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# ONREUR Report

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EWREKA's Sixth Ministerial Conference (6th) held in  
COPENHAGEN, DENMARK ON JUNE 1989

J.F. Blackburn

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19. ABSTRACT (Continue on reverse if necessary and identify by block number)  ➤ The proceedings of this conference are summarized and a list of the 54 projects announced at the conference is given. The list includes title and description, participating countries, cost duration, and status. <i>Topics included;</i>			
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# EUREKA'S SIXTH MINISTERIAL CONFERENCE

Eureka was discussed in several recent issues of European Science Notes (*ESN* 40-4:141-142 and *ESN* 41-1:12-15) and a complete update to March 1988 was given in *ONRL Report* 8-009-R dated 12 July 1988.

The Sixth Ministerial Conference held in Copenhagen in June 1988 was attended by Ministers from 19 European countries and the Vice President of the European Commission. The main event of the conference was the approval of 54 new Eureka projects at a total estimated financing cost of 360 million ECU (about \$414 million). The list of projects, together with a brief description, is given at the end of this report.

The importance of the European industry and research attached to Eureka is indicated by the approval of these new projects and the progress reported on the 160 existing projects. Small and medium-size companies as well as large ones are now active in Eureka projects.

Over 800 organizations, involving 950 different collaborative linkages within Europe, are involved in the previously approved Eureka projects. About half of the industrial participants are small to medium-size companies. Research institutions are participating in 39 percent of the projects. The work has resulted in several patent applications and approvals.

Three projects, FAMOS (for the development of automated flexible assembly for an automated factory), high-definition TV, and EUROTRAC, a European experiment on transport and transformation of environmentally relevant trace constituents in the troposphere over Europe, were described by the project participants to the Conference of Ministers.

In the area of road transport, the ministers endorsed the work on improving the coherence among the Eureka projects and achieving improved coordination with the programs and policies outside Eureka. They stressed the importance of further strengthening the synergy between the Eureka Road Transport projects and the research and development programs of the EC, and welcomed the suggestion of the incoming Austrian chairman to establish the adequate coordination structure.

In digital cartography, they noted progress made through the evaluation field test, which will serve as a European Pilot Project in which project participants as well as cartographic services have joined forces.

In high-power lasers, they noted the survey work that has been started at a national and international scale by project participants in safety regulations and standards towards a prevention safety approach.

For high-definition television (HDTV), they emphasized the desirability of developing common standards and stressed the importance of the concerned industries and governments – and the EC – of undertaking common promotional efforts. They also stressed the necessity to create the proper framework conditions for the implementation of HDTV as developed in the Eureka HDTV project, which aims to provide the TV viewer with a higher level of excellence in picture quality.

They noted that the Cosine project is improving the data networking of all collaborative R&D activities in Europe and creating market opportunities for the information technology industry. They stressed the need for harmonized national and community actions by all departments and organizations concerned with R&D and expressed support for steps to make the implementation of the Cosine project effective.

The ministers concluded that further work on supportive measures should have top priority in the coming years. And in this context, they noted the paper submitted by the Commission on Supportive Measures currently undertaken by the European Communities in the implementation of the EC Internal Market Program as well as in cooperation with the European Free Trade Association (EFTA) countries.

The ministers and the Vice President of the EC agreed on the importance of strengthening the appropriate cooperation between industry and research institutions. They took note of the Eureka high-level conference in Milan in April 1988 on the contribution of universities and other research organizations to the identification, definition, and implementation of industrial projects for international cooperation in high technology.

The ministers and the Vice President also noted the initiative of several member states on removing obstacles to international cooperation in R&D activities and, in particular, to the involvement of small and medium-size firms, where further assistance by a qualitative analysis of their role is necessary to improve and stimulate their contribution. Strengthening of project management and assistance in drafting international R&D agreements may be necessary.

They took note of the ongoing links between Eureka projects and several financial organizations as well as the initiative to explore methods to ensure part of the financial risks in liaison with work undertaken by the EC.

They welcomed the fact that the Council of Research Ministers of the EC has stressed the need for the clearest possible definition of the interface between the two frameworks for R&D so as to avoid overlap and to encourage the maximum synergy.

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They also stressed the importance of continuity for the Eureka Initiative and noted the desirability of developing a medium-term plan agenda for Eureka work and the discussion of a proposal to this effect at the next Minister's Conference.

The following pages give a list of the 54 projects announced at the conference and brief description of the work, participating countries, cost in million ECU (1 ECU = about \$1.15), and duration (in months).

Title Description/Purpose	Participating Countries and Interested Countries	Cost/ Duration	EUREKA ID #/ Status
<b>Biotechnology</b>			
<b>Media for Large Scale Mammalian Cell Growth and Maintenance</b> The technological developments resulting from the collaboration will result in improved products from which mammalian cells may be cultivated and will also enable production cost of such products as vaccines and monoclonal antibodies.	United Kingdom, France Spain, Netherlands, CECM	3.80/42	123/E
<b>Development of Quantitative Latex- Immunoassay Methods with Photometric Readings</b> Development of non-radioactive solid-phase technologic using monoclonal antibodies to improve the sensitivity and specificity of tests in clinical chemistry; diagnostic kits for the determination of viral infections/autoantibodies.	Italy, Switzerland	3.80/48	225/E
<b>Synthetic Sulphated Oligosaccharides</b> Synthesis and technological development of sulphated oligosaccharides for pharmaceutical applications, involving entry into the new area of sophisticated multi-step synthesis of complex oligosaccharides.	France, Netherlands	6.00/36	237/E
<b>Space Bio Separation</b> A new separation process to isolate and purify high specific value bio-logical products. The aim is to design a whole purification chain with and sterile conditions.	France, Spain, Belgium, Sweden	23.00/72	242/E
<b>Blood Donor Screening</b> Develop diagnostic assay panels for hepatitis HIV and HTLV I; increase diagnostic kit sensitivity/specificity; develop antigen diagnostic methods/in vitro anti-virus human immunoglobulins.	Spain, Italy, Turkey	11.25/42	246/E
<b>Creation of New Plant Varieties of Improved Organoleptic Properties</b> The improvement by biotechnological methods the basic gustatory and olfactory characters of fruits, by means of controlled process.	Greece, France	1.40/48	247/E
<b>Serological Determination of Syphilis</b> Planning, development and industrialization of a complete system made up of reagents and an automatic instrument for serological determination of syphilis.	Italy, Spain	2.10/36	255/E
<b>Automated and Programmable Laboratory Molecular Biology (Definition Phase)</b> The research, development and marketing of a associated new biochemical reagents for all the operations in molecular biology.	United Kingdom, France, Switzerland, Germany	7.50/20	260/E
<b>Sparkling and Foaming Beverages</b> Improvement of existing products and development of new, carbonated and sparkling beverages, on the basis of actual knowledge and new technology.	France, Netherlands	3.20/72	267/E
<b>The Industrial Application of Novel Plant Materials</b> Determination of the biochemical characteristics of a very high quality barley malt with the final aim of producing novel varieties of high quality brewing barley.	Netherlands, Denmark	17.20/60	270/E
<b>Development of a Heat-Resistant Probiotic Useful for Animal Productions</b> Development of applications of a naturally heat-resistant microorganism to be used as a growth promotor or a health aid for farm animals, as a replacement for antibiotics.	France, Austria, Switzerland	1.00/36	280/E
<b>Auto-Antigens for Auto-Immune Diseases</b> Preparation of auto-antigens, T-lymphocytes or antigen specific immune-manipulation and developing tests.	Denmark, United Kingdom France	7.30/60	286/E

<p><b>Genetic Improvement of Corn by RFLP (Restriction Fragment Length Polymorphism) Techniques</b> To construct and complement and present genetic select for quantitative and qualitative traits.</p>	France, Germany, Netherlands, Italy, Portugal, Turkey	12.00/56	290/E
<p><b>Processing of Bitter Lupins into High-Protein Feed Components</b> Testing/evaluation of commercial enzyme preparation in bitter lupin seeds treatment prior to processing; evaluation of two extraction processes in obtaining an insoluble high-protein feed component. Also, organic growth-promoting agent.</p>	Portugal, Germany, Iceland	0.72/18	292/E
<p><b>Medical Materials (Biomaterials)</b> The development of biological composite materials whose phases are biocompatible, which adhere to each other, and have the effective properties to satisfy medical requirements.</p>	Germany, Greece	0.45/60	294/E

## Environment

<p><b>HYPRO</b> Establishment of new, advanced treatment of wastewater including removal of organic waste, nitrate, and phosphorus compounds by combining chemical precipitation; introduction of sludge hydrolysis process.</p>	Denmark, Norway, Sweden	1.80	253/E
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## Information Technology

<p><b>TASQUE: Tool for Assisting Software Quality Evaluation</b> Development and validation of a shell and toolset that will provide a general knowledge base, enabling the breakdown of safety-related software into elementary products, and of its production process.</p>	France, Germany, Italy	5.20/48	240/E
<p><b>Process Simulator Development Project</b> Development of an advanced commercial process simulator product based on defined philosophical precepts with maximum retention of know-how between projects and utilization of newly available hardware/software methods.</p>	Norway, United Kingdom	2.80/36	245/E
<p><b>SEALOOK</b> R&amp;D for new real-time underwater acoustic optic systems, combining digital signal processing, image handling and manipulation, pattern handling and artificial intelligence.</p>	Denmark, Norway, Spain, United Kingdom	19.00/42	252/E
<p><b>Translation and Retrieval-Oriented Information. Base Adapting Data from "Native Speaking," Grammatical and Lexicographical Form</b> The project is based on the concept of a biligual dictionary. The result will be a multilingual lexical system, leading to a new, improved lexicographical standard.</p>	Austria, Germany, France	3.40/48	257/E
<p><b>Roadacom-Enroute Applied Data Communications</b> Development of an integrated system for onboard electronic data collection and processing and bidirectional exchange of data between commercial vehicles and their home base to improve road transport efficiency.</p>	Netherlands, Denmark	10.50/48	271/E
<p><b>Fluid Structure Interaction</b> Fluid structure interaction applies when dealing with non-rigidly-fixed pipe systems. The project will lead to a new computer code and new guidelines for a better, more economical, and safer design practice.</p>	Netherlands, United Kingdom, Germany	0.70/46	274/E
<p><b>Multi-Lingual Product Description</b> Multilingual product description standardization for identification of supply/demand, customs tariff classification in world trade, combining terminology with harmonized commodity classification and coding system of customs coop. council.</p>	Netherlands, United Kingdom, Austria, Germany, Spain, Italy	4.60/48	275/E

## Lasers

<p><b>Solid-State Laser-Based Advanced Manufacturing Technology</b> To provide a better understanding of maximum power outputs for solid-state lasers for manufacturing applications, development of competitive solid-state lasers to meet the criteria, beam delivery systems for materials processing lasers.</p>	<p>United Kingdom, Spain, France, Italy, Germany</p>	<p>19.90/60</p>	<p>249/E</p>
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## New Materials

<p><b>Wollastonite Reinforced Phenolic Engineering Molding Compounds</b> Development and testing of high-performance wollastonite-glass fiber phenolic engineering moulding composites and identification of their major areas of application.</p>	<p>Finland, Belgium</p>	<p>0.94/36</p>	<p>244/E</p>
<p><b>Compresit-Compact Reinforced Composite</b> Development of ultra-high strength, compact reinforced composite for civil and structural engineering applications.</p>	<p>Denmark, United Kingdom, France</p>	<p>1.40/36</p>	<p>264/E</p>
<p><b>New Generation of Pumps for Fluids with Adverse Lubricating Properties</b> The project aims to design and develop on an industrial scale a new generation of reliable pumps running without conventional lubricants (oil).</p>	<p>France, United Kingdom, Germany</p>	<p>0.90/44</p>	<p>281/E</p>
<p><b>Integrated Electric Drive for Home Automation</b> New electric motor concepts, new materials, and the introduction of electronic components can bring a strong development in home automation, wherever power and motion is needed.</p>	<p>France, Switzerland, Italy</p>	<p>9.00/60</p>	<p>282/E</p>

## Robots, Manufacturing and Process Control

<p><b>FAMOS-A.R.C.A.D.E. Automatic Assembly Shop for Driven Disks and Cover Assemblies of Clutches for Passenger Cars</b> The creation of an automated assembly shop able to assemble all kinds of driven disks and cover assemblies for passenger cars, using advanced technologies in robotics, vision systems, computer networks, and computer-aided design.</p>	<p>France, Italy</p>	<p>17.00/48</p>	<p>241/E</p>
<p><b>Rig Automation Drilling</b> The project seeks to combine novel, unproven mechanical handling technology, with some known allied technology and introduce the integrated technology into the areas of off/onshore drilling for hydrocarbon recovery.</p>	<p>United Kingdom, Norway</p>	<p>5.50/30</p>	<p>251/E</p>
<p><b>Welding Engineering Expert Systems</b> Knowledge and data acquisition in particular areas of welding engineering and the derivation of the PC expert systems with derivation of expert system modules and integration to form the welding engineering information system.</p>	<p>United Kingdom, Sweden, Denmark, Netherlands, Norway</p>	<p>3.70/36</p>	<p>259/E</p>
<p><b>Development of Advanced Manufacturing/Computer-Integrated Manufacturing Technologies (Definition Phase)</b> Europari is a 1-year definition activity to define projects for the development of advanced mfg./computer-integrated mfg. technologies which could benefit both the aerospace and nonaerospace industry.</p>	<p>United Kingdom, France, Italy, Germany, Spain</p>	<p>4.00/12</p>	<p>261/E</p>
<p><b>FAMOS - Flexible Assembly of Metering Equipment</b> The application of flexible automated assembly to the gas flow meter</p>	<p>United Kingdom, France, Ireland, Germany.</p>	<p>24.00/60</p>	<p>262/E</p>
<p><b>Safety Engineers' Workbench</b> Safety-related computer control system. Provision of computer-assisted engineering to reduce life-cycle cost. The workbench will contain analysis techniques for investigating the hazard/operability aspects of embedded computer control.</p>	<p>United Kingdom, Germany, Finland</p>	<p>2.40/48</p>	<p>263/E</p>
<p><b>FAMOS-Planet (Definition Phase)</b> Feasibility study for electronic control units production for automotive use.</p>	<p>Italy, Spain, Portugal, Finland, Denmark, France United Kingdom, Germany, Ireland</p>	<p>1.00/9</p>	<p>265/E</p>

<p><b>Design of Aluminum Structures under Fatigue Loading</b> The prime objective is to stimulate the use of aluminum alloys for structural applications. The project will involve research in welded/adhesive-bonded/bolted connection using aluminum alloys as applied for load-bearing structures.</p>	Netherlands, Portugal, France, United Kingdom Germany, Spain, Denmark	0.40/48	269/E
<p><b>Advanced Sandwich Panel</b> The purpose of this project is to ascertain whether it is possible to manufacture a new type of standard aircraft floor panel, which has better wear and tear resistant and complies with highest standards of fire resistance and gas toxicity.</p>	Netherlands, Sweden, Switzerland, Germany	0.32/12	272/E
<p><b>FAMOS — The Design, Implementation, and Integration of Sensor-Aided Assembly System with Industrial Robots</b> Development/integration of missing elements for the sensor-guided assembly process of tomorrow; development of evaluating strategies for sensor signals for systems programming and process guidance/robot control/integration capabilities.</p>	Netherlands, Austria Germany	10.00/48	276/E
<p><b>CALIES</b> The CALIES project aims at developing computer aided locomotion by implanted electro stimulation.</p>	France, Ireland, Italy, Netherlands, Germany United Kingdom	12.50/48	278/E
<p><b>FAMOS — Fridges Flexible Plant</b> The project aims at decreasing the cost of manpower in fabrication of fridges through design of automatisable products and making technology and organization more reliable and efficient.</p>	France, Italy, Spain, Germany, Ireland	8.50/48	284/E
<p><b>FAMOS — Flexible Shoe Factory</b> Developing of a flexible automated shoe factory, including two pilot plants (France and Spain). The second phase will include controlling production on one site.</p>	France, Portugal, Spain	6.30/48	285/E
<p><b>FAMOS — Computer Integrated Design and Assembly Planning</b> New procedure for analysing and improving new product design. Integration with assembly planning. Extension of design for assembly to include compound manufacturing cost implication.</p>	United Kingdom, Germany	10.80/54	289/E
<p><b>FAMOS-HIFAS.</b> The assembly automation technology for small and medium-sized batches. Includes product design, tool, assembly cells, logistics and information flow, pilot plant.</p>	Germany, Italy	7.50/9	288/E
<p><b>Multi-Purpose Underwater Remote Expert System (Definition Phase)</b> Development of a new and advanced remotely operated system dedicated mainly to the maintenance and operation of the immersed parts of offshore structures and all subsea-related installations.</p>	Belgium, France	1.00/12	287/E
<p><b>FAMOS — Relay Assembly Pilot Project, Setup of a Flexible Automation Assembly Line for a New Generation of Relays</b> Development and testing of new manufacturing and assembly methods for future generations of relays. In a pilot project a new manufacturing and assembly line will be set up which offers utmost automation and flexibility.</p>	Austria, Germany	8.50/36	295/E

## Telecommunication

<p><b>High-Quality Speech Codecs at Medium to Low Bit Rates</b> Investigation into speech coding schemes for high-quality speech emulation. Evaluation of algorithms by simulation/real-time breadboard implementations. Study of scheme requirements with respect to application-specific integrated circuits (ASICS).</p>	Germany, Portugal, Turkey	1.50/36	151/E
<p><b>Bit-Rate Reduction System for HDTV Digital Transmission</b> The definition of an algorithm and a codec structure for bit-rate reduction for HDTV transmission in contribution links, and the implementation of codec prototypes.</p>	Italy, Spain	10.50/36	256/E
<p><b>Auto Farming System</b> Development of farming systems incorporating an autonomous navigator and adaptation to environment regulations by improving mechanical/chemical soil/crop precision treatment and use of driverless vehicles.</p>	Sweden, Spain	10.00/60	266/E
<p><b>Synthetic TV</b> The design and production of a system by which realistic, synthetic TV scenery could be created and operated combining real-time computer image generation techniques with computer assisted live shooting techniques.</p>	France, Spain, Italy, CEC	7.85/60	283/E

## Transportation

### Amphibious Flying Boat (Definition Phase)

The amphibious flying boat mission capabilities will cover forest fire fighting, environmental protection, research, surveillance and control, search, and rescue transportation in specific orographical areas.

Italy, Germany

8.50/24

224/E

### Samovar Houses Transportation by Manoeuverable Aerostat Powered Vehicle (Definition Phase)

Development of a new design for a lighter-than-air air-transportation vehicle (M.A.P.) for using in transporting heavy loads.

France, Netherlands, Sweden

0.75/12

238/E

### Advanced Safety Braking Electronically Controlled System for Road Vehicles

Development of a self-energized safety system involving a new braking technology and an electronic system of survey, monitoring, and activation of braking functions.

Italy, United Kingdom

3.50/42

254/E

### Vehicle Discharge Light System

Development of a new vehicle headlamp system, based on short-arc discharge lamps, with superior life-expectancy and performance.

Netherlands, Germany, United Kingdom, Italy

10.00/48

273/E

### Linear Train Motor

Development of high-power linear motors and experimentation for traction and other industrial applications.

Spain, United Kingdom

1.60/42

277/E



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