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***Friedr. Freck***  
GmbH

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**Working together creates new jobs**



## Playing games with technology

How EUREKA's work in entertainment technology is captivating Europe

# EUREKA NEWS

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June 2000

# Microelectronics industry prepares major new project



**Cooperation between state and industry is the key to the e-economy, argues Uwe Thomas, State Secretary for Education and Research in Germany.**

Europe's leading microelectronics companies have launched a proposal for a new strategic EUREKA project in information and communications technologies (ICT), designed to put Europe at the forefront in the global marketplace.

The proposal, "MEDEA+ – system innovation on silicon for the e-economy", aims to develop enabling technologies for the Information Society. Based on a platform concept, it enables cooperation between systems companies otherwise seen as competitors, making it possible to develop standards and key intellectual property in the field. With a potential budget totalling €4,000 million, the project will focus on enabling technologies, interconnection, design and packaging.

Previous EUREKA strategic projects in the ICT industry have been highly successful in developing cooperation between large and small companies across Europe, with the result that these companies are building stronger and stronger positions on the world market in various branches of ICT. Europe's three largest semiconductor manufacturers are now all in the global top ten, for example. EUREKA's role in strengthening the European ICT industry is widely acknowledged, with such as Infineon Technologies' chief technology officer, Söhnke Mehrgardt, saying, "EUREKA has been and still is key to stimulating innovation for a continuing leadership role of the European IT industry". He sees EUREKA's role in particular, in supporting public-private sector partnerships to drive innovation.

MEDEA+ would be EUREKA's third strategic project in the microelectronics field, after JESSI, which ended in 1996 and MEDEA, which ends in December 2000. More importantly, in continuing their work this new project would maintain EUREKA's suite of four complementary strategic projects in the IT field. As well as microelectronics covered by MEDEA, EUREKA is also supporting software development (ITEA), development of interconnections and packaging design (PIDEA) and systems design (EURIMUS). The collective weight of these four strategic projects represents a considerable force in Europe's IT industry.

One of the key features of these strategic projects has been the fostering of cooperation between small companies with specific technological competence



and large companies with market strength. As Europe seeks to establish a leading position in the fast-growing world of electronic business, cooperation between these different types of companies is vital. It is often the smallest companies which have the latest technological skills but they need the experience and infrastructure of larger companies to establish new products in the marketplace.

For Europe to maintain and strengthen its leading position in the world market, another essential factor is that governments and industry work closely together, with long-term planning aimed specifically at bolstering Europe's position in fields such as electronic business. As Uwe

Thomas, German State Secretary for Education and Research who chaired the April discussions with the ICT industry at which the proposals for MEDEA+ were put forward, says: "A new electronic economy has emerged. The technological position of Europe in this field can only be maintained and strengthened through cooperation between state and industry." ■

## EUREKA in Spain takes to the Web

Spain takes over the Chair of EUREKA from Germany in July. As part of its preparations, the Spanish EUREKA Office is setting up a Chairmanship website, which will provide news on EUREKA activities under the Spanish Chair. It will be found from June at <http://eureka.cdti.es/> In November, the Spanish Chair is planning to organise a brokerage event in tourism, and is also setting up a website to publicise this, which will be available, also from June, at <http://www.eurotourism.org/>

## Finding the money for commercial success

Lack of finance is one of the main reasons why successful research projects do not go on to achieve success commercially. The reasons are many, but in general there is a gulf between the worlds of science and finance and a lack of understanding between these two worlds. The LIFT – Linking Innovation Finance and Technology – helpdesk set up by the European Union's Innovation programme aims to bridge that gap and help scientists get closer to the world of finance. It provides innovative companies with a first plausibility check on their business plans and information on potential investors.

Recent discussions between the EUREKA Secretariat and LIFT have opened the possibility that participants in EUREKA projects can receive specially tailored services from the LIFT helpdesk.



**A clear interface and even clearer guidance make the UK CD-ROM a great help for anyone considering embarking on a EUREKA project for the first time.**

In its programme of workshops, LIFT has offered to organise two specific workshops for EUREKA participants, in cooperation with the EUREKA Secretariat. The first will be a general introduction to the financing of innovation, identifying possible sources of capital and means to attract investment. The second will be for EUREKA participants who are actively looking for funding, and will focus specifically on the business planning and presentation which are essential for investors to commit themselves.

For further information, please contact the EUREKA Secretariat or see the LIFT website: <http://www.cordis.lu/lift/>

## Patent searching made easier

Nobody wants to duplicate research which somebody else has already done. But searching the myriad patent databases in Europe and the rest of the world is an expensive and time-consuming business. Nevertheless it is a vital part in the preparation of any project proposal, and in the associated planning for bringing a product to market.

A recent agreement between EUREKA and the European Patent Office will see a pilot scheme set up to facilitate patent searches during the preparation of proposals for new EUREKA projects. The scheme will not only ensure that new projects are not duplicating work already done or under way by examining existing patents or pending applications, but also help them to gather full information on the state-of-the-art in the technical field and give an idea of other work ongoing in the field. As part of the pilot EUREKA will also contribute to the costs of the patent search for a limited number of projects.

Meanwhile the introduction of the long-delayed single European patent now looks nearer, after the European Commission's January paper on a "Common Research Area" revived the idea. Since then the EU's prime ministers have endorsed the scheme at their March meeting in Lisbon, and the Commission is now expected to produce its legislative proposal in the

coming months. Once adopted, this would be a great step forward for European industry, who will be able to protect their intellectual property across the whole EU and associated countries through a single process. Nonetheless, the EU's legislative procedures move slowly, so it may yet be a couple of years before the European patent sees the light.

## CD-ROM explains EUREKA to new participants

The UK EUREKA Office has produced a CD-ROM which shows the practical help which EUREKA can give to companies with innovative ideas. It provides background information on EUREKA and explains, step by step, the procedures for drawing up and submitting proposals, seeking partners and joining existing projects in the UK. Profiles of two EUREKA projects which have now achieved commercial success are also included: E! 1059 CANBODRA developed a brewing technology to replicate the properties of draught beer in the can and bottle; E! 1895 SARSYS has developed a system to test radiation emissions from mobile phones. Although the CD-ROM is aimed at UK researchers, copies are also available to readers of EUREKA News, and may be obtained by contacting the UK EUREKA Office, fax +44 20 72 15 17 00, e-mail: [bryan.payne@dti.gsi.gov.uk](mailto:bryan.payne@dti.gsi.gov.uk)

## AGENDA

### EUREKA's Treasures at EXPO2000 (exhibition)

● 21 to 23 June 2000, Hanover, Germany  
 ● Mike Curtis  
 EUREKA Secretariat  
 Tel. +32 2 777 09 71  
 Fax +32 2 770 74 95  
[mike.curtis@es.eureka.be](mailto:mike.curtis@es.eureka.be)

### BBC Tomorrow's World Live International Invention Fair

● 28 June to 2 July 2000, London, United Kingdom  
 ● Mike Curtis  
 EUREKA Secretariat  
 Tel. +32 2 777 09 71  
 Fax +32 2 770 74 95  
[mike.curtis@es.eureka.be](mailto:mike.curtis@es.eureka.be)

### Electronics Goes Green 2000+ (congress, exhibition and brokerage event)

● 10-15 September 2000, Berlin, Germany  
 ● Mike Curtis  
 EUREKA Secretariat  
 Tel. +32 2 777 09 71  
 Fax +32 2 770 74 95  
[mike.curtis@es.eureka.be](mailto:mike.curtis@es.eureka.be)

### MATERIALICA (exhibition on advanced materials, process, and applications)

● 25-28 September 2000, Munich, Germany  
 ● Monika Buervenich  
 German EUREKA Office  
 Tel. +49 228 4492 257  
 Fax +49 228 4492 232  
[monika.buervenich@dlr.de](mailto:monika.buervenich@dlr.de)

### Brokerage event on sensor technology

● 3-5 December 2000, Helsingor, Denmark  
 ● Kristian Johnsen  
 Danish EUREKA Office  
 Tel. +45 35 46 63 92  
 Fax +45 35 46 63 01  
[kjo@efs.dk](mailto:kjo@efs.dk)

The richness and variety of his play is one of the things that distinguishes *homo sapiens* from other primates. Games are something we are good at. Increasingly, it is also something which the people who sell us boxes of electronics are good at. Games – fondly remembered by an older generation as a nursery of wooden blocks, card boards and plastic figures – are now an adrenaline-filled electronic arena. And big, big business. EUREKA is helping Europe's companies get their share.



## Adrenaline fuels rush to entertainment technology

Not so long ago people used to talk about spin-offs from military research. The idea was that technology developed in the huge centres of defence R&D could be redeployed in civil industries. Today, the wheel has turned. Video game companies spend more on R&D than many governments and the spin-offs are coming from the games makers now.

The impact of games technology is felt in a wide variety of industries from computing to communications. And what goes for games also goes for other entertainment industries. Rapidly developing technology is delivering compelling improvements for cinemagoers, web surfers and users of interactive multimedia.

For European companies, the attraction of working in booming markets is clear. For policymakers, the pull of economic growth is no weaker. It is no surprise then that a growing number of EUREKA projects focus on entertainment technology.

### New multimedia chips

HIGHLANDER, one recently completed EUREKA project, has produced the "PowerVR" family of integrated chips which will handle all aspects of multimedia in games, PCs and digital televisions. The current PowerVR 250 chip is designed to handle video and audio signals, as well as graphics in 2D and 3D. It is already in thousands of PCs, improving the play quality of games such as Tomb Raider and Flight Simulator 2000. As the family of chips develops, PowerVR chips will also go into set-top boxes, powering interactive TV services.

HIGHLANDER brought together a small English company, now called Imagination Technology, full of bright ideas, and NEC, a multinational brimming with marketing and production capacity.

It is the classic EUREKA model, bringing complementary firms together. Imagination Technologies' programmer manager John Metcalfe emphasises the crucial difference the project made.

"EUREKA support made the difference in terms of scale, giving the PowerVR chips a real chance to gain a share of the market," says Metcalfe.

But HIGHLANDER is widely seen as having a broader significance. It will help to create European capabilities in the chip industry, where at present the US and Japan are dominant. By establishing a technological base in one area of chip design, it is hoped that Europe will be able to gain a growing share of the global market. Spin-off at work.



### Authoring in 3D

The LAND-3D project supported by EUREKA aimed to develop a CD-ROM authoring system to be used by software developers to create new multimedia products. For the end-user, the system provides a 3D navigation system, helping the package to come alive.

Three partners were involved, each bringing specific skills to the project. Belgian company Vartec brought expertise in 3D graphics, the user interface was designed by Strass, a French company. The third partner, the Babbage Institute for Knowledge and Information Technology (BIKIT) in Belgium, modelled user needs and tested the interface.

Two of the companies are already selling products using the system developed in LAND-3D, not just used for entertainment but also for applications such as product presentations where a new format can provide the crucial edge for a company.

For BIKIT on the other hand, the experience itself is the spin-off. According to Dick Vervenne, BIKIT's project manager, "The LAND-3D project provided a test bed for our work, and will help in designing future products."

### EUREKA for Hollywood

The key to successfully introducing computerised special effects into films is to marry the electronic effects with the real background, so that the whole scene appears realistic. This requires challengingly subtle and precise control of light and shadows as movement takes place.

Many film studios are now turning to a EUREKA-backed system called Key Light, developed by the English Computer Film Company. Key Light has been used in a range of recent Hollywood films, including Notting Hill, the Beach and the upcoming Mission Impossible 2. In addition it has also been used in television, including in the popular BBC series, Walking with Dinosaurs, seen across Europe in recent months.

Again, it is possible to see spin-off at work here. Key Light had its genesis in two successive EUREKA projects, which in common with other fields were designed to introduce more memory and greater speed into the processing work needed. Pandora International, another English company, was involved in both these EUREKA projects. Their work in the HIGH DEFINITION TV project in the early 1990s, in partnership with Philips, led on to the FILM SPECIAL

EFFECTS project with the Computer Film Company and the High Technology Centre of Babelsberg, Germany.

Aine Marsland, managing director of Pandora, says "We are now market leaders in the field of colour correction, with our system complementing Key Light."

Speed of development is vital in entertainment technology, with the market window often only a few months long and liable to move as other products come to market. It might seem that such conditions would count against taking the time to develop EUREKA-style partnerships. Not so, says Marsland. "Our EUREKA participation enabled us to break into the American market, selling to major studios like Universal and Warner Brothers," she insists.

Pandora have recently proposed a new EUREKA project which would develop their technologies to restore the vast stocks of old films around the world. The proposed PICASSO project is offered as a means to make use of these old films with the large numbers of new TV channels offered by cable and digital services providing a ready market.

These three projects are just a sample of EUREKA's work. What they have in common is that the companies started out wanting to develop entertainment technologies and by working together via EUREKA created products which are market leaders at global level. In the rush to capture these booming markets, EUREKA has proved to be a true shot of adrenaline.

## EUREKA goes to Tomorrow's World Live fair

Visitors to the BBC's Tomorrow's World Live – being held in Earls Court, London, from 28 June until 2 July – will have the chance to see a range of products and technologies generated by successful EUREKA projects in recent years. The EUREKA stand at the fair will showcase successful projects, while staff will be on hand to explain how EUREKA itself works and how to obtain support for projects.

Tomorrow's World Live is a fair showcasing more than 250 recent inventions from around the world. Whilst it will be open to the public, it is also intended to promote new business opportunities – for potential research partners, for those seeking new products to market and for investors.

See Agenda, p2, for fair details.



# Managing tomorrow's telephone calls

E! 1815 MAIGRET  
1997-2000  
total cost: €1.51 million  
countries involved: BE, FR

EUREKA support was essential in aiding the partners involved in the MAIGRET project to develop software to help call centres and firms manage their calls through an automated system bringing together computer and telephone technologies. The partners, working in the field of computer-telephony integration (CTI) and groupware (software designed to be used by many operators at once), aimed to design a system for computers to exchange information rapidly with companies' internal telephone exchange systems. The €1.5 million project, launched in July 1997, was completed in January this year.



The MAIGRET partnership began when French firm Coheris – specialists in computer networking engineering – teamed up with Belgian company E-mailware Development (EMD) to develop the system which should cut companies' costs and reduce the time taken to deal with clients on the phone.

Both firms believe EUREKA was instrumental in their success: "EUREKA helped us finance the project which has been profitable from very early on," said Mr Hurson, financial controller at Coheris. "It has given us credibility. Companies like Alcatel and Nortel don't want to work with many partners because of the 'top secret' nature of their new technologies. Our association with EUREKA helped to persuade them to trust our work."

Michel Vereeken, division manager at Altaline Technology, a spin-off from EMD, says: "EUREKA was an enormous help in terms of financial input and the know-how brought in by other partners." The Belgian firm also found EUREKA's insistence on reporting useful: "EUREKA really needs regular reporting – they want updates to resumes and financial reports. This helped us to improve our own reporting and attract future investments. This helped us on the management, financial and technical side," said Mr Vereeken. Both EMD and Coheris would turn to EUREKA again with fresh ideas. ■

## Working together creates new jobs

E! 1799 FACTORY EUCOPET  
1997-2000  
total cost: €1.75 million  
countries involved: DE, IE, IT

The EUCOPET project demonstrates that cooperation can beat competition in R&D. "Although we are competitors in terms of more than 50 per cent of our products we soon succeeded in getting together in the field of R&D," says Stefan Kaiser, responsible for quality and product management at Freek GmbH, the German lead partner. The partners, all making products for heating systems, are KSG Gerätetechnik of Germany, Ceramicx, Ireland, and the Italian company Euroheat. The aim of the EUCOPET project was to pilot a new form of collaboration between independent small companies.

Developing and optimising products was only one of the purposes of the project. "What was even more important was that four companies discovered the exciting adventure of working together," Kaiser stresses. He was formerly an assistant scientist in the Department of Engineering at the University of Dortmund (also a partner in the project), while his brother Wolfgang is Freek's managing director. Before moving to his brother's company, Stefan Kaiser wrote

a book – *Chance Kooperation* (in German) – about the project. "Actually, it is more of a practical manual with detailed proposals than a scientific description of the project. And it serves as a model for other companies aiming to follow in our tracks," he says.

Cooperation achieves more than just bringing together competitors, with trans-national collaboration in research leading to more jobs, in contrast to the mergers of big companies which are often followed by job cuts. "It shows that with collaboration of SMEs it is possible to create more jobs", explains Stefan Kaiser. A total of 17 new jobs have come through the EUCOPET project. KSG has grown from 12 to 18 employees. "I would even say that without the EUREKA project we probably wouldn't have survived the strong competition," says Hans-Tilo Steinbach, managing director of KSG.

Sales projections are excellent, with Stefan Kaiser expecting both German companies' turnover to double this year. Freek and KSG have gained new markets by introducing new heating elements for hand dryers which run on lower power than their competitors' models, and are therefore more efficient. ■

# NEW EUREKA PROJECTS ENDORSED IN APRIL 2000

Over 30 new projects were endorsed by EUREKA's High Level Group in April. Most were in the information technology, environment, and medical and biotechnology fields. Projects in these areas received almost two-thirds of the €65.22m allocated.

Just over a fifth of the money, €13.82m, went to the IKF project, an Italian-led collaboration whose aim is to produce a distributed infrastructure and services system. Nomos Sistema,

the lead Italian firm, will be working with companies in Hungary, Portugal, Romania and the United Kingdom (see E! 2235 IKF below).

Environmental projects were allocated a total of €14.16m by the High Level Group. The largest is an Irish-Danish collaboration (E! 2121 B-WARE) developing a water purification platform, with EUREKA funding contributing €6.17m.



## ENERGY TECHNOLOGY

<b>E! 2300</b>	<b>FACTORY LKH FK</b>	<b>€0.68m</b>
<i>Seeking partner</i> ✓		
Optimising the operation of fluid boilers		
29 Nov 1999	36 months	CZ, DE
<b>E! 2349</b>	<b>OPEN VACUUM COLLECTOR</b>	<b>€1 m</b>
Open vacuum collector for thermal solar energy for heating purposes		
25 Feb 2000	18 months	SE, DE
<b>E! 2310</b>	<b>FUTOGA</b>	<b>€0.52 m</b>
Corrosion-resistant gasifier for different fuel types		
1 Feb 2000	36 months	NL, FR



## ENVIRONMENT

<b>E! 2271</b>	<b>RECONSOL</b>	<b>€1.31m</b>
<i>Seeking partner</i> ✓		
Recycling of solvent based strippers for re-use by semiconductor manufacturers		
26 Aug 1999	36 months	BE, GB
<b>E! 2337</b>	<b>EUROENVIRON ASHREC</b>	<b>€0.67 m</b>
Recycling of bottom ash from municipal waste for the building industry		
1 Sep 2000	24 months	CZ, AT
<b>E! 2331</b>	<b>WOOD-INITIATIVE FORCAB</b>	<b>€0.31m</b>
<i>Seeking partner</i> ✓		
A mobile hydrostatic-driven cable system affordable to Central and Eastern European countries		
1 Mar 2000	30 months	CZ, DE
<b>E! 2339</b>	<b>EUROENVIRON GRINDING</b>	<b>€0.6 m</b>
<i>Seeking partner</i> ✓		
Flexible manufacturing technology for the production of gears		
1 Jul 2000	30 months	CZ, RU
<b>E! 2121</b>	<b>B-WARE</b>	<b>€6.17 m</b>
Polluted water purification/recycling platform		
1 Jan 1999	48 months	DK, IE
<b>E! 2326</b>	<b>GPSFISH</b>	<b>€0.89 m</b>
GPS tagging of fish		
15 Apr 2000	36 months	IS, NO
<b>E! 2255</b>	<b>RISURSIM</b>	<b>€1.4 m</b>
<i>Seeking partner</i> ✓		
Drainage management in urban areas		
1 Jan 2000	36 months	DE, NO
<b>E! 2238</b>	<b>WASTEWATERS</b>	<b>€2 m</b>
Depuration in the tanning industry		
1 Apr 2000	24 months	IT, PT
<b>E! 2192</b>	<b>EUROENVIRON PETOIL</b>	<b>€0.66m</b>
Recycling PET oil bottles		
1 Jan 1999	27 months	ES, NL
<b>E! 2350</b>	<b>EUROENVIRON DESOLAIR (DEF)</b>	<b>€0.15 m</b>
<i>Seeking partner</i> ✓		
Solar desalination system		
10 Jan 2000	12 months	ES, EU



## INFORMATION TECHNOLOGY

<b>E! 2320</b>	<b>INFRADOK</b>	<b>€0.27 m</b>
Transforming data into a digital PC-based databank		
10 Jan 2000	36 months	DE, CZ
<b>E! 2235</b>	<b>IKF</b>	<b>€13.82 m</b>
Distributed infrastructure and services system		
1 Apr 2000	42 months	IT, HU, PT, RO, GB
<b>E! 2346</b>	<b>E-STEEL.COM</b>	<b>€7.04 m</b>
e-commerce for information on best practice in European steel construction		
30 Apr 2000	36 months	GB, FI, ES
<b>E! 2318</b>	<b>MULTIMEDIA ATENEA</b>	<b>€1.26 m</b>
e-school		
14 May 1999	30 months	ES, DE, NO
<b>E! 2347</b>	<b>DIWI</b>	<b>€2.4 m</b>
Wireless network software for mobile and fixed terminals		
1 Mar 2000	24 months	ES, FR



## LASERS

<b>E! 2322</b>	<b>EUROLASER SAFEST</b>	<b>€1.97 m</b>
<i>Seeking partner</i> ✓		
FS laser radiation effects on human tissue and protective materials		
1 Apr 2000	36 months	DE, AT



## MEDICAL AND BIOTECHNOLOGY

<b>E! 2263</b>	<b>HOLOTC</b>	<b>€1.5 m</b>
Determination of vitamin B12 in human blood		
1 Apr 2000	36 months	NO, DK
<b>E! 2334</b>	<b>DIAGNOSTICS COCANAL</b>	<b>€1.01 m</b>
Developing diagnostic kits for the detection of colon cancer and some air allergens		
9 Jan 1999	48 months	CZ, DE
<b>E! 2329</b>	<b>MICROSLEEP</b>	<b>€0.6 m</b>
<i>Seeking partner</i> ✓		
New methodology to treat insomnia		
9 Feb 2000	36 Months	IS, FI
<b>E! 2275</b>	<b>VISUALIX 2000</b>	<b>€0.86 m</b>
Digital diagnostic system for high resolution dental radiography		
1 Dec 1999	12 months	IT, GB
<b>E! 2315</b>	<b>POLYBIUS</b>	<b>€1 m</b>
Octopus farming prototype		
1 Jul 1999	24 months	PT, ES
<b>E! 2183</b>	<b>EUROAGRI MYCOPLASMA</b>	<b>€0.9 m</b>
Control of mycoplasma in rabbit and poultry production		
1 Apr 2000	36 months	ES, FR
<b>E! 2316</b>	<b>EUROAGRI WINE</b>	<b>€1.5 m</b>
<i>Seeking partner</i> ✓		
Top quality wine production		
1 Jan 2000	42 months	ES, GB
<b>E! 2323</b>	<b>TREATMENT PLANNING</b>	<b>€0.81 m</b>
MC dose distribution for photon beam therapy		
1 May 2000	36 months	CH, SE



## NEW MATERIALS

<b>E! 2336</b>	<b>STRESSCYCLING</b>	<b>€0.65 m</b>
<i>Seeking partner</i> ✓		
Pulses for industrial production		
1 Jun 2000	36 months	CZ, SI
<b>E! 2145</b>	<b>UMIC</b>	<b>€6.9 m</b>
New ultrasound probe concept for echography and non-destructive test applications		
1 Sep 1999	63 months	FR, IT
<b>E! 2345</b>	<b>INDUSTRIAL FLOOR</b>	<b>€1.44 m</b>
Materials for repairing industrial floors		
1 May 2000	60 months	SI, DE
<b>E! 2140</b>	<b>TECHNO-LEATHER</b>	<b>€2.1 m</b>
New composite leather products with higher mechanical performance		
1 Apr 2000	24 months	IT, PT
<b>E! 2285</b>	<b>COPRINK</b>	<b>€1.6 m</b>
Recyclable paper coatings and printing ink		
1 Apr 2000	42 months	NO, FR, NL



## ROBOTICS/PRODUCTION AUTOMATION

<b>E! 2319</b>	<b>FACTORY DNA</b>	<b>€0.5 m</b>
<i>Seeking partner</i> ✓		
Sustainable processes for manufacturing		
1 May 2000	6 months	IT, CZ, DE, HU, RU, ES, SE, CH, GB
<b>E! 2338</b>	<b>TRAY WASHING PROCESS</b>	<b>€0.33 m</b>
Tray washing process for small items		
1 Mar 2000	12 months	NL, DK



## TRANSPORT

<b>E! 2328</b>	<b>REFRIGE</b>	<b>€0.4 m</b>
Panel constructions for refrigerated trailers		
1 Dec 1999	24 months	PT, CH

## KEY

In this list, each entry shows			
Project number	Acronym	Expected cost	
Whether additional partners are sought (✓)			
Short description			
Start date	Duration	Partner countries, main first	
Country codes used:			
AT	Austria	IL	Israel
BE	Belgium	IS	Iceland
BG	Bulgaria	IT	Italy
CH	Switzerland	LT	Lithuania
CN	China	LU	Luxembourg
CZ	Czech Republic	NL	Netherlands
DE	Germany	NO	Norway
DK	Denmark	PL	Poland
EG	Egypt	PT	Portugal
ES	Spain	RO	Romania
EU	European Union	RU	Russia
FI	Finland	SE	Sweden
FR	France	SI	Slovenia
GB	United Kingdom	SK	Slovak Republic
GR	Greece	TR	Turkey
HU	Hungary	UA	Ukraine
IE	Ireland		



Kari-Pekka Estola

Europe's talent for collaboration has made a significant contribution to the growth of Europe's IT and communications industries. Sharing has helped companies such as Nokia, Ericsson and Siemens achieve a leading position in these high-growth sectors.

Kari-Pekka Estola, deputy head of Nokia's research centre, sees the dynamics of this process changing. From his base in the Helsinki part of Nokia's 1200-strong global research centre he speculates on what's coming next.

# The constructive landslide

**E! News:** What is the route forward for European companies building the Information Society?

**Kari-Pekka Estola:** We need a kind of landslide. We can't rely on one or two companies. Europe has good possibilities, especially with the bright lights in communications. But we need many companies fighting on the frontier. EUREKA's decision to concentrate more energy on large "strategic" projects involving many companies is very helpful for this reason.

**E! News:** Are policymakers helping the process?

**K-P E:** Sometimes I am concerned that Europe is not doing enough. The Information Society still needs 10-15 years of investment to bring it to fruition. People worry about how much is spent on these technologies compared to other areas. But to compete Europe needs these technologies. There is an idea that enough money has been thrown at this already. In fact, the story is not yet over.

**E! News:** How is EUREKA's role distinct from other European forums?

**K-P E:** The general attitude of companies like ours is that EUREKA is a good thing. The projects are low on bureaucracy and bottom-up. So in EUREKA, it is up to the companies to come up with the projects that are important to them and drive them forward.

The European Commission's programmes are more directed and come at an earlier stage of development. Through programmes such as ACTS, the Commission has helped set the framework for new standards. These then get implemented in bodies such as the European Telecommunications Standards Institute.

In practice, there's not time for the linear model. You can't wait for the research to be complete, follow up with applied research and then move into R&D. Things move so fast you have to work in parallel. And often *de facto* standards emerge first. Bluetooth – a radio communications standard aimed at simplifying connections between phones, computers and other devices – is an example of that.

**E! News:** Is there a distinctively European dimension to Nokia's research?

**K-P E:** A company like Nokia has to take a global view. The US and Japan are the technology locomotives in some areas. We work with them there. Europe has its own strengths. Our main research centre is here in

Finland, but we also have labs in the US, Japan, Germany and China.

**E! News:** Do you see any signs of a European version of Silicon Valley being thrown up?

**K-P E:** There is a lot of innovation in Silicon Valley, but it is starting in Europe, too. The funding model there has been venture capital where Europe has struggled in the past. But that is changing, in part because many US venture capital companies are starting to invest more in Europe.

But it's not just finance that's needed, there's also management know-how and research. We are learning. In Europe we have a number of areas that are known for their expertise in certain areas of technology. These centres grow by themselves. Everybody wants to promote them, but the impetus has to come from inside. Governments and their subsidies have only a supporting role.

This picture is not so different to the US. Silicon Valley itself is nothing but small companies and start-ups. There are other networks, for example around Microsoft in Washington state.

**E! News:** What kind of relationships with SMEs work best for a big company such as Nokia?

**K-P E:** Our relationships are diverse. In the European projects, it can sometimes be helpful for smaller companies to be tied to larger ones. That can make entry easier for them.

**E! News:** What advice would you give to someone embarking on their first EUREKA project?

**K-P E:** First of all, the inspiration must be what needs to be done – the work itself. Then the consortium must be strong. Everybody has to contribute. There must be no free riders. Finally, make sure all the partners check prospects for funding with their national authorities early on. Different countries have different attitudes in different sectors. ■

EUREKA is a European network for market-oriented R&D. Its aim is to strengthen European competitiveness by promoting market-driven collaborative research and technological development. The EUREKA initiative enables industry and

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