

## **IRC-FLANDERS AND MAREDFlow**

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### **Introduction**

The 'Regions of knowledge' pilot action, introduced in the 2003 Community budget as a 'pilot-project' by the European Parliament ([http://www.europarl.eu.int/news/public/default\\_en.htm](http://www.europarl.eu.int/news/public/default_en.htm)), aims at supporting experimental actions at regional level to develop 'regions of knowledge' in the area of technological development, co-operation between universities (<http://www.cordis.lu/era/universities.htm>) and research at a regional level and stimulate the integration of regions in Europe. Such actions should strengthen the regions' involvement and commitment towards the creation of the European Research Area (<http://www.cordis.lu/era/home.html>) as well as supporting the achievement of the Lisbon goals and the Barcelona ([http://europa.eu.int/comm/research/era/3pct/index\\_en.html](http://europa.eu.int/comm/research/era/3pct/index_en.html)) objective (towards a higher investment in RTD with the target being 3% (<http://www.cordis.lu/era/3percent.htm>) of the Union's GDP by 2010, with 2/3 of the GERD coming from the private sector. The main aim of the action was to demonstrate the central role of knowledge in driving regional development and how regional actors can effectively participate in formulating their regions' future.

The European Commission has selected 14 pilot projects, to be allocated a total of EUR 2.5 million, to boost the regional dimension of the knowledge economy. One of these projects was MAREDFlow with as coordinator: The Alliance of Maritime Interests in Europe (BE). Other participants are Autoridad Portuaria de Gijón (E), City of Pori (FIN), Institute of Shipping Economics (DE), Administratie Waterwegen en Zeewezen (BE).

When IWT-Vlaanderen took notice of this project, it was investigated more closely and possible synergies were sought. Indeed, we saw that both tried to stimulate cross border-technology transfer. The MAREDFlow-project, however focussed on the maritime sector.

In this article, we describe the results of our combined efforts. Of course, these are put in a context. First of all there is a description of IWT in the Flemish Innovation Landscape. Secondly, a presentation is given about the IRC-Network. Of course, the IRC-Flanders services are put in this general perspective. Given all these information, the concrete combined efforts of both MAREDFlow and IRC-Vlaanderen are revealed.

### **IWT in the Flemish innovation landscape**

#### ***The Flemish innovation landscape***

Flanders is strategically located within the centre of Europe. Together with Wallonia and Brussels, it forms the Federal State of Belgium. The three regions have far-reaching autonomy on economic (territory-bound) matters, e.g. in the field of technology and innovation.

The Flemish region counts almost 6 million people (60% of the Belgian population). It covers 40% of the Belgian territory and is a very urbanised area. Flanders accounts for roughly 60% of Belgium's Gross Domestic Product (GDP). The economy has traditionally been based on



international trade. Export accounts for 85% of the Gross Regional Product (GRP). Flanders has a highly educated work force with one of the highest productivities in the world. This attracts a large number of multinationals that choose Flanders as a base for their European operations. The backbone of Flanders' economic structure, however, is the SME. On a total of about 170.000 companies, over 99% have less than 250 employees, 89% count less than 10 employees. Large companies are often part of a multinational group.

Fig. 1. Location of Flanders.

Industry in Flanders primarily involves processing, dominated by the chemical and metallurgic sectors. Car assembly comes in a strong third. High automation has reduced employment somewhat in recent years, but the service sector is providing new impulses.

Flanders' R&D efforts are well above the European average. The Flemish universities and research centres (VIB, IMEC, VITO, IBBT)<sup>1</sup> have a very good international reputation. On the industrial side, most of the research activity is still accounted for by large companies. However, the number of innovative SMEs is rising.

Both Belgium and Flanders have an average score on the European Innovation Scoreboard 2005<sup>2</sup>. In spite of high quality R&D and a high skilled work force, converting research efforts into commercially exploitable knowledge is a weak point.

Historically, the innovation landscape in Flanders is divided over a large number of local innovation actors: regional development agencies, chambers of commerce, sector organisations, cluster organisations, research centres, universities, etc. This historic scattering makes communication difficult.

Since 1999, the Flemish Government tries to rationalise these structures. In May 1999 the Innovation Decree put IWT<sup>3</sup> in a co-ordinating position over the intermediary organisations in the field. As a result, a Flemish innovation network has been established in 2002, in which organisations are to signpost to one another when applicable. The network is based on VIS<sup>4</sup>-projects, co-ordinated and (partly) funded by IWT. These projects cover collective research, technological services, sub-regional innovation encouragement and thematic innovation encouragement.

<sup>1</sup> VIB: Flemish Interuniversity Institute for Biotechnology; IMEC: Interuniversity Micro Electronics Centre; VITO: Flemish Institute for Technological Research; IBBT: Institute for Broadband Technology.

<sup>2</sup> [www.trendchart.org/scoreboards/scoreboard2005/pdf/EIS%202005.pdf](http://www.trendchart.org/scoreboards/scoreboard2005/pdf/EIS%202005.pdf) or [trendchart.cordis.lu/](http://trendchart.cordis.lu/)

<sup>3</sup> IWT, Institute for the Promotion of Innovation by Science and Technology in Flanders. Its main activities are funding of industrial research, co-ordination of Flemish innovation landscape, NCPs for 6FP, EUREKA contact point, IRC-host.

<sup>4</sup> VIS, 'Vlaamse Innovatie Samenwerkingsverbanden' = Flemish Innovation Co-operation Networks.

### ***IWT: mission and activities ([www.iwt.be](http://www.iwt.be))***

IWT-Flanders, the Institute for the promotion of innovation by science and technology in Flanders, is a governmental agency established by the Flemish Government in 1991. Since innovation policy is a regional matter in Belgium, IWT-Flanders is the key organisation for support and promotion of R&D and innovation in Flanders. The total funding of IWT-Flanders amounts to EUR 218 million in 2004. IWT is both a programme owner (in close co-operation with the Flemish Minister of Innovation) and a programme manager (selection and follow-up of research and innovation projects).

The scope of existing funding is quite broad including industrial R&D projects, EUREKA-projects, feasibility studies and innovation projects for SMEs, support to industrial networks (sectoral research, technological advisory services, innovation stimulation), support to universities for strategic basic research, support to higher education engineering schools for technology diffusion actions, individual grants for PhD and post-doc research, support to universities for exploitation of their R&D-results and to larger 'ad hoc' initiatives as decided by the Flemish government. In 2004 about 486 R&D projects (incl. EUREKA) were funded for a total amount of EUR 78M. Different horizontal measures (VIS, TETRA) to support industrial networks and clusters active in generic sectoral research, technological advisory services, stimulation of technology transfer and innovation are focused on interaction with and transfer of knowledge to the local SMEs.

Companies can make use of services such as information dissemination about international actions and more especially about the Framework Programme and assistance in the preparation of FP6 project proposals, guidance in the innovation process, advice on IPR-issues, transnational technology transfer. IWT is in co-operation with the Science and Innovation Administration of the Flemish Community the unique NCP organisation (incl. SME NCP) for Flanders. IWT is also the IRC for Flanders.

Besides promotion of innovation through funding of R&D-projects and services, one of the main tasks of IWT-Flanders is the co-ordination of the regional innovation actors as regional development agencies, technological advisory services, sectoral research centres, industrial federations, etc.

IWT participates in six ERANET projects as a partner (CORNET, Era-SME, eTRANET, MATERA, MNT, SUSPRISE) and is coordinator of the COMPERA project.

The annual budget of IWT for support to RTDI actions is approx. EUR 218M, EUR 27M of this budget is dedicated to horizontal innovation measures to support industrial networks and clusters active in generic sectoral research, technological advisory services, stimulation of technology transfer and innovation are focused on interaction with and transfer of knowledge to the local SMEs.

### ***Innovation programmes managed/owned***

IWT is both programme manager and programme owner for all the funding programmes it implements. Most of the funding programmes that are managed/owned by IWT allow for direct or indirect foreign participation.

More information on the horizontal innovation measures aiming at technology transfer can be found on the innovation trend chart:

- Flemish Cooperative Innovation Networks (VIS): [http://trendchart.cordis.lu/tc\\_datasheet.cfm?id=8206](http://trendchart.cordis.lu/tc_datasheet.cfm?id=8206)
- TETRA-Fund: technology transfers between technical high schools and SMEs: [http://trendchart.cordis.lu/tc\\_datasheet.cfm?id=8739](http://trendchart.cordis.lu/tc_datasheet.cfm?id=8739)
- University Interfaces or Industry Liaison offices: [http://trendchart.cordis.lu/tc\\_datasheet.cfm?id=7742](http://trendchart.cordis.lu/tc_datasheet.cfm?id=7742)

No specific programmes regarding technology transfer or co-development with partners from third countries are implemented at the moment. Activities regarding the international exploitation and distribution of research results and new technology are mainly focussed on Europe. The main instrument here is the IRC-Network. To maximise its radius of action, the Flemish IRC (<http://www.iwt.be/irc>) closely cooperates with the network of Flemish innovation actors (also coordinated by IWT: <http://www.innovatienetwerk.be>). On the long term a further internationalisation of these services (incorporating countries outside of Europe) is envisaged.

## **General presentation of the Innovation Relay Centres Network<sup>5</sup>**

### **General approach**

The mission of the IRCs is to support innovation and transnational technological co-operation in Europe with a range of specialised business support services. IRC-services are primarily targeted at technology-oriented small and medium-sized enterprises (SMEs), but are also available to large companies, research institutes, universities, technology centres and innovation agencies. The first Innovation Relay Centres were established in 1995 with the support of the European Commission. The aim was to create a pan-European platform to stimulate transnational technology transfer and promote innovation services.

Over the past five years the IRCs – working together in close co-operation – have been of assistance in over 12,500 technology transfer negotiations, and have helped more than 55,000 client companies to meet their technology needs and to exploit their research results.

IRC-staff (a total of nearly 1,000) are experienced specialists with backgrounds in business, industry and research. To date, they have facilitated more than 1,000 transnational transfers of technology-signed agreements for the sale, licensing, distribution or joint development of new technologies.

Today, 71 regional IRCs span 33 countries: 25 EU-Member States and Bulgaria, Romania, Iceland, Israel, Norway, Switzerland, Turkey and Chile.

Most IRCs are operated by a consortia of qualified regional organisations such as Chambers of Commerce, Regional Development Agencies and university Technology Centres. Altogether, almost 220 partner organisations are involved, ensuring wide geographic coverage.

### **General service portfolio of the IRC-Network**

#### *Advice on innovation, technology transfer and exploitation*

Innovation Relay Centres adopt a one-to-one approach with local companies. As part of the service IRC-experts will be pleased to visit your company to discuss whether you would like to

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<sup>5</sup> For more information, cf. [www.cordis.lu/irc](http://www.cordis.lu/irc)

take advantage of the opportunities that the IRC-Network offers. IRC-staff can arrange for a technology assessment to be carried out for your organisation. On the basis of this, they can advise you on the opportunities for introduction of new technologies into your company, and to also help promote your own innovative technologies to the rest of Europe.

#### *Identifying technology need and/or technology potential*

##### Technology to offer: promoting your products in European markets

The Innovation Relay Centre Network is proactive in the promotion of new and innovative technologies throughout Europe. Each IRC-Network member has strong links with industry in its region and can help your company to:

- create a technology profile in English, choosing the right technology keywords, documenting the innovative aspects and main advantages, etc.;
- locate potential partners throughout Europe for licensing and/or manufacturing agreements;
- with the process of negotiating such agreements.
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##### Technology needs: finding technology solutions for your business

If you would like to be more proactive in finding innovative technologies, your local IRC can send details of your technology need to the 71 Innovation Relay Centres across Europe. The IRC will help you to:

- create a technology profile in English, to choose the right technology keywords to describe your technology requirements;
- find businesses or R&D centres in Europe that can supply you with new technologies or ideas;
- identify new business opportunities.
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##### Confidentiality

Your identity will remain confidential unless and until you are prepared for it to be revealed. Any responses will be passed on to you, and the IRC will help you receive further information if you wish.

#### *Finding European partners*

The technology profiles produced by the IRC can be used in a number of different ways in order to find business partners for your company.

##### Partner search via the IRC-Network

The 71 IRCs are connected by intranet which allows rapid diffusion of technology profiles across Europe. These profiles are also stored in a searchable database.

##### Partner search via trade missions

Your local IRC can use your technology profile to match your company to others in Europe. These companies might be interested in visiting you or vice versa. These visits are generally sectoral in nature and based upon a series of pre-arranged meetings. Social events, travel and accommodation can be provided as part of the package by the IRC.

##### Partner search via technology brokerage events

Your local IRC can use your technology profile to help organise meetings for you at European brokerage events. If you are unable to attend, the IRC can represent your company at these events. The Relay Centre can also promote your technologies at exhibitions, trade fairs, partnering events and through the day to day interaction it has with the rest of the IRC-Network.

## *Further support and advice*

### Advice and signposting on issues relating to innovation financing

Your local IRC can help with the selection and identification of projects, which are suitable for innovative financing, organise meetings with business angels and venture capital funds operators, organise transnational innovation financing brokerage events such as for investment and, if the expertise is available, assist your company with the preparation of the technical part of the business plan for investors.

### Advice and signposting on issues relating to intellectual property rights

Your local IRC can provide advice on how best to protect your company's innovative technologies. Advice may also be provided by a third party, a patent lawyer, employed by the Relay Centre or this service may even be delivered by Relay Centre staff themselves.

### Contract negotiation assistance

The Innovation Relay Centre not only helps you to identify partners but also gives you assistance during the negotiation phase of the contract. The Relay Centre may bring in third parties with relevant expertise (even if the service is delivered by Relay Centre staff). For more information on the exact terms and conditions please contact IRC-Flanders (<http://irc.cordis.lu/whoswho/>). This assistance may include:

- the drafting of a confidentiality agreement;
- the organisation of the first meeting with provision of a venue and if necessary a translator;
- the organisation of the visit to the partner;
- the provision of model technology transfer agreements;
- etc.

Some IRCs may be able to help you in the complex process of valuing never-before-seen technologies, in unfamiliar industries. They can direct you to specialists who can advise on the value of different types of agreement and so ensure that you pay or receive a fair price for a technology. This assistance can lead to greater efficiency in negotiating licensing agreements and it can help your organisation set financial targets for technology transfer.

## **IRC-Flanders**

### **General background**

IRC-Flanders has been hosted by IWT since the start of the IRC-project in 1995. At the start of the past contract period (2000-2004), the IRC-tasks were shifted entirely from upstream work (supporting participation to 6FP) to downstream work (technology transfer). During the first two years IRC-Flanders has invested in the development of a number of tools, facilitating the communication of transnational technology transfer (TTT) opportunities to clients and internal follow up of TTT projects. Quality and efficiency within the IRC have benefited from this effort.

The IRC disposes of three full-time equivalent in staff (+ assistant). To guarantee a full coverage of the region and work on in-depth relations with clients, a strong co-operation with the local innovation actors is needed. The large number of organisations involved in the VIS-projects offers IRC-Flanders the opportunity to increase its coverage. Their diversity allows IRC-Flanders to select the most appropriate partner for each specific IRC-activity.

## **Objectives and services**

### *Objectives*

The overall objective for IRC-Flanders is to provide cost-effective and high quality technology transfer services which answer to regional needs and which are provided in synergy with the regional support structures in Flanders.

The main goal is to increase the added value of the IRC in the process of TTT partner search in Flanders. Given the specific situation in Flanders the main operational objectives of IRC-Flanders are:

- objective 1: to improve communication towards (potential) IRC-clients;
- objective 2: to continue delivering high quality transnational technology transfer services to its clients, making optimal use of the contacts within the IRC-Network;
- objective 3: to optimise synergism with other services provided by IWT, local innovation actors and other networks.

To reach these objectives, IRC-Flanders is delivering services towards its clients using the typical IRC-awareness, contact and assistance type services.

These services are supported by intensive national and international networking and use of synergies, the IRC-Network and an efficient internal management.

### *Service portfolio of IRC-Flanders*

#### Awareness

In terms of awareness activities, a substantial additional effort is put in communication towards our clients and to increase the IRC's reach.

The main activities are:

- co-operation with a selection of local innovation actors for IRC-awareness activities in their target group;
- selection of an additional target group for awareness activities by IRC-staff;
- improvement of existing communication tools towards our clients and the development of new tools.

#### Contact and assistance

IRC-Flanders is offering the same basic contact and assistance services as in the previous contract. Quality of and communication about these services will be continuously improved. IRC-Flanders uses and improves the tools developed over the past contract to support these activities. The activities of IRC-Flanders within the IRC-Network, are supporting the services towards our clients.

Contact services:

- assisting Flemish companies and research organisations looking for an international partner for technological co-operation by generating Flemish TOs and TRs;
- distribution of European opportunities for technology transfer within Flanders;
- participation in partnering events, missions and other TT activities organised within the IRC-Network;

- organisation of own TT partnering activities, in co-operation with local innovation actors and with the IRC-Network.

Assistance services:

IRC-Flanders follows up on expressions of interest resulting from its contact activities and assists its companies or colleague IRCs when required.

*Networking: signposting and optimal use of synergies, locally and internationally*

To overcome the problem of IRC-Flanders' limited manpower, co-operation with external actors is required. This assistance is most important when it comes to awareness activities and signposting of TTT opportunities. More new potential clients need to be reached in order to increase results.

IRC-Flanders follows a multiple approach to tackle this issue:

- Within our host organisation IWT, the exploitation of possible synergies between the different departments in a structural way. The IRC-services will be included in the IWT product portfolio. IRC-Flanders will provide its IWT colleagues with the required communication tools to actively signpost potential clients to the IRC.
- Flanders counts a large number of innovation actors. The main players are now grouped in the VIS-project structure, coordinated by IWT. IRC-Flanders is setting up a structural co-operation with a number of these actors.
- If opportunities are presented to co-operate with other innovation services networks, European or other, the added value for the IRC-services and the time available will determine IRC-Flanders' involvement with these networks. The cooperation with the MAREDFlow initiative must be situated in this context.

## **MAREDFlow linked to the IRC-Network through IRC-Flanders**

One of the goals of the MAREDFlow-project is to facilitate knowledge transfer in the field of marine technology. The European IRC-Network, co-funded by the European Commission celebrated its 10th anniversary last year and has built a wide expertise in the field of promoting technology transfer within Europe, Turkey, Israël and Chili.

IRC-Flanders, hosted by the IWT, saw an opportunity for the MAREDFlow-consortium to take benefit from the services delivered by the IRC-Network: the idea being that the knowledge transfer aimed for in MAREDFlow could make use of the services of the IRC-Network which has technology transfer as its main goal. This required a 'translation' of the 'knowledge'-related terms used in MAREDFlow towards the technology transfer formats used in the IRC-Network: knowledge creators could formulate 'technology offers' of interest to knowledge users and knowledge users could formulate 'technology requests' of interest to knowledge creators.

In order to set up the necessary communication channels between the MAREDFlow-partners and the IRC-Network, IRC-Flanders provided access to a webapplication that allows the MAREDFlow-partners to enter new 'technology offers' and 'technology requests' according to the guidelines and templates used in the IRC-Network. These entries will be processed further towards finalised and by the IRC-Network accepted technology profiles with the assistance of the IRC's that represent the regions involved in MAREDFlow. These accepted profiles will subsequently be disseminated in the entire IRC-Network and in addition be published on the web application provided by IRC-Flanders (together with other technology profiles coming from the IRC-Network and of relevance to MAREDFlow).



Once disseminated in the entire IRC-Network, each of the IRC's processes the profiles in its own region and tries to identify partners that are interested to co-operate with the 'owners' of the profile.

Further follow-up of these expressions of interest on the published profiles fits into the core-business of the involved IRCs and bilateral contacts with the MAREDFlow-partners ensures that everyone is being kept up-to-date on the results achieved.

IRC-Flanders has informed all the IRCs that represent the regions that are involved in the MAREDFlow-consortium and these are all interested in taking up the knowledge transfer opportunities of MAREDFlow and try to process them towards concrete agreements.

Fig. 2 shows the proposed communication routes. The different steps in promoting technology offers and requests would be as follows:

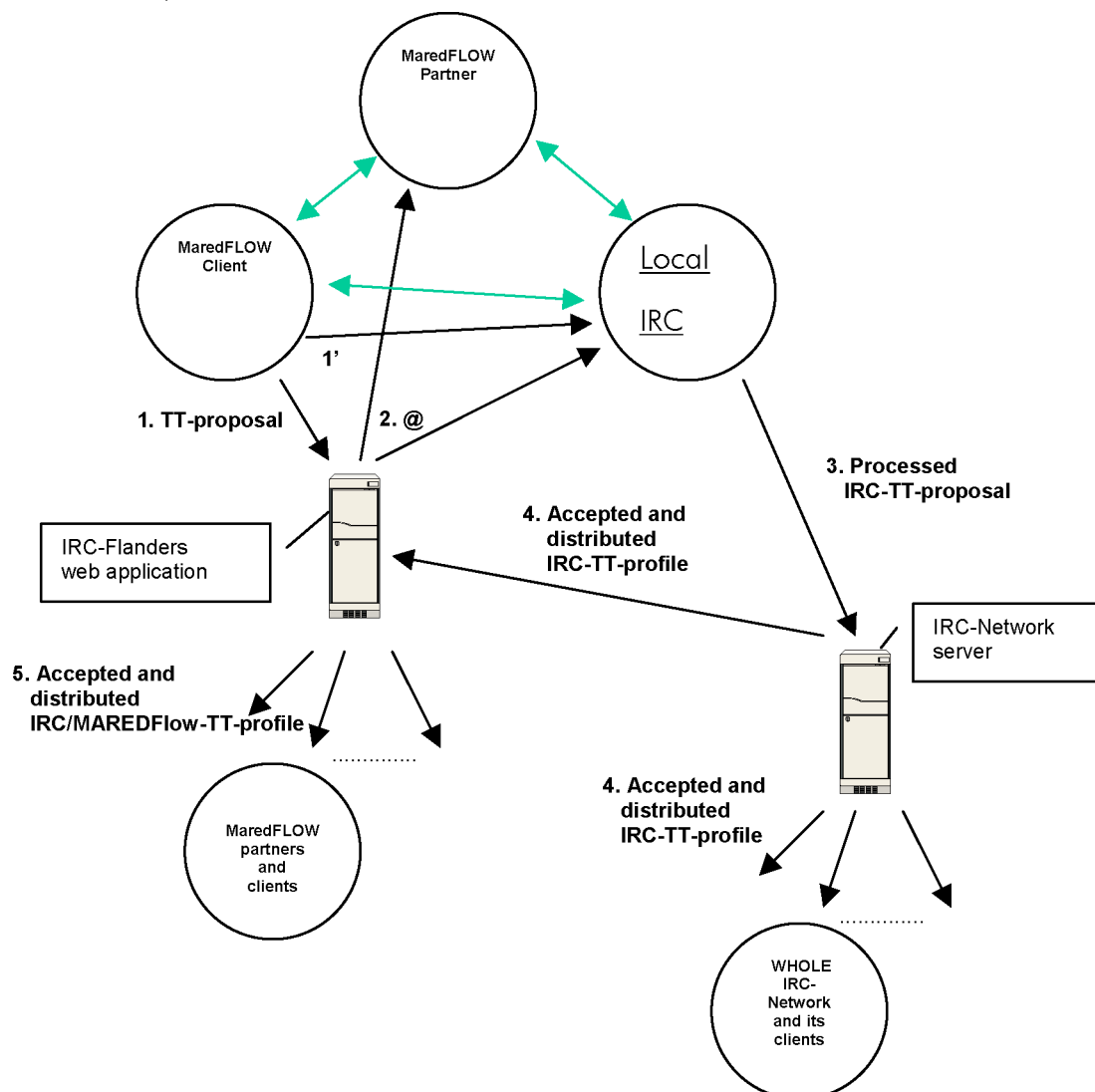


Fig. 2. Proposed communication routes.

- A client of MAREDFlow (project partner or company) enters a technology profile proposal on the web application provided by IRC-Flanders or ....1'. ...contacts the IRC in his region (jump to step 3 in this latter case).
- Upon registering the proposal in the web application both the MAREDFlow partner and the IRC from the client's region would be informed by e-mail (@).
- The IRC from this region would process this entry further towards a IRC-TT-proposal and present it to the IRC-secretariat (using the IRC-Network server).
- If accepted, this profile will be distributed in the whole IRC-Network and ...
- ... is also published on the web application provided for MAREDFlow-partners and clients.

Once the technology/knowledge profile is disseminated in the IRC-Network, each IRC is disseminating it further into its own region and will receive expressions of interest on it from interested organisations willing to investigate the possibilities for co-operation.

The web application that is developed by IRC-Flanders for the MAREDFlow consortium can be found at [http://www.iwt.be/irc\\_ttm/irc\\_partner.asp?id=7](http://www.iwt.be/irc_ttm/irc_partner.asp?id=7) and gives several possibilities (see Fig. 3):

- Upon registration, organisations can subscribe to an automated information tool: every three weeks the subscriber will receive an email with information on the latest technology profiles that have been published within technology sectors that are of interest to the subscriber.
- The visitor can browse through the IRC-database of all technology profiles within the sectors of interest to the MAREDFlow-consortium.
- The registered visitor can enter proposals for technology profiles, these will be processed further by IRC-Flanders and routed to the IRC that represents the region of the registered visitor.
- The registered visitor can enter expressions of interest on any of the profiles that can be browsed through the option described above in point 2. These expressions of interest are processed to the IRC representing the region of the registered visitor and this IRC will establish the contact between the registered visitor and the profile-owner.
- The visitor can browse information on brokerage events that are planned in the IRC-Network in technology fields that are of interest to the MAREDFlow consortium. The information on each event includes possibilities for subscribing at the event.

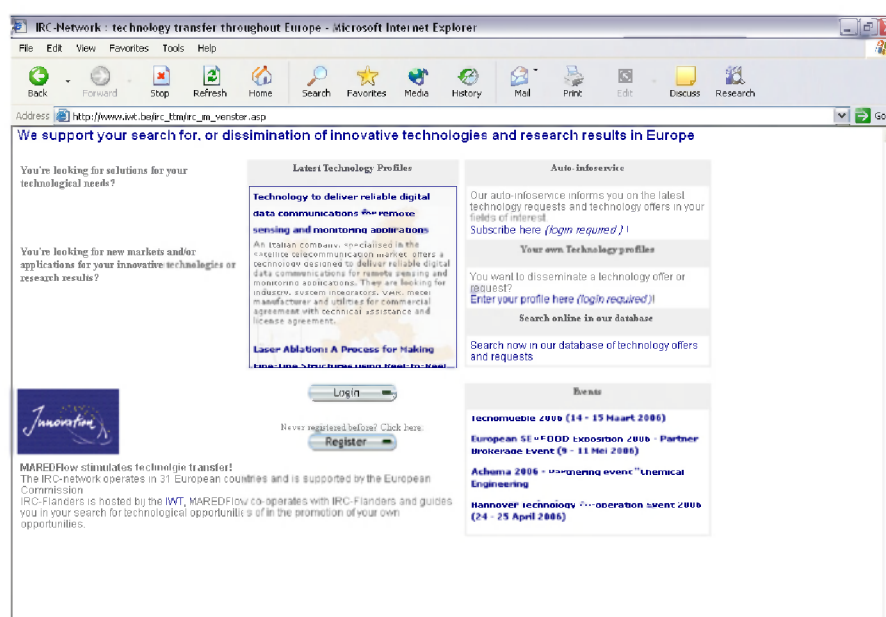


Fig. 3. Screenshot of IRC-Network – technology transfer throughout Europe.

## **Conclusion**

In this project, there was the challenge of two European funded projects working together. On the one hand, there is the MAREDFlow project in the call 'Regions of Knowledge'. On the other hand, we have the IRC-Flanders as node in the European IRC-Network. Since both have the objective of stimulating technology transfer, it was in a sense logical to try to combine efforts. Between the idea and the concrete realisation, a lot of resources have been spent. Nevertheless, we think that the end result may be considered as a good practice. We hope that in the end these may lead to a cross-border intensive knowledge transfer in the maritime sector, with concrete spill-overs to the different regional economies involved.