

MASD NEWSLETTER

Season's
Greetings

December 1989

MASD - STATEMENT OF OBJECTIVES

To achieve profitable growth by satisfying world-wide customer requirements for ASW and related products and services.

FOREWORD

As another year draws to a close I wish you and your families a very Merry Christmas and a Happy and Prosperous New Year.

Looking back to this time last year, the prospects for 1989 were that it would prove difficult to meet our budgetary expectations. However, through the efforts you have all made, not only have we met our targets in the key areas of Sales and Profit but we have exceeded them by a healthy margin. This, coupled with the actions taken to reduce costs and overheads in all areas, has put us on a sound basis to tackle the 1990s.

With the next decade very much in mind you will see above the statement of objectives that will be used to guide the future course of MASD. Airborne Acoustic Processors have been, and will remain, the keystone of MASD's plans. A major new project to re-equip the Nimrod is now in the formative stage within MOD. MASD is spending nearly £1M this year and the same again next year to put us into the

position where we can win the subsequent competition. Prospects for export orders remain high and are expected to support the Division during the run up to the new Nimrod programme.

In addition to Acoustic Processors we are exploring new areas of business such as Tactical and Mission Systems Integration, Dipping Sonar, Post Flight Analysis and Training systems. In some instances these activities are in support of our existing products, but are also aimed at new markets not currently occupied by MASD. One important new area is to look for non-military applications for our technology and expertise. If you have any ideas along these lines, don't hesitate to discuss them with either myself or your Department Head.

Once again, may I thank you all for your support and efforts over the last year and wish you all the best for 1990s.

Alan Gallagher

WYE COLLEGE

10 to 13 August 1989

Phil Liddiard and Gerry Wood

Last August, in the middle of the heatwave, the Engineering Department managers gathered at Wye College for three days. The object to participate in a set of activities designed to improve their overall management effectiveness.

Our instruction. "Make your own way there to arrive and book in by 5.30p.m." The college is just outside Wye, a village NE of Ashford, approximately half an hours drive from Rochester.

No indication on the instructions of the size, condition or complexity of country roads leading there. For some of us the last 5 or 6 miles became more like a rally than a pleasant drive. The final pair arrived with about 30 seconds to spare.

Obtain room number, key and directions to rooms. Change into uniforms and meet in the Dining Hall at 7p.m for dinner! Team members were supplied (sold) Divisional Sports Day T-shirts and requested to wear shorts. One member who confessed to not owning same was kindly supplied with a psychedelic pair by his Secretary. One or two suave team members did not believe they were actually required to wear T-shirts and shorts to dinner and hurriedly retired to change.

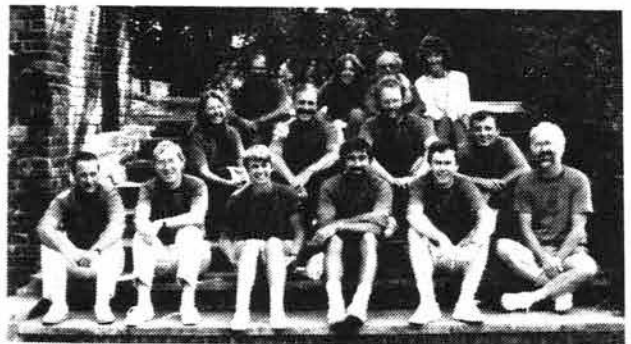
During the first hour it became obvious that we were not the only occupants of the College. Strange people, dressed in long robes and woollen capes, were reported wandering around the building and gardens acting oddly, particularly in the gardens where they were observed bending down to smell every plant, flower and leaf they could find. The phenomenon was discussed at great length over dinner with no satisfactory explanation.

What we all missed was the obvious clue as we passed through their dining room on the way to dinner. The overpowering smell and unappetising look of the food

they were eating should have told us that they were Vegans. It was later established, but not confirmed, that they were doctors studying homoeopathic medicine. However, after the initial odd encounter we learnt to ignore them and got down to the real business of the weekend.

The first meeting, held in the Conference Room, started at 8.30p.m and finally ended about midnight. Too late for the Pub. In any case the gates were locked and it was rumoured that all cars had been immobilised, never mind! Some thought had gone into the planning of this weekend. Why? A small room, containing a few bottles of beer and a couple of bottles of wine, had been set aside for us.

This small room turned out to be the only one in the building everyone could find at the end of each day. About 2a.m on Friday morning after the last bottle had been drained we were informed that the supplies were supposed to last all weekend. This remark was treated with the contempt it deserved although it was secretly felt that it was made in all sincerity. Nevertheless, someone up there was watching over us and supplies were replenished for both Friday and Saturday night.



The first thinking session

The sessions in the small room proved very popular. Not only because we were released from the Conference Room, but because it gave us the opportunity to discuss a whole range of ideas, some of which were associated with the work done during the day. However by 2.30a.m the younger ones, if not already asleep in a corner, were ready for bed. Someone discovered a pack of cards had been smuggled into the College and a game of bridge was quickly organised. After two sessions and four rubbers, with the scores all square it was decided to call it a day, or at least a morning (4a.m on Sunday).

Before leaving a few thoughts on the course. How it was tackled and what it achieved.

It started at 8.30p.m on Thursday evening.

Question one was flung out "What do you hope to achieve over the next 3 days?". Oh dear, no sitting back and listening to prepared notes with a standard set of 'course answers' ready.

Better start thinking

I have a dream that one day all people in the Division will work together, towards a common aim, using common methods, all talking the same languages and

Well its not such a bad idea, now how can we start?

Have we all got a common goal? - It seemed we had. Now that was a bit of surprise, I wonder why we had never worked it out before?

Now what was it?

'To get the largest possible share of the ASW market in the World'.

Oh dear, that sounds very puerile - but I suppose it is concise so it will do. Ah, but are we restricting ourselves too much? Lets add 'and to get the largest possible share of the follow-on market' thats better, a bit of tidying up and it will do.

Right that's it - lets all go home, but no! More questions - 'What do we need to do to make it happen? - and How are we going to do it?' - More thinking!

Well first of all it would help if we started working as a team - so that we are all pulling the same way. Right thats done, now lets identify some areas that we could focus on to achieve our 'goal' - How about -

- Cost effective products
- Market awareness
- Customer satisfaction
- Profitability/Success
- High technology
- Exploring other products (not to the detriment of ASW)
- Being proud of working in MASD

That will do for now. We look at each item in turn, finding points which are common to two or more items e.g, better estimating, feedback from previous work. In the end we have about ten major points on each item. How do we resolve them? By having meetings, breaking them down into real actions, short and long term, that produce tangible results. It's Sunday afternoon already, it must be time to go home. Time has flown.

One last thing, one action was to tell everyone what we had done. Better get this published in a Divisional Newsletter. Action One complete. As for the others time will tell.

ROGUES GALLERY



Andy Moon
Quality
Assurance
Manager

superseded by an accelerometer, to measure noise levels in the gyro when the torpedo was deployed.

Time in AS&RD was not all work and no play. During his five years with the Division Andy acquired a liking for squash. The Division participated in the Medway Squash Club competition and also had an active in house squash league, which Andy won three times in succession and retained the trophy for life.

In 1979 Andy joined MASD as a Quality Assurance Engineer involved in the AQS 902 (LAPADS) programme, which at that time was taking a back seat behind AQS 901. Promoted to Senior QA Engineer in 1982 he became responsible for all the quality related aspects of AQS 902 from in-house design to sub-contractor and supplier control. During this period, with company support, he successfully completed a two year part time course at Medway College of Technology graduating with a Diploma in Quality Assurance. Subsequently he was appointed a full member of the Institute of Quality Assurance and Deputy QA Manager. In this role he was responsible for the QA aspects of "Integrated Systems" design. This included all proposal work the Division undertook in marketing its products throughout the world.

Andy is a Kentish man. Born and raised in Tunbridge Wells, he was educated at Huntley School where by his own admission, he spent more time on the playing field than taxing his brain.

On leaving school he joined the Royal Navy as a Control Electrical Mechanician where he was responsible for maintaining shipborne sonar, gunnery and guided weapon systems. His object was to see the sea and to this end he failed spending long periods in the Far East, Mediterranean, Europe, West Indies and the Arctic. His seven years in the Navy allowed him to pursue his favourite sporting activity, rugby. He represented his ship in RN inter-ship tournaments and against foreign Navies.

In 1974, after his world tour, he joined AS&RD as a Quality Technician. In those far distant days, he worked on the servo system of the Projected Map Display for the Jaguar aircraft. As more and more of the repair work was transferred to No. 30 Maintenance Unit, Royal Air Force, he became involved in the Mk24 Torpedo gyro project. In conjunction with Marconi Underwater Systems, Portsmouth, he helped to develop, without the help of medical science, a "Calibrated Ear", later to be

In 1986 Andy was appointed QA Manager. Since taking the helm his aim has been to produce a fully integrated quality function throughout engineering, production, and all other disciplines in the Division. He believes that this approach ensures the quality of design, production and services offered to our customers is continuously improved.

Andy resides in Rainham with his wife and two children. Accepting he is too old to participate in the sporting arena, his hobbies are DIY, house and car maintenance and keeping the family happy.

A Bumpy Ride
Geoff Gingell

It seemed a simple enough trip, a visit to Developmental Science Corporation, Ontario, USA, to discuss the software content of one of its projects. The unidentified bang of something hitting the car roof as we travelled along the A303 on our way to Heathrow, the error with the flight numbers and the aborted landing at San Francisco airport, should have warned us that this was to be no ordinary journey. But these were to prove mere mishaps compared to what the San Andress fault had waiting for us.

The plan was a two hour wait at San Francisco then another plane on to Ontario. We had been in the States for just 40 minutes when the earthquake hit us. I was browsing in the airport shop when the ceiling started vibrating violently, my initial reaction was that the air conditioning system had developed a mechanical fault. Strolling from the shop, I realised it was something far more serious. By now, the whole airport terminal building was shaking violently. Deciding I would be far better off outside, I ran for the doors, avoiding the debris of what had once been the suspended ceiling.

Nick Mannerings and Dave Bagwell had remained rooted to the spot by one of the main structural pillars for the duration of the quake. A window display in their vicinity was reduced to a pile of rubble.

We met up outside the building and experienced a further minor tremor. The police moved us from the elevated roadway to a car park at ground level. It was here that we first heard of the collapse of a section of the Bay Bridge, although reports were muddled at this time.

After an hour or so, organisation returned and various airlines made arrangements to move people away from the airport. United Airlines bussed us, via a back gate, to a 747 which we understood was going to Los Angeles, only 60 miles

from our final destination. The 747 had a pilot, a handful of cabin staff, but no flight engineer. Eventually he arrived to the applause of the passengers and the plane took off, not for Los Angeles but Seattle, 800 miles in the opposite direction to where we wanted to go!

We arrived at Seattle at lam to find no hotel rooms were available. The rest of the night was spent in the airport coffee bar, watching news bulletins of the collapsed freeway, damaged houses and rescue attempts - the enormity of the disaster finally came home to us. The earthquake had lasted for a mere 15 seconds, about one third of the normal duration, but had hit 6.9 on the Richter Scale.

We left Seattle mid morning, after changing planes because of an air conditioning fault on the Alaska Airlines MD83, eventually arriving at Ontario at lunch time. Unfortunately, in the transfer from San Francisco, my suitcase had gone astray. A quick wash and brush up at our hotel and on to DSC, wearing a borrowed shirt and tie courtesy of Dave Bagwell. We were very warmly received by the DSC staff, who knew we were going to be late, but were unaware we had been in San Francisco at the time of the quake. An afternoon's work, an early evening meal, and, at last, sleep in a proper bed, 52 hours after I had left my own.

In the end our trip was extended by one day. We travelled home, via Los Angeles airport, visiting the Queen Mary and the Howard Hughes Spruce Goose, on the way. A memorable experience and a successful trip which, to borrow Dave Bagwell's phrase "unfortunately got off to a shaky start ...!"

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It is rumoured that the Hardware Team's request to be transferred to FCD has been granted. Signing on fee is said to be £150,000, salary £1,000 per week.

GOODHAND'S GOALKEEPER

The Production Test section is located in the north eastern corner of the Divisional complex in a clean air conditioned environment. The section is headed by Geoff Taylor (Chief of Test) - no, he didn't get a Hockey gold medal at the the last Olympics. In a nutshell he is responsible for all production testing from the testing of bought in components, through unit testing to Environmental Stress Screening and production system test. In carrying out this work he is supported by a staff of 15, the breakdown is shown below.

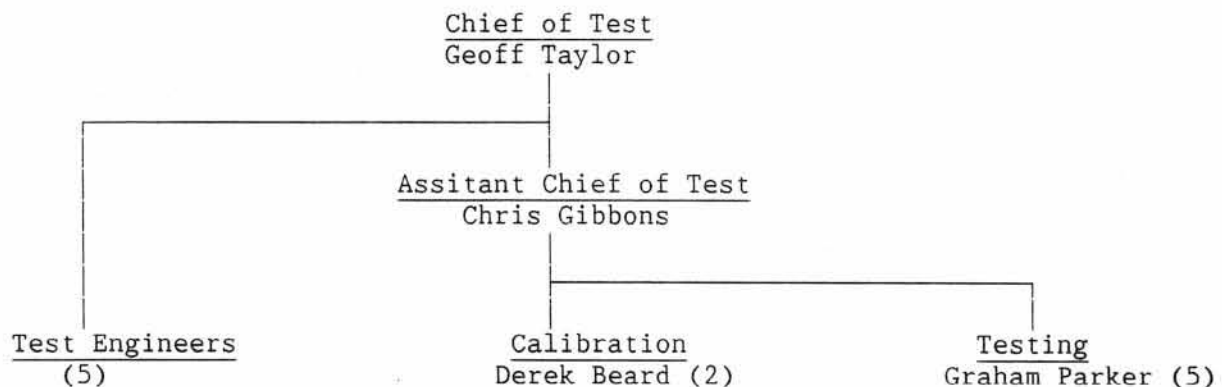
Together the staff provide the expertise for test, fault diagnosis and rectification on our processors, microprocessor sub-assemblies, assemblies and systems. The section is involved at all stages of a project from its conception to release of the final product. On the receipt of a request from a customer the Test Engineers liaise with the Engineering Operations Group to agree the test philosophy to be adopted. At this stage they produce cost estimates for the required testing to be carried out and the deliverable and factory test equipment. They also develop the most cost effective means of testing any item to meet a required quality standard and to reduce operator learning on new equipment. Their brief is to provide a feedback of problems, difficulties, trends and possible design faults during the development and production stages of a project so that early corrective action

can be instigated. This is achieved by recording the results, including defects, of all tests on development, pre-production and production equipments. The results are vetted by Quality Assurance to ensure corrective action is taken, and are continually analysed to highlight trends and problem areas.

In addition the section is responsible for the generation of new test facilities and the continuance of production test automation such as PROM/PAL programming and fault detection. It also calibrates and maintains all our production test equipment which includes Automatic and Semi-automatic test equipment. The equipment inventory includes:

- * Two Orion Automatic Test Equipment Systems
- * Three Trendar Logic Testers
- * A 29B Universal Device Programmer
- * A PP42 E-PROM Programmer
- * A Compact PCB Tester
- * Six Direct VAX Links. These are used as a Divisional database and data retrieval.
- * Environmental Test Chambers (Now with CMS Division)

Overall the Test Section, in liaison with other Divisional work centres, is responsible for ensuring our products are "Taylor made" and meet the high levels of quality and reliability set by the customer.



COMPANY SUGGESTION SCHEME

The aim of the Suggestion Scheme is to provide a means whereby you can submit useful ideas to management. The suggestions are then investigated by a Committee and if successful recognised by a financial award.

The committee, which meets once a month, consists of:

- Chairman - currently our Divisional Manager
- Secretary - Selected from Personnel/ Training

Seven members - They are selected from the following disciplines to cover a reasonable representation across the Divisions:

Trade Union
Shop Floor
Quality Assurance
- currently Steve Gibbins
Engineering
Production
Safety Department

The members, who are appointed by the Chief Executive and the Director of Personnel, normally serve for a period of two to five years.

If you have any ideas which you consider may benefit the Division or the Company in that they save time, material, labour and energy, improve machinery, tools, manufacturing methods, paper routines,

handling, storage, packing and safety, or eliminate waste, then don't hesitate. All you have to do is to complete a Suggestion Scheme Form No R1285 and drop it in the Suggestion Box. The forms can be collected from the Suggestion Box located by the notice boards in the main corridor.

The Suggestion Boxes are emptied at regular intervals and the forms passed to the Secretary for circulation to Committee members and to your Division for appraisal. During the appraisal phase all suggestions remain anonymous to ensure they are handled without grace or favour. The appraisal is the sole responsibility of the Division. The Committee merely assigns a monetary value based on a standard formula which takes into account Average Annual Saving, Length of Time of Saving, Effort, Originality and Relevance to your Duties. The Committee cannot over turn a 'No' decision by the Division. However, if it considers it a good idea it can make a nominal award of £25.

In addition an "Award of the Year", value £500, is presented annually, at the discretion of the Committee, to the suggestion which has demonstrated its usefulness and cost saving and is considered most relevant to the Company.

To keep you informed of progress, the minutes of each monthly meeting are displayed on the Divisional notice board. Don't be shy, if you have an idea or suggestion now is the time to put pen to paper.

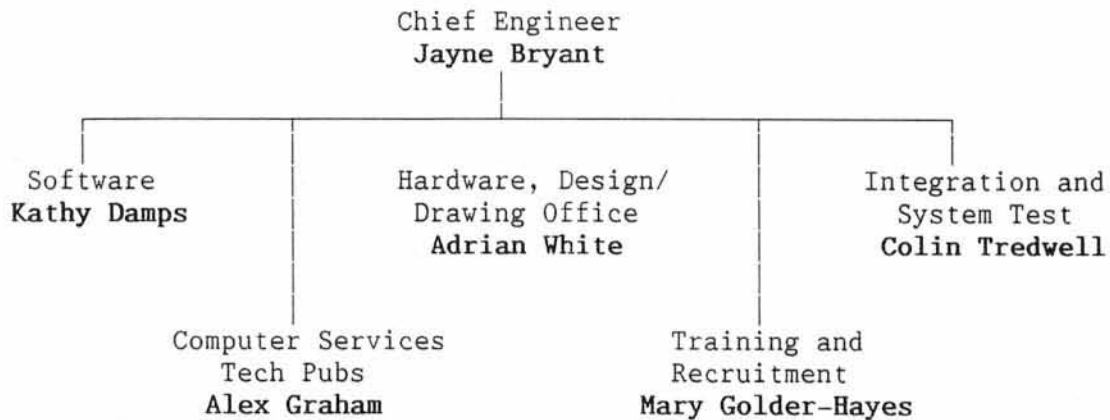


ENGINEERING OPERATIONS GROUP

In this edition it is the turn of the Engineering Operations Group (EOG) to come under the microscope. The EOG, headed by our Chief Engineer, Jayne Bryant, is the largest group in the Division employing some 310 people. In a nutshell it is responsible for detailed hardware and software design and development, systems integration and test, computing services and training and recruitment. In addition over the last few weeks it has also taken the

Design/Drawing Office and Technical Publications under its wing. A breakdown of the various teams is given below.

The EOG is involved throughout all stages of a project from conception to post development. It works closely with all other Engineering Groups and Departments to ensure the customer requirements are met in a cost effective manner. During 1990 we shall be producing articles on the various teams within EOG. By popular demand the spotlight this month falls on the Hardware Team.



HARDWARE TEAM

Having been given three months notice to prepare this article, in true Hardware tradition it arrived on the editors desk at the last possible moment. In some respects this was a blessing since the team has recently taken the responsibilities of the Drawing Office and Mechanical Design into its fold. The Hardware team is called on to perform a number of roles at varying times throughout the life of a project. These can be grouped into four main areas, namely, Design, Development, Proof of Design and Production Preparation. All this work is carried out by 57 people under the direction of the Hardware Team Manager, Adrian White. A breakdown of the team is given overleaf.

meets the customer requirements. The System Design Team (Project Management Group) produces a System Design to meet the requirement. The Hardware engineers are involved in the preparation of various specifications and documents against which the product will be designed, developed, procured, tested and produced. More importantly the team generates the high and low level Requirement Specifications for the Hardware modules. Once a design data pack has been prepared the Hardware engineers liaise with the Drawing Office and Production to produce manufacturing drawings, advise on component procurement, and develop pre-production equipment. Individual modules are checked against previously produced specifications, assembled into a total system configuration (Rig), and an Acceptance Test Procedure run. The rig is then handed over to the Integration Team.

Most Divisional projects are produced in response to a customer request. At this stage we have to propose a system, usually against a fixed price, which

Before any equipment is accepted by the customer we are required to carry out a "Proof of Design." This involves two elements, the first covers performance aspects carried out by Integration and System Test; the second, which covers environmental, reliability and maintainability demonstrations, is the responsibility of the Hardware team.

Throughout a contract the Hardware team is responsible for providing support to Production in the form of purpose built test equipment and documentation. This support is critical, particularly when new designs are being introduced, to ensure Production can test and release equipment to cost and on time.

The team is also involved in post-development. As an example, this year we have delivered a new store memory module for AQS 901 to the Royal Air Force, some 10 years after the system was delivered into service. Unlike the consumer market, the armed services maintain and improve their systems rather than buy a new model every year.

As we approach the festive season it is worth reflecting on our achievements in 1989. We have been involved in the delivery of four pre-production AQS 903 systems to Westland Helicopters. One of these has been successfully flown on the EH101 Merlin helicopter. On the 902 front we have delivered the first First

Line Test Equipment for the Royal Navy Sea King 6 on time and to budget.

1989 has also seen the introduction of the Cadnetix System for producing circuit diagrams and manufacturing data packs. Due to the hardwork and close co-operation of the Drawing Office and the Engineering Department its introduction has proved relatively "painless." Work is in hand to expand the system to embrace electrical and thermal modelling.

The team is also working closely with the Business Development Group on future Systems. During 1990 this work will intensify as the requirements for the Nimrod Mid-Life Update are confirmed.

During the year the team has kept a "Classic Quotes" book, entries include:

"The trouble is the system is a BIT unreliable."

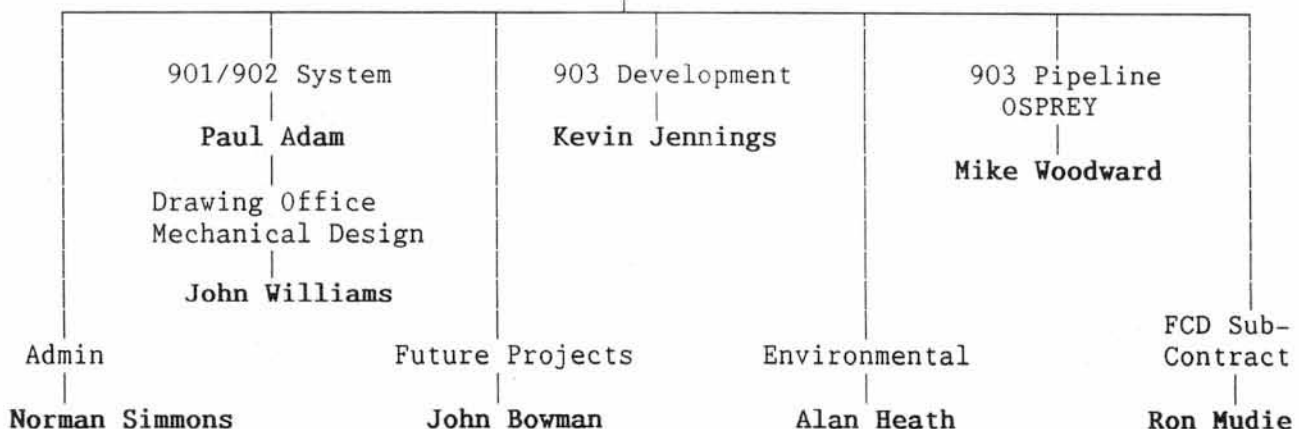
"The meeting will only take 2 minutes."

"What plans are you working to then?"

"Sue Brewster is the guy to see."

In the next edition we shall be trying to penetrate the inner sanctum and explain the role of the software team; literal translation, malleable things manufactured for sale!

Hardware Manager
Adrian White



PROJECT REVIEW

AQS 903

In the last newsletter we reported that the AQS 903 system had flown in the 'Hack' Sea King. We can now report that the system has been successfully flown on the EH101 Merlin helicopter. The system processed data transmitted from the airfield throughout its first flight. The Division has received a letter of congratulations from Westland Helicopters Limited on our successful contribution to this major milestone in the development of the EH101.

The 903 project is firmly focused on the next set of RAE bench trials which should be completed by Christmas. After the holiday we have six months in which to complete the final phase of the Sea Trials and hence the systems processing capability.

Last September the second annual Customer Design Review took place. Thanks to the efforts of the presentation team this was a complete success. The MOD, Royal Navy and RAE were most impressed with our achievements over the last year. In that time we have progressed from 1b to WTP2 standard. It hasn't been easy but the 903 team consider we now have a good baseline system. It is unlikely to get any easier next year but we can now face the future with more confidence.

Sean Hellett would like to thank all concerned for their hard work during 1989.

We are working with Sanders Associates, to develop an Advanced Dipping Sonar. Sanders is producing the 'wet end' transducer, cable and winch while the Division supplies the processing and display. We are now working on a 'demonstration' system to show prospective customers our capabilities and more importantly that the system exists and is not a "paper design." In October we visited Sanders to discuss a joint bid into the US Navy Advanced Low Frequency Sonar (ALFS) programme.

Although the requirement is for a 'wet end' only, (the UYS2 processor has been chosen for the helicopter), we are allowed to bid the AQS 903/930 if we can demonstrate an overall cost saving. This involves looking at the cost of ownership to the customer over a period of 15 to 20 years. Although these were preliminary discussions it is likely we will bid when the RFP is published.

Our visit coincided with the traditional 'Fall' season, Autumn to you Anglophiles. Hotels were heavily booked as the "leaf peepers", as the holiday makers are affectionately known, view the autumn colours. We were able to enjoy the spectacular colours of orange, red, brown and yellow as we drove the scenic route from the airport to Sanders.

AQS 901

Since the last newsletter current work on the AQS 901 development contract was completed and life became very quiet while we negotiated a new contract. While this was going on we had no alternative but to disperse team members to other work in the Division.

A new contract has now been agreed and we are in the process of rebuilding the engineering teams. The new contract provides a significant package of work which will keep the team busy until June 1992.

On the hardware front we have just received an enquiry for a quantity of Semi-Conductor Modules (Bulk Store Units) to update the Nimrod MR Mk2 Central Tactical System.

NSR 6116

Throughout the year, in conjunction with Plessey we have been working hard to enhance the Plessey Dipping Sonar. Trials have been in progress since last June which involved much travelling between Rochester, Newport, Prestwick and Vobster Quarry in Somerset. This activity culminated in sea trials with 819 Squadron at Prestwick and Stavanger

last month. Thanks to the efforts of Steve Pagan and his trials team these were very successful. However, the team has vowed to reduce overheads by including a barrel of beer in the trials kit next time it visits Norway. Production is being 'wound up' to ensure the update is delivered to the Royal Navy as soon as possible. Before we become too euphoric there are more trials looming for 1990. As the Navy are again looking for total success, life is unlikely to get any easier.

ISK (COCHIN TRAIL)

To date 15 Sea Kings Mk42B, fitted with our Tactical Mission System, have been delivered to the Indian Navy; that leaves five to go. The sixteenth is likely to be accepted as you read this article; it is undergoing integration at Westland Helicopters.

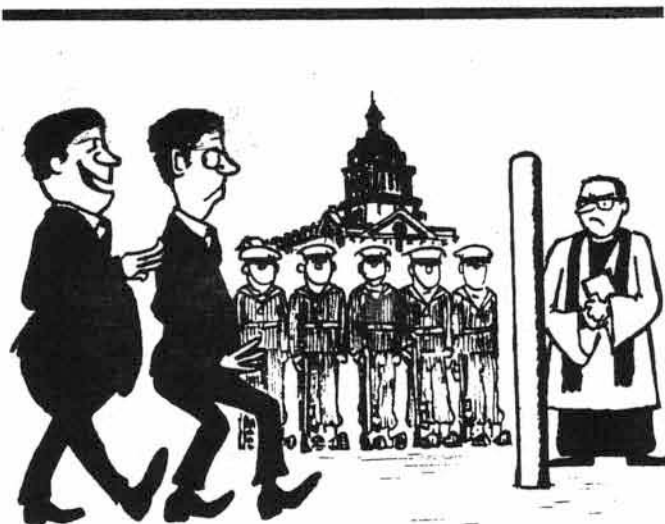
The ISK Software Issue 4 software package is being tested in the Development Airframe at Westlands by the Indian Navy. On completion of the trial we expect to retrospectively fit the aircraft at Cochin during January 1990.

Phase 1 of the Sea King support contract was completed in October so John Chappell (our field representative) is back home to prevent him going completely native. He is becoming fluent in Malyalam, latest phrases include "It's b.....y hot, go away, I will be pleased to assist." To date work has gone well and John has done much to enhance our image. He will be returning to Cochin in January to introduce the Software Issue 4 into service. As you can see from the photograph he is fully integrated in the 42B "on site" working party.

Mike Ryder visited Cochin during the week prior to the Indian General Election to discuss the provision of a third line maintenance facility. The visit was eventful, airline strikes, hotels full - holiday season - and the election adding to the fun. Expecting the unexpected has become his motto. While there he met Captain Soni (ex leader of the IN team in the UK) who now commands the Air Station at Cochin.



Carrying the flag in Cochin, seven members of the Westland 42B 'on site' working party with far left, N. Mathew, our permanent representative in the town. With him are: John Chapel (GEC), John Robins (logistics), Bob Bevin (airframe/transmission), Roger Chubb (ATE), Tom Harrison (avionics), Brian Belton (team leader) and Gerry Passmore (avionics).



"Chaps as bright as you are wasted on our Training Plan would you prefer to be blindfolded?"

SYSTEMS TRAINING PROGRAMME
(Mary Golder-Hayes)

Traditionally, our Systems Designers have been promoted from the Division's experienced engineers. Although this offers a first-rate career path for those interested in the technical route, it does remove valuable technical expertise from the Software and Hardware groups. In addition it has failed to produce Systems Designers in sufficient quantity to meet our future needs. This could have serious implications for our products, given that designers, by definition, work at the "front end" of projects.

As our recruitment of "off the shelf" Systems Designers has also proved extremely difficult we have decided to set up our own in-house Systems Training Programme. The object is to give recent graduates, from hardware or software backgrounds, training in other disciplines. It is hoped the engineers taking part will gain a better understanding of the whole system and ultimately join the System Design team in 1990. This article is to let you know what progress we have made on the Systems Training Programme.

Once the Engineering "Managers" decided a training programme was needed, the next stage was to put some detail on the plans. A whole week was allocated for this; we nearly made it. Six graduates were shortlisted, an outline training plan produced and a series of meetings arranged with Peter Carrington. The first meeting was to explain the situation to all six nominees, followed by individual meetings so that each graduate engineer could voice his doubts and ask questions. All we failed to do was give the six nominees advance warning of the first meeting and explain the plan to their supervisors. Well, we managed to tell one nominee, who duly turned up. Hasty phone calls located three more. These - receiving the message "You're supposed to be in Dr. Carrington's office now" - arrived ashen-faced, wary and frantically trawling their consciences. Despite this inauspicious start, all six

have agreed to take part in the pilot scheme.

While writing up the detailed plans for the training programme, another problem arose. What should we call these people? Having recently completed a course in higher education they were unlikely to respond well to "student". Having just achieved engineer status they were unlikely to be impressed by the title "trainee". Other possibilities seemed distinctly cumbersome: "engineers who have been nominated for the Systems training programme" hardly trips off the tongue. In the best traditions of MASD, another acronym, PSP (Potential Systems Person) was born.

During the training programme each PSP will spend three months in three of the following disciplines: Software, Hardware, System Test, Integration and Analysis. They will also attend monthly presentations, given by the Business Development Group, on various aspects of system design and Company courses on Presentations, Writing for Results, Structured Analysis Techniques and Introduction to Software Testing. In addition they will be introduced to specific divisional tools such as Teamwork; an external System Engineering courses is being evaluated. During the programme their progress will be monitored by the Training Group.

On completion of the course each PSP may be offered work as a System Designer. However, if they wish they may return to their original discipline.

To the first six guinea pigs - Alastair Brown, Matthew Collinson, Brian Craker, Joe Gatt, Stuart Harper and Phillip Stancliffe - every success. We hope you enjoy the experience.

If the pilot scheme is successful it will be a regular feature of the Division's training programme. If you would like to be considered for a future programme please speak to your supervisor or Mary Golder-Hayes. They will be pleased to hear from you.

CAREER COUNSELLING
(Mary Golder-Hayes)

A Career Counselling Scheme is being introduced within the Division. Initially it has been implemented in Engineering, however, if it proves successful it will be expanded to cover all other departments by June 1990.

During the last few months everyone in the Engineering Department has received a memo from the Deputy Divisional Manager, Sue Wood, or at Yeovil, from Nick Mannerings, outlining the Division's Career Counselling Scheme. (If you haven't received an IC have you looked in your in-tray lately? - or ever?) Further information about the scheme was also posted on the Divisional Notice boards. Despite these attempts at personal and mass communication, you may not have understood the Career Counselling scheme, or are suspicious of the reasoning behind it. This article is an attempt to answer any remaining queries.

Firstly your Divisional Career Counsellor is an addition to, and not a replacement for, existing channels for careers advice. You are still free to discuss your career prospects and ambitions with your line managers and/or the Personnel Department. However if you wish to talk to someone in the Division, not in your normal chain of command, try your nominated counsellor.

Secondly all discussions with your counsellor are strictly confidential unless you decide otherwise. If you feel a need for a mega-whinge, you can bend your counsellor's ear and no one else will be any the wiser. However it may be that you want action rather than just a listening ear. In this case you and your counsellor agree the best line to pursue.

So what can your career counsellor actually do? Unfortunately counsellors do not come equipped with magic wands (even in the current pantomime season) but there are many circumstances where the intervention of a third party can

smooth out a few wrinkles in your career path.

For instance, if you feel that your supervisor does not have the information you require (about work in other sections of engineering, say) your counsellor will obtain this information for you, or point you in the right direction. Perhaps you feel unable to talk to your line manager - because of a personality clash, or you don't want to "show your hand". In this case it may be helpful to have someone to speak on your behalf, possibly to a higher level manager. These are just a couple of examples; what happens in your case depends on your particular circumstances, and the line of action you agree with your counsellor.

If you still have lingering suspicions about the idea of the career Counselling scheme then put yourself in the shoes of the Division's Managers. (Just for a moment : this isn't a job offer). Would you prefer to spend some time making sure somebody's career was progressing to their satisfaction, or would you rather devote your energy to recruiting replacements for experienced employees who have left because they were dissatisfied?

So, if you have a problem which is bothering you, go and have a chat with your career counsellor. If you are not certain who it is, Mary Golder-Hayes (Rochester) or Hazel Foster (Yeovil) will be pleased to tell you.



"Why exactly did you leave your last employ?"

GUIDE TO EMPLOYEE
PERFORMANCE APPRAISAL

Anyone who has had anything at all to do with the growing army of professional appraisers like industrial psychologists, will know they have their own mysterious and often expensive methods of

establishing the levels at which you and I perform our daily tasks. For those of you who have just had their annual appraisal and are not familiar with the techniques, this is the Ready Rating Table.

PERFORMANCE FACTORS	FAR EXCEEDS JOB REQUIREMENTS	EXCEEDS JOB REQUIREMENTS	MEETS JOB REQUIREMENTS	NEEDS SOME IMPROVEMENT	DOES NOT MEET REQUIREMENTS
QUALITY	Leaps tall buildings with a single bound	Must take running start to leap over tall buildings	Can only leap over a building with no spires	Crashes into buildings when trying to jump them	Cannot recognise buildings much less jump them
TIMELINESS	Is faster than a speeding bullet	Is as fast as a speeding bullet	Not as fast as a speeding bullet	Would you believe a slow bullet	Wounds self with bullet
INITIATIVE	Is stronger than a locomotive	Is stronger than a bull elephant	Is stronger than a bull	Shoots the bull	Smells like a bull
ADAPTABILITY	Walks on water consistently	Walks on water in emergencies	Washes with water	Drinks water	Passes water in emergencies
COMMUNICATION	Talks with God	Talks with the angels	Talks to himself	Argues with himself	Loses those arguments

THE NEW LOOK

You cannot have failed to notice the updated appearance of the approach to Engineering. If you didn't trip over the paraphernalia, the smell gave it away. Prominent among the new decor is a display cabinet, donated to the Division, containing a variety of trophies, won or given to the Division, and Marguerite's pride and joy the new notice boards. In order to give these some resemblance of respectability it has been decided to implement a control on what can be displayed. If you wish to advertise your wares and charms please pass your proposed notice to Hannah or Marguerite. Unauthorised notices will be removed.

CHILDREN IN NEED APPEAL

Production were to the fore again. This time to support Children in Need. The raffle for an incredibly large basket of fruit, over 20 varieties were on display, raised £123.00. The winning ticket, drawn by Sue Wood, saw Ernest Jones, Production Services, wheel away the goods.

Our thanks to all who generously supported the appeal.

TOTAL QUALITY MANAGEMENT

GEC Avionics has adopted Total Quality Management as a structural approach to achieving quality improvement and customer satisfaction, thereby improving our competitiveness and maintaining profitable growth. If we are to achieve this objective, it will involve us all in continually:

a. Improving competitiveness by getting it right first time, on time, every time, through reducing errors, waste and unnecessary activity.

b. Improving responsiveness through more rapid identification and solution of problems within our organisation.

We are now taking steps to introduce TQM in the Division. TQM, in simple words "Improving our Effectiveness" impinges on all aspects of our work. The management is pursuing a number of actions aimed at improving our effectiveness. However, if we are to succeed we need your co-operation and ideas. To this end the Division is introducing an Ideas Scheme which will complement the Company Suggestion Scheme.

If you have any ideas which will improve any aspect of Divisional life whether it be working conditions or practices, morale, or cost savings then put them on paper. To make it easy we have even produced a simple proforma for you to complete. They are held in the Admin Office and by Edna Curtis, Production Secretary. Please submit your ideas to Gerry Wood. All will be acknowledged and carefully considered by management. Successful ideas will be awarded a Certificate of Merit and if appropriate, with your approval, forwarded as a Company Suggestion.

Don't be shy, your ideas are valued. We look forward to an enormous response.

PSP EXAMINATION PAPER

General Knowledge

Time allowed - Two hours

Answer any FIVE questions

Each question is worth 20 marks

Pass mark is 20

Where appropriate, answers should be illustrated with carefully labelled diagrams

1. Who won World War Two?
2. Who came Second?
3. What is a Silver Dollar made of?
4. What time is News at Ten on?
5. Who built Stephenson's Rocket?
6. What musical instrument does Phil the fluter play?
7. Do you understand Newton's Law of Gravity? (Answer Yes or No)
8. Name the winning jockey in the 1972 Greyhound Derby.
9. In the 1972 Sheepdog Trials how many were found guilty?
10. Write down the numbers from 1 to 10. (Marks will be deducted for every number out of sequence).

All papers are to be passed to Mary Golder-Hayes.

EXHIBITIONS

During the course of the year the Division is represented at various exhibitions around the world. Our attendance at these shows allows us to broaden and consolidate our contacts with major aerospace and avionics manufacturers and market our products. We have working models of the ACT, AQS 902 and 903 which enable us to demonstrate the equipments' capabilities and thus add credence to the proposals we have submitted to the potential customers.

This year we were represented at the International Air Tattoo at Fairford and the Open Day at RNAS Culdrose. The proceeds of the IAT are donated to the RAF Benevolent Fund which was founded in 1919 for the relief of distress or need, amongst the past and present members of the RAF. The IAT was held over the hottest weekend of the year. Temperatures in the exhibition tents reached well over 100° Fahrenheit. Stand manning shifts were reduced to half an hour, to allow us to remain conscious, and eventually the organisers closed the hall for two hours for fear of people passing out. The air display at Fairford runs non-stop from 10.00am to 6.00pm with aircraft and helicopters from most of the NATO nations. Participants varied from the Battle of Britain Memorial Flight (Lancaster, Hurricane and Spitfire) to the latest fighter and bomber aircraft. For our representative the highlights were the USAF aircraft, F111, B-1B, SR71 (Blackbird) and the B-52. For him the B-52 was an awesome sight, no rotation before take-off, it simply lumbers down the runway until the natural curvature of the earth does its job.

The Royal Naval Air Station Culdrose Open Day is always a rewarding show. It allows us to meet face to face with the operational users and hear their comments. More importantly we mix with the support crews (maintenance and

administrative staff, including WRENS) who are aware of our equipment. However, they rarely see it work never mind handle it, until we take our equipment to the Open Day. We also took the colour tactical processor to the show; this was an instant success with the aircrew, attracting very favourable comment and many envious glances. Overall an excellent day which did our public relations no harm.

The Royal Naval Equipment Exhibition at Whale Island, Portsmouth was impeccably organised by the Senior Service. The biennial exhibition, which is sponsored by the Defence Export Services Organisation, provides an opportunity for the UK Defence Industry to display its products to potential overseas customers. The Divisional display formed part of the GEC Marconi stand and we exhibited the Basic System Trainer and the colour tactical processor.

It was a busy week, the GEC stand was visited by 55 overseas delegations, 18 groups of VIPs and numerous personnel from UK and overseas Defence establishments. It was a pleasure to handout the press release highlighting the first flight of the AQS 903 system, particularly as our competitors were claiming it was a paper system which had not been built.

The flying display included fly pasts by Harriers and Sea King helicopters. It culminated in an impressive attack by the Royal Marines against a terrorist held boat. The Royal Marines absailed from a Sea King on to the boat, captured the terrorists and released the hostages.

Overall RNEE was a successful show. We were able to reinforce contacts with potential customers who were most impressed with the depth and quality of our products. Your Marketing staff is actively pursuing these openings.

GEC Avionics Sporting Star

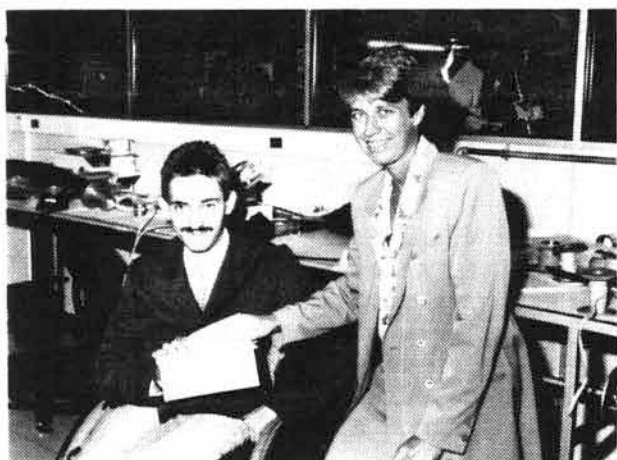
For some time now wheelchair sportsman Paul Irons (Production) has been battling to maintain his independent way of life. Despite his handicap he enjoys playing basketball and represents Kent Invicta in the British National league. However his wheelchair was beginning to wear out and even a special offer of a made-to-measure chair at £850 was beyond his means.

Paul had been quietly but independently approaching local businesses for sponsorship, not always with success. However, his luck changed when Jon Anderson (Engineering) read his story in the Gravesend Reporter. Jon brought the story to the attention of John Goodhand and Alan Gallagher who persuaded Corporate Management to donate £200 to

the cause. At the same time the Gravesend Lions, a charity appeal, donated £250, and another £100 arrived from local sources.

As for the rest, that was easy; thanks to the efforts of Brenda Cardwell, Pat Warner and Jon, who, in two days, persuaded Divisional personnel to donate £350.

I'm pleased to say that Paul has now bought his wheelchair and a tracksuit covered with Divisional logos, which he proudly wears during training sessions. Paul would like to take this opportunity to pass on his sincere thanks to all who gave so generously. The new chair will enable him to continue to develop his skills and keep him fit.



MASD ORGANISATION

During the last month several changes have been made in the Divisional organisation. These are listed below:

Programme Management Group. The Group is now headed by Sean Hellett who will be responsible for all projects and proposals. Within the Group Mike Ryder will continue to be responsible for AQS 901/902, Phil Liddiard is now responsible for AQS 903 and Pat Keast remains responsible for Integrated Systems and Proposals.

Engineering Service Group. The Group has been renamed Divisional Services and will be headed by Gerry Wood. In this post he will report direct to the Deputy Divisional Manager and be responsible for all Common Services to the Division.

Technical Publications. Tech Pubs is now managed by Alex Graham.

Design/Drawing Office. The office has been transferred to the Hardware Team headed by Adrian White.

SOCIAL SCENE

Under the auspices of Hannah Twitchen the sports and social sections have had an active and successful year.

Christmas Party. On the social scene arrangements for the Christmas Dinner and Disco to held at the Roffen Club on 8th December are complete. There are still 4 tickets left at £15 a head. If you haven't made your mind up, this is your last chance. Looking to 1990, next years' party has already been booked at the Roffen Club for 21 December. Don't say you haven't been warned - an entry for your social filofax.

Day Trip. Fancy a trip to Boulogne, duty free for Christmas, then contact Ben Morton, Personnel. Places are still available, cost is £18 if you are a member of GRADSOC (even the Editor doesn't know the meaning of this Acronym but has been told he's too old to join) or £20 for non-members. The trip is arranged for Saturday 16 December. The DM has given you all the day off, so let your hair down and see the sights.

Christmas Draw. We will be holding a Christmas Draw on 15 December. 500 tickets will be on sale at 50p each. Prizes to the value of £250 will be on offer. Tickets can be obtained from Hannah Twitchen or Edna Curtis. Give them your support. It may be your lucky day.

Rugby. We have played several matches since our last newsletter and notched up a win or two. This included a rematch against our old rivals, which despite the biased referee (who wishes to remain anony-mouse) we won. Congratulations to all concerned. There is a rumour we shall soon be challenging Maidstone for their place in the National League.

Badminton. The Divisional Badminton competition has resumed. For the newcomers it consists of singles, doubles and mixed doubles. Most of the games are

played on a "fun basis" and all are welcome. The more the merrier, so if you fancy your chances please contact Hannah Twitchen. P.S. What odds that Marguerite and her partner repeat their win over the Champions?

Superstars. The Superstars competition took place in October. Several new events were introduced in an attempt to unseat the Champion. There were eleven events, competitors had to compete in the Assault Course plus any eight from:

Archery	Long Jump
Gym Test	100 metres
Basketball skills	400 metres
Football skills	1500 metres
Swimming	Cricket Ball

Chris Rossitor again came out top, winning 6 events and coming second in 3 events. A convincing victory. Congratulations to Chris for winning the competition for the third time in succession.

PDPII (Mark Hadfield, Ian Atkins and Andy Hedge) won the team event. As a side issue there were some internal battles, the prime one between Mark Hadfield and Ian Atkins. Ian was convinced he would win easily but eventually lost the wager. Hence his appearance at work minus shirt.

Well done to all concerned. You all deserve a medal.

Pool Tournament. It is hoped to hold a doubles pool tournament next February at the Gav/BP club, Hoo, not in the water but on the green baize. This is a golden opportunity to demonstrate your mis-spent youth. Competition is open to all, come on ladies this is one event you can win. If you are interested please contact Hannah Twitchen. P.S. Caroline McKenzie is looking for a partner, preferably young and good looking. If anyone is interested, please contact ext 4124.

HATCHES, MATCHES AND DESPATCHES

Congratulations and good wishes on the occasion of their marriage to:

Clare Jones (Software Engineering)
and Matthew Clayton

Phillipa Wilson (Contracts) and
Alan Haughton (Engineering)

Congratulations and best wishes on their engagement to:

Julia Cameron and
Julian Ledbrook (Software)

Nicki Hansford (Engineering) and
Jim Shilling (Engineering)

Congratulations to:

Margaret and Adrian White (Hardware) on the birth of their daughter Helen.

Julie and Derek Watson (Software) on the birth of their daughter Nicki.

Helen and Peter Moore (Prod Eng) on the birth of their son Nicholas.

Janet (Software) and Graham Finneral on the birth of their daughter Lisa.

Lucy and Robin Stedman (Stock Control) on the birth of their first grand-daughter Fleur.

Kay and Barrie (Editor) Riley on the birth of their sixth and seventh grandchildren, Hannah and Nichola.

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Long Service Association

That up and coming youngster, Eric Gilroy (Senior System Engineer) is the latest recruit to the Long Service Association. Eric completed 25 years service with the Company last September. His friends tell me he will easily qualify for the LSA and bar (50 years service).

Fred White

I am happy to report that Fred White, ex QA Hardware team, who retired just over a year ago, has been enjoying the fruits of his greenhouse. He had a bumper crop of tomatoes and his apple cucumber had to be seen to be believed. However, his first attempt at growing melons was not quite so successful.

On a sad note his friends tell me he has not been very well. The old ticker has been playing up. After a stay in the Medway Hospital he is now waiting to go into St Thomas Hospital for further tests. On behalf of the Division may I wish him a speedy recovery and many more happy years of retirement.



Is this an 'A Ward' winning attempt?

Shangrila
Lovers Walk
Snodhurst Bottom

Dear Hopeful

I refer to your advertisement in the Summer Special. I should like to be considered for the post of Housewife.

I enclose a copy of my Curriculum Vitae. You will see that I have all the necessary qualifications. Furthermore, you may wish to note that I am well endowed; recently widowed, my husband left me the family business with a turnover of £2,000,000 a year.

If required, any of my three daughters or four grandchildren will be pleased to act as a referee.

I look forward to hearing from you.

Yours truly

Inid

INID A TOIBUOY
SWALK

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EDITOR'S NOTE

As I grow older the more impressed I become with the way mankind reacts to help those less fortunate than themselves. The last month has been no exception. On the international front there is the continuing upsurge to assist democratic movements in Eastern Europe and those in the famine areas of Ethiopia; in the UK the massive response to support the Children in Need Appeal, to which the Division, led by Production, gave generously. Much nearer home is the story of our wheelchair sportsman Paul Irons. Although too modest to admit it the credit lies with Jon Anderson. His initiative and your generosity has given Paul much joy. The way the sponsors were able to raise so much money in so short a time says much for the attitude and

Dear 'Hopeless', opps! sorry, I mean 'Hopeful',

I read your advert in the last issue of the MASD newsletter with much interest, and although you list your requirements in some detail, there is no mention of yourself. Are you tall? Short? Fat? Thin? The looks of George Michael? Or more like George Formby?! I really couldn't place my ample charms in the hands (if you will excuse the expression) of a man who hasn't even described himself (a bit like a flasher in the cold weather really).

However, a little about myself. I am 22 (stone, not years), blonde hair (what's left of it after the peroxide), green eyes (when they're not red from the gin), and four foot eleven and three-quarters tall (in my six-inch stilettos). My hobbies are Men, money, champagne and diamonds - preferably all in large amounts.

If I sound like your kind of woman then please reply in the next issue, or alternatively meet me by the revolving doors on 22nd December at noon, wearing a red carnation and carrying a copy of 'Fetish News.' So that you recognise me, I'll be wearing a smile and little else.

Regards, Little Else.

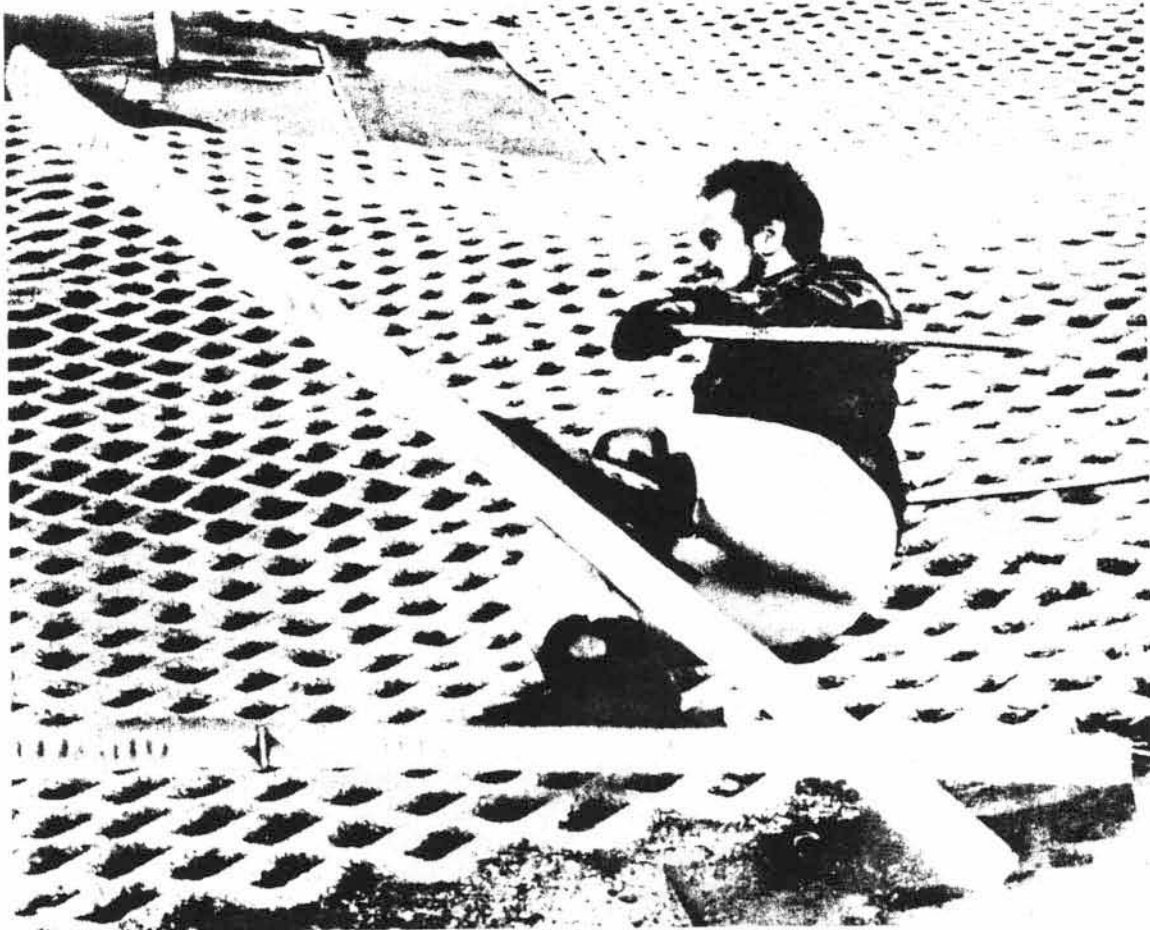
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morale of the division and reflects great credit on all concerned. Well done.

On a more mundane note my thanks to those who anonymously dropped on my desk the letters to hopeful, the crossword and other snippets. Your efforts are much appreciated.

My thanks to Caroline McKenzie, without her ability to read my handwriting and convert into neat text I would be lost. Thanks also to Tech Pubs for collating the articles and the Library for printing same.

I wish you all a joyful Christmas and a prosperous New Year. Why not make your first 1990 resolution a promise to produce an input to your newsletter?



Muovirinteeseen ei ole asiaa ilman vahvoja käsineita ja pitkähihaista takkia. Jos ja kun kaatuu, se tuntuu taatusti.

ALEC THE AUK

MASD's answer to Eddie the Eagle

Like Stork margarine his fame is spreading.
 Literal translation of that printed in the Finnish press is
 "to avoid injury you have to be well padded."
 Tech Pubs beware, you could be joining him on the slippery slope.

CONTRACTS CROSSWORD

XXXXXXXXXXXXXXXXXXXX		
XXXXXXXXXXXXXXXXXXXX		
XXXXX		XXXXX
XXXXX	1.	XXXXX
XXXXX		XXXXX
XXXXX		XXXXX
XXXXXXXXXXXXXXXXXXXX		
XXXXXXXXXXXXXXXXXXXX		

Clues

Across

1. First letter of the alphabet.

Down

1. The indefinite article.



**Have yourself
a merry
Christmas**