



# ***e-DEFENCE ELECTRONICS NEWSLETTER***

The e-NEWSLETTER OF THE DEFENCE ELECTRONICS HISTORY SOCIETY  
No 43: February 2016

## **THINGS TO COME**

**eDEN 43** opens with this picture of the USN 'destroyer' **Zumwalt** on its sea trials; a 'destroyer', though its displacement is 14,500 tons, the same as many WW1 battleships! Some 80 missile 'cells' encircle the hull, rather than being centreline based; and its two 155mm guns fire guided shells with an 83-mile range. The ship's power supply is a thumping 78 megawatts, enough for electromagnetic rail guns to be fitted. The Royal Navy's own First Sea Lord, **Admiral Sir George Zumbellas**, is a determined forward thinker (see **eDEN 39** on naval laser cannon), and has set up Exercise Unmanned Warrior when unmanned ASW, MMCM and ISTAR will be tested; see inside for Thales/ASV's announcement on unmanned MMCM!

Similar pioneering was the British thrust towards nuclear weapons in the early years of World War 2, and in our **Burns Lecture** on **Wednesday 13<sup>th</sup> April** we are delighted that the distinguished author and Institute of Physics Kelvin Medallist **Graham Farmelo** will address DEHS on '**Winston Churchill – A Nuclear Pioneer?**' Graham's book '**Churchill's Bomb**' about the early British development of nuclear weapons received huge international acclaim, and we are indeed fortunate to have secured such an outstanding speaker – **book now, on the form attached!**

Our forthcoming **Autumn Symposium** will be held on **Thursday, 6<sup>th</sup> October**. This event will be held jointly with our Affiliated Society, the **Vintage and Military Amateur Radio Society, VMARS**, and together we are assembling an outstanding exhibition and an 'all-star' cast of speakers, including **Peter Butcher** covering **Emergency Services Communications**, HMS Collingwood's **Clive Kidd** on **Naval Mobile Communications from the Boer War onwards**, and **Wing Commander Jeff Jefford** on '**Blue on Blue**', the fratricidal case when all communications prove futile. VMARS will also be providing a speaker and we look forward to seeing you all there.

In this month's issue, we open with **Ops Board** which is extended to cover our own and Affiliate events, from **MRATHS** and from the **Newcomen Society**. I then introduce our **Accounts for 2015**, with grateful thanks to the hard work of Dick Green, our Treasurer, and then move on to the happy news of our member the **Bawdsey Radar Trust** who have received a whopping Lottery Grant of £1.4 million for the conservation and interpretation of the Transmitter Block there – excellent work! More sadly, January saw the death of **Lt Cdr. David Balme, of U110 and Enigma fame**, but read more on his obituary – later, a Fleet Air Arm observer and fighter direction officer, and later still, adviser to the US film U-571, about whose portrayal of U-boat Enigma capture by the US Navy David was combatively unrepentant.

**Fred Starr** writes to trigger our responses on the interesting question of **Taffy Bowen and RDF 1.5**; and **John Liffen** appeals from the Science Museum to find out more about **Roderick Denman**, his 1920/30s predecessor as Curator of Communications, who intriguingly disappeared in a clandestine intercept operation in the Western Desert. **S/Ldr Mike Dean** provides some insight into the **Admiralty Type 74X decimetric sets** – intended for the Far East, and 'Force Z'? **Marconi's Beam Wireless Station at Dorchester** is described in the first part of a booklet by **Paul Hawkins**, and **Alison Bird**, daughter of the late **Astronomer Royal Professor Sir Martin Ryle**, provides the original typescript of her mother's transcription of her father's account of **early AI work at Worth Matravers**; next month, the original pages about his work for D-Day

Three articles loosely around the theme of GEE follow – discussion around **Andy Young's** apparently simple question of the **operational dates for each Mark of GEE and GEE-H** in World War 2; the vexed question of the value of **detonators** to destroy such equipment (with an experimental reconstruction of an exploded set); and then the first in a series of articles commemorating the almost forgotten group of WAAF radar mechanics, by **Amy Bridson**, the only one of their number – at least to my knowledge - to have written a book on the topic, whose unique memoir gives some operational insights into, for example, crew reaction to **Aural Monica's** endless blips. **Professor Brian Austin** then poses a question on the **Daventry Demonstration** (members will know I am not keen on mis-describing Daventry as an Experiment!), and **John Liffen** provides images of the Science Museum's splendid **Chain Home 1930s tower models**.

The mailbox overflowed last month with material about **LOP/GAP and RTV1**, so I include the first two responses and pose a couple of questions of my own before going into print next month with more about these interesting missiles and their Australian tests. **Thales, ASV and BAE** then bring us back to the present day, with news about **unmanned mine-countermeasures vessels**, and a new **ECM fit** for the trusty **Hercules C130J**.

We close with our **Publications** – the result of much hard work by Keith Thrower – and the end of a tale from the **Falklands** in our Tailpiece feature. More thoughts and input are always welcome, please!

## INDEX

February 2016 to 2017 Ops Board	4
AGM 2016: 2015 Accounts	6
Bawdsey Radar Trust Awarded £1.4 Million Grant	7
Lt Cdr David Balme – Obituary	8
RDF 1.5: <i>letter from Fred Starr, Newcomen Society</i>	10
Appeal for Information – Roderick Denman <i>John Liffen, Science Museum</i>	11
Admiralty Type 74X Mystery <i>S/Ldr Mike Dean MBE</i>	12
Marconi's Beam Wireless Station at Dorchester <i>Paul Hawkins</i>	13
Astronomer Royal Sir Martin Ryle's Radar Days <i>via Alison Bird</i>	24
GEE and GEE-H: Marks and Dates	29
GEE – Did Detonators Work?	30
WAAF Radar Mechanic <i>Amy Bridson</i>	34
Daventry Demonstration; the Heyford Aerial? <i>Prof Brian Austin</i>	38
Chain Home Aerial Models <i>John Liffen, Science Museum</i>	39
LOP/GAP, RTV 1/1e, and Woomera <i>Hugh Williams, Clive Kidd</i>	40
Thales/ASV <i>Halcyon</i> Unmanned Minehunter	47
BAE C130J upgrade	48
DEHS Publications	49
Tailpieces: A Falklands Ending for a Type 42	50