



ACD Will Move to Rochester

Integration with EFA Next Year

AFTER seven years at Borehamwood, close to the source of Elliott's on-line computer production, Airborne Computing Division is to move down to Rochester during next year to integrate its operations more closely with EFA's airborne equipment activities.

Many ACD people will therefore be moving their homes to the Rochester area. Vic Johnson is already here to coordinate the Rochester end of the move.

A key reason for the move is that it has become obvious that systems to be made in the future will be more digital than analogue, and ACD will obviously play a large part in development of the new technology.

ACD was formed in 1961 to apply digital techniques, in which Elliott has traditionally specialised, to airborne systems. It developed the pioneering digital systems for TSR.2 and for Nimrod. Currently ACD is investigating applications of computers to digital engine control and flight management, both of which can lead to important new sales opportunities. ACD will also cooperate in the development by other divisions of such systems as digital autopilots and air data computers.

The move to Rochester will additionally allow ACD to overcome the problems of space and personnel restrictions, and the difficulties of working closely with divisions located 50 miles away, which made life difficult at Borehamwood.

Order Takes EFA Into New Market Area

MACD TO MAKE HELICOPTER AUTOPILOTS



Artist's impression of a WG.13 helicopter for the Royal Navy.

AN important sales success during August, which was publicly announced on the Monday of the Farnborough show, was MACD's selection to produce the autopilot and auto-stabiliser for the Anglo-French Westland/Sud WG.13 helicopters.

This machine is one of the three in the Anglo-French programme and several hundred will eventually be produced for the French Army and Navy and for the British Army and Royal Navy.

Production will get under way during the early 1970s and could well continue until the end of the decade. Already the first orders have been placed for a civil version of the WG.13 and further military orders can be expected in due course.

This places EFA squarely in the helicopter flight control field after successful competition with the companies hitherto established as suppliers of this type of equipment. It is the second production application of the line of development, both in circuitry and packaging, which has already produced the Harrier auto-stabiliser and the failure surviving multiplex actuators and auto-stabilisers.

The WG.13 will be built in at least five different military versions and the autopilot will be arranged so that the varying control requirements of each type can be supplied simply by deletion or addition of circuit boards in a standard computer box. The basic auto-stabiliser is a fail-safe duplex system. A sample box exhibited on the Elliott stand at the Farnborough Show created some interest.

The WG.13 exists at present only in mock-up form, but the first prototype should fly next year and be in service about two years after that.

WEAR THOSE BADGES

The issue of company badges to people working in the towers is now complete, but the first enthusiasm for displaying them prominently is wearing off. Remember that the system is intended to protect not only national security but also the company's interests by making EFA people immediately recognisable. Spot checks—no badge, no entry—could happen at any time.

Farnborough under an English Electric Flag

Combined Display Emphasises Importance of Aerospace Work

THE decision that English Electric, Marconi and Elliott-Automation should combine forces at Farnborough was taken long before the most recent merger situation developed, but the size and importance of the combined aviation activities of the three companies was significant in the new circumstances.

Just before Farnborough, Lord Caldecote, English Electric executive director in charge of aviation activities, was able to announce to the press that the three companies' combined aviation order book had topped the £100 million mark. This is larger than English Electric's order

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The Elliott-Automation stands, grouped with those of Marconi and English Electric, were well stocked with equipment and attracted, as shown above, at least as many visitors as any other in the whole indoor exhibition.



Hard work could not spoil the charm of the girls on duty in the entertainment enclosure, telephone exchange and stands during Farnborough week. From the left, they were Lynn Shelsher, Mary Barker, Pauline Gladish, Lorna McPake, Rita Edwards, Terry Bennett, Avril Hayden, and Daphne Chalmers. Mary and Terry are both English Electric girls and Avril is from Marconi.



SATURATION SATURDAY

and Sunday, Monday, Tuesday and after

THE heaviest rain in 200 years, according to the blandly surprised weather men, did not fail to leave damp stains in the lives of many Elliott people, both at Rochester and at Farnborough. For many, the stimulating sense of adventure was soon swamped by the realisation of actual danger or personal loss.

By 7.00 am on the Sunday, the works engineers were called in to fight flooding in the main works, where several inches of water flowed off the newly surfaced car park, into the Fisher delivery area and on into the lower levels of the main works and down into the huts. For many, Monday morning was another mopping-up operation after a wet weekend at home.

Mysterious Holes

Some mysterious holes appeared in the playing field alongside the towers and were tentatively attributed to a stream which had been diverted when the towers were built. A brief unexploded bomb scare brought the Army bomb disposal squad into the picture, but the sinister object, courageously removed by Mike Bunce, under the watchful eye of Mr Bengier, turned out to be a plastic coffee cup with cardboard fins, well disguised with insulating tape and mud.

Everyone using the roads has tales to tell and journeys to Farnborough turned into day-long nautical adventures. The hired 20-seat bus taking the Elliott secretaries, Jack Rann (MACD), Brian Teather (IND) to Farnborough took six hours to make the journey frequently negotiating several feet of flood water. The girls swear they saw water from blocked-up drains flowing up hill! Mr



Joe Stonestreet of transport department drives the Company Humber through the floods outside the personnel gate on Saturation Sunday, September 15. The water flowed down through the factory after collecting in this area.

Alexander, Joint Managing Director, covered over 90 miles to make the 45 mile journey, was stopped by flood water several times and reports that he used three boxes of tissues drying out his ignition (Jaguar reliability?). The Angel Hotel in Guildford, where the EFA team stayed, looked more like a refugee camp with people sleeping wherever they could find room. The flood waters nearby reached a depth of more than six feet.

Job Completed

For those already at Farnborough on the Sunday, the successive reports of flooding and power failures became more and more threatening throughout the day. The indoor tent lost electrical power during the afternoon, just as an engineer arrived to make final adjustments to the working 920C computer and displays.

It was a credit to all concerned that the exhibition stand was complete and manned on the Monday morning. The ladies' turquoise mini-dresses looked coolly attractive, but the Monday sunshine mocked the

heavy-weather gear which most people had by then managed to organise.

We can all do without a repetition of such weather for another 200 years.

Earthquake in Manila

AS & RD Rep and Family Survived

ON August 1, Maryn Cole, the AS&RD Far East representative, arrived in Manila, Philippines, with his wife and small son to support Philippine Airlines' BAC One-Elevens. At 4.20 am next morning, the major earthquake struck the city, killing 300 people in the collapse of a single tenement building. These are extracts from his report of the disaster.

"My own recollections of the terrifying 40 odd seconds when all hell was let loose are, like so many other people's, somewhat jumbled and confused. The senses reel under the influence of new sounds and movements, the room has become a cabin on board a ship in a violent storm and that last great wave produces a shudder of increasing intensity that displaces and topples lamp-standards, television sets, bottles and the like.

Just outside our window power cables, stretched to the limit, snap and arc (perhaps it is fireworks night) and from near and far breaking glass, groaning building, falling debris and isolated explosions merge to produce a new impression—someone has dropped a bomb.

"Perhaps half way through that nightmare the realisation of what is happening hits you, but by now all the lights are out and anyway movement across the violently oscillating floor is impossible. The three of us stand huddled together for both physical and moral support, and to the question "What can we do?" there can only be one reply "Pray".

"As the violence subsides the slowly rocking building creates a new sound as curtains and venetian blinds, together with clothes hung up in the wardrobe, swing gently back and forward to effect their own quite fascinating orchestration. Surprisingly an eerie quietness then settled over our part of the building and a feeling of intense isolation gripped us, no voices, no footsteps, nothing. It was for this reason, I think, that I picked up the phone and asked what was going on, even though I already knew.

Fear and Instinct

"Outside the hotel the various states of dress, or undress, presented quite a comical picture, as did also the varied assortment of articles that people had decided to bring with them. However, without doubt my prize for initiative goes to a Canadian who "saved" an unopened bottle of whisky. Never has a "nip" been so welcome. Excited voices tell of the fear that has struck deeply into everyone, some of the younger girls are pale and almost in tears, and even amongst grown men a tremble of the

Climbers' Holiday

Elliott Men in Mountain Rescue

FRANK McLOUGHLIN (ATED), Ray Dennis (MACD), Mike Hazelgrove and Pete Church, all members of Elliott Climbing Club, spent two weeks at the end of August climbing in North Wales.

The trip began on August 16, reports Ray Dennis, with the long trek to Wales, often at high speed along the winding mountain roads, stopping only to refuel at the too infrequent pubs en route.

Climbing started in earnest the next day after a hearty breakfast of egg mankies (recipe on request from the Climbing Club). Many classic routes were climbed including Soap Gut, Craig Dhu Wall, Cenotaph Corner and Suicide Wall, the last-named being one of the hardest climbs in the area. Luckily, good weather had been ordered well in advance and the first week provided some excellent climbing.

Ray and Frank climbed 20 routes, graded up to very severe and including Yellow Groove, a 100 ft climb in the Llandberris Pass. At one point they made a very thin traverse across 10 ft of overhanging rock with 400 ft

of nothing beneath them. Having completed it they returned via a waterfall, which in their opinion was a very easy route. Ray also made what is thought to be the fourth ascent of the V-notch on Milestone Superdirect, this time accompanied by Mike Hazelgrove.

During the bank holiday, the party was joined by many more Climbing Club members to make a splendid finish to a great holiday.

While climbing Tryfan, five members were involved in a mountain rescue operation. A huge boulder came crashing down towards them followed by shouts for help from above. One member returned to contact the mountain rescue team while the others located the person in difficulty, fastened a rope round him and lowered him to the bottom where the rescue team was waiting with a stretcher.

It was generally considered that the man was lucky to have suffered no more than minor injuries, but his only comment was "My wife will kill me when she finds out". However, the rescuers awarded themselves the CDM for their fine efforts.



Mike Hazelgrove on Brant Direct, Llandberris Pass, North Wales.

hands can be detected as cigarettes and bottles are passed around. Perhaps only the children miss this fear if my own five year old son's reaction is anything to go by. He actually enjoyed the "shake up" and seemed keen to have a repeat performance.

"It is remarkable how many people were actually awake when the major tremor hit us. Both my wife and I had been aroused by our son calling to us, not in fear, just some form of discomfort that had awoken him. Later I heard so many stories of people aroused by the howl of cats or dogs, who were actually looking out of a window when it all began. Another had a minor "earthquake" all of his own as his cat went berserk in the kitchen and scattered pots and pans everywhere, again just before it started. Both children and animals it would appear have some form of delicate mechanism which gives that vital few seconds of warning."

Kent Archers

At Elliott Ground

Doreen Becomes National Champion



Kent County archery team's banner at the Elliott sports ground.

Members of the Kent and Essex teams preparing and sighting on the shooting line during the inter-county match held on the Elliott ground on August 4. At far left is Doreen Green (FID) and wearing slacks is the 1968 Kent Champion, Pauline Edwards. (Picture by Gay Lancaster)

THE inter-county Kent versus Essex archery match was shot on the Elliott sports ground in Featherby Road, on August 4. The Kent team, which includes Doreen Green of FID, won by a creditable 392 points. Elliott archers gave up their own day's practice and assisted the county officials.

Doreen Green also shot for Kent in the southern counties match at Enfield on September 8. Kent led the 13 competing counties until the final shoot, when they were beaten into second place by only six points.

During this match, Doreen became the fourth woman in Britain to win the 1100 Star of the Fédération Internationale de Tir à l'Arc by scoring more than 1100 points. She also became the new 70 metre national champion by scoring 270 points at this range, beating the existing record of 253.





Captain Sir Edward Archdale, D.S.C., presents the cup, donated by Elliott Social Club, to Don Norwood on behalf of the Marine Cadets. (Picture by Paul Chesmond)

The Six-Pounder Gun

THE Social Club presented a cup this year for competition by teams competing in the field gun races during the annual Navy Days at Chatham Dockyard during the August bank holiday.

After four hard runs over the length of the arena, towing gun and limber, changing wheels half way and firing two shots, the winners by five seconds from the Medway Sea Cadets were the Marine Cadets—and they had been trained by Don Norwood, then with TACD. Don is Colour Sergeant with the Marine Cadets; and their Chief Petty Officer and Seamanship Instructor is Albert Appleby, also of TACD. He was safety officer during the display which, to his credit, went off without casualties.

Don Norwood accepted the Elliott Social Club cup on behalf of the Marine Cadets from Captain Sir Edward Archdale, D.S.C.

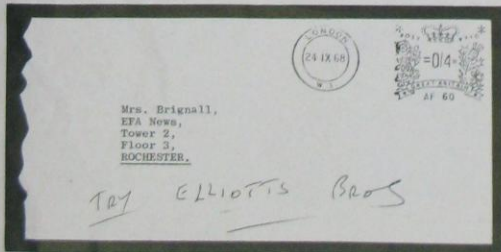
Ladies' Table Tennis

AT least a dozen girls have already shown interest in joining a ladies table tennis section of the social club, according to Syd Groves (ADD), who organised an initial meeting during August.

Potential players came initially from the telephone exchange, works engineering and MACD, but Pauline Hyde, daughter of Daphne Hyde (MACD) and Ken Hyde (CMS), is currently Medway towns junior champion and would like to join an Elliott section.

Practice sessions are planned for Tuesday evenings in the snack bar canteen, and a team is to be formed to compete in the ladies' division of the Medway League. The form so far is most encouraging and there is talk of designing an attractive uniform.

Anyone else who is interested should contact Syd Groves on Int. 668.



Proudly displaying their German Stein mugs are the CMS team who won the inter-divisional bat and trap competition. CMS beat ATED "B" team by 2 games to 1 in the finals held at Elliott club house on September 10. Standing, from the left, are: Bill Turner, Jim Cooper, Tom Jobber (Captain) and John Ward. Crouching are runners-up, Tony Mathews, Alf Blake, Jim Skinner and Phil Tuffnel. (Picture by Peter Rose)

Who said that the fourpenny post is second-class mail? This letter from E-A head office in London reached EFA News in 48 hours in spite of the rudimentary address!

SUCCESS IN KARATE

NINE members of the Elliott Karate Club won grades during a two-day session in the Elliott canteen on September 28 and 29.

Three won their white belts, three their yellow and three their orange. All nine had had less than a year's experience of Karate.

Mr Harada, a 5th Dan and Professor of Karate, gave an impressive demonstration of the techniques and all-important timing used by Karate experts at his level.

At another session at Chigwell, north London, Mike Bradley (IND), a keen founder member of the Elliott club since it started in January 1966, won his green belt. Mike had been prevented from training for a year by an unfortunate motor cycle accident

two-and-a-half years ago. His green belt was awarded after a week of solid training organised by the Karate-Do Shotokai national training organisation.

Eight-year-old Tony Carpenter and his 10-year-old brother Ronnie, who joined the club a year ago as novices, both now hold the orange belt. They also won their awards at the Chigwell training session, and were applauded by participants and instructors for their fine display.

Elliott Karate training sessions are held on Wednesday and Friday evenings in the works canteen. Between 15 and 18 club members regularly attend. David Johnson (FUZE), a brown belt, is secretary and chief instructor. Two other instructors are George Yard and Mick Bradley.

David Johnson (FUZE), Secretary of the Karate club, leads the practice session during the two day grading meeting in the canteen. (Picture by Bob Collis)

PETER GLADWISH (FID), captain of the winning inter-divisional cricket team, receives the cup from Mr A. Harrison, vice-president of the cricket club. Jim Collins, Social Club secretary, looks on.

The presentation was made at a social evening held at the club house on September 16 for the finalists of both the cricket and bat and trap competitions.

In the cricket finals on August 19, FID won by 129 for 5 against the Flight Engineers' 86 for 7.



Welcome Back

MRS LUCY JONES, well known in EFA as secretary to the chief engineer of MACD until she emigrated to Australia with her family in August 1967, came back to England in October.

They made the six-week return journey via America. Also recently seen again in EFA after several months illness and convalescence is Ken Mackay Controller of IND. Ken spent six weeks in Middlesex Hospital and speeded his recovery with a fortnight on the Isle of Wight.

New Bus in Service

IN two years since the bus service started between the main works and the flying school side of the airfield, the 12-seat Commer diesel bus has clocked up about 50,000 miles, making 98 single journeys every working day and carrying about 1,700 people per week.

Most of the driving has been done by Joe Campbell.

Now, the new diesel-engined Ford Transit 13-seater is in service and the Commer has gone for a well-earned overhaul. The two buses will then take turns on the route. The Ford will also be used when larger groups of visitors have to be collected from Chatham station.



Charles Taylor (MACD) and his wife Freda spent their holiday in Blackpool.

HOLIDAY WINNERS -WHERE THEY WENT

AT every Christmas Dance a number of Elliott people are chosen to receive £100 towards the cost of a holiday. The selection is by random draw from personnel numbers and all Elliott Rochester Social Club subscribers are automatically eligible. The money is paid against bills produced by the lucky winners in arranging a holiday of their choice.

During this year, three Elliott members gained free holidays. Ernest Coates (Fisher Machine Shop) decided to use his £100 for a holiday in Jersey, where he had a wonderful time with his wife, despite unusually overcast weather and some trouble with the British Rail strike on the return journey. They intend to return to Jersey. As a souvenir, Mr Coates treated his wife to an 18ct gold watch.

Another winner was Charles Taylor, who spent a sun-drenched fortnight at the Oak Lea Hotel, Blackpool, with his wife and 17-year-old daughter. Charles reports that this was "the best holiday in 20 years of married life".

Third winner was Mrs Eileen Wade, who left ADD at the end of July. With her husband, who worked for a time in the print room, she spent a fortnight at Benidorm, Spain.

Next year's winners will be picked at the company dance at the Star Hotel, Maidstone, on December 20.



Relaxing with duplicate ice-creams on a beach in Jersey is Mr E. Coates (Fisher).

Record Suggestions Award

A SUGGESTION for an improvement to the Nimrod automatic test equipment being made by ATED earned Douglas Terry, an ATED fitter, the largest suggestion award ever paid in the Rochester establishment. The suggestion was also officially recognised as the best of the year.

A cheque for £100 was formally presented to Douglas Terry on October 9 by Mr. W. H. Alexander, EFA Joint Managing Director.

Terry's suggestion, for a modification to the Nimrod automatic test equipment, has already been implemented. By redesigning the latching device connecting the test adapters to the line switching units, up to 60 adapter units may be tested without further modification to the individual units.

The suggestion committee led by Norman Evans (IND) includes representatives of personnel, management, staff and shop floor. It examines every suggestion submitted to it and decides, where appropriate, on the amount of the award. Special competitions, such as the one for the best suggestion from a lady employee last year, are run periodically to stimulate suggestions. Wherever possible, the value to the company of a suggestion is calculated.



Mr Douglas Terry receives the cheque for £100 formally presented to him by Mr W. H. Alexander, Joint Managing Director of EFA.

Ladies' Netball — a problem

ALL three ladies' netball teams have done exceptionally well.

The Blues formed this year finished the season without a single defeat and move up to Division I of the Medway Netball League next season.

The more senior Reds and Whites consolidated their positions in the Premier and 1st Divisions. The teams are now competing in the Medway Winter League and Maidstone Winter League, but they have a problem.

As EFA News went to press they were negotiating for floodlighting over an outdoor pitch in the car parks near the fuel flow laboratory, but they really need a suitable hall. Can anyone advise or assist? Contact club secretary Beryl Hoey (Fuze) Int. 235.



Intent on maintaining the Blues' position at the top of the league is Pauline Kennedy (IND) in a match against Meadowside. (Picture by John Bishop)

A VISIT TO CONCORDE

THIRTY EFA people concerned with work on Concorde engine instruments and the fuel flow rig went down to Filton during July to see the aircraft for themselves. They were received by BAC Filton's publicity manager, Mr Simms, shown round the prototype, allowed to sit in the passenger seats of the full-scale mock-up (where they are shown, left) and taken to lunch in Bristol.

The visit was organised in conjunction with the Social Club by Frank Driver, then chief of progress in AEID. Everyone enjoyed the visit, but Frank had a tricky start when his transport failed to arrive and he found himself pushing a push-chair loaded with beer and sandwiches up City Way, in order to catch the 5.00 am departure of the coach.



Testing the comfort of the seating in the customers' mock-up of the Concorde supersonic airliner at Filton, are 30 EFA people working on engine instruments and flow meters.

1968 EFA SCHOLARSHIPS CHOSEN

FOUR people were awarded scholarships this year under the scheme by which Elliott employees are sponsored for full-time post-graduate courses. They were D. Hamlin (TACD) and K. R. Smith (ATED), who received full scholarships, and B. Plumb (TACD) and B. S. Flower (TACD) who received honorary scholarships.

Unfortunately, after being awarded an EFA scholarship, Keith Smith could not enrol on his chosen computer science course this year, but he hopes to be successful next year.

Derrick Hamlin is attending an M.Sc. course in system engineering at the University of Surrey at Guild-

ford. Barry Plumb has started a one-year M.Sc. course in communication systems at the University of Essex and received a Science Research Council grant to supplement his EFA scholarship. Barry Flowers also received an S.R.C. grant and began his M.Sc. course in control engineering at the University of Sussex on September 23.

People with graduate or equivalent academic qualifications working in an EFA engineering department can apply for a scholarship, before June 24, to Mr D. Hunter, Personnel Development Manager. Recipients are selected by a panel of EFA managers, which consisted this year of R. K. Barltrop, D. Price and D. K.

Hunter. Successful candidates make their own applications for a place in a post-graduate course relevant to the firm's business.



The four Elliott scholarship winners for 1968 were, left to right, Derrick Hamlin, Keith Smith, Barry Flower and Barry Plumb. (Picture by Peter Tromp)

MUCH MORE BLOOD THIS YEAR

SEVENTY-TWO more Elliott people at Rochester gave blood this year than last. The National Blood Transfusion Service unit from Sutton, Surrey, recorded this quite exceptional increase during a hectic four-day visit to the Elliott Rochester Establishment in October.

Mrs. J. P. Peake, assistant to the Regional Donor Organisation, said that an increase of five donors was considered good and she was very pleased with the response by Elliott employees. She reports that 533 volunteers produced 522 bottles this time, compared with 441 bottles from 461 donors produced at last September's session. Next year the

unit intends to make two visits, in April and September. A four-day session will open on April 21, 1969, unless there is an even greater increase in volunteers.

Incidentally the unit suggested that all blood donors should make a point of carrying their card with them at all times in case they themselves required a transfusion after an accident.



Posing briefly for company photographer Peter Tromp are the 10 members of the Sutton National Blood Transfusion Service unit, who cover all of south England. The donors, front to rear, are John Bennett (RAF detachment working in ATED), Harry Launder (Fuze) and Leslie Payne (IND).

Farnborough under an English Electric Flag

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book for aircraft and missiles when BAC was formed in 1960.

The three companies duly associated in a large block of stands in the big indoor exhibition and in a combined entertainment enclosure, both of which were extremely busy throughout the trade days. Even so, the stands of the three Elliott management companies attracted at least as large a crowd of visitors as any other in the whole display. The teams of stand-manners were kept busy from Monday morning until Thursday evening, demonstrating, explaining and answering enquiries. The three systems for the Lockheed C-5A, the new 80 Series head-up display, Jaguar nav/attack system and the WG.13 autopilot all raised interest. Including the four digital computers shown separately in the BAC weapons park display in association with the Nomad export defence system, Elliotts had 10 computers at Farnborough.

A 920C computer was shown producing various forms of tactical information on the very large electronic display tube used in the HS.801 Nimrod tactical system, now being produced by ACD at Borehamwood.



Mr. Edward Heath visited the Elliott Stand and was shown the 80 Series head-up display by Mr. W. H. Alexander, left, EFA joint managing director.

One of its newer applications is in the Retriever information system for military commanders in the field. So impressive was this new application of computer information handling that an Army brigade telephoned during the week to ask whether it could be provided for a large exercise in East Anglia shortly after the Farnborough Show.

For all the many Elliott people concerned Farnborough was at least as tough an assignment as before, additionally complicated during the early part of the week by the wide-spread floods. But this year the rather low-key flying display ensured that visitors paid much more attention to the equipment. What the week lacked in spectacle, it made up for in positive customer interest.

For the general spectator, only the RN and RAF contributions lifted the flying display above boredom level, if one ignores the technically brilliant flying by the Italian pilot in the Macchi 326 jet trainer. Yet more rain on the public days in any case dampened enthusiasm.