



UK CHAPTER NEWSLETTER

October 2020

Introducing Your New UK Chapter Website – Check it out!

As previously informed via a Special Edition Newsletter, 22 August 2020, the UK Chapter website has undergone significant changes. Hopefully by now, even if out of curiosity, you will have visited the new UK Chapter website at www.ukaoc.org. Most importantly, it is now up and running for you, our members, so why not take some time re-familiarise yourself with your local Chapter website if you have not already done so. We hope you like it!

Your Company Logo/EW Job Advertising on New Website

Your Logo - Why not consider sponsoring the UK Chapter by placing your company logo on the UK Chapter Website? Costs are modest and will promote your logo to the UK EW Community and beyond. Not only will you be supporting your local Chapter's activities, but you will also be reaching an ideal target audience; that must be good for business.

Your Jobs - Looking for the right EW personnel to fill your vacancies? Then also consider using the new UK Chapter website, to not only reach the heart of the EW community, but at the same time keep your recruitment advertising costs low. Advertising a vacant position on the Chapter website has been priced extremely competitively for all Chapter members and cannot be easier to set up.

Interested in taking advantage of these opportunities? Simply contact the UK Chapter President or any UK Board member for more information.

UK Chapter Board of Directors - Changes

Introducing Your New UK Chapter President:

by Dr Sue Robertson, AOC International Region 1 Director

As previously reported in May, due to the sudden and incredibly sad loss of our UK Chapter President, John Clifford OBE, an election process was commenced to determine a new President. The Board of Directors have now completed the election process in accordance



with our Constitution. To that end the Board are now pleased to announce that Chris Howe MBE has been formally elected to the position of AOC UK Chapter President.

Following a distinguished 26-year career in the Royal Navy, culminating in his appointment as Operations Officer at the Royal Naval EW Operational Support Establishment (RNEWOS) RAF Wyton, Chris was awarded an MBE for an outstanding contribution to the conduct of Electronic Warfare activities within both the United Kingdom and NATO.

Chris subsequently spent 18 years at Systematic where he was EW Director and responsible for EW Training, Database Management Software Solutions, associated Training and Support issues and general corporate Sales & Marketing activities for all EW matters on a global basis. Chris has been a member of the AOC for over 25 years and chapter Vice-President for 11 years. His impressive biography is attached, and I am sure you will agree that we are extremely fortunate to have Chris as our Chapter President.

Introducing Your New UK Chapter Vice-President

With Chris taking up the position of President, it was also necessary to elect a new Vice-President, the position Chris had previously held for 11 years. The Board are therefore also pleased to announce that Board Member Jonathan Bramley (aka Swaz) has been formally elected to the position of AOC UK Chapter Vice-President. Swaz has also taken on a secondary role of Awards Chairman, also in lieu of Chris.

AOC HQ Board Elections:

An email was sent out by AOC HQ to all members on October 1st informing that AOC HQ Board Elections will run from Oct 1st through Oct 30th. There is an amazing list of candidates this year. Be sure to read the candidates bios and watch their video messages. On October 1st, an email will go out to all members with their voting credentials. Please take the time to study the list of candidates and make your vote count, your support is very much appreciated. [List of Candidates and Bios Here](#)

Future Events/Visits

AOC EW Europe 2020 – Liverpool - 25th AOC European Conference. It is with great disappointment to announce that this event has been cancelled due to the ongoing restrictions caused by the COVID-19 pandemic. [EW Europe 2021](#) is being planned for May 2021 in Seville, Spain. Get the date in your diaries and we hope to see you there.

UK Chapter Christmas Dinner – RAF Club, Piccadilly, Friday 11, Dec 2020 (Cancelled)
Update: Due to the ongoing circumstances and restrictions caused by the COVID-19 epidemic, very sadly, it will not be possible for this year's Christmas dinner to take place.



Proposed Visit to 30 Cdo Y Sqn in Plymouth. Dr Sue Robertson had arranged a visit to 30 Cdo Y Sqn RM. However, due to the Covid-19 Lockdown it was cancelled. Once the current situation is resolved a future date will be agreed.

Possible Visit to Josef Pilsudski Institute in London Visit has been put on hold for the time being. However, the Institute is running a webinar style talk at 1800 on Wed 14 October 2020. The presenter will be Jerry McCarthy who is a Volunteer Docent at The National Museum of Computing (TNMOC), Bletchley and an Occasional Speaker at the Pilsudski Institute, Hammersmith, London. His talk will start with a brief description of the German 3-rotor Enigma and a summary of the various methods which Polish mathematicians and engineers created to decode messages sent by Enigma. The talk will then move onto a Polish designed machine, the LACIDA, which has some similarities to Enigma, but also some major differences from Enigma. The two machines will be compared, and their relative advantages and disadvantages will be discussed. The speaker will then demonstrate his software simulation; this will be followed by a Q & A session. Please consider joining what will be a most interesting talk.

Meeting ID: meet.google.com/nvi-kgub-qek PIN: 440 449 511#

Historic Article of Interest

The Woman Whose Invention Helped Win a War and Still Baffles Weathermen!

Her work long overlooked; physicist Joan Curran developed technology to conceal aircraft from radar during World War II.

On June 4, 2013, the city of Huntsville, Alabama was enjoying a gorgeous day. Blue skies; mild temperatures; just what the forecasters had predicted. But in the post-lunch hours, meteorologists started picking up what seemed to be a rogue thunderstorm on the weather radar. The “blob,” as they referred to it, mushroomed on the radar screen. By 4 PM, it covered the entire city of Huntsville. Strangely, however, the actual view out of peoples’ windows remained a calm azure.

The source of the blob turned out to be not a freak weather front, but rather a cloud of radar chaff, a military technology used by nations all across the globe today. Its source was the nearby Redstone Arsenal, which, it seems, had decided that a warm summer’s day would be perfect for a completely routine military test. More surprising than the effect that radar chaff has on modern weather systems, though, is the fact that its inventor’s life’s work was obscured by the haze of a male-centric scientific community’s outdated traditions.

The inventor of radar chaff was a woman named Joan Curran.

Born Joan Strothers and raised in Swansea on the coast of Wales, she matriculated at the University of Cambridge’s Newnham College in 1934. Strothers studied physics on a full scholarship and enjoyed rowing in her spare time. Upon finishing her degree requirements in 1938, she went to the University’s preeminent Cavendish Laboratory to begin a doctorate in physics. At the Cavendish, Strothers was assigned to work with a young man named Samuel Curran. For two years, Strothers got along swimmingly with her new lab partner. But with international conflict brewing in Europe, in 1940 the pair was transferred twice to work on military research and ended up at Exeter.



There, they developed proximity fuses to destroy enemy planes and rockets. There also, Strothers married Sam and took on his last name, becoming Joan Curran. Shortly after their wedding in November, the Currans transferred to the Telecommunications Research Establishment (TRE) in the autumn of 1940. Curran joined a team led by British physicist and scientific military intelligence expert R. V. Jones that was developing a method to conceal aircraft from enemy radar detection.

The idea, Jones later explained in his book *Most Secret War*, was simple. Radar detectors measure the reflection of radio waves of a certain wavelength off of incoming objects. As it turns out, thin metal strips can resonate with incoming waves, and also re-radiate the waves. Under the right conditions, the re-radiated waves create the sonic impression of a large object when in reality there is none—hence, the blob in Alabama.

This property means that a few hundred thin reflectors could, together, reflect as much energy as a heavy British bomber plane would. A collection of strips might conceal the exact location of an aircraft during a raid behind a large cloud of signal, or even lead the enemy to believe they were observing a major attack when in reality, there was only one or two planes.

By the time Pearl Harbor was attacked in 1941, Curran was nearly a year into painstaking experiments on using metals to reflect radar signals. She had tried a seemingly countless number of sizes and shapes, from singular wires to metal leaflets the size of notebook paper. The leaflets had been a particularly interesting idea, since they could do double-duty as propaganda sheets with text printed on them.

In 1942, Curran finally settled on reflectors that were about 25 centimeters long and 1.5 centimeters wide. The reflectors were aluminized paper strips bundled into one-pound packets and intended to be thrown out of the leading aircraft. When defenestrated from a stream of bombers once every minute, they could produce “the radar equivalent of a smokescreen,” according to Jones.

In 1943, the reflector strips were put to a serious military test when the Allies launched Operation Gomorrah on Hamburg, Germany. Operation Gomorrah was a brutal campaign of air raids that lasted over a week, destroyed most of the city and resulted in almost 40,000 civilian deaths. But with rates of only 12 aircraft losses out of 791 on one evening’s bombing raid, the campaign was a major victory for the Allies, in large part due to Curran’s reflectors.

Perhaps most notably, radar chaff was used as part of a large-scale, elaborate diversion on June 5, 1944 to prevent German forces from knowing exactly where the Allied invasion into Nazi-held continental Europe would begin. Deployed on the eve of what would become known as D-Day, two radar chaff drops, Operations Taxable and Glimmer, were combined with hundreds of dummy parachutists to draw German attention towards the northernmost parts of France, and away from the beaches of Normandy.

Curran went on to work on many more scientific and military technologies in both the UK and U.S., including the Manhattan Project. She is remembered as being a truly unique and skilled researcher, and was lauded in her obituary for having “the scientific equivalent of gardening green fingers.” But despite her impressive body of work, Curran’s legacy was obscured due to the customs of the time. In fact, Curran did not actually possess a degree from Cambridge when she did all of her remarkable war-winning work. This was not for reasons of merit—she had, of course, completed all her coursework for an honours degree in physics—but only because in that day and age, women were simply not granted degrees, despite completing all the work and being hired to continue their studies.

In 1987, Curran was finally awarded an honorary degree of Doctor of Laws by the University of Strathclyde. She died in 1999.

In her obituary, Jones was quoted as having said, “In my opinion, Joan Curran made an even greater contribution to [Allied World War II victory] than Sam.” Like many other female scientists who have faded unrecognized into history, Curran and her work was discussed only by men, and only in the context of that of her male counterparts. And her own words have never been published, nor recorded in interviews, making her voice unavailable to generations of female scientists who followed in her footsteps.

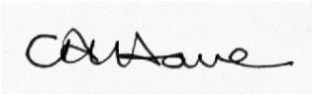
Curran’s life and work may not be splashy enough for a TV show, nor well-documented enough for a book. But she still deserves a place in history for changing the course of airborne warfare, and for confusing the heck out of 21st century weathermen.

Finally

Do remember, the UK Chapter is all about you, so please stay engaged and let the Board know what you want. Feedback is always most welcome; otherwise we are in danger of operating in a vacuum. We need more diverse and young members to become actively involved in what the UK Chapter does – any ideas will be greatly appreciated

The 3-year young adult complimentary membership is a great initiative and one the UK Chapter has worked towards for many years – please think about it and use it wisely, for example let your apprentice and training teams know about it. We are particularly keen to encourage apprentices in industry, academics and serving military personnel learning new EW-related skills.

Take care out there everyone and please stay safe.



Chris Howe MBE
AOC UK Chapter - President

**Check out the New UK Chapter website at:
www.ukaoc.org**

Chris Howe MBE - Principal EW Consultant

Profile

After 48 years' experience operating in the world of Defence and Electronic Warfare, Chris Howe MBE has now moved into semi-retirement and operates as an independent Defence EW consultant, based in Lincolnshire, UK. He is currently Course Administrator & EW Instructor for the Staff Officer Joint EW Course which is uniquely run on behalf of the NEWAC with full endorsements.

Prior to April 2016, Chris was the EW Director with Systematic where, for over 18 years, Chris was responsible for all aspects of the Electronic Warfare business. His duties included EW Training, Database Management Software Solutions, associated Training and Support issues and general corporate Sales & Marketing activities for all EW matters on a global basis. Chris now has 48 years working in the EW environment 23 of which have been in EW Operational Support to Front Line Forces.

Chris has been a member of the Association of Old Crows (AOC) for over 25 years; he has been a member of the AOC UK Chapter Board of Directors for over 14 years and has been the Vice President of the UK Chapter for the past 11 years, where his duties included Awards Chairman and UK Chapter Webmaster. Chris has also contributed to numerous



live EW symposiums where he has delivered papers on EW training and EW Operational Support issues, contributed articles to the Journal of Electronic Defence and has exhibited extensively at AOC and many other Defence/EW events over the past 25 years.

Chris joined the Royal Navy at 16 in 1972 and trained as a Communications and Electronic Warfare specialist and has 26 years' active service to his name, including as EW Director, in the rate of Petty Officer, in HMS Coventry during the FI conflict of 1982 where he suffered extensive burns at 27% when his ship was sunk in action on 25 May.

Chris is Chairman of the HMS Coventry D118 Association and a Board Member/Trustee of SAMA82 where he is responsible for Public Relations and Charity Liaison.

Chris's Naval EW career went on post 1982 to see him drafted as Electronic Warfare Staff Officer Advisor to COMNAVSOUTH Naples; then to HMS Illustrious where he was EW Director within a Carrier Battle Group; Chief EW Instructor at the RN school of EW; NATO MEWSG (now NATO JEWCS) Tracsvan Captain and subsequently Chris's final appointment was Operations Officer at the Royal Naval EW Operational Support Establishment (RNEWOS) RAF Wyton where he was instrumental in the formation of the tri-service UK Defence EW Centre and the first UK Joint Defence EW Database based at RAF Waddington, Lincolnshire, UK.

Chris left the Royal Navy in 1998; in the same year his efforts were formally recognised in the Queen's Birthday Honours List with the award of a Military Division MBE by Her Majesty Queen Elizabeth II for an outstanding contribution to the conduct of Electronic Warfare activities within both the United Kingdom and NATO.

Jonathan "Swaz" Bramley MSc BEng (Hons)

Profile

Jon "Swaz" Bramley has been working in Defence and EW for 18 years, starting his career as an RAF aircrew EW specialist in 2002. He enjoyed an active and interesting military service with operational deployments to Iraq, Afghanistan, Caribbean, and others. His final posting before leaving the Service was to deliver advanced EW and radar training to student aircrew at RAF College Cranwell.

After leaving the RAF, Swaz continued to deliver phase 2 training to all RAF Weapon Systems Operator (ISR) students destined for any of the UK's ISR platforms. He is still heavily involved in EW/ISR/aircrew training and runs a training and simulation company in Lincolnshire which currently provides instructors for the RAF's advanced aircrew training for EW, Acoustics and Land (EO/IR) disciplines, as well as training to international air forces and sensor operators.

Swaz is extremely passionate about all things EW, still enjoys teaching people new to the field and is also the Awards Chairman for the UK Chapter.