



The D.R.

'Remarkable close to the ole busses 'ead'  
to let the shots go by.'  
(R.I.C.)



Snapple

# JOURNAL

Volume 33  
Issue 1  
Summer 2015



*Nigel Harrison*

## EDITORIAL

Welcome to this bumper edition of the RSI Journal. Within its pages I hope that you will find an eclectic mix of articles to interest you and hopefully also to inspire you to put pen to paper yourself; all contributions would be gratefully appreciated.

The last twelve months have seen a succession of key anniversaries – the 70th anniversary of D-Day, the 70th anniversary of VE Day, the 100th anniversary of the start of WW1, the 200th anniversary of the Battle of Waterloo, the 200th anniversary of Gurkha service in the British Army, the 700th anniversary of the Battle of Bannockburn and even the 800th anniversary of the signing of the Magna Carta. In August we will also commemorate the 70th anniversary of VJ Day. Whilst none of these anniversaries will feature directly in this edition of the Journal, I have listed them to make a point about history and about heritage; they are both important to us – they help shape us, they help to bind us together and they shape our experiences and our future. In an article starting on Page 20, Brigadier David Hargreaves ponders a thought-provoking statement “What has Heritage ever done for us?”

Coming closer to home and looking ahead into next year; March will see the 40th anniversary of the Queen sending the first royal email, from the Royal Signals and Radar Establishment, in 1976 and in August it will be the 25th anniversary of Tim Berners-Lee publishing his idea for the World Wide Web in 1991. Modern communications and information technology have transformed our lives – at home, in the office and also on the battlefield. With the cessation of operations in Afghanistan last Autumn, the memorial service at St Paul’s Cathedral earlier this year and finally the unveiling of the ‘Bastion Wall’ earlier this month, Operation HERRICK is now starting to transition into recent history. However, before it does I am taking this opportunity to include three articles by individuals who were deployed with Task Force Helmand HQ & Signal Squadron in 2012 to provide a snap-shot of ICS provision on the modern battlefield. Things have indeed moved on a great deal since 1976 and 1991.

*Best Wishes,  
Nigel*

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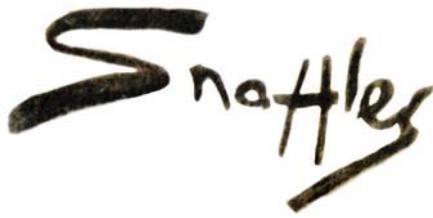
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**This issue's cover** A sketch by the World War 1 war artist 'Snaffles' (Charlie Johnson Payne) held in the Royal Signals Museum. A brief biography of 'Snaffles' and the background to the inscription can be found on Page 2. The sketch is reproduced by kind permission of Felix Rosenstiel's Widow & Son Ltd.

# LOOSE ENDS



The picture on the cover is a sketch by the World War 1 war artist 'Snaffles' held in the Royal Signals Museum; but who is Snaffles and what is the inscription that he wrote on the picture mount?

Charlie Johnson Payne, aka Snaffles, was born in 1884; he was bootmaker's son and the fourth of eight children. From an early age his twin passions were horses and the military.

His initial attempt to join the Army in order to fight in the Boer War was thwarted as he was too young. In 1902, when he finally reached

18, he enlisted into the Royal Garrison Artillery where he learnt to ride but ill-health forced his departure in 1906. It was during this time that he also produced his first semi-caricature portraits.

He re-joined the Army at the outbreak of World War 1 but was soon invalided out after a very bad fall. Snaffles then took a job as a war artist; producing many works which reflected the horrors of trench warfare and life on the Western Front.

In the 1920s Snaffles gained a reputation as a sporting artist;

particularly focusing on equine sports and, where possible, the military at play. His prints of 'pig-sticking' in India in the late 1920s are some of his finest works.

Snaffles built an element of humour into his work and the captions to his subjects were often as important as the artwork. Our cover picture is no exception; the inscription reads *"Remarkable close to the old busses 'ead' to let the shots go by (RK)"*. The RK refers to Rudyard Kipling, another of Snaffles' childhood influences. Indeed the quote is a slight twist on a line from a Kipling poem entitled 'M.I.' (Mounted Infantry of the Line); the line goes *"Remarkable close to my 'orse's neck to let the shots go by"*.

Snaffles died in 1967 aged 83 after a life as a true Victorian.

## BATTLE OF THE SOMME CENTENARY

**8,000 tickets available to the public**

The public will be invited to the Thiepval Memorial in France on 1 July 2016 to mark the centenary of the Battle of the Somme. Tickets for the event will be available through a public ballot opening later this year.

This Anglo-French commemoration of the Battle of the Somme is expected to attract great public interest, so tickets are being made available for the event. The 8,000 tickets will be allocated in pairs, free of charge, through a public online ballot. The ballot will be open to residents of the UK, France and Ireland on 28 September 2015. More details can be found on the Somme 2016 Ballot website at <http://somme2016.org>.

The Somme was one of the bloodiest battles of the First World War, resulting in over one million casualties. A commemorative event is held at the Thiepval Memorial every year, but the centenary event in 2016 will be

on a larger scale, with some 10,000 people attending.

The event will include representatives from the battle's combatant nations, organisations such as The Royal British Legion, and members of the public. Plans are being made to broadcast the ceremony live to large screens in towns across the Somme region and the UK. There will also be a wide programme of events taking place in the UK. Events will also take place in France to mark the 141 days of the battle.

The Culture Secretary has also announced a further £4 million in Heritage Lottery funding for communities looking to explore, conserve and share local heritage of the First World War. This new money will help even more people get involved



and explore the inspirational stories of those who gave so much including those surrounding the Battle of the Somme.

You can listen to men who took part in the battle and went over the top on 1 July 1916 in Voices of the First World War Podcast 23: The First Day of the Somme at

<http://www.iwm.org.uk/history/podcasts/voices-of-the-first-world-war/podcast-23-the-first-day-of-the-somme>.



## THE ARMY SKILLS OFFER

HAVE YOU APPLIED FOR YOUR FREE  
QUALIFICATION YET?

**What is it?** The Army Skills Offer enables regular and reserve personnel to apply for free civilian qualifications from Army training and service. These qualifications cost between £2,000 and £15,000 if undertaken at a civilian college. The academic and vocational qualifications range from Level 1 (GCSE) to Level 8 (PhD).

**Who is it for?** The offer is open to regular and reserve officers and soldiers who have completed an eligible course; for example CLM, Commissioning Course, LEOC, JOTAC and ICSC(L). A maximum of one qualification for each eligible course will be funded.

**What kind of qualifications are on offer?** D Ed Cap has developed employability, leadership and management, and instructor-related qualifications that articulate the skills and experience gained through military service.

**Where can I find out more and how can I apply?** Full application details can be found in 2015DIN07-053. More information is available at [www.army.mod.uk/qualifications](http://www.army.mod.uk/qualifications). The point of contact in Directorate Education Capability is SO2 Qualifications on 94391 7598.

# SCIENCE MUSEUM

Last Autumn saw the Queen opening the Science Museum's new Information Age Gallery. The gallery houses more than 800 unique objects from the Science Museum collection, some that witnessed incredible moments in history. It has been the most ambitious Science Museum project in over ten years and has transformed what is now the largest exhibition space in the Museum. It is well worth a visit!

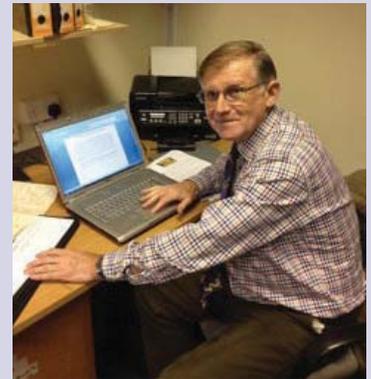
The gallery explores how our modern connected world was created through six networks: the electric telegraph, the telephone exchange, radio and television broadcasting, satellite communications, computer networks and mobile communications. At the centre of the gallery visitors will find a spectacular 6-metre high aerial inductance

coil from Rugby Radio Station. This enormous and strangely beautiful object resembles a series of giant spiders' webs. It was once part of the most powerful radio transmitter in the world. Exhibits also include early items of Ptarmigan equipment as well as parts of LEO, the World's first commercial computer; for more information on LEO see the article starting on Page 32.



*Cooke and Wheatstone  
Double Needle Telegraph 1844.*

## THE CORPS IN GERMANY 1945 - 2015



Work continues on gathering and assessing information on the involvement of the Corps in Germany from 1945 to the present day. The period will cover the time from the establishment of BAOR on 25 August 1945 through its dissolution on 28 October 1994 and thence onwards to the eventual draw-down of British Forces Germany in 2016.

The Project Manager, Colonel Tom Moncur (pictured), has already been much encouraged by the unselfish and generous response of several individuals in providing memories, memorabilia and souvenirs of their service, and will be following this up in face to face meeting with key personalities. More is still needed, especially from those who were serving in the more specialised environments away from the mainstream organisation. Anecdotes, impressions and things which convey the flavour of our existence during these increasingly distant times will all be welcome. Journal readers with personal memories of this time are therefore invited to forward their recollections, be they in the form of photographs, documents, diagrams or written accounts to:

Colonel TF Moncur,  
BAOR History Project  
The Royal Signals Museum,  
Blandford Camp,  
Dorset DT11 8RH  
Fax: 01258 482084  
e-mail: [moncurtom@gmail.com](mailto:moncurtom@gmail.com)

Submissions can be sent by post in hard copy, which will be returned if requested, or by fax or e-mail.

FCILT

CITP

CMILT

BSc



CMI



MCMI

MILT

MIET

IEng

FIET

CEng

ICT Tech

CMgr



MSc



EngTech

MBCS

FBCS

# PROFESSIONALISATION UPDATE

Mr David Barlow

## EDITOR'S NOTE

David Barlow is the lead for Whole Life Development in Headquarters Royal Signals and consequently the focal point for accreditation and professional development for all serving officers and soldiers in the Corps. He has regular dealings on the Corps' behalf with related professional institutions such as the IET, BCS, CILT(UK) and CMI and academic institutions such as the University of Lincoln. He also oversees the administration of WCIT employment briefings, facilitates the Late Entry Commissioning Board and manages Adventure Training grants from Corps Funds.



More information on these opportunities and the through life professional, career and educational options available to serving Royal Signals personnel can be found on the HQ Royal Signals Intranet site at: Ministry of Defence | Army | Adjutant General | DG Pers | D Pers Ops | Corps Cols | Col RSignals. Alternatively you can contact David directly on 01258 482098 or email him at [rsignalshq-wld-c2@mod.uk](mailto:rsignalshq-wld-c2@mod.uk).

It is now a year since I wrote my first comprehensive update on Royal Signals professionalisation agenda; a great number of further developments have taken place in the intervening 12 months and yet more initiatives are taking shape as I write.

## APPRENTICESHIPS

The Royal Signals Apprenticeship Programme is gaining more visibility each year and is certainly seen as a major recruitment tool. The Corps initiated its Apprentice of the Year Awards last year and this is very much helping to raise awareness of the whole Apprenticeship Programme across the chain of command.

Our Apprenticeship Programme and our Awards Scheme have not only attracted attention within the Corps; many in other capbadges are envious of both. It is a credit to the quality of our apprentices that our Royal Signals Apprentice of the Year for 2014 has gone on to be the Army nominee for this year's forthcoming National Apprentice of the Year Awards. More about the Apprentice of the Year Awards can be found elsewhere in the Journal.

The Corps is also playing a leading role within the MoD and nationally alongside other employers in shaping the new Trailblazer Apprenticeships which are now starting

to come on-line. This work within the digital industries area is being coordinated by the Government-sponsored Tech Partnership (formerly known as e-Skills UK).

### **REGISTER OF IT TECHNICIANS (RITTech)**

The Corps is supporting the new Register of IT Technicians (RITTech) scheme being officially launched this Autumn by British Computer Society (BCS). RITTech is for technicians who can show that they have a core understanding of IT, can demonstrate at least one specialist skill at SFIA level 3 and have signed up to a professional code of conduct.

It should be stressed that RITTech is not a qualification – it is professional recognition of being able to do a technically skilled job in IT well. The level is equivalent to technician certifications in other professions.

The Corps has agreed to become one of BCS's early delivery partners and over the coming months we are hoping to register a sizeable number of our soldiers onto this new professional register. Further details will be circulated soon to the serving Corps via a Royal Signals Information Note.

### **BRITISH COMPUTER SOCIETY (BCS)**

Initial discussions have been held with the BCS to examine ways of encouraging more members of the Corps to become Members of the BCS (MBCS) and Chartered IT Professionals (CITP). Discussions are at an early stage and consideration is being given to seeking to form a Royal Signals Special Interest Group within the BCS.

Any serving or retired members of the Corps who are current members of the BCS are asked to contact the RSI Secretary ([rsi@royalsignals.org](mailto:rsi@royalsignals.org)) to join the mailing list for further targeted updates on developments in building a stronger relationship between the Corps and the BCS.

### **CHARTERED INSTITUTE OF LOGISTICS & TRANSPORT (CILT(UK))**

A formal partnership agreement was signed between the Corps and CILT(UK) in Autumn 2014 which has allowed the Corps to establish a Special Registration Agreement to assist suitably qualified and experienced members of the Corps to obtain Chartered Membership of the institute (CMILT) via a streamlined registration process.

Applications are scrutinised by a panel of assessors made up of a senior representative of CILT(UK) and a number of serving members of the Corps who already hold the

CMILT award. The agreement and the work of the panel is supported by HQ Royal Signals and is modelled on a similar agreement that we already operate with the IET.

### **INSTITUTE OF ENGINEERING & TECHNOLOGY (IET)**

The Special Registration Agreement (SRA) between the Corps and the IET has now been in operation for nearly four years and during this time over 300 serving members of the Corps have gained their Chartered Engineer (CEng), Incorporated Engineer (IEng, Engineering Technician) or ICT Technician award. More than 70 of these awards have been for CEng. An additional 60+ individuals are part-way through their application process. The IET have now agreed to extend the SRA for a further period and a formal re-signing event will take place in the Autumn.

The success of this SRA is due very largely to the dedicated extra-curricular support of the Corps own panel of assessors led by Lieutenant Colonel Laurence Fowkes; his hard work and championing of professionalisation was recognised last year by the Award of an RSI Silver Medal. [Details of which can be found elsewhere in the Journal]

### **LINCOLN UNIVERSITY**

The Lincoln University BSc(Hons) in Communications Management was launched two years ago to allow Royal Signals Troop Commanders to gain academic recognition for their studies at Sandhurst and Blandford; it requires a subsequent distance learning package to be completed in the 12-18 months following the end of the Troop Commanders' Course.

Eligibility for the degree was retrospectively offered to those who completed their Troop Commanders' Course within the previous 10 years. In 2014 eligibility for the BSc was also extended to individuals completing their Yeoman of Signals and Yeoman of Signals (Electronic Warfare) courses.

To date, nearly 180 members of the Corps have taken up the offer to study for the Lincoln University BSc (Hons) in Communications Management of which about 20 have thus far graduated and collected their degrees at graduation ceremonies in Lincoln.

The cost of studying for this degree is about £2,600 per year of which the majority can be claimed back via the Enhanced Learning Credit scheme; leaving students with a personal bill of £700 per annum. With normal undergraduate tuition fees now coming to £27,000 for a three year degree course this is certainly a very attractive alternative to saddling oneself with huge student loan debts!

**Get qualified, get registered and get recognition**

**...take control of YOUR career**



# ROYAL SIGNALS HONOURS AND AWARDS

There are a number of ways in which the remarkable deeds and truly outstanding abilities of Royal Signals officers and soldiers can be recognised:

The State Honours process (for New Year Honours, Queen’s Birthday Honours and Operational Honours Lists),

The Corps’ own annual awards process (for Princess Mary Medal, RSI Silver Medal, Master of Signals Award and the Medal for Adventurous Endeavour),

An annual process of nomination for awards from external bodies and

A rolling process of nominations and awards for the Master of Signals Commendation.

Sadly, but almost inevitably, the timeline for each of the honours and awards processes is different. The State Honours process is well documented elsewhere; this article gives the key details of the remaining three awards processes.

**Royal Signals Annual Awards.** The Corps own annual awards process culminates in an awards ceremony at the Royal Signals Institution (RSI) London Lecture and Dinner each November where typically six to eight individuals are recognised through the award of the Princess Mary Medal, the RSI Silver Medal, the Master of Signals Award and the RSI Medal for Adventurous Endeavour. The selection of worthy individuals is made by the RSI Awards Committee on the basis of citations submitted by the chain of command covering the previous year (April to March). The details of each of these awards are as follows:

**Princess Mary Medal.** This is the highest RSI Award and may only be presented to serving or recently retired members of the Corps who are full members of the Institution. It must be regarded as a rare honour given to mark an individual achievement, contribution or service of the highest order that is considered to have enhanced greatly the performance, reputation or status of the Royal Corps of Signals, or a prolonged period of dedicated service. Up to one medal may be awarded in any year.

**RSI Silver Medal.** This is an award to mark the attainment of an outstanding individual professional achievement in the Corps. This award may also be made to an individual for conduct or achievement in an operational theatre, where such conduct does not match the standard of the Princess Mary Medal. In addition, those attaining an exemplary standard on higher level professional courses may also be considered for the award. Typically three or four of these awards are made each year.

**Master of Signals Award.** This award is a formal recognition of a special contribution or service to the Corps made by an individual or corporate body which cannot be properly accommodated by either the Princess Mary Medal or the RSI Silver Medal. This award is open to individuals outside the Corps who have contributed significantly to the performance, status or reputation of Royal Signals. Typically, two awards are made each year.

**Medal for Adventurous Endeavour.** This award is intended to recognise outstanding achievement or service by a member of the serving Corps arising from exploration, expeditions or adventurous endeavour. Normally, up to one award is made each year.

**Timings.** The annual timeline for the Royal Signals Annual Awards process is as follows:

- 31 Mar End of (12 month) reporting period
- 1 May Names of nominees (but not citations) to HQ Royal Signals
- 1 Jul All citations to HQ Royal Signals
- 1st Thursday in October Awards announced
- 3rd Thursday in November Awards presented at RSI London Lecture and Dinner

**Whistler Trophy.** The Whistler Trophy for excellence at Regimental Duty is open to all subalterns and junior captains and is awarded annually. For simplicity, the Whistler Trophy nominations and selection procedures for the period follow the same process and timeline shown for the Royal Signals Annual Awards except that the award will be presented at the Corps Guest Night following the announcement.

**External Awards.** Each year the Royal Signals is asked by three external bodies to identify suitable individuals to receive recognition and an award for their operational signalling and operational engineering prowess over the previous 12 months. Details of the three awards in question are shown below:

**The Churchill Medal.** This is the premier prize awarded annually by the Professional Engineering Institutions for Defence engineering achievement. The award is for an individual or a small team (the majority of whom are serving members of the Armed Forces or were serving at the time) for “achievement in Engineering and Technical Advancement in support of Military Operations”. This award is open to all three services and to all cap-badges within the Army. Whilst any CO or line manager across the MoD can independently submit a citation direct to the Institute of Engineering and Technology, HQ Royal Signals runs its own ‘filter board’; giving added endorsement to what it judges to be the best citation from across the Corps. Citations should not exceed 1000 words and can include a maximum of one diagram and one photograph.

**The WCE Royal Signals Operational Engineering Award.** This medal is awarded annually by the Worshipful Company of Engineers (WCE) to the Royal Signals officer who has “best applied professional engineering judgement or technical innovation to contribute significantly to the maintenance or enhancement of operational capability or effectiveness in any theatre of operations, including the UK”. This recipient of this award will be decided by the RSI Awards Sub-Committee. Citations should be roughly 500 words (1 page of A4) in length.

**The WCIT ‘Through’ Award for Operational Military Signalling.** This award was inaugurated in 2012 by the Worshipful Company of Information Technologists (WCIT) to recognise the 20th anniversary of the formal affiliation between the Royal Signals and WCIT. Eligibility for the ‘Through’ Award is restricted to Royal Signals soldiers, non-commissioned officers and warrant officers who have made “an exceptional contribution to the provision of information services on operations, in support of operations or in supporting the training of others preparing for operations”. The eligibility criterion goes on to say that “a successful recipient will, in particular, thereby have displayed conspicuous levels of innovation and determination”. Once again, this award will be decided by the RSI Awards Sub-Committee. Citations should be roughly 500 words (1 page of A4) in length.

**Timings.** The annual timeline for the External Awards process is as follows:

- 31 Mar End of (12 month) reporting period
- mid-April Full citations to HQ Royal Signals
- late-April Winning citations passed to IET, WCE and WCIT
- mid-May Awards Announced
- mid-July Awards Presented

**Master of Signals Commendation.** Whilst a prestigious award, the Master of Signals Commendation is intended to be given to a greater number of recipients and for achievements that do not merit a higher award. It is therefore recognised as the lesser of the RSI awards. Nominations can be submitted at any time. If agreed by the Corps Colonel and the Master of Signals a suitable presentation can then be made under local arrangements. An absolute minimum of four weeks should be allowed between receipt of the citation and the intended presentation date. Typically about thirty commendations would be awarded each year.

**Citations.** The template to be used for all citations can be found on the HQ Royal Signals pages of the Defence Intranet or is available from the Corps Adjutant or the RSI Secretary (see page 81 for contact details). Where appropriate a single form can be used to nominate an individual for multiple awards. All nominations and citations must be sent electronically to the Corps Adjutant or the RSI Secretary.

**Awards Committee.** The RSI Awards Committee reserves the right to consider nominees for an alternative award. Any unsuccessful nominations for the Royal Signals Annual Awards will be automatically reconsidered for a Master of Signals Commendation.



# Roll of Honour

## CB

Maj Gen John Crackett TD (January 2015)

## CBE

Brig Robert Meinertzhagen (June 2014)

## OBE

Lt Col Alan McComb (June 2014)  
Lt Col Timothy Allen (January 2015)  
Lt Col Benjamin Fitch (June 2015)

## MBE

Lt Col Hervey Scott (June 2014)  
Capt Robert Clifford (June 2014)  
Maj David Rook (January 2015)  
WO1 (YofS(EW)) Andrew Johnson (January 2015)  
WO2 Paul Westcott (January 2015)  
Capt Mark Acklam (February 2015)  
Maj Caroline Lewin (June 2015)  
Maj Casanna Wootten (June 2015)  
Sgt Craig Clark (June 2015)

## QVRM

Lt Col Dominique Cairns TD (January 2015)

## QCVS

Maj Edward Maskell-Pedersen (March 2014)  
SSgt Clinton Sherratt (March 2014)  
WO1 Nigel Rogan (February 2015)  
A/Cpl Scott Robertson (February 2015)  
Cpl Lisa Dawson (February 2015)  
Cpl Karl Page (February 2015)

## Chief of the General Staff's Commendation

Maj (GM) Tol Khamcha QGS (January 2015)  
WO2 (RQMS) Calvin KIELTY (January 2015)  
A/Lt Col Clive Cook (June 2015)  
Maj Charles Davies (June 2015)  
Maj Russell Davies (June 2015)  
Maj James Snelgrove (June 2015)  
WO1 (RSM) James Scott (June 2015)

## Commander Land Forces' Commendation

SSgt Javaprakash Rai (January 2015)  
Maj Charlie Miller (January 2015)  
WO2 G Guthrie (January 2015)  
SSgt Andrew Risley (January 2015)  
Maj Jane Witt (January 2015)  
Maj John Riley (June 2015)  
Capt Andrew McGrane (June 2015)  
Capt Peter Watson (June 2015)

## Worshipful Company of Engineers' Royal Signals Operational Engineering Award

Capt (TOT) Daniel Fielding (July 2014)  
Capt (TOT) James Healy (July 2015)

## Worshipful Company of Information Technologists' 'Through Award' for Operational Military Signalling

WO1 (FofS) Tristan Searle (July 2014)  
SSgt (FofS) John Shambrook (July 2015)

## The RSI Silver Medal

Lt Col Laurence Fowkes (October 2014)  
SSgt (FofS) Craig Petch (October 2014)  
Sgt Nicholas Smart (October 2014)

Since the last edition of the RSI Journal was published a significant number of members of the Corps and the wider Corps family have had their superb efforts recognised; be they on operations, in barracks, in the classroom or further afield. Some of the citations for these individuals are included in the following pages but, for now, here is the full Corps 'Roll of Honour' for the period February 2014 to July 2015. Each and every one of them thoroughly deserves their award and also our congratulations.

### **Master of Signals Award**

Lt Col (Retd) Jim Ross (October 2014)

### **RSI Medal for Adventurous Endeavour**

Major George Hume MBE (October 2014)

### **Master of Signals Commendation**

WO1 (FofS(IS)) Aaron Marsh (February 2014)  
Corporal Francis Lyness (February 2014)  
Mrs Elaine Easton (October 2014)  
A/WO2 (YofS) Anthony Kirkby (November 2014)  
SSgt Benjamin Franklin (November 2014)  
SSgt Iain Lawson (November 2014)  
SSgt Beer (November 2014)  
Maj Robert Pace (November 2014)  
Capt Gary Christie (November 2014)  
SSgt Drew McMahon (November 2014)  
A/Cpl C Stanton (November 2014)  
A/Cpl Anthony Brissett (November 2014)  
Cpl Samantha Rodway (November 2014)  
SSgt Samantha Martin (November 2014)  
LCpl Francis Gowlett (December 2014)  
Sgt James Sidorowicz (December 2014)  
SSgt Mark Vinten (December 2014)  
SSgt Steve Wood (March 2015)  
Cpl Shelley Briggs (March 2015)  
Cpl Williams Waters (March 2015)  
Sgt Gary Nash (March 2015)

### **RSI Gold Medal for Academic Excellence**

SSgt(FofS) Richard Hill (May 2014)  
SSgt (YofS) Paul Etchell (September 2014)  
Maj Steve Ruxton (October 2014)  
SSgt (FofS(IS)) Daniel Miller (October 2014)  
SSgt (YofS(EW)) Richard Forde (January 2015)  
SSgt (FofS) H Tweed (April 2015)

### **Agar Memorial Prize**

2Lt David Seaton (April 2014)  
2Lt Nicholas Clarke (August 2014)  
2Lt Nathaniel Ayling (December 2014)  
2Lt Gregory Tonks (April 2015)

### **Whistler Trophy**

Capt Mike Goodman (January 2015)

### **Deane-Drummond Prize Essay**

Lt Matthew Wray – 1st Prize (January 2015)  
Capt Vishal Pun QGS – 2nd Prize (January 2015)  
Capt Alexander Cave – 3rd= Prize (January 2015)  
Capt Phillip Berry – 3rd= Prize (January 2015)

### **Royal Signals Undergraduate Prize**

Lt Ian Archambeau (February 2015)

# RSI LONDON LECTURE & DINNER 2014



*The Guest Speaker, the MOD's Chief Digital Information Officer, Mr Mike Stone, fielding questions from the audience*

The 2014 RSI London Lecture and Dinner took place in the grand surroundings of the Institute of Directors on Thursday 20th November. In addition to many members of the serving and retired Corps, the dinner was attended by representatives and guests from a record number of Defence and Security companies, some twenty four companies and over 260 diners in total.

The evening started with the guest speaker, the MOD's Chief Digital Information Officer, Mr Mike Stone, giving a broad-ranging summary of the key elements of his vision to transform the delivery of information and communications services across Defence and the challenges that he foresaw; it was a powerful tour de force which was warmly received by the audience. Later,

after the dinner itself, the audience had an opportunity to question the guest speaker.

The evening concluded with the new Master of Signals, Major General Nick Pope CBE, presenting four of the five RSI Annual Awards; the fifth recipient was on deployment in Afghanistan and his presentation was held over until his return to UK in Spring 2015. The recipients were Lieutenant Colonel Laurence Fowkes (RSI Silver Medal), Lieutenant Colonel (Retired) Jim Ross (Master of Signals Award), Major George Hume MBE (RSI Medal for Adventurous Endeavour), Staff Sergeant (Foreman of Signals) Craig Petch (RSI Silver Medal) and Sergeant Nicholas Smart (RSI Silver Medal). Their citations are reproduced below.

## **Lieutenant Colonel Laurence Fowkes**

### **RSI Silver Medal**

Lieutenant Colonel Laurence Fowkes is an exceptional ambassador for the Corps and the driving force behind the Royal Signals' intent to increase professional accreditation amongst its soldiers and officers and thereby strengthen the Corps' reputation across Defence, academia and its industry partners.

He is a mechanical engineering graduate of Imperial College London and transferred to the Royal Signals

after serving in the Royal Gurkha Rifles. He is a committed engineer who clearly believes in the values and ethos of continuous professional development. Since transferring to the Corps, Lt Col Fowkes has been a passionate advocate of Professionalisation. He has readily volunteered to represent the Corps in the Defence Engineering Forum and been instrumental in supporting the engagement of the Defence Sponsor Group with the Professional Engineering Institutions and the Engineering Council.

Acting as a voluntary conduit between the Institute of Engineering and Technology and Royal Corps of Signals applicants seeking Membership of the institute, Lt Col Fowkes has provided detailed, practical and frequently editorial advice to more than sixty senior soldiers and officers. His experience and commitment have been instrumental to translate an individual's Service experience into the recognisable, fundamental evidence for them to succeed through the Initial Registration Process. Thereafter he has continued to mentor and guide many in their preparation for their Professional Review Interview. Without his personal encouragement, support and assistance there are many members of the Corps who would have failed to achieve certification.



Lt Col Fowkes makes these significant contributions to the Corps' engineering development in addition to his own demanding appointment. He is a hugely capable and efficient officer, and has picked up additional responsibilities whilst his immediate superior's post, Assistant Director has been gapped. In spite of the considerable pressures upon him, he has continued to commit his own time and energy to promoting professional excellence and supporting individuals in their own professional development.

An impassioned and enthusiastic engineer Lt Col Fowkes personifies the benefits of achieving chartered status in one's profession. Whether it is for his work to streamline accreditation processes through the Defence Engineering Forum, or the dozens of individuals who have benefitted from his guidance, the Corps is indebted to his diligence. Lt Col Laurence Fowkes efforts undoubtedly deserve formal recognition; he is awarded the Royal Signals Institution Silver Medal.

## Lieutenant Colonel (Retired) Jim Ross

### Master of Signals Award

Lieutenant Colonel (Retired) Jim Ross has been associated with the Royal Corps of Signals for 53 years, first as a regular soldier and officer for 36 years and, upon retirement, in a variety of voluntary capacities. He joined the Corps in 1961, later serving as a Yeoman of Signals Instructor at the Royal Naval Signal School

(HMS Mercury) and subsequently as the first and only 'Warrant Officer-in-Charge' of the British Army Element in Nassau.

After commissioning in 1979, he held several key appointments including Frequency Manager at Headquarters 1st (British) Corps, a role which included managing the frequency spectrum for Exercise SPEARPOINT (CRUSADER 80), the largest ever British Army and NATO FTX in Germany. Importantly, he also assisted industry to develop and introduce computer-assisted frequency assignment in the field. Later, as a Lieutenant Colonel, he became the first Late Entry Officer to lead the Royal Signals Training Development Team; this coincided with the Corps' move from Catterick to Blandford.



Upon retirement in 1997, he became the first voluntary Secretary of the Royal Signals Institution under Major General Bill Robins. During this time he initiated the Institution's Annual London Lecture and Dinner. Later, he became a

volunteer at the Corps Museum, regularly opening it at weekends and, on request, in the evenings for group viewings, during which he gives a comprehensive, well-informed and widely-appreciated guided tour.

His most recent and uniquely valuable contribution to the Museum has been to recruit and lead a small team of appropriately knowledgeable volunteers to undertake a comprehensive review of the communications equipments held in store to determine their state of preservation and historical value. This has been a huge undertaking; the first major attempt to rationalise such items for over 40 years. The successful outcome of this review is fundamental to the Museum achieving its formal re-accreditation in 2015. To date, his team has reduced the number of items in store by over half and,

in doing so, benefited the Museum both financially and in terms of easing its future routine accessioning and accounting procedures.

He is also an enthusiastic and committed member of the Royal Signals Association. For example, volunteering to become the regional representative when no-one else could be found to take on the role; he volunteered to do so despite the many other calls upon his time, including managing his own business.

For his 53 years of especially valuable and dedicated service to the Royal Corps of Signals, Lieutenant Colonel (Retired) Jim Ross is presented with the Master of Signals Award.

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## Major George Hume MBE

### RSI Medal for Adventurous Endeavour

Major George Hume has had, and continues to enjoy, a highly successful career as a soldier, Yeoman and Traffic Officer. Over the years he has also made a significant contribution to Corps adventure training; for example leading the only Royal Signals expedition to Nepal during the 2013/14 trekking season. He has made it his business to introduce soldiers to mountaineering and to expanding the experience and qualifications of others along the way.

In 1989, whilst a Corporal, he qualified as a Joint Service Mountain Expedition Leader. Over the next 25 years he has organised, developed and led others mountaineering in the UK, Italy and Nepal. In 1995, he led his first international expedition to the Dolomite region; here, over a period of ten years, he introduced dozens of soldiers to the 'via ferrata' method of climbing. Two of his expeditions to the Dolomites were leading teams of Royal Signals Reservists where they tackled mountains up to and above 3,200m.

As an example of the significant legacy that he always seeks to leave behind him, in 1999 he was posted to 2 Signal Squadron in Dundee as a member of permanent staff. On arrival he was the only soldier in the squadron with adventure training qualifications. Through his motivation and organisation he departed two years later leaving three Mountain Expedition Leaders and a further three Unit Expedition Leaders.

By 2010, Major Hume had the experience and political ability to conceive, coordinate and lead the first British Army Loan Service and Royal Army of Oman expedition to Nepal. He successfully managed a team of six; half from each Army including the eldest son of the Commander of the Royal Army of Oman. The expedition did much to cement and extend links between the two Armies, as



well as climbing to the 6,189m summit of Island Peak.

This year, Major Hume organised and led an expedition to Nepal which saw 14 all-ranks members of 2 Signal Regiment trek to Everest Base Camp (5,364m) and ascend another nearby peak of 5,550m. He deftly dealt with the risks of trekking out of season, although snow and high winds forced an early descent. Through his tutelage, two team members qualified as Summer Mountain Leaders and a further six gained their Summer Mountain Foundation Certificate. In addition, his team almost certainly saved the life of a European trekker who had got into such considerable difficulty he had to be evacuated by helicopter.

Major Hume has made a significant contribution to the reputation of the Royal Signals through a 25 year long commitment to adventure training. He has coached, mentored and led others; setting the best example for our future leaders to emulate. His adventurous achievements are outstanding and he is a worthy recipient of this year's RSI Medal for Adventurous Endeavour.

## Staff Sergeant (Foreman of Signals) Craig Petch

### RSI Silver Medal

Over the last two years Staff Sergeant (Foreman of Signals) Petch has performed outstandingly in all facets of his role as Foreman of Signals 217 Signal Squadron, 22 Signal Regiment. He has been pivotal to the successful fielding of the mission configurable services to the Allied Rapid Reaction Corps (ARRC).

SSgt (FoS) Petch arrived in post on completion of his Foreman of Signals course but operated from his arrival as a much more experienced supervisor. That autumn his Regiment deployed on a challenging series of NATO Response Force exercises with the new and unproven Magpie system. With almost no formal training on Magpie across the Regiment, he led its technical integration into the extensive Exercise Control organisation to deliver first-class NATO information and communication services. His driven approach to engineering was invaluable throughout the commitments to HQ ARRC, Joint Task Force Headquarters on Exercise JOINT WARRIOR 13, the EU Battlegroup proving exercise and finally the largest Exercise ARCADE FUSION for many years.

Magpie was not a formal project but a collection of catalogue items assembled into a system and so the exact configuration and optimisation of this arrangement took time and considerable skill. His deep technical understanding of the components that make up the system was developed through energetic study and investigation. It was this indefatigable thirst for understanding and mastery of the technology that meant the Regiment was able to deliver the extensive information services to a demanding staff. The fine tuning of the systems was driven by FoS Petch; he identified network wide issues and was the first to exploit the complex network monitoring tool. Video teleconferencing, real time situational awareness and bulk data transfer between applications databases were de-conflicted and optimised through his hard work.



*SSgt (FoS) Petch belatedly receiving his RSI Silver Medal from Brigadier Greg Wilson, Commander 11 Signal Brigade, on his return to UK from an Operational tour in Afghanistan*

In barracks he has driven the development of Regimental Magpie SOPs, as well as providing boundless impetus to the professional development of the Communications Systems Engineers. His excitement is infectious and his mentoring of potential Foreman of Signals is particularly effective. Additional tasks such as producing a statement of need to improve maintenance and training were tackled with equal zeal.

For his dedication and enthusiasm to energise the comprehensive Professionalisation of his Regiment's ability to operate Magpie and for taking this challenging work forward with due diligence, Staff Sergeant (Foreman of Signals) Petch is awarded the Royal Signals Institution Silver Medal.



*Left to Right: Brigadier Mike Lithgow CBE, Lieutenant Colonel (Retired) Jim Ross, Major George Hume MBE, Major General Nick Pope CBE, Sergeant Nicholas Smart, Lieutenant Colonel Laurence Fowkes and Mr Mike Stone*



# THE WHISTLER TROPHY

*A delighted Captain Jim Collins receives the Whistler Trophy from our Colonel in Chief, HRH The Princess Royal*

## 2014 – Lieutenant James Collins

The 2014 winner of the Whistler Trophy was Captain (then Lieutenant) James Collins who was serving in 21 Signal Regiment at the time of his nomination; he has recently left the Corps in order to pursue a second career. He was very fortunate to receive the trophy from our Colonel in Chief, The Princess Royal, at the Spring Corps Guest Night in Blandford in March 2014. His citation is reproduced below.

Lieutenant James Collins has displayed outstanding leadership as a Troop Commander, highlighted when dealing successfully with significant challenges. These include assisting a seriously injured soldier on exercise, winning a Bronze medal in the arduous Cambrian Patrol competition, and reaching the Army Individual Boxing Light Heavyweight Final.

Highly committed, extremely hardworking and impressively competent, Lt Collins has been an excellent Troop Commander for over 50 soldiers in a Campaign Signal Regiment, despite being without a Troop SSgt for long periods. During the Squadron's 3 month deployment on Op OLYMPICS, he was required to step up and assume the Squadron 2IC's responsibilities. He showed mature leadership and management of a large rear party with significant welfare and medical cases. It was his determination and sheer will to succeed that ensured that the Squadron's WIS visits were conducted correctly and on time, and that all welfare cases were dealt with in a compassionate and professional manner. Being a natural and inspirational leader, he is both highly respected and liked, and throughout the year he has set and achieved the highest standards.

When a soldier struggled for breath and collapsed on a training exercise, Lt Collins immediately stepped forward. Instinctively knowing how to act he assisted in providing essential, lifesaving first aid. When the soldier stopped breathing he alternated with a colleague to provide CPR and to keep the airway clear until an air ambulance arrived. His immediate response, calmness under pressure and intelligent reaction to the situation kept the soldier alive. Whilst very fatigued after giving CPR for an extended period, he proceeded to the hospital to offer assistance to the family. His compassion, emotional support and interpersonal skills were outstanding.

Exceptionally fit and always a volunteer for additional responsibilities, Lt Collins commanded the Regimental Cambrian Patrol team leading the patrol by example maintaining high morale throughout. Despite atrocious weather conditions, the patrol was awarded a Bronze medal. Lt Collins is also an accomplished and courageous boxer, and was the runner up in the Army Individual Light Heavyweight Final in May 2012. He has also actively participated in many sports throughout the year, and completed Trailwalker as part of a Regimental team. In addition, Lt Collins has

organised a number of excellent functions in the York Officers' Mess and has used his initiative and attention to detail to ensure that the Mess property is correctly accounted for.

Lt Collins is an outstanding junior officer. His achievements, conduct and example are inspirational. Entirely modest, he exemplifies our Core Values. For his outstanding achievements, Lieutenant James Collins is awarded the 2014 Whistler Trophy.

## 2015 – Captain Mike Goodman

The 2015 winner of the Whistler Trophy was Captain Mike Goodman who was also serving in Afghanistan with 21 Signal Regiment at the time of his nomination; he is now a troop commander at Army Training Regiment (Winchester). He received the trophy from the Master of Signals at the Spring Corps Guest Night in Blandford in March 2015. His citation is reproduced below.

Capt Mike Goodman is nominated for the Whistler Trophy for his outstanding leadership as a Troop Commander, in barracks, on exercise and on operations. Throughout this most challenging of years he has sought every opportunity to support, enable and sustain his soldiers.

Totally committed, hardworking and with a passion for those he commands Capt Goodman and his Troop bore the brunt of the training support burden for 7 Armoured Brigade's force elements. Over a series of exercises they have delivered everything from 3-man ICS detachments in simulated Forward Operating Bases for each Company Group through to providing the primary communications systems for the Brigade HQ test exercise. The conscientious way in which he executed each task, building strong relationships with the exercising troops as well as the directing staff, ensured that our soldiers clearly understood their role and allowed a proactive response to changes. This is symptomatic of his intelligent and thoughtful leadership.

The Squadron pre-deployment reorganisation saw Capt Goodman assume command of the CIS Troop. Charged with the individual preparation of over 70 soldiers, he developed and managed a comprehensive programme of activities to address the plethora of pre-deployment requirements. Squeezing his own training between exercise commitments, he focussed on developing his understanding in areas that would directly benefit his soldiers, including becoming qualified as a Trauma and Risk Management (TRiM) Practitioner and Coordinator.

In theatre, his role has focussed principally on administration, equipment management, soldier welfare and support. Throughout he has maintained strong relationships with the significant number of his Troop that are attached to other units and also took under command the RAF Tactical Communications Wing detachment and with it, the complexities of joint administration and discipline. His development and maintenance of their team spirit was amply demonstrated by the 'Running Home for Christmas' charity relay that he organised, developing a format that ensured that every member of the Squadron could contribute. In contrast his calm and assured counselling of our soldiers who witnessed the tragic death of a soldier in Camp Bastion demonstrated his all-round leadership qualities.

Despite all the challenges that the Regiment have faced he has set a faultless example and ensured that the standards and operational effect of his Troop have

remained high. The implementation of a revised fault-reporting and resolution processes that he managed has delivered genuine operational benefit. His drive to serve his soldiers is evident in all areas of his work, most notably through the priority he places on ensuring their career development. The amount of time and effort he has expended in developing an appropriate and manageable equipment accountability regime for the vast quantity of communications equipment across Camp Bastion is clear evidence of both his determination and moral courage.



Capt Goodman is an outstanding junior officer. His achievements, conduct and example under the most challenging of circumstances are an inspiration to his soldiers. Entirely modest, he exemplifies our core values, and is fully deserving of formal recognition.

### The Whistler Trophy – a brief history.

In 1963, on relinquishing the appointment of Signal Officer in Chief (Army), Major General A M W Whistler CB CBE presented a Georgian silver tankard to be awarded annually to the outstanding Royal Signals Subaltern of each year. The rules were changed in 2006 to extend eligibility for the award to reserve officers and junior Captains of less than two years seniority.

The winner is the junior officer who is judged to have done the most for their unit over the year; paying particular attention to what they have done for those under their command, to the level of enterprise shown and to their overall contribution to the Corps. Emphasis will be placed upon effort, achievement and professionalism, though significant achievements in sport and adventurous training that have benefited those under command will also be taken into account.



## Royal Signals Apprentice of the Year 2014 Lance Corporal Katie Constable

There were smiles all round when Lance Corporal Katie Constable received her award as the first Royal Signals Apprentice of the Year at an award ceremony held in Princess Mary Hall in Blandford on 10th December 2014. She is pictured above receiving her winner's cheque for £1,000 from the Corps Colonel Royal Signals, Colonel Graham Norton. Lance Corporal Constable is an Electronic Counter Measures Force Protection Operator with 10 Signal Regiment. As a testament to her outstanding performance, she has gone on to be the Army nominee for the 2015 National Apprentice of the Year Awards, the winner of which will be announced later this year.

The Royal Signals Apprentice of the Year Awards are co-sponsored by the RSI, the Institute of Engineering & Technology, the Chartered Institute of Logistics & Transport and our apprenticeship provider, Wiltshire & Somerset Colleges Partnership. In addition to the £1,000 first prize, there were runners-up prizes of £250 for each of the other five shortlisted finalists. The finalists had been selected from a field of more than 50 nominees put forward by their unit chain of command.

The remaining finalists were Lance Corporal B Carter (Communications Systems Engineer from 200 Signal Squadron), Lance Corporal A Sutton (Installation Technician from 222 Signal Squadron), Lance Corporal J Hunston (Electrician from 22 Signal Regiment), Signaller M Knott (Communications Systems Operator from 200 Signal Squadron) and Signaller V Royals (Comms Logistic Specialist from 1 Armoured Division Signal Regiment). The picture below shows the finalists with the Corps Colonel Royal Signals and representatives from the each of the four co-sponsoring organisations.



# Royal Signals Apprentice of the Year 2015



## The BAE Systems 'Falcon' Award

Pictured above is the new Falcon Award which is being presented to the Corps by BAE Systems in 2015 and will now be awarded annually to the Royal Signals Apprentice of the Year. The Falcon is a superb silver centrepiece and will be held for the year in the safekeeping of the unit to which the Apprentice of the Year is serving at the time of the award.

In addition to being handed the actual Falcon Award for their unit to display for the year, the Apprentice of the Year will also receive a replica of the Falcon Award plus the cheque for £1,000. The five runner-up prizes of £250 each will also be awarded to the remaining shortlisted nominees.

All Royal Signals soldiers are eligible for these awards providing, as at 31 July 2015, they have been enrolled on a Royal Signals Apprenticeship for a minimum of 12 months or have completed their apprenticeship in the previous 12 months. And they have not reached the substantive rank of sergeant.

Nominations must be submitted to HQ Royal Signals by 30 September 2015 through the unit chain of command. A shortlist of six finalists will be selected and announced

in mid-October; one finalist from each of the six sub-categories: Logistician, Electrician, Operator, EW Operator, Installation Technician and Engineer.

The six shortlisted finalists and their CO/OC will be invited to an awards event in the Princess Mary Hall at Blandford Camp on Thursday 3rd December 2015 where the winner will be announced and receive the Falcon Trophy and their £1,000 prize. The remaining finalists will also receive their £250 runners-up prizes.

**Are you a Royal Signals Apprentice, are you diligent, hard-working, an inspiration to your peers, keen to progress your career? Why not speak to your OC and apply to be the Royal Signals Apprentice of the Year?**

**Do you know someone in your unit who fits the bill for the Royal Signals Apprentice of the Year? Why not nominate them for this valuable award?**

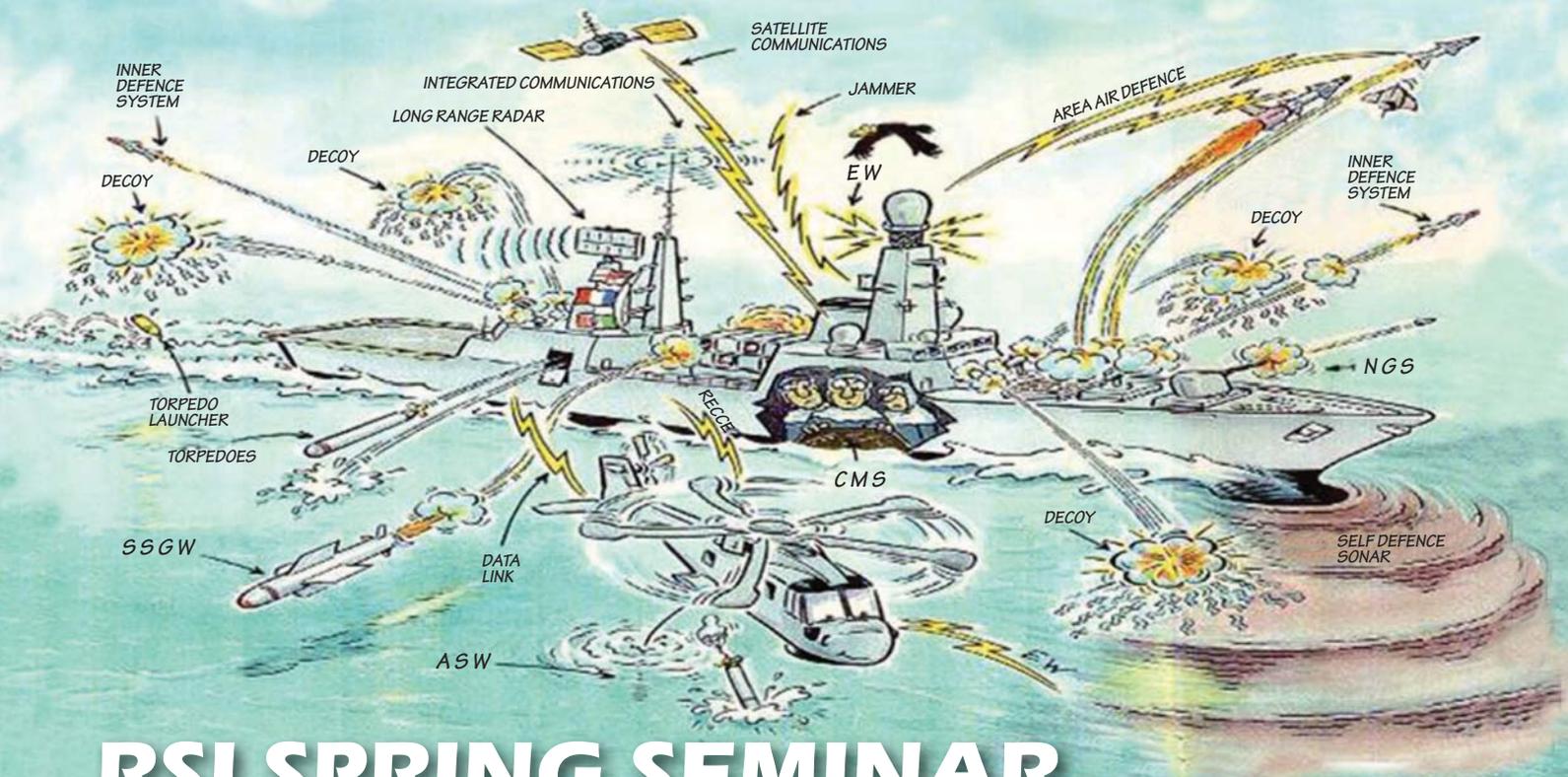
Full details will be circulated shortly in a Royal Signals Information Note or contact Mr Dave Barlow on 01258 48 2098 (civilian) or 94371 2098 (military) or at [rsignalshq-wld-c2@mod.uk](mailto:rsignalshq-wld-c2@mod.uk)

The Royal Signals Apprentice of the Year Awards are sponsored by:



Wiltshire & Somerset Colleges' Partnership Ltd





# RSI SPRING SEMINAR

*Type 45 - A Model for Procuring Integrated Capability?*

## EDITOR'S NOTE

On the 24th April the Royal Signals Institution in conjunction with HQ 1 Sig Bde held a Workshop in London to explore the next steps in the Army's part of the information capability portfolio. The intent was to offer a candid explanation to our industry partners of how we envisage doing business in the immediate future and to explore the part that they might have to play. Particular emphasis was placed on exploiting existing equipment by engineering solutions that are greater than the sum of their parts, agile procurement and delivering emerging capability sooner to the G-Cloud. Attendees were divided in to groups and each group allocated to work on one of the following questions:

- The Bde HQ as a platform – 'Delivering technically coherent HQs' – Facilitator: Col Rich Carter.
- Application Hosting Environment for Mission Threads – 'Interoperability at the Application layer' – Facilitator: Col James Vosper
- Battlefield Skype - 'Breaking the CNR / Trunk / CIS divide for voice and VTC' – Facilitator: Col James Langley.

Due to overlaps in the findings from the groups that tackled the 'Application Hosting Environment for Mission Threads' and 'Battlefield Skype' questions, the workshop agreed to combine the responses from these groups into one brief therefore this paper will contain the response to 'the Bde HQ as a platform' and the 'Application Hosting Environment for Mission Threads' which also includes the points made for the 'Battlefield Skype' question.

## The Bde HQ as a "Platform"

### INTRODUCTION

Historically, Defence has delivered a number of bespoke and often stovepiped capabilities into a C2 node within the Land Environment, leaving the deployed commander to integrate the capabilities as best he/she can. This has been uniquely highlighted on Op HERRICK through the delivery of a plethora of UORs, delivered by multiple DE&S Delivery Teams, sponsored by a number of Capability Planners, representing several functional areas (or fiefdoms). However, as Defence begins to line up behind Information Superiority and fund an ever increasing number of information capabilities such as MORPHEUS and DCNS Operational Information Services whilst delivering new vehicles and infrastructure, planning

future C2 nodes may need a new approach. Treating the Bde HQ as a platform programme in its own right follows the approach used for other complex platform programmes and ensures all elements are planned and delivered coherently and across all Lines of Development. But does this platform-centric approach counter the very people-focussed approach that the Army is used to?

### TYPE 45 - A MODEL FOR PROCURING INTEGRATED CAPABILITY?

Defence has moved away from Whole Ship Procurement to an approach which sees the MoD as the design authority which articulates standards, key component designs and internal boundaries. Critical to the successful delivery of

a Type 45 is the close integration of the sensors and CIS, delivered by a number of Delivery Teams, which make up the Combat System. The Combat System is the “set of men and machines that form the fighting capability of the Platform<sup>1</sup>” and it is the Combat System Design Authority that ensures that system boundaries are absolutely clear and standards are set and adhered to by all Delivery Teams although the syndicate highlighted that even the Royal Navy had experienced inconsistencies between individual ships of the same class as capability upgrades may be made to the first ship whilst the last ship was still being built. This is a fact of life with Maritime platforms which requires careful synchronisation and sequencing between Industry and Defence.

It appears, therefore, that there are elements of Design Authority and Defence/Industry collaboration that this platform-centric approach may be of benefit to Bde HQ programmes but by putting the platform at the centre of capability development one must accept the very different outcomes that may result, which may suit the Royal Navy but not the people and information orientated requirements of a Bde HQ. One must also recognise that the Bde HQ, by its very nature, is agile and able to grow and shrink and adapt to threats and operational drivers unlike the heavy duty maritime platforms. And one always expects the commander to stamp his style onto the HQ. So the trick is to use architectures, standards and joining rules, similar to the platform approach, but in order to develop a modular and agile capability.

#### **DESIGN AUTHORITY AND INDUSTRY STANDARDS**

For the Land Environment, the Land Open Systems Architecture (LOSA) was cited as the exemplar for defining a set of protocols and standards, supported by Industry, and aims to ensure that soldier, vehicle and base systems are designed to interoperate from the outset whilst the Service Design Pillar within ISS defines and increasingly owns the architectures and standards for information capabilities across Defence. Where previously we have used the mantra of “open standards”, it is recognised that this term may have led us to some incoherent capability in the past. The syndicate took great delight in “swinging

the lantern” over TacISDN and OpenOffice which served to highlight the difference in opinion as to what “open” meant but it is now accepted that the requirement is for “common standards” which are industry best-practice allowing suppliers to compete on a level playing field and support flexibility, changing requirements, evolutionary acquisition and innovation. That said, the demands of the military environment may still need some unique, differential standards to meet the required service availability in a contested battlespace e.g. EMP hardening. Our standards must also be consistent with NATO and our coalition partners.

#### **DEFENCE AND INDUSTRY COLLABORATION**

There is an acceptance that the post-HERRICK era will bring a greater level of scrutiny from the MoD, HMT and the Cabinet Office towards our C4ISR capability requirements at a time when we attempt to migrate our acquisition process from the old 10 year, big-bang programmes to one of evolutionary acquisition which leverages mature COTS technology through a number of spirals. This takes Industry, Defence and Dstl from being focussed on long term research to one that focuses on experimentation and Concept Capability Demonstrations with a view to pull through existing commercial technology into each spiral of capability. This needs a closer working relationship between Industry and Defence and between a larger number of stakeholders under the delegated model. The delegated model does, however, allow for a quicker approval route for funding and the spirals will serve to provide a much flatter revenue stream for Industry.

#### **CONCLUSION**

The platform approach to acquisition, as carried out by maritime platforms, is characterised by a System Design Authority setting the boundaries and standards and close Industry/Defence collaboration. These characteristics are key for the development of the Bde HQ as a capability recognising that a full platform-centric approach does not necessarily meet with the people and information orientated requirements of an agile, modular Bde HQ.

## **Application Hosting Environment for Mission Threads**

#### **INTRODUCTION**

The legacy of the Operations over the last decade and the UOR programme has left Defence with a plethora of applications that were often designed in isolation to deliver specific solutions. The limited overarching governance and design authority has resulted in duplications of effort and varying performance requirements have also meant that not all these applications can run on the same platform. While deployed on enduring Operations such as HERRICK the logistical and bandwidth overheads can be managed, albeit with some pain and cost. However, with the move

from enduring operations to contingency this approach will not be feasible. With this background in mind what can Defence do to improve application hosting and their use by deployed users?

This was the question presented to one of the break out groups at a recent Royal Signals Institution (RSI) workshop that was held in April 14. The Group consisted of members currently serving in the Royal Signals, industry and MOD Civil Service. The views of the group on application hosting built on the concept of the HQ as a single platform and that the ‘new world order’ of communications equipment (Falcon, Magpie(Jackdaw), Reacher and LE Tac CIS) will deliver a fully integrated digital network that will allow data to flow seamlessly throughout the operational theatre and back to the UK.

<sup>1</sup>DEFSTAN 21-88

## TECHNICAL REQUIREMENTS

An assumption was made by the group that the main servers hosting the applications would be situated in a secure UK location with access into the SECRET and RESTRICTED systems where needed. In the advent of a deployment to an operational theatre, application servers would be deployed to handle the demands of in theatre updates. The group discussed, but could not reach a conclusive answer on the frequency that the main servers in the UK were to be updated. The discussion focussed on the trade off between currency of data from the operational theatre and the UK and the bandwidth overheads involved in frequent updates from the operational theatre to the UK.

In order to achieve the desired level of flexibility required on contingency operations the group concluded that the network(s) on which these applications would operate as a single 'Black' network. Accreditation would not be conducted on the system as a whole and its physical security (which arguably is nigh on impossible to achieve) but instead security would be provided on a point to point basis, and the security of the information would be assessed on the data being transmitted on the network(s). Encryption would have to be conducted at the device level and technologies such as TPM (Trusted Platform Module) could be used to achieve effective and low overhead device level encryption.

By bringing Defence applications under this level of governance more control will be able to be exercised over who has access to the applications. Users deploying to specific theatres could be assigned to a specific role which in turn would have predetermined access enabled to a list of applications and specified access rights. Other potential filters for access could be the Identity, Operational area and the duration that access to particular applications are required for. These limiting actions should help to mitigate the risk of security breaches by having a limited and recorded pool of individuals on the access list.

Based on currently technologies the group identified that constrained bandwidth on the network(s) would be a limiting factor on the scope of the enterprise. Therefore data flow prioritisation would be a key component in an attempt to alleviate potential bottle necks.

Another potential methodology to mitigate constrained bandwidth would be for users to pre load key data onto their portable user devices at fixed infrastructure sites. Subsequent updates to this these data sets could be released as differentiated updates such as electronic map overlays.

## CHARACTERISING SERVICES

The group placed a great deal of effort in characterising the mobile user's Access Device. It was strongly felt that such devices should have an interface that users should already be familiar with from their day to day lives and be developed to mimic commercial Smart Phones and Tablets. Operating systems such as Windows 8 already enable a mouse based and touch screen interaction. These technologies enable

the same operating system to be used on the users desktop device and the deployed device with different methods of interaction. The interface with the application software was identified as being critical and careful research would need to be put in place to ensure that the means of interaction is intuitive and as easy to use as possible.

So why go to all this effort on a device? By providing the user with a device interface that is intuitive increases the likelihood that they will adopt it while also mitigating the training burden for re-familiarising users with devices after periods of skill fade. If the same operating system can be used both in peace time locations and while deployed this further mitigates the effect of skill fade as users are current.

The group also identified that a search engine, common to all applications and that is sufficiently powerful to search across all applications on the system would be vital to the success of this concept. The challenge will be to achieve this within the limitations of our current, not future CIS. Perhaps engagement with organisations like Google could be made to achieve such a solution?

The nature of military operations means that there will not always be sufficient bandwidth to allow regular updates. At no point should the administration of the applications suite prevent users from doing their job. The group fully recognised that mobile users should have the ability to work in isolation, sometimes for extended periods. This means that any patches/upgrades released must be compatible with the previous three iterations. Mobile users should also have the option of whether they wish to receive an update or delay it if they are in a crucial phase of an operation or an area of low bandwidth.

## DEVELOPMENT PROCESS

The widespread use of applications may require regular updates and it was suggested that the AIS branch of the IS directorate could be empowered and resourced to code these applications internally. This increased resourcing would allow Defence the agility required to develop its own applications. Application rollout can be incremental and the design authority would have greater control over the development and release of updates to existing applications. AIS are already developing applications, albeit on a smaller scale, but the concept is proved and with the correct levels of resourcing AIS can deliver.

## CONCLUSION

UK Defence has already declared its intension to adopt where possible the core NATO applications suite and the advent of the fully integrated digital network presents a great opportunity for Defence to review how its plans to use applications in support of both in barrack activity and while deployed on operations. The power of commercial mobile user devices and their ability to enable live updates into the application databases, represents a potentially very powerful force multiplier if it can be adopted. There are many acknowledged constraints to this approach, but unless Defence takes an enterprise architecture wide view on the effects of Applications in the contingent space it will be facing some difficult challenges in the future.



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# WHAT HAS HERITAGE EVER DONE FOR US?

*Cable Laying in the Field, Gilbert Holiday, c. 1924<sup>1</sup>*

## EDITOR'S NOTE

Last year the Corps Council asked Brigadier David Hargreaves to consider what the Corps wishes to achieve from its investment in Heritage, what that level of investment should be and how it should be controlled. He interviewed in excess of 80 regular, reserve and retired personnel from Lance Corporal to Lieutenant General - and one civil servant! The resultant paper was accepted unanimously at this Spring's Corps Council meeting. In this extract, the author considers what Heritage is and the Corps' relationship to it.

Brigadier Hargreaves served in the Regular and Reserve Corps between 1977 and 2013. His final appointments were as Commander 2 Signal Brigade and as the Programme Director of the Saudi Arabian National Guard Communications Project (SANGCOM).

He is now Chairman of the Royal Signals Association, Chairman of the Reserve Forces and Cadets Association for Yorkshire and the Humber, Squadron Colonel of 50th (Northern) Signal Squadron, a listener for the Samaritans and a caseworker for the Royal British Legion.



<sup>1</sup> This first World War study of a cable wagon under fire in Flanders in 1914 was painted by Gilbert Holiday who is believed by many to be the most accomplished action painter of the horse in the history of English art. He visited the Western Front in 1914 as an unofficial war artist and may have based this painting on sketches he made at that time. This painting, along with two others by him ('Laying Cable in a Trench' and 'Menin Gate') and 'Through' by Franc Martin, were the first to be hung in HQ Mess Royal Signals.

# THE RELATIONSHIP BETWEEN THE CORPS AND ITS HERITAGE

## WHAT IS HERITAGE?

*“When I use a word,” Humpty Dumpty said in a rather scornful tone, “it means just what I choose it to mean – neither more nor less”*

The Army does not have a definition of “Heritage”. This is surprising, given that there is an SO1 Heritage in Army Headquarters and ECAB has endorsed an Army Heritage Strategy. In conducting interviews for this Study, however, a number of common threads emerged:

- It is our Heritage which makes us unique, and distinct from the other Arms and Services of the Army.
- Heritage unites us as a Corps, helping us to think, act and fight alike.
- We inherit our Heritage from our forebears and contribute to the heritage of our successors.
- Our Heritage goes back before the formation of the Corps and continues to accumulate today.
- Heritage does not just consist of material objects, but embraces ideas, stories, customs and practices.
- It contributes to our way of thinking as Signallers and therefore influences our future actions.

## IS HERITAGE IMPORTANT?

*Regimental pride has always been of enormous importance in the British Army and still is, despite the ravages of amalgamation. It was even – I might say particularly – true of wartime soldiers. We were therefore given a comprehensive and inspiring picture of the Regiment’s history.*

Unlike “Heritage”, the Army does define “Fighting Power”. Heritage contributes directly to two of its three pillars. It is a key element in building and strengthening esprit de corps, providing much of the glue which joins us together as a single Corps, focussed upon our mission of getting the message through. As such, it is integral to the Moral Component:

*The soldier’s pride and loyalty are not, first, to the Army as a whole, but to his own Corps or Regiment – to his own immediate comrades. The moral strength of the British Army is the sum of all these family or clan loyalties. They are the foundations of the British soldier’s stubborn valour. They hold him when more distant, wider loyalties could not.*

But it also provides examples and stories from which we can learn, either to build upon good practice or to avoid poor practice. Heritage contributes to the lessons learned and decision-making process and therefore forms part of the conceptual component of Fighting Power. Never was a truer word spoken than:

*Those who cannot remember the past are condemned to repeat it.*

The Corps appears to have been aware of the significance of its heritage from its earliest days. Way back in 1922, only two years after its formation, a small museum already existed in the Signal Training Centre at Maresfield, Sussex. By 1927 the Royal Corps of Signals Association was producing a 58-page booklet detailing the “History of Signals in the Army” and issuing it to all members of the Corps. It is instructive to quote from the foreword to that booklet, as its words are as relevant today as they were 87 years ago:

*Of necessity ... only a very few of the immense number of stories of devotion to duty on the part of individuals could be included. But it is hoped that the reading of these will encourage those who have to carry on great traditions to emulate and even surpass them.*

As late as the closure of 11 Signal Regiment as a basic training unit in Catterick in the early 1990s, soldiers were not allowed to wear our capbadge until they had mastered the basic facts of Corps history, structure and personalities.

## THE CORPS’ CURRENT ATTITUDE TO ITS HERITAGE

Whilst the aim in 1927 might have been to share “a very few of the immense number of stories of devotion to duty” with young soldiers, it has been sobering to discover how little the current Corps actually knows of its own heritage. When interviewees from Lance Corporal to Lieutenant Colonel, chosen at random from across the units of the Corps, both Regular and Reserve,

<sup>2</sup>Carroll, Lewis. *Through the Looking Glass, Chapter 6*

<sup>3</sup>AG/14/5/52 dated 8 Dec 09. *Army Heritage Strategy to 2015.*

<sup>4</sup>One interviewee was proud to claim the Corps’ direct line of descent from Pheidippides, who carried the message of Greek victory from Marathon to Athens in the 6th century BC.

<sup>5</sup>Schlaefli, Robin. *Emergency Sahib, 1947.*

<sup>6</sup>Slim, Field Marshal Sir William. *Courage and Other Broadcasts. 1957.*

<sup>7</sup>Satayana, George. *The Life of Reason. 1905.*

<sup>8</sup>Royal Signals Museum. *Pamphlet No 7, History of the Museum and the Royal Signals Capbadge. Undated.*

<sup>9</sup>Royal Corps of Signals Association. *A Short History of Signals in the Army. Foreword. 1927*

were asked ten, reasonably straight-forward questions on the Corps' history and heritage, the average score was under 4. Less than 20% were able to name the year in which the Corps was formed, let alone the date<sup>10</sup>; of those that did the vast majority were Warrant Officers or Late Entry Officers who had undergone training in Catterick, Ouston or Harrogate. The majority of respondents had only heard of Major General Deane Drummond in connection with the essay competition and the majority of those interviewed, even in 30 Signal Regiment, were not aware of that unit's role in the Falklands Campaign. The "quiz" was no respecter of rank, as the highest score achieved (8) was by a Corporal and the second lowest (2) by a Lieutenant Colonel. I went on to ask interviewees how they felt similar questions would be answered in an infantry battalion. All were convinced (rightly or wrongly) that everyone would know their unit history, its battle honours and key personalities. They felt that this would have been inculcated in every soldier from the day they joined the unit and contributed significantly to unit cohesion and sense of purpose.



March Past, Sennelager, Ken Howard, 1978<sup>11</sup>

It was clear that most of the Corps wishes that a greater emphasis were placed upon our history and heritage, is rather embarrassed by current *laissez-faire* attitudes and is envious of the strong bonds created within other capbadges, principally the Infantry, by their shared sense of belonging. I would therefore suggest that what the Corps wishes to achieve through its investment in all matters of Corps heritage is:

- A strengthened sense of identity, both at Corps and Unit level.
- Enhanced esprit de corps.
- Pride in the Corps' achievements at least on a par with other capbadges across the Army.

<sup>10</sup>Answers varied from the late 19<sup>th</sup> Century to the outbreak of WW2.

<sup>11</sup>This painting represents the Royal Signals participation in the Silver Jubilee Royal Review in the presence of HM The Queen at Sennelager on 7<sup>th</sup> July 1977. The Corps was represented by 4<sup>th</sup> Armd Div HQ & Sig Regt, vehicles from 7<sup>th</sup> Sig Regt, together with contingents from 6<sup>th</sup> and 20<sup>th</sup> Armd Bde HQ & Sig Sqns.

## THE TRAINING REGIME

Recruits to the Corps undergo Phase 1 training at one of three establishments<sup>12</sup>, where the amount of capbadge specific activity which takes place is down to the judgement of the individual CO. Currently one believes that emphasising capbadge loyalty would weaken any sense of unit identity and result in unhealthy competition between Arms and Services<sup>13</sup>. At the other end of the scale, one positively encourages capbadge mentoring.

Phase 2 training contains just one heritage-related serial: a visit to the Corps Museum. Most interviewees recall this visit as being conducted last thing on a Friday, of their troop corporal handing them over to a museum guide and then disappearing himself, and of the aim as far as the recruits themselves were concerned being to conclude the visit as quickly as possible so that they could get away for the weekend<sup>14</sup>. Some of this may of course be anecdotal or apocryphal, but little emphasis does appear in the recent past to have been given to instilling key aspects of the Corps' heritage in its new members<sup>15</sup>. A similar situation persists in officer and supervisory training. We simply do not have a structured approach which introduces our soldiers to their heritage; neither do we inculcate in them the qualities and achievements which bind us together as Signallers. What we do do is haphazard, in many cases relying on local initiatives and one or two enthusiasts.

## AN ALTERNATIVE APPROACH

*What thou lovest well is thy true heritage.*<sup>16</sup>

If we are to achieve maximum operational benefit from our investment in Corps heritage, we need to undergo a sea-change in our approach to that heritage. We need to seize every opportunity to introduce our soldiers to our rich and diverse heritage, to the inspiring stories of Signallers doing their jobs in exceptional circumstances, our Corps "heroes" and the technical, structural and doctrinal developments over time. This can only be achieved through the wholehearted involvement, commitment and leadership of those in positions of influence and authority, whether they be members of the Corps Council or a troop corporal in a training unit. We need to tell a consistent, structured message and tell our story in a way which matches the development of the issue. At the heart of this cultural change, therefore, is what happens in the training regime.

<sup>12</sup>Army Foundation College Harrogate, Army Training Regiment (ATR) Pirbright and ATR Winchester.

<sup>13</sup>AFC Harrogate Plan 13/14 dated 2 Aug 13.

<sup>14</sup>Sources protected!

<sup>15</sup>For example, when I asked some Phase 2 permanent staff who taught their recruits the Corps motto and Corps march, I was assured that this took place during Phase 1; when the same question was asked of Phase 1 permanent staff, I was equally confidently assured that it took place during Phase 2!

<sup>16</sup>Ezra Pound. Cantos.

Each element of formal training undertaken by a soldier or officer should include a heritage theme or vignette. For example,

**Phase 1 Training.** We must work within the regime we have, seeking to convince both the system and individual all-arms COs in the ATRs and the AFC that the value of capbadge mentoring and nurturing far outweighs any perceived disadvantages. Trainees should be introduced to some crucial basic facts about the Corps' heritage, such as the date of its formation, its motto, capbadge and march.

**Phase 2 Training.** Trainees should be tested early in their time at Blandford upon the basic facts to which they have already been introduced. They should be issued with a workbook (or app) which has to be completed during their course and which will require them to undertake a small amount of research either in the Museum or the Library. Award of the Corps' Tactical Recognition Flash should be dependent upon successful completion of the workbook/app. Trainees could also be required to deliver short presentations upon an aspect of Corps heritage as part of their graduation ceremony.

**Subsequent Career Courses.** It is recommended that each subsequent course includes an element on heritage matched to that particular course, whether it be a leadership course or a more technically demanding one. Syllabi should be amended to include this element.

To achieve this change in approach, we will need to make use of all the assets and occasions we have available to us. Corps events should all have a link to heritage. To take but three examples: no Princess Royal Day event should go by without, say, a presentation on our history, just as happens on Trafalgar Day for the RN and Battle of Britain Day for the RAF; all those taking part in the Lanyard trophy should be acquainted with how and why the event came about; and we should all know who the Morrison of the Morrison Cup was. And, we need to make best use of one of our greatest resources, the Corps Museum.

### THE REQUIREMENT FOR A CORPS MUSEUM

*"I used to think the Corps Museum was boring, but I went and looked around it last week. You know, sir, it's actually great – really interesting!"*

Everyone in the Corps seems to have an opinion on the Corps Museum, whether or not they have visited it. The Corps Committee first considered the possibility of establishing one back in 1934, although it was only eventually set up in ad hoc accommodation in 1952. It led a peripatetic life around Catterick Garrison until moving to the Entrance Hall of the then new School of Signals in Blandford in 1967. In 1988, the Corps Committee decided to launch a project to construct



*An internal view of the Museum<sup>20</sup>*

a larger, purpose-built Museum outside the wire. Following fund-raising difficulties, the plan became more limited and the current Museum was opened by the Princess Royal in July 1995. It is now one of 69 museums which receive MoD support towards operating costs and accommodation.

Whilst there is a belief that the Museum exists solely to meet the requirements of the Corps, this is not the case. The Museum is not financially viable without MoD funding and this support is conditional upon meeting the Army's objectives. Thus the requirements of wider stakeholders are important, but not more so than those of the Corps. These were perhaps best summed up by the then SOinC(A):

*Our Museum should inspire, encourage, unite, celebrate and commemorate. It should build in our soldiers and officers mutual respect and strengthen the family feeling of our Corps. It should celebrate and inspire pride in the successes of our forebears and our contemporaries and it should stimulate admiration for their achievements and personal qualities and the challenges that they have overcome.*

This, however, can only be achieved if the Corps uses, visits and exploits its Museum to the full.

<sup>17</sup>Only late in my research did I learn that such a workbook had actually been used for Phase 2 trainees in the mid-2000s, but the use of which ceased upon change of COs. I have unfortunately not been able to locate a copy of the workbook.

<sup>18</sup>A Corporal interviewed in Blandford.

<sup>19</sup>See footnote 8.

<sup>20</sup>This display area shows a Ferret Scout Car in UN livery with vehicles from the TA and Special Forces in the background.

<sup>21</sup>Minutes of 26th Meeting of R SIGNALS Museum Trustees (91211 dated 23 Oct 08).

## THE CORPS' ATTITUDE TOWARDS ITS MUSEUM

Members of the Corps have a complex relationship with the Museum. Many who were serving at the time of the "heavy handed fund-raising in the 1990s"<sup>22</sup> were undoubtedly scarred by the experience. It led to a "long period of invisibility and reluctance [on everyone's part] to involve the Corps in keeping the Museum contemporary."<sup>23</sup> As these personnel are now largely in positions of influence, either as senior officers or senior WOs, the long-term impact of this distancing cannot be ignored. It has resulted in parts of the Corps' history being under-represented within the collection; it may already be "too late to capture the full richness of the Corps' achievements in Afghanistan, Iraq, the Balkans and BAOR."<sup>24 25</sup>

More junior members of the Corps family have a much more relaxed attitude to the Museum. Most are proud of it, although a number felt that it was, in parts, staid and old-fashioned. They also appear to visit it more regularly than their more long-standing comrades. They value the ability to "pop in" whilst in Blandford, to see what has changed, to use it as a meeting place and enjoy its linkage both to the shop and cafe. They like to view the unit displays and are genuinely upset by those units which do not keep their displays up-to-date.



One of the new unit display cabinets in the Museum<sup>27</sup>

## CONCLUSION

*"Thank you for the heritage chat this evening – you really piqued my interest in setting the right foundations for our next generation."<sup>26</sup>*

When I commenced the research for this study, I assumed that the central heritage issue would be that of the Museum and its position within the Corps' hierarchy. That has proved not to be the case. Rather, at the heart of the issue is the Corps' currently unstructured and almost laissez-faire attitude to its own heritage. Members of the Corps yearn to have as much pride in their capbadge and draw strength and purpose from the Corps' family as other, perhaps more prominent, capbadges. This can only be achieved by a cultural change programme which is driven from the top but permeates every level and part of the Corps. It does not require a massive increase in

expenditure on heritage items or projects, but it does need the wholehearted commitment of individuals' time and effort. There is no better time to start the change than now, as we build up to our centenary.

<sup>22</sup> Museum Director e-mail dated 23 May 14.

<sup>23</sup> Ibid.

<sup>24</sup> Report to 3rd RSCC on 14 Nov 13 by Museum Chairman.

<sup>25</sup> As of May 13, the items within the Afghanistan display had been donated by Hesco, Steria, AMOT, DES, Paradigm, the School of Infantry, Rolatube and non-Corps personnel. Despite a commendably clear PD on what is expected of units deployed on operations, the only items donated by units upon return from the theatre were a 1864 Lee Enfield presented to 2 Sig Regt for hearts and minds work and a child's T shirt from 11 Lt Bde HQ and Sig Sqn. It is heartening that, since conducting interviews with deploying COs, a more mature attitude has been developed; but is it still too late for this theatre?

<sup>26</sup> A CO interviewed during the study.

<sup>27</sup> All units are now encouraged to contribute display cabinets, this one is maintained by 216 Sig Sqn.

## AFTERNOTE

The full study report, which also considers the Corps Collection, the location of the Museum, financial and governance issues and some views on the forthcoming centenary of the Corps, is available on request from Headquarters Royal Signals or from the RSI Secretary.

Subsequent to the report being written and being considered by the Corps Council, one of the current Colonel Commandants, Brigadier Ted Flint, has been appointed to be Colonel Commandant Heritage. Brigadier Flint has already started to get his teeth into many of the issues raised in David Hargreaves' report and has also been invited to write a short update for a future edition of the RSI Journal.

Hopefully this article about Heritage will prompt some of you to put pen to paper (or fingers to the keyboard) and write your own views on the Corps Heritage. All correspondence will be gratefully received and will be published in the next edition (subject to available space). Letters should be sent to The Editor, RSI Journal, HQ Royal Signals, Griffin House, Blandford Camp, Blandford Forum DT11 8RH or emails can be sent to [rsi@royalsignals.org](mailto:rsi@royalsignals.org).

Finally, the Director of the Royal Signals Museum, Nick Kendall-Carpenter, would welcome your active support in keeping the displays in the Museum up-to-date, relevant and interesting to the many visitors who pass through the doors each year. His contact details are on the following page.

# ROYAL SIGNALS MUSEUM

## NEW DEVELOPMENTS

The Museum has been working with serving soldiers to develop a series of new exhibitions and displays, including:



The Modern Signaller

1 Brigade and 11 Brigade

Displays of individual Regiments and Squadrons

The Roles of the Corps

The skills of its men and women.

Modern Comms Equipment

## CAN YOU HELP?

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# 27 COMMONWEALTH BRIGADE SIGNALS IN THE KOREAN WAR



*HQ 27 Commonwealth Brigade, Winter 1950*

## EDITOR'S NOTE

In August 1950, 27 Commonwealth Brigade landed in Pusan (now Busan) as part of the UN response to the invasion of South Korea by its neighbour in the North. The author's father in law, Brigadier (later Major General) Aubrey Coad commanded this force.

Lieutenant (now Major General (Retired)) Peter Baldwin was a subaltern in 27th Brigade's Signal Troop throughout its campaign. The above photograph shows 27 Commonwealth Brigade Signals deployed in Korea during the Winter of 1950/51; it was taken by a visiting Royal Australian Signal Corps Liaison Officer, Major Mason.

The author, Major John Maclean, served with the Corps from 1965 to 1984 during which time he undertook regimental and staff appointments in Germany, UK and Northern Ireland. He captained the White Helmets, enjoyed a two year posting to Singapore, sailed non-stop from London to Sydney and commanded 63 SAS Signal Squadron. He and Diana, Brig Coad's daughter, survived the disastrous 1979 Fastnet Race on the Army yacht that he skippered and he married her a year later!



## BACKGROUND

Last year my wife and I were accorded great hospitality by the Republic of Korea (ROK) when we toured the country. We were escorted to Panmunjom on the 38th Parallel that marks the focus of the continuing confrontation between North and South. As guests, we also attended the 60th year Remembrance Day Service of this uneasy armistice at the distinctive UN Memorial Cemetery just outside Busan.

I have since researched 27 Brigade's war diaries and my father-in-law's notes and reports. I have also met up

with Peter Baldwin who has described to me the stark realities of a war that took him, as a young commissioned officer, from a posting in sunny Hong Kong into a brutally punishing terrain during one of the coldest winters ever recorded for that part of the world.

Recently, the journalist Andrew Salmon has written a gripping book *Scorched Earth, Black Snow* (ISBN 978-1-84513-619-2). It describes the exploits of 27 Brigade's encounters and vivid recollections by the men who fought. They came from the Argyll and Sutherland Highlanders, 1st Middlesex (Diehards), 3rd Royal Australian Regiment,

the 2nd Canadian Light Infantry, the New Zealand Field Artillery and a splendid contribution from 60th Indian Field Ambulance. The Brigade had limited supporting arms and the staff in the headquarters often had to rely upon vague assurances from their parent US command for everything from rations to transport to air and fire support.

## 27 COMMONWEALTH BRIGADE

From the outset, 27 Brigade was in every sense a spearhead unit fighting the massed hordes of North Koreans. The Brigade helped to turn the tide, initially holding fast on the Naktong River then breaking out with surprising ferocity, despite many of its number being National Servicemen and Reservists.

Over the course of the first couple of months in theatre, the Brigade's reputation, for not only getting out of sticky situations but driving all before it, became a talking point throughout the UN Command. During that autumn, this Commonwealth force, and the US Divisions under which it was assigned, chased the North Koreans all the way towards the Yalu River in the far north, with 27 Brigade delivering all demanded of it.

29 Brigade was deployed some two and a half months later. This completed the full UK land contribution that continued after 27 Brigade was withdrawn in April 1951. Much came to be expected of it, perhaps reflecting the ability and cohesion achieved by 27 Brigade, often in the face of appalling adversity.

## NORTH AND SOUTH KOREA TODAY

A tinder-box relationship has existed between North Korea (officially DPRK, the Democratic People's Republic of Korea) and South Korea (ROK, the Republic of Korea) for more than 60 years since the armistice in 1953.

An assessment by Chatham House, the Royal Institute of International Affairs, indicates that one spark, one miscalculation or misinterpretation could plunge Korea back into the war torn chaos of yesteryear. With China, Japan, Russia and the US vying for influence in the region, the situation continues to remain a threat to world peace.

South Korea's once bare hills are reforested and high rise cities that have grown out of yesterday's rubble. ROK has established itself as one of the world's wealthiest nations being pre-eminent in shipbuilding, automobile manufacturing, electronics and technology of all types.

By contrast the DPRK is economically weak but it has a million servicemen under arms and if that is not enough, it also has five million reservists. Even with obsolete armour and artillery, weight of numbers could once again prove decisive if it were ever to decide to use military force in order to break out from its isolation.

Hopefully sanity will continue to prevail until an enduring resolution to the dispute can eventually be found. However, given that this is such an overt and

long-standing source of international friction, may we perhaps see history repeat itself with the North once again invading the South. Perhaps somewhere in the depths of Whitehall there is a dusty contingency plan for deploying a UK force there once again. If so, what encouragement might a 21st Century Signal Squadron take from the Commonwealth Brigade's signalling experience all those years ago?

Surprisingly little exists in archives of the Royal Signals Museum on the achievements of the Brigade Signal Troop under command of Capt (later Lt Col) Nigel Pidsley. Thankfully, Peter Baldwin has a clear recollection of some of the situations he and his men encountered in that far flung country and in a largely forgotten war which tested every man to his limit.

I have recorded these remembrances and added further background taken from Brigadier Coad's records which are filed in the Imperial War Museum.

## THE FIGHTING - AUGUST 1950 TO APRIL 1951

*"We disembarked from the aircraft carrier HMS Unicorn and the cruiser HMS Ceylon amongst colossal local excitement. The North Koreans were a mere 40 miles away and we were not a moment too late in re-establishing the bridgehead, with our infantry immediately thrown into patrolling a 12 mile gap that we were allocated.*

*Sadly, at an early stage we were rocked by the untimely death of our Brigade Major. He died in the cab of one of our Signal vehicles which crashed over the side of a steep hill. This was compounded a couple of weeks later in one of the worst friendly fire incidents, when the Argylls were napalmed by the US on Hill 282 with devastating losses.*

*Then in a daring operation, US forces attacked the occupied S Korean capital Seoul from the sea entering the Han River over its mud flats at high tide. This took the enemy completely by surprise. To consolidate this undoubted success, our whole brigade numbering some 2000 personnel was airlifted from Taegu, some 150 miles away to join up with the attacking force. This airlift was executed in the dark by just two staff officers, one American and one from the Brigade, and went without a hitch!*

*General McArthur, the Supreme Commander, was determined to continue the hot pursuit and we fatefully crossed the 38th Parallel into North Korean territory. We floundered about on the mountains beyond until given an axis of advance and ordered to capture a place called Sariwon 34 miles away. It was reputed to be the 'Aldershot of North Korea' and returning enemy stragglers were confused and shocked to find we had indeed overrun their principal military base. Our advance continued to the capital, Pyongyang and beyond. On one of the days we forged 42 miles ahead, killing 150 N Koreans and capturing another 2000.*

*Despite UN air superiority there were evening flights made on several occasions by a small N Korea plane no bigger than an Auster. The Brigade HQ initially accorded this intrepid pilot the title of "Bed-Check Charlie".*

However on one occasion he went too far, tipping a jerrycan full of explosives over the Australian battalion who were furious and let off a right royal firework display. The same chap came on and machine gunned our HQ leaning out of his cockpit with a Burp gun. This gave rise to an Army Intelligence Report saying we had been strafed by jet fighters!

Eventually, after eight weeks fighting and advancing to contact, many thought that North Korean capitulation was imminent and dared ponder on the possibility of being home-by-Christmas. Cruelly this was not to be. China awoke with ferociousness and came to their rescue. Chairman Mao only recently inaugurated, directed his 4th Army of three hundred thousand trained communists soldiers to take on the might of the US 8th Army that included 27 Commonwealth Brigade and fighting contingents from twelve other member nations of the UN with another five providing medical personnel.



HQ 27 Brigade parade for Brig Aubrey Coad's award of US Legion of Merit for outstanding command. The soldiers on the parade are from the Brigade HQ Signal Troop; the OC, Capt Nigel Pidsley, on the extreme left with LCpl Cecil, Cpl Loudoun, Cpl Norman and Cpl Osborne in the front rank

At this time, our Brigade was consolidating around an isolated position in the vicinity of a town called Taechon. We saw our first dead Chinese there following our first encounter. The only way we could distinguish them was that they wore rather attractive fur boots, and those soldiers whose feet were small enough took full benefit!

We considered the Chinese troops to be first class. They had no fear of death. When they dug in, they had to be winkled out with a bayonet or with a Bren gun squirted from five yards into their dug-outs. They were fit and extremely well trained in night attacks.

The first Chinese offensive petered out but on 25th November they launched their second on a much grander scale. From our position in the far North West of the country, we then began a series of withdrawals. We had

led the UN out of Pyongyang on the way up and we were somewhat proud to be the last back, as we engaged our pursuers in a relentless series of rear-guard actions.

And so it was back to the 38th parallel and we were to be pushed even further southwards as winter set in with a vengeance. The wind changed to north-east and we had 25° of frost. This was nothing to what we experienced a few weeks later when minus 45° was once recorded. The men had to dry their socks twice a day to avoid frostbite and socks could not be removed unless the owner was sitting in front of a fire. Water took 1½ hours to boil and a tin of meat, just to get warm, had to go into boiling water for two hours.

General Ridgeway had taken over the Eighth Army and ordered that we were to hold. However on 3 January 1951, the Chinese renewed their attacks and by midday things were not looking good. He ordered our brigade to cover the exit of two US Divisions which we duly achieved and extricated ourselves intact over the river South of Seoul. It was a close run thing.

For the remainder of January and throughout February we were harassed by enemy attacks of varying strength and cunning. We were in mountainous country that was without roads and where mules would have been a great benefit for moving our stores around. As it was, our battalions had about 250 South Korean porters working from bases set up where jeeps could not get any farther.

We fought and refought the various incursions summarized by Nigel Pidsley as 'the fluctuating battle phase'. By now, all ranks in the Brigade were extremely tired and on 13 March 1951 we were relieved and went into the Corps reserve. Here, for only the second time in the campaign, were we able to enjoy the facilities offered by a mobile bath unit and take off our boots at night.

However we left 29 Brigade in the thick of it when the Chinese 1951 spring offensive began. The enemy onslaught over the Imjin River began in late April and was directed at retaking Seoul. It failed but not before the Glosters on Hill 235 had fought to the last man, being killed or captured in the process.

We embarked for Hong Kong, a grimly different body of men from the relatively carefree fellows that had stepped ashore nearly nine months previously."

## 27 COMMONWEALTH BRIGADE SIGNALS

So what of Peter Baldwin's reflections on the lessons that were learnt? "Throughout the whole campaign, our liaison with the US Signal Corps was extremely good. They were always most helpful and friendly even with provision of cable that was very precious.

*Their method of operation was quite different from ours. In his operational report, our OC notes that to 'dove-tail' with them, there was much to be learnt in order to work closely and effectively.*

*For instance, we needed to get to grips with US Signal Operation instructions (SOI) and Standing Signal Instructions (SSI) and their techniques of issuing amendments. The US voice (and in those days CW) procedure was quite different from ours. Also their routing of messages left us with cause for concern. We occasionally found that their complicated use of routing indicators and address groups could occasionally bounce our messages anywhere except to the intended recipients and often back to ourselves again!*

*All the non-signals functions including cooks, clerks and defence platoon that existed pre-integration were overseen by a vexatious infantry officer on the Brigade HQ staff. Several years later in Borneo as OC 5 Inf Bde & Sig Sqn, I successfully trialled 'integration' and we showed that we could clearly cope with all non-signalling matters.*

*Our Brigade Commander went somewhere every day because he was rarely in our HQ. Regrettably, he was frequently summoned by his US superior to be given another task involving change of location. This drove us quite crazy, sometimes moving three times in a day, with a possible change of superior HQ and the need to reorganize various forms of radio contact.*

*We found that motor-cycles in the combat area had limited advantage. They were not weatherproof and could only carry limited amounts of equipment. We conveniently lost them. We received the first 12 military Land Rovers off the UK production line that had also been 'winterized'. The first thing we did was to put sandbags into the flimsy foot spaces as a precautionary measure.*

*Our work horse radios were the 19 sets in the 2 – 8 MHz range and 31 sets were used at company and platoon level. A 53 set which arrived from Hong Kong in early October 1950 worked the administrative rear link. During the advance to the Yalu, this set remained at B Echelon and was a continual worry; almost monopolizing the Troop Sergeant and one vehicle mechanic to keep it on the air. Later on, we delighted to have NZ Base Signal Troop comprising one officer and 20 men who took over all the administrative communication and contributed immensely to the signal efficiency of the Brigade.*

*Once we were hauled up in person by an agitated US Army Major who arrived to tell us that our command net had committed 136 procedural errors in one hour. Somewhat nonplussed, our OC said "Is that a record?"*

*One day, General Ridgeway arrived in his helicopter. He was a most imposing man with grenades hanging from his webbing. We often wondered if they were primed! He showed particular man-management skills when L/Cpl Cecil, our electrician, helped the pilot to start his engines. The General got out and shook him by the hand.*

*Our linemen were superb, achieving those vital connections in near impossible conditions of terrain, weather and enemy patrols. Cpl Prince was typical and, after all the dangers he faced on those hillsides, it was desperately sad that he later lost his life in a flash flood whilst jointing a cable in or near one of Hong Kong's monsoon drains.*

*I have photographs to show what a scruffy lot we looked. Most of us acquired American clothing and because of the sub zero temperatures, it was deemed acceptable to wear it. After all, we got the job done!"*

*Brig Coad's daughter, Diana Maclean at the UN Memorial Cemetery, Busan*



# LEO: THE LYONS ELECTRONIC OFFICE

## The Story of the First Business Computer

By Lieutenant Colonel (Retired) Neville Lyons

*LEO 1 at Cadby Hall, Kensington, circa 1952*

### EDITOR'S NOTE

Neville Lyons served in the Corps for 31 years, taking retirement in 1977. As a second career, he became a Director of the UK Electronic Components Industry Federation and Secretary-General of its European equivalent, finally retiring in 1997.

The author's grandfather was a cousin of Sir Joseph Lyons (always known as Joe), co-founder of the giant food company J Lyons & Co. This family connection prompted the author to carry out extensive research into that company's wide-ranging history of innovation and trend-setting; he now gives a variety of talks on the subject.

The in-house development and production of the LEO Computer illustrates an extraordinary achievement by the company. The Science Museum recognises this, by displaying one of the few remaining parts of the original LEO in its new Information Age Gallery, to be opened this autumn.



### THE COMPANY BACKGROUND

For much of the 20<sup>th</sup> Century, J Lyons & Co reigned supreme throughout England for its public catering and for its great range of own brand food products. The company was founded in 1887 to improve the quality and pricing of the inferior catering at the national exhibition halls. It was later welcomed by the general public through the

famous Teashops, flourishing in London and other major towns and cities across the country. The huge Corner House Restaurants, with their varied menus, non-stop live music and attractively efficient 'Nippy' waitresses, became popular as venues for family days out in London. Tea, Swiss Rolls and Ice Cream were among many of the high quality Lyons products on the market.

Anyone who lived during that era will doubtless treasure such fond memories. But they will probably be less aware of the organisational initiatives that helped J Lyons & Co to retain its predominance in the field of catering and food products for close on 100 years.

## **THE NEEDS FOR AUTOMATION**

By 1939 Lyons employed a total of 33,000 staff across the country. 1500 were involved in accountancy and other statistical work; an office block at their Cadby Hall, Kensington headquarters had been specifically built to accommodate them. Accounting and clerical efficiency had been a concern of management from the outset. As early as 1910, the company were using calculating machines to assess, from waitresses' bills, the average morning and afternoon spend by customers at each of its teashops!

Prior to the Second World War, the company were ahead of their time in their improvements to management information and clerical procedures, employing highly qualified graduates to mastermind these roles. The leader in this field was John Simmons, who initiated a Systems Research Office to focus on creative organisation and methods. The object was not only to give continuing improvements in office efficiency, but also to provide information to management about profit variations affecting the business. This forward thinking was to prove highly advantageous in the years ahead when electronic automation came to the fore.

Indeed, after the war the sharp rise in office costs made the company realise that some form of automation was essential if these costs were to be brought under control. In 1947, the Lyons Board agreed to Simmons's proposal to send to America two senior Managers with wide experience of clerical procedures, to study the current research into electronic computers. During their stay in the USA, they were put in touch with those who were doing serious work on electronic computing, but this aimed mainly at academic usage. They also heard, much to their surprise, of a computer project that was currently under way in England at Cambridge University!

On their return, the Managers made a point of investigating the Cambridge project before reporting back to the Lyons Board. The project, known as EDSAC, was designed for academic calculations and quite inappropriate for office work, but they at once appreciated the potential of the new technology, which became a significant aspect of their report. They stressed that electronic machines would hold the key to office efficiency and they put forward three options for the Board to consider: either to persuade Cambridge to follow a commercial computing path, or to await machines as they became available from manufacturers, or to develop a machine in-house. They estimated this latter option would cost £100,000, but they claimed it would show a saving in office expenditure of £50,000 per year.

## **THE PROJECT GOES AHEAD**

The Board felt the company's influence on machine design was essential if the problems of commercial clerical automation were to be solved successfully. So, they agreed on a middle course: to undertake their own in-house development with the co-operation and technical advice of Cambridge University. Lyons would donate £3,000 (£60,000 in today's money) to Cambridge, towards EDSAC in return for technical advice on their company project. The Cambridge personalities were understandably apprehensive but agreed to go along with the idea.

Lyons had never employed an electronics engineer. There was a strong electrical department, but its work was largely devoted to providing and regulating the company's power supplies. So they advertised for an electronics engineer to lead their project. This was quickly answered by John Pinkerton, who had recently obtained his Ph D at Cambridge and, while there, had learned of this extraordinary project which Lyons were planning. He was accepted as the right man for the job and started work in January 1949.

Pinkerton was to be supported by a small team for both hardware and software design, although this terminology was not yet in use. Some were already Lyons employees. Among these was one Derek Hemy who had had wartime service as a Royal Signals officer in SIGINT and was to become prominent in program development. Another, Ernest Lenaerts, had served with the RAF on radio countermeasures and was seconded by Simmons to the Cambridge team to gain practical experience of the new electronic technology. He not only learned how EDSAC was constructed but was also able to make a positive contribution to unit circuit design.

The computer project team faced an inevitable enigma: On the one hand, thought had to be given to clerical uses to enable them to decide how best to build the machine; on the other, some definition was needed of how the machine was to work in order to determine the best approach to clerical applications. Hence, it was recognised from the outset that engineering and programming teams had to progress in parallel, complementing each other's ideas.

## **THE BIRTH OF LEO**

During the next three years this technically qualified but inexperienced team designed and built a working model for which Simmons chose the name of LEO, standing for Lyons Electronic Office. The design thinking was initially influenced by EDSAC. A large area at the Cadby Hall headquarters was vacated and the computer gradually assembled there, piece by piece. During the process carpenters, plumbers, sheet metal and engineer staff toiled in a well organised undertaking on the huge assembly of valves and other large components, together with wiring, ducting and power supplies.

Many difficulties had to be overcome. For example, the first problem tackled was pulse generation and pulse

control through the mercury delay tubes, chosen for memory storage. Considerable experimentation was needed and specialised test equipment was not readily available on the limited budget assigned to the project. This led Lenaerts to design and build an oscilloscope, based on one already designed by the Cambridge researchers. For this purpose, he had to resort to a selection of parts, including ex-War Department radar tubes from second-hand dealers. Other problems involved finding the most suitable types of input and output devices, for which trials were conducted with punched cards and paper tape before achieving the most satisfactory method, using magnetic tape.

The logical design of LEO closely resembled that of EDSAC, but it had twice the memory size, with 64 mercury delay tubes, each 5ft 4" in length with a 1" diameter bore. LEO differed in construction, with modular design to enable rapid replacement of defective units. More than 6000 thermionic valves were used, many of the type used in television and radio at that time. The entire machine occupied 5,000 square feet, with air-conditioning.

The computer was controlled from a panel, with several oscilloscopes set up to monitor contents of the storage area. A speaker was installed in the machine and programmers could hear the sounds generated as LEO performed calculations. They became so accustomed to certain frequency variations, that they could detect something was wrong with a program by the sounds produced through the speaker. During the very infrequent periods of relaxation, the team used this speaker arrangement to generate some of the first "computer music."

## **LEO BECOMES OPERATIONAL**

The first operational program, covering Bakery Output Valuation, was run on LEO in September 1951. There were initial handicaps due mainly to failures of thermionic valves and dry joints. Pinkerton's team worked hard on improving hardware, so that by November that year the machine was sufficiently reliable to calculate the weekly production value of bread and other bakery goods such as Swiss Rolls, Kup Kakes and Individual Fruit Pies. This breakthrough established LEO as the first computer in the world to run a routine office job.

However, payroll automation was one of the main objectives. Between 1951 and 1953 further work took place on the machine's reliability, bearing in mind that the weekly staff payroll required strictly accurate and timely performance. This milestone came on Christmas Eve 1953. The results were astounding. The task of calculating employees' pay, until now, had taken an experienced clerk 8 minutes per employee. LEO had done the job in 1.5 seconds.

## **BUREAU ACTIVITY BEGINS**

News of this 'electronic brain' spread throughout many industries and government departments and was received enthusiastically. Lyons soon organised a bureau, commissioned to perform a range of tasks on LEO. In

fact, LEO undertook the first recorded bureau job on any computer in the UK; quite remarkable considering this was a prototype model! This task was on behalf of the Ordnance Board who were given facilities for carrying out ballistic computations. The work was enshrouded in secrecy at the time, but it was later revealed that the calculations performed by the programming team were associated with the trajectories of the Black Knight missiles.

Another large and more complex calculation job for the defence industries was undertaken on behalf of De Havilland and later revealed to be for simulations of the guidance system for the Blue Streak rocket. Derek Hemy worked on the project and, despite his security clearance due to his SIGINT background, he did not become aware of its purpose until after he had left Lyons!

In 1955, after the Chancellor's budget speech, a courier delivered to Cadby Hall the parameters of the new taxation. All other work had to be taken off the machine while LEO processed new tax tables overnight for delivery to Inland Revenue the following morning, a process that had previously taken weeks by hand. For the British Transport Commission, LEO worked out the distances between each of the 7000 rail stations, for the purpose of rationalising fares. This was the longest programme and had to be performed over many evenings covering 18 months when LEO was not otherwise engaged. Had the job been undertaken manually, it was estimated that 50 clerks would have taken 5 years to complete it!

## **LEO II SUCCESSION**

The company had always planned for more than one machine. The success of the LEO prototype, which became known as LEO I, was now well recognised, so Pinkerton submitted in May 1954 outline proposals for the building of LEO II and the Board soon gave approval. The development of LEO II followed essentially the same design methods as had been used for LEO I, but several changes were made in the light of experience. These included improving the store cycle speed to nearly four times that of LEO I, by decreasing the dimensions of the mercury delay tubes. In the later models of LEO II, storage core architecture was improved by use of ferrite core storage; and transistors were used for the first time in some of the circuitry.

One of the more novel features of Leo II at this time, compared with machines such as EDSAC, was the provision of multiple input and output channels. Hence, the system could simultaneously read from more than one input device, send output to more than one output peripheral and carry out calculations. In a payroll, for example, the computer would be printing the payslip of employee 1, while calculating the pay of employee 2 and reading the data for employee 3.

Lyons had their first use of LEO II in July 1957 when their model was installed ironically in the very building that had been built at Cadby Hall some twenty years earlier to accommodate the increasing number of clerical staff!

## IMPROVEMENTS TO BUSINESS EFFICIENCY

The Lyons management were interested in putting LEO to work on applications that would contribute directly to improving the efficiency with which the business could be run. So, for the next main application after payroll, they selected the processing of teashop orders. Up to now, each teashop (of which there were more than 200) would submit its orders by telephone to Cadby Hall every morning for delivery the next day, based largely upon the previous day's sales. The system had been carefully honed over the years and proved efficient within the limitations of the existing technology. But, it was not, for example, possible for management to detect and report speedily any significant changes in ordering patterns or trends in trading, nor was there information available to enable the performance of shops to be monitored.

Some of these limitations could now be resolved by computer application, effectively streamlining the system. Each teashop would compile sets of monthly standing orders for each product and these would be stored as data on the computer. The shop manageress would supply daily changes in these standing orders by phone call to the computer operators at selected times each afternoon. These would be punched directly onto cards and their accuracy would be checked back to the manageresses. Such changes would then be processed against the standing orders to produce the loading and despatch schedules needed to supply the shops in time for next morning's trade. For the benefit of management, it was now possible to provide timely reports based on the standing orders, identifying significant changes in the trading patterns to be expected in the next month.

This application was to hail the first pseudo on-line commercial system to be run on a computer. Moreover, LEO was now being used as a management tool, not just a clerical processor.

## LEO COMPUTERS LTD

By the mid 1950's, the great interest shown by large well-known companies in the LEO project led the Lyons Board, at the initiative of John Simmons, to consider maximising its commercial possibilities. They decided to form a subsidiary company to manufacture, sell and lease electronic computers and to provide other associated services. This was a major departure from their core business of catering and food manufacture, but a natural decision for the company. They were experienced in diversifying into other activities such as vehicle assembly, carton manufacture, printing and laundry to avoid being dependent on others for their supplies. Their decision to create a computer manufacturing facility was an opportunity to exploit their unique office expertise and to benefit financially.

Thus Leo Computers Ltd was born in November 1954, the event receiving wide newspaper publicity. The Lyons staff who had worked on LEO were formally transferred to this new company, now to be based at Minerva Road, Acton. The increasing volume of external interest in LEO gave rise to the need for considerable staffing of engineers, physicists and mathematicians. LEO Computers Ltd instituted an intense recruiting programme and full-time training courses.

## LEOII BUREAU APPLICATIONS AND SALES

The bureau service that had initially operated using the Cadby Hall computer was transferred to LEO Computers Ltd, who installed for this purpose a LEO II machine in offices they had acquired above Whiteley's Department Store, Queensway. One notable bureau job run on LEO II, later the subject of a documentary film, was the weekly payroll for the Ford Motor Company's 21,000 employees at Dagenham, Essex. By 1958, LEO was not only processing Lyons own payroll, but also those of others, including Ford, Kodak and Tate & Lyle.



*LEO II at WD & HO Wills, circa 1956*

In February 1956, a LEO II model became the first sale of a commercial computer in the UK. The purchaser was the cigarette manufacturer, WD & HO Wills. This was probably influenced by the fact that the Lyons co-founders, Salmon & Gluckstein, had a tobacco industry background and some of the present Lyons directors had continuing business connections. But relationships with other organisations that purchased LEO II between 1957 and 1961 were less obvious, though no less interesting. These included British Oxygen, Standard Motors and Ministry of Pensions as well as Ford Motors who had already experienced the bureau activity.

## SO NOW TO LEO III

By the early 1960's, the J Lyons company had ample proof not only of LEO's ability to relieve the repetitive and uneconomic nature of clerical work, but also its value in assisting management decision-making, through the success of the teashop and stock analysis jobs. The company had by now used LEO I continuously since 1951. They already had LEO II in use since 1957 and this would become fully loaded when LEO I was retired.

By 1962, Leo Computers Ltd had completed development of its next generation computer, LEO III. It was one hundred times faster than LEO I and for the first time, an operating system that became known as 'the Master Routine' was used to control its more sophisticated features. Well ahead of its time, it could claim to be the only truly multi-programming computer commercially available, incorporating many new features, some of which would be adopted eventually throughout the computer industry.

LEO III was fully transistorised (using over 100,000 transistors and semiconductor diodes) and capable of undertaking up to 13 jobs simultaneously. A new program language was devised for use with LEO III, to express in simple terms the procedures to be carried out to do any job. This new Clear Language for Expressing Orders (CLEO) brought about a dramatic improvement in program development since it needed less skill in its use.

It was now for the company to decide on how best to employ LEO III to extend the automation of their business applications. A plan was agreed involving several new clerical applications relating to the Tea, Bakery and Ice Cream Divisions, with substantial manpower savings. The Lyons Board agreed to place an order for a LEO III and this began operation at Cadby Hall in 1963.

Leo Computers Ltd had already delivered the first LEO III machine in April 1962 to Whiteley's for the bureau activity, where later that year it performed its first bureau job for the textile company, Courtaulds.



*LEO III at Cadby Hall, circa 1963*

## LEO III HITS THE MARKETS, HOME AND ABROAD

While sales of LEO II outside the Lyons group had totalled 9 models, sales of LEO III reached 58 models. The diverse nature of the purchasing organisations is quite remarkable. They included Dunlop Rubber, BOC, Cerebos, HJ Heinz, Ever Ready, Kayser-Bondor, Royal Bank of Scotland, South Western Gas Board, Tote Investors, Board of Trade, Customs & Excise, Inland Revenue, the GPO and HM Dockyards.

The very first overseas sale of LEO III was an adventurous step forward. It took place in May 1962 as an export to Johannesburg. Leo Computers Ltd had set their sights on the S African and Australian markets as showing the most export promise. In Johannesburg, they set up an office in partnership with the Rand Mining Group, with a view to processing their administrative functions and becoming a marketing agency for LEO in that part of the world. The LEO III model was air freighted to Johannesburg, where two experienced engineers who had worked for LEO Computers since 1957 took charge of the installation process. Eventually, LEO not only took on all the Rand Group work but also the bureau functions for other mining groups, who between them owned more than 50 mines.

LEO III was also exported to three Australian companies including the Shell Group, who purchased two of the machines. Sir Samuel Salmon, the Managing Director of J Lyons & Co, handed over the first model at Shell's Melbourne offices. After the handover, the machine played a few bars of Waltzing Matilda and then worked on four programmes simultaneously! (LEO's musical prowess had previously been demonstrated during a visit of the Duke of Edinburgh to the Acton factory in 1960. LEO had been computing the payroll for Army and Air Force officers. Just as the Duke was departing, it burst into the Sailors' Hornpipe!)

Three models of LEO III were exported to Czechoslovakia, while still behind the Iron Curtain. The purchasers were State Railways, a Steelworks and the office of Social Security. These computers were used for more than 10 years and were highly acclaimed for their reliability. The Czech computer engineers had been trained by Leo Computers Ltd and were capable of dealing with any eventuality.

The largest order for LEO III came from the GPO (forerunners of British Telecoms). They eventually had fourteen models, which undertook such tasks as telephone billing in the National Data Processing Service Centres across the country. Even after production stopped in 1968, it had to be re-started to satisfy the GPO's urgent needs. Seven LEO III's remained in service with GPO until 1981. HM Dockyards were also an important purchaser of LEO III, with models installed at Portsmouth, Chatham, Devonport and Rosyth.

## SET-BACKS, COMPETITIONS AND MERGERS

But despite the success of LEO, the parent company were now finding it increasingly difficult to fund research and

development of LEO Computers Ltd. Revenues from the sales were barely covering production and marketing costs. Any small profits were inadequate for the continuing research budget.

When Leo Computers Ltd was launched in 1954, only two other UK computer manufacturers, Ferranti and Elliot Brothers were considered to be possible competitors. But their products were aimed towards the scientific market. By the early 1960's the number of other computer manufacturers in the UK had increased quite dramatically, with companies such as EMI, English Electric, Standard Telephones and Cables, ICT, Burroughs, in competition. Moreover, the USA had made great advances in computer technology, with R & D budgets far in excess of those in the UK, resulting in products that were well engineered, packaged, marketed and advertised. The Americans' strong domestic base enabled them to enter the UK market with ease, their systems being technically superior and often less expensive. IBM already had a factory at Greenock and they were to become predominant in the UK industrial market in the next few years.

By 1962, the Lyons Board were concentrating on other business plans more in keeping with their food and catering businesses, which had been suffering considerable downturns in profit. They also recognised that they had underestimated the pitfalls of becoming involved in high technology products and were now unable to compete on equal terms with the electronic giants. Hence, they realised that Leo Computers Ltd could no longer survive independently. Negotiations were soon put in hand for a merger with English Electric and this took effect in early 1963. But further pressure led to more restructuring. English Electric Leo Computers was soon to become English Electric Leo Marconi and eventually merge in 1968 with International Computers and Tabulators (ICT) and other electronics companies to form International Computers Ltd (ICL).

Many of the LEO III models mentioned earlier were made after the mergers in the 1960's and continued in use into the next decade.

## END OF AN ERA

LEO 1, the prototype, had operated for the parent company at Cadby Hall from 1951 until 6pm on Monday 4th January 1965 when, after 14 years of continuous service, the computer was quietly closed down. The LEO III model which had been installed at Cadby Hall in 1963 remained in operation until 1972, when it was replaced somewhat ironically by an IBM model.

For Lyons, the mergers marked the end of an era of technological achievement, which had played a direct and important role in the development of the UK's commercial computer industry. Nobody could have predicted the rapid growth and the increments of computer power that would follow.

## LEO COMPUTERS AND THE SCIENCE MUSEUM

The LEO era was looked upon with much pride and affection by all who were part of it. This feeling still remains, with continuity provided by the Leo Computers Society, whose members have all been employed on LEO at some stage. Periodical reunions take place, including a celebration of the 60th anniversary of the birth of LEO 1, held in November 2011 at the Science Museum, London.

The Science Museum's new Information Age Gallery, due to open in October 2014, will include display of one of the few remaining parts of the LEO 1, a mercury delay tube chassis, together with an 'interactive audio experience', telling the story of the world's first computer used for business applications.

## EPITAPH

It seems extraordinary that a company which dominated the national food and catering scene for 100 years could also figure amongst the pioneers of computing. The enterprise and initiative of J Lyons & Co led to the use of the computer as an effective management tool not only for their company but for British business in general. A place in the Guinness World Records is a fitting epitaph.



## Acknowledgements

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Peter J Bird: LEO - The First Business Computer. Wokingham: Hasler Publishing Co. ISBN 0-9521651-0-4

Georgina Ferry: A Computer called LEO. Harper Perennial. ISBN 978-1-84115-186-1

J Lyons & Co website: [www.kzwp.org/lyons](http://www.kzwp.org/lyons)

Leo Computers Society website: [www.leo-computers.org.uk](http://www.leo-computers.org.uk)



# OP HERRICK: A SNAPSHOT IN HISTORY

*The Bastion Wall at the National Memorial Arboretum, unveiled 11 June 2015*

## EDITOR'S NOTE

2014 saw the end of combat operations in Afghanistan and the withdrawal of the majority of UK Forces; it was a significant milestone in the history of the British Army and marked another step along the road towards the return to a 'contingency operations' posture.

The following eleven pages contain three articles written in late 2012 which provide a snapshot of how the provision of communications and information services have evolved in the latter stages of Op HERRICK; they are an insight into the complexity and sophistication of modern military capabilities.

We expect a great deal from the officers and soldiers of the Royal Signals to whom the country entrusts the provision of its military command, control, communications and information networks. They have to be resourceful, intelligent, quick-thinking and hard-working in order to meet the demands of commanders, the staff and the supported units; but above all they have to be soldiers first. We should not forget the nine members of the Corps who made the ultimate sacrifice whilst serving in Afghanistan; their names are recorded below, alongside a photograph of the inscription on the Memorial Wall in Camp Bastion before it was dismantled and returned to UK for the rededication service at the National Memorial Arboretum on 11 June 2015.

	Cpl Mark Cridge	7 Sig Regt	22 March 2006
	Sgt Peter Thorpe	14 Sig Regt (EW)	1 July 2006
	LCpl Jonathan Hetherington	14 Sig Regt (EW)	22 August 2006
	Sgt Barry Keen	14 Sig Regt (EW)	28 July 2007
	Cpl Sean Reeve		17 June 2008
	Sig Wayne Bland	16 Sig Regt	11 August 2008
	Cpl Steven Dunn	216 (Para) Sig Sqn	21 December 2010
	Sig Ian Sartorius-Jones	20 Armd Bde HQ & Sig Sqn (200 Sig Sqn)	24 January 2012
	WO2 Pez Thomas	37 Sig Regt	1 July 2012

# 200 DAYS OF HELMAND

By Captain (now Major) Richard Day

At the time of writing this article in 2012, the then Captain Day was serving as the Operations Officer of 12 Mechanized Brigade Headquarters and Signal Squadron (228).

He was commissioned into the Royal Signals in 2006 and had served as a troop commander in 14 Signal Regiment (Electronic Warfare) and as second-in-command of the Electronic Counter-Measures (Force Protection) Squadron prior to arriving in 228 Signal Squadron in 2010. Major Day is currently a student on the Initial Command & Staff Course at the Defence Academy in Shrivenham.



## INTRODUCTION

228 Sig Sqn deployed on Operation HERRICK 16 (H16) in March 2012, succeeding 200 Sig Sqn as the Task Force Helmand (TFH) Signal Squadron. During Ex PASHTUN HORIZON we learned that the development of the Afghan National Security Forces (ANSF) would be our main effort, closely followed by spurring on the evolution of TFH from a Counter Insurgency (COIN) to a Security Force Assistance (SFA) posture. We supported the development of the ANSF through a generous allocation of Rear Link Detachments (RLD) and close liaison with our higher HQ, Regional Command (South West) (RC(SW)). The transition to SFA brought with it a number of J6 consequences which had to be mitigated, notably a thinning of the tactical data network through base closure, a changing TASKORG and laydown and the requirement for cross boundary flexibility. These requirements were developed into our five Lines of Operation (LoO); the exploitation of BCiP 5.4, the development of cross boundary capability, ANSF development, redeployment and other projects. It was these LoO that shaped our efforts for the tour.

RC(SW) C-6 were based around the 1st Marine Expeditionary Force (1MEF) Forward HQ which was largely manned by US Marine Corps (USMC) personnel, however, there were a number of coalition posts. In the case of C-6 there were two Royal Signals personnel, Maj Bryan Alderson (the ANSF Plans Offr) and SSgt (YofS) Sim Chochangi (the UK Spectrum Manager). Our J6



*Ops room work, all part of the norm*

## RELATIONSHIPS WITH EXTERNAL ORGANISATIONS

Throughout the tour we had dealings with two primary external organisations; Joint Force Communications Information Systems (Afghanistan) (JFCIS(A))<sup>1</sup> and RC(SW). The relationship with JFCIS(A) was key and developing this was a vital part of MST. Much of the success of our tour can be attributed to a firm working relationship with JFCIS(A) who were highly tuned to the TFH HQ battle rhythm and rallied to assist when we had exhausted our expertise. The success of Base Realignment and Closure (BRAC) from a J6 perspective can be attributed to combined and, most importantly, coordinated planning and is a testament to this highly capable and professional organisation. It is safe to say that in the run up to and throughout H16 our two organisations have been firm friends.

interaction with RC(SW) was limited to the OC (higher level planning and coordination), SO3 ANSF S6 Dev (S6 capability development) and Yeoman of Signals (frequency management). Despite being focussed on ANSF plans the willingness of Maj Alderson to unofficially double as a UK Liason Officer greatly smoothed the process of interaction with RC(SW) throughout the tour and to him we were very grateful.

## THE EXPLOITATION OF BCiP 5.4

Bowman as a communications system is good and works well when operated correctly. The release of BCiP 5.4 has gone a long way to eradicating many of its 4f gremlins; however, confidence in its capabilities varied depending on the unit. The Bde's experiences in Canada and Kenya meant that it entered into MST 'Bowman confident' and this was reinforced by two comms savvy Bde Comds. 228

<sup>1</sup>For the majority of Op HERRICK 16 this was 16 Signal Regiment.



*Configuring TacSat*

Sig Sqn made exploiting Bowman a priority and utilising the expertise of the TFH YofS (WO2 (YofS) Shaw) we focussed our efforts on three areas; enhancement of the TFH VHF Comd Net, enhancing the resilience of our High Capacity Data Radio (HCDR) net and the rollout of Tactical Network Gateway (TNG) and Bowman Interoperability Tactical Server (BITS) to Combined Force (CF) HQs.

On arrival in Th the VHF net was not all informed and as such took a back seat to TacSat. Our intent was to change the TFH Primary net to VHF and to enable this we quickly deployed three new Radio Rebroadcasts (RRB) to make the net all informed across the AO. A fourth standby RRB was subsequently deployed to add resilience. To retain flexibility during TF level ops two air portable RRB were built, allowing rapid deployment by Support Helicopter (SH) anywhere in the AO. Critically this enabled the reinforcement of the net in targeted areas during periods of heightened activity. All of these RRB installations were built using existing resources, no additional resource bids (ARBs) were submitted.

The next challenge was to maximise its usage. LFSO 2194<sup>2</sup> details the process and restrictions for loaning Bowman to other nations and it allowed us to give this equipment to both US and Danish (DK) forces, therefore enabling coalition C2 on the TFH VHF Comd net. Bowman regrouping nets were also used extensively to allow the increasing amount of cross boundary movement by advisory teams; a natural fallout of the evolution of the force from COIN to a SFA.

With VHF sorted we turned our attentions to enhancing the TFH Data net. HCDR resilience is all about having as many Points of Presence (POP) as possible. BRAC was reducing the number of bases and therefore

the number of PoP whilst concequently increasing the distances between antennas (Ae). Through careful liaison with TFH BRAC planners and detailed Path Profile Analysis (PPA), ten enduring locations were identified and, through JFCIS(A), a number of 30m masts<sup>3</sup> were procured. This then allowed us to considerably elevate HCDR Ae in these locations, substantially increasing their transmission range. This work on HCDR resilience was supported in depth by the deployment of 41 Lightweight Bowman Data Nodes (LBDN)<sup>4</sup> across the TFH AO. The project was designed to bring the benefits of networked TiGR<sup>5</sup> down to Check Point level, where the Bowman infra does not normally support HCDR. Deployment is now complete; all that remains is for future iterations of Op HERRICK to exploit this capability.

The deployment of TNG and BITS into CF HQ locations was successful; however, due to a lack of training and exposure on the equipment during MST, units lacked the confidence to fully exploit it. The capability provides three functionalities, Chat, Operational Staff Work (OSW) and Shared Situational Awareness (SSA). Chat was fully embraced with SSA receiving some attention, however, OSW received little attention due to the accessibility of OVERTASK at Sub Unit level.

## **THE DEVELOPMENT OF CROSS BOUNDARY CAPABILITY**

Despite being the TFH alternate means, the existence of coalition crypto made TacSat the preferable means of communication during multi-national operations, especially when outside the Bowman VHF footprint. During H16 TFH demonstrated the effectiveness of using TacSat to enable C2 over UK, DK and US forces deployed on a specific operation. In addition to this the procurement of 15 more KY99A equipments allowed Bowman to interoperate with AN/PRC 117f, albeit only in the voice mode.

## **DEVELOPMENT OF THE AFGHAN NATIONAL SECURITY FORCES (ANSF)**

ANSF comms capability continues to develop at pace. On deployment we decided our focus should be on training the ANSF rather than developing their capability, which sat with RC(SW), however, their cog turns slowly and so lines of communication were maintained to influence as required. Early in the tour much work was done to understand ANSF information flows and subsequently their Command and Control (C2) structures. This was a necessary precursor

<sup>3</sup> Eight Clark WT8 masts were procured; at two sites existing infra was used to elevate the Ae..

<sup>4</sup> An HCDR radio, Lambda power supply and antenna system, all powered by an LFG.

<sup>5</sup> Tactical Ground Reporting – a situational awareness tool that facilitates the planning and reporting of patrols.

<sup>2</sup> The Security of Bowman Equipment.



*Mentoring the Afghan National Police (ANP)*

to delivering effective and targeted training. Both the Afghan National Army (ANA) and the Afghan Uniformed Police (AUP) have good quality radios (the ANA use Datron, the ANP Motorola and Codan), the challenge now lies in training them how to use these equipments and encouraging their use. Success was not always forthcoming, most notably with the ANA who still remain reluctant to deploy their secure comms despite having a strong network, enabled through the development of their HF and VHF RRB capability. The AUP have continued to impress and have embraced the assistance offered by Police Mentoring Advisory Group (PMAG). The statistics speak for themselves; 87 policemen now trained in basic radio operation and maintenance (up from two at the beginning of H16) and 100 now trained in generator maintenance.

## REDEPLOYMENT

Previous Op HERRICKs have made huge headway with tracking down the substantial quantities of unaccounted for Bowman equipment. It soon became apparent that there was little value to be added by continuing in the same vein, simply because the vast majority of the equipment has now been found. We decided to focus our efforts on two areas; firstly ensuring that the equipment was in the right place and secondly that the process of accounting for it was simple and effective. We felt that if the process was simple then our units would engage more willingly; we were right. The TFH FofS (WO2 (FofS) Sorrell) designed a new monthly Critical Equipment Return (CER) which was in turn used to influence the HERRICK Equipment Forecast (HEF). The process was fully linked in with JFSp(A) and has produced remarkable results, notably £8m of surplus TFH TacCIS being either redeployed as per the requirements

of BRAC or backloaded (from a Th total of £12.5m) and £210k of unaccounted for equipment found and brought onto account. The TF now has a healthy equipment reserve.

BRAC was always expected to be one of the major challenges of H16 but it turned out not to be (for J6). Joint planning and lots of liaison with JFCIS(A) was reinforced by full engagement in the TFH BRAC planning process. TFH planners included J6 in their workings and were aware of our small number of constraints. Coordination with the units was completed through TFH J6 and was reinforced by the release of a joint TFH Sig Sqn and JFCIS(A) guidance note. All this ensured that at no stage was '6' viewed as a constraint to a 3/5 plan.

## SUPPORT TO THE TFH HQ

Project TARDIS, the re-design of the TFH HQ floor plate, is an excellent example of what can be achieved as a result of good communication and relationships between the TFH Sig Sqn, JFCIS(A) and JFSp(A). The project had a measurable positive effect on staff efficiency and has enabled a technical refresh of the HQ. Deemed too ambitious in the past the project was managed by our FofS(IS) (SSgt (FofS(IS)) Law) who was supported by both the TFH HQ Main Troop and a team of specialists from JFCIS(A). The initial design was created by the TFH J3/5 Plans team and signed off in concept by the TFH Chief of Staff (COS) before being handed to our FofS(IS) for a sanity check. He was then able to design a detailed Scheme of Manoeuvre. All the changes took place in silent hours, with minimal disruption to the staff and took 10 nights to complete. It was a resounding success, the staff now have more space, can work more efficiently and we managed to remove approximately 2.5km of redundant cabling and a number of fire hazards to name but a few.



*Running the MOB LKG flight line is just one of the Sqn's many tasks*

## MAIN OPERATING BASE LASHKAR GAR

The TFH Sig Sqn had a hugely constructive effect on the environment of Main Operating Base (MOB) Lashkar Gah (LKG). Our greatest test came just 30 minutes after our TOA when a rogue ANA soldier attacked the Main Entry Point (MEP) of the MOB, killing two ISAF soldiers and injuring a third. This triggered a full sy review of the MOB which culminated in the complete rebuild of both the Main Entry Point (MEP) and Heavy Goods Vehicle (HGV) gate, the installation of an independent HF sy net, the introduction of a permanent MOB Sy force and the change of a number of the MOB's long standing TTPs. There are not many facilities in the MOB that were not improved by the deft touch of the MOB QM (Maj Shaun Littlefield) and his team. Their successes range from quick wins such as the enlargement of the al-fresco dining area and the reshuffle of the female accommodation (which increased MOB transit accommodation by approx 33%) to longer term projects such as the battlefield clearance of 91 ISOs from around the MOB.

## SIX MONTHS IN, NONE TO GO

I firmly believe we have done all we can to set the next TFH Sig Sqn (204) up for success. We leave behind an all informed, flexible and robust Bowman VHF net, an extensive HCDR footprint that can survive the shifting sands of BRAC and a much improved staff working environment in TFH HQ. The TacCIS stocktake is a legacy which will endure and has ensured that equipment is now in the right place. I expect it will pay dividends during drawdown. The future of ANSF comms remains bright, they want to learn and will succeed provided we continue to invest in their training. The security of MOB LKG is much improved and infra development continues apace. We are justifiably proud of our efforts but there is much more to be done. The fortitude and professionalism of our soldiers has been nothing short of inspiring but the mantle must now pass to 204 Sig Sqn; I have no doubt more great work will be done.

# TACTICAL CIS ON OP HERRICK – A CASE STUDY – OPERATION QALB (HEART) 7

By WO2 (now WO1) (YofS) Ian Shaw

At the timing of writing this article in 2012, the then WO2 (YofS) Ian Shaw was the Brigade Yeoman of Signals for 12 Mechanized Brigade Headquarters and Signal Squadron (228).

He enlisted into the Army in 1994 as a Tele Op (TG), despite thinking he was to be trained as a linguist, and has been posted to 215 Sig Sqn, JCU(NI), 14 Sig Regt (EW), the Defence Science and Technology Laboratory and back to 215 Sig Sqn before attending further training for YofS in 2007. As a YofS he served with 600 Sig Tp and 251 Sig Sqn (UK Ops) prior to moving to 12 Bde. WO1 (YofS) Shaw is now serving at RMA Sandhurst.



## EXECUTIVE SUMMARY

The case study detailed below provides an insight into an operation carried out during Op HERRICK 16 (H16). It examines the way in which various means of communication were used in order to enable a multinational operation which took place over a large area and a significant amount of time. In particular, it highlights how the VHF Command Net in use by Task Force Helmand (TFH) has been re-enforced with additional Radio Re-Broadcast (RRB) installations and that the UHF Data Net has been reinforced with several new points of presence. Further, it describes the way in which tactical satellite communications have been used to enable interoperability and flexibility of command across a multi-national force. It then highlights the importance of the lessons identified in this operation that may be carried forward to future operations, not only in Afghanistan but other locations in which the UK military may be deployed.

## INTRODUCTION

Key to tactical operations on Op HERRICK is the ability to command and control (C2) Force Elements (FE) against an environment which is not only hostile but is also highly changeable with the distinction between Local Nationals (LN) and Insurgents (INS) sometimes being very difficult to make. In this environment, C2 at the tactical level is critical and Task Force Helmand (TFH) Sig Sqn and the wider J6 community within the Task Force (TF) invested considerable time, effort and resources into improving Tactical CIS (TacCIS) to enable operations throughout HERRICK 16 (H16).

## BACKGROUND

The pace of change in the capability and availability of TacCIS has been well documented and this has been no different during H16. TFH Sig Sqn arrived in Theatre and immediately set about improving the reach of the



*On Patrol – Sig Lockey, a Royal Signals operator, provides communications during a ground patrol*

TFH VHF Comd Net across the TFH Area of Operations (AO) through the deployment of additional fixed RRB installations as well as developing two air-portable RRB installations which can be flown forward in support of operations to specific areas where the Bowman VHF footprint was not as robust. The Bowman data network has been equally improved with the deployment of Lightweight Bowman Data Nodes<sup>6</sup> (LBDN) and the introduction of HCDR antennas elevated to 30m in key locations. Alongside these improvements, the TF as a whole have made significant use of available equipments and associated policy to enable greater interoperability across our own sub unit boundaries as well as to our coalition partners.

## AIM

The aim of this case study is to provide an example of an operation carried out by TFH; to highlight how TacCIS has been exploited to enable operations. In part this exploitation has been enabled by the work carried out to improve TacCIS across Theatre but also through intelligent use of capability by TFH sub units. In order to achieve this aim, this case study will look at Op QALB 7 which took place during the latter part of June 2012.

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<sup>6</sup> LBDN – In essence a standalone Bowman HCDR point of presence able to be deployed to any location in order to generate a ‘thicker’ mesh to the Bowman data network.

## C2 OF A MULTINATIONAL FORCE

**RC(SW)** Op QALB 7 was an operation led by Regional Command (South West) (RC(SW)) who sought to synchronise a number of operations to exploit the power of combinations throughout the Gereshk AO. Its aim was to magnify the necessary effects to hasten Transition to Lead Security Responsibility (TSLR) in areas critical to TFH. The op would also allow US FE to establish a Village Stabilisation Patrol (VSP) within the AO.

**Coalition Force Element (FE).** As stated, a number of FE’s grouped under RC(SW) were involved in the op. The key role of TFH within the op was to FIX the INS in order to shape them for Special Operations Task Force West (SOTF-W) to establish their VSP. This would be achieved through CF NES(N) establishing a BLOCK (incorporating Danish (DK) FE) which would allow 3/215 Afghanistan National Army (ANA) Bde, within a discrete Ops Box, to CLEAR INS that threatened in specific areas of interest within the area of operations, subsequently drawing the INS away from ops further North. Throughout, 3/215 ANA Bde were advised and mentored by the UK Brigade Advisory Group (BAG). In addition, TFH provided complementary effects to other RC level FE; GUARDing the flanks of SOTF-W, magnifying local security around key routes subsequent to 1-7 Marine Amphibious Recon (MAR) operations and, as the situation allowed, exploiting further in the South. The majority of the BLOCK and GUARD activity was completed by CF BMA and CF NES(N) with the TFH ISTAR Group providing not only a GUARD and subsequent BLOCK but also the

majority of technical SCREENING required throughout the op.

**Devolution of C2.** Early on in the process of planning for the op, it was realised by TFH J6 that RC(SW) were not configured in a way that would allow them to exercise C2, at the tactical level, over the FE deployed on the operation. Prior to the beginning of the op RC(SW), having realised the same, devolved C2 of the operation to Commander TFH. This left the TF having to generate a plan to enable the C2 of not only its own UK FE but also of other, coalition FE involved in the op. This demanded a resilient yet flexible comms scheme of manoeuvre in order to allow Commander TFH to exercise and maintain C2 throughout.

**Area of Operations.** The physical area over which the operations ranged, in the area of Gereshk, was large; at it's widest approximately 80km. In addition to this, the terrain itself varied greatly from Afghan desert, or Dashte, to the fertile and thickly vegetative area of the Green Zone within the UGV. In areas the ground was flat and plain like whilst in others there were rolling hills and steep sided valleys and Wadi. The distance and terrain over which the FE would be operating provided an additional challenge to the provision of C2 throughout.



*The Gereshk AO. The darker area running diagonally shows the densely vegetated valley known as the Green Zone with the lighter areas running into the Dashte*

## COMMUNICATIONS FOR C2 AND INTEROPERABILITY

**UK FE.** Normally, UK FE made use of their organic capability to maintain their own C2 throughout. This was predominantly achieved using Bowman equipment with CF/Transition Support Unit (TSU) typically applying VHF as their primary means and HF as their alternate. However, at the multiple level, communication between individuals and fire teams were achieved making use of EZPRR<sup>7</sup>. Each multiple utilised Bowman VHF to communicate to the Coy level. From here, Bowman VHF would be used to reach

<sup>7</sup> EZPRR – Enhanced, encrypted personal role radio. These radios are issued to all pers deployed on the ground.

CF/TSU level. Across the CF/TSU level, HQ TFH maintained C2 over the TFH VHF Comd Net, enabled via the fixed RRB network and augmented through the deployment of an additional, air-portable RRB deployed in the area of the operation. In addition, Bowman data was enabled via the HCDR network and predominantly used to pass Bowman CHAT traffic, via the Tactical Network Gateway<sup>8</sup> (TNG) onto JCHAT which is the primary CHAT tool used in Th. From the Coy level and upwards to TFH and higher, OpCIS was also available. In order to achieve C2 for Op QALB 7 itself, subtle changes were made to the CF/TSU routine CIS plan. For the reasons explained later in this document, TacSat became an alternate means in place of Bowman HF below the Coy level and the BAG Fwd HQ was enabled with OpCIS through the deployment of an RDMS from HICSSS<sup>9</sup>.

**Interoperability for Op QALB 7.** In order to maintain C2 of coalition FE throughout the op, TFH made use of existing policy and Beyond Line of Sight (BLOS) capabilities:

**LFSO 2194.** The first was to exploit LFSO 2194<sup>10</sup>. This document details the measures that may be taken to enable the loan of equipment to other nations in order to allow interoperability. Bowman was predominantly used to enable communication with the DK Tank Coy

but, in some instances, was also used to enable local communication with US callsigns. In these situations, TFH sub units have made intelligent use of the equipment that they have available to them, in conjunction with policy, to enable interoperability to other coalition partners.

### Tactical Satellite (TacSat).

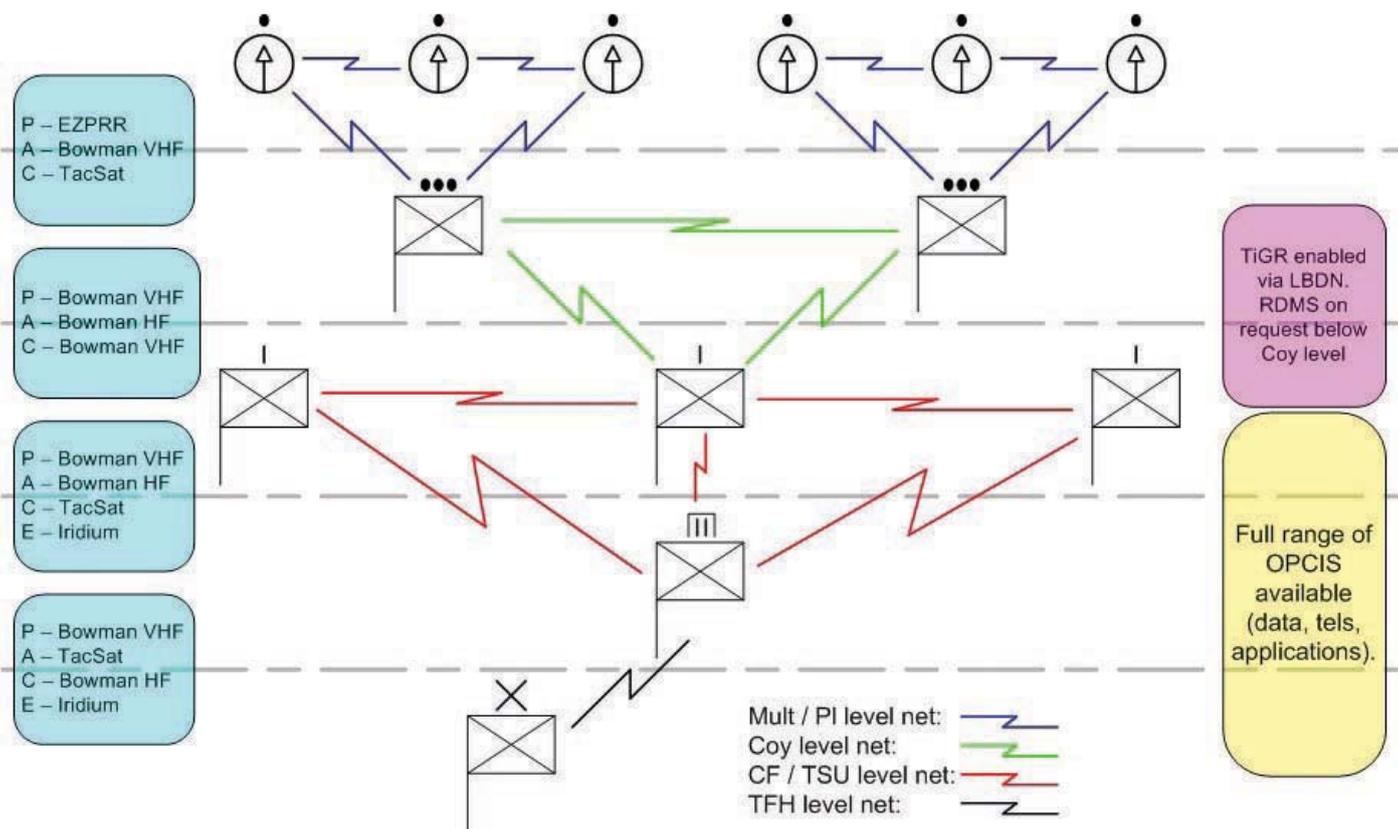
Throughout Op QALB, TFH maintained a TacSat Channel to which every UK or coalition FE were joined. This channel is known as the Ops Support Channel and came about following a review of the channels, issued to TFH by PJHQ, which found that

through considered use of the available channels, one could be released to support specific ops. Fortunately, there is a coalition encryption key which is in use in Th and controlled by the US. This key is held by all FE

<sup>8</sup> TNG – The TNG, along with Bowman Interoperability Tactical Servers (BITS) provide a gateway from Bowman onto fixed systems; in Afghanistan this links Bowman to the Mission Secret network.

<sup>9</sup> HICSSS – Helmand Information Communication Services Sig Sqn; the Sqn responsible for the provision of OpCIS to all FE within the Helmand AOR.

<sup>10</sup> Land Forces Standing Order 2194 – The Security of Bowman Equipment dated Dec 11.



Simple CIS Overview. (Units and sub units not representative of actual force laydown. Means of C2 specific to this operation, not to routine operations carried out by TFH)

and therefore all that was required in order to enable the TFH Op Sp Channel as the primary means of C2 to coalition FE HQ's was to share the channel information. This was done, and through the deployment of Liaison Officers (LOs) supported by operators from TFH Sig Sqn, Commander TFH had an all informed net, throughout the op, which included all FE C2 nodes across the AO.

**Operational CIS (OpCIS).** As a result of forward planning and close liaison within the UK '6' community and our coalition partners HQ, C2 of the op, delegated by RC(SW), was achieved by TFH primarily on TacCIS means. However, this was augmented with use of OpCIS and it is worth noting that OVERTASK and applications such as JCHAT significantly enhanced C2, particularly within the upper echelons of the various coalition FEs. This was most useful during the planning and the subsequent exploitation following the decisive phases of the op. In addition, a Remote Deployable Mission Secret (RDMS) platform was deployed within the ANA Ops Box by HICSSS to provide the BAG with 1 OVERTASK data terminal and 1 VoIP telephone.

## LESSONS IDENTIFIED

**Early Planning.** If ever there was a realisation of the importance of early planning, it was in planning for Op QALB 7. The scale and complexity of the op had not been seen in Th for some time and without early planning, the limitations of RC(SW) ability to execute C2 during tactical level ops may not have been realised. Further, beginning the planning process early allowed for the necessary liaison and testing of C2 links to be completed in sufficient time to identify and mitigate

issues found. Had this been left until later in the process or until the op began, then it is likely that all elements deployed would have been communicating in a sub-optimal manner with no redundancy available.

**Understanding the Art of the Possible.** Throughout planning and execution of this op, from a J6 perspective, there were many issues which could have proved insurmountable; communication with DK and US FE, lack of TacSat equipment, lack of TacSat Channels, extensive and changeable areas of operation. However, effort was put in to finding solutions to these problems so that what could be achieved was known prior to offering solutions to problems. This allowed capability to be grouped and applied to specific challenges. More than this, it allowed a much deeper understanding of the issues and how they may be overcome i.e. awareness of LFSO 2194, awareness of coalition crypto's, knowledge of TacSat channel information and awareness of the limitations of Bowman equipment, in order the planning and execution was made significantly less problematic than it would otherwise have been.

**Liaison and the Use of Crypto.** The use of coalition crypto was critical to enabling this op. Without it, there would have been no single overarching net able to provide cross TF C2 at the tactical level and an additional level of CIS would have been required to allow any top-level direction to reach troops on the ground. This use of crypto very nearly did not happen due to a very simple error. The encryption key used by the UK and US FE is shared but the US receive this key as a digital edition and the UK receive this key as a hard copy on paper tape. Whilst the short title of the crypto is the same, that which



*Preparation of BAG Forward equipment prior to deployment*

to promote their C2 construct throughout. Additionally, our own UK FE's were being asked to make use of known equipments to communicate with coalition partners i.e. use of Bowman with DK and US FE's. Whilst some, in particular NES(N), were very used to this as they had DK callsigns operating in their AO during routine operations, others had not been subjected to this before. A significant amount of flexibility was expected at all levels to enable this complex, multi-level and multi-national construct to enable C2 of the operation.

## SUMMARY

Op QALB 7 was an ambitious undertaking, being one of the largest operations seen in HELMAND in nearly 4 years. There were many different elements involved, not only from the UK contingent, but also from other elements of the coalition. The nature of the terrain that the operation was conducted over and the complexity of the command relationships throughout, meant that a very thorough communication plan was required to enable C2. Through forward planning, exploitation of available equipment and a solid understanding of policy and governance, TFH J6 delivered such a plan and the operation was a success. Clearly, there were lessons to be learned and instances of best practice to be recorded but, having invested heavily in the CIS lay down across H16, 228 Signal Squadron leave a great legacy for subsequent TFH Signal Squadrons, through H17 and onwards, to take advantage.



*BAG Forward HQ during QALB*

is digital ends with the letter D i.e. 1234D<sup>11</sup> and that which is paper tape ends with the letter T i.e. 1234T. Convincing the various users of this key that it was one in the same, simply delivered in different formats, took an inordinate amount of effort before confidence that it would work was gained.

Promoting Flexibility at all Levels. Finally, the need to promote flexibility at all levels was very apparent and a particular point to highlight. It is understandable that, whilst deployed on ops, many will revert to what they know as this is what they are confident in using. During Op QALB 7, FE's from several nations were being asked to use equipment they were familiar with in ways that they had not necessarily done before. TFH were forward leaning in enabling this as they deployed LOs



*3/215 ANA Bde Comd, Brig Gen Sheeran Shar, on the ground in the Gereshk AO*

<sup>11</sup> Crypto short titles are representative and not actual titles used within Th.

## FUTURE OPERATIONS

As this case study was being written, planning was well underway for further operations to be undertaken by TFH. Whilst future operations may not be as ambitious as QALB 7 in terms of the area covered and the number of differing FE and nations involved, they will continue to see a requirement for a flexible yet resilient comms plan in order to enable successful C2. The effects able to be achieved through coherent and well executed C2, making the most of the power of combinations,

has been a key feature to the success of H16. Above all else, interoperability with other nations has been the key component. Indeed, as 12 Bde prepare to become one of the first multi role Brigades, responsible for the provision of the Lead Armoured Battle Group for contingency operations, it is highly likely that interoperability with other nations will also be central to success. Again, through understanding what must be done to achieve this and taking forward the lessons that have been learned from QALB 7, future operations too, will surely be successful.

# INFORMATION MANAGEMENT AND EXPLOITATION – WHY WE ARE NOW GOOD AT IT

By Major Jon Malcolm MSc BEng(Hons)

Major Jon Malcolm commissioned into the Royal Signals in 1999 following education at Welbeck College and an Army Cadetship at King's College London. He has served as a troop commander with 21 Sig Regt (AS) and 12 Mech Bde HQ and Sig Sqn (228), as Team Captain of the White Helmets, Ops Officer with 250 Gurkha Signal Squadron and Adjutant of 14 Sig Regt (EW). He has also served as a Staff Officer at HQ LONDIST, HQ ISAF and in the DE&S Network Technical Authority following completion of the CISM course. He is now serving in MOD London.

At the time of writing this article in 2012, Maj Malcolm was SO2 J3 IM/IX HQ Task Force Helmand.



Over recent years it has become axiomatic that the British Armed Forces are rubbish at Information Management (IM) and its subsequent Exploitation (IX). Just as someone might say they simply do not understand these 'wiggly amps', they will assume that IM/IX is 'hard'. A potent institutional inertia has sustained and propagated this axiom.

In this article I seek to challenge the accepted wisdom. Following a recent tour as SO2 J3 IM/IX for Task Force Helmand (TFH), it is my experience that we now get it – and not only that – we are now good at it. While there are always areas for improvement and development, which I will touch on, we no longer need to sell the importance of IMIX but should instead look forward for ways to get even better.

The basis for this assertion is the performance of Task Force Helmand on HERRICK 16, based on 12th Mechanized Brigade. Arguably one of the most complex British Task Forces ever committed, consisting of: 3 Combined Forces; 2 Transition Support Units; 2 Advisor Groups; ISTAR, Joint Fires and Engineer Groups, an EOD & Search Task Force, a Close Support Logistic Regiment, and with on call support from a bewildering array of specialist and logistic capabilities. HQ TFH in Lashkar Gah is connected to this Task Force by the most capable and complex ICS network ever deployed by the Armed Forces. It is worth digressing slightly

to point out the incredible feat that this network represents. Previous UK operations have been dogged by perceptions of poor communications; it is notable that the debate on HERRICK has now moved to focus on how best to use the communications we have. This is no mean achievement, and one of which we should be rightly proud.

The culture of information on operations has changed significantly. Where once the Commander wanted his CO Guns and Engineers on his shoulder, he now wants information. Naturally, the Staff realise this and have all the incentive required to develop and improve how this is delivered to him. Therefore they no longer need to be told that IM/IX is important and that they must do it, they simply want help to get better at it. As you might expect, the J2 and ISTAR communities have particularly embraced this and, in many ways, are rapidly outstripping our allies in their exploitation of multifarious information channels. But good practice and ingenious improvements are not limited to these experts, and users across the spectrum are making this work for them. There is a common appreciation that this is simply good staff work, and this leads to a bottom-up self-policing approach to IM that makes the job of the SO2 IM/IX much easier.

The genesis of this cultural change was through simple necessity, and it has been maintained through the

reinforcement of success. In spite of unconscious or well-meaning obstacles – such as our sluggish procurement process or the bewildering and often contradictory array of IM/IX Guidance and Direction – our people spontaneously develop innovative processes that work with the tools at their disposal. We should embrace and nurture this bottom-up innovation and resist the natural military tendency to dogmatically insist on adherence to a top-down procedure or toolset. The eternally painful IM processes of document naming and file structures are a good example of this. Experience should have taught us by now that despite enormous top-down pressure, users simply do not name and store their data as directed by Defence policy. However, data only needs to be named and stored correctly to enable its retrieval by somebody else conversant with the same policy. HQ TFH – J2 staff in particular – use a working practice based on SharePoint, a collaborative working tool, and DtSearch, a basic but powerful search tool. This enables a user to retrieve relevant data in seconds from various indifferently organised repositories comprising well over a million patchily-named files amounting to approximately 1.5TB.

Despite this, there is still the perception amongst some that IM is something in addition to their normal work. Even while an AGC(PS) clerk in an iHub is maintaining an email distribution list, or a Staff Officer is running a short-notice planning session around a map and a live SharePoint Event Log, they might say that they do not understand IM/IX and that, 'it's a Royal Signals thing.' This irony of being an unwitting practitioner of good IM/IX is a problem of education and terminology, and leads to the propagation of the myth that we are not good at it. Mandatory requirements to complete specific IM training, separate Staff positions, and the plethora of direction and guidance in this field all also imply that an individual has to do something additional or different in order to manage and exploit their information. The best way to counter this assumption is to train this simply as good staff work, and maybe to not even mention the terms.

It is the job of every specialist Staff Officer in the

modern Armed Forces to explain his specialisation to the decision makers in as simple and understandable a manner as possible. This is particularly the case with IM/IX. Just as in the pure J6 field, explaining intangibles to someone harbouring a residual resistance to anything containing the aforementioned 'wiggly amps' can be a challenging business. It is still the case that that not knowing how to interpret a Decision Support Overlay (DSO) would be an unforgivable lack of professionalism in any Staff Officer, whereas not being able to draw a DSO on a computer and save it into a shared area for others to work on is not seen as a glaring gap in somebody's professional capability – and indeed, pointing this out can give rise to some pretty angry reactions.

Further cultural change is required to overcome these remaining hurdles, but some simple additions and small changes to training and education are all that it would take to achieve this. Instead of bespoke or specific IT training, use of IT should simply be made integral to the actual conduct of training. Rather than an 'IM/IX course', teach the process that your Branch, Unit or Organisation needs to follow. Nobody will remember the definition of IX, but they will remember the clever way to do their job that saves them some time.

So, the news from Operations is good – the battle to have this taken seriously has been won. Now, as a Corps and as part of a professional body across Defence, we have the opportunity to reinforce success by exploiting the momentum gained on HERRICK and taking it forward into contingency. The movement of Royal Signals involvement up the stack of the network model into the Application and Business layers provides the missing link between an understanding of the ones and zeroes and the business requirement. Commanders and their Staff want to get better and do more, and they will need experts to show them how. This is a challenging and immensely rewarding task, and developing it into the future looks genuinely exciting.

To conclude his article, Maj Malcolm offers the following 'Brainstorm'.



# IM / IX BRAINSTORM

- Don't get hung up on technology.
- SO2 IMIX in the type A Bdes is a great post for the Corps to have.
- 'Nuggety' IM stuff is now less important. File naming is not so important as we can search better, duplication less important as we've tonnes of storage. (clearly compression for transmission remains important, and contingency may not give us so much capacity, but why not! It's cheap!)
- Tech SA v Mapboards and stickies.
- J6 IMIX v J3 IMIX - making things work v Ops Coord type function - US Staff Secretary concept.
- Training of our Junior SO3s in staff process is well reported in PORs, but more training is required for all in IT. Weaving of IT enabled process with other staff process is now the junior staff officers' job. Not just word/excel/PPT/SP 'knobology', but where/how things save.
- Bde Comds used to want their COs Guns and Engrs in their TAC, now CO Guns is only still in there as CO Jt Effects, the other is Ch ISTAR. Comds want Information, and he wants the guy who provides it to him. We're still providing J6 IMIX, we need to evolve this into J3 IMIX, harnessing the power of combinations (J2 and ISTAR, J3 current, historical info etc)
- Information channels - part of formal info theory, strictly mathematical etc. More Information Science - a woolly discipline.
- Main topic: future of the SO2 IM/IX post?
- There is an argument (for another article!) that the increasing complexity and specialisation of modern J6 has divorced the J6 community from the J3. Moving into the info domain will help to bring the J6 (and the Corps in particular) back into bed with the J3.
- Terminology issues. US Marines call it all IM, and it's dealt with by an IMO. US Army have IM and KM. IX for both is something discrete and J2 oriented. IM/IX are different things, but are now shoved together, and assumed to be J6.
- A lot of these points will not be new, or revolutionary. Make quick snapshots of the old news in order to provide a quick 'sitrep' but make hay with the big issues.
- We mustn't beat ourselves up about this. The US have EXACTLY the same problems as we do. On the whole, it all works really well.
- I'm a convert. As a youngster (at 12X!), I was convinced of the need to stay out of even the App layer. That idea now seems ridiculously naïve. Partly because of the development of CIS, but mainly because I was just plain wrong. We experts, who understand how the DL layer works, are essential to help those at the Business layer express their needs, and to use the supplied tools (find an OSI model with an App and Business layer for ref.) This is now a real opportunity after the removal of the cursed 'life support' function under 2020.
- Institutional inertia. How to overcome it?
- Getting things done. Temptation is to attempt to railroad a perfect version of the change through, but it's bloody hard, and take up ends up being half-hearted and partial. Better to get it started from the ground up in a limited, messy, far from perfect way. Then, the people involved will expand, develop and improve it themselves, probably in a much better way that you ever thought of.
- People get it, they know they need to do it, now they just want to be shown/told how.
- Good intentions have created a blizzard of not very helpful guidance
- It is simply staff work
- File naming and folder structures v search tools
- The job of any staff officer in the modern forces is to explain his specialisation to the decision makers in as simple a manner possible. This is particularly the case in IMIX. (Why?)
  - Residual resistance to 'wiggly amps'
  - Explaining intangibles
  - Still the case that not knowing how to read a DSO would be an unforgivable lack of professionalism, whereas not being able to draw a DSO on a computer and save it in a sensible place is not seen as a glaring gap in somebody's professional capability (and indeed, pointing this out can give rise to some pretty angry reactions!)
- Still a perception, even amongst AGC(SPS) iHub type staff that 'IM' is different, and difficult. This is still reinforced by a lot of the direction and training material.

# THE TRILLION DOLLAR ENTERPRISE SOFTWARE INDUSTRY.....

## Where did it all go wrong ?

By Dr Richard Mishra

### EDITOR'S NOTE

Dr Richard Mishra has over 20 years' experience in telecoms management systems, from both service provider and software vendors perspectives, quite possibly inspired by the Strowger relays he played with as a child.

Richard set up people2persons ([www.people2persons.com](http://www.people2persons.com)) to promote innovation in telecommunications. He has recently founded Standard InterOperations Ltd to provide the methods and tools to create Operational Integration Standards and so start the process of industrialising enterprise software.

[www.linkedin.com/in/richardmishra](http://www.linkedin.com/in/richardmishra)



An army may march on its stomach but it is readied, directed and co-ordinated by information; communicated along the line and up and down the chain, command and supply. Although the stomach issue has not changed, nor is it likely to, communications certainly has. I had the great pleasure of visiting the Royal Signals Museum at Blandford Camp recently and the transition from the motor cycle dispatch rider to satellite comms was movingly clear. As a child, my father would bring me Strowger relays recovered from telephone exchanges undergoing digital conversion. Looking around the museum brought back the same feelings of past accomplishments and change.

What can be missed in the evolution of communications is the rise of Information Technology as a critical component. Of course nothing happens without a network, but increasingly the network forms only the foundations for much greater structures, which harvest and corral signals into actionable information. IT gives signal meaning, whether it's from a brain scanner, an AWACS, or a crypto-processor. It gives information longevity and availability, so that it starts to be about real things; people, activities, services and devices. More particularly, as defence includes increasingly sophisticated intelligence, the raw material for that intelligence, information and the systems they are extracted from, become paramount.

And here is the challenge. Although communications technology has steadily, systematically evolved, the IT for large organisations seems to have stopped about 20 years ago. In that time, we have been on a journey that has taken us from analogue copper to 100Mbit/s V-DSL, from analogue radio to 4G mobile, DAB and satellite and from mountains of physical multiplexers in telephone exchanges to Dense Wave Division Multiplexing over a single fibre. All this has been achieved through R&D investment by device manufacturers and because of standardisation. Bodies such as ITU, 3GPP and IEEE have helped the industry create standards which, by the very

act of standardisation, has converted one generation of innovation into the basic building blocks for the next generation. It has ensured a global supply of devices that meet the standards and encouraged price and quality competition.

### THE CHALLENGE

And so to IT; even the name lets us down. Is it about the software systems or about the tools and techniques used to build those systems? The confusion between the two allows people to boast "its software, we can make it do anything". Does an engineer say that about metal? Of course any art or craft is about making the materials do whatever imagination dictates. Clay and stone should be crafted to the artist's personal expression and each piece is valuable because it is unique. But we know what a gear-box is, or a clutch assembly, or a span, or a strut. We engineer increasingly better ones because we are clear about what they need to do and how they inter-work with other known components. Not so with IT. Each solution may have a core of product code, but the vast majority of the cost is in the customisation and integration. Each project produces a unique, hand-made, solution, built from a unique set of operational requirements. That helps explain the \$1T figure in the title. The value is a projection from a 2010 Gartner report, of today's worldwide end-user spend on IT services: note services, as in craft, not product.

**My first observation: Enterprise IT is fundamentally a craft, not an engineering discipline.** Let me make it absolutely clear that I am not belittling the professionals in the industry in any way. It is no fault of the individuals. On the contrary, this situation is much to the professional and personal disappointment of many practitioners and I say this from personal experience. There are continual attempts to transform the industry away from craft and this essay is part of the latest foray.

The reason why innovation has stalled in enterprise software is because it is a craft. Every solution starts afresh from the beginning, not building on what has gone before. There are no establishing camps to use as a base for further progress. That is what standardisation would get us; the ability to turn one generation's innovation into the base for further innovation. There are no standards that specify what IT systems must do, in the way that ITU specifies what communications devices must do. There is no standing on the shoulders of giants. We continue to reinvent solutions like a potter continues to hand-throw pots: each one somewhat different and none particularly better than the one before.

What does this amount to? Most obviously, very many disappointing headlines about the failure of software projects to deliver even systems as apparently straightforward as payroll or recruitment. By the way, the headlines will be about public bodies only because they have a responsibility to disclose. Any industry professional will tell you that the private sector have the same challenges, with no desire to disclose and often even no desire to acknowledge the failure internally.

There are very many reasons why a major IT project fails. Some are completely outside the project such as mergers and acquisitions and changes in corporate personnel and strategy. Most reasons, whether management, technical, or operational stem from one root weakness;

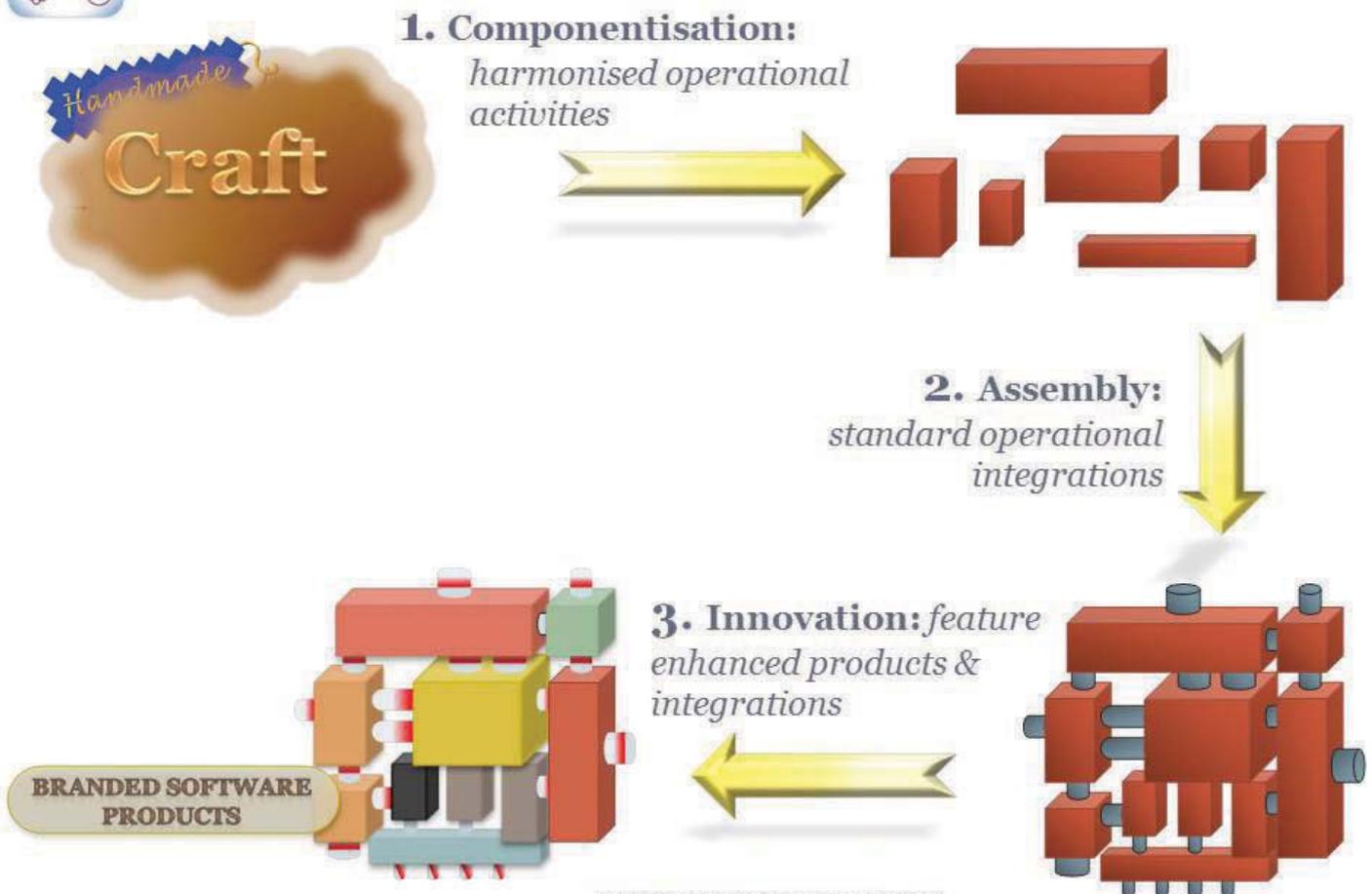
each project starts afresh, from the beginning and on its own. That is why those initial operational requirements are so often found wanting. It is because they are drawn from the very narrow remit of an individual project and business case and not from industry best practice. The same explanation applies to why projects become so complicated, why risk management is so hard and why budgets and resources are not properly allocated. What is missing are reusable components and low risk assembly of those components.

Surely the IT industry has aspired to standards and re-use, such as Service Orientation? Again we are confused by what we mean by IT. Yes there are any number of methodologies and standards for the production of software. Agile and ITIL are current. But if they are used to produce an entirely custom solution, then nothing has been gained. The methodologies and standards used in the project are valuable while the development team are using them, but when they leave, the system becomes legacy.

Let us return to those unique set of requirements that drive today's custom IT projects. Are they so unique? Do we not already know what a Payroll system should do and what it needs to connect to in order to achieve it? By and large yes, the basic commodity activities are understood, but in a loose, fragmented way amongst the many operational experts who work in the area. It does not amount to a precise, unambiguous specification.



## Industrialisation of Enterprise Software





who use such systems may add their own additional features when they deploy these systems, again differentiating themselves from other organisations in the same market. All these parties are able to focus on innovation, because budget is not being wasted on simply re-inventing commodity features. Over time, these innovations are folded back into standards when they become the expected norm.

## CONCLUSION

To return to the start of this essay, I noted how much communication had changed over the decades. I was not giving the full picture. Communication devices have changed out of all recognition, as the Royal Signals Museum shows so well, but the way people communicate at a distance; people-to-people, has not improved since it was invented over 130 years ago. The only possible exception is the prearranged conference call. Otherwise it continues to be a disembodied voice, a dial tone and a ring tone – often at an inconvenient moment. Of course it has become more convenient

with mobile devices and much cheaper with free services over the Internet, but it has not become richer as a form of communication. Internet services have given us many more ways of communicating, but all of them are less rich, or poorer in quality compared to the traditional service provider offering.

The cause of this stagnation is that the richer forms of communication are dependent on IT system, which has failed to innovate. Mew sensors found in the computer gaming industry, which track movement and big gestures are pointing in the right direction, but much work is required to build the innovative systems that can turn those signals into meaningful communication and deliver the experience on demand, globally. Enterprise software needs to transform from a hand-made craft, to a fully-fledged industry with reusable components assembled with high confidence. When this happens, the world will transform. In the meantime, we have no gesture, no posture, no facial expression and very little for sensory impaired people. If you want to discuss this, we are going to have to meet.

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# RSI London Seminar

**Tuesday 20 October 2015**

**Positioning Royal Signals to support the New World Order**



The 2015 RSI London Seminar will take place on Tuesday 20 October in the splendid surroundings of 61 Whitehall, the historic home of the Royal United Services Institute (RUSI).

Serving members of the Corps can attend for free upon registration; a small fee will be payable by industry and retired members of the Corps. The one-day seminar (09:30–17:00) will be followed by a drinks reception.

Full details are available from the RSI Secretary on [rsi@royalsignals.org](mailto:rsi@royalsignals.org)

**Book your seat today!**

The seminar will explore three themes that have underpinned Defence's contribution to SDSR and which are of particular relevance to the Corps: CGS's concept of Land Joint Strike; Commander JFC's thoughts on Warfare in the Information Age and CDIO's vision of Defence as a Platform.

These emerging themes come on top of continuing Defence Transformation, the transformation of ISS, the Army Command review and an increase in the complexity and range of threats we face. What must the Corps do, do better and do differently, within the Army and across Defence, to deliver the information services and information professionals that are needed to support this 'New World Order'?

# WHY A RETIRED BRITISH ARMY COLONEL HAS BECOME THE LAST HOPE FOR SOMALIA'S FORGOTTEN HOSTAGES



John Steed rescues crews of hijacked ships whose owners have abandoned them

By Colin Freeman

Even by Somalia's standards, the village of Amara is a lawless place. A tumbledown hamlet in the sun-bleached scrubland north of Mogadishu, it lies in a "no man's land" between turf controlled by local warlords and the al-Shabaab Islamist militia. It is the perfect spot to keep hostages, and during the height of the Somali piracy crisis, its shabby homes served as jails for Paul and Rachel Chandler, the kidnapped British yachters.

## EDITOR'S NOTE

Earlier this year Colonel John Steed MBE was interviewed by Colin Freeman, the Daily Telegraph's Chief Foreign Correspondent. John Steed retired from the Army in 2012 after a full and varied career in the Corps which saw him undertaking challenging postings in many of the World's trouble spots. The article first appeared in the Daily Telegraph on 26 March 2015 and is reprinted within the kind permission of the Editor.



Last month, another group of hostages finally walked free from Amara - this time four bedraggled, traumatised crewmen from the Prantalay 12, a hijacked Thai fishing vessel. But while their release did not attract the publicity that Western cases do, their place in the history of piracy is already assured. The four sailors had been held for just short of five years, giving them the dubious distinction of being the longest-held Somali hostages on record. Abandoned by the ship's owners, who had failed to pay kidnap and ransom insurance, six of their fellow crewmen had already died from illness and neglect. That the rest have been spared the same fate is thanks not to a team of special forces soldiers, but to an ex-British army officer with a kind - if slightly unreliable - heart.



*John Steed, 2nd left, Leslie Edwards fourth from left at the back*

A high-stakes, dangerous game, it is not for the fainthearted - something that Mr Steed, 59, is all too well aware of, having suffered a serious heart attack just three months into his work. Still, given how close last month's release operation came to disaster, it seems his heart surgeon did a good job. After raising a sum believed to be around \$150,000 for the release of the four Thais - a fraction of the original \$9 million ransom demand - Mr Steed flew to the Somali town of Galkayo, from where he dispatched a team of Somali go-betweens to undertake the exchange in a patch of desert outside Amara. All was going fine, until he got a call on his mobile. He could hear a firefight.

Two years ago, Colonel John Steed, a former military attaché to the British embassy in neighbouring Kenya, began his own personal mission to save those who were dubbed the "forgotten hostages" - the 100-plus sailors who still languished in pirate custody as of 2013. Drawn exclusively from poorer nations, their stories are a dark mirror image of that of Captain Phillips, the hijacked American whose rescue by US Navy seals became a blockbuster movie. Most have spent years in captivity, left to their fate not just by their employers but by their governments, who lack either t

"An al-Shabaab faction had attacked both my group and the pirates - they were probably after the money," Cornwall-born Mr Steed told The Sunday Telegraph from his home in Nairobi, where he works



*Abandoned ship - the crew Prantalay 12 spent nearly five years as hostages*

Mr Steed's only chance is to get the pirates to see the sailors as a lost cause too. He tactfully persuades them to abandon hopes of a multi-million dollar ransom, and settle for a much smaller payment of "expenses", which he scrapes together from charitable donations.

*Released hostages from the Prantalay*





Thinking the owner's refusal to pay a ransom was a bluff, the pirates quickly departed from the usual Somali practice of treating their captives humanely, deliberately giving them salty, brackish drinking water. Five eventually died after suffering swollen limbs and various other conditions, and were buried at sea.

The rest were transferred to the Somali mainland after a drunken pirate crashed their ship, since when they have spent their time in a dark, windowless hut with nothing to do. Unable to speak English, they initially thought that the go-betweens who came to pick them up were another pirate gang, their bafflement growing even greater when a group of local officials handed them smart suits to wear for the handover to Mr Steed.

He arrived to find what looked like a Thai business delegation in the middle of the Somali scrub.

"It was a very emotional moment, and there were some tears in the plane out," he says. "Three of them don't seem too bad, given the circumstances, but one is showing signs of quite severe psychological trauma."

A former Royal Signals officer, Mr Steed first dealt with pirates during his work as a military attaché, and continued to do so when he moved to a job as

*Hostages on the MV Albedo were kept in appalling conditions*

*Not all Somali piracy cases end as happily as that of Captain Phillips*

from an office in his spare room. "I could hear the rounds going off in the background, and as someone who had a heart attack not that long ago, I could feel my blood pressure going rather high.

"Luckily, we'd arranged a strong guard force of about a dozen armed men, and they were able to see the attackers off. If we'd lost the money, it would have been disastrous."

The four Thai sailors are now back home, after a 1,774-day ordeal that sounds like something from Coleridge's Rime of the Ancient Mariner.





*The good times are over for Somalia's pirates  
- but they still hold onto a handful of ships*

a counter-piracy expert with the UN's Somalia office in 2009. He realised that while a great deal of public money was being directed at fighting the pirates, very little was being done for their victims.

"We were building pirate prisons and funding prosecutions that would respect their human rights and so on, but we weren't really doing anything for the victims at all," he says.

Having realised that if he didn't do it, nobody else would, Steed raised some money from various UN contacts to fund an office, from which he draws a modest stipend. Often his first challenge was simply finding out where the hostages were and who was holding them. Tracking down the ships' owners was even harder, with many claiming to have either gone out of business or simply going underground.

"It is disgusting," he says. "They are sending people into known pirate zones without adequate insurance coverage, and then abandoning them when they get into trouble."

At first, he says, he gets short shrift from the pirates. While their boom years are long over - the posting of armed guards on ships has all made hijackings all but impossible - many are used to raking in up to \$10m per ship, and can be difficult to convince that they have picked a vessel with no owner willing to cough up.

Still, even on Somali wages, the costs for a pirate leader of paying his men to guard a ship for years on end can run into tens of thousands of dollars. An offer to at least cover their "expenses" can eventually prove tempting - especially if the pirate leader has "investors" to pay off, and especially if the alternative might be nothing at all. It is a painfully slow process: it has taken Mr Steed two years to free just two ships. Those who argue that pirates should never be paid any money whatsoever, he adds, are not living in the real world.

*Persuading Somali pirates that they have picked a ship  
whose owners cannot pay is a tough task*





*The Albedo became a floating torture chamber as well as a prison*

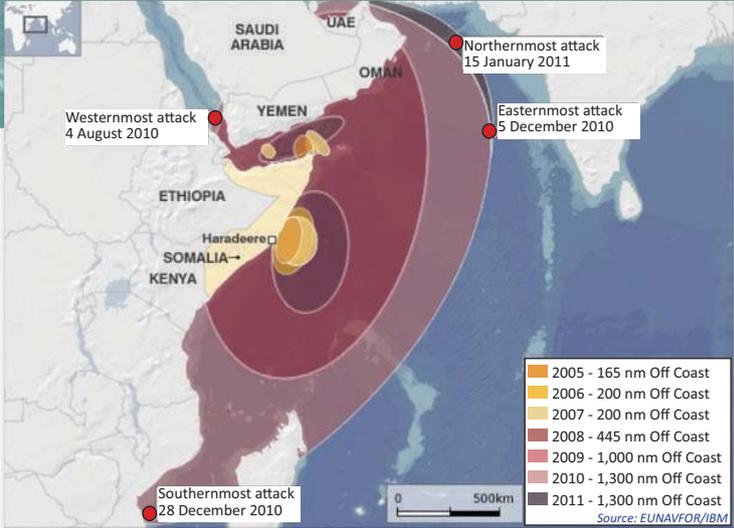
For security reasons, he is coy about exactly where his “expenses” money comes from - beyond saying it is from a private charity of limited means. He is, however, happy to mention the role of those who provide pro-bono help, which again is a mainly British effort. A firm of London-based shipping lawyers, Holman Fenwick Willan, provide legal advice, while he is helped in the negotiations is by Leslie Edwards, one of Britain’s most experienced kidnap negotiators.

“A lot of negotiating firms did well out of piracy during the boom years of 2008-11, and we have a moral duty to deal with those hostages left behind,” says Edwards, who has dealt with kidnapers of every kind, from al-Qaeda and the Taliban through to Colombian drug cartels.

“Dealing with pirates isn’t what people usually imagine solicitors doing, and the work is challenging and emotive,” added Richard Neylon, of HFW. “But it’s very good when you’ve played a part in helping to save these seafarers’ lives.”

That was certainly the case with the Albedo, whose mainly Indian, Pakistani and Bangladeshi crew was taken hostage in November 2010, and which last year became Steed’s first successful case. As the ship’s captors grew ever more frustrated at the owner’s refusal to pay a ransom, they resorted to tactics as brutal as those in piracy’s medieval heyday.

Sailors were lashed until they passed out, had their fingernails torn out with pliers, and were forced to



*Areas of pirate operations 2005 - 2011*

lie on the sunbaked deck for hours on end. On one occasion, the entire crew were put in the ship’s disused swimming pool and kept without food or water for three days, while the pirates urinated on them and hurled in pails of sewage. One sailor was shot in cold blood as a warning to the owner, while four others drowned when the boat sank in heavy seas. Mr Steed said that when his team finally got them out, it was “the greatest feeling in the world”.

Even his long-suffering heart doctor has become a convert to his cause, Mr Steed recruiting him to medical check-ups on newly-released hostages. Mr Steed now has eyes on a third crew, the 26 men of the Taiwan-owned Naham 3, whose third anniversary in captivity beckons at the end of this month. And every so often, new “forgotten” cases come to light.

“During the Thai case, we learned that there were two Kenyan medics being held in the same village,” he said. “It’s now just a question of trying to raise the money.”

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PIONEERING THE FUTURE TOGETHER





## DEANE-DRUMMOND PRIZE ESSAY COMPETITION

The annual Deane-Drummond Prize Essay Competition was inaugurated by the RSI Council in 2010 principally to support Commanding Officers in fostering professional development amongst their young officers. The competition is however open to all serving regular and reserve Royal Signals officers and soldiers, including QG Signals. Essays are required to be between 1,500 and 2,500 words, they must not contain any classified material and all references and quotes must be listed in accordance with the Harvard System of Referencing.

The title for the 2014 essay was:

“Should all information necessarily be treated in the same way; which aspects of the information landscape belong to commanders and their staffs, and which are best left to R SIGNALS personnel?”

Over sixty entries were received and the Marking Panel of serving Brigadiers, Colonels and Lieutenant Colonels, had a significant challenge in identifying the winning entries from amongst a group of excellent essays. The final decision of the Marking Panel was as follows:

<b>1st Prize</b>	<b>£1,000</b>	<b>Lt Matthew Wray</b>
<b>2nd Prize</b>	<b>£500</b>	<b>Capt Vishal Pun</b>
<b>3rd= Prize</b>	<b>£250 each</b>	<b>Capt Alexander Cave and Capt Phillip Berry</b>

The winning essays are reproduced on the following pages; they have not been edited. [Due to space limitations, the essays of the Joint 3rd Prize winners are only available in the online version of the RSI Journal.]

Full details of the 2015 competition can be found on Page 64; there is still time to get writing!



*Lieutenant Matthew Wray receiving the Deane-Drummond Trophy and his £1,000 prize from the Master of Signals at the Corps Annual Dinner at the Savoy in May 2015*

## Lieutenant Matthew Wray 3 Signal Regiment

### INTRODUCTION

'Our success in all our activities is dependent on our effective use of information' (VCDS and 2nd PUS, circa 2006). This highlights the reliance of the modern military on information, around three key themes.

Information Management (IM): 'Integrated management processes and services that provide exploitable information on time, in the right place and format to maximise freedom of action' (MOD, 2008).

Information Exploitation (IX), 'The use of information to gain an advantage and improve situational awareness to enable effective planning, decision making, and coordination of those activities required to realise effects' (MOD, 2008).

Information Superiority (IS), 'Possessing a greater degree of information about the battlespace, being able to exploit the information more rapidly and preventing the adversary from obtaining or exploiting information which could give combat advantage' (MOD, 2008).

I will establish which themes are the realm of the commander, staff and J6 community, before concluding with recommendations for responsibility of aspects of the information landscape and additional recommendations for the Royal Signals with their stated mission to be 'A highly professional and technically able military team that supports our commanders and disrupts the efforts of our enemies.' (RHQ R SIGNALS, 2014)

### THE LANDSCAPE

The information landscape is a dynamic environment that not only changes as a reaction to the evolution of technology, but with our adversaries. As our adversaries change, so do their Tactics Techniques and Procedures. As a result the information requirement of the commander changes, bringing the challenge of adapting as a Corps to deliver timely, and accurate information to commanders at every level from strategic, to operational, to the tactical level. We need to actively react to change in order to carry out our function, as must the whole of the defence community. 'Defence must shift its mindset to operate within the future operating environment' (MOD, 2013). Delivering information empowers the commanders at every level from the Battlegroup commander to the strategic Corporal to make effective decisions and apply command and control (C2) functions due to real time situational awareness. The value of information in this environment is highlighted by Joint Force Command (JFC) stating 'Information has value, is a corporate asset and is everybody's responsibility' (JFC, circa 2013).

### INFORMATION MANAGEMENT

Information is a high value asset and it is our core business to deliver it to the commander in order for him to execute his mission and prosecute his intent. Its value is highlighted in JSP 747 as 'Information is the most valuable when it is available to the right person at the right time, in the right format, and to the right level of quality. All information related activities must be targeted to this end.' (MOD, 2011) IM in this sphere is key. Defined as 'A set of management processes... that enable and support the capability of collectors, producers and users to store, locate, retrieve and transform information, allowing it to become the right information in the right form and of adequate quality to satisfy the demands of the commander or organisation (MOD, 2011). In this sense I feel the takeaway for the Royal Signals is to be adaptable, agile and robust enough to perform the enabling function for the commander to bring him real time situational awareness to facilitate effective decision making and operational C2 of forces across the battlespace. This crucial factor is highlighted as 'IM underpins the successful prosecution of military operations. It is 'the integrated management processes and services that provide exploitable information on time, in the right place and format, to maximise freedom of action' (MOD, 2008). The Corps' aim should be providing the commander with as much of the information landscape as possible to give him IS. With IS the commander will have effective Command, Control, Communications, Computation and Intelligence (C4I) over the battlespace.

'IS is enabled by 'successful management and exploitation of information.' (MOD, 2008) The value of information has been established above, and IM is everybody's responsibility from the Strategic to the tactical level, 'IM is a corporate responsibility that needs to be addressed and followed from the senior levels of management to the front line worker' (aiim.org, circa 2014). With this comes the need for information to be 'owned by nominated individuals and must be effectively updated, accounted for and utilised.' (JFC, circa 2013). While the Royal Signals have the responsibility of being the enabler for information there is now a division of responsibility. JSP 747 outlines responsibilities under Information Quality Assurance of 'availability, integrity, confidentiality, authentication, and non-repudiation.' These responsibilities do not necessarily align themselves to the Royal Signals, the Corps provide the CIS, which enables the service.

### AVAILABILITY

Availability is described as reducing the risk of loss of service; undoubtedly a Royal Signals responsibility as we are responsible for the service (network, system or service) that is being provided to the customer or end user (the commander and their staff). We

hold responsibility for the confidentiality of the network, system or service; preventing unauthorised disclosure of information during transit over the network. However once the information is with the user, disclosure becomes their responsibility, we can implement controls and the user is mandated to adhere to current defence policy with regards to the security of information. Here the responsibility is shared between the Corps, and users.

As a Corps we take steps to prevent unauthorised modification of the network, systems or services we engineer or provide, and preserve their integrity. However we cannot prevent unauthorised modification by the end user or customer we deliver information to; again this is down to the staff as system managers. Authentication to validate the source of the information is not the responsibility of the Royal Signals but the headquarters staff who are the owners of that information, or in the case of intelligence, the J2 cell within the headquarters. Here we see limited accountability for the J6 community, and increased accountability with the end user, the commander and his staff. To further examine and analyse these relationships I will now look at the treatment of information and look at the idea of IX.

## INFORMATION EXPLOITATION

There were many principles for IX set out in January 2004 by the Director General for information. I believe the most pertinent are: 'information will be managed as a corporate asset; information will have clearly defined ownership; information will be available for sharing across defence; defence IX will be based on a common understanding; information will be created and stored once for use many times; the quality of information is of prime importance.' (Couch, circa 2006) It is my belief that these responsibilities are not within the remit of the J6 community unless they are indeed the author or owner of a piece of information. These responsibilities therefore lie with the end user or commander and his staff, with guidance from J6. These principles do not directly point to the enabling or facilitating of the passage of information or the network behind it. The J6 responsibility here is the availability of that data to the customer to allow them to carry out IX.

Should these principles not be followed it could lead to drastic consequences for the commander and his staff as they are the ones entrusted to make decisions. Penalties of getting it wrong include 'Casualties and loss of life; wasted time; risk of making a wrong decision using inadequate or inappropriate information' (Couch, circa 2006). Our core business is to support the commander. We fulfil this by providing a robust network to deliver information. I feel IX is owned and should remain with the commander and his staff. To exploit effectively 'Information must be made available and shared...not all information is open to anyone, but in principle the sharing of information helps the use and exploitation of corporate knowledge.' (aiim.org, circa 2014) From a Corps perspective this is achieved by delivering the service and the information to the end user, who then exploits,

owns, modifies and processes it. At the operational level IX leads to a strategic effect. This has to be driven by the commander and his staff as end users as they 'want to be able to find and retrieve information easily and quickly, confident that it remains protected from those people who shouldn't be able to see it. Accessibility, security and privacy are competing themes, so skills and sound judgement are needed to strike the appropriate balance between them.' (MOD, 2011) The question of balance between access and integrity, is the domain of the commander and his staff. However as a corporate responsibility we are required to 'share information responsibly and sensibly.' (MOD, 2011) thus maintaining operational security (OPSEC). There is no escaping our corporate responsibility however, as an enabler we are the facilitator and the owner is the customer.

## COMPARISONS

We can now draw a relationship between IS, IM, and IX. IM and Information Assurance (IA) are enablers of IX. In this relationship, the Royal Signals are the enabler of the information through networks, systems, and services; the information has then passed into the realm of the commander and his staff who are enabled to conduct IX; through control and administration, this leads to IS. This process must be driven by the commander and his staff; 'Commanders at all levels should challenge their people not only to manage information effectively but also to exploit it to enable timely and better decisions.' (Couch, circa 2006)

Within the sphere of the Information requirement, we see the ball move firmly to the Royal Signals court. Commanders and staff want 'information to be of good quality. At best they want it to be accurate, unambiguous, concise, clear, consistent and timely.' (MOD, 2011) For this to happen 'MOD systems should support both information push (speech, email or telephone) and pull (book or website). How do we achieve this? As a Corps we drive the Information Exchange Requirement (IER); 'The IER translates an operational information requirement into the detail required by CIS staff to provide capability throughout all phases of an operation. It stimulates development of the CIS solution and forms the basis for developing a CIS network design.' (MOD, 2008) This is our fundamental core business, enabling the staff to conduct their estimate and planning, and giving the commander the tools he needs for situational awareness and Operational C2. 'J6 staff will advise and support all staff branches during completion of the information services requirement.' (MOD, 2008) J6 guidance is critical here to prevent the staff solutionising. From this close support during the completion of the IER which in essence is a shopping list of services and systems required for end users we can ensure that we enable the 'delivery of the right information to the right person, in the right place, at the right time, in order to allow the best decisions across the complex web of organisations that make up defence.' (Couch, circa 2006) Through this mechanism we provide 'common operating pictures that are fundamental to developing situational awareness and enabling effective decision making.' (MOD, 2013) This also allows the introduction

of expectation management, from what the staff want to what can be provided on the networks, systems, and services made available to them from the IER. 'The staff are enabled to receive and capture information, disseminate and organise information in a shared workspace' (Couch, circa 2006), whether this be DII(F), MOSS, or deployed systems such as HOUSEKEEPER and OVERTASK, or BOWMAN at the tactical level to provide secure voice and data.

In short the requirement provided by the Royal Signals through the IER will fulfil the Defence Information Vision of 'Agile exploitation of our information capabilities to improve effectiveness and efficiency on operations and in support areas through access to, and sharing of, timely, accurate, and trusted information.' (MOD, 2013)

Having assessed the nature of the information landscape and what responsibilities fall out for commanders and the Royal Signals there are several challenges and recommendations. 'The way that IS is achieved is unique for every situation and relative to every set of actors.' (MOD, 2013) Commanders need accurate information, so for that we need to be agile, flexible, and modern with our approach to enabling the commander and the staff. The staff maintains the responsibility of ensuring the enablers meet the operational needs for the Corps, the IER allows us to effectively manage that requirement and mitigate potential constraints such as bandwidth and spectrum along with expectation management. We must ensure we provide 'appropriate network connectivity, power, bearers, and redundancy capability to meet and maintain the requirement.' (MOD, 2013). We achieve this by employing 'methods that are at the forefront of modern digital military CIS technology' (army.mod.uk, no date) with 'competent, trained personnel who can adjust system behaviours and levels of interoperability.' (MOD, 2013) However while the Royal Signals set the conditions through 'planning and configuring capabilities, and adjust or adapt locally as necessary;' (MOD, 2013) commanders and staffs must be trained, confident and capable in IS. (MOD, 2013)

## PROVISION OF INFORMATION

The recurring theme across all aspects of the information landscape is that 'The primary goal of the J6 community at all levels should be the 'provision of information of the right format, right place, and right quality to the end user.' (PJHQ, 2012) This can be achieved by J6 staff providing support in 'configuring the tools and services for the context including expected shortfalls and mitigation.' (MOD JDN 2/13, 2013) This can be achieved by 'identifying the users who need to communicate most and how best to enable those services.' (MOD, 2008) To do this, we must have personnel with the 'knowledge and experience to advise on the capabilities and limitations of the CIS.' (MOD, 2008) Commanders utilise information in context, and that combined with 'experience, interpretation and reflection generates knowledge and thereby enables effective use of the information in decision making'. (MOD, 2008) That is the remit of the commander and his staff, to maintain situation awareness and C2.

## CONCLUSION

To conclude, the realm of the Royal Signals is as the enabler to a commander and his staff. We deliver the network, services, and systems to facilitate decision making, and allow successful IM, IX, and IS. With this in place they are able to make better informed decisions quicker than their opponent. Therefore we have to remain flexible in order to deliver that requirement in any environment against any actor. The requirement of the commander and his staff in theory does not change; they still want the same information. The environment and external factors are dynamic, whether that is the natural environment, the type of operation be it conventional, or contemporary, the capabilities of the equipment, or indeed the threat of the actor, be it low level technology, or sophisticated electronic warfare and surveillance capability, the Royal Signals still have to deliver information to the commander in a timely manner. Our core business will not change but to prosecute it we must remain flexible, and agile to sustain robust and resilient networks, systems and services from the tactical to the strategic level.

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# DEANE-DRUMMOND PRIZE ESSAY COMPETITION 2015

The 2015 Deane-Drummond Prize Essay Competition is open to all serving regular and reserve R SIGNALS officers and soldiers (including QG SIGNALS). Entries should, where practicable, be submitted through the Royal Signals Chain of Command.

The prizes provided by the Royal Signals Institution are as follows:

1st prize	£1000
2nd prize	£500
3rd Prize	£250

The question for this year's essay is:

By the end of 2015, for the first time in its history, 95% of the Corps will be based in mainland UK. In parallel, 2016 will see the start of the delivery of a number of measures as part of the New Employment Model (NEM) programme, aimed at providing greater stability for Service personnel and their families.

Is the nature of service changing; does it matter that in the future, service in the Corps may be regarded by some as just a job, rather than a career or a vocation?

The rules of the competition are as follows:

- Entrants must be serving (regular or reserve) members of the R SIGNALS or the QG SIGNALS.
- Essays should be between 1500 – 2500 words and submitted in electronic format (MS Word 2003 – Arial Font, 12 point).
- Classified matters must not be included.
- References and quotes must be in accordance with the Harvard System of Referencing.
- Essays should be sent to the Corps Adjutant at [rsignalshq-corps-adjt@mod.uk](mailto:rsignalshq-corps-adjt@mod.uk) under unit arrangements.
- The closing date for entries is 31 August 2015.
- Winners will be informed through R SIGNALS Chain of Command in December 2015.
- The awards presented at the Corps Spring Guest Night in 2016.



## Captain Vishal Pun QGS 2 Signal Regiment

This essay discusses the information landscape in order to determine which aspects should be owned by commanders and their staff and which should be left under Royal Signals ownership. Rather than a deep dive into the granularities of information requirements and information management, this essay will attempt to look at the question in a conceptual manner. The question will be divided into three parts. Firstly, it will look at what 'Information' is and if we can treat all information in the same way. Secondly, the essay will attempt to describe how the information flows through an organisation and lastly, it will attempt to answer where Royal Signals personnel sit in the information landscape and which aspects should be owned by them. The main focus of this essay will be on the information requirement for the commander and his staff, how the information flows between them and their relationship with Royal Signals personnel in processing that information.

Before proceeding with the essay it is necessary to define the terms information and information landscape. Although the information is defined in varied ways by various individuals and organisations, Businessdictionary.com defines it quite comprehensively as "data that is accurate and timely, specific and organised for purpose, presented within a context that gives it meaning and relevance and can lead to an increase in understanding and decrease in uncertainty" (Businessdirectory.com, 2014). Before it can be used as information it appears in a form of data. Information is a valuable entity as it can affect a decision, an individual's perception or an outcome. It is this information that commanders and their staff will gather and analyse before arriving at a decision in order to successfully complete a task. Therefore, the optimal use of information is important to the success of any unit. As for the information landscape, it is a way of viewing the complete environment of information use. The information landscape consists of many lines of information use and can be defined as a structural design of shared information environments (Skovira, 2004). Information landscape is an approach to defining various boundaries necessary to understand information use and creation from one level and its flow to another level. Skovira further argues that there are four aspects of information landscape which are the people, content (information), processes and relationships between all the other three components (Skovira, 2004). In our context this can be viewed as a wiring diagram where the commander sits at the top of the tree with the G1 – G9 staff cells below him all answering to the commander. Each desk or cell will have further branches below them assisting in gathering information which will allow the commander to make an informed decision. In

this model the information flows back and forth from Commander and his staff. Each desk, cell or individual will be required to follow a certain set of procedures and processes in order to successfully pass information to one another. These processes are the ways and means of acquiring, manipulating and presenting the information. They do not concern the information, its content or its type but govern the flow of information. Of many processes, technology and technological process is an important and integral component of information landscape.

The first part of the question asks if all information could be treated the same. In the Army not all information is the same and may not carry the same weight. Information in the wrong hands can have devastating effects on the outcome of a result, unit cohesion or morale of the soldiers. In order to share information in a secure, timely and efficient manner, HM Government policy classifies all information under various categories such as Official, Secret and Top Secret. Security classifications system assists in determining the sensitivity of information (in terms of the likely impact resulting from compromise, loss or misuse) as well as the protective measures to be applied against a broad profile of applicable threats (Cabinet Office, 2013). It is the MOD's policy that all information must be handled with care to comply with legal and regulatory obligations and reduce the risk of loss or inappropriate access. Access to information is only permitted through personnel, physical and information security controls that offer the relevant protection against any threat (Cabinet Office 2013). As explained in this paragraph it can be seen that all information is not the same and cannot be treated or shared in the same way. The essay will now talk about the information flow and amongst various departments and responsibilities of Royal Signals personnel.

In this modern age, the majority of information is passed, stored, managed or controlled using technology. One of the most used technologies in the Army today, in the space of information landscape, is the Information Technology (IT) which can be described as anything which is related to computing technology, such as networking, hardware and software. Although most of the fixed IT infrastructure in the UK today has been outsourced, on Military Operations and deployments, the majority of responsibility for IT falls upon the Royal Signals. It is the responsibility of the Royal Signals to ensure that the deployed Staff Headquarters are provisioned with CIS and ICS support. The structure of information flow between the Commander and his Staff and their relationship with the Royal Signals can be compared with a Data, Information, Knowledge and Wisdom

(DIKW) pyramid. In this model 'Data' sits at the bottom of the pyramid, followed by 'Information', then 'Knowledge' and then 'Wisdom' which is placed at the top of pyramid. In this model 'data' can exist in any form, usable or not, its meaning is not important at this level. The information is the data that has been collected together to provide a meaning. The knowledge is the suitable collection of information that can be useful and analysed. Wisdom is a state where all previously acquired knowledge can be called upon to form an opinion, judge between right or wrong and form decisions (Bellinger G., Castro D., Mills A., 2004) . The Commander can be compared with 'wisdom' and sits at the top of the pyramid. His staff cells will collect information, turn them into useful knowledge and pass them to the Commander. The data that forms information has to be created stored and transported through various systems. Although not responsible for the creation of data, the Royal Corps of Signals personnel are responsible for managing the system that enables the creation, storage and distribution of data, therefore the Royal Signals personnel can be compared with the 'data' layer of the DIKW pyramid. On deployment, the majority of the data is captured, transported, stored and manipulated using communication technology. Much of these communication systems are maintained and managed by Royal Signals personnel. For example a Staff user in Afghanistan will have access to a variety of information stored and distributed through the communication system or devices, he or she is able to send and receive messages or information to other users. The system that enables information to be transported across remains transparent to the users unless there is a fault in the system, i.e. a failure of a process. Similarly, Royal Signals personnel do not need to know the content of the information, they are only responsible for processing the data through the various communication systems.

Considering the model above, the ownership of creation of data and its management falls onto the Staff Cell. The Staff Cell will create, collect and manage data such that they can be accessed and become useful to inform Commander allowing him to form a decision. The Royal Signals personnel will enable the Staff Cell with appropriate technology, correct applications and communication systems to allow them to manage their data. For example on Op HERRICK, Royal Signals personnel provide CIS and ICS support to the Staff users enabling them to create, store, safeguard and secure passage of information between various Staff cells. The security and overall management of the information lies with the user. Regardless of the type of information, either voice or data, the Royal Signals personnel do not need to know the details of the information and will concentrate on the provision of ICS services provision, managing services and controlling any changes to the network through the Request For Change (RFC) processes.

Although Royal Signals personnel manage the majority of communication tools for the Staff users, there are few areas that are not covered by Royal Signals. Some of these areas are considered specialist tasks to particular Arms or trade group, however an area that requires Royal Corps of Signals attention is the Application Space. Currently application specialists' roles are covered by personnel from a number of Arms and Services. Being the Corps of communication and IT specialists, the Royal Signals must look to secure these application specialists posts allowing its personnel a wide spectrum of hardware and software enabling roles.

While attempting to answer the question, the first part, should we treat all information the same, seemed like a straight forward 'Yes or No' type question. The answer is 'No', it was established that different information may carry different value of sensitivity and may require to be handled in a specific way; meaning that not all of the information are same and should not be treated the same. To answer the second part of the question, a brief attempt was made to describe the information landscape and how it is driven by information and processes. While comparing the relationship between the Commander and his Staff cell with the Royal Signals to a DIKW pyramid it was established that the information in its entirety is owned by the information owner. They must comply with the security and information flow processes while the Royal Signals personnel will assist the Staff user with appropriate technology and toolset to enable him to manage his information. Further to this, it is also recommended that the Royal Corps of Signals application specialist roles are captured within the Corps allowing the Corps a wider exposure and an opportunity for wider integration of its personnel.

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# SUPPORTING SERVICE PERSONNEL AND VETERANS

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# REMEMBRANCE



Since the last edition of the RSI Journal the following senior officers from the Corps have sadly passed away; our condolences to their families and friends.

Major General I O J Sprackling OBE (Ian)	Served 1955-88	Died March 2014
Brigadier W E Sherratt MBE (Bill)	Served 1943-74	Died May 2014
Brigadier R L Stonham (Ronnie)	Served 1948-82	Died August 2014
Colonel M J Ridlington (Mike)	Served 1964-94	Died August 2014
Colonel J V Fielding CBE (Johnny)	Served 1959-97	Died September 2014
Colonel J D Cox (Jonathan)	Served 1964-93	Died September 2014
Brigadier K Olds (Keith)	Served 1953-91	Died December 2014
Brigadier J Westlake (Jack)	Served 1953-89	Died December 2014
Colonel J Findlater OBE (John)	Served 1947-85	Died December 2014
Colonel J R Gibson (John)	Served 1948-84	Died February 2015
Colonel R Gilbertson (Richard)	Served 1944-81	Died February 2015
Colonel U Ryan (Ultan)	Served 1949-87	Died February 2015
Col J R West MBE (John)	Served 1939-74	Died March 2015

## Major General I O J Sprackling OBE

As befits the sad passing of a hugely well-respected and popular former Master of Signals we re-print the obituary that was carried in The Times of 10th April 2014. A personal tribute from Major General Bill Robins follows.

### *Gung-ho signals officer and expert in electronic warfare who was not afraid to bend army rules*

There was nothing conventional about Ian Sprackling. Forcefully curious, instantly suspicious of received wisdom and bursting with ideas of his own, he found the mid-1950s Sandhurst course so stultifying that he resolved to use it only as a stepping stone to an in-service degree and then leave the Army. His career developed differently, but it was a bumpy ride at times.

Ian Oliver John Sprackling was born in 1936 in Topsham, Devon, and attended Bristol Grammar School before enlisting as a private soldier in June 1955. His two years at Sandhurst were followed by what he thought an insufferably long signals course at Catterick, during which he was back-termed for idleness, but qualified in time to join the 3rd Division Signal Regiment for the 1958 precautionary reinforcement of Kuwait following General Qassim's coup in Iraq.

On return to England, he read for a London external degree at the Royal Military College of Science, Shrivenham, irritating the authorities by marrying his childhood sweetheart while under age to receive married quarters or allowances. The course proved stiffer than he expected and he and others left Shrivenham without a degree. By then with a family to support, he settled down to make the best of army life.



Posted in 1961 to the 28th Commonwealth Brigade Signal Squadron in Malaya, he was diverted en route to Singapore to command 237 Signal Squadron's receiver troop at Amoy Quee in the north of the island. As the only officer, he interpreted this as a test of his command ability, took it seriously and was eventually allowed to join the Commonwealth Brigade Squadron and see some service with the South East Asia Treaty Organisation staff in Thailand.

His next assignment, as an instructor at the School of Signals, Catterick, gave him opportunity to retake his finals examination, get his degree and also pass the Staff College examination. On qualification from Camberley in 1970 he became the logistics and personnel staff officer of 24th Amphibious Brigade based in Plymouth.

The amphibious role did not prevent the 24th Brigade being sent to Belfast in 1972 to take part in Operation Motorman — the clearing of illegal barricades to the so-called "No-Go" areas in the city and in Londonderry. He was mentioned in despatches for his part in this operation.

The application of electronic warfare — use of electromagnetic devices to disrupt the enemy's communications and electronically controlled weapons and search systems — was becoming a key feature of the land battle when Sprackling was appointed to command 11th Armoured Brigade's Signal Squadron in Germany. He grasped this innovation with enthusiasm and quickly established himself as an expert on the subject; but when posted as an instructor at the Staff College on promotion to lieutenant-colonel, he perversely volunteered to serve with the Sultan of Oman's Armed Forces as he needed the allowances to help support his family.

This proved a shrewd career move. Appointed chief logistics and personnel officer of the force, he received the Sultan's Distinguished Conduct Medal for his organisation of the logistic support for the final push to defeat the rebels in the southern Dofar province and was appointed OBE for his part in planning the reorganisation of the force in preparation for the withdrawal of the seconded British and contract officers and specialists.

**The following tribute to Ian Sprackling's was given by Major General Bill Robins at the Memorial Service which took place at St Stephen's with St John, Rochester Row, Westminster on 4th July 2014.**

Ian Sprackling was not conventional. He was clear minded, an original thinker, supremely competent in the things that mattered. He had an Orwellian eye for hypocrisy, a deep insight into human nature, a mischievous sense of humour and he enjoyed life to the full.

I will illustrate six of the qualities of this extraordinary man and so will bounce around Ian's life, using them as themes. Those anticipating a chronology should hang onto their hats for some energetic time travel.

**His first quality: the most striking thing about Ian was his capacity for original thought, and the clear sense of purpose that stemmed from it.**

Very early in his career, he showed himself absolutely clear minded about the most important part of his life:

His expertise in electronic warfare had not been forgotten. After Oman he was appointed to form an electronic warfare regiment for service with the 1st (British) Corps in Germany. The regiment was established by bringing together a number of small units previously engaged in garnering signals intelligence; the equipment was provided but no living or working accommodation allocated. With a disregard for authority for which he was fast becoming notorious, Sprackling cut the lock on the gates of an empty barracks in the attractive Saxony town of Celle and moved his soldiers in. This fait accompli was eventually accepted but not before a good deal of staff ill-humour had been expended.

Promoted to colonel in 1979, he joined the Cabinet Office where together with younger men he was responsible for drafting advice to ministers on issues of defence in the Middle East.

Advanced to brigadier, he was appointed to command the Royal Signals Training Brigade at Catterick. He next became the MoD Director of Military Assistance Overseas covering all three Armed Services, taking him to Africa and the Caribbean where equipment and training advice were constantly in demand. His final military post in the rank of major-general was as Director-General of the Management and Support of Intelligence.

On leaving the Army, aged 52, in 1988 he became an adviser to Andersen Consulting UK in London for three years and then ran its Moscow office for another four. He was Chairman and then President of the Topsham Branch of the Royal British Legion and of the Exmouth Branch of the Royal Signals Association from 2005 until his death.

He is survived by his wife, Ann, née Coote, whom he married in 1959, and two sons, Simon, a film director and producer, and Rob, a screenwriter.

*Major-General I. O. J. Sprackling, OBE, Director-General Management and Support of Intelligence, 1985-1988, was born on October 3, 1936. He died of a brain tumour on March 28, 2014, aged 77.*

he married Annie. He was 23, an age at which marriage was seriously discouraged by the Army authorities of the 1950s. In Ian's words, "the military weren't best pleased with us". So Annie and Ian found a tiny house and became good at being poor: cementing a union so hospitable and welcoming to so many of us over the next 55 years.

On the same theme of his clarity of purpose: a few years later, he was selected to teach at the Army Staff College. Again, Ian rejected conventional wisdom and declined this plum job in favour of a tour in the Oman, where there was a war going on. More of that later.

In 1979, after handing over the bouncing young Regiment which he had just formed, his reputation for original thought and political acumen ensured his promotion to full Colonel and moved him across Whitehall to join

the Middle East section of the Intelligence Assessment Staff in the Cabinet Office: the people who 20 years on, were to produce the "Dodgy Dossier". But there was nothing dodgy about his dossiers.

He was, he says, pulled through this tour by FCO and MI6 colleagues and delighted to be given what he described as a full, beneficial re-education by very bright and much younger people, a pattern which he would repeat. And the complexity and high stakes of what he did here perfectly suited his intelligence and his originality.

His involvement in sensitive policy and intelligence issues continued with his appointment as DGMSI, where he was behind the expulsion of several Soviet Diplomats in 1988. Towards the end of this 2\* Defence Intelligence appointment, Ian was offered another 2\* job but Andersen Consulting heard about him and were intrigued. They were really looking for a young Colonel rather than an old General; but a short interview turned into a vehement and erudite 2 hour discussion. They invited Ian to join them.

Later he saw that the Andersen's Moscow office, set up after the collapse of the USSR, had proved terminal to the careers of some of the young partners. Ian persuaded the firm that a less cerebral approach was needed. So they made him Head of Moscow Practice. He ran it for some 4 years with 40 odd people, including ex KGB operatives, as fixers to help him work through the corruption and extortion of running a business in this city and at the same time staying alive.

His little office achieved a lot, particularly for people at the bottom of the heap in this now ruthlessly capitalist nation: it cut corruption in the Moscow Ambulance services. It improved bread production so that the poorest on the streets got something to eat. This upset some powerful people, one reason that Ian, the former British Intelligence officer, quickly learnt to enjoy having KGB heavies around. But it was his clarity of purpose and his Orwellian anger at corruption and the abuse of the powerless that sparked these changes.

### **Which takes us to his second quality: inspired leadership, breath-taking energy and courage.**

His early devotion to rugby (lethal in the tackle), bridge (a fearsome strategic sense), long parties into the night (the stamina of a rhino) led to many adventures before he gained an honours degree and at much the same time passed the entrance exam into the Army Staff College at Camberley, (an unusual double). He emerged from Camberley near the top of the output, to be made Deputy Chief of Staff at a Brigade HQ.

In the early 70s the Ulster troubles were at a particularly violent stage: he went to East Belfast for Operation Motorman, the clearing of illegal barricades. Ian's taste for danger was confirmed: he was mentioned in despatches for his part in a number of demanding operations.

Shortly after that, the mid-70s saw him on Loan Service to an Oman which was at war in the southern province of Dhofar. He ran the logistic support for the Sultan's Armed Forces for 2 years of the war and his supremely effective planning and at one stage, his gallantry in the hugely successful final battle saw him awarded the Sultan's Distinguished Conduct Medal and later from London, the OBE for his brilliant organisation of the speedy withdrawal of the Brits when the crisis was over.

In his office in Oman, he had a telephone call from the Signal Officer in Chief, at that time a 2\* appointment in Main Building. "Ian, congratulations, you are to command 14 Signal Regiment!" The original 14 Signal Regiment had quietly provided world-wide communications for many years and had recently been equally quietly disbanded. Thinking that he was invited to command this worthy but undemanding unit, Ian was outraged. Never one for false modesty, he said: "Listen General, I am the sharpest pencil in your box and I don't plan to stay around for long if I am not used properly". It took several minutes to convince Ian that the job was demanding enough for him to take.

So in 1977, Lt Col Sprackling formed the first EW Regiment in British Army, much of it billeted in the Junior Ranks Club of a reluctant Gunner Regiment in Hildesheim. Relationships with the gunner hosts frayed. As the new Regiment grew, frustrations grew on both sides.

In the state of cosmic irritation for which he was becoming legendary, Ian found a disused barracks at Scheuen, near Celle in Lower Saxony and broke in, his QM taking a crowbar to the gate, watched by Ian and by the nonplussed guards of the German Panzer battalion next door. The Regiment took possession of the derelict camp. After one look round, the boys told Ian that they preferred to live in their tents and vehicles rather than the condemned buildings.

Ian was bombarded with orders to "leave Scheuen forthwith" by his Brigade, Divisional and Corps commanders. He ignored them all, with the Nelsonian disregard for authority for which he was by now becoming famous.

Things came to a head: D SACEUR, General Gerd Schmückle visited by helicopter to personally ask Ian if he would please move out: "the barracks was unsafe and belonged to the German Army anyway, not the Brits".

Possession proved to be 9 points of the law: in time, the Germans reluctantly conceded the decaying estate and the Brit barrack authorities equally reluctantly started to refurbish it.

During this heroic, demanding and confusing time, Ian's inspiring leadership became a legend.

And so did his lunches, Rabelaisian in scope: going on far into the evening and cementing a Regimental

spirit of close knit loyalty, a team that felt enormously privileged to work with this outrageous man, a CO whom all of them knew was a winner.

They marvelled at his energy and drive. They created myths about him, some even true. Indeed, there was an epic dimension, a Shakespearean element to Ian's leadership, reflecting his own insight that leadership was largely acting, but acting informed by great understanding of human beings and a deep affection for them.

**Which takes us to his third quality: his insight into human nature and his never ending curiosity about what makes us tick.**

GOC 1 Div said that Ian, as CO 14 Signal Regiment, wrote the most psychologically perceptive and acutely observed officers' CRs in the Division. But Ian did not write them: he dictated them – because his handwriting was, as you would expect in a unit devoted to intelligence and deception, quite illegible.

Besides his handwriting, there was another area to which Ian was sublimely indifferent and that was personal administration. He was not remotely interested. But after a few disasters which saw him arriving at the wrong place in the wrong gear, he gave this direction to HH, long suffering Adjt: "Don't believe any assurance that I give you that I have packed. Before I go anywhere, make me stand by the desk, and make me show you everything I must have: passport, NATO Travel Order, ID card, money, address book...." Do not take my word for it.

Ian's further insights into human nature led to him carefully select the very best people, even those with dubious records, to do key jobs: Cpl Gregory, his staff car driver was a case in point.

Ian had chosen to retain for a staff car, an Austin Maxi, old, slow, comfortable. On the way to a stiff and formal occasion, an address by the Corps Commander to COs, the starter motor burned out.

Somehow, Cpl Gregory got the old car started and they arrived in the nick of time, just as the Great and Good arrived, covered in flags and star plates, gold braid and glory. Ian said, "Cpl G, don't stop the engine. I will be out in an hour, so keep the engine running. I will not be shown up here in front of these people."

When he came out, Gregory sat looking straight ahead, stony faced in a silent car. Ian, equally silently got in. The engine purred into life. As they drove out, they passed a REME Lt Col and his Corporal driver, looking sadly into the engine compartment of their Austin Maxi. Nothing was said.

**His fourth quality was wisdom and humanity, traits that made him such a generous friend and mentor.**

When he worked with Andersen Consulting, the average age of the Andersen staff was 27, about half his age. In

his first few weeks with the firm, Ian hit it off immediately with these youngsters and became a mentor to many of them. The warmth they felt for him during his years with the firm was shown at a leaving dinner for Ian and Annie, where they presented him with a mug bearing the inscription: From the fortunate few, who had the privilege of being called "Spracklettes".

Ian left Andersen in 1998. At the insistence of a number of us, he generously gave up a lucrative commercial career to become Master of Signals and spent five years fighting the corner of the Corps at a time when the Army was suffering cut after cut. His political sense and advocacy, his skilled support to the serving Corps team, not only limited the damage but justified an increase in Corps numbers even as other regiments shrank.

As Master he chaired the Royal Signals Corps Committee. Those who knew him only by his fiery reputation feared that this strong personality would run the Committee with a rod of iron, directing and not listening much to lesser mortals. We got a Chairman who always allowed full debate, never pushed his own view and listened intently and with real respect to the arguments, before he gave an impeccable summing up and clear decision.

For Ian knew something that most of us struggle to learn: the difference between Knowledge and Wisdom, the two opposing snakes on the caduceus of Mercury, our Corps emblem. Knowledge is about giving answers, something that engineers in particular love doing. But Wisdom is about having the patience and the intellectual rigour to ask the right questions. Ian was wise and we individually, the Corps, Andersen's and the many firms who's Boards he chaired all benefited from that.

**And wise men know how to have fun. His fifth quality is his sense of fun and his eye for the ridiculous.**

Early in his time with Andersen, Ian and an Andersen partner went to the hotel sauna in Ottawa to recover from jet lag. An urgent message arrived asking the firm to bid for some work. He and the partner transferred from the Sauna to the Hot Tub to plan the response. Ian was so thrilled: it was just like he had seen business being done in the movies! At last, he said to us all, he was a real businessman.

While he was in Moscow, Andersen invited the former Prime Minister, Ted Heath, to help publicise the bread project. Heath was famously grumpy. One unlucky member of the group drew the short straw and sat next to him on the flight out to Moscow. On the flight back to London, the team rebelled. With no-one willing to sit next to Heath, Ian stepped in. His solution was simple: get the drinks in. By the time they got to London Airport, Heath had become a bon viveur and wit, tirelessly regaling the plane with outrageous and indiscreet tales of Westminster, surrounded by fascinated young management consultants and a grinning Sprackling.

**So, completing this picture with the sixth quality, we see an unusually gifted man, larger than life and wholly human.**

He has been a generous friend, guide and mentor. I and many of us here owe him a debt of immense gratitude: and not just for his wise guidance and inspiring leadership.

But for close and loyal friendships over the decades, playing out over fierce debate and roars of laughter, over fast-emptying glasses in Welsh cottages, Bergerac farmhouses, Italian caravan sites and of course the great house that he and Annie ran at Mount Howe in Topsham.

Ian Sprackling deserves our admiration: for his lust for life, his wisdom, his supreme intelligence, his Orwellian

eye for hypocrisy, his Shakespearean insights into human nature, his mischievous sense of humour and his courage. Finally for his team act with Annie and the way she stood four-square with him in all things.

The world will be a duller place without him.

### **Major General Ian Oliver Sprackling OBE**

**3rd October 1936 – 28th March 2014**

## **Major General R Benbow CB**



Robert Benbow was born in India in 1933. He was educated at Kimbolton School, Cambridgeshire and joined the Army in 1951. He was commissioned from the Royal Military Academy, Sandhurst into the Royal Corps of Signals in 1953.

His first two tours of duty were with 17 Gurkha Divisional Signal Regiment after which he was Adjutant, The Junior Leaders Regiment, Towyn, Wales. He attended the Staff College, Camberley in 1964 and this was followed by tours as DAQMG in the Middle East, in command of 7th Armoured Brigade Headquarters and Signal Squadron in BAOR, as a Company Commander (Gaza Company)

at RMAS and as Brigade Major of Training Brigade Royal Signals at Catterick.

He attended the United States Armed Forces Staff College in Norfolk, Virginia in 1972 and in the same year was promoted to Lieutenant Colonel in the appointment of Commander Royal Signals Hong Kong and Commander Queen Gurkha Signals. His next appointment from 1975 to 1976 was as GSO1 Assistant Secretary (NATO) in the Chiefs of Staff Secretariat. On promotion to Colonel in October 1977 he assumed the appointment of Commander 1 Signal Group. In December 1978 he was to Brigadier and appointed Commandant of the School of Signals and in 1981 attended the Royal College of Defence Studies.

Thereafter, he served as Deputy Director of Personal Services (Army) until June 1983 when he was promoted to Major General and assumed the appointment of Signal Officer in Chief (Army). His final tour of duty was as President of the Regular Commissions Board at Westbury from December 1985 to April 1987.

Maj Gen Benbow was made a Companion to the Most Honourable Order of the Bath in January 1986, served as a Colonel Commandant of the Royal Corps of Signals from 1985 to 1990 and was Colonel Queen's Gurkha Signals from 1986 to 1990.

Robert married his wife, Pauline, in 1958 and they had three sons, Nicholas, Christopher and Alan. His interests were golf and gardening at the family home in the village of Winterborne Stickland near Blandford Forum.

### **Major General Robert (Bob) Benbow CB**

**4th January 1933 – 9th January 2014**

## Brigadier W E Sherratt MBE



Bill Sherratt retired from the Army in 1974 after a 31 year career in the Royal Signals. He was born on 30 January 1924 and enlisted into the Corps in 1943 prior to being commissioned in 1944. During the war he served with 5th Indian Divisional Signals in Burma and remained in India and Pakistan during the immediate post-war period, seeing the partition of the two countries at first hand, before finally returning to Europe in 1949.

Apart from three years in UK as GSO2 Plans at the School of Signals most of his subsequent service was spent in field units in BAOR and in staff appointments in the Far East. He

received the MBE for services in Malaya.

In 1966 Bill took command of 7th Signal Regiment having previously served with the regiment as a squadron commander. After a short break at the Ministry of Defence he returned to Germany as Commander Royal Signals 1st British Corps from there he went to serve as a Deputy Assistant Chief of Staff in SHAPE before taking up his final appointment as Director of Telecommunications (Army) at the Ministry of Defence in 1973.

He was an officer with great loyalty and enthusiasm and zest in all he did both at work and at play. He always seemed to have unbounded energy and was able to maintain his sense of humour and enjoyment of life however trying the circumstances might have been. Some of his happiest moments were on exercises in BAOR where his special interest in the practical side of field communications was always in evidence. His contributions to the success of the BRUIN trunk communications system and to net radio in 1st British Corps were particularly remembered.

After he retired from the Army, Bill joined Shell as head of the Technical Development Division in Information and Computing Services, a position he held for ten years. During his time at Shell he was responsible for introducing one of the first company-wide email systems in the world. On leaving Shell, Bill became an independent telecommunications consultant: his clients included major companies and scientific organisations. He also organised conferences mainly on GSM, including the GSM World Congress, over a number of years. He finally retired in 2001 at the age of 78.

He died in Kingston Hospital on 12th May 2014 aged 90. His wife Mary, whom he married in 1947, died in 2012. He is survived by his three sons; Richard, John and Nigel.

### Brigadier William Eversley (Bill) Sherratt MBE

30th January 1924 – 12th May 2014

## Brigadier R L Stonham

Ronnie Stonham was educated at Portsmouth Grammar School from where he joined the Post Office Engineering Department in 1944. He continued his education part-time at Portsmouth Technical College, where he studied Electrical Engineering and Telecommunications.

In 1948 he was granted an Emergency Commission in the Royal Corps of Signals and posted to 2nd Division Signal Regiment in Germany where he commanded 19th Field Regiment RA Signal Troop, stationed in the ex Luftwaffe

barracks on Dusseldorf airfield. He returned to civilian life at the end of his National Service in 1949 and joined the Territorial Army with 3 (Line of Communication) Signal Regiment.

In 1951 he applied to return to the Corps; he was granted a Regular Commission, posted to 3rd Division Signal Regiment in Colchester and appointed Assistant Adjutant. Just four days after his arrival, the Regiment was bound for Cyprus aboard HMS Illustrious, along with other elements of the



in Blandford for two years. This was followed by six months on the Senior Officers' War Course at the Royal Naval College, Greenwich and then 18 months as Chief Signal Officer, Headquarters 3rd Division which at the time was in its UK Mobile Force role at Bulford.

Promotion to Brigadier in 1978, he commanded 12 Signal Brigade (Volunteers) and appointed an Aide-de-Camp to the Queen in July 1980. His last tour, before retiring in July 1982, was as Brigadier General Staff (Author) in the Ministry of Defence where he wrote the classified operational history of the Northern Ireland campaign.

At various stages during his military career he served as Secretary of the Royal Signals Saddle Club, Chairman of the Royal Signals Yacht Club and Chairman of Royal Signals Shooting.

On retirement in 1982, he secured an appointment with the BBC, dealing firstly with a complete revision of the UK's Emergency Broadcasting Plans, in liaison with the Cabinet Office and Home Office, and secondly with the Corporation's Staff Vetting Policy; in this latter task he obtained a degree of notoriety and attracted much publicity in the press as the "BBC Vetting Officer"!

After leaving the BBC in 1989, he took on the task of planning, publicity and fund-raising for a new Corps Museum at Blandford. Handing over the reins of this project three years later he then became involved with various voluntary welfare and fund-raising activities in Wiltshire, Dorset and Somerset; including as a Case Worker for SSAFA, Chairman of Governors of his local Primary School and Chairman of the Royal Signals Welfare Committee. Indeed, he remained active throughout his retirement only handing over Chairmanship of the Castle Cary Branch of Macmillan Cancer Support at the age of 85. He was also Treasurer of the Friends of the Cemetery Chapel in Castle Cary and was largely responsible for the fund raising that made restoration of the chapel possible.

He was particularly proud of his association with 3rd Division, where he served twice; once in the 1950s and once in the 1980s. It was during this latter tour that he edited the book "Iron Division" (the history of 3rd Division) by Robin McNish. So, in 1996, with the very sad death of Brigadier Bertie Brett, he was the obvious choice to take over as President of 3 Division Signals Reunion Club. On relinquishing the Presidency ten years later he was elected Honorary Vice President.

Joy and Ronnie celebrated their Golden Wedding Anniversary in February 2004 with their three daughters, Sally, Susan and Mary, five grandchildren and other family members. Joy sadly succumbed to a bravely fought long illness on 20th January 2007, predeceasing Ronnie, who died on 5th August 2014 aged 87.

### **Brigadier Ronald Leonard (Ronnie) Stonham**

**9th July 1927 – 5th August 2014**

Division. The Division moved to Moascar in the Canal Zone in early 1952 where he became second in command of 'O' Troop before moving to El Ballah to command 32nd Guards Brigade Signal Troop. It was here that he met his future wife, Joy, who was attached to the British Military Hospital.

In 1954 Ronnie and Joy returned to UK for their wedding and for him to belatedly complete his Long Telecommunications Course; on completion of which he served as Staff Captain 'A' in Headquarters Training Brigade at Catterick. In 1957 he was appointed Signal Officer, Joint Experimental Helicopter Unit at RAF Middle Wallop, where he was involved in day and night navigation and homing trials for military helicopters; at this time night flying by helicopters was in its infancy.

After attending Staff College, Camberley in 1960, he held staff appointments with 17 Gurkha Division in Malaya from 1961-1964, spending his last 18 months as GSO 2 (Operations). On leaving Malaya he took command of 20th Armoured Brigade Signal Squadron in Detmold until 1966; reorganising it to become one of the early integrated Headquarters and Signal Squadrons. This was followed by a return to Catterick for a tour as Brigade Major, Headquarters Training Brigade.

Promoted to Lieutenant Colonel in 1968 he took command of 4th Division Headquarters and Signal Regiment in Herford until 1971; during this time the Regiment carried out extensive trials with Armoured Command Vehicles for the Divisional staff. The two years following command were with the Defence Intelligence Staff at the Ministry of Defence, spending time with the American forces in Vietnam during the "Vietnamisation" programme, also visiting Laos and Cambodia. Promoted to Colonel in 1973, he was appointed Chief Instructor at the School of Signals

## Colonel M J Ridlington



Director Army Recruiting in MOD in London.

An escape to Cyprus followed in 1978 where he commanded 259 Signal Squadron in Episkopi. On his return to London in 1980 he was posted as a GSO2 on the staff of the Signal Officer in Chief (Army). This was followed in 1982 by a return to Germany as 2IC of 1st Armoured Division HQ & Signal Regiment.

Promotion to Lieutenant Colonel followed in 1983 and his subsequent selection to command Birmingham University OTC. It was 19 years since he had been an undergraduate at the same University and was the first graduate of the University in living memory to command the OTC. Indeed he was also one of the first Royal Signals officers to command an OTC.

He returned yet again to Germany in 1986 as SO1 G3 (O&D) in HQ BAOR before being selected for promotion to Colonel and command of 8 Signal Regiment in Catterick in 1989. London beckoned yet again in 1992 with a posting to Whitehall as Assistant Director Defence CIS Ops shortly after the first Gulf War and the Liberation of Kuwait; events which had seen a step-change in Defence CIS capabilities. His final tour was also in the MOD, this time as Deputy Military Secretary (C). He retired from the Army in 1994 and he and his second wife, Pamela, then moved to Alicante, Spain.

They lived in Spain for twenty years, spending much of their time restoring an old house which is still the family home today. They had many hobbies and Mike was a leading light in the local amateur dramatic society; he directed, acted and was involved in every part of theatrical life. He was also involved with the local classical music group and had an almost encyclopaedic knowledge of the subject.

Mike's other great passion was orienteering; in earlier years he had represented both the Corps and the Army, after his retirement he joined the Alicante orienteering club and led the standing for his age group. He thoroughly enjoyed his retirement but unfortunately, in 2005 he suffered a debilitating stroke which left his left side paralysed. He struggled with this illness with remarkable fortitude but sadly in November 2013 was diagnosed with terminal cancer; once again, he bore this second illness with the same characteristic dignity. He passed away on 8th August 2014.

He was stepfather to Alexandra and Timothy and step-grandfather to Aliyah and Rocco.

**Colonel Michael John (Mike) Ridlington**

**17th March 1942 – 8th August 2014**

Mike Ridlington was born on 17th March 1942 at Boscombe in Hampshire. His father fought with the Glosters at the Battle of Imjin River in 1951 where he was taken prisoner by the Chinese for two and a half years. It was during this time that Mike was accepted as a pupil at Duke of York's Royal Military School. Whilst at DYRMS his talent as a swimmer came to the fore; he represented Kent and was selected for a trial for the English national team. Later he attended the University of Birmingham; where he graduated in 1964 with a BA in English and Latin.

He was subsequently commissioned into the Royal Army Education Corps and served for two years with the Junior Leaders Regiment RE before transferring to the Royal Signals in 1966 and attending 61 Q Course. His first tour with the Corps was as a troop commander in 4th Division HQ and Signal Regiment which coincided with the introduction of BRUIN and BID 150.

After attending the Junior Command & Staff Course he was posted to 24 Signal Regiment as Adjutant in 1969. This was followed by a tour in HQ BAOR as GSO3 Ops (LIVE OAK) in 1971 and a subsequent posting as 2IC of 19 Airportable Brigade HQ & Signal Squadron in 1973.

Two years later he found himself heading to Wellington in India to attend the Defence Services Staff College after which he was posted back to UK and to the staff of

## Colonel J D Cox



Jonathan Cox was born in 1943 and spent his early years in Whitchurch, Shropshire. It was whilst at school here, and particularly through the medium of the scouts and the Army Cadet Force, that he developed his life-long love of the outdoors; something which he was able to carry through his military career and on into retirement.

He was commissioned into the Royal Signals from Mons Officer Cadet School in January 1965. Early postings included Cyprus, Germany and command of an Army Youth Team in Dundee before heading back to Blandford for his Long Comms Course. A tour in 30 Sig Regt followed before a return to Cyprus and a subsequent tour with 39 Bde HQ & Sig Sqn in Northern Ireland at the height of 'the troubles' and internment. He earned a very positive reputation during this time for being "the most demanding troop commander".

Germany then beckoned once more with a tour in 7 Sig

Regt after which he attended RMCS Shrivenham and the Staff College in Camberley. His reward for passing Div 2 was an SO2 posting to the Planning Wing at the Intelligence Centre in Ashford.

Three further postings to Germany followed; firstly command of the COMCEN squadron in 2 Div HQ & Sig Regt in Bunde where his two COMCENS, Echo and Foxtrot, had an outstanding reputation. Next came a staff appointment in HQ 1st British Corps in Bielefeld and finally Second-in-Command of 28 (NORTHAG) Sig Regt in St Tonis. During his time in Germany he was able to continue with two of his other passions, skiing (both alpine and downhill) and orienteering; indeed he was for very active in Royal Signals Orienteering for many years.

Promotion to Lieutenant Colonel saw him posted to RSRE in Malvern and thence to Command of 37th Sig Regt (V) in Bristol; this was one of the proudest moments in his military career. He was always happiest when serving at Regimental Duty; popular and well-respected.

He was subsequently promoted to Colonel in 1989 and posted to HQ SOinC(A) in MoD London to be the Branch Colonel of Signals 34. This was a particularly challenging time with a great deal of focus on the equipment-related planning for Op GRANBY, the first Gulf War, whilst in parallel dealing with the down-sizing and restructuring of the Army under the post-Cold War 'Options for Change' programme.

Jonathan retired from the Army in 1993 and returned to Malvern where he took up an appointment with QinetiQ. But after a few years in Malvern the lure of the mountains of Snowdonia led him to retire a second time and settle with Dianna in Y Felinheli (Near Bangor) in North Wales. In addition to continuing to walk the hills and mountains of Snowdonia he spent some of his time supporting the work of the Esmé Kirby Snowdonia Trust.

He is survived by his wife Diana and his two sons Chris and Nick.

**Colonel Jonathan Donald Cox**

**4th October 1943 – 20th September 2014**

## Colonel J V Fielding CBE

Johnny Vivian Fielding was born a few months before the outbreak of the Second World War on 15 February 1939. From 1955 to 1957 he attended Welbeck College, where he was a noted cross country runner. He then attended Sandhurst and was commissioned into the Royal Signals in July 1959.

Following a tour as a troop commander he was selected to study for a degree RMCS Shrivenham. Further studies at Catterick followed, where he came top of his TE course. His reward was a posting as Adjutant of 17 Gurkha Signal Regiment in Seremban, Malaya. After 18 months there



Several interesting postings followed including being on the Directing Staff of the Nigerian Staff College, Commandant of the Signal Wing at the School of Infantry in Warminster, Commander Joint Forces Signals Staff in the Falkland Islands in 1983 and subsequently a year on the staff of the MOD Procurement Executive. It was at about this time that he also became a Chartered Engineer.

On promotion to Colonel in 1985 he found himself yet again heading overseas, this time to Saudi Arabia as Deputy Commander of SANGCOM; before once again heading back to the world of procurement and 'special projects' for two further tours. He was awarded a CBE for his work in Special Projects.

His final tour in uniform was once again overseas, as Director of the 'four eyes' (ABCA) Standardisation Office in Washington DC. On retirement he took up a post as the Retired Officer responsible for Military Secretary matters in the Parachute Brigade HQ in Aldershot.

Johnny was a tall, athletic and laid-back individual with a great sense of humour. He died peacefully in hospital on 7 September 2014 aged 75. He is survived by his wife Sheila their daughter, Emma Fielding, the well-known actress.

### Colonel Johnny Vivian Fielding CBE

15th February 1939 – 7th September 2014

he was posted to the Gurkha Independent Parachute Company in Johore Baru. This parachute experience paid off because after a Grade 3 staff job and then Staff College, Camberley he became OC 216 Signal Squadron (Para Bde) in 1974 followed by DAA & QMG in HQ 16 Para Brigade in 1976.

## Lieutenant Colonel L H M Gregory OBE

Lionel Hugh Michael Gregory (known as "Greg") is widely recognised as a pivotal figure in the early days of Gurkha Signals (now Queen's Gurkha Signals) in Malaya in the 1950s and a long-time supporter and friend thereafter. He was a man of strong religious beliefs, who also established the Ten Tors and Comex organisations.

On 1 January 1948 four Gurkha Infantry Regiments were transferred from the Indian Army to the British Army as The Brigade of Gurkhas and stationed in Malaya. Concurrently a new Division was formed in Malaya, titled 17th Gurkha Infantry Division in order to maintain a connection with 17th Indian Infantry Division and its three Infantry Brigades which had been largely manned by Gurkha battalions throughout the 1942-45 campaign in Burma. In pursuance of a policy to include Gurkha manned supporting Arms and Services within the new Division, Engineer and Signals units were raised. By 1950 sufficient Gurkha manpower had been recruited and trained in Royal Signals trades to form an operational Signal Squadron.

Greg was commissioned in 1941 and had a distinguished wartime service in the Royal Signals, including being

Mentioned in Despatches four times. In 1950 he was posted to Malaya, (where his brother was serving with the 10th Gurkha Rifles) to join the nascent Gurkha Royal Signals unit, based in an old transit camp on the northern edge of Kuala Lumpur. He already had an ability to write and speak Urdu and quickly became fluent in Gurkhali and familiarised himself with Nepalese culture and customs. He learned to play the 'madal' as well as many of the songs and dances performed by Gurkha soldiers to entertain themselves. A master of 'battis masala', his fiery hot curries were legendary amongst both Gurkha and British guests who enjoyed his hospitality.

Given command of the first fully trained Gurkha Signal Squadron, in December 1950 he deployed it to Kuala Lipis to provide the command and administrative communications for 48 Gurkha Infantry Brigade, whose battalions were engaged in the Malayan Emergency campaign against communist terrorists attempting to overthrow the Malayan government. In October 1951 Greg made a familiarisation visit to the British Gurkhas Lines of Communication organisation and their Depots in India, which included a journey to Kathmandu and an Audience with King Tribhuban.



51st Highland Division he persuaded the 'Keeper' of the Grant Tartan to permit its use by the Regiment. He also raised the Pipes and Drums and personally trained a team of Gurkha 'Scottish' dancers. In 1956 Greg, on behalf of the Regiment, attended a ceremony at St. James' Palace where HRH The Princess Royal presented her Pipe Banner to him. This was the first Royal Pipe Banner to be presented to a unit of The Brigade of Gurkhas.

On 23 September 1954 the Regiment paraded in Lamjung Camp to be presented with its own cap badge by Major General Perowne CB CBE, Major General Brigade of Gurkhas. All former and currently serving members of Queen's Gurkha Signals recognise that they owe much to Colonel Gregory for their cap badge and the content of the speech delivered by General Perowne on the day. The speech was repeated on the parade in Gurkhali without notes by Lieutenant Colonel Gregory. It notably contained the words "By your badge men shall know you. By your loyalty, by your behaviour, and by your technical skill, judge you as men, and measure your efficiency as men." These words, written by Lieutenant Colonel Gregory continue to inspire members of the Regiment, British and Gurkha to this day and are a foundation of the Regiment's kaida. By the time he handed over command of the Regiment in 1955 Greg had created a Regimental identity recognised by Royal Signals as competent and efficient communicators and as a respected member of the Brigade of Gurkhas family.

In 1952 Greg left the squadron and returned to Kuala Lumpur to take command of the expanding Gurkha Signal Regiment in the new Maxwell Road Camp. The Camp comprised of a number of wooden huts, built on and around a small hill feature, with mostly tented accommodation for all ranks and the Gurkha families. Ignoring its official identity, Greg renamed the Camp as Lamjung Camp; Lamjung being the home of the Gurkha Major, Major (QGO) Parsuram Gurung MBE (late 2/2 GR). From 1953 to 1955, Lieutenant Colonel Gregory was Commanding Officer 17th Gurkha Divisional Signal Regiment and Commander Royal Signals in 17th Gurkha Infantry Division. In 1953 he received the MBE.

After leaving the Regiment Greg continued paving the way for future generations as Commanding Officer of the Junior Leaders Regiment Royal Signals based at Denbury near Newton Abbot in Devon. He opened up adventurous training to disadvantaged youths by the creation of the two day Dartmoor Ten Tors Expedition, the first one being in September 1960, organised and run by his unit. Today the Ten Tors Expedition is a nationally recognised annual event, organised and supported by military units but so popular that that participation is limited to 400 teams of six teenagers aged 14 and 19 years. The event celebrated its 50th anniversary in 2010.

Known as "Giri-giri Saheb" by all Gurkha ranks, Lieutenant Colonel Gregory was determined to ensure that, despite some scepticism concerning the Regiment's signalling competence within the Royal Corps of Signals and some reticence to welcome a non-infantry unit into The Brigade of Gurkhas, the Regiment would achieve its rightful place in both organisations. As all the Gurkha manpower was enlisted into the Brigade of Gurkhas, the basic style of dress of Gurkha Signals was consistent with that of infantry regiments, modified to incorporate some features of Royal Signals dress, in particular to replace Rifle Green uniform with the Corps Blue and Scarlet equivalent. Greg opted for the now familiar light infantry black dress accoutrements and a Sam Browne belt but the latter was subsequently replaced with a Pouch belt. Dark blue was selected for the Regimental identity on hosetops, rank chevrons, stable belt, puttees and anklets.

After leaving the Army Greg organised and led the Commonwealth Expedition (COMEX), the first one in 1965 being an expedition from Britain to India in support of multicultural ideals of the British Commonwealth. There have now been 15 such expeditions. He also wrote a number of books, including Journey of a Lifetime: Story of Ten Tors and Commonwealth Expeditions (1997) and Crying Drums: The Story of Comex, the Commonwealth Expedition (1972). He was promoted to OBE in December 1998 "for services to Commonwealth youth".

Lionel Gregory's funeral was held in St Mary's Catholic Cathedral, Edinburgh.

### **Lieutenant Colonel Lionel Hugh Michael Gregory OBE**

**2nd September 1915 – 17th February 2014**

Greg's initiative produced the Regimental Crest, the design and initial manufacture of the Cap badge, which was funded by the Officers! Through an affiliation with



# The Royal Signals Association and The Royal Signals Benevolent Fund



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That work continues today and every year we help hundreds of those who have fallen on hard times whether it be a serving Signaller who has been injured on operations, the families of those who have made the ultimate sacrifice, members of the Corps who need help with specialist medical care for their children or veterans who need help in maintaining their mobility and independence.

We don't distinguish between Regular, Reserve, National Service, ex-ATS or WRAC who served with the Corps, officer or soldier and their dependants; any case brought to us will be considered with expert support from SSAFA, The Royal British Legion and the Army Benevolent Fund. We will help whenever we can .... and you can help too, by leaving a legacy in your will. Its simple to do and can make all the difference to someone who has worn the same capbadge and who may not have been as lucky as you. If you would like to make a difference, please contact the Association who will tell you how to leave a legacy so that others from the Corps might benefit from your generosity.



Royal Signals Association – Phone 01258 482090 or e-mail [rsa@royalsignals.org](mailto:rsa@royalsignals.org)

# THE CORPS FAMILY DATABASE

## - A 21st Century solution utilising Subscriber Customer Relationship Management

### EDITOR'S NOTE

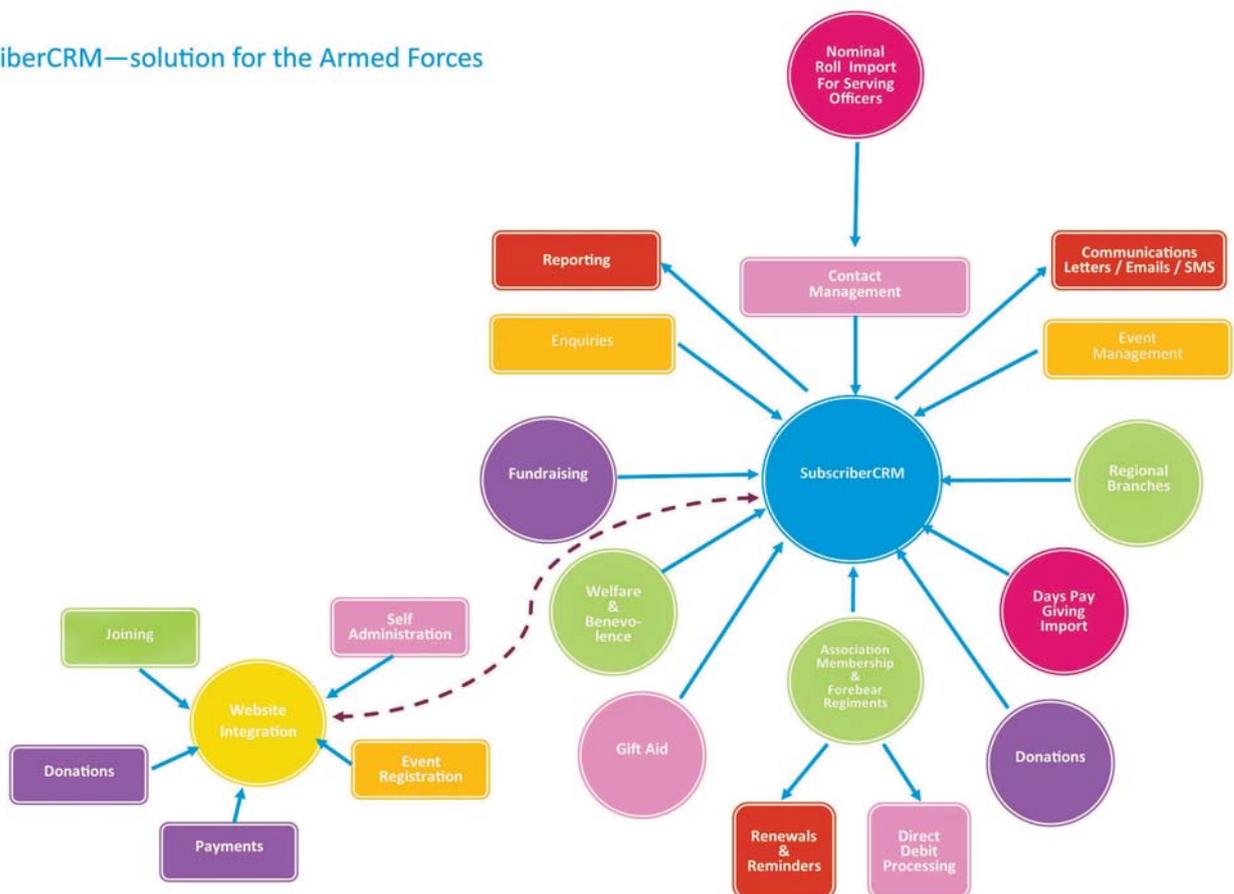
This brief article by Maj John Fradley, SO1 Communication and Heritage in HQ Royal Signals, is intended to give readers a brief glimpse behind the scenes showing the organisational and technological changes which are transforming how the Corps communicates with the 'Corps Family' in the 21st Century; where the Corps leads, the rest of the Army are now following.

It had been clear for some time in Headquarters Royal Signals that the way in which we continued to communicate with the Corps Family (the 3 Rs – Regular, Reserve and Retired) required to be updated. Whilst once probably leading the way and at the cutting edge of developing technology, we managed our data through an Access Database Solution developed and supported by former WO2 (FoS) Andy Soward. This had been a huge step forward and Andy went on to replicate his solution across a number of other Corps which in many cases he continues to support today.

As a technical Corps operating in the modern environment, it became clear that a more intuitive and flexible approach was required if we were going to effectively communicate with the Corps Family,

utilising the full range of modern communication channels. Having recognised the issue in early 2014 we have, since last Autumn, implemented a change in approach and also introduced a replacement application called Subscriber Customer Relationship Management (SCRM); built in Sequel and running on Microsoft.NET. The company we have partnered with, Dataware, have spent 10 years developing SCRM to meet the requirements of their many and varied customers. The functionality was already well matched to the requirements of Headquarters Royal Signals, but has been extended to meet some of our very specific military needs. The schematic below illustrates the functionality and utility offered by SCRM in their newly tailored 'Armed Forces Solution'.

### SubscriberCRM—solution for the Armed Forces



Having introduced SCRM in December 2014 and mapped our previous data across, we have been working hard to develop our processes to meet the vast functionality of this new tool. Additionally, we have written to all those with a current subscriptions and requested re-registration and payment details. This was in order to ensure we are Data Protection Act Compliant and that we had permission to continue to hold personal details and periodically communicate as required. This approach has not been without its challenges and we are aware that patience has been required on both sides.

The next phase in our development is to go Web or Internet facing, which we plan to introduce over the next few months. This will allow an individual to log on from home and register or update their personal details, subscribe to a publication or sign up for an event. The event module will be a huge improvement as individual requirements can be selected, whether these are attendance, dietary or accessibility requirement. We will also be in a position to

take online payments which will negate the requirement for form completion and cheques as we more often use today. A period of functionality and security trials will take place whilst we continue to work towards full compliance and accreditation.

The final phase will see RSA Members, Retired Corps, Serving and Reserve Corps invited to register online and update their personal details. The changes will allow HQ Royal Signals to continue to operate as an efficient and effective, fit-for-purpose, 21st Century organisation!

As is befitting for a technical corps, we are once again leading the way for the rest of the Army, as we have been asked to deliver a pilot working, web facing and accredited solution, whilst scoping the wider requirement for all other Corps/Regimental HQs.

Want to learn more? Take the Subscriber CRM Tour at <http://www.subscriber.co.uk/>.

**Below is a reminder of the contact details for the key individuals within Headquarters Royal Signals.**

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# Communication is everything



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