



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

The e-NEWSLETTER OF THE DEFENCE ELECTRONICS HISTORY SOCIETY  
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## **CONFERENCES AND PROJECTS**

A very busy year for DEHS members lies ahead, starting with our **Burns Lecture Day** - tomorrow! at **STEAM, Swindon** – then the opening of the new radar display at **Doncaster's South Yorkshire Air Museum on May 26th**; D-Day commemorations (choose from many!); **Bawdsey Radar Trust** special events on **4 July** and **4 August**; for those with travel in mind, **IEEE's HISTELCON on 18/19 September in Glasgow** immediately followed by **IET's History Weekend in Dublin on 21 September**; and then for foggy evenings an 'autumn of secrecy', with **Arthur Bauer** and the **Cryptomuseum's** ever-popular '**Secret Communications**' events in **Arthur's museum in Duivendrecht, Amsterdam** on five dates - **16 & 23 November, 7 & 21 December, and 12 January 2020** - and of course **DEHS's Security and Intelligence Conference at the Science Museum's Dana Centre, London on 27 November**. Beat that for a series of events! Details inside this issue of **eDEN** in a revamped Ops Board covering major events during this busy year, and on the respective websites.

And there is yet more! Members have been busy with power tools and soldering irons to bring back to life long-forgotten and often much-abused equipment, and in this **eDEN** we show several examples – above, **Tony Waller's** restoration of the **AI 8** from the **Norman Groom collection**, now residing in a superb custom-made transport trolley specially created by Tony to allow its easy

transport to displays and exhibitions. Tony is working the same painstaking magic with Norman's **ASV II, AI4 and AI 10**. This issue of *eDEN* also showcases **Tatjana Joëlle van Vark's** beautiful restoration of two **Rebecca indicators, an Indicator 302** (modified Indicator 233) and an earlier **Indicator 6B**. We are promised several spectacular items will be brought to display at our Lecture Day at STEAM tomorrow, and look forward with great anticipation! A full report, with photos, in June's *eDEN*.

This month in *eDEN*, we continue our practice of a wide range of articles, beginning with a whole series of articles and requests for help stimulated by our recent issues. First of all, **Peter McGee of the Elmswell History Group** asks for help identifying a possible WW1 (yes, World War One) telecommunications item found in excavations on that airfield; **Peter Marks** then poses two queries – one, after Peter's perusing Peter Ward's article in *Transmission Lines* over a decade ago, on the origin of the acronym **ASDIC**, and the second on the operational value of the **Bathythermograph**. **Dick Green and John Stubbington** stimulate an intriguing line of enquiry on the **Rainbow Codes**, and **Michael Ellis** narrates some practical experience of **MF** in a 1960s naval exercise.

Our longer articles this month begin with the radar experience of two different Armies - the German, in **A. E. Hoffmann-Heyden's** review of **AAA (flak) Radiolocation in Retrospect**; and the American, in **Roger B. Colton's Radar in the United States Army** - both articles written very soon after World War 2 and interesting for that reason among many others. Last month, I said that, on reviewing *eDEN* articles for subjects still not covered (of which there are many!), I had spotted that we have so far devoted less attention than we might to the key area of CRT displays during 1935-45, and so here are the second and third articles to redress that omission - **War-Time Developments in Cathode-Ray Tubes for Radar** by the trio of **L. C. Jesty of GEC, Dr T. H. Moss of Cossor and R. Puleston of EMI**; and a brief note on the **Skiatron, or 'Dark-Trace Tube'** by **P. G. R. King**.

I have to apologise to those expecting more on **Graf Spee: Radar at the River Plate** as work on the Lecture Day has meant that this has had to be held over for a further month, as also is a feature by **John Kaesehagen** commenting on **Emilio Ciardiello's recent early magnetron article**.

We conclude by looking first at **Thales'** new products and new customers - for Switzerland, an Image Intelligence System, and radars for Jamaican Coastal Surveillance. Finally, **Tailpiece**, contributed by **Brian Austin**, illustrates the probably unique painting by **Jeffrey Bass** of a 'pianist' or **Resistance radio operator, Virginia Hall**, titled '**Les Marguerites fleuriront ce soir**', and most recently used to illustrate reviews of the recently-published book 'A woman of no importance' by Sonia Purnell.

As always, many thanks to **Mike Dean** for his invaluable help, and suggestions for improvements, offers of articles and all general comments to me at [philjudkins@btinternet.com](mailto:philjudkins@btinternet.com) or [info@dehs.org.uk](mailto:info@dehs.org.uk).

Warmest regards

Phil

Dr. Phil Judkins, DEHS Chairman.

# DEHS CONFERENCE ON SECURITY & INTELLIGENCE

WEDNESDAY 27 NOVEMBER 2019

The Science Museum will be opening a new exhibition, '[Top Secret: from ciphers to cybersecurity](#)', from 10 July 2019 to 23 February 2020.

Tickets are free but can be booked at <https://www.sciencemuseum.org.uk/see-and-do/top-secret>

- From the trenches of the First World War to the latest in cyber security, *Top Secret* explores over a century's worth of communications intelligence through hand-written documents, declassified files and previously unseen artefacts from the Science Museum Group's and GCHQ's historic collections.
- Trace the evolution of the gadgets and devices used to conceal crucial messages and to decode the secrets of others. Hear from GCHQ staff doing top secret work to defend against terror attacks and serious crime and discover the challenges of maintaining digital security in the 21st century.
- Explore the story of Alan Turing and the team of Bletchley Park codebreakers who broke the Enigma code in 1941, uncover spy-craft from 1960s Cold War espionage and challenge your friends and family to become codebreakers in our interactive puzzle zone.

Top Secret coincides with the 100th anniversary of GCHQ, the UK's Intelligence, Security and Cyber agency.

The exhibition has been curated by **Dr Elizabeth (Liz) Bruton, Curator of Technology and Engineering at the Science Museum, and DEHS committee member**. She is also a committee member of the IET History of Technology Network.

**To coincide with this exhibition, the Defence Electronics History Society (DEHS) is organising a conference with the title 'Security & Intelligence'**. The Science Museum has kindly allowed the DEHS to hold the conference in the Dana Centre, located in Queens Gate, which is only a short distance from the main museum building. The only cost will be for refreshments and will be approximately £25.

Although it is early days, we already have seven confirmed speakers and two others who are probable.

1. The Keynote Address at the conference will be given by **Tony Comer, the GCHQ Departmental Historian**.
2. **David Kenyon, the Bletchley Park historian**, will give a talk on the History of Bletchley Park.
3. **Dr Helen Fry** will give the talk 'Listening-in: what was discovered from senior German POWs in WW2'.
4. A senior representative from the National Cyber Security Centre who tell us of the present-day cyber threat.
5. **Olga Topol, of the Pilsudski Institute in London**, will give a talk on the Enigma Double Machine.
6. **Dr Edward Stansfield**, previously a senior manager at Racal Research, is an expert on speech coding and will outline the workings of vocoders
7. I will give a talk on the Fullerphone which was used to provide secure Morse communication across the battlefield in the two World Wars.

Both the Newcomen Society and IET History of Technology Network are co-sponsors.

The conference will conclude at 4 p.m. and Liz will then take us through to the exhibition and give a conducted tour.

We are looking for a good turnout of our DEHS members together with colleagues from the Newcomen Society, the IET, GCHQ, Bletchley Park, and from related organisations and colleagues.

**Please make a note of the date and let Keith know asap by email if you are thinking of attending.**

Email: [kthrower@waitrose.com](mailto:kthrower@waitrose.com)

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