

The **ADDVISOR**



The Shape of Things to Come

With the world rapidly changing around us, many people are beginning to ask questions about the future of Defence orientated businesses. With this in mind Bruce Hopkins gazes into his crystal ball.

Notwithstanding the Gulf crisis, many western nations are dramatically cutting military spending, and the defence equipment market - currently our main business area - is shrinking. So what is the position? What are the prospects in the avionics market and how are we going to get a piece of the future action?

First, don't panic! We do have 'bread and butter' contracts which form the basis of our business for the immediate future. The good old reliable F-16 HUD system continues to sell, and other on-going contracts include equipment for Tornado, EH101 and C-17 aircraft. Our Night

Vision Goggles are selling well, Cats Eyes and Ground Owl to the US and UK governments respectively.

That's all well and good, you cry, but we need new business. Absolutely right! We are, of course, constantly striving to find customers, both for current equipment and in new product areas.

Well, where is the new business? As the defence equipment market shrinks, it is necessary to try and diversify into other areas, such as the civil avionics and electronics sectors. However, the civil aerospace market is, as they say a different ball game! It is bitterly competitive and the steep and rocky path to success is strewn with the bones of those who dared but failed. Nevertheless, the rewards can be substantial for those who succeed and we must now compete in selected areas.

However, these is still a

substantial, long term basic need for most countries to defend themselves, and there will remain a firm, albeit smaller, world wide market for military avionics. While NATO and the Warsaw Pact countries cut back, other markets are developing, notably the Far East.

We will continue to seek defence business in three main areas. First, our traditional USA and European markets. Potential remains for advanced technology products both for new aircraft, such as the F-22, EFA and next generation helicopters, and in the retrofit market, notably the Tornado and F-16. Recently we have won contracts for FA which will ensure substantial work into the 21st Century.

The second main area is the integrated aircrew helmet display system. This is a new product area and has great potential as a future 'core' product.



The Integrated Night Vision Helmet

Accordingly, the Division places great emphasis on winning early contracts. At the moment we are participating in flight trials with the German Army Air Corps, and we are involved, with two other competitors, in the I-Nights 'fly-off' programme in the USA. The winner of I-Nights will establish a clear lead in this important new product area.

The third area is the combat aircraft upgrade or retrofit market, in which the Division has considerable experience and expertise both for equipment and for system integration. As the

costs of new combat aircraft rise, seemingly exponentially, few countries can afford new aircraft fleets and must, therefore, look at refurbishing and upgrading their in-service aircraft. The best example of this market is the Northrop F-5 Tiger II aircraft. Currently there are over 1700 F-5's in 26 countries, outside the USA, the majority of which will remain in service for many years. A number of upgrade programmes for this versatile aircraft are expected; we will endeavour to make sure that we win a good share of this market.

Finally, back to the civil market. Great efforts are currently being made to break into the market, recently identified, for commercial aircraft head up displays. The Air Carrier HUD is now recognised as a cheap but effective alternative system to enable airliners and other commercial aircraft to operate safely into airfield in poor weather. We have a demonstration system, as a marketing tool, derived from the C-17 equipment, and we are aggressively pursuing airline business.



The Northrop F-5, an old warhorse being updated for the 21st Century.

Proposal Panic

Two major proposals for new business were sent out in November to the United States. The F/A-18 INIGHTS proposal was delivered to McDonnell Douglas in St. Louis and the F-22 HUD Proposal, to Lockheed in California.

Preparation of a proposal can be a formidable task. Information is sent from the various specialist departments throughout

the division to the Publications Group. There it is collated into a well presented series of volumes, each containing a vast amount of information. This includes technical descriptions of the proposed equipment, commercial reports, quality assurance provisions and managerial strategies.

As is usually the case, the F/A-18 and the F-22

proposals had to be produced in a very short time. In order to achieve this, many people had to work up to sixteen hours a day seven days a week and special thanks should be extended to all involved, particularly those in Publications and Contracts who on one occasion worked for more than 24 hours without a break!

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A Word From the Top

Keith Snelling reviews the past year and looks forward to the next.

Welcome to the first general issue of The ADDVISOR. Some of you may have seen the limited circulation 'introductory issue' which was directed in particular at new starts or prospective future members of our team and therefore concentrated on providing a background picture of the Division, its organisation and its general activities. This, and future editions will attempt to provide more topical information on past and forthcoming events to keep you in touch with your Division.

As we approach the end of another hectic year it is opportune to review our recent achievements and missed opportunities and look forward to our hopes for the future. 1990 has undoubtedly been a difficult year. The dramatic changes in East/West relationships coming at a time when defence budgets worldwide have been under pressure, has seen several of ADD's contracts or anticipated contracts cancelled, slowed down or postponed. The direct

consequence of this has been the unfortunate necessity to reduce employment levels in a number of areas to ensure that we remain viable and competitive for future business opportunities. At the same time we are actually involved in the most intensive proposal activity the Division has ever seen, and many of you will have been involved in the long days and even longer nights finishing major proposals for Helmet Position Trackers, Night Vision Helmets, Modular Mission Computers, Ground Owl, Cats Eyes NVG's and assorted Head Up Displays and their associated Electronics Units. The pressure will continue into the new year with further proposals for Helmet Mounted Displays and further HUD systems.

There have of course been many successes through the year and we must look to these as inspiration and motivation for the future. Our four nation consortium has won three major EFA display suite contracts, the

Head Up Display, Computer Symbol Generator and Cockpit Interface Unit. The VF-22A Advanced Tactical Fighter demonstrator has commenced flying and our HUD is performing impeccably. Some ten years of design work in helmet mounted display systems has culminated in flight trials in both helicopter and fast jet aircraft and we are well positioned to win major new business in this field. Initial sales of Ground Owl Night Vision Goggles have been achieved and Cats Eyes NVG have gone into full scale production with substantial further orders already received and more anticipated.

On the leisure scene the ADD sports team won the athletics and swimming trophies and narrowly missed, by half a point, winning the combined events shield. Self inflicted pain in the guise of the ADD bike race and the superjerk competition, remains popular and always generates intense competition

For the future, providing we continue to attack the market aggressively and competitively, we have every justification to be optimistic. We already have a substantial order book and the present round of proposal activity provides real opportunities to extend our business base into Helmet Mounted Systems and Modular Computing as well as consolidating our world wide success in Head Up Displays. Great interest is being shown in Civil Aircraft HUD's and our experience and product range will enhance our prospects in this area. Continued attention by every member of the ADD team to the effectiveness and quality of our work will provide that little extra competitive edge that is all we need to ensure a successful future.

May I extend to all of you, and your families my best wishes for the Christmas festivities which will soon be upon us, and my hopes for a happy and prosperous 1991.

National Young Employee

The NYEC competition is an annual event run by the Dunchurch Management College. GEC Companies from all over the U.K. compete in a three day event with a number of tasks to complete. This year the event was held in The National Agricultural Ground in Stoneleigh, Leamington Spa, on the 14th, 15th and 16th of September.

There were 69 teams, and each team had 6 members with one member being nominated as a team manager. The GEC Avionics team this year consisted of the following people: Gary Lambkin (PCD), he was this year's team leader, Neil Bricknell (MASD), Garry Caveny (ADD), Arthur Hood (GSD), Julian Ryan (MASD), and Phil Stancliffe (MASD), supporting and helping out with equipment, meals and drinks were Emma Bond (MASD), Dave Bradley (ISD) and Ben Morton (Personnel).

The first exercise we completed was a sort of orienteering exercise where we had to draw a map of the area within a certain time, we were then given the second part of the task which required us to decipher a cryptic clue sheet which held information on where to find clue sellers, money lenders, black marketeers, booby traps, and visa sellers. The idea was for each team to collect as much money as we could and then buy exit visas and clues. We then had to collate the clues and work out the password. At one part of the exercise we all had to pay to get over a bridge, so one team decided to forge some money, and because it was



dark they got away with it, unluckily (for them at least) their team number was on the money voucher and so the next day when the marshals checked the money they realized the money was forged and so penalised the team.

Another task was to build a bridge across the Avon, stand on it and sing a song which was written by the team, obviously without falling in, and yes we did complete it. On another part of the field we had to decipher a cryptic clue sheet which held information on where to find clue sellers, money lenders, black marketeers, booby traps, and visa sellers. The idea was for each team to collect as much money as we could and then buy exit visas and clues. We then had to collate the clues and work out the password. At one part of the exercise we all had to pay to get over a bridge, so one team decided to forge some money, and because it was

Other exercises included a



Editors Note

Well here we are again! The second issue of the ADD Newspaper. Feedback about the first issue seems to be favourable and I have even received two unsolicited letters (albeit both from the same person and one too long to print). Remember, as this publication has a staff of one part time editor (ie me) I am only able to print stories which present themselves to me. So, if you or your workmates have done something of interest you will have to write and tell me about it.

This Issue is the first to be a 'proper newspaper' in that it contains some news rather than a general description of ADD as a whole.

By the time we go to press it will be touch and go to beat the Christmas deadline. If we have, then I hope you have a merry Christmas and if we didn't then I hope you had a merry Christmas.

Finally thanks to Clare Boorer for jogging the right memories when deadlines approached and no stories were in.

Frank Hall - Editor

Pic Fight!

Is there anyone in your office or on the shop floor that you would love to see given the custard pie treatment? On the 23rd November an intrepid group of people from ADD went down to Sun Pier in Chatham and spent the evening doing just that, and to make the whole thing more interesting they were all regaled in fancy dress. Sounds a bit strange but if you watched it on TV then you are probably aware it was all in a good cause. The money raised by making people pay to see their boss or 'friend' pelted with gunge all went to the BBC's Children in Need collection and was one of the major events of the South East.

Unfortunately this issue went to press before the great day and so a full report will have to wait until next issue when it will be known how much money was raised and how everything went. Thanks go to all in the Software, Computer Services and Publications Group who helped with the organisation and everyone who sponsored the 'victims'.

Airmail



Bat & Trap Outrage

The laws of libel, in this country, are quite clear. Basically 'Thou shalt not print naughty lies about anyone'. You sir are guilty of printing the most defamatory article I have seen, regarding that most athletic band of sportspersons, the Bat and Trappers.

I shudder to do so but I quote your most disgusting insinuation that 'Bat and Trap is not a serious game and players drink before, during and after ...etc'. Not so sir! Do not denigrate that which you have only ignorance of, sir; the rules are probably far too complicated for your simple self anyway, let alone the finer points. Balls (for example) I doubt if you know the reasons why some are hard and some soft, the lady players prefer a soft one, unless they are bowling when they express a need for a hard one.

Feelings can run very high during a game. Many a man has been reduced to Gazzalike tears when his flap is flipped or his ball is missed after cocking his flap and not getting it high enough.

But you know nothing of this and I suggest you attend next season's games and put right the bad effect your misleading words have had on this most revered of sports, and if you do dare to show yourself at Hoo, I'll have a pint of AK, (before, during and after the game!).

Dave Williams

I humbly pledge that if I receive a report on next season's games I will give it the noble coverage this most magnificent of sporting events deserves.

Sorry - Ed

Court Social

Congratulations to:

Ruth Stocker of Engineering on her marriage to Paul Thomas on the 18th of August at Bredhurst Church. Ruth Thomas has since returned, bronzed, radiant and weary from her honeymoon in Zante, Greece.

Simon Manderson of Software, who married Sarah Miles on the 20th October at Brockworth, Gloucester.

Tina Baston, who recently became the new Mrs Jeffrey after marrying her fiance Terry.

ees Competition 1990



sort of triathlon, where one team member cycled to a given destination, collecting a clue on the way, the clues were map coordinated which directed us to further clues, once twenty clues were collected the next two members set off down the river in a canoe. There was also still walking around a maze laid out on the ground, and defusing a bomb exercise, it was only when one of the other team's canisters went off that we realised that the bombs really would explode!

The event suffered this year from a number of organisational problems, timing was not of a high standard and no award was given for events finished inside the time limit. This unfortunately made it impossible for us to make up for the mistakes made in the first event. The competition was also further soured when someone broke into our van and

stole all the video equipment, jewellery and even all of Emma's clothes.

As you may have gathered the competition was for us anyway, and I suspect for other teams with a more serious attitude towards the competition, a bit of a disappointment. The training and effort we had all put so much into did not really seem to matter. The team had been training for nearly three months, which comprised of weekends in Wales, where we completed exercises such as abseiling, raft and bridge building, canoeing and orienteering we also trained with the Royal Engineers at Brompton Barracks, we even practised wallpapering, plastering and bricklaying with the works engineers. This was necessary as these types of exercises came up in the previous competitions. So we were all pretty fit but the competition did not require fitness at all.

The competition was summed up by the teams not knowing where they were finally placed!

Despite these difficulties all was not lost as we have gained many new skills, both practical and mental and made good friends throughout not only GEC Avionics but at many other GEC establishments as well.

The winners of the male category were Heat Exchange (GEC Alstom) from Larne in Northern Ireland, well done to them anyway! There were also two other categories in the National Young Employees competition, the veterans, and the mixed group, the winners in these classes were Marconi Underwater Systems and GEC Traffic Automation respectively.

Garry Caveny

Around the Division



It is a common complaint among ADD staff (and probably members of any large organisation) that no one knows much about what other departments do, or who runs them. For this reason, as a supplement to the descriptions in the first issue, we will be running a series of articles by departmental heads, describing who works for them and what they do. The first to take the plunge is John France of Quality Assurance who would like to remind those with a rather jaundiced view of QA, that;

QA Can Help!

Many people think of Q.A. in a negative role - finding reasons why things can't be done. We would like to be consulted early in the design, development, production cycle so that we can advise how things should be done and thus avoid problems at a later stage.

ADD Quality Assurance are ideally placed to help as we have a wealth of experience

in the Department. Apart from myself, there are five Principal Q.A. Engineers, all of whom will be pleased to help.

I was born in Swindon in 1936 but spent most of my early life in Finchley (Thatcher country). I studied electrical engineering at Imperial College and joined Elliott Brothers in 1958 at Borehamwood where I worked on the Blue Steel Standoff Bomb which was fitted to the V. Bombers.

I got married in 1961 and moved to Rochester, still working on Blue Steel in Inertial Navigation Division. While there I became Chief Development Engineer responsible for the G3 platform used on the Nimrod. In 1967 I joined Aircraft Engine Instruments and Flowmeters. Having decided that I needed some management training I studied for a Diploma in Management Studies at Mid Kent College.

In 1970 I became Quality Assurance Manager of Instrument Systems Division and was involved with the introduction of many of the Quality systems and procedures still in use today. In 1989 I was appointed QA Manager of ADD.

Bill Burke is an expert on Defect Investigation and manufacturing techniques, especially soldering. His team have a well equipped laboratory which is the envy of all the other Q.A. Departments at Rochester.

Colin Clarke looks after 'Production Quality' and is the ideal man to see if you

need advice on such things as quality conditions on orders, incoming inspection, P Cards etc and especially on how to get equipment released.

Tony Crack is responsible for quality aspects on helmets and night vision goggles and is our specialist on Safety and Human Engineering.

Joe Mosse is our 'Design Quality' expert and will be happy to advise on design quality whether it is carried out in-house or at a subcontractor. Within his group he has teams looking after Software Q.A. and Component Quality so he is well placed to help.

Jack Scarfe looks after 'Reliability Assurance' and has many years experience of reliability testing, RST etc. Before coming to ADD he worked in CQD so can give you good advice on how to avoid some of the pitfalls of Environmental Testing.

I hope the above brief notes give some indication of how Q.A. might be able to help. Why not try seeking our advice before problems arise. I think you will find it easier than waiting until after the event and then having to recover the situation.

P.S. On a lighter note if you want information of the Social Club Cricket, Squash or Golf Sections contact Bill, Joe or me, we will be pleased to provide details.

Aside from his duties

within ADD John France has a wide range of interests. In an effort to see the man behind the suit he describes what else makes him tick.

My main hobbies are concerned with sport. I have played soccer and tennis and been a football referee but my main hobby is now golf. As well as playing I am interested in the administration of the game and have been on the committee of the Social Club Golf Club for twenty years and the committee of Bearstead Golf Club for five years.

To keep the old grey cells working I have taken an active interest in education, particularly the Bath University M.Eng course and I have been secretary of the Kent branch of the BIM for the past fifteen years.

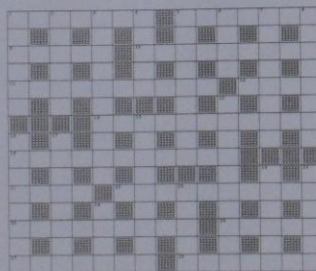
I have three children all now in their twenties.

Did you know?

The QA Department subscribe to T.I. Indexes and have the latest issue of most of the MIL-Specs and Standards you are likely to want on microfiche. For further information contact John Coomber or Malcolm Crucefix on 3761.

Competition Crossword by Ian Bull

Correct entries will be drawn from a hat and the winner will receive a substantial prize (*hic!*). Entries must be with Clare Boarer (Corsair Building) by 11.1.91.



ACROSS

- Hunting 16 (7)
- 16 shaped muscle (7)
- Attribute either way (5)
- Speak with tallest snake and get confused about 16's system (4,5)
- Illuminates and makes less heavy (10)
- Adjective applied to 1 across (4)
- One in five sees confused oriental koala intro (4,7)
- Type of 16 fetches rotten price (11)
- One of 52 vehicle notes (4)
- Short characteristic formed by business affliction (1)
- Push old friend out of leafless tree (9)
- Woman is found in trademark - that's a hot number (5)
- 16 found in New York photo (7)
- 16 given by Cockney crew-cut, we hear (7)

DOWN

- The unearl throne gives

- Service drink to a foreign 16 (6)
- They have proved not to be normal by pointing gun right up ruffled Eastern dress (10)
- He drinks up to transfer his plants (5)
- County left to naval town (9)
- One of seven from within the cluster (4)
- Eulogy - old boy writes it before the end of certain months ... (8)
- ... even about those who passed away penniless (4,4)
- 16 with an impossible job (10)
- A mixed up student from the South East was obseisant on a pile of feathers (5,4)
- We hear he inherits a boat to fly in! (8)
- Jefferson enterprise (8)
- Girl says she is heartless before another (6)
- State of excited nucleus, some are in backward state (5)
- Fundamental graduate is thus (5)
- Books up city voice (4)

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LEISURE ADDVISOR

10 Years of the ADD Bike Race and 8 Years of ADD Superjerks

How quickly time flies - this year was the 10th consecutive running of the ADD Bike Race and the 8th year that the Superjerks competition has been organised. Who would have thought that both events would have remained with us after their humble beginnings.

The Bike Race

The Bike Race was the inspiration of Jim Beany, probably because it was the only thing he excelled at. For the first three years the race was held on the Lower Rainham Road and probably the most eventful thing that happened on that course was that during the inaugural race, Charlie Oliver of the Engineering department got lost and arrived home forty five minutes after everyone else had finished.

Although the course was fairly flat the roads were a little dangerous and the race was moved to its present Bluebell Hill route. To date the most notable happening was the year that Geoff Cook and Mark Tickner of the Model Shop entered on a tandem which they were caught and photographed loading into a van half-way round the course.

Entries for the bike race have varied from twelve in the first race to twenty nine in 1987 with an average entry of about twenty two.

Winners of the race over the years have been:

- 1981 - Chris Dardry
- 1982 - Phil Turner
- 1983 - Paul Smith
- 1984 - Jim Beany
- 1985 - Jim Beany
- 1986 - Chris Dardry
- 1987 - Derek Stone
- 1988 - Jim Beany
- 1989 - Kim Staff
- 1990 - Ray Brogan

The trophy is named after



Dave Marvella in recognition of all the help extended to us by him.

Superjerks

It all started from a group of engineers and one member of the drawing office. Superjerk events included the world golf ball throwing competition, 100 metre sprints in the car park, a 2.5 miles handicap race around the roads enclosing the airfield and many other trival games competitions and friendly wagers.

Superjerks was a joint effort and the original committee consisted of myself, Jim, Harry Harper-Wilkinson and Colin Tattersall, the last two having both since left the Company.

Today, it is a totally different competition and probably the most sought after trophy. It is a complete test of fitness, strength and stamina. The competition comprises of eight disciplines of which entrants must choose six. 100 metres, one mile, swimming, rifle shooting,

gym tests, weight lifting, basketball and an assault course. (The latter was replaced by a rowing machine test after security problems at Brompton). Only once was the competition cancelled due to lack of support, which just goes to show how many masochists there are in the division.

A great deal of thought was put into the format of the competition to attempt to ensure a good test of overall fitness and agility. Minor adjustments have been made over the years to try and make it as fair as possible but it does look as if the rules may need to be changed even more as neither Jim nor I have won yet. Maybe entries should be restricted to just two!

Entries for Superjerks varied from twenty seven in the first year to a maximum of thirty five in 1988.

Winners over the years have been:

- 1982 - Trevor Snelling
- 1983 - Brian Harris
- 1984 - Trevor Snelling

1985 - Brian Harris

- 1986 - Steve Coates
- 1988 - Alan Goodger
- 1989 - Alan Goodger

Both the Bike Race and Superjerks are well supported by the spectators and the people that year in year out, help set the events up on the day.

Both competitions are open to male and female entrants. Some young ladies have entered the competitions but sad to say, only a brave few.

This year's Superjerks competition will handicap the men against the ladies to attempt to give the ladies a better opportunity to win. Since this article goes to press before the event, I can't report how well that has gone or how many handicapping boos were made - but watch this magazine for that report.

So come on ladies don't be afraid to join in, the more that enter the more fun we'll all have.

Alan Ward

West Malling Sees Return of Rock Legends

This summer saw the return of one of the great supergroups. Those high priests of the sonic cathedral of rock, The Feedbacks, had reformed. The first date of this controversial world tour was to be that Mecca of rock historians and musical megaliths - Detling Village Hall.

The reason behind the most significant reunion since Slade re-recorded 'So Here it is Merry Christmas' was, like so much of this semi-mythical brotherhood of musical Demigods, steeped in rumours, half truths and scandal. The lead singer a vocal titan equal in stature to Ozzy Osbourne, had it seemed been accused of a slight fiscal impropriety and wished to re-live the heady days of rock superstardom before society exacted harsh retribution for his tiny(ish) mistake.

As the concert date approached rumours and mystery abounded as Chas 'Slowhand' Hearn (Project Leader and Geigastar) was overheard negotiating for a P.A. big enough to play Wembley Stadium.

At last the time for speculation was over, the great gig was upon us and the musical pilgrims gathered in West Malling to hear these behemoths of the faith recite their sacred incantations of power, sex, love and fast cars.

Before the great performance your most humble reporter managed to gain an exclusive audience with the great Chas and I asked him if perhaps he was nervous before this great return. He confessed to 'a slight unease' but when asked, hotly denied that the band used drugs before a gig, adding that a simple tippie of fifteen or twenty pints was all he needed to get in the mood. At this juncture he bade me farewell and went to prepare himself for the nights performance. Still slightly dizzy from the excitement of meeting the man debatably described as the greatest living guitarist, I rejoined the throng in

The atmosphere hummed with tension as the vast crowd waited for the performance to begin. Suddenly they were upon us. In a sensory blitzkrieg of sound, light and fireworks, the band launched into their first number, a version of Jonny B. Goode that even the late, great Jimi Hendrix would have been proud.

The fans went crazy. Women blacked out and tears of reverential worship slipped slowly down the faces of many, as these warlocks of Rock and Roll demonstrated that they were as good now as they had been when they supported that world renowned group 'Budgie'. Masterpiece after masterpiece flew from the P.A. and the faithful disciples headbanged and played 'air guitars' like never before. Now it was time for what was, for many at least, the highlight of the evening. Performing his own semi-improvisational composition 'A Whole Lot of Chas' the true master of rock guitar left the audience gaping in awe.

There was a nervous moment when it seemed that Chas would be pulled from the stage in a frenzy of idolatrous worship that had gripped the crowd but his professionalism held good and he played on like the master craftsman that he is. After this example of brilliance one could have been forgiven for believing that the band must have peaked, but no, in another pyrotechnic conflagration The Feedbacks' vocal Grand master returned. Clad only in stockings and suspenders he gave a rendition of 'Sweet Transvestite' that Tim Curry himself would have envied. After this I confess I passed into a musically induced higher plane of Nirvana like enlightenment and bliss and have no coherent memories of the remainder of the performance save only that of the adoring crowds screaming, nay begging, for encore after encore. I made my way home, a changed man, my mind echoing the holy mantra, 'Feedbacks Feedbacks Feedbacks ...'.

Frank Hall

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