



e-DEFENCE ELECTRONICS NEWSLETTER

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DRONE FUTURES: BAE CONCERTO?

The Association of Old Crows' excellent eCrow tells us that the US Defense Advanced Research Project Agency, **DARPA**, is engineering a multi-functional RF system for small drones able to converge previously disparate radar, electronic warfare and communications functions into an integrated, flexible architecture. DARPA recently awarded **BAE Systems** a deal to collaborate on the effort, called the **CONverged Collaborative Elements for RF Task Operations (CONCERTO)**, which streamlines small drone mission capability by allowing a single platform to perform a range of functions more efficiently. At the moment, soldiers need to send up multiple drones in order to perform numerous mission sets such as electronic warfare, ISR or radar; CONCERTO uses integrated antennas, circuitry, software and hardware to enable a single drone to quickly switch from one payload function to another; for instance, if a fast-moving, high-threat combat scenario required rapid transition from an ISR mission to launching an electronic attack upon an approaching enemy, current compact drones would not have a mid-air ability to transition these functions. DARPA's CONCERTO plans to make this possible – all a long way from the World War I German explosive drone motor boats we saw in *eDEN 59*!

In *eDEN 60*, **Peter Butcher** provides us with his intriguing research on the 19th century origin of these boats, and we span the 20th century beginning with a description of the receiver used by **22 Squadron**, in its experiments with **radio-telephony in 1918**, the manual having been preserved by pilot **WFJ Harvey**, with thanks both to his son **Rupert Harvey** and, once again, to **Mike Dean**. **David Robertson** and **Phil Racher** both located the words to "**Jogging Along to Salisbury**" last month's challenge; well done both!

We move forward in time as **Jeff Jefford** traces the development of the **RAF 'Hand and Thunderbolt' badge**, and we revisit last month's reprint of the thoughts of Arthur 'Bomber' Harris in 1938 on a visit to the USA to review aeronautical developments there, by printing an account of **the state of the art in aircraft radio in the UK in the same year, 1938**, by **D Hay Surgonier**. How much, we wonder, was Harris aware of exactly what the UK offerings were compared to those of the USA?

We next return to the sea, with the third of the series of articles charting the history of **Radio Warfare in the Royal Navy 1900 – 1945**, which **John 'Jacey' Wise** has most kindly agreed to serialise here in eDEN; and following his comprehensive account last month of the Royal Navy's developments to meet the threats of the post-war period, our newest member, **Peter Marland**, has this month provided an outstanding article on **the 'Roots of ADA'**, with extremely useful multiple accounts by those actually involved in the process – read those accounts, and consider carefully just how closely the accounts of what worked and what didn't match your own experience!

Back to the present day, there follows our **Publications List**, and then In somewhat lighter mood, but with serious undertones, **Tailpiece** this month contemplates an image of what we hope was a victimless (though clear) breach of Health and Safety and invites suitable [and preferably printable] member captions to the image.

Part II takes as its focus the **World War 2 OBOE bombing system**. We begin with **Sir Arthur ‘Bomber’ Harris’ view of the various systems used by the RAF**, and move on to the IEE article in which **F E Jones describes the Oboe system** and its operation. **Mike Dean** has then contributed three articles on Oboe – the first giving a **USAAF view of the relative merits of Oboe** and three other blind bombing systems; the second, the developments to **link the automatic pilot ‘George’ to Oboe**; and the third, an account of an attack on the **German GEE jammer at Bad Homburg** with references to the Oboe station later set up there. Our final article is a Part I of a serialised detective story, which has as its subject the senior Oboe scientist airbrushed from history, **George Gavin ‘Gav’ Samson**. **Mike Dean** started the investigation, your Editor contributed a small piece of the jigsaw and our New Zealand colleague **Grahame Fraser** has made a massive contribution which will appear next month in Part II. Tailpiece II shows what you might unexpectedly find in your local art gallery – **pictures of the aerial feeders of Truleigh Hill GEE!**

As always, suggestions for improvements, offers of articles and all general comments to me at philjudkins@btinternet.com or info@dehs.org.uk.

Dr. Phil Judkins, DEHS Chairman.

INDEX

Editorial: Drone Futures – BAe Concerto?	1
Index	3
2017 Ops Board: Kew talks; October 13th DEHS Symposium; November 25th Nachtfee Day Event at Duivendrecht	4
Teledynamics <i>Peter Butcher</i>	5
“Jogging along to Salisbury” <i>David Robertson and Phil Racher</i>	6
‘A Voice ..’ - II: Telephone Wireless Aircraft Mk II: Set, Receiving (1918) <i>WFJ Harvey</i>	7
The ‘Hand and Thunderbolt’ Badge <i>Jeff Jefford</i>	24
Did Bomber Harris Know? Aircraft Radio UK, 1938 <i>D Hay Surgonier</i>	28
Royal Naval Radio Warfare 1900 – 1945 Part 3 <i>John ‘Jacey’ Wise</i>	49
Roots of ADA <i>Peter Marland</i>	65
DEHS Publications	88
Tailpiece: Caption Competition	89
Part II:	90
Harris and Radar Aids <i>Sir Arthur Travers Harris</i>	90
OBOE: A Precision Ground-Controlled Blind-Bombing System <i>F E Jones</i>	102
OBOE compared: The USAAF View <i>USAAF RADAR Magazine via Mike Dean</i>	129
‘George’ for OBOE <i>Mike Dean</i>	131
Hill 880 <i>USAAF RADAR Magazine via Mike Dean</i>	136
Oboe’s Missing Man: George Gavin Samson, Oboe scientist, 1907 – 41; Part I	140
Tailpiece II: The Art of Truleigh GEE	145