



TBI-News – Jan 2008– N°2

All our best wishes for 2008, may it be filled with brilliant projects and success!

Editorial



For cleaner and safer seas

For a whole week, Brest was the venue for the reflections, and shared experiences of an international community concerned by mounting problems with international maritime safety. We hosted more than **500 participants from 30 different countries** (Not only Europe but Africa, North and South America and Asia as well).

Recognized authorities at the international (OMI, OHI), European (European Commission, EMSA, ESA), national (Secretary General of the Sea, Maritime Affairs Department, CETMEF) levels, regional security authorities and actors on the maritime stage (professionals and associations) participated in the debates and brought their viewpoint not only on the evolution, the stakes at risk, but also on the new perspectives opened up by science and information technology.

On the agenda, a **legal, technological and economic survey** of current maritime safety conditions, maritime pollution...

By measuring scientific, technical and legal innovations, this exchange gave decision-makers a broader picture, scientists new themes for collaborative research, and industrialists insight into new developments.

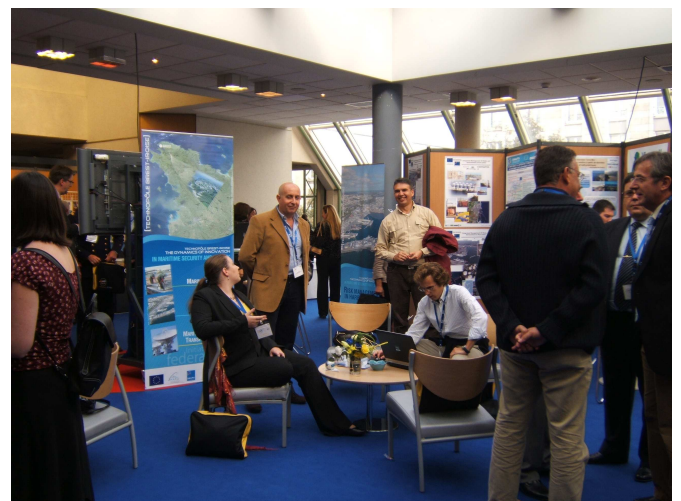
You can listen these exchanges on the Safer Seas Conference web site – <http://www.saferseas-best.org/>

Mark your calendars now for **the 3rd Safer Seas in October of 2010**. The Steering Committee will be established before then and will meet during SeaTechWeek 2008.

In the meantime, you are all invited to join this community and to participate in the exchanges, projects and work going on collaboratively at MITS – www.maritime-its.org

Marc Labbey,
President of Technopôle Brest-Iroise

[SAFER SEAS]



Booth of Technopôle Brest-Iroise and partners [IMAPS, MAPO, MITS, GASD]

A look at coming events in 2007 made clear the need for an update on maritime safety: **The Erika lawsuit and the investigation into the wreck of the Prestige, actions plans, after the Green Book and toward an integrated European maritime policy.**

Five years after the first Safer Seas conference of 2002, are human factors taken into better consideration? Have legal recourses evolved? Are governing bodies in place nationally and internationally?

In this newsletter, we cannot encompass all the richness of those 3 days that so benefitted participants from all sides. The videos of

conference sessions found on the conference website offer a deeper look at the content of each session: www.saferseas-best.org



Official reception at Oceanopolis, in front of the aquarium

We'll focus more on the themes presented by Technopôle Brest-Iroise: **risk management in port zones, pollution controls and information technology applied to maritime navigation and transport.**

The following paragraphs are an excerpt from the **conference summary report** presented by **M. Elie Jarmache**, mission manager of the **Secretary General of the Sea**, who did the honours at the conference wrap-up.



*The conference was structured around **three major themes**, or factors, within a particular framework which clearly revealed why events have gained such momentum: **a profound change has taken place affecting***

*stakeholders, organizations and resources. That change is the confirmation of a “European maritime response”. **International cooperation and European integration now go hand in hand with any pronouncement or action** relating to maritime safety and security. Whilst it is true that the problems faced are inter-related, the same is even truer for the solutions. Setting out the three issues raised by the conference serves to illustrate this.*

1. Technology as a significant factor

*This factor has proved the revelation of the conference. a driving force enabling improvements in safety and guarantees of security **monitoring shipping, identifying vessels and also in detecting clandestine activities....***

*SAFESEANET database **e-maritime technology initiative**, supported by the Commission's transport directorate, have 3 objectives : improving maritime safety, maritime sector economy and working conditions*

2. Part played by the human factor

... the 2006 International Labour Organisation Convention a major social step forward ... implementing measures which will make the level of protection the Convention affords obligatory without having to wait for it to come into force through the traditional mechanisms of treaty law ...

Maritime safety relies to a large extent on excellent standards of training the quality of on-board life must be subject to review and evaluation

Recognition of the human factor lies at the point where the interests of three separate states – the flag state, the port state and the state supplying the crew – intersect. Greater monitoring is also needed of certificates issued by third countries.

.... Concerns over living conditions at dismantling yards emerged as an essential feature of the legal process which is attempting to promote the ILO in a draft agreement currently under negotiation and comprising a two-fold requirement relating to standards of environmental inspection and public health.

3. Influence of the legal factor

... a factor with a horizontal and sector-based relevance

... In the case of container ships, a subject which appears technical but which is attuned to the needs of industry professionals, there are very real legal concerns. ... Another highly revealing example concerns satellites. ... leads to some legal questions being raised concerning the admissibility or otherwise of images taken as means of proof in the event of legal proceedings and, where necessary, the imposition of sanctions

*... **influence of international agreements**, with that of the United Nations on the law of the sea, known as the Montego Bay Convention, at the forefront. ... the **ILO agreements** – those **ratified** in expectation of being effectively implemented, those **negotiated in expectation** of the required number of ratifications making some level of*

effectiveness possible, and **those in the course of negotiation**. A second category of legal texts to mention is the rules and directives of the European Union, with particular reference to the “Erika III Package” now under discussion at Commission, member states and European Parliament level. It was noted that **Commissioner Barrot aimed to secure adoption of the package at the end of the French presidency of the EU**. Lastly, mention must be made of the legal dimension and the influence of legal rulings on current assessments of maritime safety and security. There has been a discernible trend towards tougher legislation and increased fines with significant results being recorded. **A tripartite approach of dissuasion, prevention and sanction is very much the order of the day.**

... **legal topics which were key points of the conference:**

- The ever-buoyant issue of the law and the state flag,
- Confirmation of the central role played by the port state
- Recurring and nagging questions over challenges to the Montego Bay Convention,
- The need for a global approach to international maritime criminal activity,
- The search for effective tools to combat illegal trafficking,
- The issue of removing maritime sovereignty for the benefit of “maritime intervention”, and
- Should community law necessarily be substituted for international law seen as slow to be implemented and not very effective in producing results?

The list could go on given the large number of fascinating questions raised and passionately held viewpoints expressed in the presentations relating to legal matters.



Closing session : Elie Jarmache, Xavier Rolin, The Maritime Prefect of the Atlantic ; Jean-Yves Le Drian, Former Minister, President of Brittany Regional Council ; François Cuillandre, President of Brest métropole océane

What is the overarching framework for governance of these three factors?

The state is and remains the fundamental level of governance ...

The international level is the best known and most familiar as it corresponds to inter-governmental organizations and here the leading IGO is the IMO. But in matters concerning maritime safety, has the contribution of the IHO, for example, been evaluated? The regional level is the most innovative in the as yet hesitant first steps towards developing governance practices. Projects and programmes are most appropriately carried out at this level.

.... the Conference of Peripheral Maritime Regions represents visibility at an international level, unchallenged legitimacy within member states and an unrivalled degree of action within the European maritime policy.

....a pivotal moment for **European maritime identity**. **EU maritime policy** is moving towards the level of a strategic priority. This is what was meant by the message conveyed by Commissioner Barrot who provided two indications of this change: the adoption of the “Erika III Package” and the EU as appropriate regulatory level for successful governance of the oceans. Such an affirmation poses the fundamental question of the relationship between the EU and the IMO which sometimes gives the impression of being based on mutual quasi-obsession.

.....

In a way, the 2007 conference found itself the unpremeditated gathering for the announcement by the Commission of its blue book for **an EU integrated maritime policy** ...

If, rather than repeating the same integration mantra, one were to put forward a definition of an integrated EU maritime policy, it would be about **finding direction, consistency and legibility**. ...

This evolution, clearly defined by our conference, relies on a new development within the European community, namely that of the European agencies. Only the key agencies – EMSA, Frontex and the fisheries agency – need a mention. It does not take an expert to appreciate the increased power of the agencies and to point out that the real problem of governance on the horizon – if not already arrived in port – in terms of maritime affairs lies in the agencies’ methods of communication established

with member states. But that is already an opening topic for a future conference.

New vistas are opening to us and a date has already been set for the 3rd Safer Seas Conference in Brest in October, 2010.

« Risk Management in Port Zones » at Safer Seas

Gathering together all the partners in the IMAPS European program and inviting additional leaders from other continents, shows the focus on disseminating as widely as possible the results of a two-year study of the regulations, policies and technologies developed in response to problems of safety and security in port zones

As the Commissioner of the conference, Mr. **Michel Morvan**, director of Technopole Brest-Iroise, will emphasize, **a problem this complex requires an in-depth look at different viewpoints**, and an **exchange of past experiences** in order to **move toward solutions**.

By their very nature, port activities take place amid urban, tourist and fishing zones, leading to obvious conflicts of interest.

Seen in this light, risk management appears to be a rapidly expanding market. One must come up with regulations, develop materials, modeling techniques and training curriculums that constantly improve risk management.

Although this admittedly complex problem is far from solved, the seminar will have shown that real perspectives are available. To be convinced, one must have first understood the views of governmental authorities who are responsible for both maritime safety and regional economic health (**Session 1**). It will then be necessary to hear from port authorities who must apply the regulations while ensuring the profitability of harbor infrastructure (**Session 2**). Lastly, **one must identify** process solutions, primarily technological (**Session 3**) developed **with the aid of research networks and based on risk management platforms** (**Session 4**).

By the depth and quality of the program and the fertile exchanges it stimulated, this seminar, attended by over 90 participants, confirmed once again the potential of the INTERREG program.

Furthermore, the results it has already achieved convince us of the absolute necessity to forge ahead so that past efforts and progress are even more rewarded in the future ...

www.imaps-interreg.net

« Maritime ITS » at Safer Seas

The international task force met for the 4th time during Safer Seas. Their agenda was to take the measure of today's information systems and dedicated e-maritime applications, and to discuss cooperation and action plans to be established for 2008.

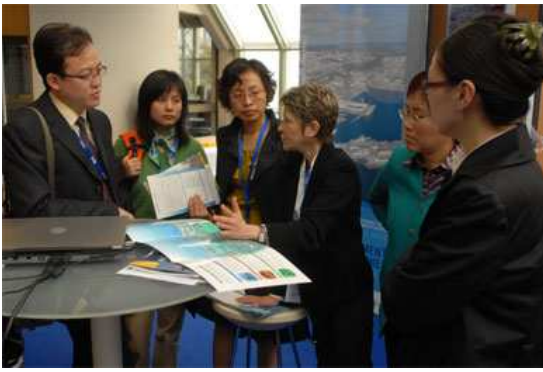
Technopole Brest-Iroise is particularly grateful to the distinguished personalities invited to lead the working sessions: Prof. Xu Kaiyu, Director of Science and Technology, Maritime University of Shanghai, Mr. Gordon Campbell, ESA, Mr. Cees Glansdorp, MARNIS. We would also like to thank the numerous participants who enlivened the debate.

The various discussions made it clear that the technologies in question can be used to develop new value-added services for different sectors, and that the financial means to support and test and deploy these developments, are available today (ESA, EMSA, as well as the European commission and the Interreg and PCRDT programs). The race is on!

Those interested can participate by joining the collaborative workspace, MITS – www.maritime-its.org.

Several project partners at the Technopole booth were already demonstrating current and potential uses of these technologies:

- [Boost Technologies](#) : Vigisat - an operational earth observation center in Brittany , to collect, process, exploit remote sensing data
- [CERVVAL](#) : Sea states generator: applications to drifting of objects, wave energy
- [Research centre of Ecole Navale - IRENAV](#) Towards "digital ocean techniques: adaptative ship tracking techniques"
- [Telecom Bretagne](#): WIMAX and its research projects and status.
- Maritime Prefecture – Emergency department Nuclear-radiation-chemical detection aboard the Maritime Firemen's Argonaute
- [Kenta Electronique](#): AIS systems



« Marine Pollution » at Safer Seas

Management of Accidental Marine Pollution post Erika and Prestige, the workshop held by CEDRE and Technopole Brest-Iroise, caps two years of work on the MAPO project in the struggle against marine pollution. CEDRE, the focal organization addressing accidental water pollution, suggested Technopole could issue a call for participants engaged in combatting marine pollution.

The concept was to gather together for a few hours, **participants in European projects initiated in the face of recurring maritime accidents. A good eight projects were presented and we demonstrated that action is possible**, that such incidents are not inevitable.

The two keys to preserving the marine environment are maritime safety and pollution prevention. They are, however, not sufficient. **Despite all the preventive measures, an accident will always happen** and cause pollution to be managed. **CEDRE was founded on this conclusion** and, since its creation, **it has become an international presence not only in researching technological solutions, but also in implementing practical preventive and reactive techniques and in professional training and development.** For its part, Technopôle Brest-Iroise seized the wider opportunity in the national and European post-Erika and post-Prestige contracts to expand its members' efforts on subjects that dovetail with those of CEDRE and coalesce to form a complete

The seminar was a time to draw conclusions from the experiences presented, to extend cooperation over time and to create new synergies among players now more individually familiar.

The MAPO project participants have published a booklet and DVD aimed at PME who want to participate in the 7th PCRD. They contain practical information on integrating an existing project or proposing a new one.

The various headings teem with examples of good practices, with contacts and a database of 450 PME in 10 European countries – www.marine-pollution.org – all potential partners for your future projects.

Contact : Technopôle Brest-Iroise, MAPO project coordinator – francoise.duprat@tech-brest-iroise.fr

[International Collaboration]

[China]

A delegation of 5 people participated in the Safer Seas conference in Brest last October: a naval design engineer from the Shanghai Academy of Science & Technology, 2 representatives from the new port of Shanghai, a representative from the China Academy of Sciences, and a professor of transportation.

Ms. Wang Li, **representative of Shanghai Maritime University**, prolonged her **stay through mid-November** in order to develop ties with Technopole and its partners.

Chosen by the university president for her command of French – she has taught French there for the last 8 years – she has been directed to meet with scientific partners in Brest and, on her return, to relay information back to Chinese research teams. Shanghai Maritime University is a multi-disciplinary center focused on maritime transport.

In 2006, Technopole and the university set up a cooperative center: « MITS-Galileo for safer seas. » Located on the maritime university campus, the center also serves as a secondary access to the Chinese and Asian markets for both researchers and business enterprises.

Growing ties between the Ecole Navale and Shanghai Maritime University – SMU

The collaboration between **Dr. Cyril Ray**, lecturer at the Research Institute of the Ecole Navale (IRENav) and **Prof. Tianhao Tang**, Director of the **Institute of Power Electronics of Shanghai Maritime University** has been initiated thanks to the conference SeaTechWeek organized at Brest in October 2006. **Opening the « MITS-Galileo for safer seas » center** solidified the ties between Brest and Shanghai and allows our enterprises to reinforce their relationships. In this context, Dr. **Tianzhen Wang**, a young researcher in **data mining and GIS**, is spending **7 months with the SIG group of IRENav** where she will study new models for the **analysis of maritime trajectories and trends**. Her post-doctorate falls within a larger research effort of GIS group on **modelling, analysis and real-time visualization of maritime traffic**. This project, in which Technopôle is participating by accommodating an AIS maritime transmitter, will focus on following and analyzing maritime navigation within the Brest harbour. Within the framework of this partnership, Dr. Tianzhen Wang also collaborated with two naval academy students during their end-of-study term at Shanghai Maritime University in September of 2007.

Dr. Tianzhen Wang will be setting up visits with other institutes of higher education in Brest



Dr. Tianzhen Wang in the big hall Neptune of the Ecole Navale

[Vietnam]

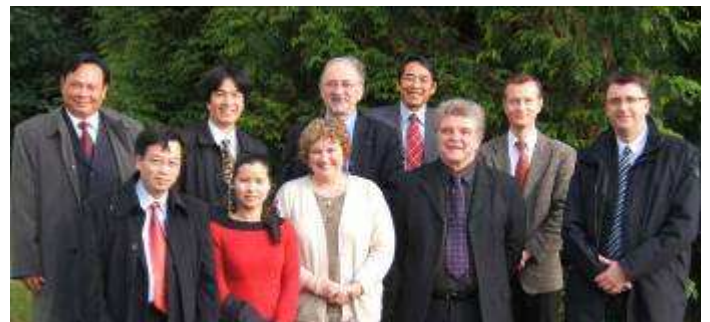
Exchanges are ongoing since the economic and scientific Jeanne d'Arc mission in February, 2007 : signature is scheduled for early November on an agreement for a « **Bay Contract** » for the bay of **Hai Phong City**.

Initial contacts were established through Technopole between the local Hai Phong City authorities and two members of the Littoralis group – Hocer, Actimar – during the Jeanne d'Arc mission. Specific services offered by that group drew the attention of Hai Phong City officials : **water quality – sustainable development**.

Hai Phong City is the principal port and leading industrial center of the Democratic Republic of Vietnam.

A proposal for a long-term contract modeled after the « Bay of Brest Channel Contract » was presented to People's Committee members in July. The solid experience of the Brest team reassured them, as did the experience gained in European programs like Qualipol and IMAPS, and other contracts around the world (Martinique, Gabon, Uruguay, Argentina, Kuwait...).

An agreement for the **project kick-off in 2008** was signed at the beginning of November. **Phase 1** will entail a **definition of current conditions** (setting up the SIG, bay analyses). **The second phase will validate analytical methods for water and food products**. Food product safety is a major concern for the Vietnamese authorities as Vietnam exports large volumes of seafood (shrimp and catfish). **The participants** from Brest are Littoralis, Western Brittany University and Brest Metropole Océane.



Led by Dr. BUI THANH TUNG, Director of Science and Technology, the delegates of the People's Committee of Hai Phong City gathered in Brest last October around Gael Durand, IDHESA Bretagne Océane, Michel Morvan, Technopôle Brest-Iroise, Atilio François, Littoralis, Eric Vandenbroucke, Technopôle Brest-Iroise.

[Japon]

Last October's mission to Yokozuka included research fellows F. Gallee of [Télécom Bretagne](#), JY Cognard of [ENSIETA](#), E. Al Falou of [ISEN](#), C. Le Gall of [CERV](#), representatives from surrounding communities, M. Guivarch of Brest metropole ocean, Severine Merlet, the Counsel General of Finistere, and E. Vandenbroucke from Technopôle Brest-Iroise.



Members of the delegation pose with Mr. Handa, Ms. Kamimura, YRP, and Mr. Yasuda, representing the city of Yokozuka

The schedule of individual and group meetings let us renew contacts with familiar organizations such as [PARI](#), the [University of Yokohama](#), [JAMSTEC](#) (equivalent to Ifremer), [NDA](#) (interforce officers candidate school), [FUJITSU](#). It also let us recontact organizations within which we wanted to find new partnerships: [NICT](#), [OKI](#), and [Yokozuka Research Park](#) (YRP) with whom we had organized the ITST conference in Brest in 2005.

Areas of common interest have been identified and, in some cases, collaborative projects are already in development. As for Technopole, we have solidified our exchanges with the Business Development Institute at Yokozuka Research Park around the theme of shared projects within the framework of our respective testbeds – full-scale test platforms – for wireless broadband.

Eric Vandenbroucke presented the Brest platform, Wim@ages, which is part of the Image & Networks project, Ima@inLab (see following article).

A visit by a Japanese delegation is planned for July, 2008, during the international maritime event, « Brest 2008 », during which Wim@ages partner experiments will be tested.

[Information and Communication Technology]

News from Wim@ges - Brest's Wireless Broadband Platform

In our July issue, we outlined the platform for this project and its integration into the interconnected platforms of Im@ginLab, the Images & Networks focal project

In Brest, WiMAX and WiFi tests will be conducted for **dead zone coverage** and **maritime zone coverage** that can give access to HDTV, video on demand and voice-over-internet telephony.

The first important step in on-site **testing of the platform** will take place **during** the international maritime event, « **Brest 2008** » which takes place July 11 – 17.

The following services will be tested:

- WiFi coverage of a fleet of boats anchored in the commercial port. Open internet access for participants.
- Capture and transmission of « high definition » images to remote sites in Brest (airport, train station,...) or further (Rennes, Paris ...).
- Tracking a regatta in the Channel and relaying competitors' positions. Real-time images of the race will be transmitted with virtual reconstruction of boat trajectories. Transmission via cell phone using DVB/H.
- WiMAX coverage over a wide maritime zone (from the Channel mouth toward the open sea...).

The platform will be available to any organization that wants to validate and verify its equipment. Negotiations are underway with other European platforms in view of more rapid international standardization.

[Agenda]

May 8 to 11, 2008 in bay of Brest: Grand Prix Ecole Navale [GPEN]. www.gpen.ecole-navale.fr

October 13 to 17, 2008 in Brest: **SeaTechWeek** (International Sea Sciences and Technologies Week). Lectures, round tables, professional suite, tours along the following themes: Ocean Research, Defense, Offshore, Marine Technology. Ifremer will host several

conferences: 2nd ICOE (International Conference on Ocean Energy), Rogue Waves 2008, 3rd International workshop on Technology for Search and Rescue and other emergency marine operations (SAR), OCO 2008 (Coastal Oceanography Operations)... L'Université de Bretagne Occidentale/IUEM

The Technopôle Brest-Iroise will organize a workshop on Maritime ITS with its partners.

November 20, 2008, in Brest: 7th Technology Meeting on « Enhanced Virtual Reality » as part of the HDMOC'08 (Mobile Broadband Communications) conferences. The morning will be devoted to plenary sessions on the market, new technological advances and adoption by the public. The afternoon is reserved for sessions on projects, products and/or services. A small parallel exhibit will be held. **Submit session proposals before July 15, 2008,** to veronique.leloup@tech-brest-iroise.fr.

July 7th and 11th, 2008, in Brest: GESMA (Underseas Study Group for the Atlantic), a part of the general armement delegation (DGA) will hold a **European Competition for Underwater Robotics** in collaboration with DSTL (MoD-UK) at Ifremer in Brest.

More information : <http://www.dstl.gov.uk/news-events/competitions/sauce/index.php>

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11 July 2008: « Invest in Brest », une journée « sur le pont » organisée par Brest métropole océane, la Chambre de Commerce et d'Industrie, le Technopôle Brest-iroise: une séance d'échanges et de contacts privilégiés avec les décideurs économiques locaux et découverte de Brest et sa façade maritime à l'occasion de Brest 2008.

fields: electronics, image processing, mathematics, data processing and signal processing. Students from partner Schools and Universities will be involved in these experiments..

Contact : jean-pierre.gerval@isen.fr



Claude Berrou, professor in the Electronics Department of GET-ENST Bretagne is **named to the Academy of Sciences.**

Co-discoverer with Alain Glavieux of turbo codes, a revolutionary methodology that has spurred astounding advances in data communications, Mr. Berrou

was the 2005 recipient of the United States' prestigious Marconi Prize.

Mr. Sorin Moga, research fellow at **Telecom Bretagne**, has been named **Honorary Consul of Rumania**. A fellow in the Logic Department on social sciences, information and usage, he is originally from Transylvania in northern Rumania. He arrived in France in 1995 after finishing his studies in Timisoara and was recruited by ENST Bretagne in 2001. His specialization is in artificial intelligence, more specifically learning systems using neural networks. His mission as Honorary Consul is **to further the economic policy goals of Rumania, to promote cooperation between the two countries, and to disseminate Rumanian economic, cultural, scientific and commercial information to the media.**

Contact : sorin.moga@enst-bretagne.fr.



[Noticeboard]

ISEN Brest will host the first meeting of the **Project Steering Committee for EMULACTION** (Multi-modal environment for cooperative cross-national training and education) by the end of January.

This project brings together six participants from six different countries: [Institut Supérieur de l'Electronique et du Numerique](#) – Brest France; [OVIDIUS University](#) – Constanta, Romania; [Vietronics Technical School](#) - Hai Phong City, Vietnam; [Moncton University](#) – Moncton, Canada; [Lebanese University](#) - Sciences Faculty – Tripoli, Lebanon; [Faculty Moldave Institute of Technology](#) – Chisinau, Moldavia

The goal of this project is to **develop a Working Data Platform that will accommodate collaborative, distributed, laboratory work:** groups of students from different schools and countries working on the same subject. Experiments within the Working Data Platform will be based on concrete activities in the following

**Readers, please note:
TBI-News welcomes your
contributions!**

Inform others about your projects, achievements, conference dates and other items of interest. Send articles for the attention of Michel Morvan, Director of the Technopôle Brest-Iroise
michel.morvan@tech-brest-iroise.fr

Dates for your diary: BREST 2008
International Festival of Sailors
11 to 17 July 2008 - <http://www.brest2008.fr>



<http://www.tech-brest-iroise.fr>