmed in 2007)

Corresponding Members:

Australia – Dietmar Müller (confirmed 2006)
 Austria - Monika Bright (confirmed in 2006)
 Brazil - Suzanna Sichel (confirmed in 2005)
 Canada - S. Scott (confirmed in 2007)
 (Nov. 2007) Chile – Juan Diaz-Naveas and Luis Lara
 (Jan. 2008) Chinese Taipei – Saulwood Lin
 Denmark – No correspondent (John R. Hopper moved to Germany)
 Iceland - Karl Grönvold
 Italy – Paola Tartarotti (confirmed in 2006)
 Mauritius - Daniel P. E. Marie
 Mexico - ? (J. Eduardo Aguayo-Camargo emails bounce back)
 Morocco - Jamal Auajjar (confirmed in 2006)
 New Zealand - Ian Wright (confirmed in 2007)
 Philippines - Graciano P. Yumul, Jr. (confirmed in 2007)
 Russia - Sergei A. Silantyev (confirmed in 2007)
 South Africa - Petrus Le Roux (NEW confirmed in 2006)
 Sweden - Nils G. Holm (confirmed in 2006)
 Switzerland - Gretchen Früh-Green (confirmed in 2006)
 SOPAC - Russell Howorth (confirmed in 2005, email bounced back in 2006 and 2007)

APPENDIX II

InterRidge Budgets for 2006 and 2007 and projected for 2008

2006, Colin Devey's presentation:

Income:

| | |
|------------|--------------------|
| IFM-GEOMAR | 21.179,26 Ū |
| France | 19.546,52 Ū |
| Japan | 18.906,14 Ū |
| Korea | |
| China | 4.056,18 Ū |
| U.K. | 21.128,20 Ū |
| Norway | 3.966,99 Ū |
| USA | 20.543,09 Ū |
| Kanada | |
| Portugal | |
| India | 4.202,00 Ū |
| Spain | 3.961,37 Ū |
| Germany | 20.945,04 Ū |
| Summe | 138.434,79 Ū |

Expenditure:

| | |
|---------------------------------------|----------------------|
| Coordinator (Katja, Val,rie, Sabine) | -24.732,25 Ū |
| Student assistents (website, IR news) | -3.480,59 Ū |
| E&O Coordinator | -54.741,07 Ū |
| Travel | -15.120,09 Ū |
| Workshops | -4.574,80 Ū |
| Publications (IR News) | -3.464,47 Ū |
| Postal costs (IR News) | -4.927,18 Ū |
| Others | -4.843,40 Ū |
| Total expenditure | -115.883,85 Ū |
| Income 2006 | 138.434,79 Ū |
| Balance | 22.550,94 Ū |

Total transfer to WHOI:

| | |
|---------------------------------|--------------------|
| Deficit 2004 | -9.330,35 Ū |
| Surplus 2005 | 29.328,20 Ū |
| Surplus 2006 | 22.550,94 Ū |
| France pre-payment (!) for 2007 | 18.912,01 Ū |
| Transfer | 61.460,80 Ū |

2007, Jian Lin's presentation (revised as of Jan. 2008):

| Funding (US \$) | | Expenditure (US \$) | |
|--|----------------|---|-----------------|
| • IR Principal Membership paid (France, Germany, Japan, UK, US, WHOI) | \$150 k | • IR Coordinator Salary (combined two successive coordinators, both part time) | -\$132.8 k |
| • WHOI additional one-time contribution | \$80 k | • IR E&O Coordinator Contract | -\$65 k |
| • IR Associate Membership paid (China, Korea, India, Norway) | \$20 k | • Workshops/Meetings | -\$26.1 k |
| • Two IR Associate Membership unable to pay (Portugal & Spain, originally budgeted \$5 k each) | \$0 k | • Annual newsletters (printing & mailing) | -\$4 k |
| • Use of the IR surplus funds to partially compensate no-payment of two IR Associate Members | \$5 k | • Bulk mailing of Oceanography magazine to international funding agencies & individuals | -\$0.6 k |
| Total Funding | \$255 k | • Web technical, graphic & data base assistance | -\$14.9 k |
| | | • Best Student Paper Award | -\$0.7 k |
| | | • Computers, software, office supplies & communications | -\$10.8 k |
| | | Total Expenditure | -\$255 k |

InterRidge 2007 Steering Committee Report

2008 (projected), Jian Lin's presentation (revised as of Jan. 2008):

| Funding (US \$) | | Expenditure (US \$) | |
|--|--------------------|--|---------------------|
| • IR Principal Membership (China, France, Germany, Japan, UK, US, WHOI) | \$175 k | • IR Coordinator Salary (half time) | -\$116 k |
| • IR Associate Membership (Korea, India, Norway) | \$15 k | • IR E&O Activities (Additional hours of salary for IR Coordinator to work on IR E&O activities; Expenses associated with 2008 E&O activities – International MATE ROV competition; ESOF; International, multi- lingual GLOBE/FLEXE program) | -\$30-35 k |
| • Potential IR Associate Membership (Portugal, Spain, Russia, Canada, New Zealand) | \$0-25 k | • Annual newsletters (printing & mailing); mailing of other IR documents & additional copies of Oceanography magazines | -\$6 k |
| Total Expected Funding | \$190-215 k | • Web technical assistance, office supplies & communications | -\$11.3 k |
| In addition: | | • Best Student Paper Award | -\$0.7 k |
| • Proposals to foundations for 15 IR Student Fellowships over 3-5 years | \$50 k | • IR Student Fellowships | -\$6 k |
| | | • Workshops/Meetings | -\$25k |
| | | • Other | -\$0-\$15k |
| | | Total Expected Expenditure | -\$195-215 k |