

EASAMS' 25th Anniversary

A Silver Jubilee is traditionally an occasion for warm reminiscence of the past and this issue of Interface contains much in this vein. It is also an opportunity to look forward to the next twenty five years and the continued development of our company.

Crystal ball gazing into the future is a notoriously hazardous occupation, but the well tried principle that history holds the key to the future can help to establish the main trends.

In a time of rapid technological market and business change, it is worth noting that the principles of good system engineering and project management, upon which EASAMS was founded, remain as valid and essential in 1987 as in 1962. Certainly the techniques and aids to good system design have advanced enormously, but the need to get the whole system act together rigorously at the outset is still vital to the success of any project. The potential major pitfalls in interface definition still lurk for those who neglect the need for top down system design. It is a fairly safe assumption that these principles will continue to prevail in the year 2012.

Tomes have been written in recent years on the computer revolution and EASAMS has been a central participant. From today's viewpoint the hardware and software of the 1960s seem primitive in the extreme and there is every reason to suppose that the next twenty five years will continue this rapid evolution.

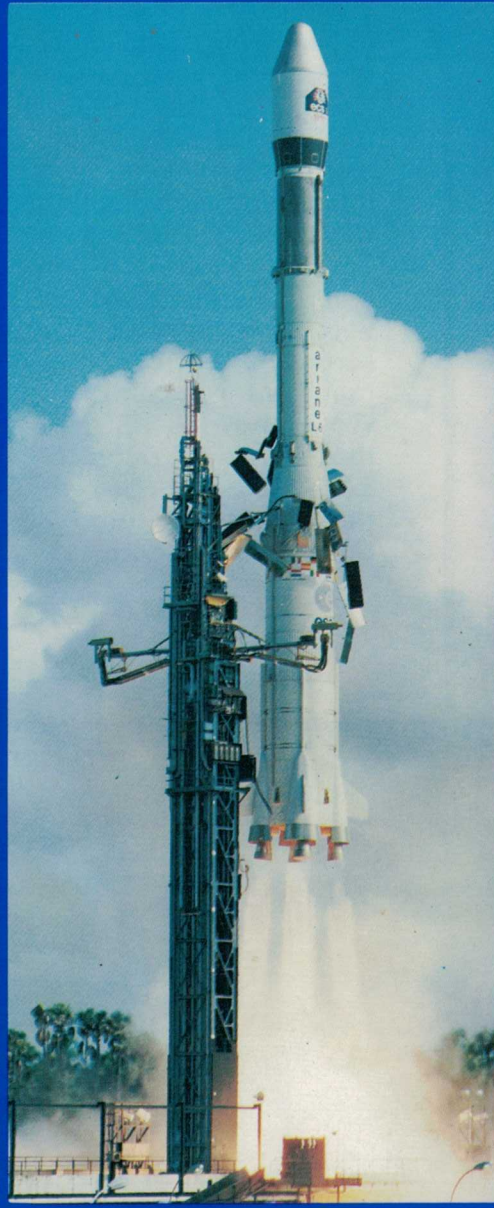
Modern software capability is central to our future and we continue to invest money and time in modern techniques, tools and facilities which are the key to rapid and economic software development in a highly competitive marketplace. The opportunities available as Information



Photo: Courtesy of R.A.F. Museum

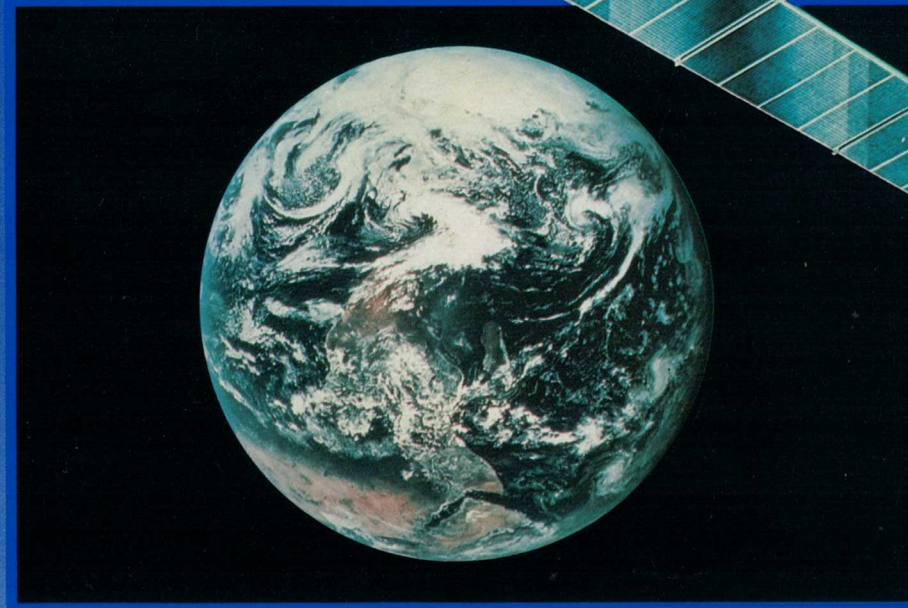


been neglected in the past through LBA/MS' heavy preoccupation with defence projects. The creation of a software division in early 1986 has already established business for the company in turnkey software, and sustained and long term growth is planned in this area.



The pursuit of new market areas and opportunities must not, of course, result in neglect of our established business and customers. Here, too, change is evident and we continue to adapt to the new methods of doing business. Since 1962 the roles and relative capabilities of industry and the Government establishments have changed profoundly for a complex variety of political, economic and technological reasons. The policies of today, strongly directed to competition and the package deal, require close alignments of the platform and airframe companies, systems and software houses and the equipment suppliers. The complexity and cost of some major defence systems require the participation of the national resource rather than that of one company, however large. Even the most foolhardy crystal ball gazer would hesitate at predicting the procurement policies that will prevail in twenty five years' time.

The magnitude of these changes in our environment is no greater than that faced by our founders in 1962. We will do well to follow their example of combining technical excellence, enthusiasm and innovation to meet successfully the challenge of the next twenty five years.





EASAMS' 25th



A Selection of Projects Since 1962

This year sees a milestone in the Company's history. EASAMS Company celebrates twenty five years.

We have come a long way since 1962. We have been at the forefront of many projects, giving proof not only of our technical capabilities but also of our ability to adapt to a changing market.

1962

SKY BOLT VULCAN – EASAMS' first project, carrying out research on the missile system for the Vulcan aircraft.

In addition to the naval/tactical system, we drew up requirement specifications for the system trainer and simulator.

1965

NIMROD MARITIME RECONNAISSANCE AIRCRAFT – We were the co-ordinating design authority for the Nimrod MR Aircraft navigation/tactical system, including the software. When the task was completed within the agreed limits of cost and time-scale, our project management methods earned an accolade from the House of Commons' Select Committee on Science and Technology which reported:

'The method in our view should be copied for all major projects.'

1968

HOVERCRAFT NAVIGATION SYSTEM – One of our earliest studies was the use of hovercraft in the Fleet which involved an examination of the operational limitations and the types of equipment needed. We also studied the requirements of the hovercraft pilot, culminating in the design, procurement and installation of an integrated navigation equipment package.

1969

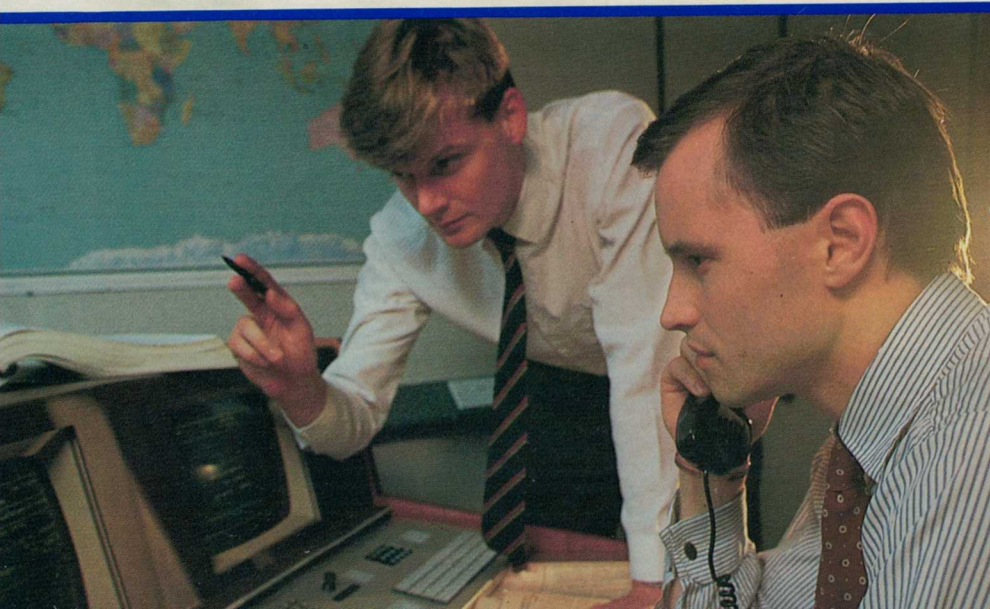
HARRIER STUDY – In a study to establish the comparative cost-effectiveness of V/STOL and conventional aircraft, we were concerned with the whole Close Air Support System including logis-

in the air and on the ground, for both the UK and US projected systems.

1970

TORNADO – In what is believed to be the largest avionics contract of its kind ever carried out for NATO, we are the prime contractor for the multi-national team for the design, development, integration and management of the total avionic system for the Tornado Multi-role Combat Aircraft. This complex task has involved correlation and control across three countries of the many inter-dependent activities. We are now deeply involved with the UK Air Defence Variant. EASAMS continues to support these systems throughout production and service.

Courtesy BAe



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the history of EASAMS as the years of success.

ce we were formed in 1962 and many important developments, cal skills but also of our ability to

1973

MINITRAM – This small, automatically controlled, driver-less vehicle, running on its own track, was developed by EASAMS in association with other GEC companies. Each electric tram could hold up to 24 people.

1974

ALGERIAN PORTS STUDY – This study was undertaken as part of the Algerian Secretariat d'Etat plan to investigate the present and future operating efficiency of the ten ports within the Algerian port system.

During Phase 1 of the study, a multi-disciplinary team carried out a survey and processed the data for the current traffic conditions and infra/superstructures of each port. Other surveys established administrative and planning procedures, port facilities and services. From the analysis of these investigations, and from more detailed investigations in Phase 2 the study generated

1977–78

SSK/UPHOLDER – As a result of experience in submarine-related studies gained since 1970, EASAMS became a member of the team forming the co-ordinating authority for the design, development, integration and support aspects of the weapon system for the SSK series of submarines. We believe this collaboration has resulted in a very advanced submarine navigation and attack system.

1980

SEABED OPERATIONS VESSEL – HMS CHALLENGER

– EASAMS was responsible for the management and systems engineering on this specialist diving ship for seabed operations.

1982

DEALING ROOM SYSTEM

– We developed a modular system which could be tailored to the precise needs of a particular



1980s, technological estimates for cargo ships, cargoes and port facilities and a report giving the means and methods required for the production of an investment plan for the ports for the 1980s.

1976

GSA 1 – EASAMS integrated the Type 42 gun system and operated a computer model to assess system changes and improvements, and to diagnose problems during in-service use. We also studied the effect on system performance of fitting a gunnery radar on the GSA 1. This continued with EASAMS as the design authority for the Navy's series of gun systems.



today, has been designed with the user in mind and, as a result, dealers in the foreign exchange, securities, commodities and similar markets have fast and easy-to-use communications.

1985

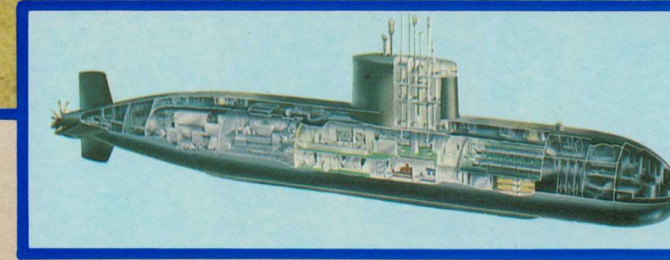
EAMACS – EASAMS' Architecture for Management and Control Systems which exploits recent advances in computer and video technology to provide a powerful yet simple-to-use data handling capability. In 1985 EAMACS was first applied to a commercial system, the SRDS Coastal Radar System.

1986

ADCIS – EASAMS is a member of one of two consortia which have put in a bid for Air Defence Command Information Systems. The study is for the British Army and is a project which is one of the most important and far-reaching in terms of conventional Western defence for many years.

1987

SDI – EASAMS has won several SDI contracts including the largest SDI study let to date through the MOD, which is for Battle Management and Command, Control and Communications Systems in the European Theatre of Defence. We will also work on studies for an Allied Test Bed and will study Theatre Defence Architectures with the Hughes Aircraft Company.



THE UNDERWATER STUDIES GROUP (0330)

The Underwater Studies Group forms part of the Studies and Consultancy Division reporting, until recently, to 'King John' York (The King is dead, long live The Queen!). Under the watchful and benevolent direction of Greg ('Captain Birdseye') Willson, the 70 members of the Group have continued, sometimes quietly(!), to expand their business in the underwater domain.

The reader might idly ponder the meaning of 'underwater studies' and 'working in the underwater domain'. Does this mean there is a little known department beneath Lyon Way where specially adapted members of staff sit at desks ten feet under water? "Shut up, you silly fool, and tell them that half of the Group lives imprisoned behind the locks in A3W whilst the rest are scattered around Britain from Dorset to Scotland to London." Someone tell the Authorities.

The Group is populated by a wealth of interesting characters. People with an unquenchable desire to acquire data and who will go to any lengths to get it. Meet Mike ('of the North') Browning who, amongst recent 'dodgy' experiences, shared a single arctic portaloos with 400 Marines. Not sure what data he was acquiring! Meet Keith ('Biggles') Jones, who combines data gathering with polar bear spotting when flying Nimrods (ASW, of course).

"Look, I've told you before!" "Right!" The work of the Group is, broadly, the study of systems designed to operate beneath the surface of the sea and the environment in which they must work. In system life cycle terms the Group mainly pursues objectives from the initial concept to the end of feasibility and, jumping ahead, when systems become operational. There is a relationship between the two ends of the life cycle in the use of data.

Tools of the trade include specialist track reconstruction and signal processing suites, in addition to a heavy reliance on the dear old Vax Cluster. ("Is it working today?") The Group also has a firm and long-standing commitment to Expert Systems Research which, under the wise guidance of Brian ('Artificial Intelligence') Knapp, and in collaboration with our customers, is beginning to show a real return and much promise for the future.

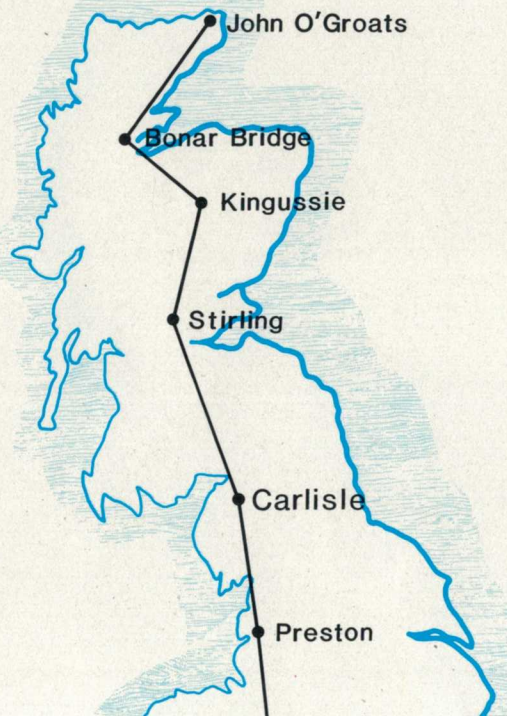
That's about it really, circa 300 words at no notice! No description of the Group would be complete, however, without an appreciative mention of Kathryn ('MegaSec') Applegarth. (She gained this badge when, in one day, she broke the IBM PC and a typewriter, yet still found time to drink *all* of the Group Manager's tea.) When Kathryn speaks the Group listens. So long as she is around we will survive.

GEOFF FRASER – MOROCCO PROJECT

Since Geoff was last featured in Interface several developments have taken place with regard to the GEC Morocco Project.

The most interesting of these is the award of £1000 plus equipment and training from the BBC Mick Burke Award Scheme, an annual scheme, run jointly by the BBC and the Royal Geographical Society intended to encourage young expeditioners to film their travels. Over 150 expeditions applied for this year's awards.

Four awards are given annually to expeditions which have demonstrated to a joint BBC/Royal Geographical Society panel, that they can produce a film of sufficient quality to be



DEBRA CYCLE APPEAL

James Heede promised, in the last issue, that he would give us further details of his Charity Cycle ride from John O'Groats to Lands End. Here they are . . .

It is now nearly a month since our cycle journey was completed – successfully I might add. Surprisingly, the journey through Scotland was easy, travelling through Inverness, Perth, Stirling and on to Carlisle. Our confidence was greatly enhanced, particularly with regard to navigation and physical fitness, with the only small 'hiccup' being one puncture at Inverness which was quickly repaired.

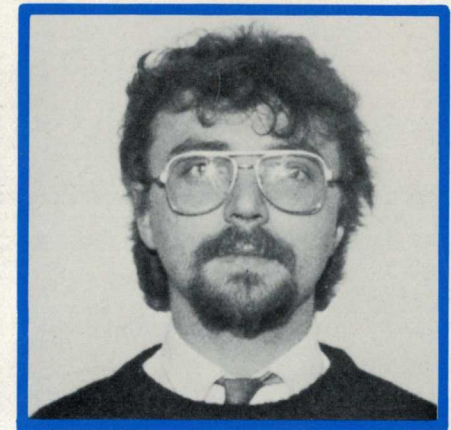
Unfortunately, our good luck ran out as we crossed the border into England. Cycling over Shap in Cumbria (the highest point situated 2000 feet above sea level), we met very heavy weather which accompanied us south into the Midlands. The heavy rain completely waterlogged our cycle lamps and meant one particular 'nightmare' night cycling through the Cities of Lancaster and Preston in complete darkness. Further south in Shropshire a hurricane crossed our path, 'screaming' in from the Atlantic at 107 m.p.h. We made it to Shrewsbury but the weather caused us to call a halt for 24 hours. After the unscheduled delay, the next few days allowed us relatively calm cycling south to Bath and then on to Exeter. The last day from Exeter to Lands End was, again, set against us. Our planned early departure from the Youth Hostel was delayed because the warden

about 33 series. Two members from each successful expedition were nominated as cameraman/producer and sound recordist and were invited to a four day intensive training course at the BBC's Ealing Studios. Geoff was chosen as cameraman and is, at present, busy training for his new role in the expedition.



friends, the heavy rain and high winds, returned. Then one of the bikes developed serious gear problems but we 'battled on' and, on the evening of Tuesday 31st March at 8.30 p.m., we crossed the finishing line – ourselves and equipment totally soaked and waterlogged, utterly exhausted and in pitch darkness coupled with thick fog.

I am now fully recovered after a month's complete rest from cycling. The journey totalled 943 miles which was completed in nine 'cycling' days, averaging 105 miles each day. The appeal has, so far, raised £1500 with donations/sponsors still pouring in. Once again, I would like to thank all the people of EASAMS for their generous sponsorship and donations. The money raised is to help pay for a Clinical Nurse Specialist for young Epidermolysis Bullosa sufferers at the Hospital for Sick Children, Great Ormond Street, London.



- A liaison has been formed with the American Peace Corps, already in Morocco. The Americans are producing the solar panels for the heating system in Morocco, thus saving the expedition the trouble and expense of transporting them from England.
- The 'playground project' has, however, run into some difficulties – both with materials and design. Initially it was envisaged that timber would be bought in Morocco, but further research has shown this to be far too costly to be feasible. Also, after consultation with staff from the Khemisset School, it has become evident that the initial playground design will have to be altered because a higher proportion of children, than was originally thought, do not have the use of their legs. Therefore a much lower, ramped structure will be necessary. Any ideas?

ISMF HANDOVER

On Wednesday 15th April 1987, EASAMS formally handed over the Tornado FMK2 In-service Software Facility (ISMF) to the RAF Software Maintenance Team at RAF Coningsby. The bringing into service of this facility will enable the RAF to undertake the design, development and proving of modifications for the Tornado on-board main computer flight and engineering programs. The F2-ISMF will also enable the RAF to investigate reported software defects and the production of software program tapes.



The top picture shows Peter Ibbott presenting Sqn. Ldr. J. Sabin (OC Software Maintenance Facility) with a plaque to commemorate the delivery into service of the ISMF.

The picture below shows the project team at the handover ceremony.



Other developments include:

- Sponsorship from British Airways and Brittany Ferries which will enable both the flying and overland elements of the expedition to travel to and from Morocco at greatly reduced rates.
- An expedition mug has been produced by Staffordshire Potteries which will be on sale for a minimum of £1.50 in order to raise funds for the Project.