



May 1994

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## Foreword

As another Financial Year has drawn to a close I am delighted to announce that MSG achieved it's major targets in both terms of sales and profits and I would like to thank you all personally for your assistance in a difficult period.

I am also delighted to say that MSG has received a number of contracts over the last few months so the Order Book is looking good. The major contracts include the JAAC RTP Processor (Simon Ainsworth); the SK6 Active Hardware Mods (Tony Young); further changes to Merlin AQS 903 (Adrian White) and 4th Line Repairs for SK 6 (Don Cocker). Thanks to everyone who participated in the proposals and negotiations.

Over the next four months life will still be hectic chasing new contracts and generating proposals. This includes negotiating contracts for AQS 901 to include Colour Broadband, ACT 2 for the Italian Navy, an ACT 2 Feasibility Study for the RN incorporating 2069 simulation, whilst still chasing the Australian P-3C Acoustics contract (in theory, by the next edition of the Newsletter, the Prime Contractor will have been selected by the RAAF). Proposals will be generated or updated for the UK Attack Helicopter / US Marines where MSG is producing the S/W for the central computer, additional AQS 903 systems for IBM-ASIC and ACT 2 for the Royal Australian Navy.

On the UK RMPA programme a number of high level discussions are being held with potential partners and, by the next Newsletter, I hope to be able to announce our strategy/way forward.

Recently the project scene has been extremely busy, with numerous milestones and achievements having been made on schedule. They are too numerous to list but many, many thanks to all of you for the long hours (including weekends) you have worked to achieve these and thanks also to your families.

On the social scene please support the Mixed Hockey and the Company Annual Sports Day.

On a personal note my thanks to Jon, Gareth, Dave and Ann for "volunteering" to take over the production of MSG's Newsletter from Barrie Riley. Your views on the new format would be most appreciated - don't forget it's YOUR Newsletter.

Finally, may I take this opportunity to hope you have a well earned rest over the coming Bank Holiday weekend - many thanks once again.

*Sue Wood*

S Wood

## "My Life So Far"

Stephen Pagan



"Merv"

Stephen William Pagan (better known as "Mervin") is a by-product of a late 1940s genetic engineering experiment that went horribly wrong.

Steve was born in Plymouth in 1949 and educated at the Plymouth High School for Girls (many happy years he recalls). On reaching the age eighteen, without being found out he was actually a boy, he left Plymouth High on a quest for further knowledge and for some reason ended up at Exeter University.

After surviving a spell at University during the "Swinging Sixties", he commenced his working career with the Guided Weapons Division of the British Aircraft Corporation (BAC) at Bristol, (worrying isn't it).

Whilst at BAC he worked in the Systems Control Department and was mainly involved in modelling, I don't know about you but I can't really see Steve as a Super Model or Glamour Puss, oh you mean

modelling complete guided weapon systems in order to prove and evaluate system designs. Apparently it was cheaper to employ a few simulation engineers rather than launch missiles for real - well that was the theory anyway !

Modelling was mainly in FORTRAN on an IBM/360 mainframe running overnight batch jobs - this meant Steve had loads of free time after having solved compilation errors within five minutes. It was a well travelled job in that he had to travel 150 miles to Stevenage, HERTS, at least once a week by company coach with all the other lucky inmates for a progress report.

In the seventies, Steve found himself at a crossroads in his life - should he continue his modelling career or should he go back to school. Fortunately he was presented with the opportunity to try and break away from the defence industry by taking a NERC (yes you can guess what it stands for) mature students grant to study "Petroleum Exploration" for one year at Aberdeen University at the expense of the taxpayer - which he highly recommends!

On successful completion of his studies at Aberdeen the salary offers he received from the oil industry were disappointing and were not enough to keep the family in the manner they had been accustomed to; so the only thing left was to return to the defence industry.

He joined GMAv/MSG one year later and has always looked back as the saying goes. His first job was Performance Testing of the AQS 901 and 902 systems. During this period he gained fame with one of his greatest achievements - which was nearly burning MSG to the ground by setting light to a waste paper bin in the rig areas with a

"carefully discarded" dogend. The rising cost of cigarettes, his pyromaniac tendencies and lack of significant pay increases soon put pay to that foul habit and he has always thanked GMAv for that.

Four years later he headed up the analyst team for a short spell and still to this day he doesn't know what the hell the analysts were talking about. One year later, he moved to work with the 902 project group to help with customer and company trials. This has to be one of the highlights and most interesting periods in Steve's life with many trips and trials abroad including USA (Florida, California, Washington, Massachusets, New York, Hawaii), Bahamas, Scotland, Japan, Hong Kong, Norway, France, Wales, Azores, Madeira, Grand Canary Islands and cruises on the Atlantic and Pacific oceans in warships (alright we've got the message)! . These trips have helped him to maintain his interests in mass consumption of food and alcohol etc.

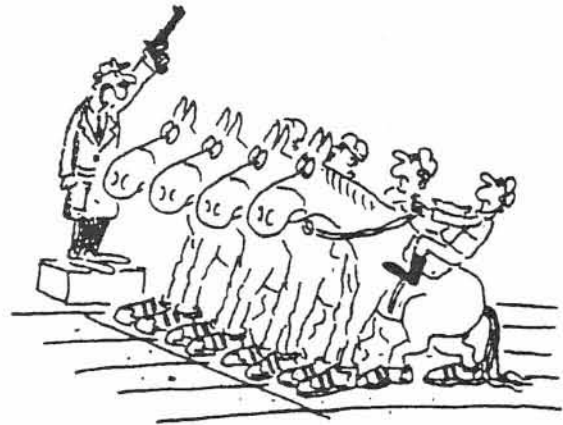
Seven years later he found himself driving along the M25 to Frimley each day to participate with BAe in the Merlin bid. Thank god that job only lasted one year - Steve says he knew we were in trouble when he realised that GEC knew as much about helicopters as BAe!

Since then, his career has taken a step back in time and he is now working for the analysts group - *deja vous!*

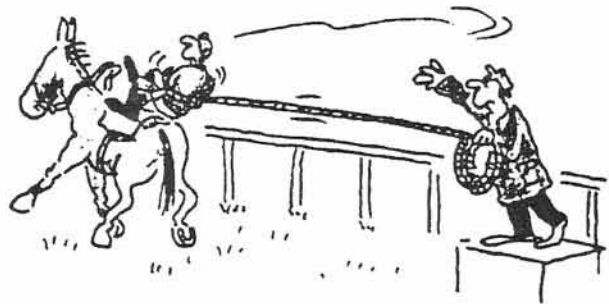
He lists his main hobbies as rugby, drinking, and sex but not necessarily in that order and supporting Bristol Rovers - but I'm not sure if that is a hobby or not.

### Comic Cuts

#### "The National Cock-Up"



*"On your marks ...."*



*"New recall method"*



*"We've forgotten to organise a finish line"*

## MSG Programme Reviews

### AQS 901

During the last two months we have been involved in a series of meetings with both the MOD and the RAF and are now at the stage where work will shortly commence on the colour modification package.

Movement in placing tasks for the transfer of DCU 3 firmware, the installation of the solid state Program Load Unit and performance testing of Nimrod Software Teams 5.2 package is slow but authorisation and contract placement is expected in the very near future.

### 901/902 PDS

FY 93/94 contract is complete and the follow on contract for FY 94/95 is currently being negotiated. The new contract is expected to cover the next three years.

On-going developments and planned future developments of the 901 and 902 systems are expected to maintain the level of PDS effort for the foreseeable future.

### AQS 902

#### Royal Navy Sea King Mk 6

The Issue 5 software continues as planned with all major milestones being successfully achieved. Thanks are extended to the Integration, Software and Hardware teams for their efforts in ensuring these modifications were implemented and integrated without any major problems.

Recent Royal Navy trials of the prototype active hardware mods have demonstrated significant system performance improvements which are associated with

this modification. The contract amendment to proceed with the full development of these mods has now been received and work is progressing well.

The contracts for selection and procurement of a video tape recorder and for 4th Line Repairs have also been recently received.

### AQS 902 Colour

The 'go-ahead' has been given to develop a 902 Colour Acoustic Processor which will be used during extensive sea trials in a distant and warmer location. At the time of going to press this task is scheduled for September. Initial progress is encouraging, with the system requirement and top level design accepted ahead of schedule. In order to verify our design, the 902 data dump facility is being modified to enable the 902 acoustic system to connect with Alan Smith's acoustic colour demonstrator.

### Pakistan

With seven major sub-contractors to monitor through monthly progress meetings Paul Adam is spending a lot of time on the road. Happy to report there have been no further brushes with the law, (by either PRA or the Program Manager.)



A program review was attended at PNS Mehran in March where the layout of equipment and modifications to the aircraft were finalised.



### Royal Swedish Navy

Since the New Year the 10KHz lofargram modification has been successfully integrated and tested. Initial impressions from the Swedish Navy, who witnessed the changes during a visit in February, were favourable although minor alterations were highlighted. These alterations have now been implemented and the final SIDT will take place at the end of May. A special mention to P. Stancliff must be made as rumours are out that the requirement specification will be ready for review prior to SIDT - Thanks Phil.

### AQS 903 Merlin Programme

Having now successfully concluded all the major design reviews, the programme is well on course for making the two critical development deliveries during 1994. For those of you who are not familiar with the Merlin Programme the first of these deliveries will be in June this year and will contain a full colour acoustic capability. The second delivery in December, the first full production system, will be fully compliant with the IBM-ASIC requirement.

The last few months have been very busy for the MERLIN software team as the major Drop 2 software milestones all fell in this period. The Test Readiness Review (TRR) for the software was held, rapidly followed by the Witnessed Pre-Integration Testing (WPIT). The latter consisted of a five day testing period in front of the customer where the IST, PIT and loading scenario tests were all successfully run. The customer was extremely impressed with the quality and ruggedness of the package, and of the progress being made.

In parallel with the software, the first B model rack system is nearing completion and is expected to be handed over to the verification team at the end of April.

In addition to the main development programme the team are also heavily involved with preparing reliability and environmental qualification test programmes. The preparation for these tests involves the design of new test equipment together with the commissioning of new Preproduction rack systems which come complete with their own set of teething problems - free of charge. If this was not enough to contend with there are also the ancillary problems to overcome such as having the wrong sort of ICE for the Ice formation environmental qualification test - (Excuse borrowed from British Rail)!! The solution to this problem involved shipping an AQS 903 system with all its support equipment to Warwickshire where apparently they had the right Mil. Standard Ice.

Work has now commenced on the Drop 3 software package which will include the latest agreed changes from IBM (Block 2 changes).

### ACT 2

The negotiations with the Italian Navy are on-going whilst we wait for the results of an RF site survey at one of their airbases.

The demonstration of ACT 2 in New Zealand and Australia went well. In actual fact it went so well in Australia that we offered to lend them the ACT 2 system for a couple of weeks. This was due to their other simulator, which is made by a strong competitor of ours, who are located somewhere on the South Coast of England, suffered from a smoke and burning problem (a coal fired version of ACT - what a novelty). It is hoped that this tour will generate new ACT 2 business opportunities in this part of the world.

Discussions are continuing with the Royal Navy on the subject of a Feasibility Study

which will look into the possible fitment of an ACT 2 system with 2069 Dipping Sonar simulation to their Sea King Mk 6 helicopters (HAAT - Helicopter Airborne ASW Trainer).

### S/SE S/W Progress

The development of the Sonics Sim/Stim ACT for IBM-ASIC continues to progress on schedule thanks to the enthusiasm and hard work of all the S/SE team members. The programme was one year old at the end of April and has now entered into the Formal Acceptance Test phase.

The Critical Design Review with IBM-ASIC was held at the end of December and the Test Readiness Review was completed at the end of March. Both reviews were passed with flying colours.

Integration testing was completed at the beginning of April and most of the Internal Acceptance Tests have been signed off by MSG QA.

Prior to Customer witnessed testing, the system must undergo a Physical Configuration Audit (PCA) and the first stage of the Functional Configuration Audit; both scheduled at the end of April.

As any of the S/SE team will tell you, its a very busy time.

### GEMMA

Work on the GEMMA tactical re-host continues. The Wave Form Generator and graphics interface processor are complete, which now leaves the main database and VME/ARINC interface to complete module testing prior to Integration.

### Tactical Demonstrator

The tactical demonstrator workstation, which is housed within the MSG fuselage structure, includes an on-board scenario generator which runs within the same machine. This scenario generator is now being modified such that the scenario is generated on a separate machine which forms a centralised database of contact positions, speeds, identities etc. A number of workstations may then be connected to this central database via Ethernet links to allow each workstation to display and manipulate the same tactical data. This type of architecture is similar to how a real system might be implemented. 1553 would probably be used as the communication network allowing interface between the tactical system and the various sensor systems (Radar, Acoustic, ESM, etc).

Once this task has been completed, a variant of the tactical workstation called the NAV/COMMS workstation will be developed which will have slightly different functions to the Tactical workstation in order to assist in Navigation and the control of communications such as the Link 11 interface. Link 11 is effectively a system which allows co-operating aircraft, ships and ground stations to share tactical information and route commands.

### Colour Broadband Demonstrator

The 901 colour broadband demonstrator has been in use by JAAC (Joint Acoustic and ASW Centre) for some weeks and is already demonstrating the value of colour lofargrams. The feedback that we have is that JAAC are very impressed, albeit they are not quite so keen on the tasteful set of colours that we decided to use. We have now supplied them with a modification whereby they can design their own colour

schemes. Numerous demonstrations of the system have now been made with a very positive response being given by nearly all who see it. The MOD are very keen to see this (or similar) system supplied by us as an upgrade kit to the Nimrod Fleet.

### PFC Test Set

The last period has seen the completion of QA witnessed Integration and System Testing and formal delivery of the software to FCG. A number of further updates have been requested and we are soon to complete regression tests for another formal delivery.

With the first flight of BOEING 777 scheduled for the beginning of June, FCG's rig room has become a busy place. Use of the PFC Test Set has reached a peak and MSG continues to support the FCG PFC Integration programme by supplying FCG requested S/W enhancements. A list of further 'Critical Updates' is currently under discussion and so there is plenty to keep the team busy up to (and possibly beyond) the current end date at mid 1994.

### Advanced Signal Processor

As some of you will be aware, we have recently been awarded, in the face of very strong competition, a contract for a laboratory based 4 channel DIFAR processor. This system will be based at the Joint Acoustic and ASW Centre (JAAC) at Farnborough and be used for the evaluation of broadband processing.

The system consists of a high throughput signal processor, based on a five slot VME chassis which is connected via ethernet to a DEC Alpha workstation with the output being displayed on a high resolution colour screen. The signal processing is based on algorithms used in the AQS 903 system

with the addition of other facilities such as null steering and colour bearing processing.

Delivery is planned for 16 May 1994 with the Customer witnessed acceptance test on Friday 13 May (an unfortunate choice of date).

### Comic Cuts

#### "The Holiday Season"



*"Yesterday he kicked sand in my face,  
today he blew his nose on my  
handkerchief."*



## Root'n, Toot'n, Shoot'n

By "Little Rambo" Barnaba

If you hadn't already heard of Quasars then you must have only just joined the Group. With a phenomenal 60 participants, the Group staggered (NO, metaphorically, Tony) into the bright bustling lights of Gillingham Town for an evening of sheer blood, sweat, tears and maybe even terror. All this means the Group was intending to do battle during a game of Quasars.

For all Quasar virgins let me explain the background to the game play. The Group is divided into four teams of fifteen, imaginatively named A, B, C and D. Then two teams at a time do battle against each other in a two level complex in semi darkness. Scarey or what? To add to the effect of a future world environment, all team members are made to wear body armour thus resembling something out of Robocop! Mind you, some people will never look like Robocop, eh Pete?

So you're standing there, tailored up, armed up, briefed up, loaded up, the lighting is down, the music is loud, the Ultra Violets lights are on and you now realise why you're the only one with a white Tee shirt on. Dark clothing is definitely a benefit in this game as UV has a tendency to illuminate certain colours like white or white. I think my teeth received 46 direct hits in the first game along with Darren King's hair slide!

The two teams in the arena do battle for points. One team is red the other green, as defined by body armour and laser colour. Points are gained by shooting your opponents and are lost by being shot by the opposition, your own team mates or if its been a really bad day by yourself. You are awarded 200 points for hitting an opponent and you lose 100 for being hit, in addition to that each team has a base. If

you shoot your opponents' base you gain 1000 points but beware, it is Booby Trapped. You realise you have been hit when your front piece of body armour vibrates. A certain participant was seen to be wandering around begging to be shot. No names, but today's clues are "strawberry" and "blonde". Just to make the game more fun, the organisers have painted all the walls black, creating an immense problem for a certain gentleman who ran into a wall and broke his glasses. Today's clues are "Simon" and "Ainsworth".

That's the game and here are a few of the after game comments:-

You B\*!@a\$D. Everywhere I went you shot me!!!  
I hate you.

My gun wasn't working properly!!!

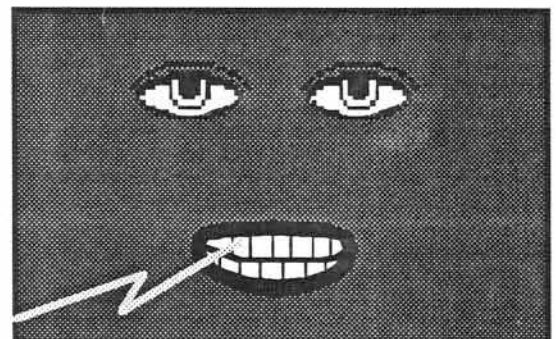
Was that you I was behind?

Did you see me hiding in the corner?

I don't think my vibrator stopped all of the game.  
I could feel your gun in my back most of the time.

Doesn't your hair look funny in Ultra Violet Tony?

Anyone interested in attending the next Quasars game, which is likely to be on the 31 May 1994, should contact Phil Barnaba.



Photograph of an in-bound shot hitting Sam Holder's teeth during the recent Quasar Games



## *The Marketing Report*

Over the last six months the MSG Marketing Department has been involved in many opportunities including:

- Turkish Surveillance/MPA programme
- Royal Australian Air Force P-3C refurbishment programme
- UK's Replacement Maritime Patrol Aircraft programme
- Royal Netherlands Navy P-3C Capabilities Upkeep Program (CUP)

to mention just a few, as well as playing host to many MOD visitors.

In October last year a series of meetings took place between GEC-Marconi Defence Systems and MSG which highlighted a potential programme in Turkey that should, all being well, surface its head in the latter quarter of this year. The outcome of one of these meetings led MSG to visit CASA in Spain who have an active interest in this potential programme. During our visit to CASA they gave us a full brief on the programme which would include the supply of CASA's Persuader, the maritime version of their CN 235, to Turkey. We in turn responded, at their request, with a presentation on our capabilities and products.

CASA have since informed MSG that we are currently their preferred supplier for acoustic processing systems, which is nice to hear, but this is not a reason to sit back. You can see by recent developments in certain projects that we have no intentions of sitting back and we are continuing to enhance our products so as to maintain the leading edge over our competitors.

Earlier this year Pat Keast and Peter Duckworth visited our friends down under in New Zealand and Australia to discuss

and demonstrate the ACT 2 system. This visit also provided the opportunity to check up on the RAAF P-3C programme.

Since Christmas the Marketing Department and a few other members of the Group have been heavily involved in assisting Divisional Management in the run up to the UK Replacement Maritime Patrol Aircraft programme (UK RMPA). For those of you who don't know this is the MOD's planned replacement or update of the existing MPA, the Nimrod MR Mk2. This programme is not only of great importance to GMAv but also to the other GEC-Marconi companies who have products and services to offer. It is therefore vital that all the permutations and computations are studied in great detail so as to arrive at the winning formula. This programme is now picking up speed so watch this space.

We have recently been invited to submit technical data to the Royal Netherlands Navy who are about to conduct a feasibility study to ascertain if their planned Capabilities Upkeep Program can be met within the schedule and the budget. Discussions are taking place to define the company's policy for this programme and updates will be issued as appropriate.

Since the beginning of the year the Group has played host to many MOD, RAF and RN personnel who have visited us for presentations and discussions (exchange of ideas) and to see demonstrations of our latest developments. Back in February we were visited by Air Vice Marshall Sir John Harris and his party who witnessed the advanced tactical demonstration (in the fuselage) and the colour/broadband and transients demonstrations - the art of the possible. He and his party were impressed with our advancements in acoustic and

tactical processing and offered words of encouragement.

In July we will be participating in the Underwater Defence Technologies (UDT) exhibition at the Wembly Arena, where MSG will be sharing a stand with Support Division. In early September we will be represented at the Farnborough International Airshow, and will be sharing the stand with all the GEC-Marconi companies. We also hope to be able to sponsor and participate in the Fincastle ASW Competition - which is always good

value for money allowing direct access to operating aircrews and senior officers of the RAF, RAAF, RNZAF and CAF.

Earlier this year the Marketing Department put on a presentation which included a question and answer session detailing the future prospects for our acoustics systems. This was well attended and the subsequent feedback suggested it was a worthwhile venture. Sometime in the near future it is intended to expand the presentation to cover the tactical and ASW training area of our business.

## Editor's Comments



That's it folks, the first edition of the MSG Newsletter under its new editorship. For those of you who do not know who the Newsletter Production Team comprise let me introduce them to you.

Firstly we have Ann Whitbread who without her excellent skills around the keyboard and her patience with the Editor we could not produce the Newsletter. Next we have my two spies and Assistant Editors Gareth Owen and Dave Hewlett who always keep their ears to the ground, so mind you don't stamp on their heads and myself, Jonnie "5 Bellies" Anderson as the Editor. Finally I must not forget the Library who do the most important job of running off 250 copies.

Well I hope you all found the Newsletter a useful update/in-sight into some of the

Group's programmes, new people and goings-on. As this was our first edition at the helm we would welcome your comments, both good and bad - one can only assume that if we don't receive any feedback, that you, the readers are happy with its content.

The next edition, all being well, should hit the streets some time in August, so please don't be frightened of putting pen to paper any time during the next three months. We will welcome your inputs and ideas all the time.

Finally before I sign off may I thank all the people who have provided articles for this edition and can I please encourage you to continue to do so.

Don't forget people, this is your Newsletter!

*Jon. Anders*

## *Hello and Goodbye*

Since the last issue of the MSG Newsletter there have been a number of people join our happy band and I'm sad to say a number of departures.

This issue we would like to welcome Barry Wallington, Andre Sadeghpour, Norman Prior and Mark Testi and we have to say a sad farewell to Jack Wells and Alex Graham. So it's now over to our new faces to introduce themselves and the departing pair to tell us their life stories and say their farewells.

### Barry Wallington

After a 5 year apprenticeship in HM Dockyard, and 3 years in the REME (mainly in North Africa & Cyprus), I joined Elliott Bros in 1960 as a Wireman in IN Division. I worked on Blue Steel and Aircraft Equipment until I moved into the Test Department in 1962 working on the Jaguar Test Set development and the Nimrod Production Test equipment.

I moved into the Training Department in 1973 as an Electronic Instructor training apprentices. In 1983 I helped organise and implement the company's first YTS scheme. In that year I became Superintendent of the training centre at Hopewell Drive.

For the last eleven years I have been responsible for the day to day running of the training centre including recruitment (the latter years with Personnel) of technical trainees. During my 20 years in training I have been involved in the training of over 1500 young people.

I am married with a son and married daughter and have an 18 month old grandson. I am a committed Christian,

being authorised as a Pastoral Assistant to Christ Church, Luton.

I also enjoy photography and entertaining as well as "baby sitting".

### Andre Sadeghpour

Hello, to those that know me and for those that don't allow me to introduce myself. My name is Andre and I have recently joined the Hardware Engineering team working on CAMERA. Having been on loan from CACG to MSG since June of last year I have got to know quite a few people, however, here's a quick recap. I started with the company as an apprentice studying engineering on a part time basis, once the apprenticeship finished I was taken on by, what was then, CACD logistics. After a couple of years spent there calculating failure rates, generating symbols for components etc and then obtaining the necessary qualifications, I moved to the Engineering Department of CACD. I spent my time there on various projects. First, on the Tornado projects of CSAS, SPILS and Sage (flight controls and test equipment for the Tornado aircraft) then onto the American projects of T-45 (yaw damper) and F-22 (test equipment). Still, enough about work, as for my spare time, I'm keen on most sport especially fencing (not the type around gardens I might add!). I also have an interest in languages, at the moment I'm trying my hand at French and Spanish. Other interests, well, socialising and pubs on a Friday night sounds good.

I'd better sign off now before I ramble on too much, but for further details contact me on Ext 3581?! (Especially those of you interested in Fencing!)

### Norman Prior

Hi, I have been asked by the editor to say a few words about myself.

I graduated as an applied physicist at Bath University. I joined the company immediately after, entering what was then FARL. For those new to the company, FARL was based at New Road, Chatham and was an advanced development laboratory. It later became TSRL, which has since been disbanded as part of the restructuring of the company.

My early days were spent developing a variety of sensors (for the measurement of position, pressure, fluid level, human eye position, etc.). I increasingly specialised in fibre optic technology, which promises immunity to Electro-Magnetic Interference, particularly in signal cables, as well as providing high data rates (well beyond Gigabits per second). In 1987, I joined CACD and worked on the fibre optic data bus for the European Fighter Aircraft. This aircraft has just successfully flown on its maiden flight.

With the recession in our industry, work in new technologies (such as fibre optics) has been severely cut back. Since MSG had plenty of work, I joined the group 'on loan' in May 1993, to assist with environmental testing of the AQS 903 Merlin Sonics Processing Rack. My previous experience had been testing of small sensors, so the size of the test unit was a little different! Due to the tremendous success of my work (the Temperature Shock test at Borehamwood Wood was nothing to do with me, honest!) MSG decided they could not operate without me and made the position permanent!

I am very happy to be here. One feature is noticeable within MSG, the working atmosphere is "generally" very friendly at

all levels. This is appreciated, and others who have spent time working in the group have also remarked on this. I say "generally", as I sit close to Derek B. Still, if you had to spend all morning explaining to a variety of engineers why their job can't be done immediately, and then all afternoon explaining various tasks to production because the ELS's and details are incomplete..... (Only joking Derek, this won't delay my next job will it?!).

My main personal interests are golf (I frequently study the flora and fauna amongst the trees and undergrowth on my way round the golf course).



I also keep honey bees. Having been attacked by the little devils on many occasions, I can see why they have survived since the dinosaur age! I should explain that I was pulling their hive apart at the time in order to inspect their health and condition.

### Mark Testi

Giddyay. My name is Mark Testi and I am from GEC-Marconi Systems in Australia. The AQS 903 has been proposed for the Australian P-3C Orion upgrade and I am here to learn how it works. (I also heard there was a pretty good chance of playing for the English cricket team!)

Before joining GEC-Marconi Systems in Sydney I worked for two other defence



companies - AWA Defence Industries and Australia Sonar Systems (the Australian subsidiary of the French company Thomson Sintra ASM). During this time I worked on a variety of acoustics and signal processing projects and spent a short time in Paris working on the Sadang processor for the French Atlantique maritime aircraft. I have been in MSG for almost three months and am currently working in the Firmware group.

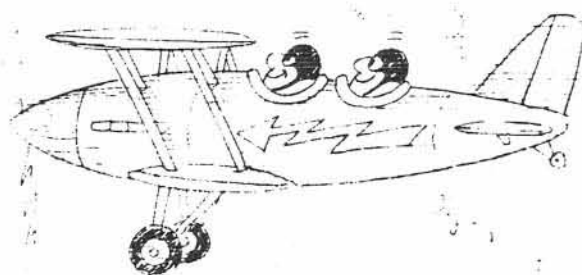
In my spare time I like playing basketball, tennis and golf and enjoy travelling. I'm sure I'll get to meet a lot more of you over the next 18 months. See you around.

P.S. - I don't watch 'Neighbours' and I have no idea who Beth marries!

### Jack Wells

After 18 years with the Division I am retiring at the end of May and have been asked to write a few lines for the Newsletter, though it is a bit like writing one's own obituary! I joined in May 1976 after 29 years in the Radio/Radar branch of the Royal Navy, retiring as a Warrant Officer. I started in MASD as the Project Administration Officer for AI Radar and Miscellaneous projects in 1978. After a few very busy weeks, the prototype SPU was built and to everyone's surprise it worked - the birth of AQS 902. I have been with 902 in all its many shapes and forms (except ISK!) ever since, which isn't a bad record I suppose.

It has been an interesting 18 years, there was a period when I spent one day a week at the MOD in London, which made a nice change from Rochester, as did the odd trips to Yeovil, Farnborough, Borehamwood etc., often by company aircraft (the opening of the M25 seemed to put an end to 0830 take-offs, worse luck).



The highpoint of this period was probably the flight back from Farnborough by helicopter, it was a case of helicopter or Southend, Rochester was out. There was also the day trips to Madrid and Stornaway, Stornaway is definitely off my list of places to visit!

There have been many changes in the Division/Group of course, six DMs/GMs for a start, and the Group has definitely shrunk, but there are still some faces around who have lasted the course as long as I. To them, and to all of you I wish every success in the future. As far as I am concerned MSG has been a happy place to spend one's working life, surrounded by very friendly people.

### Alex Graham

I joined the company in August 1983 after completing my degree in Computer Science at the University of Lancaster. I started in Marconi Avionics as a Software Engineer working on the Jaguar Fly-By-Wire programme within CACD. Fairly quickly, I moved into the CACD equivalent of our Utilities group and from there, moved into the CACD computing services group. Whilst here I ended up having to do systems management and systems programming for CACDs VAX system and from that point on, my work within the company has all been related to generally looking after computer systems and the people who use them.

Sometime round about 1988/89 I applied for the job of Computing Services Manager within MASD. After my first interview

with Jayne Wood and Steve Marsh I thought "Oh well, I didn't really want the job anyway". Jayne, in her usual calm quiet and gentle manner, had all but flayed me to death during the interview (well it felt like that to me!). However, since I did join MASD it couldn't have been as bad as I thought it was.

Since I joined MASD (now MSG) I have been lucky enough to look after a number of different teams. The Utilities Group, Configuration Control, Technical Publications and Drawing Office have all worked with me at some point. However, during all my time with the Division/Group my main area of activity has been the MCS.



I have no particular horror stories relating to my time in MSG, but I still remember a rather damaging night out with the Utilities Group. I will never, ever, ever drink Cream Soda cocktails again (well, not for a while)! I also do not recommend long exposure to spray mount adhesive. Gerry Wood, Steve Keefe and I worked late one evening finishing off a proposal. It had lots of colour pictures to be stuck in to it's 14 copies. I'm sure we were all high as kites by the time we had finished!

I have now decided its time for a change and have moved into GMAv Computer Services where my responsibilities include computer integrity and security as well as looking after all of the company's business systems, Vaxs, Macs, PCs etc. I am happy

to hand over the reins of MCS to Keith Davies and I would just like to wish all my friends and associates in MSG the very best wishes and good luck (especially to Keith and MCS). I would like particularly to thank one front office manager with whom I had many long chats, even after he did say the best way to improve the MCS was to get rid of me!!

### Comic Cut

A newly commissioned junior officer admonished a recruit who failed to salute him on the barrack square. To teach the man a lesson, he ordered him to stand to



attention and salute 100 times. The Adjutant came upon the scene just as this bizarre punishment began. On being informed why it was imposed, he said: "I must remind you that it is the duty of an officer to return salutes. Carry on!"

## *The History of ISO 9000*

Post Second World War pressure was first applied by the Military to establish some sort of quality standard. This was initially achieved by the military procurement authorities having their own 'inspectors' check product prior to acceptance at the suppliers. This was followed by the Defence Standard 05 and AQAP series of documents which shifted responsibility for 'product quality' to the actual supplier. During this period major companies such as Ford, BT, British Gas and Marks and Spencers began to establish their own quality system standards and to assess their suppliers.

To cut what could turn into a long and possibly arduous tale these developed into the BS5750 series and were ultimately rationalized in conjunction with the AQAP's and became the ISO 9000 series, (easy, yes).

### The Purpose

The purpose of ISO 9000 is to provide an international standard for the establishment of a 'Quality Management System', usable by all parts of industry be they civil, military or service. The implementation of the standard is varied and widespread, the output however should always be the same, a documented system that provides consistent quality with the aim of continuous improvement, thus providing customers and potential customers a high degree of confidence in the supplier.

### Situation in Displays Division

To date Lloyds Register (the assessor) have visited twice, once as a prelim visit and in April two auditors carried out a desktop review of our 'Quality System' documentation. The purpose of which is to

ascertain that our documented system meets the ISO prior to our full assessment in early July 1994.

### Displays Division Documentation

Firstly who are Displays Division:

- a. Display Systems Group Rochester (DSG(R)).
- b. Display Systems Group Edinburgh (DSG(E)).
- c. Mission Systems Group (MSG).

Divisional Documents :

Displays Division Quality Manual.

Displays Division Procedure Rochester (DDPs).

These documents are applicable to all groups within the division. Below this level of divisional documentation is the MSG MSI and ENCOP procedures.

This total suite of documents is our 'Quality System' which will allow us to meet ISO 9000.

### What it means to you?

Initially viewed a 'pain', but the 'system' is there to help us all perform our respective functions consistently and better and at a level that is meaningful.

### What do you need to know?

The Divisional, Group and Project documentation that is relevant to the function/task that you as an individual and team member perform.

### How do I find out?

The Rochester site have produced a booklet that outlines the fundamental requirements and provides guidance on

ISO 9000, this booklet will be (has been) provided to us all.

MSG will be carrying out training sessions for all group members. This will be in the form of a presentation and question and answer session.

If you need to know ask your supervisor, who if in doubt, should seek further guidance.

### The Way Ahead

The actual assessment is now two months away, education and commitment is what is required, if you don't know, say so and

as the AA always say 'ask a man who does'.



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## Displays Division Quality Policy Statement

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"It is the policy of Displays Division to seek excellence in customer service through the free exchange of ideas, open management style and a culture geared towards continuous improvement. This is effected by implementing Total Quality Management principles from initial concept through contract negotiation, design and manufacture to after sales service.

Through this policy Displays Division will retain and enhance its reputation as a world class supplier to industry by producing affordable, high quality solutions to customer requirements"

A stylized, handwritten signature in black ink, appearing to read 'P. Kenyon', positioned above a horizontal line.

P. Kenyon  
Divisional Managing Director

**GEC-Marconi**  
**AVIONICS**  
*Displays Division*



## Attack Helicopter Programmes

You have probably heard of the Venom proposal for the UK attack helicopter. Did you know that MSG has been selected to propose and supply the Mission Computer Subsystem? MSG has also been selected to bid a similar subsystem for the IWS (Integrated Weapon System) for the USMC AH-1W Super Cobra.

### Venom

The prime contractor is the Venom Management Team (part of Displays Division). MSG is the subcontractor for the MCS (Mission Computer Subsystem). The MCS consists of two dual redundant Mission Computers. The mission computers are based on the Tornado mid life update units and will be supplied by DSG(E). The ADA software will be written by MSG. The unit has three functions:-

1. Input / Output            1553, Analogues,  
                                     Discretes, RS422
2. Mission Processing      2 x 68040 processors
3. Graphics Processing    2 colour head down  
                                     displays  
                                     1 limited function  
                                     display  
                                     1 helmet

The proposal to procure and equip 91 new AH-1W Super Cobras was delivered in November '93. Firm Fixed Prices are about to be submitted. Contract award will be May '95. The Venom Team are quietly confident.

### IWS

The prime contractor is EER Systems in Washington DC. The MCS is similar to the Venom subsystem, but the digital map will be included in the computer. The analogue and discrete I/O will be moved to the displays to make room for the Digital Map.

The programme is a cost plus incentive contract to supply two production aircraft. This proposal is scheduled to be delivered to EER in June of this year. The difference on this programme is that approximately 230 AH-IWs are currently in service and all will eventually be refitted.

### MCU Demonstrator

As part of our marketing and risk reduction effort on these two programmes MSG has written some prototype ADA code which generates six of the proposed display pages. This code runs on a development Mission Computer which is on loan from DSG(R).

A series of demonstrations of MSG's Mission Computer, driving a Collins colour LCD display, was given in Washington DC on the 18th and 19th April. The software and hardware were stable and the demonstrations went without a hitch.

Two USMC Major Generals and the whole of the AH-1W project office attended. The presentations and demonstrations, which also covered the cockpit layout, digital map, data loader and helmet, undoubtedly established the credentials of the team and significantly improved our chances of winning this major programme.

Many thanks are due to Steve Crowe who wrote the demonstration software in an extremely short space of time.

Anyone wishing to see the demonstration should contact Trevor Taylor.

## Miscellaneous

### Hatches, Matches and Dispatches

Our Congratulations are expressed to:

Paul and Mandy Barnicott on the birth of their son Thomas who was born on 09/Feb/94 and weighed in at 3lbs 11oz.



Jane Strange and Graham Phillips who tied the knot on 16/Apr/94.

Linda Atkins and Simon Henderson who are to be married on 30 July this year.

### Notable Achievements

Our Congratulations are expressed to:

Sam Holder who reached the grand old age of 21 on 22/Apr/94.

Roy Davis who has an IQ of 161 and is now a fully paid up member of MENSA.

Gareth Owen who passed his Diploma in Management and now goes on to study for a Masters Degree in Business Administration.

### Sports Day

In an attempt to breathe new life into the Company's Annual Sports Day it has been decided to do away with the traditional field, track and swimming events, and to stage an "It's a Knock Out" type competition. The date and venue for the competition will be 11 July 1994 at the GMAv Social Club at Hoo. The five-a-side football, the netball and the tug of war competition will continue to be held on this

day, with the hockey, bowls and swimming competitions being held on other dates.



Any persons interested in participating in Sports Day, please contact Hannah Everett on Ext. 3353.

### Forthcoming Hockey Tournament

The Intergroup Mixed Hockey Tournament will be starting shortly. MSG have become quite attached to the trophy over the years and are again keen to show that Hockey is just one of the Team's attributes the other being drinking. Any players interested in participating should contact Ian Smythe on Ext 4440 or Jon Anderson on Ext 3378.

### Social Committee

#### Definition

A group of people who try and meet regularly to organise various social events for your benefit and enjoyment.

#### Participants

Colin Tredwell, Derek Watson, Dave Hewlett, Steve Keefe, John Cayzer, Gareth Owen.

The majority of these people were nominated by yourselves. Membership is not exclusive or expensive so if you feel that your team or group are not represented by any of the present participants please nominate a representative and send him/her along to

the next meeting which will be on 25th May in Colin Tredwell's office.

### Previous Events

Events that have been organised in the past include the Christmas Party (some of you will still remember the party games), Summer Ball (most of you will have forgotten the singing), Go-Karting, Bowling, Quiz nights, etc.

### Future Events

Events that are currently being organised include a Spring/Summer party at the Walnut Tree, Bowling (venue to be decided), Quiz Night. The dates for these events will be publicised closer to the time.

### Benefits

There are many benefits to be gained by you if you support your social committee. Any suggestion will be listened to and if enough support can be obtained to run the

event, it will be done. If you suggest ideas to the committee then you will get the social events that you want.

The social committee also has a small amount of funds that could be loaned to help pay deposits if you wanted to organise an event within your team or group. This money would have to be repaid to the committee but it would mean the organisers of smaller events wouldn't have to put their own money up as a deposit.

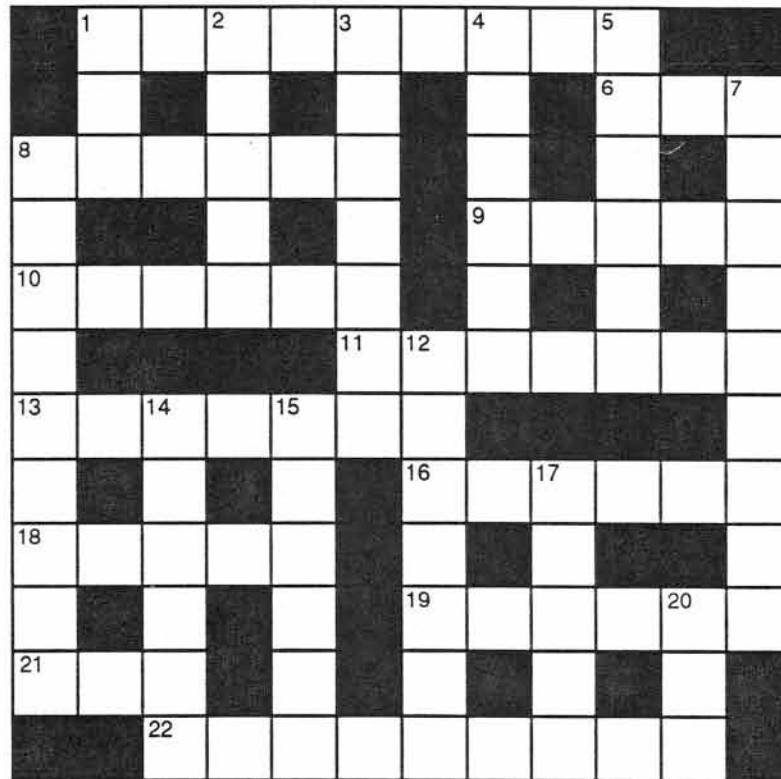
The social committee is there for your benefit. If you don't think that it's being run correctly or it's not organising the events that you want to attend, then it's up to you to help change that. Most of you will know at least one person on the list above but if you don't, maybe you should nominate someone that you do know. To be effective the committee needs to be a representative sample of the group, nominations are welcome to try and achieve that.

### Comic Cut

*"Cheats Never Prosper!"*



This week a golfer who was accused by two of his club mates of cheating during several golf competitions lost his legal battle to prove his innocence. His legal bill was estimated to be in excess of £250 000.

"Crossword"

Note: The answers will be displayed on the notice board in a weeks time.

Across

- 1 Not Keen (9)  
 6 Possessive pronoun (3)  
 8 Given by nature (6)  
 9 Cake topping (5)  
 10 Photographic apparatus (6)  
 11 Huge (7)  
 13 Irreverent (7)  
 16 Canadian city (6)  
 18 Leaf of evergreen plant (5)  
 19 American Indian (6)  
 21 Prophet (3)  
 22 Advantageous (9)

Down

- 1 Move fast (3)  
 2 Not tight (5)  
 3 Keep within (7)  
 4 Assert strongly (6)  
 5 Venetian painter (6)  
 7 Set apart (9)  
 8 Not able (9)  
 12 Mythical sea creature (7)  
 14 Excel in rivalry (6)  
 15 Slumbering (6)  
 17 Rub harshly (5)  
 20 Head adornment (3)