

Eighteenth International Research Ship Operators Meeting 6 – 7 October 2004, Rhodes, Greece

1. Attendees

Country e-mail address	Representative	Organisation	
Chile	Mr. Enrique Aranda	IFOP, Valparaiso	earanda@ifop.cl
Finland	Dr. Eila Lahdes	FIMR, Helsinki	eila.lahdes@fimr.fi
France	Mr. Jean-Xavier Castrec	IFREMER, Brest	jean.xavier.castrec@ifremer.fr
	Cpt. Armel Le Strat	GENAVIR, Paris	armel.le.strat@ifremer.fr
	Mr. Jacques Paul	GENAVIR, Paris	Nelly.Lebelanger@ifremer.fr
Germany	Mr. Wolfgang Klaassen	Briese	research@briese.de
	Dr. Dieter Strohm	Leibnitz InstfM, Kiel	strohm.d@web.de
Greece	Dr. Dimitris Georgopoulos	NCMR, Athens , Host	dgeor@ncmr.gr
	Dr. Leonidas Pervivoliotis	NCMR, Athens	lperiv@ath.hcmr.gr
Iceland	Mr. Vignir Thoroddson	MRI, Reykjavik	vignir@hafro.is
Ireland	Mr. John Breslin	Marine Institute, Galway	john.breslin@marine.ie
Japan	Dr. Hiroyasu Momma	JAMSTEC, Yokosuka	mommah@jamstec.go.jp
	Cpt. Kenji Adachi	GODI, Yokosuka	adachi@godi.co.jp
	Mr. Tetsuya Yokota	NME, Yokosuka	yokota@nme.co.jp
Netherlands	Dr. Marieke J. Rietveld	NIOZ, Texel – Chair	rietveld@nioz.nl
New Zealand	Mr. Clive Glover	NIWA, Wellington	c.glover@niwa.cri.nz
	Mr. Fred Smits	NIWA, Wellington	f.smits@niwa.cri.nz
Norway	Mr. Per Nieuwejaar	IMR, Bergen, vice chair	pern@imr.no
	Mr. Atle Sangolt	IMR, Bergen	atle.sangolt@imr.no
South Africa	Mr. Ian Calvert	Smit Pentow Marine, Cape Town	i.calvert@smit.com
Spain	Dr. Juanjo Dañobeitia	CSIC/UTM, Barcelona	jjdanobeitia@cmima.csic.es
UK	Mr. David Blake	BAS, Cambridge	DMBL@bas.ac.uk
	Dr. Mike Webb	NERC, Swindon	mweb@nerc.ac.uk
	Mr. Paul Stone	SOC/RSU, Southampton	paul.stone@soc.soton.ac.uk
	Mr. Geraint West	SOC/UKORS. Southampton	g.west@soc.soton.ac.uk
USA	Ms. Dolly Dieter	NSF, Arlington	edieter@nsf.gov
	Cdr. Elizabeth White	NOAA, Silver Springs	elizabeth.white@noaa.gov
	Prof. Dennis Nixon	URI, Kingston	dnixon@uri.edu

Apologies for absence

Australia	Mr. Dick Burgess	P&O, Hobart
	Mr. Ron Plaschke	CSIRO, Hobart
	Mr. Jonathan Reeve	AAD, Kingston
Belgium	Mr. Andre Pollentier	MUMM, Oostende
Canada	Mr. Steve Peck	DFO-CCG, Ottawa
Denmark	Cpt. Frode R. Larsen	DFU, Copenhagen
ESF	Dr. Niamh Connolly	ESF, Strasbourg
EU	Mr. Gilles Ollier	CEC-DG XII, Brussels
Eurocean	Mr. Laurent d'Ozouville	Eurocean, Lisbon
France	Mr. Jacques Binot	IFREMER, Paris
Germany	Cpt. Caspar Von Spee	RF, Bremen
	Dr. Thomas Müller	IMUK, Kiel
	Mr. Falk von Seck	RF, Bremen
Greece	Prof. G. Chronis	NCMR, Athens
India	Mr. G. Janakiraman	NIOT, Chennai
Ireland	Mr. Conor Mowlds	Marine Institute, Dublin

Japan	Cpt. Masatake Okawara	JAMSTEC, Yokosuka
NATO	Dr. Ian Sage	NATO, Ispra – La Spezia
Portugal	Mr. Joao Coimbra	CMER, Porto
Russia	Mr. Alexey Turchin	INTAARI, St. Petersburg
South Africa	Sharon du Plessis	DEAT, Cape Town
Spain	Mr. José Diaz	CSIC/UTM
UK	Mr. Edward Cooper	SOC/ Southampton
	Mr. John Morrison	SEERAD, Aberdeen
USA	Dr. Linda Goad	NSF, Arlington
	Mr. John Freitag	ONR, Arlington
	Ms. Elizabeth Tirpak	Dept. of State, Washington D.C.
	Mr. Douglas White	OCEANIC, Delaware

2. Welcome

All 29 participants from 15 different nations were warmly welcomed to the Hydro biological Station in Rhodes by **Dr Dimitris Georgopoulos** on behalf of the Hellenic Centre for Marine Research (NCRM) to the eighteenth International Ship Operator Meeting (ISOM). The NCRM headquarter is in Athens, but they also have an institute in Crete, as well as the hydro biological station in Rhodes. The NCRM operates one 62 m research vessel (RV) called “Aegaeo” and the submersible “Thetis”. For more information about the NCRM and its facilities see <http://www.ncmr.ge>.

Ms. Marieke Rietveld (Netherlands), as Secretary of ISOM, brought forward the apologies for absence of a number of members. She noted in particular that **Mr Andre Pollentier** from Belgium is still recovering from a very bad accident and that all ISOM members wish him all the best and a speedy recovery. Ms. Rietveld noted that there were quite a number of new faces and she invited all participants to briefly introduce themselves.

3. Review of Minutes of seventeenth Meeting

The minutes were accepted as a true record of the seventeenth meeting held in Valparaiso, Chile, 21 - 22 October 2003. The final version of the minutes will be made available on the ISOM web site (<http://www.isom-info.org/>) and OCEANIC (<http://www.researchvessels.org/>) **Ms. Dolly Dieter** (USA) commented that she was most impressed with the content and level of detail in the minutes from the previous meetings.

4. ISOM and the future

Ms Marieke Rietveld introduced this agenda item by referring to the fact that this was the eighteenth ISOM and that it had grown from a small group of people meeting for one day in to an “organisation” with more than 70 “members” from 25 countries and four international organisations meeting for two full days, with a lot of preparations for each meeting, and an archive and a web site to be maintained. This means that the ISOM has become a great success, but it also represents a rather heavy, non-funded workload for one person with a number of other tasks to perform. She therefore tabled, together with **Mr. Per W Nieuwejaar** (Norway), the question if the time was right to make some changes in order to make the ISOM more structured, better organised and to share the workload on more individuals. The proposal they put forward was to have an elected chair for a three year period with the main responsibility for preparing the agenda and conducting the meetings, an elected vice-chair as chair-elect for the same number of years who functions as the ISOM secretary (writing minutes, maintaining the web site and the archive etc), and a host for each meeting who is responsible for the very many practical arrangements that has to be taken care of for each meeting. *Ms. Rietveld* has acted as a “de facto” vice-chair for some years already and she volunteered to be the elected chair for the next two years and she proposed *Mr Nieuwejaar* as the elected vice-chair.

For more details, see [ISOM and the future](#). The group then had a short discussion that mainly focused on the “mechanics” around how the ISOM has been organised in the past, and how the members would prefer to see the future. There was an agreement that Ms Rietveld would be the chair and Mr Nieuwejaar the vice-chair for this meeting and the next one in 2005, and that another election would be held at the end of the ISOM 2005.

It was agreed that any member of ISOM is eligible, but that candidates should be consulted beforehand and be willing to take on the task. It was also agreed to keep the rotation cycle with meetings in Europe and other parts of the world every other year, and that the host could ask for up to 100 USD/Euro in conference fee if need be.

5. Delegates Reports of Activities

Mr. Enrique Aranda (Chile – IFOP) reported on the fleet of RVs in Chile, which are aging rapidly and which they struggle hard to keep operational. Two of the three vessels they have are about to be taken out of service, leaving them with only one operational RV.

The need for replacement vessels are therefore urgent and they had tried to take over the Norwegian RV “Sarsen” when it was taken out of service in Norway in 2003, but had not succeeded.

Dr. Eila Lahdes (Finland – FIMR) gave the ISOM an update on the 15-year-old RV “Aranda”, which is in need of several upgrades, but unfortunately no extra money is allocated for that yet. She also pointed out that the cruises are divided between approx. 30% for environmental monitoring and approx. 70% for science. In addition to the use of “Aranda” a number of commercial vessels are used for data collection, e.g. through the “Ferry box” project. “Aranda” is the only Finnish research vessel > 50 meters. Three others are coastal vessels; “Muikku” (27.7 m) is also working in the lake district, “Geola” (40 m) and “Geomari” (20m, double hull). The last two belong to the Finnish Geological Survey.

Mr. Jean-Xavier Castrec (France – Ifremer) reported on major achievements of the four blue ocean vessels of Ifremer, the R/Vs “L’Atalante”, “Nadir”, “Le Suroît” and “Thalassa”, the new vessels “Beautemps-Beaupré” and the “Pourquoi pas ?”, and the major facilities HOV “Nautile” and the ROV “Victor 6000”, in addition to milestones in 2003 and ship time-barter exchange. He started with Ifremer’s mission, which is to manage a great part of ocean observation tools for the benefit of the French scientific community (CNRS, universities, IRD, etc.). These facilities are also used within industrial partnerships, European cooperation or chartering operations, like those used on the Prestige wreck, which mobilised Nautile in the first semester of 2003.

- **L’Atalante:** At the beginning of 2003 the RV “L’Atalante” continued to plug the leaks of the “Prestige” tanker wreck, which sank at great depth off Spain, then carried out a cruise (physical oceanography) on behalf of the University of Hamburg in the framework of the multilateral ship timesharing agreement. “L’Atalante” then conducted the first survey financed by the French ministry of Industry in the framework of the continental shelf extension programme (Guyaplac cruise) off French Guyana. After the first trials to deploy the Penfeld penetrometer developed by Ifremer, “L’Atalante” carried out a cruise off the Nile deep-sea fan with “Nautile” (Nautinil cruise), under the aegis of Géosciences Azur, in cooperation with Germany and the Netherlands. At the end of the year, she sailed back to western Africa for a new Biozaire cruise in partnership with Total (French oil major) in the Gulf of Guinea.

- **Thalassa:** The vessel made its three traditional fisheries resource assessment cruises in European waters.

Two cruises on behalf of the Spanish partner IEO (Instituto Español de Oceanografía) were scheduled. One was devoted to small pelagic species in the Bay of Biscay, the other, called Corica, to physical oceanography studies off the African coast. In autumn, Thalassa performed the Juvaga cruise, the first of a series that will be devoted to the study of anchovy juveniles in the Bay of Biscay.

- **Le Suroît:** Le Suroît, was located in western Africa, and made two cruises (Néris and Biozrecup) dealing with geohazards and sedimentary instability in partnership with the oil group Total at the start of the year. Another cruise, called Pirata, upon an IRD initiative, concerned servicing of moored buoys. After being decommissioned for two months, Le Suroît carried out four geosciences cruises in the Mediterranean, one in the Gulf of Lions, the other off Algeria, where the programme was adjusted to provide better understanding of the recent earthquake which began off Alger (Maradja cruise), the third off Lebanon and the fourth off Syria. The results collected during the last of these cruises provide new knowledge about the area, especially about the active nature of the tectonics on the edge of the Lebanese coast and at the origin of Mount Lebanon. New partnership with the Lebanese CNRS is taking shape on this basis.

- **Nadir:** Nadir has realized a cruise on the Prestige tanker wreck and she was sold for further trading for underwater movies in spring 2004.

- **ROV Victor 6000:** The Ifremer’s ROV Victor 6000 was mobilised during eleven weeks aboard the German partner AWI’s research icebreaker Polarstern for three cruises (the second leg as a common cruise) which allowed many scientists from various European countries to work with two of the most powerful tool in Europe.

- **Beautemps-Beaupré and Pourquoi pas ?:** On 17th July 2002, the ministers of Defence and Research sealed a partnership between Ifremer and the French Navy to jointly acquire two ships. The new hydrographic and oceanographic vessel Beautemps-Beaupré, manned by the Navy, successfully underwent acceptance procedures in February 2003. Ifremer ensures 5% of the budget, thereby entitling it to ten cruise days per year.

She joined the fleet on 13 December and was almost immediately mobilised on site at Sharm El Sheik in Egypt. This was to take part in operations to locate the black boxes of a commercial airplane that crashed at sea there.

Pourquoi pas? is a new research vessel, 45% of which is being financed by the ministry of Defence and 55% by Ifremer, and manned by civilians. Her construction will be completed in 2005. After the contract was signed with Alston Marine in late 2002, contracts to supply multibeam sounders and deep-water winches were signed with the Danish companies Reson and McArtney. The slides used to present the two new vessels can be found in [Présentation Bb et Pp \(GB\)copie.ppt](#). **The use of a “gondola” under the vessel hull to mount different antennas for underwater acoustic systems was discussed at length by the ISOM and it was agreed that gondolas, drop keels and hull mounted antennas is a topic that should be on the agenda also at future ISOMs.**

- **Bartering:** The multilateral ship time-sharing agreement made it possible for two French scientific missions to be carried out aboard two European vessels. The first was aboard the British R/V Discovery to recover moorings in the Atlantic, the other on the German R/V Poseidon off the Azores. Ifremer realized for RNIOZ in Mediterranean Sea a mooring operation (on R/V L’Europe) and a coring (on R/V L’Atalante).

Mr. Dieter Strohm (Germany – Leibnitz InstfM) reported on the Leibnitz-Institut für Meereswissenschaften an der Universität Kiel that was founded in January 2004 through the fusion of the research institutes IfM and GEOMAR. The institute has to its disposition the two medium size RVs “Poseidon” (60m) and “Alkor” (55m), and the two small RVs “Littornia” (30m) and “Polarfuchs” (13m). He also informed the ISOM that Germany is planning to establish a consortium of research institutes in 2005 in order to better

coordinate research and infrastructure such as scientific instruments and RVs. Joint cruise planning for all RVs in Germany is also an element in this.

Mr. Wolfgang Klaassen /Germany – Briese Schiffahrts GmbH& Co KG is a newcomer to ISOM because his company recently won a contract as operator of the German RVs owned by the Leibnitz InstfM. The ships “Alkor”, “Heincke” and “Poseidon” will in 2004 operate in the north and Baltic Sea in addition to the Mediterranean, the Azores and/or Black sea. The research vessel “Maria S. Merian”, which is still under construction, will operate in the Baltic Sea, the North Sea and the North Atlantic up to its northern ice boundary regions. For this project Briese Schiffahrts GmbH& Co KG provides the supervision starting from the year 2004. These crewmembers will take over ship’s command of MARIA S. MERIAN in the year 2005. For more information about the company and its involvement in RV operations, see www.briese.de.

Mr Vignir Thoroddson (Iceland – Marin Research Institute) reported on the two Icelandic RVs “Arni Fridriksson” (70m - built 2000) and the “Bjarni Saemundsson” (56m – built 1970/upgraded 2003). Until June 2004 the MRI also operated a third, 26m RV named “Drofn”, but this vessel was laid up due to budget cuts, a trend that has been ongoing for some time without any clear reasoning behind it as far as the MRI knows. The two remaining vessels are operated approx. 200 days a year, mainly financed by the Iceland government (approx 160-180 days pr year) and the rest by income generated from chartering the vessels to local research institutes in Iceland. This year the “Arni Fridriksson” was chartered for 14 days and the “Drofn” for 12 days to the Institute fur Geophysic at the University of Hamburg. The vessels have also participated in a number of multinational projects such as BIOCE and MARECO, in addition to 10 different EU projects. The operating area for the vessels are mainly Icelandic coastal and offshore waters, but the vessels also operates in the area between Spitzbergen in the north, Rockall in the south, the Fareo Islands in the east and the west coats of Greenland to the west. More details about the institute and the vessels can be found at www.hafro.is.

Mr. John Breslin (Ireland- Marine Institute) reported on the two multipurpose research vessels owned by the Marine Institute (MI), the RV “Celtic Voyager” and the RV “Celtic Explorer”. Specs of the ships can be found on the Marine Institute website: <http://www.marine.ie>. The MI operates the vessels, but they use a private company to provide crew, in addition to technical and logistic support. This contract is currently being tendered. The vessels are mainly used in 2004 for fisheries, nutrients, oceanographic and seabed surveys in Irish and European waters and beyond. MI has developed a web based Survey Planning System (SPS) to aid the RV operators in planning cruises and provide the operators with sailing instructions, technical & logistical requirements and proposed research activities via web. Mr Breslin also presented a constant temperature container lab the MI has procured and which is possible to rent for other RV operators. For more details from his presentation, see [Irish national update ISOM 2004.ppt](#)

Mr. Tetsuya Yokota (Japan-NME), who has taken over from Capt. Masataka Zaitzu, reported on the JAMSTEC fleet activities in 2004. The Nippon Marine Enterprises (NME) operates the four RVs “Natsushima”, “Kaiyo”, “Yokosuka” and “Karei”, one manned submersible “Shinkai 6500”, two ROVs called “Hyper Dolphin” and “Kaiko 7000” which are owned by JAMSTECH. In addition JAMSTEC owns the RV “Mirai”, operated by GODI. They each sail for approx. 300 days per fiscal year (April – March).

- **RV Natsushima** used to be the mother ship for the “Shinkai 2000” and the “Dolphin 3K” which is retired, and the vessel is therefore reassigned as “Research vessel” in April 2004. While the vessel performs different operations, its main task is to support the ROV “Hyper Dolphin”.

- **RV Kaiyo** acts as a research vessel for conventional research activities such as Ocean Bottom Seismometer (OBS), Single Channel Seismic (SCS) and Multi Channel Seismic (MCS) (38% of the year), piston coring/navigable sampling (22% of the year), deep tow survey (22% of the year) and deployment/recovery of mooring systems (11% of the year).

- **RV Yokosuka** is the support vessel for “Shinkai 6500” in addition to supporting the AUV “Urashima” which was used to test a new fuel cell and achieved a run of 220 km at 800 m depth, which is a world record! The “Yukosuka” is now on a cruise named “NIRAI-KANAI” in the South Pacific with the “Shinkai 6500”.

- **RV Karei** is the mother ship of ROV “Kaiko” which was lost in the summer of 2003. Until a new ROV is built a modified UROV7K is used as a substitute. A new “Kaiko 7000” is now in testing and on its third trials cruise it reached a depth of 7031m.

- **JAMSTEC** has taken over the operation of two vessels from the University of Tokyo, named R/V Hakuho-Maru (3991 tons) and R/V Tansei-Maru (610 tons). The “Hakuho-Maru” is used for worldwide cruises and the “Tansei-Maru” for cruises in the Japanese coastal waters.

- **Lost equipment:** JAMSTEC has suffered a loss of OBS’s outside the Japanese coast, not responding when they tried to release them in order to surface. So anyone who finds an OBS drifting around Japan please return it to the owner! They also had an interesting experience with an OBS recovered far from its deployed position, having drifted against the dominating sea currents. No good explanation for this is found so far. For more details of the report, see [JAMSTECH update ISOM 2004.ppt](#)

Cpt. Kenji Adachi (Japan - GODI) reported on the large size oceanographic research ship “Mirai” that is managed by GODI. “Mirai’s” activity area is the North Pacific (from Equatorial up to high latitude) and the Indian Ocean.

R/V Mirai is currently operating in the Arctic Ocean and later in the fiscal year it will be replacing Triton buoys in the North Pacific Equatorial waters. The Beagle 2003 cruise, circumnavigating the globe on the Southern hemisphere, was a great success with 278 scientists from 24 countries taking part in more than 500 CTD stations and 6 corer operations.

Ms. Marieke Rietveld (Netherlands - NIOZ) reported on the Royal NIOZ R/V Pelagia (66 m, multipurpose, built 1991). In 2004 PELAGIA has worked mainly in the North Sea, the North Atlantic and in the Mediterranean. After 7 weeks of maintenance and fitting of an USBL tube at port side for the Posidonia antenna in January/February 2004 the ship sailed for 230 operational days, including one barter cruise (University of Hamburg – SAGA project) of 20 days in the East Mediterranean. No commercial charters this year for the vessel. Projects were funded by the Netherlands Research Council NWO (also funding 122 days ship time, including the EUROCORES programme EUROMARGINS (MOUNDFORCE and MEDIFLUX), the European Union (EUROSTRATAFORM – no ship time funds), the IGBP-LOICZ (exl. Ship time), and RNIOZ (88 days of which 38 matching EU/IGBP projects).

Joint cruises/bartering: Other ships used were the German R/V Alkor (7 days barter), the UK RSS Charles Darwin (a shared German/Dutch barter cruise of 17 days) in the Irminger Sea, The French R/V Marion Dufresne (a 6 science days charter) in the Arabian Sea, and the R/V Polarstern in the Antarctic for a joint cruise. Within the Ocean Facilities Exchange Group (OFEG) an intervention by RSS Charles Darwin took place, picking up an adrift LOCO mooring in the Canary basin. During the MEGAFUX and SAGA cruises the German Deep Tow Sonar (DTS-1) was used, and a GEOMAR team joined the cruises.

Major equipment/fleet changes: The moveable lander (MOVE!), a co-operative project under NEBROC (Netherlands Bremen Oceanography) is in testing stage. The new build R/V **Nereis** (20m) that was planned for delivery early 2004 has serious delay due to requirements of Dutch Shipping Inspection that was badly understood by the shipyard, and introduced extra work to meet all classification requirements. Neries is a fast aluminium twin hull vessel with water jet propulsion (25 knots) for the shallow Wadden Sea (draught: 0.8m) and nearby coastal work. This is a shared ship with the Netherlands Organisation for Applied Technology (TNO).

Staff exchanges: Within the OFEG framework a senior marine technician boarded RSS Discovery for piston core training of SOC technicians. Three marine technicians of RNIOZ participated in the INMARTECH workshop.

Equipment lost: During the cruise on RV Polarstern the SCANFISH undulating platform was lost in the Southern Ocean. The main part of the LOCO mooring still rests in the Canary Basin. Mid October RV Pelagica will try to recover this mooring that probably has lost most of its buoyancy capacity.

Mr. Clive Glover (New Zealand - NIWA) reported on NIWA’s vessels R/V Tangaroa and Kaharoa, and the survey launch Pelorus. “Tangaroa” has a 300 days and the “Kaharoa” a 160 days program this year. For the Government the ships are mostly involved in fisheries work, which is declining, and geological surveys and seabed surveys. The ships have also participated in two rescue missions this year in addition to deploying a large number of ARGO buoys and other large buoys. The use of multi beam echo sounder for seabed survey is increasing and New Zealand cooperates with Australia in this field.

Mr. Per Nieuwejaar (Norway- IMR) reported on the fleet of the Institute of Marine Research (IMR) in Bergen, Norway. IMR owns three vessels, operates three for other owners and rents another two vessels. They are:

”G.O.Sars” (LOA 77,5 m, built 2003), ”Johan Hjort” (LOA 64.4 m, built 1990), ”G.M.Dannevig” (LOA 28 m, built 1979), ”Dr Fridtjof Nansen”, (LOA 57 m, built 1993, Owner: NORAD), ”Håkon Mosby” (LOA 47 m, built 1980, Owner: University of Bergen), ”Hans Brattström” (LOA 24,3 m, built 1992, Owner: University of Bergen), ”Fangst” (LOA 15 m, built 2000, renting approx 200 days a year) and ”Jan Mayen” (LOA 63,8 m, built 1988, renting approx 75 days a year). For more information about the vessels, visit the IMR website at www.imr.no. IMR took delivery of the new ”G.O. Sars” in April 2003 and after one and a half year of operations we can conclude that the vessel has been a tremendous success. The real ”proof of the pudding” was the two months cruise in the summer of 2004 along the mid-Atlantic ridge between Iceland and the Azores, collecting a variety of data on large depths. IMR has taken the initiative to establish a joint cruise planning committee for all Norwegian RVs, built on the experience from a joint cruise planning committee with the University of Bergen. The result of this initiative still remains to be seen. IMR and Marine Institute in Galway, Ireland are currently developing an MOU between the two institutions, covering exchange of crew, exchange of ship time and other areas of cooperation. The RV ”Michael Sars” and the old ”G.O.Sars”, which was renamed ”Sarsen” was taken out of service in 2003 and sold.

Mr. Ian Calvert (South Africa - Smit Marine South Africa) reported on the RV's owned by the South African Department of Environmental Affairs & Tourism (DEA&T) - and operated by Smit Marine SA. The FRS Agulhas is an ice-strengthened 112 m long vessel, built 1977 and used for Antarctica expeditions is planned to be replaced within the next three years. FRS Africana is a fisheries research vessel with an LOA of 78m, built 1982. The FRS Algoa, used for fisheries research, with an LOA of 52.5 m, built 1975 and converted in 1993. This vessel will be replaced with a new vessel within the next two years, and currently seven different designs are evaluated.

Prof. Juanjo Dañobeitia (Spain - CSIC) reported on a contract signed in July 2004 by the Ministry of Science and Technology for the construction of a new multipurpose oceanographic vessel (LOA 70,5m, breadth 15,5m and draft 4,9m) to be used for ROV operations, seismics, oceanography, fisheries and acoustic surveys and that will be run by the CSIC. He pointed out that they had received support from Ireland, Norway, France and the UK when developing the specifications and he looked at that as living proof that ISOM works! He then gave a detailed presentation of the new design and the slides he used can be seen on [New Ship Pres1.swf](#). The ship will be a diesel-electric low noise (designed iaw ICES 209 recommendations) multi purpose RV with removable fisheries capabilities (only ramp is permanent). Acoustic equipment will be placed in drop keels and on a gondola like the one used by IFREMER vessels. The ship will have a crew of 16 and 26 science berths and it will be able to deploy the French ROV ”Victor 6000” over the stern, using an A-frame. For seismic surveys the vessel will be equipped with a 2,4 km multichannel system, using two compressors, one permanently installed and one portable. For oceanographic sampling the vessel will have two A-frames on the starboard side.

Dr. Mike Webb (UK – NERC) informed the ISOM that there has been a budget increase for both ship operations and equipment procurement within the Natural Environment Research Council (NERC), and that it is now a good balance between demand and supply regarding science cruises on NERC vessels. The winch replacement project on RRS DISCOVERY has been heavily delayed and that has reduced the available ship time considerably, but hopefully this is now a matter of the past. NERC has been involved in 13 barter cruises this year, which is a significant increase and shows that the OFEG is working very well. Contract for the construction of the RRS James Cook has been placed (Design: Skipsteknisk A/S in Ålesund, Norway, Yard: Flekkefjord Slip & Maskinfabrikk A/S, Flekkefjord, Norway) with the same companies that designed and built the Norwegian RV G.O. Sars. Delivery is planned for August 2006. He could also report that a CTD system was lost off Halifax in August 2004 and that the 2005 cruise program for the NERC ships are filled up.

Mr David Blake (UK – BAS) reported on the activities of the British Antarctic Survey (BAS) who operates the RRS James Clark Ross approx 330 days a year, leaving only 4 weeks for maintenance and refits. He also spoke about the RRS Ernest Shackleton, which BAS leases on a 15-year charter with Rieber Shipping in Bergen, Norway. BAS charters the vessel back to Rieber for 120 days a year for them to use in the offshore market in the North Sea, but this is a very difficult market for the time being, so the vessel could be available for hire from Rieber if anyone is interested!

Ms. Dolly Dieter (USA – NSF) reported on the University National Oceanographic Laboratory System (UNOLS) fleet funded by NSF. She had brought a fleet activity report that was prepared by Mr John Freitag (US – ONR) who had to cancel his attendance at the last minute. The presentation can be found as [UNOLS Ship operations and ONR Report for ISOM-1.ppt](#). Ms Dieter said that in general this year is very busy for the US academic fleet, but 2005 is expected to be very quiet in comparison. The funding for RV cruises is approx USD 50M in 2004. She also mentioned the bartering arrangements the US has done with the UK.

Cdr. Elizabeth White (USA–NOAA) presented the National Oceanic & Atmospheric Administration (NOAA) fleet renewal plan; see [NOAA upda ISOM 2004.ppt](#) for details. NOAA runs a large fleet of vessels, 19 at the moment, most of them rather old, and has therefore developed a NOAA fleet renewal plan, and in September 2005 a coordinated federal research vessel renewal plan is planned to be ready for approval. This plan will address the NSF, NOAA, US Navy RVs, in addition to Coast Guard polar icebreakers. NOAA has funding for four new fisheries research vessels, starting with the *Oscar Dyson*, which is in sea trials for the time being, and a second vessel that is now under construction.

6. Monitoring and forecasting oil pollution in the marine environment

Dr Leonidas Perivoliotis (Greece – HCMR) presented a computer simulation tool that HCMR has developed using data from space borne Synthetic Aperture Radar (SAR) satellites such as ERS-2, RADARSAT and ENVISAT to detect oil spills from ships

passing through Hellenic territorial waters and to predict the transport of the oil spill based on computer models of wind and current patterns in the Mediterranean. They also have a network of buoys in their territorial waters to monitor the oceanographic conditions in the ocean. All these systems are enabling the experts to advice the Greek Government about what actions to take in case of major oil spill at sea. More details about the system can be found in [HCMR_ISOM_2.ppt](#)

7. OD 21 Riser drilling vessel Chikyu

Capt. Kenji Adachi gave the ISOM an update on the construction and testing of the new deep ocean scientific drilling ship “Chikyu” that the group has been kept informed about the progress of during several meetings. He showed a very impressive series of pictures and animations of the vessel operations and functions that can be studied in more detail in [Chikyu - The Earth \(ISOM 2004\).ppt](#). JAMSTEC will take over the vessel in April 2005 and conduct training and test cruises until April 2007 when the vessel will commence its international drilling program.

8. European RV Operators (ERVO) 2004 meeting

Mr. John Breslin reported on the 6th ERVO meeting held in the CSIC headquarter in Barcelona, Spain on 16-17 June 2004 in conjunction with a meeting in the European Science Foundation (ESF) sponsored Ocean Fleet Working Group (OFWG). Mr Breslin’s presentation can be found at [ERVO_2004 rapport til ISOM 2004.ppt](#). Nine European countries was present and the main topics were RV fleet updates including presentations of new vessels, the implementation of the ISPS code, handling of on board waste and the structure of the ERVO meetings in the future. Niamh Conolly from the ESF informed the group on the possibilities for funding from the new MarinERA program within the EU for establishing networks within Europe. The group elected Mr Per Nieuwejaar as the ERVO chair for the period 2004-2006, with Dr Juanjo Danobeitia, Mr John Breslin & Mr Mick Gillooly as co-chairs. The main responsibilities are to draw up a three-year work programme, identify funding opportunities and establish a member database for the ERVO. ERVO 2005 is planned to be in Lisbon, Portugal in the spring of 2005.

9. Future plans on research fleets and Marine Infrastructure

9.1. FOFC Integrated Fleet Renewal Plan

Ms. Dolly Dieter presented U.S. Federal Academic Research Fleet Renewal Activities, see [US Fleet ISOM 2004.ppt](#) for details. This is a fleet renewal plan going to the year 2020 and shows that there is an identified need for 13 new vessels of different sizes and with different instrumentation.

The first vessels to be introduced to the academic fleet in the near future is an Arctic Research Vessel (ARRV) to replace the ageing “Alpha Helix” in Alaska in 2006-08, a Norwegian 3-D seismic vessel recently procured to replace the R/V Ewing and which is currently in Rhode Island for modifications in order to be re-classed by the American Bureau of Shipping (ABS), and a replacement for the Alvin submarine that is able to operate from the mother ship “Atlantis”. There is also plan for 3-4 regional class vessels for coastal operations and an open competition for design, construction and operation of the vessels is planned. The NSF is also sponsoring studies of so called Hybrid ROVs (HROV) that shows great promise regarding diving depths, endurance, data transfer and functionality. For those interested in more details, please visit the NSF website on www.nsf.gov

9.2 New JAMSTEC organisation

Dr. Hiroyasu Momma presented the “new JAMSTEC” with the same acronym, but a new meaning since April 2004. Now JAMSTEC means Japan Agency for Marine-Earth Science & Technology and is re-established to be an independent administrative institution. Dr Mumma then went on to describe the Marine Technology Centre (MARITEC), which he is the head of, and the JAMSTEC research fleet that is part of the MARITEC. For more details about the new organisation, the fleet and the major cruise activities in 2004, see [New JAMSTEC organization, ISOM 2004.ppt](#).

9.3 EU/ESF – Marine Infrastructure & Research Fleets

Ms Marieke Rietveld reported on efforts to reach a co-ordinated approach on operation and strategic planning for the European research vessel fleet. She started with a description of the MarinERA, which is an attempt to co-ordinate national and regional marine RTD activities in Europe, starting 1 November 2004. Objectives are to map what is in existence of programs and infrastructure, facilitate networking of Marine RTD funding agencies and providing a basis for sharing available resources. They also plan to establish a Forum of Marine Infrastructure Managers (MIF) to be a meeting place for such managers in order to establish contacts, networks etc. The first MIF-meeting is scheduled for April 2005.

Another initiative is the Ocean Fleet Working Group (OFWG), tasked to propose ways to better utilize available RVs in Europe. This group is scheduled to deliver its report in the beginning of 2005. She also pointed out the need for more precise criteria for what a vessel need to be before it can be regarded as an research vessel since there are nearly 200 vessels in Europe today being labelled as RVs, which has led politicians and high level government people to believe that Europe has a large overcapacity of RVs, which is not

necessarily the case. For more details from her presentation, see [EU research fleet, ISOM 2004.ppt](#).

9.4 Norwegian RVs

Mr. Per W. Nieuwejaar presented the situation in Norway regarding RVs and the need for a coordinated plan for the renewal of the fleet in the coming 10-15 years. For details, see [Norwegian research vessels.ppt](#). He also informed the group that all RV operators in Norway was invited to a meeting the week after the ISOM to discuss a national cruise planning committee, a national instruments pool, a national RV agency and a national fleet renewal plan.

9.5 Ocean Facilities Exchange Group

Dr Mike Webb presented the Ocean Facilities Exchange Group (OFEG), formerly known as the Marine Facilities Tripartite Group (MFTG) that has been in operation since 1996. The first members were UK, France and Germany, but since 2003 The Netherlands has joined as a member and Spain as an observer. The group meets twice a year, with a technical/operational meeting in the spring and a strategic meeting in the fall. The barter agreements between the parties consist of both vessels and/or heavy instruments; see [OFEG presentation to ISOM \(Final draft\).ppt](#) for more details. The group has established a “barter point” system that specifies the “barter value” of each unit. They also take a geographical programming approach, trying to avoid moving ships over long distances if a barter arrangement can be used instead. In the beginning there was 1-3 barter per year, but in 2003 this had increased to 16 and in 2004 it is currently at 13 and increasing. More information can also be found at: <http://www.nerc.ac.uk/funding/marineplan/tripartite.shtml>. Issues to be solved for the OFEG is to ensure the same level of service on every “OFEG vessel”, in particular regarding additional funding for technician support and the setting up of equipment pools.

10. Marine mammal mitigation measures

Mr Geraint West introduced the topic of marine mammal mitigation measures at the previous ISOM and gave the group an update and expansion on the topic at this meeting. His slides can be found as [ISOM Environmental Impact 2.ppt](#). He has done a thorough investigation into the possible problem of sea mammals being disturbed by low and medium frequency sonar, seismic air guns and even multibeam echo sounders. There is a lot of speculations and not too much solid evidence of a link between these transmissions and non-normal behaviour leading to death for sea mammals. A steadily increasing political and scientific interest in the phenomena has so far resulted in a growing pressure to introduce limitations to the use of such underwater signals and to implement mitigation measures in order to minimize or if possible, eliminate the problem. A set of guidelines or good suggestions have been developed and they are e.g. use of minimum transmission power levels, “soft start” of transmissions in order to “scare” the animals away, use of look-outs to try to “clear an area” for sea mammals before transmission starts and immediate stop in transmissions if sea mammals are observed within a given distance from the transmission source and stay out of areas altogether at times when sea mammals are known to be there.

11. ISPS code

In the absence of Mr Caspar von Spee, **Mr Paul Stone** accepted the challenge and presented Mr v. Spee’s report on the implementation of the International Ship and Port Security (ISPS) code. The ISPS code is an example of what happens when legislation arrives first and best practise comes later! So “everybody” has been very busy getting the system operational onboard ships, in ports and at ship operator offices around the world. Even government owned ships can be exempted from the code, it could mean that the vessels are not allowed in to ports exercising the ISPS code, so the best approach even for government owned vessels seems to be to adopt the code fully as soon as possible. Another observation is that ships and ship operators seems to be well on track with the implementation of the code, while ports are lagging behind. Possible practical effects of the ISPS code seems to be more paperwork on board and ashore, and more time spent entering harbours. The actual improvement in security is harder to assess. The typical actions taken by ship operators is to introduce better access control to the vessels when in port, checking luggage, equipment boxes and supplies arriving at the pier for loading on board, ID-cards with pictures to be carried by everyone on board, more strict embarkation/debarkation routines, random search of persons and their belongings and increased use of watchmen when in port. Most RV operators have already implemented the ISPS code, but some are still preparing for it.

12. Piracy problems/war zone update

No reports at this meeting

13. RV performance

Mr Paul Stone was asked to give a talk on his experience with methods to measure and verify research vessel performance and his brief can be found as [Research Vessel Performance - ISOM 2004.ppt](#). He started out with discussing what affects the outputs or results of the performance of an RV, including vessel, instruments, crew etc., which could be such things as bad planning, equipment failure, severe weather, medical problems and/or accidents. When one has established the fact that things can go wrong, and they often do at the worst possible time, then questions arises about how we can objectively measure and quantify the impact of these failures, are there any trends and eventually, can we do anything about it? He pointed at the fact that most ship operators establish annual targets in order to maximize the number of operational days at sea and minimize transit times, downtime on equipment etc. Another tool is risk management in order to avoid unwanted incidents and accidents that of course have a negative impact on both operations and the economy. So when the RV operator has everything in good working order, the next question is who wants evidence

of performance and why? Obviously the owners and the users of the vessels is interested, and also those who are responsible for the political and strategic planning and decision making concerning marine science are interested in evidence that proves the cost effectiveness and usefulness of the RVs and the science cruises. One approach to ensure a good communication of performance and cost effectiveness is the use of performance indicators. Performance indicators are simply a comparison between what you plan or expect to be the result, and the actual result of an operation that is planned and executed iaw the plan. Such targets can be for example number of operational days, number of CTD stations and/or number of trawl stations during a cruise or a calendar year. As long as something can be measured in an objective way it can be used as a performance indicator.

The next step can be to compare performance from year to year, or from ship to ship, or even establish a benchmarking club where different ship operators compares data between their vessels or fleets in order to find out how good one is doing compared to other comparable vessels or fleets.

Another tool which is used by NERC Research Ship Unit (RSU), which Mr Stone is the head of, and the UKORS, which Mr West is the head of, is a Marine Facilities Review Group (MFRG) consisting of user representatives and experts in RV operations/management and scientific equipment support, tasked to give guidance and support, and ask some of the critical questions that needs to be asked from time to time. Such a panel can also function as “spokesman” vs. the vessel owners to aid the ship and equipment managers in their struggle to get adequate funding and support.

14. Reuse of equipment

Mr Per W. Nieuwejaar brought up the issue of reuse of equipment at the ISOM 2003, but due to limited time available the discussion on the topic was not completed. He therefore brought the issue up again at this meeting and his slides can be found as [Cables and wires mod 2, Rhodes 2004.ppt](#). The typical situation he described was that a RV operator has some equipment, e.g. 4000m of perfectly good cable for a scientific winch that is of no or limited use to him because he needs a 5000m cable for the winch. So if he has the money he buys a new cable and throws away the old one, if he cannot find another user who is happy to take over the cable for the cost of transportation etc.

Mr Nieuwejaar pointed at the two main options for how such a “second hand market” can be established, either by posting offers and demands on a web site, or that he who has something for sale/give away sends an e-mail to everyone who may be interested in taking over the equipment on offer and vice versa, meaning that those who are looking for some used equipment sends out a request to everyone who may have such equipment to sell or hand over. The ISOM concluded that the latter option is the preferred one, and every ISOM member is therefore encouraged to start to circulate such offers and/or requests. *Mr Blake* said that this is common practice already among those who operates in the Antarctica and that they have good experience with it.

15. INMARTECH 2004

Mr David Blake, who represents this years INMARTECH host, the British Antarctic Survey (BAS), gave a brief about the INMARTECH 2004. This meeting is an offspring of ISOM and is arranged every other year, and this time 58 attendees from 10 countries met in Cambridge, UK on 21-22 September. INMARTECH is a meeting place for informal information exchange among marine technicians with focus on practical matters, meaning how to do things in preparation and execution of scientific cruises on research vessels. Mr Blake had observed that a number of scientists “dropped in” on the meeting and that it was a real “eye opener” to many of them regarding the level of expertise the technicians represent and the technical and logistical complexities they have to tackle in their work. There were some industry representatives at the meeting who presented some of their products, which was well received. A new topic this time was communication systems, which is of growing importance for research vessels in order to transfer data from ship to shore and make the scientists able to communicate via phone and e-mail, and surf on the Internet while at sea. INMARTECH 2006 is planned for Woods Hole in the USA, and INMARTECH 2008 will be held in Europe again. Mr Blake also informed ISOM that the meeting had resulted in a surplus of £1500, - which he asked for good ideas to how they could be used within the INMARTECH context. His suggestion was to set up a workshop on a special theme or to sponsor attendance at the next meeting for someone with limited travel funds.

Mr Blake also gave a presentation of the VISAT (Virtual Synthetic Aperture Technology) C-band satellite communication (SATCOM) system as an alternative to the INMARSAT system that BAS used on their vessels, see [short codis.ppt](#) for more details. It is a SATCOM system provided by INVSat Ltd, based in Aberdeen, Scotland that provides the users with IP telephony, access to BAS LAN in Cambridge, e-mail and Internet. The satellite has a ground trace that covers Europe, Africa, USA and South America. BAS has installed the system on its two RVs (Ernest Shackleton and James Clark Ross) and on four scientific stations in the Antarctica. Ship installations runs at approx 40K£ each and the use costs approx 2,5K£ pr year, giving the user a 128 kbps duplex capacity. Ship antennas are 2,4 m in diameter.

David was also tasked by the ISOM to look at an email system for ISOM/INMARTECH. He has reported back the following for the minutes:

Within the Antarctic community an email system called Majordomo is used. There are other similar systems with one called Mailman. For users to access the Antarctic system, anyone on the list emails enmanet@comnap.aq.

A message is then sent to all on the list. Users can be added by a moderator or by anyone who has authority to use the system. David will be setting up one of these systems for Inmartech using the existing database of names and if the ISOM would like him to set up such a system for ISOM he is happy to do it since there are 25 major domo accounts at the British Antarctic Survey and he is quite

content to add the ISOM list to BAS servers. What he then needs from the ISOM is who would be the moderator and the list of names/email addresses.

16. Research Vessel opportunities for ARGO

At the ISOM 2003 **Ms Marieke Rietveld** introduced the topic of using research vessels to drop free drifting autonomous floats that collect information from the upper 2 km of the global ocean, so called ARGO buoys.

The floats spend most of their (typically 4 year) lives at depth and rise to the surface every 10 days to make CTD profile observations that are transmitted, and the floats located, by satellite. The data collected are freely available, and not restricted to the Argo contributing countries. Argo has a target of 3000 floats to be in place by 2006.

A particular challenge faced by Argo is that of populating the rarely visited areas of the oceans and particularly those in the southern hemisphere. It is in this regard that ISOM members may be able to assist Argo. This assistance could be in several forms. 1) Alerting the Argo project when research vessels are likely to visit remote areas of the deep ocean 2) Facilitating the deployment of floats either on passage legs or within research activities 3) Helping with customs clearances. For item 1) contact should be made with the Argo project office (argo@ucsd.edu). For items 2) and 3) negotiations would be with the float providing country. The assistance of ISOM is sought in this regard. ISOM members acknowledged again that they were aware of Argos, and willing to assist. *The address is: Dr. W John Gould, Argo Project Director, Scripps Institution of Oceanography, 9500 Gilman Drive La Jolla, CA 92093-0230, USA, Phone 858 534 5096, e-mail: argo@ucsd.edu*

17. RV web portals and databases

Mr Per W Nieuwejaar gave a short introduction to the two main RV web portals to day, the OCEANIC in the US (www.researchvessels.org) and Eurocean in Europe (www.eurocean.org), and in particular the need for a common data format for inputs to the RV database the two websites maintains together, see [RV dB inputs, Rhodes 2004.ppt](#) for more details. The ISOM thereafter had a discussion on what the members think should be the main features of such websites and databases. Main conclusions/suggestions were that the input process should be simplified and that the level of technical details about each vessel is too deep today. That makes it difficult to navigate in the database and even more difficult to keep the information contents accurate and up to date. A simpler format could therefore be beneficial and rather use links to the individual vessels homepage for detailed information than try to maintain it in a central OCEANIC/EurOcean database. There is also a general resistance towards posting detailed cruise plans on the web due to security concerns when operating in certain parts of the world. It is also important to have a “date tag” on datasets on the web such that it is clear when the datasets was last updated. Another issue is the use of filters in order to make it easy to compile lists of vessels, equipment, functions etc a user is interested in. It is also an important issue now to have a closer look at what vessels actually fits the label “research vessel”. Today it looks like Europe is “flowing over” of RVs if you list all European vessels found on the OCEANIC and EurOcean web sites. But a number of them are just very small vessels with very little equipment, and therefore with very limited capabilities. A system of categories (local, coastal, regional and ocean going) could be an option to resolve this problem. The general consensus in the meeting was that everyone agrees that such web sites are very useful, but that they need to be maintained and improved continuously in order to be a useful tool and providing correct information.

18. BONUS

Dr. Eila Lahdes presented the BONUS program established in the Baltic region with participation of the key research funding organizations from Finland, Sweden, Denmark, Germany, Poland, Estonia, Lithuania, Latvia and Russia. The amount of infrastructure and resources for marine science is not evenly divided between the countries around the Baltic Sea today, so the need for good and close cooperation in order to manage the resources and the environment in these waters are therefore evident. Her presentation can be found as [ISOM BONUS.ppt](#). BONUS is sponsored by the EU 6th framework programme/ERANet. BONUS is comprised of 5 Work packages including Task 1.5. Inventory of marine research infrastructures. Infrastructure working group had its first meeting in June 2004 and the second meeting is scheduled for January 2005. The idea is to better utilize available marine science infrastructure and resources in the region by establishing networks and a web portal with links to OCEANIC and EurOcean, see <http://www.bonusportal.org>.

19. “Lone Rover” rescue mission

Mr Fred Smits (New Zealand – NIWA) presented a rescue mission the RV Tangaroa had been involved in due to an attempt to row single handed from New Zealand to South Africa! His presentation can be found as [Hornette.ppt](#). The national maritime authorities in New Zealand were trying to find ways to declare the uninsured vessel as “not seaworthy”, but in the end they let it “row away”. The first attempt failed shortly after leaving New Zealand and a second one resulted in an emergency situation in bad weather, and a rescue mission by maritime patrol aircrafts from New Zealand and the RV Tangaroa who had to brake off a cruise and take a 830 nm, 63 hours detour to save the rower and carry the wrecked rowing boat to New Zealand. The accumulated cost for the rescue mission is calculated to approx 60K USD for the aircrafts and 26K USD for the “Tangaroa” which none of them seems to be able to recover since the rowing vessel was uninsured. This certainly raises the question once more about what it should take to declare a vessel “unsafe” before it goes out on a mission that most experts would agree on is doomed to fail from the very beginning.

20. RV insurance and liability issues

Once again **Prof. Dennis Nixon (USA – University of Rhode Island)**, the Risk Manager and Legal Advisor for the US UNOLS fleet, was giving the ISOM an update on RV insurance and liability issues. He started out with recognizing the fact that the history of maritime law actually started in Rhodes in 200 B.C. so this years ISOM was held at the very birthplace of his own profession. He also I did point out the role of Chile in the history of exclusive economic zones, and then went on to point out that Rhodes was also famous for the development of the Rhodian Sea Code, the basis for contemporary admiralty law. He then gave a review of a coring expedition to the Arctic using three icebreakers from different nations. He had spent more than a year to go through all legal aspects of the mission with the approach “think about what could go wrong and be prepared for it!”

The insurance and liability update was based on cases decided during the past year when the pay out was 160% compared to the premiums paid in the same period. This year has been better than the last regarding insurance claims, but there have been some major accidents, so the insurance rates are expected to rise 20% or more next year. He also noted that the introduction of the ISPS code, together with the ISM code, has increased the paperwork load for the officers on board so much that it could become a risk concerning collisions at sea! Studies of root cause for accidents lately shows that human error is still the main reason, and that deck officers are most often involved and engineers the least. This will probably result in an increase in P&I rates in the order of 17-25% next year. The pay outs for P&I has increased with approx 40% since 1999 and is still increasing, and the average pay out pr person is now in the order of 2K USD. He also noted that 2003 was the first year the industry paid in more in premiums than they paid in 1991, so the good times are now over!

The liability cases discussed this time concerned the quite well known Manhattan ferry crash with a captain on duty who turned out to have serious health problems and being totally unfit for duty. His health problem was kept secret by both the captain himself and his MD, resulting in criminal charges against both of them. The ferry company has since decided to implement the ISM code.

Prof. Nixon also referred to several liability cases involving personnel working on casino boats etc, vessels which are not what one would regard as “typical” commercial vessels in the past, but who are growing rapidly in numbers. Those vessels employ a large number of people working in restaurants, bars, casinos etc on board and who are covered by the many of the same rules and regulations as “old fashioned sailors”, opening up a lot of new, and to law professors, interesting aspects of liability when such professionals are injured on duty on board or during training ashore. He also pointed at a new trend in defining seaworthiness of vessels. Some even claims that a ship is not seaworthy if someone slips and fall because of an object being left unattended on deck. Another example is a student who became badly injured when participating in a ship operation. The P&I rules in such cases are special since they state that if a student or other “non-sailor” on board is injured due to own negligence/mistakes it’s the persons own insurance that has to cover the damage, but if it is because of something that happened because of the way the vessel or its equipment was operated/behaved, then it’s the ship operators responsibility. Liability for classification companies was another example he brought up, referring to a case where the transfer of a ship from one classification society to another became much more complicated and expensive than what was anticipated because the vessel was in a much worse condition than the former classification society had documented.

Prof. Nixon also brought up the very interesting legal questions around the introduction of AUVs, since nobody knows whether an AUV is a vessel, and therefore has to have navigation lights when on the surface at night, the requirements for a lookout and so on, or if it is something else, and in that case, what is it? The AUVs are getting bigger and bigger, with longer endurance and therefore longer range, which in turn makes it even more difficult to predict what the consequences may be if it runs astray etc. Other questions that arises are such as collision avoidance, safe surfacing procedures vs. other surface traffic, what if it accidentally enter other nations territorial waters and so on. The questions raised are therefore many more than the answers given for the time being regarding the legal status of AUVs!

21. Diplomatic clearances

Ms Marieke Rietveld gave a report on the Dutch experiences on cruises in the Mediterranean, which showed that there still are a number of difficulties regarding responses to applications, and the interpretation of where the limits of territorial waters for different countries actually are, in particular for Libya. They also operated in Israeli waters this time and that worked out well. Based on previous experiences they operated in the waters more than 24 nm off the Egyptian coast without applying for permission. She also pointed to a problem regarding an area of dispute between Morocco and Mauritania, and who to apply to for permission to enter that area. See [Clearance, ISOM 2004.ppt](#) for more details.

Mr John Breslin informed the ISOM that the Irish have had some difficulties with obtaining diplomatic clearance to enter UK waters and therefore have established a “direct line” to the UK clearance desk.

Mr Per W Nieuwejaar reported that clearance to enter Russian waters in the Barents Sea still is a difficult issue and that permissions and denials seems to be given more or less randomly.

Ms Eila Lahdes reported that Finland had been given access to Russian waters in the Baltic for the first time without having Russian observers on board. She also pointed to the very strict regime in Sweden regarding permission to enter their waters.

Ms Rietveld informed the ISOM that the Japanese had started to charter Russian vessels in order to access Russian waters in the Pacific due to great problems to gain access with Japanese RVs.

22. Arrest of RV Dr Fridtjof Nansen

Mr Per W Nieuwejaar reported on an incident in late June when the Norwegian RV Dr Fridtjof Nansen was arrested by the military

in Equatorial-Guinea, see [Arrest of DFN, ISOM 2004.ppt](#) for details. The situation was quite difficult when the vessel was hit by machine gun fire from a “coast guard cutter” and a “gun ship” helicopter escorted the ship in to port. When in port in Luba armed personnel took command of the vessel, and the ships radio station was sealed off. At the same time the ships captain, chief engineer and the cruise leader was taken ashore for interrogation. The next day the vessel was released and sailed to Cameroon. The vessel had a permission from the government to operate in their territorial waters, so the arrest and hostile behaviour from the military was totally out of context the way the Norwegian government sees it, but no explanation or apology has so far been received from the government of Equatorial—Guinea.

23. IMO regulations in high latitudes – Update on Arctic and Antarctic rules

Ms Eila Lahdes reported that there has not been any development regarding IMO rules for the Arctic since last year and that the guidelines published in 2002 still are under construction on some issues. Inputs from classification societies are also missing so far. **Mr. Fred Smits** gave an update on the Antarctic rules work that he also reported on at the ISOM 2003; see [IMO regulations in high latitudes.ppt](#) for details. Main issues to be resolved by IMO for the Antarctic are: Ice-pilot training, cleaning-up of oil spills, removal of wrecks, the need for double-bottom hulls and other items under current study by the Antarctic ship operator group, COMNAP (Council of Managers of National Antarctic Programs) are: Use of heavy fuels in the Antarctic, release of ballast water in Antarctic water, and need and options for navigational aids.

24. Any Other Business

Mr. Fred Smits suggested that seabed surveys was chosen as a “main topic” for next year’s ISOM and he proposed that each member looks in to the possibility of presenting own survey activities, techniques, technology, equipment, results etc in order to make a good information exchange on this steadily growing activity for a number of the RV operators around the world. The group was in agreement to do this.

25. Dates and Place of Next Meeting

ISOM has received an invitation from the Indian ISOM member, **Mr. G. Janakiraman** of NIOT to have the ISOM 2005 in October next year at the NIOT in Chennai, India. This offer was gratefully accepted and very well received by the ISOM members. For more information about the meeting site, see [ISOM 2005 meeting site.pdf](#). The ISOM 2006 is planned to be in Ireland to keep up the usual alternation of venue within Europe and outside Europe.

The Chair then expressed thanks to Dr Dimitris Georgopolous and his staff for an excellent organized meeting, great hospitality and wonderful food during a meeting held in a beautiful location and the meeting adjourned.