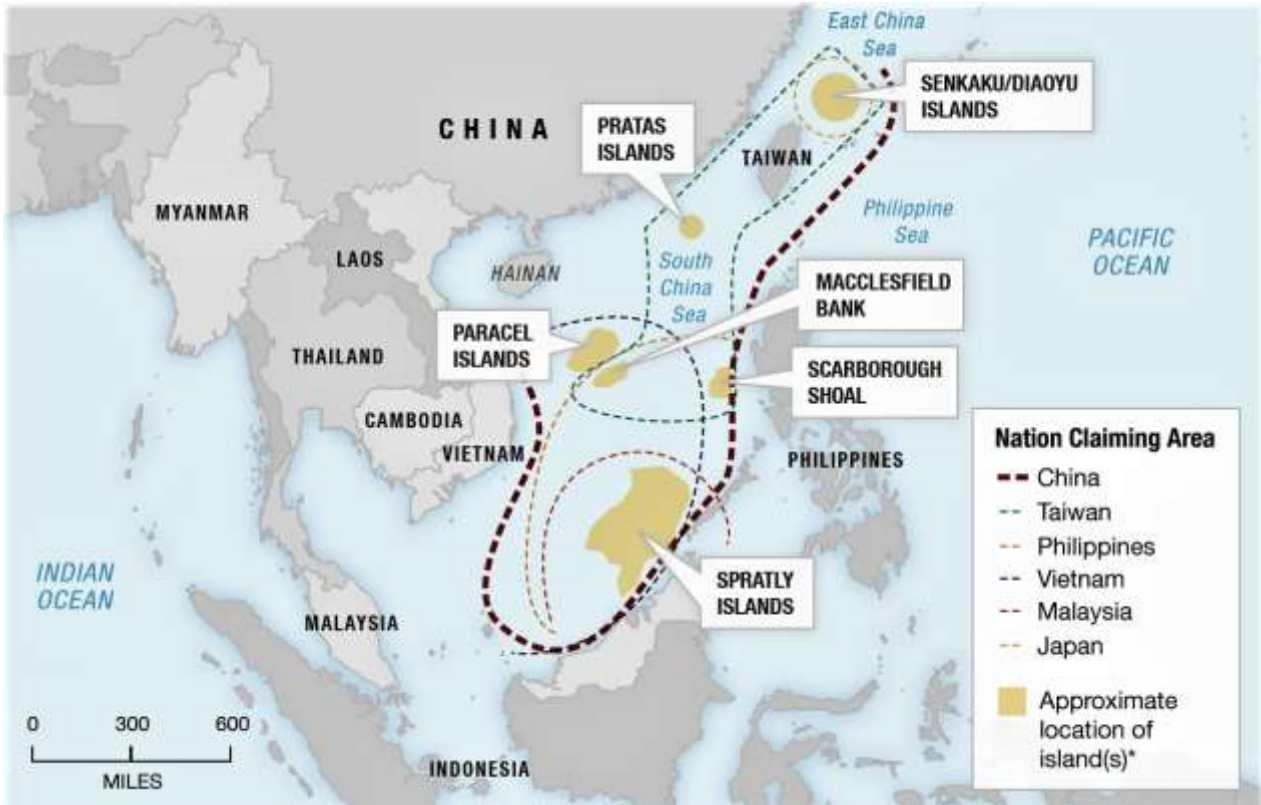




e-DEFENCE ELECTRONICS NEWSLETTER

The e-NEWSLETTER OF THE DEFENCE ELECTRONICS HISTORY SOCIETY
No 86: September 2019 Part I



MARITIME MATTERS ...

It has often seemed to your Editor that relatively little attention is paid to developing events in Asia, and more particularly in the disputed areas of the South China Sea, shown in the map above, and considered in more detail in this month's **Tailpiece 1**. History has shown us that it is dangerous to neglect this area, and indeed to neglect the area of **maritime radar and electronics**.

Although, therefore, once again, **eDEN 86** has cast its net wide, with articles on Army, Navy, Air Force, and clandestine electronics, **maritime electronics** feature significantly. Keeping to this issue's introduction, Part II consists of notification of a very relevant lecture by **Prof. Simon Watts**, and a major article on matters maritime – **what was the performance and reliability of radars in RAF Coastal Command during the Atlantic, and other maritime, Battles of World War 2**, and how were these radars kept running in the adverse maritime environment? This was a particular concern of a little-recorded activity of **TRE Malvern**, its '**Post Design Services**'; we will feature this important unit again in future issues, for it has major lessons for today.

Part I has three foci, the first being again articles covering significant subjects which merit greater attention. We look internationally, with a **French perspective on IFF** contributed by new member

Gaston Dessornes, whom we welcome most cordially to DEHS; and further international perspective is provided by **Mike Rowland's** article on **Operation Lodestone**, the electronics of the post-war counter-insurgency in Malaya. **World War I** provides two articles – on **US 'Signaling' in 1916**, before that nation entered the conflict; and the **preservation of WW1 artefacts**, considered in a 1954 letter from AEL's **H Brown** via HMS Collingwood's **Lt Cdr Clive Kidd**. Finally, yet another link with railways – the **LMS Hallade track recorder in a Beaufighter!** Why? **Mike Dean** explains, with **Jonathan Ayles** triggering an image from **National Railway Museum's Bob Gwynne**.

A second focus is provided by a series of contributions, written by members now deceased, from early issues of DEHS's Journal **Transmission Lines**, and including information recorded nowhere else. The greater majority of current DEHS members have joined after those issues, and may not know of their value, so here is a representative sample. The late **Brian Callick** provides two articles, the first on the **NT57 - The first transmitter valve designed for radar**, and the second on **'Making a Radar Magnetron'**, always a popular topic with DEHS members. Experience of keeping radar running is provided by **Bill Wilkinson on RAF Sharpitor**, and by **Geoffrey Merriman [via Colin Pomeroy] on RAF Renscombe**, the former TRE Worth Matravers and very poorly recorded after TRE left. The late **Reg Batt** gives a TRE view of **'The Birth of the Navy's 271 set'**; **Jack Shayler** takes the story further with **'The Early Days of Radar Type 271'**, while the **Naval Radar Trust's F G Kingsley** provides useful corrections in **'A Matter of Fact....'**. And did **radar ornithology**, in the form of gannets, **hinder British radar during the Channel Dash?** **J W Whitehead** poses the question. We move to Army radar use in three articles - **British Weapon Locating Radar** by **Jim Reynolds**; **Further Thoughts on Weapon Locating Radar - The Real Problems** by **Peter Stock MBE**; and **British Weapon Locating Radars** by **Brian S Baxter**, then Deputy Curator, REME Museum. RAF radar is the subject of two sets of articles – airborne use, by **Alfred Evans** on the lesser-known **G-H Wartime Radar Precision Bombing System**; and ground radars, on **ROTOR Electronics** by **Jim Reynolds & Sqn Ldr Tom Winchcombe MBE**, with a correction on the **Early Development of GCI** in **'ROTOR Electronics'** by letter from our late President, **Dr W H Penley, CB, CBE**. An interesting query was posed in a letter by **Michael Fan** – what was the date of first of the **V1 cruise missiles** to reach England? All new research by DEHS members welcome! The subject of the V1 triggered a further article by **Peter Stock MBE** on the **1950s fuze jammer 'Blue Warrior'** – again, more information welcome! At that same date, the late 1950s, **Wing Cdr John M Brown** was engaged on **Norway's NATO Early Warning Radar System**, and provides his memories here. **Dick Green's** excellent **Index to Transmission Lines**, and my own **Index to eDEN** are attached – please use them, and ask if you want electronic versions of the original issues.

The third focus consists of responses by members to requests for help in previous issues of **eDEN**. We have of course answered queries since the earliest days of DEHS, and from an early issue of **Transmission Lines** here is one such – **Molly Baker's** query on **a D/F Truck** answered by **Ross Muddell and Brian Baxter**, paralleled by a mystery for DEHS members today – an interwar Radio car, but is it Army, RAF or both? Answers please! Present-day responses to queries are well illustrated by **Sqn Ldr Mike Dean's** article on the **Chain Home Buried Reserves**, originally a query raised within the **Electronics Research Group**; and a follow-up by **Hugh Williams** of MRATHS, linking TRE's listening station at **Guarlford** with Mike's earlier work on the RAF receiver **R1334**.

My thanks, as ever, to **Mike Dean** for his invaluable help, and suggestions for improvements, offers of articles and all general comments to me at philjudkins@btinternet.com or info@dehs.org.uk.

Warmest regards all

Phil

Phil Judkins, DEHS Chairman.

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OPS BOARD

DEHS members are shown in RED – and we may note how many events involve DEHS members!

Currently open: Science Museum, London: Exhibition, 'Top Secret: from ciphers to cybersecurity', Tickets are free but can be booked at <https://www.sciencemuseum.org.uk/see-and-do/top-secret>
The exhibition is curated by **Dr Elizabeth (Liz) Bruton**, Curator of Technology and Engineering, Science Museum, committee member, DEHS, and also IET History of Technology Network

Wednesday 11th September 7pm VANGUARD: THE TRUE STORIES OF THE RECONNAISSANCE AND INTELLIGENCE MISSIONS BEHIND D-DAY Dr David Abrutat **Malvern Radar and Technology History Society**, Lewis Lecture Theatre, Science Centre, Malvern College, College Road, Malvern WR14 3DF. Operation OVERLORD, the opening up of an Allied second front by the invasion of the Normandy beaches in June 1944 was the largest military invasion of all time, but it was preceded by years of industrial scale intelligence collection and dangerous clandestine reconnaissance missions off the French coast. VANGUARD is the untold story of this work, the intelligence machine and covert reconnaissance missions that went into the D-Day planning, such as the signals intelligence intercepts, the agent running operations orchestrated by the 15th Flotilla, to the clandestine work of the X-Craft and COPP (Combined Operations Pilotage Parties) diver teams that scoured the Normandy coast months before the June 1944 deadline. The lecture brings together previously unpublished but declassified 'Top Secret' documents, diaries, letters, and personal accounts from some of the few remaining veterans who were there. **Refreshments afterwards**

Wednesday/ Thursday 18/19 September IEEE HISTELCON 2019, Technology and Innovation Centre, Strathclyde University, Glasgow: Theme 'Historic Computers'. Website: www.histelcon2019.org/

Saturday 21 September IET History Conference, Clayton Hotel, Bullsbridge, Dublin: historical engineering and technological innovations created on and from the island of Ireland. Details at <https://events.theiet.org/conference-on-the-history-of-technology/>

Sunday 22 September South Yorkshire Air Museum, Doncaster. Opening of Radar Display by Sqn Ldr Mike Dean and IET Lecture by Dr Jonathan Ayles Bloodhound on my Tail – see attached flyer.

Monday 23 – Friday 27 September IEEE RADAR 2019, Neptune Palais, Toulon.

- **Thursday 26 September 14.00 – 15.40: Historical Session** chaired by **Yves Blanchard**
 - **Prof. Hugh Griffiths**: *The MAMMUT Phased Array Radar: Compulsive Hoarding*
 - **Prof. Simon Watts**: *The Eagle (AN/APQ-7) and its assessment for ASV operation by RAF Coastal Command*

- Marc Leconte, Philippe Lacomme *History and development of airborne radar phased arrays antenna for French and European fighter*
- Stuart Anderson, Don Sinnott *Phased array antennas at HF: Half a Century of Developments in Australia's Over-the-Horizon Radar Programs*
- Daniel O'Connor *Early Phased Array Radars for Ballistic Missile Detection and Tracking*

Saturday 19 October 2 pm Cologne: IEEE ceremonial unveiling of the Hülsmeyer Milestone Plaque. Both **Prof Hugh Griffiths** and **Arthur Bauer** have been 'prime movers' in this event, which at long last places Hülsmeyer's radar researches, experiments and patents at the forefront of this technology. For more information, see www.cdvandt.org/Huelsmeyer/

Thursday 24 October, 7 for 7.30, Prof Simon Watts *ASV Radars for RAF Coastal Command 1940 – 1945* University of Reading – see Part II page 101 for full details

Wednesday 13th November *Radar Wars* Damien Lewis **Malvern Radar and Technology History Society**, details as 11 September.

Saturdays 16 & 23 November, 'Secret Communications' events Duivendrecht, Amsterdam. Arthur Bauer and Paul and Marc of the CryptoMuseum present their ever-changing and ever-popular displays of crypto and secret communications devices of all vintages, up to very recently indeed!

Wednesday 27 November DEHS CONFERENCE: 'SECURITY & INTELLIGENCE'; NEW VENUE, Smith Centre, Science Museum main building, Exhibition Road, London. **NOW FULLY BOOKED.**

Saturdays 7 and 21 December 2019, and Sunday 12 January 2020; 23-5, Kloosterstraat, 1115BJ Duivendrecht, Amsterdam. SECRET COMMUNICATIONS – see below. www.cdvandt.org.

Wednesday 15th January 2020 *ASV radar* Professor Simon Watts **Malvern Radar and Technology History Society**, details as 11 September.

