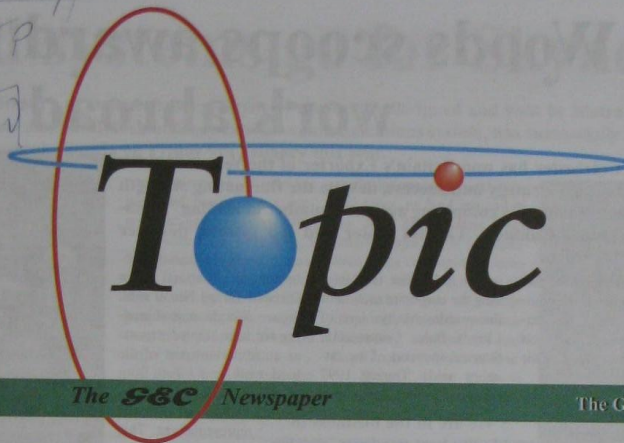




Sir Roger Hurn is GEC's new Chairman Page 3

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CFP
FDW



GEC women engineers show their true colours Page 8/9

February - March 1998

The *S&C* Newspaper

The General Electric Company, p.l.c.

Dismantling the Greenwich reactor

NNC has won a challenging decommissioning contract from the MoD worth around £1.5 million to remove all traces of a nuclear training reactor called 'Jason' from the Royal Naval College in Greenwich by the Year 2000.

The Grade 1 listed building housing the reactor is part of a scheduled ancient monument, which must be restored by NNC to its original state once work is completed.

NNC will also be responsible for safely disposing of the radioactive waste generated, including waste reduction, segregation and packaging for transportation to the low level waste repository at Drigg, Cumbria.

Head of NNC's decommissioning business Clive White said, "Safety is paramount and we are working to a tight deadline. The project completion date is scheduled for just a few weeks short of the Millennium, so completion to time and to budget is of the utmost importance."



Work will begin on site in April 1998.

Eurofighter deal takes off

Production contracts for 620 Eurofighter 2000 jet fighter aircraft were signed this January by the British, German, Italian and Spanish governments. GEC-Marconi will be providing no fewer than 24 different electronic systems for the aircraft.

Eurofighter is Europe's most important collaborative military aircraft programme. The first contracts for the combat aircraft involve production, tooling and other preparatory work. GEC-Marconi's share of the work will eventually be worth approximately £3.6 billion.

GEC-Marconi is not only prime contractor for Eurofighter's radar and defensive aids sub-systems, but also one of the major sub-contractors for the project, supplying the aircraft's ECR 90 radar, the electronic warfare protection

system and cockpit information and computer technology for the jet. The Eurofighter consortium comprises Alenia Aerospazio, British Aerospace, CASA and Daimler-Benz Aerospace. It is responsible for the complete weapon system except for the engine and the assembly of the planes.

The Eurofighter deal has secured around 1,350 British jobs within GEC-Marconi, and may create

over 10,000 more within its supply companies and the services sector.

A spokesman for GEC-Marconi said, "This is core business for us for 35 years.

It does secure jobs and it means that there will be a European radar solution at the forefront of technology for decades to come."

Aircraft deliveries are scheduled to commence in 2002.



A prototype Eurofighter takes to the skies at last year's Paris Air Show. Photo courtesy of British Aerospace

GPT's Italian Job

GPT's participation in a consortium with Italtel, Marconi Spa and Sirti has resulted in the largest single order for the company's synchronous digital hierarchy (SDH) equipment.

GPT's £90 million order from Telecom Italia is its share of a three year contract to the consortium, and forms part of the national operator's £8.5 billion network infrastructure modernisation.

GPT is also supplying its family of SMA multiplexer units, which enable transmission speeds along SDH networks of up to 2.5 Gbit/s - enough for transmitting 30,000 simultaneous phone calls or 48 broadcast-quality television programmes.

Among the company's initiatives is a plan to make interactive multimedia services available to 5.5 million homes by 1999.

Major success

"This is a major success for GPT," declared Managing Director of GPT's International Division Peter Warn.

"It is a brilliant example of the success of GPT's international alliances with Italtel and Siemens. The project will provide

Italy with one of the most efficient and flexible communications networks in the world," he said.

GPT only recently announced another large contract for its Moscow-based joint venture Comstar opening a new telecommunications network around Moscow, the Russian capital.

The SMA multiplexer units being used in the new SDH network won GPT the Queen's Award for Technology and Achievement in 1997.

Key GEC-Marconi systems on board

- * Radar
- * Flight controls
- * Head up display
- * Helmet mounted display
- * Defensive aids sub-system
- * Laser warner
- * Display symbol generator
- * Fuel flow meter
- * Crash survivable memory unit
- * Fuel and coolant pumps
- * Air data transducer unit
- * Engine monitoring unit
- * Wing pylon station units
- * Tactical data links
- * VHF/UHF communications
- * Microwave landing systems
- * Missile systems

GEC news...1-5 Innovations...6 Environment...7 Feature...8/9 Training & development...10-12 Overseas club...13

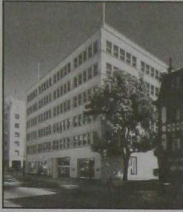
www.rochesteravionicarchives.co.uk

News in Brief

New address for HQ
From 1 Stanhope Gate...



...to One Bruton Street!



GEC Head Office moves into its new premises on 23 February 1998, to **One Bruton Street, London W1X 8AQ**. Telephone and fax numbers will stay the same, alongside new direct dialling in to 0171 306 + 1-current extension number.

Industrial Group sales

GEC has reached agreements to sell a number of business units from its Industrial Group. These include the Distribution and Trading operations in Australia, New Zealand and Ireland and the air charter firm, Magec Aviation. This is in line with GEC's refocusing strategy. The full programme of disposals should be completed during the current financial year.



Editor: Nicolette Linton
Deputy Editor: Caroline Rees

Topic is the GEC Newspaper, providing a link between all the company's operations and keeping employees informed and aware of each others' interests and activities. Please send stories and articles to:

Topic Office, GEC,
One Bruton Street,
London W1X 8AQ

Tel: 0171 493 8484
G-Net: Access + 783 388/389
Fax: 0171 491 0708

Next Issue: May
Copy Date: 13th April

Woods scoops award for top work abroad

Woods of Colchester has won Britain's Exporter of the Year award for its focused export strategy and success, despite the fluctuating strength of the pound. Woods was competing against a number of leading companies including Guinness, Thames Water and top fashion designer Vivienne Westwood.

This is the first time that Woods has entered the competition, reflecting the company's increased focus on export organisation over the last few years.

Divisions within the company are encouraged to target specific overseas markets while overseas customers are invited to the Colchester plant for technical, commercial and engineering training. In addition, Woods has continuously improved the performance and range of its products, controlling its manufacturing and freight costs and streamlining its overheads without jeopardising quality.

Woods collected the

overall title after first winning the corporate section of the awards. Martyn Last of Lloyds Bank Commercial Service, sponsors of the category said: "During 1997 many exporters have been

"We are in the business to provide the best products, service and technical advice for our customers world-wide. This award shows we are doing just that"

Woods' Export Sales Director Henry Nicoll

affected by the strength of sterling, yet Woods maintained strong export performance throughout and this marks them out as a world-class company."

Exporting to over 70 countries, Woods' overseas activity now amounts to over half the company's

turnover. Export Sales Director Henry Nicoll said: "Since Woods started trading we have treated exports as an important part of the hard work and effort from people here in the UK as well as our overseas representatives. This award shows the strength of our extensive network of overseas distributors who work as a team, hand-in-hand with Woods group companies."

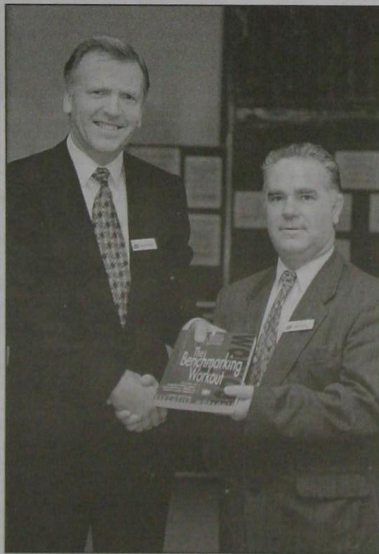
Woods' top export markets are China (including Hong Kong), France, Italy, Finland, North America and Singapore. Promising inroads have also been made recently in The Lebanon, Vietnam and Eastern Europe.



Something in the air: David Priest (front right), Managing Director of Woods of Colchester, gathers with members of the team which helped the company win Britain's Exporter of the Year award. Picture courtesy of Essex County Newspapers.

Benchmarking helps to set standards in GEC

Dunchurch recently hosted the fourth Benchmarking Forum event aimed at helping GEC companies measure themselves against the best.



Executive workout: Jack Fryer, GEC's Strategic Planning Director (left) presents a signed copy of The Benchmarking Workout to Jeff Povey, Quality Manager, GMRDS Operations, Scotland - the winner of a competition to name the Forum's newsletter Measure for Measure.

The event, labelled 'Routes to Success', was opened by GEC's Strategic Planning Director Jack Fryer, who emphasised the importance of benchmarking to the future of the company. He also stressed the commitment which exists from top management to making the process work.

1997 has certainly been a busy year for the Benchmarking Centre and the Steering Group, with the three other Forum events hosted at Dunchurch: the birth of a benchmarking newsletter, implementation of six pilot projects and numerous on-site presentations.

During this most recent event, GEC managers visited stands set up by the six pilot projects, highlighting progress to date and projections for the future. The final results of the projects are due to be released at the organisation's AGM in April 1998.

Sixty-nine companies are now Forum members, and steps are currently being taken to integrate GEC businesses in North America. Relationships with outside organisations have also been developed.

Over the last year, a great deal has been done to establish the structure necessary for benchmarking to be successful within the business.

This has included creating a protocol code of conduct and legal agreement, a benchmarking centre and database, a benchmarking business plan (1998-2001), a customer survey, and an enquiry and feedback process.

Dunchurch is looking forward to 1998 being an exciting year.

As well as the planned events and training programmes, the Forum intends to run a number of benchmarking roadshows:

* There will be about 12

strategically sited events covering all GEC businesses within the UK.

* The roadshow will last three hours and will usually be between 1400 and 1700 hrs.

* They will cater for 150-200 people, allowing each company to be able to send 15-20 employees. They will be encouraged to ensure that these employees are a multi-functional, multi-led cross section of the business.

* The content will be fast moving, dynamic and informative.

As the Forum is continually looking for innovative approaches, it will be developing the benchmarking package globally in a 'virtual learning' format through the internet and the intranet.

For more information contact the Benchmarking Forum website on:
www.gec.com/benchmarking

News in Brief

Woods

The success of Woods of Colchester's UK-wide Partnership Collection Scheme (featured in the last issue) has led to the launch of the European Partnership Range. Woods promises to deliver direct to the customer within ten working days of an order being placed.

GPT

GPT makes its debut into the internet market by supplying internet provider EasyNet with state-of-the-art network equipment. EasyNet is the first internet service provider to win a telecoms operating licence and start offering customers sophisticated, own-brand telephone services as part of its Net portfolio.

MMS

The French, German and UK governments have signed a Memorandum of Understanding to begin the project definition phase of their joint future military satellite communications system *Trimilcom*. The programme, expected to be worth around US\$2 billion, will provide survivable high data-rate communications within operational theatres and offer interoperability with allies.

Marconi Instruments sale

GEC announced the sale of Marconi Instruments to US electronic test instrumentation manufacturer, IFR Systems Inc, for £65 million, paid in cash on completion. The sale includes UK-based Marconi Instruments Limited and its subsidiaries in France, Spain and Germany, as well as Marconi Instruments Inc in the US. Marconi Instruments, headquartered in Stevenage, designs, manufactures and distributes electronic test and measurement systems and equipment.

Thomson Marconi Sonar

TMS has been awarded a ten-month MoD contract to examine options for the replacement of the mine-hunting sonar fitted to the Royal Navy's HUNT class Mine Countermeasures Vessels. These vessels were successful in mine hunting and clearance during the Falklands war and Operation Desert Storm. The order will involve investigating the demanding operational requirements for the vessels and will lead to a recommendation for the most effective replacement sonar solution.

All systems go for Skynet launch

The UK Ministry of Defence's latest Skynet 4 spacecraft, designed and built by Matra Marconi Space (MMS) to extend the life of the current British military satellite communications system, was successfully launched on a Delta 2 rocket from Cape Canaveral, Florida on Friday 9th January this year.

Matra Marconi Space's "delivery-in-orbit" contract for the satellite includes the launch, operational control and in-orbit testing prior to hand-over to the customer.

Skynet 4D is the first of the Skynet 4 Stage 2 series. Incorporating an enhanced design, its communications payload includes steerable antennas for super high frequency spot beam

communications. It also has increased power and a superior anti-jamming capability.

At ultra high frequency, a fully tuneable system increases its flexibility, which means that it can be used by more people across a wide range of countries and can transmit larger amounts of data.

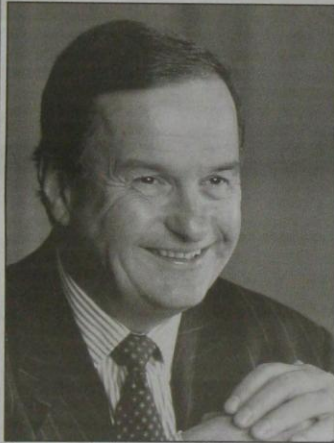
A large variety of spot and global beams enables the satellite to serve numerous

earth stations, or ground control zones, on land, sea and in the air. These range from small manpack sets (portable backpacks containing a radio and a reflector), aircraft terminals, those on widely dispersed naval vessels (including submarines) and large anchor stations on land.

Skynet 4 is built to withstand harsh electronic warfare environments.

Hurn for new Chairman

Sir Roger Hurn, Chairman of Smiths Industries, will become GEC's new Chairman and non-executive director at the end of the year.



Front man: Sir Roger Hurn, GEC's future Chairman

Sir Roger, 59, will take up his new post from 1 December, succeeding Lord Prior, GEC's current Chairman who aims to retire after September's AGM.

As one of Britain's top businessmen, Sir Roger was knighted for his services to the engineering industry. He joined Smiths in 1958 and, as Chief Executive, transformed it into an engineering giant with sales of over £1 billion. He retires from Smiths Industries this November, retaining his position as non-executive director of ICI and Deputy Chairman for Glaxo Wellcome.

Sir Roger feels confident that he can help to guide GEC through its restructuring, building on the achievements of Lord Prior's 15-year tenure. "Hopefully my background has got something to contribute to the next phase of GEC's development", said the destined Chairman. "The job has plenty of challenges, and I am very excited."



The launch: The Boeing Delta 2 launch vehicle carrying the Skynet 4D military communications satellite lifts off successfully on 10th January from Cape Canaveral Air Force Base.

..update...update...update..



The Earls Court Boat Show provided the perfect venue for the Festival of the Sea 1998 to continue raising its profile ready for the major August Bank Holiday event.

The show, held in January, marked the start of a public advertising campaign to promote the festival to a wide and varied audience. GEC is working in collaboration with the Royal Navy (RN) as Title Sponsor, and the company name will feature as an integral part of the festival logo (left).

As a principal supplier of ships and systems to the Royal Navy, including airborne equipment for Sea Harriers and Lynx and Merlin helicopters, GEC

will enjoy a strong and influential presence at the festival. On display will be around thirty RN warships, several of which will have been built by GEC and almost all of which will be equipped with various GEC-Marconi systems.

Applications from more than 400 boat owners have been received already - all keen to participate in the festivities.

The Boat, Caravan & Leisure Show takes place at NEC, Birmingham, from 14-22 Feb.

Brunei orders confirmed for Yarrow

The Ministry of Defence of the Government of His Majesty the Sultan and Yang Di-Pertuan Darussalam in co-operation with the Government-owned Royal Brunei Technical Services Sdn Bhd has confirmed the contract for the building by GEC-Marconi of three offshore patrol vessels for the Royal Brunei Armed Forces.

The work is expected to take four years to complete. The 95 metre ships are due to start taking shape next year, as the production of the three latest Type 23 frigates for the Royal Navy is completed.

The order is for a ship package which includes propulsion, weapon systems, spares and training. All three ships will be fitted with the latest technology equipment from leading international companies.

The UK Secretary of State for Defence George Robertson welcomed the signing of this very important deal, and said, "This contract is extremely good news for the British defence industry in general and for the Yarrow shipyard in particular."

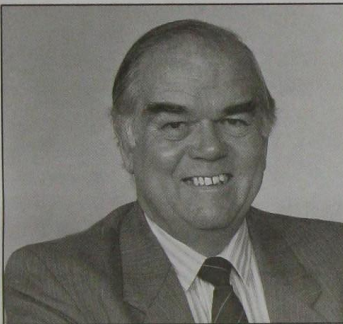
Queen bestows Honours on GEC four

Gordon Osbourne, MBE

Gordon Osbourne, an employee of GEC-Marconi Underwater Systems Group was awarded an MBE for his services to the defence industry. He joined GEC in 1970 aged 31 as part of the Skynet II team at Portsmouth. In the next nine years he headed a team of dynamicists and structural engineers supporting all the company's Browns Lane site projects from spacecraft to underwater weapons.

When Marconi Underwater Systems was formed in 1979, he joined the team working on the 7525 torpedo feasibility study, leading to the mechanical aspects. GEC was awarded the full development contract of 7525 in 1981 and the torpedo became known as *Spearfish*. Gordon has continued to be an important member of this project up to the present day. In 1984 he was seconded to Sundstrand in Illinois to supervise the final development and qualification of the powerplant for the torpedo. In 1985 he became Project Leader for propulsion and control aspects of *Spearfish* and is currently the Afterbody Manager responsible for all mechanical and propulsion activities of the torpedo and its support equipment.

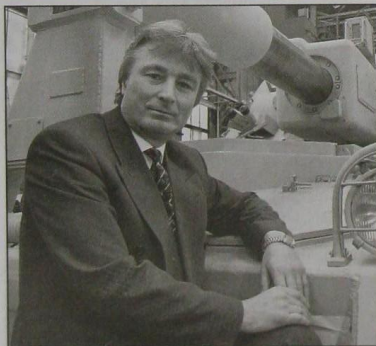
Rex Rayner, MBE



Rex Rayner, of late the Post Design Support Manager for GEC ALSTHOM Paxman Diesels, was awarded an MBE for his services to the Royal Navy. Rex's association with the Navy started some 30 years ago. He was made Post Design Manager MOD (N) in 1978 with the mandate to re-establish the confidence of the Navy in Paxman engines.

Over the years Rex resolved problems, improved reliability and engine life and implemented a teamwork system with the Navy which is still used today.

Tony Lawrence, OBE



VSEL's Armaments Projects Director Tony Lawrence heads the project team charged with producing three AS90 self propelled howitzers a week to meet tight timescales for a £300m British Army contract. Tony, 43, took up his role of AS90 Programme Manager in 1992.

He joined Vickers as a student apprentice in 1971 and took up a company sponsorship to complete a four-year course in mechanical engineering at Loughborough University.

He graduated with a keen interest in armaments and weapon systems and was later appointed as a design engineer in the Armaments Drawing Office. During the next five years he worked on a wide range of products, including Sea Dart missile launchers and rocket launcher decoy systems.

In 1980, as Chief Systems Engineer, Tony became involved with a new project called GBT155, an initiative which led to the AS90. Six years later he became Marketing Manager in the Armaments Business Development Department.



Brian Saunders, CBE



Brian Saunders was awarded his CBE in the New Year Honours for his services to the defence industry.

Brian, 58, has been the Commercial Director of GEC-Marconi in Stanmore since 1982, where he has responsibility for company-wide commercial and legal matters.

Brian lived in Great Dunmow in Essex until 1963 and, after obtaining his Law Degree at Leeds University, joined Marconi's then Wireless and Telegraph Company in Chelmsford, before eventually settling in Stanmore six years later.

Brian lives with his wife in Brookmans Park, Hertfordshire and has two daughters.

"European Quality Week 1997"

GEC-Marconi Radar & Defence Systems Operations Division (GMRDS) hosted last year's highly successful events in support of European Quality Week.

The Portsmouth-based unit provided a series of events constituting a "Quality Market Place" which was advertised in the special edition of the European Quality Journal.

The events continued for a whole week, and were located in the newly refurbished state-of-the-art Radar manufacturing hall.

The theme - quality at the service of society - was directly related to one of the company's key objectives: to forge close partnerships with local schools and so all of the schools involved

were invited to attend the "Quality Market Place" event.

This included displays and presentations on IIP, statistical process control,

demonstrations of the latest high-tech microwave finewire ball bonding processes and micro component assembly processes.



Small is beautiful: Teams scrutinise microscopic wonders during European Quality Week last year.

GEC-Marconi lands civil deal for pilot display

Following intense international competition, GEC-Marconi has won a contract to supply American Airlines with 75 civil head-up displays (HUD) for their new 737-800 aircraft.

A head-up display is an advanced integrated system which analyses pilots' instrument readings, allowing them to view vital flight information without looking down from the windscreen.

GEC-Marconi already holds a world-leading position as a supplier of HUD systems for military aircraft. The American Airlines programme underlines the company's ability to diversify this core expertise into new markets.

The GEC-Marconi HUD pedigree, based on more than 35 years' experience in military systems, began when the world's first ever HUD was selected for the UK RAF's low-level Buccaneer strike fleet in 1962. Since then, GEC-Marconi has supplied HUDs for more than 50 different aircraft types.

The American Airlines 737-800 HUD exploits technology developed by GEC-Marconi for a range of modern aircraft. GEC-Marconi has launched the 2020 civil HUD programme for the Gulfstream business jet that is now in full-



The civil head-up display has been designed based on GEC's unrivalled HUD experience. The HUD represents state-of-the-art display technology from GEC-Marconi and integrates complex data from advanced avionics instrumentation.

scale production at the company's Rochester site. It is also a supplier to several programmes including the USAF F-22 Raptor and Eurofighter 2000 combat aircraft, and the C-17 GLOBEMASTER II transporter aircraft. The market for civil HUDs is

estimated at between 10,000 and 16,000 systems over the next 10 years.

Leading-edge technology

"American Airlines is pleased to announce that GEC-Marconi has been selected as the Head-Up Display supplier for our new 737 aircraft," said Captain Rick Owens, 737 Fleet Manager, American Airlines. "GEC-Marconi Avionics in Rochester is the world's largest HUD supplier with over 10,000 units in service. We are excited about this new partnership to provide our pilots with leading-edge technology to enhance safety and situation awareness," added the Captain.

Lord Simpson, Managing Director of GEC said, "We are pleased to have been selected for this contract by one of the world's major airlines. This is an important step in GEC's strategy to develop the civil component of GEC-Marconi's order book. It also marks a strong early leadership for GEC-Marconi in a market with enormous growth potential."

The site is right!

The Astute Class Project welcomes its first VIP, as Peter Gershon, Managing Director of GEC-Marconi, signs in at the group's new premises.



Hitting the spot: (Above left) GEC-Marconi's Managing Director signs the visitor's book in the new purpose-built building at Lyon Way, Frimley. (Above right) The newly formed GEC-Marconi Underwater Systems Group completed the transfer of the Astute Class Prime Contract Office from several separate units at the Addlestone site to the new location. This new high-tech facility, combined with the new grouping, will ensure that the project can proceed with the prime contract management of the £1.8 billion order to provide the Royal Navy with the next generation of nuclear submarines.

Tilting train tender submitted

GEC ALSTHOM and Fiat Ferroviaria have submitted a joint tender for the contract to supply a fleet of new tilting trains for the West Coast Main Line franchise operated by Virgin Trains.

The West Coast Main Line is the UK's premier rail service linking London, Birmingham, Liverpool, Manchester and Glasgow. The existing fleet of trains needs to be replaced by modern, state-of-the-art tilting trains which will be able to travel faster on existing track.

rail travel in the 21st Century. In developing its new products, GEC ALSTHOM and Fiat Ferroviaria has paid particular attention to the interior design of the train to provide an enhanced customer environment and substantially improved customer services and facilities."

Attention to the interior design

Managing Director of GEC ALSTHOM Metro-Cammell Peter Murray, said, "This is the single most important tender that the train manufacturing industry in the UK has competed for in many decades. It is a wonderful opportunity for GEC ALSTHOM and Fiat Ferroviaria to demonstrate its technical expertise as well as to provide a quality product for

He added, "All too often in the past the rail industry presented a hard and uncaring image to its customers. We want to transform this image so that travelling by train becomes an enjoyable experience in itself rather than simply the basic means of getting from A to B. We want to see trains providing facilities which are fun, interesting and exciting. When these features are



Trainsformation: GEC ALSTHOM and Fiat Ferroviaria plan to re-write the future of train design and set new standards of passenger comfort.

combined with Virgin's high quality customer service the result is a unique and exciting railway journey experience. We share Virgin's

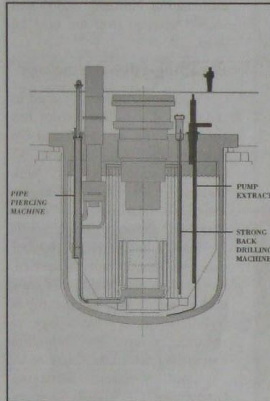
vision of the railway industry and are convinced that our product will set the standard for quality, reliability and innovation."

INNOVATION

Hot metal

NNC takes on a major nuclear industry challenge

How do you dispose of more than 1,500 tonnes of radioactive hot liquid metal coolant in a nuclear reactor - most of it sodium held at a temperature of 200 degrees Celsius?



The diagram above explains the sophisticated drilling and punching operations which are necessary to access and drain liquid metal safely from the Prototype Fast Reactor.

That was the challenge faced by the UKAEA when it decided that the safe disposal of the coolant was a priority of decommissioning the Prototype Fast Reactor (PFR) at Dounreay in Scotland.

NNC provided the safest and most cost-effective solution, winning a £17 million six-year contract in 1995. It is one of the largest nuclear decommissioning contracts currently underway in the UK.

The development of a safe and reliable decommissioning strategy was paramount. Liquid sodium and liquid NaK (sodium potassium) are used as the heat transfer media in the cooling circuits of the fast reactor. They require special care as they are very chemically reactive when exposed to air or water.

The solution was to build a dedicated liquid metals disposal

plant together with the systems needed to transfer the metals to the plant.

NNC has built a new two-storey steel-clad building, housing 500mm thick concrete containments, in the empty shell of what used to be the PFR turbine hall. Some of the purpose-built plant and systems

Project management

manufactured at NNC's Risley workshops have now been delivered and installed on site. NNC's experts are providing comprehensive safety support required on a licensed nuclear site, and a dedicated unit has been set up on site to provide health physics and dosimetry support for all personnel.

The project also involves a waste management strategy to ensure that the liquid effluent, tritium and hydrogen produced through the disposal process are disposed of within agreed discharge limits.

The "NOAH" process

The process used for disposing of the liquid metals, licenced to the French nuclear company Framatome, is sometimes referred to as NOAH (an anagram of the symbols of sodium, oxygen and hydrogen).

In the disposal plant, small quantities of liquid metal are injected into water by metered injection. The resultant controlled reaction produces aqueous sodium hydroxide which undergoes a neutralisation process using hydrochloric acid to form aqueous sodium chloride, which is cooled and filtered to remove radioactive particulates.

The reaction also produces hydrogen which is diluted and dispersed using a high volume ventilation extract system.



NNC engineers (above) have achieved a world first by successfully drilling and piercing under liquid sodium as part of the decommissioning project.

GPT develops world's most sophisticated telecoms chip

Technologists at GPT in Beeston have developed the most advanced chip ever used in telecommunications equipment - with the equivalent of 6,400,000 transistors packed into a unit just 40mm square.

The new ASIC (application specific integrated circuit) has been purpose-designed to further enhance the performance of GPT's SMA multiplexers, which won the

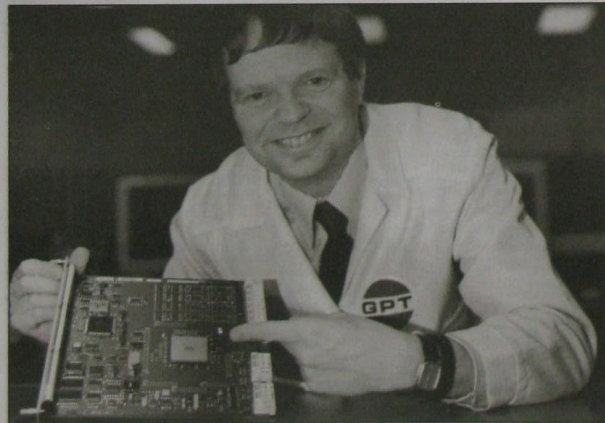
Queen's Award for Technological Achievement in 1997.

GPT's supremacy in SMA development has already made it world market leader in SDH (synchronous

digital hierarchy) technology - the most popular system for carrying high speed telecoms traffic over optical-fibre networks.

"This is undoubtedly a first for Britain in telecoms technology. The new chip moves the design of SDH equipment forward significantly by delivering more channels and features, with lower power consumption and in a smaller package than ever before," said Phil Griffin, a Development Director at GPT.

Chip off the block: GPT Development Director Phil Griffin shows off the new ASIC technology. The tiny chip measures just 40mm - smaller than a teabag but with the brains of a super-highway.



Picker Interventional debuts at RSNA

The future of diagnostic imaging arrived at the 83rd Annual Meeting of the Radiological Society of North America (RSNA) in Chicago, Illinois, when Picker International unveiled Venue™, the industry's first complete multimodality interventional product line.

Combining CT and X-ray technology, Venue™ products improve instrument guidance and interventional planning for a variety of procedures, including biopsies, drainages, brachytherapy, bone interventions and angioplasty.

The unveiling was so significant for the future of health care that Picker used the theme "Picker Interventional" to organise its product displays and to deliver its message to customers.

Surfing with Fibreway

A link in a unique national fibre-optic network has been completed early by GPT's subsidiary company Fibreway. Telewest Communications is one of the first users of the network, which connects London and the South East with Birmingham, Leeds, Warrington and Manchester.

"Telewest's development of a high-quality optical fibre infrastructure is an investment in the future, giving customers immediate access to high bandwidth services," said Peter Borer, Telewest's National Network Director.

"The Fibreway solution alleviates the need to build, own or maintain the network, allowing us to focus on our customers' requirements," he added.

The network - in collaboration with British Waterways - provides telecoms network operators and internet service providers with access to secure, diverse high bandwidth telecom-

"The Fibreway solution alleviates the need to build, own or maintain the network allowing us to focus on our customers' requirements."

Peter Borer, Telewest National Network Director

munications capacity. Though the Fibreway network will carry high bandwidth trunk traffic, it is capable of carrying all of the voice traffic for the UK.

The project has a major environmental advantage: much of the network runs along the canal towpath. By generating revenue, it enables British Waterways to invest in the future of the canal infrastructure.

"The trenches have the capaci-

ty to take up to eight cables, bringing with them the prospect of cable television, data transfer and a number of other high bandwidth applications such as the internet," said Jane Reynolds, Fibreway's Director. "Our customers are provided with immediate access to a nationwide telecoms network which also protects their competitive integrity."

Fibreway's network is expanding rapidly, with the business reporting significant interest from telecoms network operators and internet service providers who are supplying services in the centres through which the cables pass.



Route canal: Fibreway's nationwide network of fibre-optic cables allows customers to gain access to cable television, data transfer and other high bandwidth applications such as the internet.

Green alert

If you work within GEC and if you recycle waste, use environmentally friendly equipment, raise money for an environmental charity, or if your company has its own environmental policy, please send details to Topic or call Caroline Rees on 0171 493 8484 or G-Net Access+ 783 388.

If any GEC employee has questions on the legislation surrounding the environment, or wants advice on how to become more environmentally friendly, please send your questions in an envelope marked Environment Page to: The Topic Office, GEC, One Bruton Street, London W1X 8AQ.

Topic regrets it cannot always give individual replies or advice, and asks that original documents are not sent in. No legal responsibility can be accepted for advice or statements in this section. The view expressed will be the personal views of the contributor and not necessarily those of the editorial team at GEC. Readers should take specific advice when dealing with specific situations.

Clean air power for Danes

The most advanced and efficient fossil-fired plant in the world is now officially open in Skaerbaek with GEC ALSTHOM equipment in place.



GEC ALSTHOM supplied the 412MW steam turbine operator (HP/IP cylinder shown above during manufacture) and balance of plant for the third unit of the power station. The double reheat steam turbine operates at supercritical steam conditions of 285 bar and 580 degrees Celsius at high pressure input. The first and second reheat temperatures are 580 degrees Celsius. These extreme steam pressure and temperature conditions make this the most advanced way to minimise emissions and to achieve a more environmentally friendly fossil-fired power plant. This unit is an extension to the existing power plant on the site, and will supply both electricity and district heating for the Danish company 1/S Skaerbaekvaerker.

PARC life

Since the launch of the GEC-Marconi Product Assurance Response Centre (PARC) in April 1997, the centre has played a significant role in supporting GEC Environmental Services.

PARC is made up of a multi-disciplinary team of scientists and technicians who provide GEC-Marconi with rapid, cost-effective trouble shooting. It solves problems associated with materials, processing, assembly and product performance.

Although it primarily provides manufacturing support to the group, PARC also offers environmental support. For example, it gives key legislative and technical support throughout the business with regard to the phasing out of ozone depleting substances and the application of impending controls on volatile organic substances, such as solvents.

PARC has also undertaken GEC site audits, preliminary environmental site assessments as part of acquisitions or divestments, contaminated land surveys, water monitoring, air emission checks and general consultancy work.

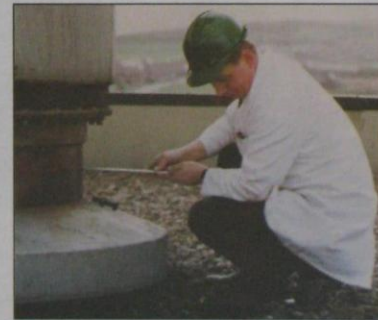
The centre has major input

into the GEC-Marconi Environmental Special Interest Group, which meets every four months to discuss issues of key importance to GEC. The group is chaired by PARC's Technical Manager Dr David Andrews.

The centre is supported by direct sponsorship from GEC-Marconi's operating units but it does take on some work from other GEC companies and external

organisations. The unit is based at GEC-Marconi Research Centre, Great Baddow, and facilities include two new laboratories which house a wide range of analytical equipment.

All enquiries are routed through PARC's 24-hour help line (01245 242000, G-Net: Access+333 2000). Some 450 calls have been logged to date.



PARC team member Alan Yale monitoring stack emissions.

Fabulous four: (Clockwise from top) Winner **Claire Drew**, Systems Engineering Manager, GEC-Marconi Avionics, Rochester is working on the helmet mounted sighting system on the Jaguar RAF aircraft upgrade. Third prizewinner **Patricia Dooley**, Software Development Manager, looks after a team of 12 software and integration engineers developing operating systems for GPT in Coventry. Award runner-up and winner of the WISE prize, **Vicki Houston** works as a technical author for Yarrow Shipbuilders in Scotstoun where she coordinates the Ships Weapon Systems Equipment Operators' Handbook for the Royal Malaysian Navy LEIKU class frigates. **Anita Hales**, Software Engineer for GPT Payphone Systems in Liverpool analyses customer requirements, produces and implements detailed software designs and sees projects through to completion.



"I believe there is still a misconception that engineering is a 'dirty hands job' and therefore girls don't look at the range of options available to them."
Claire Drew, Systems Engineering Manager, GEC-Marconi Avionics, Rochester and winner of the 1997 Young Woman Engineer of the Year Award

It's not just a machine

Four of the five finalists at the recent award ceremony work for GEC. While quality of GEC's women engineers, this field is only 14%. Topic gets down what is being done to encourage women compete on equal

"Engineering is a wonderful career - a combination of the arts and sciences where dreams can be turned into reality. Talented people of both sexes must be encouraged to take up the profession."
Claire Curtis-Thomas MP C Eng, Member of the Senate of The Engineering Council



Claire Drew, Systems Engineering Manager at GEC-Marconi Avionics in Rochester, is the 20th winner of the Young Woman Engineer of the Year award. Sponsored by The Institution

Claire Drew (left), winner of the 1997 Young Woman of the Year award, was presented with her prize by **Claire Curtis-Thomas MP**.

responsible and reliable." Mother of a three-year-old daughter and part-time Open University degree student, and giving children valuable insights into engineering as a career.

Claire has expanded her already hectic schedule by becoming a 'neighbourhood engineer'. This is an initiative run by the Engineering Council which links professional engineers and technicians to local schools, supporting teachers

"Engineers are the creators of our future environment and GEC recognises the priority it must place on encouraging more women to enter this crucially important field as equal players."
Peter Mackenzie Smith, GEC's Director of Education

Over 11,000 neighbourhood engineers work with 2,000 secondary and a number of primary schools.

In her role as a neighbourhood engineer, Claire has noticed that "even if we are getting the message through to young people, we still have a generation of parents who do not think that engineering is a suitable subject for their daughters. We need to educate everyone and show that women can be achievers in these disciplines."

"The most frequent question I am asked is 'Why engineering?' Isn't that an unusual career choice for a woman?" I notice that men are never asked the same question and, really, my only answer is 'Why not? Engineering is what I enjoy!'"
Britta Hendel, Manufacturing Engineer Manager, GEC ALSTHOM Metro-Cammell, Birmingham



Catching them young: Schoolchildren from Tunbury Primary School in Chatham, Kent discover the secret way to balance bricks on paper. Training staff at GEC-Marconi Avionics, Rochester use this problem-solving exercise as a technology ice-breaker. The next task was to choose a team leader, cost a project, and build and test a water tower.

In the footsteps of a pioneer

Caroline Haslett was born in 1895 and, at the age of 25, became the first Secretary of the Women's Engineering Society (WES). From the WES grew the Electrical Association for Women to which Caroline, by then a Dame, was appointed Director and Secretary. Through the Association, she encouraged the use of power in the home, believing that electricity was the real emancipator of women. A trust, which was formed in 1945 to commemorate the 21st anniversary of the Electrical Association for Women, became a memorial to Dame Caroline after her death.

The Caroline Haslett Memorial Trust is a charitable body which provides scholarships and other educational opportunities to women seeking or already pursuing other careers in electronic and electrical engineering and allied technologies. It awards annual scholarships and bursaries to women embarking on full-time Higher National Diplomas and Incorporated Engineer-level degree courses. It is also joint sponsor of the Young Woman Engineer of the Year award and the complementary Mary George Memorial Prize.



Following the demise of the Electrical Association for Women in 1986, the Trust was reconstituted and, in 1990, the trusteeship was handed over to The Institution of Electronics and Electrical Incorporated Engineers.

Caroline Haslett outside the White House with President Truman in 1952. This photograph was taken during Caroline's visit to the United States of America as President of the International Federation of Business and Professional Women.

Women who have dreams

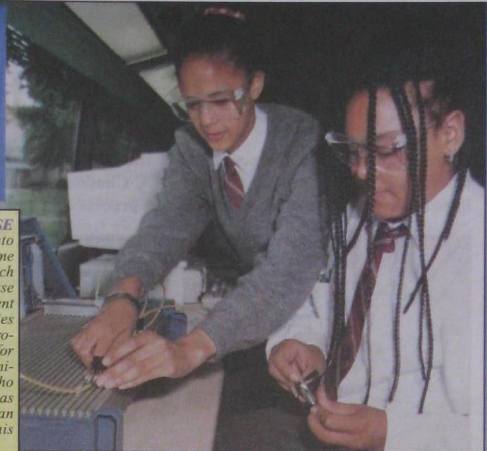
Young Woman Engineer of the Year
 this impressive result reflects the high rate of women currently studying in to brass tacks with the experts to see into engineering and to allow them to terms with men.



"Engineering is about brain power, problem-solving and analytical ability, not brawn or muscles. If girls keep a broad range of options up to the age of 16, then they will be in a better position to take up engineering as a career."

Michelle Richmond, Project Manager on Skynet 5, Matra Marconi Space, Stevenage and chairwoman elect of the new Institution of Incorporated Engineers electronic, electrical and mechanical

Two young engineers experiment at a WISE bus workstation: The WISE (Women Into Science and Engineering) Vehicle Programme has six specially converted vehicles which offer 13-14 year old girls an opportunity to use various technologies. Although the equipment on each vehicle is not identical, opportunities are provided for work in mechanisms, micro-electronics, pneumatics, microprocessors for control, computer aided design and communication. Apart from members of the public who have seen the vehicles at special events such as exhibitions and conferences, more than 275,000 girls have benefited from this 'Technology in Action' programme.



"Engineering is an exciting and challenging career to which women are ideally suited. However, it is most important that men and women in engineering compete on equal terms."

Former engineer Mary McKinlay, Director of Human Resource Developments, GEC-Marconi Avionics

did recognise the difficulties women face in a career that is so male dominated: "I look on you and think that you and I have so much in common," she said. "We have all had to struggle to achieve what we wanted. It isn't easy; there are tremendous obstacles for women in engineering."

Also present at the event was Baroness Williams of Crosby, who presented the first ever award in 1979.

"When it started, engineering had a rather crude and dirty image, brawny arms up to their biceps in muck and so on. One of the things we wanted to do was make it

glamorous, to show that good looking, smart young women were engineers too."

Michelle Richmond, Matra Marconi Space project manager and winner of the award in 1990, is also chairwoman elect of the new Institution of Incorporated Engineers electronic, electrical and mechanical. Her feeling is that "women have had to compete in a profession which is so male dominated

that they have to be very good engineers. So, to cope with that environment, they have to have a certain amount of character and drive to succeed. It is taking a long time to get more women [into the profession]. It's taken over a decade to double the numbers. That is why this award is so very, very important - to keep on raising the profile of women engineers."

The Young Woman Engineer award ceremony, which was held at the Royal Society for the Arts in London, was attended by former winners of the award as well as Labour MP for Crosby Claire Curtis-Thomas who presented the prize to the winner.

As a chartered engineer and member of the Senate of the Engineering Council, Claire is urging the

Government to increase its support for UK engineering and publicly emphasises the important role all profession-

al engineers play in the nation's prosperity.

However, in her speech she



Step by step: Claire Drew (bottom step) with Claire Curtis-Thomas MP (on bottom step behind her), Baroness Williams (in tartan jacket, one step above) and 13 of the previous winners of the award.

Onwards and upwards

Claire Drew is the fifth engineer to have been named Young Woman Engineer of the Year whilst working for GEC. Never happened to the other four?

Frances Sharpe worked for GEC as a Technician Engineer Apprentice and is now a consulting director for a software company.

Catherine Srdic, who was a development engineer for GEC, is now a lecturer in telecommunications at Coventry Technical College.

Susan Hewitson, a GPT telecommunications engineer at the time of the award, is now Broadband Strategy Manager for GPT Public Networks Group in Coventry.

Hayley Gladstone, former Senior Project Manager for GPT Strategic Communications Systems is now Operations Commercial Manager for the same company.

WISE move



Another GEC finalist received a further honour at the award ceremony: runner-up Vicky Houston, project coordinator and technical author for Yarrow Shipbuilders based near Glasgow also won the WISE prize.

WISE (Women Into Science and Engineering) was launched in 1984 by the Engineering Council and The Equal Opportunities Commission to help change the attitudes of young people, parents, teachers and the general public to the value of engineering and its suitability as a career open equally to men and women. It aims to attract more women, especially at undergraduate level, into engineering through a programme of publications, seminars and workshops.

The WISE campaign along with other initiatives does seem to have made some impact on the industry: the number of women studying for engineering degree programmes has risen from 7% in 1984, when the campaign started, to its present 14%. By 1989 there were female students on all university and polytechnic engineering courses. WISE campaign manager Marie-Noëlle Barton feels that "given engineering is the application of scientific knowledge to solve practical problems, there is nothing to justify the discrepancy between the number of men in the engineering profession compared to the number of women. Both camps are missing out: women because engineering is a fascinating career and industry because women make such good engineers."

CONTACTS

The Institution of Electronics and Electrical Incorporated Engineers

0171 836 3357 Jenny Poulton
 Engineering Council, WISE Campaign
 0171 240 7891 Marie-Noëlle Barton

GAME ON - the 1998 GEC Challenge

In the 100 Group Conference in September 1997, which many will have seen on video, Lord Simpson set all employees the task to transform the company into 'The New GEC'. The GEC Challenge, to be held on the banks of Lake Windermere between 4th and 6th September, offers a great opportunity to contribute to the change process and explore new ways of communicating across functional boundaries, working as a team and learning the skills of problem-solving.



Team effort: (Above) Building a floating platform to transport people and equipment across the lake. (Right) Making a kite - one of the tasks set for the Challenge teams.

There are two options open to those interested in taking part in this event: the first is to enter a team and the second is to act as a mar-

shal. Both offer opportunities to learn and develop important skills.

For example, you will learn to cooperate and collaborate with other teams to achieve common goals. By developing your planning and decision-making skills, you should be able to come up with creative and innovative approaches to solving problems and working better under pressure. Individual and team performances will be monitored,

reviewed and improved continually throughout the weekend.

Those who decide to be marshals will have the unique experience of working in teams chosen from across the whole of GEC and the overall success of the event is dependent on their effectiveness.

Of the 100 team places, 76 have already been booked, so move fast to take up this great development opportunity. If you wish to be a marshal, training will take place at Dunchurch between 13th and 14th June.

Please contact Sharon Evans for an application form on G-Net: Access+ 784 2114, or e-mail: challenge@dunchurch.ccmil.com-
puserve.com

"To succeed well into the 21st Century, GEC has to be a learning organisation with well educated, well trained and well motivated employees, aligned to the company's objectives and working together as a team."

Lord Simpson,
GEC's Managing Director

While working for GEC ALSTHOM Engineering Systems, Graham Murray played an important part in developing a Partnership Centre which, working alongside the Education Business Partnership, provides a vehicle for introducing and promoting engineering as a career to young people in Leicestershire.

Now at GEC ALSTHOM Metro-Cammell, Graham is still involving his company in the community. In one project with local grammar school Bishop Vesey's in Sutton Coldfield, students have been designing a bicycle rack for Metro-Cammell's Juniper train, which will be presented to the Board of Directors.

Most recently, his company has just received an Education Business Partnership award for its technology and engineering projects at Washwood Heath School.

Other GEC companies are also heavily involved in the

local community. GEC Marconi Avionics in Rochester, for example, houses the Medway Education Business Partnership on its site, with which it holds 'Engineer Your Future' days, providing workshops in conjunction

"One of the main ways of making GEC a sustainable learning organisation is through education partnerships and links all through the system from primary schools to research at universities."

Peter Mackenzie Smith, GEC's Director of Education

with the University of Greenwich. As well as their work with the Year of Engineering Success and Young Enterprise, Rochester site staff have been profiled in the Society of Business Aerospace/Careers in Focus video *Aerospace: building on success* which shows a range of entry points into a career in aerospace.

The company's Edinburgh site is also involved with local schools and universities. One example is that it

offers work placements, job skills days, mock interviews and material support in its Edinburgh Compact scheme.

The Edinburgh site also holds 'Son and Daughter at Work' days and exchanges places on training courses

offered by the company and Edinburgh University. It is

an active contributor to the Fife Council and to Young Enterprise Scotland.

Liaison with local education providers has a direct impact on training within companies, as confirmed by Peter Drew, GEC ALSTHOM Engineering Systems' Personnel Director: "Applications for places on the company apprenticeship scheme have increased by over 100%. Working more closely with schools has been seen as a major contributory factor to this figure."



Graham Murray Supreme Individual National Training Award winner

After completing a four-year craft apprenticeship in Electrical Engineering, Graham joined the Royal Air Force in 1980 as a trainee electronics technician. Having just enrolled on a course which would lead to a position as Education Officer, he was involved in a horrific car accident, leaving him with permanent disabilities. Still keen to take on a senior role in training and development, Graham embarked on a ten-year personal training programme. He spent three years consolidating his electronic engineering background with City & Guilds and HNC qualifications and, in 1989, switched to business and training-related courses, culminating in a Masters Degree in Training and Development from the University of Sheffield. In 1996, he joined GEC ALSTHOM Engineering Systems in Whetstone as Training and Development Manager, before moving in 1997 to GEC ALSTHOM Metro-Cammell in Birmingham as Development and Training Manager. Graham is directly responsible for over 1,750 employees including graduates, apprentices and youth trainees. He promotes engineering and associated disciplines at careers fairs, schools and colleges, and is a part-time lecturer at Countesthorpe College, teaching business studies to mature students.

"Having benefited so much from further education, it is satisfying to be able to put time and effort back into the system." Graham Murray

Brainstorming: Graham Murray (left), GEC ALSTHOM Metro-Cammell's Development and Training Manager discusses the company's education policy with GEC's Managing Director, Lord Simpson (right) and Director of Education, Peter Mackenzie Smith.

Business is learning

Throughout the group, companies and individuals are getting involved in schemes to exchange GEC's skills and knowledge with those of local communities. One of them, Graham Murray, GEC ALSTHOM Metro-Cammell's Development and Training Manager, has just been given two of the highest accolades in training: an Individual National Training Award and a Supreme Individual National Training Award - one of only five in the country. These not only recognise his own considerable personal achievements, but also the amount he has put back into the system.

YliPee! GEC companies make the grade

Investors in People (IiP) is a national standard which sets a level of good practice for training and developing people to achieve business goals. The Government is encouraging all companies to be accredited with IiP by the Year 2000 and more and more GEC businesses are achieving this goal. *Topic* looks at the criteria behind the standard and at some of its most recent recipients.

IiP was developed in 1990 by the National Training Task Force in partnership with leading national business, personnel, professional and employee organisations. The work was supported by the Government's Employee Department. It was then extensively tested during 1991 by Training and Enterprise Councils and Local Enterprise Companies.

It provides a national framework for improving business performance and competitiveness through a planned approach to setting and communicating business objectives and developing people to meet these objectives. The result is a match between what people can do and are motivated to do and what the organisation needs them to do. The process is cyclical and engenders a culture of continuous improvement.

The IiP standard is based on four key principles: commitment to invest in people to achieve business goals; planning how skills, individuals and teams are to be developed to achieve

them; taking action to develop and use necessary skills in a well-defined and continuing programme directly tied to business objectives; and evaluating outcomes of training and development for individuals' progress towards goals, the value achieved and future needs.

Being recognised as an Investor in People involves a number of steps. Firstly, understanding the standard and its strategic implications for your organisation. Then, undertaking a review against the standard to identify any gaps in current practice. Next, making the commitment to meet the standard and communicating that commitment to all members of staff. After that, planning and taking action to bring about change and bring together evidence for assessment against the standard.

Only then will a company be recognised as an Investor in People. However, it does not stop there: it will need to continue to work on keeping the culture of continuous improvement.

GMRDS



...and in my spare time: Chancellor of the Exchequer Gordon Brown tries his luck at driving one of GEC-Marconi's train simulators.

GEC-Marconi Radar and Defence Systems Simulation and Training Division, Donibristle, achieved its IiP last October. GEC-Marconi has the largest UK-owned Simulation and Training Enterprise with over 30 years' experience. The official presentation was made by Gordon Brown, Chancellor of the Exchequer.

NNC

NNC, Knutsford is celebrating the win of its IiP award after the first attempt. The multidisciplinary engineering, safety and project management company has been working towards the standard for more than 18 months. Its success in managing change in the company and its commitment to continuous business improvement particularly impressed the IiP assessors, and were cited in their report.

NNC now encourages a much closer link between business and personal objectives, so that everyone can understand how their own contribution affects the company's progress. It has also introduced a number of specific initiatives, such as an Open Learning Centre and a programme awarding NVQs to staff, and has introduced 'fast track' career development.

Yarrow Shipbuilders



"The IiP standard proved a useful framework for continuous improvement by providing the 'people dimension' to the company's change programme. The objective of achieving IiP has given us a target, around which we have been able to achieve significant improvements in training and development."

Chris Slater, Personnel Manager
NNC

Yarrow Shipbuilders' IiP plaque was unveiled by the Scottish Secretary of State, The Rt Hon Donald Dewar.

Yarrow Shipbuilders, Glasgow, is the first shipyard in the UK to gain its IiP award. The largest employer in Glasgow, it worked hard to implement a wide range of responsibilities throughout the company, with the significant input of the Trade Unions.

Woods of Colchester

Woods of Colchester has become one of the first ten companies in the country to gain its third IiP accreditation. One of the first 28 to achieve IiP status in 1992, Woods was successfully reassessed in 1994.

The company's structured approach to training has led to a number of further training initiatives being launched during the past three years. These include the Woods Senior Programme for senior management development, the Career Action Partnership to develop future managers, and the MAST programme (Management and Supervision of Teams) for the development of both existing and future supervision.

A major initiative is the Woods Lifetime Learning Programme, a portfolio of training activities open to all employees. It includes Woods Vocational Qualifications (based on the National Vocational Qualifications), Woods Academy lunchtime lectures and evening courses sponsored in subjects outside the employees' usual sphere of work.



Woods of Colchester's Managing Director, David Priest (front right) accepts a commemorative plaque from Peter Rainbird, Chairman of Essex Training and Enterprise Council (front left) at the company's Tufnell Way site, surrounded by employees who took part in the audit.

MfS pilot takes Windy City by storm

GEC's first US Managing for Success course, piloted in Chicago, has been praised by delegates who believe it is crucial to the process of 'shaping today's managers into tomorrow's world-class leaders'. This positive reception bodes well for the programme's imminent roll-out across the rest of the country.



Where does MfS make an impact?

- Observation skills*
- Listening skills*
- Monitoring and reviewing skills*
- Methodical attitude*
- Sense of direction*
- Creative thinking*
- Thinking for 'success'*
- Leading a team*
- Analysis of skills*

The USA 'Class of '97', hosted by Videojet, was attended by managers from six other companies: Gilbarco, GEC-Marconi Avionics (Hazeltine, CNI Systems and Aerospace Divisions), Picker, Lear, Cincinnati Electronics and Canadian Marconi. It differed from the UK programme in only one respect: the diversity of companies attending.

Course delegates in the UK have, in the main, been selected from either GPT or GEC-Marconi. The actual programme structure, however, was the same as the UK programme.

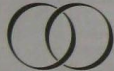
Overall, managers on the US programme found it "encouraging, enjoyable, challenging, creative, interesting, energetic and fun - at times!" One delegate said

that he "loved the interaction with various participants from other GEC companies." Another found that "at the end of the programme, I came away with tools that could be readily applied in the workplace."

MfS's emphasis is on improving generic skills rather than providing functional knowledge, and the course provides delegates with a tool kit to develop these skills back at work.

Following the success of the Chicago pilot, the full US roll-out is imminent. An American-based delivery team has been identified - bringing a wide variety of experience to the programme - and will work closely with Dunchurch to ensure the MfS experience is as well-received in the States as it is in the UK.

... new jobs ... new jobs ... new jobs ... new jobs ... new jobs ... new jobs ...



DUNCHURCH
THE GEC MANAGEMENT COLLEGE

Learning from Experience Unit Researchers

Dunchurch requires two researchers to work in its newly established Learning from Experience (LFE) Unit based near Rugby.

Part of the Project Management Group, the unit will design and implement a corporate learning mechanism to enable each GEC-Marconi business to learn from the experience of other units, encouraging a culture of continuous learning and improvement. The project will be funded centrally by GEC-Marconi.

The position involves visiting GEC-Marconi units throughout the UK to observe project review, phase review and contract review meetings and to interview those involved in the execution of projects in order to gather data relating to the conduct of those projects. You will be responsible for analysing the data to identify factors which generally assist in the successful outcome of projects and report findings back to the units. Distribution methods will include the generation of newsletters, briefing presentations and the use of Internet/Intranet technologies.

Based at Dunchurch, researchers will initially be appointed for a two-year period. They may also have the opportunity to work towards a research degree during the project. Applicants must hold a first or higher degree and should have knowledge/experience of research methodologies including the analysis of complex data. Excellent verbal and written communication skills are essential.

For further information, please contact Alex Miles, Project Management Group Manager on G-Net: Access + 784 2099.



DUNCHURCH
THE GEC MANAGEMENT COLLEGE

March/April Open Programmes

Commercial

Contract Law and Negotiation	23 - 26 March
Introduction to Financial Statements	12 - 13 March
Export Credit	1 - 3 April
Basic Management Accounting	16 - 17 April
Business Opportunity Analysis	29 April - 1 May
Key Account Management	29 April - 1 May
Finance for Sales Managers	2 - 4 March

Business Process Improvement

Business Excellence Model Assessor Training	18 - 20 March, 15 - 17 April
Business Process Re-engineering	18 March
Internal Quality Audit	23 - 24 March
Benchmarking One-Day Briefing	23 April
Business Excellence Model Briefing	21 April

Management and Organisation Development

Influencing Skills	18 - 20 March
International Negotiation Skills	23 - 26 March
Management Through People	9 - 13 March
Developing Leadership Skills	27 - 30 April
'That's Not What I Meant'	27 April - 1 May

Manufacturing and Product Development

Managing Product Development	12 - 13 March
Total Productive Maintenance	7 April

The Learning Company

16 April

"A Learning Company is an organisation that facilitates the learning of all of its members and continually transforms itself."

Mike Pedler, John Burgoyne, Tom Boydell
(authors of The Learning Company)

This one-day seminar is aimed at directors and senior managers across the business. It explains what a Learning Company really is and shows how GEC can become an outstanding example of such an organisation.

The seminar will be led by Professor John Burgoyne, a leading proponent of the Learning Company concept, who will show how it offers a new focus for organisational change programmes.

Further details on all of the above courses can be obtained by contacting Ira Jones on G-Net: Access+ 784 2025. To book a place on a course, please contact the Dunchurch Sales Office on G-Net: Access+ 785 2020, call 01788 528120 or e-mail Sales@dunchurch.cemail.compuserve.com

GEC Overseas Club

South Africa Centre's spread



When 63 South African Centre members got together for their annual dinner at the Inanda Club, Johannesburg, they set the photographer a tricky task. How to include everyone in the room in one photo? With a little cut and paste, however, all members were reunited in memory of a jolly good bash.

News from the Centres



What do you mean, there's no such thing as Santa? Coventry Centre Secretary Alan Nixon (left) sets Pat Cooper (centre) and Tony Motture (right) straight at the traditional Christmas dinner.

Remember when . . .

Fernando Pulido Valente of Lisbon has written in to share his experience of working for English Electric in the 1950s.

"From 1951 to 1953 I worked as an apprentice with English Electric and then in 1954 for the Electric Traction Department in Bradford. At that time, Portuguese railways were in the process of electrification and English Electric was one of the companies putting in a bid for the project.

English Electric suggested a system which

was a cross between the classic use of DC motors and the more modern one of high voltage on the catenary. The system that was eventually chosen was one using AC high voltage on the overhead catenary and AC voltage traction motors provided by a French company.

During my apprenticeship, I was sent to Morecambe-Heysham

where a short line was in operation using this English Electric system. My Overseas Club life membership dates from that time. During my stay in England, I made many friends who I would be very pleased to hear from. Maybe this letter will prompt someone to contact me."

Please contact the Club Secretary for further details.



Morecambe-wise: Lancaster-Castle railway station in the 1950s, where English Electric's AC high voltage system was in use.

Chelmsford

This year, the Chelmsford Centre reintroduced its Christmas cocktail party to the social calendar. Held on Tuesday 8th December in The Barn at EEV's Waterhouse Lane, the party was well attended by 70 members and their partners. David Priest, the Chairman of Club Council, was present and everyone wished the outgoing Centre Chairman and Secretary, Mike Mandl and Chris Christelow, well for their retirements. Members are reminded that Martin Vermond is the new Centre Secretary.

Coventry

A record 60 Coventry Centre members and their partners met in the Grange Club's Grice lounge for a traditional Christmas meal on Sunday 7th December. The centre plans to arrange rambles in March

and April and a summer lunch will be held at the Grange on Sunday 21st June. The AGM will be held at the Grange on Tuesday 21st April. Please contact Secretary Alan Nixon for further details.

Manchester

The 1998 Annual Dinner of the Manchester Centre will be held at the Cresta Court Altrincham on Tuesday 7th April. For details, please contact Ken Bentley, Tim O'Rourke or the Centre Secretary Chris Baines.

Stafford

The Stafford Centre continues to run a series of visits to restaurants with distinctly foreign menus. Having previously sampled Indian and Italian food, this time the party of 24 visited Mingh's of Penridge.



CLUB SECRETARY

Council: David Twigger,
GEC,
One Bruton Street,
London, W1X 8AA
Tel: 01203 565588

CENTRE SECRETARIES

Chelmsford: Martin Vermond,
EEV,
Chelmsford,
CM1 2QJ
Tel: 01245 493493

Coventry: Alan Nixon,
GPI,
New Century Park,
Coventry, CV3 1JH
Tel: 01203 563784

Lincoln: Tim Dunn,
GEC Plessey
Semiconductors,
Carholme Road,
Lincoln, LN1 1SG
Tel: 01522 590500

London: John Forster,
20, The Avenue,
Fitzwick,
Bedford, MK45 1BP
Tel: 01525 713891

Manchester: Chris Baines
CEGELEC plc
Units 10-11
Westinghouse Road
Trafford Park
Manchester, M17 1WW
Tel: 0161 875 2978

Portsmouth: Roger Peplow,
Matta Marconi Space UK,
Anchorage Road,
Portsmouth, PO3 5PU
Tel: 01705 704596

Rugby: Phil Moore,
CEGELEC Projects,
Boughton Road,
Rugby, CV21 1BU
Tel: 01788 563498

Stafford: Penny Lewis,
GEC ALSTHOM
Turbine Generators,
Lichfield Road,
Stafford, ST17 4LN
Tel: 01785 274005

Australia: John Rogers,
GEC Lighting Wholesale,
Cnr Percy & Boora Sts,
Auburn, NSW 2144
Tel: 61 296469451

Canada: Lyne Crote,
GEC ALSTHOM Int,
Canada, Mississauga
Tel: 905 6248300

UK rep: Henk Aiting-Mees,
for Canada: Cottage Wayside,
Little Baddow,
Chelmsford,
Essex, CM3 4RS
Tel: 01245 222309

Hong Kong: Robert McPhee,
GEC Hong Kong
Tel: 852 2919 8282

South Africa: Jake Crompton,
GEC ALSTHOM Int
Rivonia Gate North
381 Rivonia Boulevard
South Africa
Tel: 27 11 447 3108

CLASSIFIED

Holidays

BRIXHAM, Devon fishing port at the Southern edge of Torbay. 2 bedroom detached holiday bungalow. Quiet site within 5 mins stroll of 2 small coves and 10 mins from main harbour. Site includes indoor swimming pool, bar, restaurant, launderette and children's play area. Tel: 01752 693329 (day) or 01822 617 867.

CARNLOUGH, County Antrim, Northern Ireland. Luxury bungalow on beautiful coast road amid the glens of Antrim. Excellent walking, fishing, sightseeing and touring. 2 bedrooms, double sofabed in lounge, sleeps 3/6. Northern Ireland Tourist Board Certified. Tel: 01266 653596.

CORNWALL, Mevagissey. Real fishing village near St Austell and famous Heligan Gardens. Newly renovated and furnished 2-bedroom cottage, sleeps 5. 2 mins walk from quay. For details call 01726 74899 or 01703 263188.

CORNWALL, St Ives Bay. Superb self-catering accommodation available in probably the prettiest site in the area. Special deals available. Phone 01736 753086 for a free brochure or e-mail Westwoodpark@btinternet.com.

CORNWALL, St Ives. Small private hotel overlooking Porthminster beach. En-suite, family and single rooms available, the majority with beautiful sea views. Licensed bar. Optional evening meal. 5 mins from town centre, bus and railway stations. Open Easter until Nov. Tel: 01736 795595 or e-mail Clarkprima@aol.com

FERRYDEN, Montrose. Self-catering 2-bedroom ground floor flat. Sleeps 4. All mod cons. Pets welcome. Suitable for golfing, fishing, walking and bucket/spade holiday. From May - Sept £125-£190 per week incl. gas and electricity. Call 0141 569 5275.

SCUBA DIVE with Slough Sub-Aqua Club. Free training provided. Trips organised using chartered hardboats and our own 2 RIBs. We are a not-for-profit society and use volunteers to run the club. Call 01628 530851 (eve) or G-Net: Access + 822 3915 for further information.

SOUTH DEVON. Privately owned, fully equipped 6-berth, 2-bedroom caravan. Located on Haven site at Challaborough Bay. Most dates available at rates well

below site tariff. Tel: 01522 685 178.

SUTTON-ON-SEA, Lincolnshire Coast. Fully furnished family bungalow, close to sandy beach. Sleeps 8, 3 bedrooms, cot provided. Private and sheltered garden. Includes seafront chalet at nearby Sandilands. Dates now available for '98. Prices from £150 per week. Tel: 01522 874561.

SUFFOLK. Unique gamekeeper's cottage in 4 acres of woodland. Holiday let from Feb '98. 10 mins Southwold/Beccles, beaches and sailing. Special arrangements for birdwatchers possible. Full central heating, also open fires. Suitable all year. Sleeps 3/5. Price range £195-£352 per week. Tel/fax: 01767 261407.

ALGARVE. Well-equipped, 2-bedroom, 2-bathroom villa on superb Rocha Brava development with tennis, 3 swimming pools, shops, bar, restaurant. Close to excellent shopping, beaches etc. £160-£350 per week seasonal. Contact Brian on 01923 242018.

DORBOGNE - near Montignac. Fully equipped farmhouse in beautiful, peaceful surroundings with private pool. Sleeps 5/7 and gite sleeps 5. Many historic sites to visit. Good walking. Spring and Autumn. Excellent local restaurants. For details and brochure tel/fax: 01785 222781.

SNOWDONIA. Trawslyndd Village. Comfortable, well-equipped 2-bedroomed stone cottage. Sleeps 4/6. Cot provided. Pet welcome. Good walking and fishing locally. Convenient for exploring rest of North Wales. Available throughout year. £88 - £175 pw. Winter mini-breakers from £60. Tel: 01489 574626.

SOLWAY COAST - near Lake District. Well-equipped comfortable cottage in quiet village at western end of Hadrian's Wall. Sleeps four. Open fire and c/h. Good birdwatching and friendly pub 100 yds. From £125 pw. Ring Mr Cooper on 01697 351868.

WEST COAST SCOTLAND. Culzean Bay, Ayrshire. 8 miles south of Ayr. Caravan for hire, walking distance from beach, close proximity to 12 golf courses and scenic 'Burns Country'. Culzean Bay 2 miles from historic Culzean Castle, 4 miles from Turnberry. Available for hire from 1 March to 31 Oct. Sleeps up to 6 with luxury amenities. Call 01292 268177 for details.

YORKSHIRE **DALES**.

Tosside, near Settle. B&B in charming barn conversion. Peaceful and picturesque. Close to the Three Peaks, Settle to Carlisle scenic railway, Forest of Bowland, Dales etc. En-suite facilities. £19 pp per night. Open all year. Tel: 01729 840482.

FLORIDA. Villas at £7.70 to £9 pp pn. Luxury, air-conditioned, own screened pools, minutes from all main attractions. Welcome pack includes groceries and information pack. Can arrange inexpensive car hire, travel insurance and theme park tickets before you leave. 10% GEC staff discount. Call 01582 654583.

FLORIDA. Luxury 3 bedroom, 2 bathroom, pool home at Kissimmee overlooking golf course. Help with travel arrangements available. Price range £295 to £425 pw. Tel: 01255-851149.

FLORIDA. 15 mins from major attractions and Disneyworld. 3 bedrooms, 2 bathrooms, privately-owned luxury villa. Sleeps 8. Private screened and heated pool. Cable TV, A/C and fitted kitchen. Advice on travel arrangements available. Tel: 0191 384 7786.

FLORIDA. In Lakeland, a luxury 3-bedroom villa with A/C. All amenities (except long-distance phone calls) included in price of £375 per week. Some summer and autumn 1998 dates left. Tel/fax: 0181 947 0080.

FRANCE. Cottage for rent in 3 acres with lake and waterfall, landscaped grounds with woodlands and orchard. Fresh farm produce. Sleeps 6. Log fire, modern kitchen and bathroom. Total tranquility yet with all the amenities. Tel: 01543 424852 for brochure.

FRANCE. La Palmyre near Royan. Book your holiday now and only pay 1995 prices (extended to 15.3.98). Modern villa comfortably accommodates 6 people. 2 bedrooms, good-size living room with kitchenette. Swimming pool (in season) and tennis courts in a village style complex. Good walking and cycling area. Sandy beaches, shopping precinct, large zoo and restaurants approx 2.5 miles. Ideal for visiting Cognac, Bordeaux, Futuroscope. Tel: 01276 28792 (answerphone).

FRANCE. Mobile homes in Brittany and West Coast France and Rockley Park, Poole. 2/3-bedroomed, well equipped vans on premier sites. Pools, shops, tennis, restaurants, entertainment. Nr beautiful sandy beach-

es. Call 01708 788049.

FRANCE. Vendee Coast. First floor apartment to let overlooking gardens. Sleeps 7. Across the road from beach. Discount available on some ferry crossings. Call 01565 653309.

FRANCE. Ile de Oleron near La Rochelle. Luxury 30 ft mobile home, sleeps up to 6. Pleasant site, all facilities plus horse riding. English couriers on site. Nr beaches, supermarket, walled town (Le Chateau). Easy journey from St Malo. Call 01243 542493.

FRANCE. Le Dramont near Cannes. 6-berth caravan. Beautiful hillside site. Bars, restaurants, convenience store, take-away, entertainment, table tennis and crazy golf. Site has own beach less than 5 mins walk. 10% GEC staff discount. From £120 per week. Tel: (0121) 747 5220.

IBIZA. Cala Llonga. Booking for Summer 1998. Comfortable apartment on private complex. 2 bedrooms, 2 terraces, 3 bars, 2 pools. Restaurant and lovely gardens. Accommodates up to 5. 6 minutes from beautiful beach and village. Flights, car hire, insurance all arranged. Tel: 01442 395599.

KENYA. Enjoy a fabulous holiday in the Pemba Channel. Snorkel, windsurf, scuba dive, fish for big game or cruise among the islands of the Zanzibar archipelago. Perfect for group hospitality. Tailor-made itineraries available. Phone 01334 472504.

MALLORCA. Palma. Apartment in wonderful location, sleeps 4, sun terrace on roof. Available from March. Call 01442 384440.

MIENORCA. Detached villa with swimming pool. Sleeps max 6. 3 bedrooms, kitchen, lounge/diner, 2 bathrooms, sun terraces and gardens. Close to beaches/coves. Approx 2 miles North West of Ciudadela. Booking for Summer 1998 and beyond. For brochure, tel or fax 01634 867183.

MALTA. Privately owned holiday flat in the quiet coastal town of B'Bugia. Situated by the sea with a beach just minutes away offering excellent swimming. Sleeps 5, 2 twin and 1 single room. Cost for flat pw, summer £130, winter £100. Tel: 0141 616 0513.

ORLANDO. Privately owned luxury villa. 4 dble bedrooms, 2 bathrooms, family room and large lounge. Fully fitted kitchen with dishwasher etc. Air condi-

tioning. Large screened private solar heated pool. Patio with BBQ. Garage with washer and drier. Tel: 01722-257312.

ORLANDO. 2 bedroom, 2 bathroom a/c villa over looking 18th fairway, Meadows Woods Golf Club. Free golf and use of pool. From £200. Tel: 01745 833426.

SPAIN. Benalmadena, Costa del Sol. 7 nights in 1-bedroom apartment (sleeps 4) in Benal Beach complex. Only £200. Facilities include swimming pool, fitness rooms, sauna, jacuzzi, squash. Call Jim Thomson on 0131 314 2681 (day).

Wanted

CHINA SEARCH - replacement service for China. Wedgwood, Doulton, Spode, Paragon, Aynsley, Minton, Johnson Brothers. Including any White China. Call 01538 756 115.

FOR BUDDING YOUNG ENGINEER. Redundant 'Brio' (or equivalent) track and trains urgently needed for desperate 2 year old. Call Philip on 0181 875 1905 (eves) or G-Net: Access+ 783 383.

MILITARY NAVY OR AIRCREW WATCHES. Any nationality. Also large military binoculars. Call 01634 409 276.

PHONECARD COLLECTOR. Wants to exchange French phonecards for those of other nationalities. Contact Berthier Gilles, 7 rue du 19 Mars 1962, 71150 Fontaines, France.

For sale

TV RECEIVERS 1945-1955. 405 line BBC1 only. Also, unused 9" electromagnetic deflection CRTs for TV application. Contact Alan Stubbings, 7 Church Road, Saxilby, Lincoln, LN1 2HH or call 01522 702601 (eves) or G-Net: Access+591

If you wish to place a classified advertisement in *Topic*, please send your text (maximum 40 words) written clearly in block capitals to: *Topic*, GEC, One Brunel Street, London W1X 8AQ to reach us no later than 13 April 1998. Include your name, address, telephone number and, where appropriate, your GEC site and G-Net number. Next issue - May 1998. Insertion is not guaranteed, but every effort will be made to include your advertisement as soon as possible. GEC employees, their families and people who have retired from the company may advertise free of charge. For others the cost is 50p per word. Please make cheques payable to *The General Electric Company, p.l.c.* *Topic* takes no responsibility for any misrepresentations or inaccuracies in classified advertisements or for any breaches of obligations by classified advertisers. Readers are recommended to take appropriate professional advice before entering into obligations.



Muscle power: (Above) Previous Waterlooville Triathlon competitors from GEC-Marconi Underwater Systems in training for this year's race: (left to right) David Cooper, GSA; Ken Hall, Defect Report Engineer; Keith Young, Production Planning; Jenny Fletcher, Waterlooville Pool Senior Attendant; Nigel King, Production Engineering. (Right) GEC-Marconi Underwater Systems Group triathlon coordination team: Mark Knight, Webpage Author; Vic Hill, Transport; Steve Collings, Raynet; John Moore, Admin Planning; Viv Causley, Admin - Race Entry; Cecelia Battley, On-site Publicity; Steve Cole, On-site Publicity; Keith Taylor, Coordinator.

In at the deep end

GEC-Marconi Underwater Systems, Waterlooville is pooling its collective talents to take part in the seventh annual Waterlooville Swimming Pool Triathlon.

The event will be held in association with the Portsmouth Triathletes and has the approval of the British Triathlon Association. It will include, for the first time, a section called the GEC National Triathlon Relay Championships, which is being held to encourage both seasoned and novice athletes

to participate in this challenging annual event. Participants must be employees of GEC on the day of the race.

The first leg of the race will start with a 600m pool swim, followed by a 40km road cycle, finishing with a 10km road run. The race will start and finish at the Waterlooville Swimming Pool.

To encourage novices to participate, competitors are able

to enter as teams (maximum three people), each person completing a separate discipline: swimming, cycling or running. GEC is hoping to enter as many teams as possible, and the winning team will receive a trophy along with individual prizes for the different categories.

For information and entry forms, please contact Keith Taylor or Viv Causley on 01705 264466 or e-mail: keith.a.taylor@gecm.com or viv.causley@gecm.com



Retiring?

If you are going to retire soon - or have retired - and would like to keep on receiving issues of *Topic*, please write to *Topic*, One Bruton Street, London W1X 8AQ.

Crossword

December solutions

Across

7. Legal 8. Half-baked 9. Strap 10. Left-overs
12. Cotoneaster 16. Tarn 17. Panda 18. Exam
19. Gospel truth 22. Capricorn 24. Stole 25.
Rehearsed 26. Drink

Down

1. Sectional 2. Paramount 3. Bade 4. Off the rails
5. Maevae 6. Weary 11. Deep concern 13. Sun-up
14. Territory 15. Wasteland 20. Wakes 21. Creek
23. Reef

December winner

The winner of the December *Topic* crossword was R C Lea from GEC ALSTHOM Engineering Systems in Whetstone who won a Redring Plus 8.5 Extra instant shower.

Prize

The prize for this issue is an Xpelair 12" oscillating desk fan with selectable speed control.

Recharge your batteries at Forte's leisure

Forte and *Topic* have joined forces to bring GEC staff a special 10% discount off any Forte Leisure Break in the UK and Ireland featured in their current brochure.

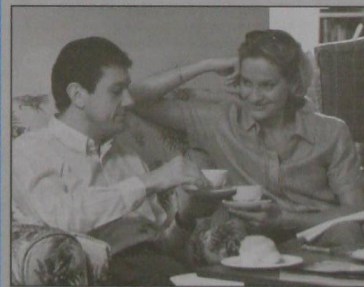
Forte - voted 'Best UK Hotel Group' by the travel industry for 19 years - has a choice of over 160 hotels and bed and breakfasts from only £29 per person per night.

Topic readers can choose from 83 Forte Posthouse hotels across the country, all conveniently situated in town and city locations and ideally placed for easy access to the UK's most popular sights and attractions.

Or, if you want to take things at a more leisurely pace, there are over 50 Forte Heritage hotels to choose from in Britain.

Forte Heritage is a unique collection of traditional hotels in rural and historic locations ranging from cosy coaching inns to elegant townhouses. Forte also has 18 superbly located properties throughout central London and at Heathrow and Gatwick airports.

To make a reservation: call 0345 404040 and quote 'Privilege 10' to claim your 10% discount or call Magnet Travel on the dedicated GEC leisure line (0171 457 4686) and ask for Tracie Walsh.



Claim your heritage: step out of your everyday whirl and relax in one of Forte's traditional Heritage hotels.

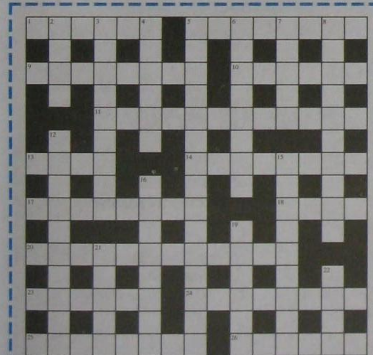
Clues

Across

- Bouncy, as jail-birds sometimes are (6)
- Walks awkwardly in a scene of confusion (8)
- Good-looking characters from Bath (and Somerset generally) (8)
- The lowest decks reveal some poor, lop-sided area (6)
- Protests as monster tears around (12)
- Tailless bird, one of great courage (4)
- Killer-whale is hiding in river. Drive the devil out! (8)
- One with a will of his own (8)
- Nile not normally suitable for fishing? (4)
- Resources needed for finding roads with unusual names (4,3,5)
- I'm averse to doctor taking most of sap from plant (6)
- Sound abstanter given second helping - a small piece of meat (8)
- Spiritless redhead abandons spot on ship (8)
- Becoming 'ealthy in West London? (6)

Down

- Salary about right one might ask? (4)
- Downtrodden, like Labour in the early eighties (9)
- They attend weddings and are extremely generous about space (6)
- Mr Spender trains irregularly, incurring severe reproofs (5, 10)
- Trouble over purchase tax? It's only normal, initially, in a takeover (8)
- Beautiful Italian gets left in Elba, disconcerted (5)
- Symbolising that which was once a gramophone record? (10)
- Speedy form of Rugby for one leaving the XV? (5-1-4)
- Unravell'd code tells of non-firing weapons (4-5)
- Man of wisdom absorbs accent from the dim and distant past (5,3)
- Reorganising life without Bill is easy (6)
- Head of state giving talk reportedly gets the bird (5)
- Overheads that stufify? (4)



ENTRY FORM

Name

Address

Company

DEADLINE: 13 April 1998

Please send a copy of your crossword together with this entry form to *Topic*, GEC, One Bruton Street, London W1X 8AQ. Please mark your envelope **Crossword**.

Central Services

Are YOU being served?

Employees, customers and shareholders can all benefit from GEC's core of group-wide facilities. *Topic* takes a look at some of the principal in-house units which offer a range of essential corporate services to all of its companies, subsidiaries and associated businesses in the UK and across the world.

Health & Safety

GEC has a responsibility to its employees for their safety and health at work, as well as to those people who live nearby or who visit company premises.

Concern for safety and health should be an integral part of the organisation at all levels. GEC expects high standards of safety and health management to be pursued in the same way and with the same vigour as other managerial concerns.

The Health and Safety Working Party, chaired by the Health and Safety Advisor, comprises representatives from the major businesses within the group. Meeting at six-monthly intervals, it sets out company standards in best practice documents. Its mission statement is

"to assist in maintaining high health and safety standards and to stimulate further improvements throughout the GEC group",

through encouraging the development of a positive safety culture; improving safety management systems; raising the level of management awareness of health and safety issues; providing practical guidance to unit management awareness of health and safety issues; identifying and promoting good practice; offering specialist training where needed and raising the level of awareness of health and safety for all employees.

Product Safety

All products undergo appropriate, documented product safety assessments prior to being placed into service. Product safety requirements world-wide are developing rapidly due to growing safety expectations from customers, regulators, legislators and users. The changing nature of GEC's products, services and organisation structure together with markets and developmental processes means that a managed, integrated, lifecycle approach to product safety is essential. GEC issued its first product safety policy statement to group companies in 1972 and appointed a GEC Product Safety Advisor in 1989. His job was created to help group companies navigate the minefield of ever-increasing product safety requirements. As well as providing advice to individual companies, the Advisor ensures that GEC is represented on relevant external safety bodies and provides a group response when necessary. He also makes sure that experience of product safety is shared between business units to maximise any necessary improvements.

Estates

The GEC Estates Department is charged with the effective and efficient management of the company's properties in the UK and overseas and provides a complete service to all subsidiary and associated companies.

The department advises on the sale, purchase and letting of property as well as rating, insurance and compulsory purchase. It provides valuations for these purposes, identifying under-utilised property and obtaining planning permissions to enhance their value before they are sold.

Property is one of GEC's largest assets as the company occupies over 10 million square metres of space.

Estates is closely involved with the acquisition and disposal of companies and the formation of joint ventures. GEC Estates manage large property holdings in Wembley, Accrington and Rugby, each with a multitude of tenancies, and these together with other investment properties in the UK produce a substantial rental income.

The construction of new buildings and major refurbishments are also dealt with by this group - a team of building surveyors project-manages major building work and is involved in a programme of site investigations, development appraisals and dilapidation claims. With major customers increasingly requiring turn-key tenders, GEC Estates is also closely involved in supporting bids for these projects.

Recent acquisitions by GEC Estates include the company's new 4,100 sq.m HQ at One Bruton Street and GPT's new office/development facility of 12,448 sq.m at Poole.

Energy & Environment

GEC has played an active role in improving energy efficiency for more than 20 years. Initially this was driven by the need to reduce costs and save money, but more recently the need for environmental management and efficient corporate energy purchasing has led to the establishment of The GEC Energy and Environmental Advisory Unit. The unit's comprehensive range of services to GEC include advice and guidance on energy efficiency and management; environmental compliance and management; legal advice and help with energy and environmental matters; corporate purchase of electricity, gas and oil; training and promoting energy and environmental excellence at all levels throughout the group.

Keeping pace with new trends in environmental legislation and technology is a vital role for the Unit.

The unit also works as part of GEC Environmental Services to co-ordinate the Marconi Product Assurance Response Centre, NNC and the GEC Management College in providing expertise for energy and environmental projects within the group. GEC needs to be able to anticipate developments that could affect its business. The Energy and Environmental Unit aims to balance cost-efficiency with maximum energy and environmental performance.

Alcohol & Drugs

These days, each time a tender is submitted for a new contract, a company is likely to be asked what systems are in place for the safe management of alcohol and other drugs.

Not only does a company need effective policies on its sites, but increasingly customers' policies require a proportion of the workforce to be screened regularly and randomly.

The GEC Alcohol and Drug Advisory Service gives guidance on all aspects of alcohol and drug policy implementation - providing on-site information, education and training. It also arranges company-wide seminars and conferences including the joint Occupational Health and Safety conferences for doctors, nurses, personnel and safety managers.

In 1995, GEC was named Company of the Year by Alcohol Concern.

The national agency for alcohol misuse Alcohol Concern recognised GEC's commitment to developing effective workplace policies and for the leadership it has provided within British industry when dealing with alcohol at work. The GEC Alcohol and Drug Advisory Service is available to all employees and their families for strictly confidential information and advice on any aspect of alcohol or other drug misuse.

The service also gives guidance and case management to managers needing to refer an employee under the alcohol and drug policy assistance programme, and will liaise with local and national agencies to optimise outcome.

Registrars

The GEC Registrar's office provides the full range of share registration services to **120,000 GEC shareholders and share option scheme services to 25,000 GEC employees** holding options. Answering to the Company Secretary, the Registrar gives advice and information, and updates the share register following the purchase and sale of company shares on the London Stock Exchange. He also pays the interim and final dividends, and distributes the annual report and accounts along with other shareholder documentation.

Patents

GEC's thriving research and development activities keep its products at the forefront of technology. The GEC Patent Department works closely with business units throughout the group to make sure that proper protection is obtained for technical developments on a world-wide basis. This relatively small department includes Chartered Patent Attorneys and European Patent Attorneys (as well as four ex-Patent Office Examiners) who act for the whole group, including joint venture companies such as Matra Marconi, GEC ALSTHOM and overseas GEC companies.

The term "intellectual property" encompasses patents for invention, design rights and copyright.

A patent for an invention must initially be registered at the office, after which it becomes subject to rigorous examination for novelty and inventiveness.

Copyright, which applies to literary and artistic works (including software and engineering drawings), comes into being automatically as and when a work is created, without any registration procedures or other formalities. The same applies to the recently introduced 'design right'. Intellectual property rights can prevent unauthorised use of inventions and ideas by competitors and, where appropriate, these rights are licensed to generate revenue, or to form the basis of cross-licence arrangements with other major companies around the world.

Pensions

The GEC Pensions Office at Stafford administers The GEC Plan and Selected Benefit Scheme for Stanhope Pension Trust Limited (SPT), the Plan's corporate trustee.

A full administration service is provided for the 49,000 active Plan members, 77,000 pensioners and 53,000 deferred pensioners.

This includes calculating and paying pensions and lump sums. The assets of the Plan total nearly £5 billion and are managed by Stanhope Investment Management Limited in London.

SPT also arranges visits to Units, making presentations to employees about joining and leaving the Plan, retirement and mid-life planning. Membership of The GEC plan and the Selected Benefit Scheme is voluntary.

Names and numbers

Alcohol and Drug Advisory Service
01788 531582 *Gaye Oxley*
Energy Advice
0121 607 5111 *Lucy Bradley*
Environmental Advice
0121 607 5111 *Dr Philip Tyson*
Estates
0171 489 4000 *Stewart Cooper*
Health and Safety Advisor
0181 420 3879 *Dr Martyn Hayes*
Environmental Legal Advice
0171 493 8484 *Simon Boyle*
Product Safety Advisor
01438 772170 *Julian Hubbard*
Registrars
01785 251446 *Roger Taylor*
Stanhope Pension Trust
01785 256344 *Stephen Hart*