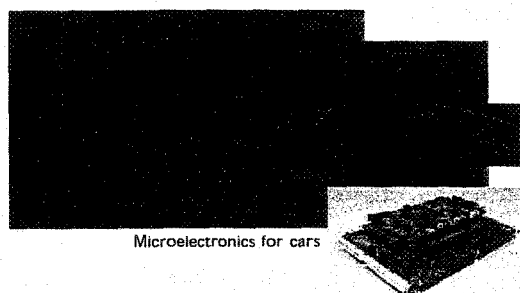
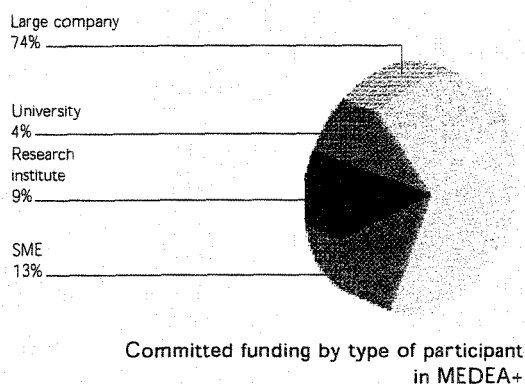


Progetti **Les exemples de projets** Cluster programmes Project section Projectos a model for collaboration

To achieve competitive advantage, Europe's industries must look to their future to predict and shape new markets and develop the technologies, processes and products necessary to exploit them. This requires companies to set aside their own naturally competitive relationships and work together to identify and foster major, longer-term and strategically significant projects that will be of mutual benefit and key importance to national and European economies.

EUREKA's cluster programmes fulfil this role and offer a demonstrably successful model of the kind of integrated and strategic Europe-wide collaboration envisaged for the ERA. Clusters have a reputation for success and are contributing to strategic technologies across a wide spectrum of sectors, including automotive, health and aerospace. The fact that they make up the bulk of EUREKA's portfolio shows that industry values them. Their market-oriented approach complements industry's own priorities and allows participating companies to determine and manage projects and own the results.



MEDEA+ System innovation on silicon

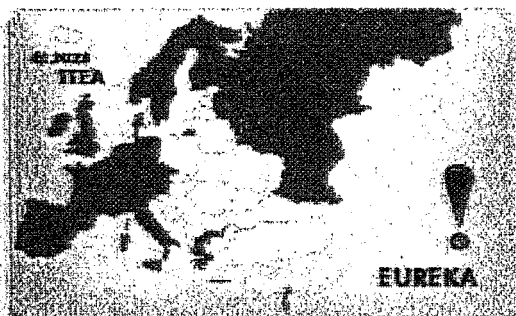
MEDEA+, together with its predecessors JESSI and MEDEA, has been a notable success in stimulating Europe's leadership in chip technology with the goal of moving our economies into the information age. Three European companies (Philips, Infineon and STMicroelectronics) are currently ranked among the world's top 10 semiconductor suppliers, while several European process equipment manufacturers set the standards worldwide.

A wide range of cutting-edge applications are currently in development under MEDEA+, including high speed and mobile consumer electronics with multimedia and internet capabilities, automotive electronics focusing on communication and engine management and smart cards for safety and security solutions. The many benefits of European-developed GSM technology are gradually enabling Europe's leadership of the global mobile phone market, while MEDEA-developed systems-on-chips concepts will, in the longer-term, be providing mobile phone network operators with the technology they need to upgrade to the new 3G networks to meet demands for additional capacity and multimedia.

Automotive electronics

Europe's automotive industry is about to set the world standard in designing new electrical and electronic architectures and generic chipsets to support sophisticated telematics and electronics applications in the vehicles of the future. Project A404 SSAE (Silicon Systems for Automotive Electronics) is defining and designing the core modular trans-platform silicon chips required to do the job. The new architecture will give automotive manufacturers a significant competitive advantage by enabling them to provide increasingly sophisticated functionality cost-effectively and in a wider range of vehicles, tailored to a customer's requirements. It is an ambitious project which could help Europe to net a potential 60% share of the silicon market with an estimated value of 3 billion €.

For further information about MEDEA+ visit:
www.medeaplus.org



ITEA Embedded software solutions

The ITEA cluster stimulates and supports projects designed to give European industry a leading edge in embedded software and software-intensive systems. Europe's leadership in this fast-moving sector is crucial to securing future competitiveness in a wide range of industries, including consumer electronics, telecommunications, avionics, the automotive industry and the health sector.

Ambient intelligence

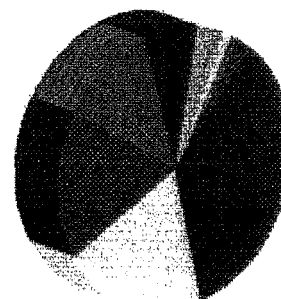
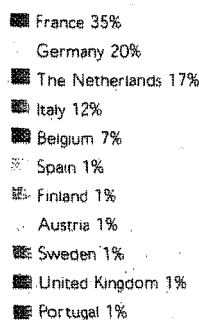
Representative of the cluster is project AMBIENCE, comprising 19 partners from seven countries, which aims to develop key capabilities needed for the creation of ambient intelligent environments, systems and products. Ambient intelligence refers to an exciting new concept in information technology which empowers people and improves their quality of life by providing a digital environment that is conscious of their presence, and both sensitive and responsive to their needs, habits, gestures and emotions.

To date, the project has generated concepts for these ambient intelligent environments and investigated the architectures, methods and tools required to develop and power them. The project team is currently in the process of integrating the relevant technologies into prototype systems for demonstrating and evaluating home, professional and indoor mobile applications. Systems currently in development include an ambient intelligent home which boasts an interactive personal robot; a smart design studio controlled by a variety of means, including speech and gesture; an intelligent office with the potential for remote linking and office environments which enable the occupants to locate people, places and meetings through the use of intelligent positioning systems.

For further information about ITEA visit:
www.itea-office.org



Future home ambience



Committed public and private funding to clusters during the Chair year by member on 30 June 2003

Ongoing cluster projects on 30 June 2003

Value of ongoing projects (m€)		
Microelectronics	MEDEA+	2116
Software intensive systems	ITEA	816
Packaging and interconnections	PIDEA	244
Microsystems technology	EURIMUS	114
Recycling electronic components	SCARE	23
Robotics	FACTORY DNA	16
Forest sustainability	EUROFOREST	8

Two other cluster programmes, PIDEA and EURIMUS, also focus on the information technology sector. For further information about these clusters visit their websites at www.pidea.com.fr and www.eurimus.com.

Project section

Umbrella projects

Progetti

Les exemples de projets

a thematic approach to innovation

A key objective of the European Research Area (ERA), as envisaged by the European Commission, is greater coordination and cooperation between the national R&D mechanisms. In this respect EUREKA's umbrella projects, given their market-oriented nature, have a valuable and complementary role to play in collaborating with FP6 on large-scale projects with a real European dimension. To this end, the Danish Chair held discussions with the Commission to determine potential areas of collaboration between umbrellas and FP6's integrated projects.

Like the umbrellas, FP6 focuses thematically on specific areas of technology but as yet doesn't cover certain key areas (e.g. in biotechnology, energy and advanced materials) which are, though, of interest to Europe's industrial and research communities. EUREKA's umbrellas offer a ready-made 'opt-in ERA programme' to satisfy their more market-led interests.

E! 1440 FACTORY

FACTORY, one of EUREKA's most prolific and successful umbrellas, is renowned for the rapid transfer of industrial developments emerging from its large number of projects. It focuses on innovative and flexible manufacturing organisations, integrating advanced technology, new materials, human resources, sustainability and the product lifecycle.

FACTORY is a good example of the growing and increasingly productive collaboration between EUREKA and other European innovation programmes. During the Danish Chair the European Commission invited EUREKA to explore synergies between FACTORY and FP6, to contribute to the revision of the latter's programme in this field and to come up with specific proposals for joint projects. The Commission has also welcomed FACTORY's input into road-mapping the future of European manufacturing and acknowledged, in the context of enlargement, the value of EUREKA's experience in networking with the accession countries of central and eastern Europe.



Reclaiming soil

E! 330 EUROENVIRON

EUROENVIRON is another prolific umbrella targeted at solving some of Europe's major environmental problems. More than 80 projects are tackling specific areas of concern, such as industrial, agricultural and urban waste, air, soil, water and noise pollution, excessive pesticide use, flooding and other environmental catastrophes.

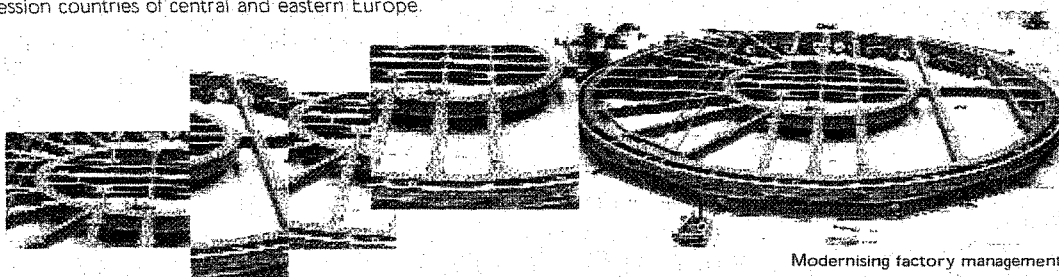
Project E! 2190 EUROENVIRON REVITAL, for example, has developed a technique to recycle biological, agricultural and food industry wastes to produce composts which can be used to help decontaminate and revitalise polluted land. The technique is based on the principle that certain crops work with microbes within the compost to break down unwanted hydrocarbons and revitalise the soil; the micro-organisms utilise the pollutants as a source of energy and nutrients. The REVITAL technology has been successfully tested on reclaimed soil from an abandoned coal mine and the project partners are planning to market it to farmers, petroleum processors and owners of mining or industrial installations.

For E! 2190 EUROENVIRON REVITAL:

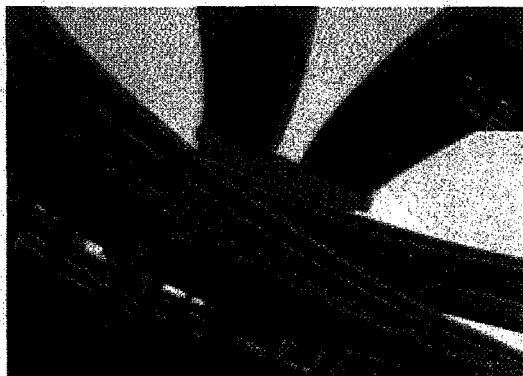
Participating countries CZ, HU

Budget 1.1 m€

Contact Jan Hruby, hruby@vupt.cz



Modernising factory management



Intermodal transport links in Europe

EI 2402 LOGCHAIN

The LOGCHAIN umbrella's objective is to reduce congestion and wear and tear on Europe's roads by attracting freight onto the railways and inland waterways. Projects focus on developing and optimising the logistic chains between shipper and receiver. The umbrella embraces all aspects of freight transportation in a bid to redesign long-distance freight transport routes, in particular relieving bottlenecks and making use of the spare capacity of underused rail infrastructure.

For example, the sheer scope of EI 2457 LOGCHAIN E-W-LAND-BRIDGE is representative of the 11 projects endorsed to date. This ambitious multi-national project aims to establish an inter-modal inland link as an alternative transport route between Slovenia on the Adriatic coast and Germany. Key elements of the project have included collecting data about cargo flow and identifying possible routes for the land bridge, the industry sectors likely to use it and the operational and strategic requirements of the ports at either end. Once the route has been finalised and the infrastructure is in place, it will be a considerable improvement on the 5000 km route freight currently has to take.

For EI 2457 LOGCHAIN E-W-LAND-BRIDGE:
Participating countries DE, SI
Budget 0.44m€
Contact Frank Thyroff, frank_thyroff@wiv.stadt.nuernberg.de

Ongoing umbrella projects on 30 June 2003

Marine technology	EUROMAR
Environmental engineering	EUROENVIRON
Food industry	EUROAGRI+
Environmental performance of electronic products	CARE ELECTRONICS
Conservation and cultural heritage	EUROCARE2000
Industrial production systems	FACTORY
Multimedia equipment	MULTIMEDIA
Sustainable freight mobility	LOGCHAIN
Tourism and leisure industries	EUROTOURISM
Laser technology network	EULASNET
E-learning industry	EUROLEARN

EI 2527 EUROTOURISM

Europe's world-leading position in tourism has been hit in the last couple of years by the increasing popularity of long-haul destinations and a series of recent events, among them September 11th, economic recession and health crises such as the SARS and 'foot and mouth' epidemics.

Strategic initiatives such as the EUROTOURISM umbrella have never been more vital in helping to maintain the global position and profitability of Europe's tourism and leisure industry. EUROTOURISM aims to do so by increasing competitiveness and the quality of the European holiday experience through sustainable development and the application of new technologies.

Since June 2002, the umbrella has been managed by a specially created body, the Madrid-based Consorcio Euroturismo. While the umbrella remains a EUREKA programme, the industry-led Consorcio acts as a conduit between the tourism and technology arenas and determines projects likely to attract European funding. In June 2003, the Consorcio drew up an action plan for 2003-2004 to make EUROTOURISM more widely known to the tourism and technology sectors and encourage them to propose new projects.

Proyectos **Individual projects** **Projekte** **Project section** **promoting an entrepreneurial spirit**

For the innovation gap between Europe and its competitors to be closed, not only must our R&D networks make it easier for new, high technology companies to be created, they must also encourage under-resourced and less technically developed SMEs to become an increasing part of the innovation and technology transfer process.

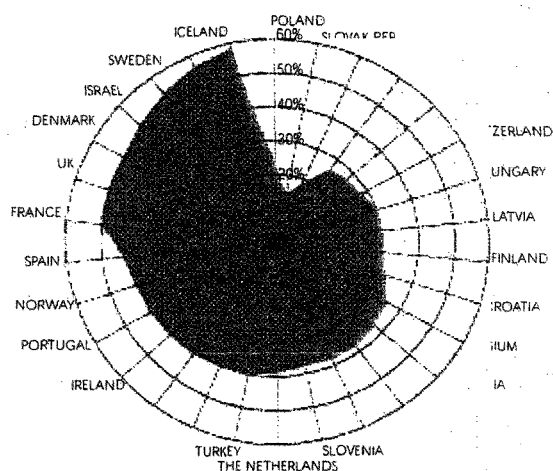
Having a novel idea for a product or process is, arguably, the easy part of innovation. An inability to source and put together the necessary skills, expertise and resources is all too frequently the death of it, so it's hardly surprising that SMEs often find it difficult to actively innovate. Yet they are one of the main pillars of future economic growth in Europe, a fact recognised by the EU in its declared commitment to nurturing the innovation potential of SMEs. 41% of EUREKA's total budget for individual projects is allocated to SMEs.

Helping to overcome obstacles to innovation

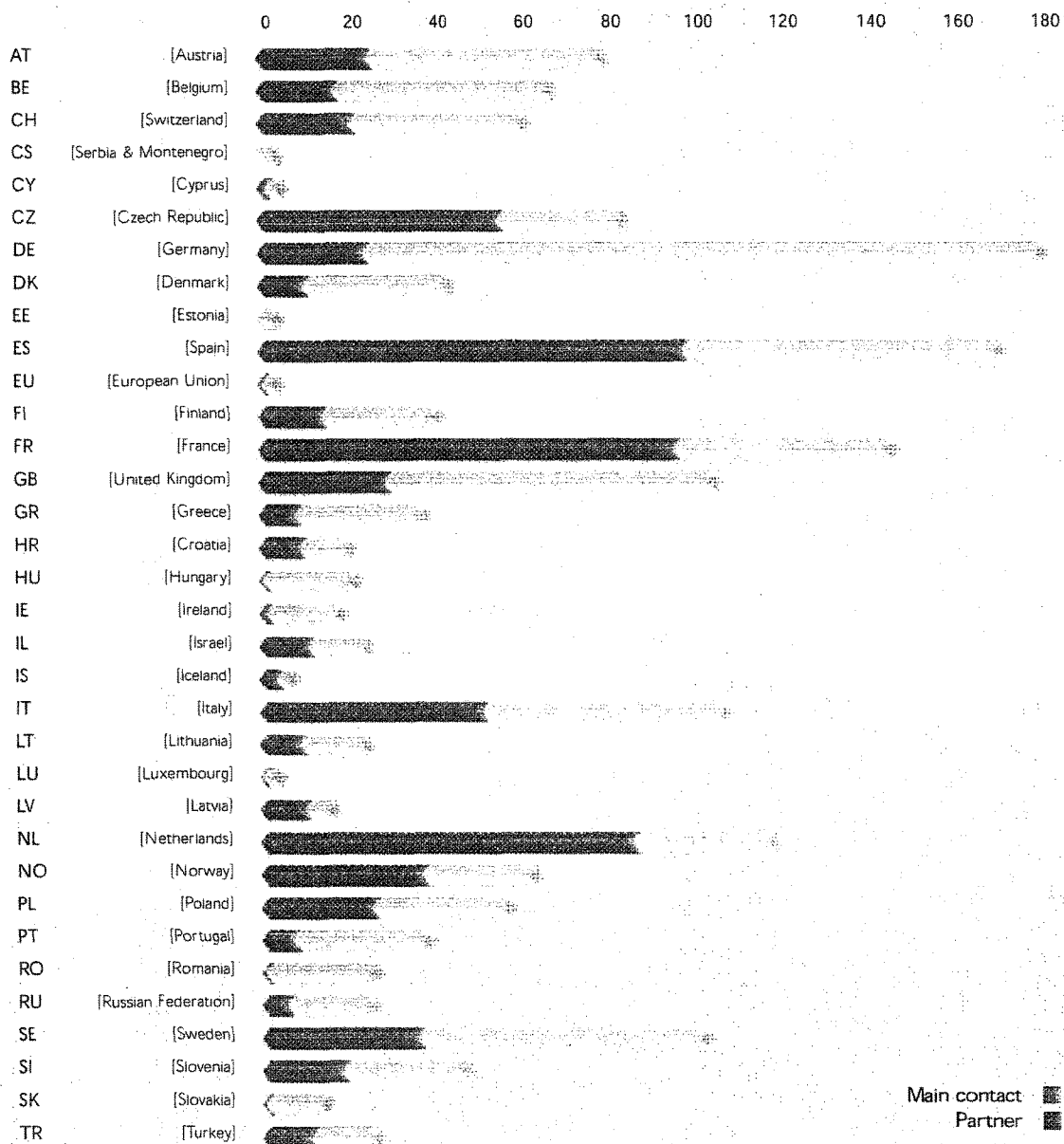
SMEs are quick to react to changes in the market and have a reputation for innovation and entrepreneurship, despite their traditional lack of resources. This is borne out by their level of participation in EUREKA's individual projects. They generate a high proportion of projects as main partners and account for almost two-thirds of industry representation in projects as a whole.

Undoubtedly, one of the explanations for this impressive level of participation is that EUREKA's individual projects, which form a very responsive part of the Initiative's portfolio, provide the ideal framework for fostering their innovative aspirations. Equally, EUREKA's market-led approach and unbureaucratic way of doing things suits an SME in need of getting new products and innovations to market quickly to maintain competitiveness. EUREKA also enables SMEs to pool resources and share the risks of innovation with other like-minded enterprises and provides them with crucial access to market intelligence, technology transfer, networking opportunities, potential customers and an international platform.

SMEs have become prime targets for European programmes and the ERA is keen to see them integrated into even larger projects in order to foster their growth. For this to happen, EUREKA and Europe's other R&D initiatives must do more to synchronise and signpost their services so that SMEs - and all customers - have quick, one-stop access to information and support.



XIV LEGISLATURA – DISEGNI DI LEGGE E RELAZIONI - DOCUMENTI



Number of ongoing individual projects by member in 2003

Project activity during the Danish Chair

- 168 new projects were launched with an estimated value of 398 m€ and the participation of 580 organisations. This brings the total number of ongoing individual projects in EUREKA's portfolio to 730 with an average value per project of 2,8 m€.
- Two-thirds of the organisations participating in projects are from industry and 41% are SMEs.
- Notable trends in the technological sectors include a decrease in the number of biotechnology projects from 21% to 17%. However, new initiatives in this sector take considerable time to set up. A number of proposals are in the pipeline and will be endorsed in coming years. On the other hand, the number of information technology projects is up from 25% to 28%.

- Some countries such as Slovenia, Lithuania, the Czech Republic, Poland, Latvia and Croatia have announced a very encouraging number of new projects in relation to their GDP. These countries match the level of involvement of older members, thereby showing that they opt for EUREKA efficiency in preference to other means of innovation support.
- Most of the new projects were bi- or trilateral collaborations covering a wide variety of areas such as biology, robotics, new materials and tools, transport and the environment.

Project section

Proyectos
Individual projects
Projekte
Les exemples de projets
promoting an entrepreneurial spirit



Renewable energy from waves

E! 2278 WWEC – harnessing wave power

The world's oceans hold one of the keys to our future and sustainable electricity needs, but their potential for producing power has yet to be effectively exploited. EUREKA project WWEC brings the harnessing of this renewable energy source a major step forward with the development of a device that generates energy from the sea as easily as a wind turbine does on land.

The project team's objective was to develop a commercially licensable technology that could be deployed in large arrays far out to sea where waves have much more power. Wavebob, as the device is called, floats loosely moored, largely below the water surface, and converts the energy of ocean waves into electricity. The technology is based on oscillating heaving buoys, but does not require large reaction weights, massive plates or rigid attachment to the sea bed.

Until now such devices have had serious problems coping with the often violent extremes of waves and weather. In a significant technological breakthrough, the WWEC partners have come up with practical and low cost solutions to these problems, enabling Wavebob to recover power from big waves and to be fully tuneable to varying wave frequencies and heights as weather conditions change.

Participating countries IE, NO, UK

Budget 0.5 m€

Contact William Dick, william.dick@clearpower.ie

E! 2255 RISURSIM – preventing city flooding

Water management is an expensive business, but dealing with the aftermath of a flood is far costlier. When urban drainage systems can't cope with excess water levels cities, businesses, homes and insurance companies are faced with a huge clean-up bill.

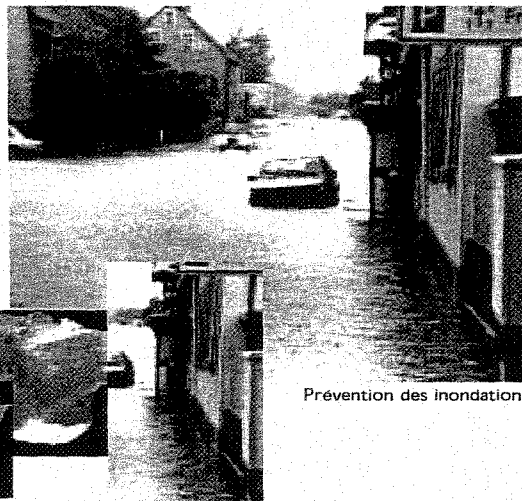
A flood management system developed by project RISURSIM will soon enable local authorities to monitor and minimise the costly impact of flooding on their communities. The Norwegian, German and Italian partners have taken drainage simulation above street surface into account for the first time by using computers to model the interaction between surface run-off and the drainage and sewer systems. Prior to RISURSIM, researchers hadn't been able to successfully couple surface and sewer flow in a forecast model. The interdisciplinary nature of the project, which comprised engineers, mathematicians and computer modellers, provided the expertise to map numerical algorithms into computer codes to define the flow problems.

By seeing floods happen on screen, local authorities can manage their sewer networks more pro-actively, city planners can determine safe places for new development and insurers will be able to assess the flood risks of different districts and even streets.

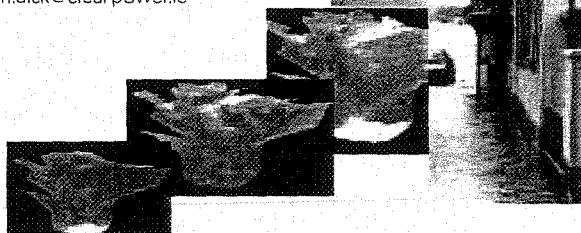
Participating countries DE, IT, NO

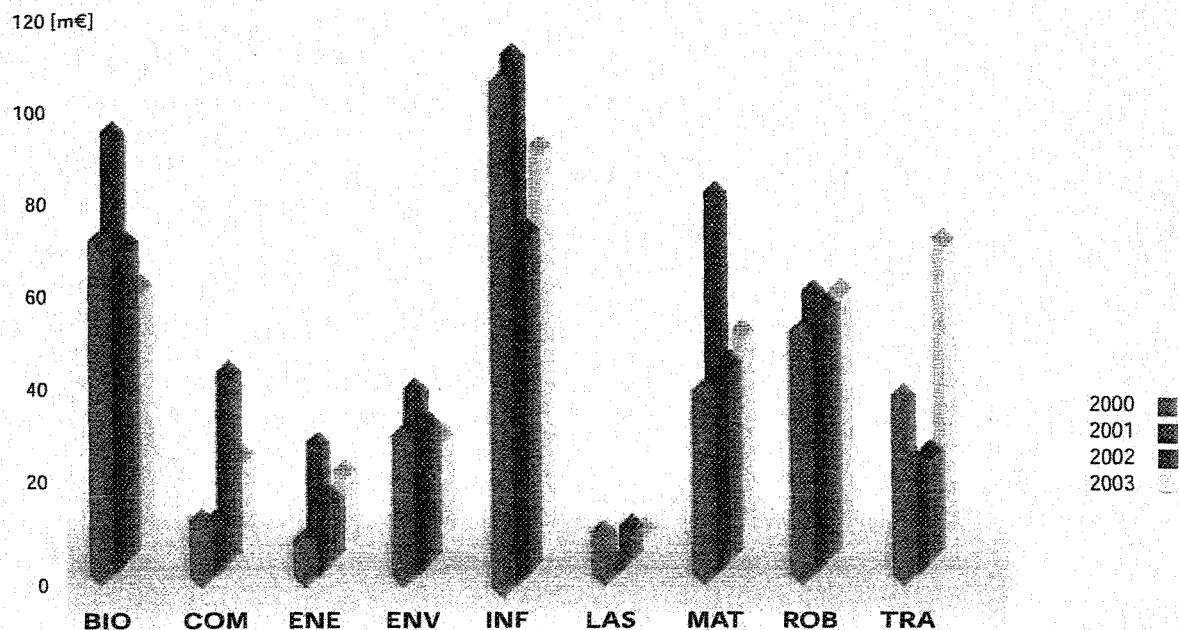
Budget 1.6 m€

Contact Dr Klaus-Peter Nieschulz, nieschulz@itwm.fhg.de



Prévention des inondations





Committed public and private funding for individual projects by area over 4 years

BIO: Medical and Biotechnology COM: Communication Technology ENE: Energy Technology ENV: Environment Technology INF: Information Technology
LAS: Laser Technology MAT: Materials Technology ROB: Robotics and Production Automation TRA: Transport Technology

E! 2254 BLUESPOT – electronic data storage solutions

The past decade has seen an explosive growth in the optical memory industry. In 1998, around 200 million optical drives were shipped and more than 10 million disks were pressed, generating a worldwide business of more than 13 billion US dollars. In the same period, the storage capacity has leapt from 0.65 Gbytes for a CD to 4.7 Gbytes for a DVD. Project BLUESPOT is taking this even further in a bid to make the European multimedia industry more competitive than its American counterparts.

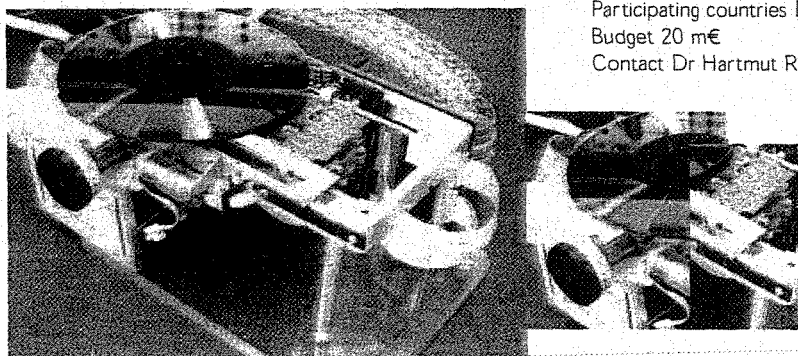
BLUESPOT is creating a new drive that uses a blue laser diode to access single or dual layer disks with 40 Gbyte capacity, leaving no doubt that rewritable optical disk recorders will replace VCRs in the coming years. This means more music, more data or more video on each DVD. It is also anticipated that even a two-hour HDTV film, which has twice the picture resolution of analogue, will fit onto a single disk.

BLUESPOT builds upon the experience of a previous EUREKA project, E! 1505 REMOD, which developed technology to write to multi-layer DVDs. Since its launch in 2002, BLUESPOT has made excellent progress, according to the German and French partners. The next stage is to push each component system further to reach the necessary performance and storage targets.

Participating countries DE, FR

Budget 20 m€

Contact Dr Hartmut Richter, richterh@thmulti.com



Rewritable DVD with increased storage capacity