



THE RADAR BRANCH

RAAF ASSOCIATION (N.S.W. DIVISION) INC

Website: <http://www.raafradar.org.au>

Email: contact@raafradar.org.au

Patrons: Air Commodore D. Bowden AM (Ret'd)
Air Vice Marshal R.B. Treloar AO (Ret'd)

President: W. Fielder-Gill

Correspondence: Secretary, The Radar Branch
2 Preece Close, SPRINGFIELD NSW 2250
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BULLETIN FEBRUARY 2007

REGARDS TO OUR PRESIDENT

On behalf of the Branch Patrons, Committee, and Members we extend best wishes and a speedy recovery to our President, Walter Fielder-Gill who is convalescing from a bout of ill health over the New Year. We send our united kind regards to Walter and Lae and look forward to his return to the fold.

FUTURE EVENTS

THE RADAR BRANCH ANNUAL GENERAL MEETING (AGM)

- (I) **Date:** Tuesday 20th March 2007 – 1030am
- (II) **Venue:** RAAF Association Headquarters
Defence Plaza, Level 23, 270 Pitt Street, Sydney 2000 (Phone 02 9377 3485)
- (III) **Travel:** The Defence Plaza is in Pitt Street between Park and Bathurst Streets. It is a 5-minute walk from Town Hall Station. The nearest parking station is at 133 Castlereagh Street, one block north between Park and Market Streets.

The AGM will call for nominations for all office bearers and elect the Executive and Committee members. Of course, existing office bearers are welcome to stand for re-election. All positions will be declared vacant and nominations can be made in writing to Secretary or orally at the meeting. Members are encouraged and welcome to participate in the election of your committee and executive.

The first committee meeting of the Branch elected officers will follow the AGM.

Those wishing to attend and nominations for office are requested to be sent to The Secretary (details above) or e-mail to contact@raafradar.org.au

Please Note: All Members and Friends are most welcome.

ANNUAL RAAF BIRTHDAY FUNCTIONS 2007

This years Annual Birthday Luncheon to celebrate the 86th Anniversary of the formation of the Royal Australian Air Force will take place as follows:

- (I) **Church Service:** 1030am Sunday 25th March, St Andrews Cathedral
- (II) **Commemorative Service** 1100am Friday 30th March, Cenotaph Martin Place Sydney
- (III) **Annual Luncheon** 1200 for 1230 Friday 30th March, Parliament House

For details of the events, please contact the RAAF Association, NSW Division Phone 02 9377 3485

The luncheon is \$60 per head and members of the Radar Branch have enjoyed the event over many years. If you haven't been before, please consider attending to experience a special function in a very special and friendly venue with other Radar Branch members. The RAAF Association extends the invitation to the function to all Radar Branch Members and partners and requests that payment (cheque \$60 per head) be forwarded to the following address ***no later than Friday 16 March 2007***. Please also annotate membership of The Radar Branch to assist with the seating plan.

State Secretary
RAAFA NSW Division
PO BOX A2147
SYDNEY SOUTH NSW 1235

If you wish more information please contact The Secretary (details above) or e-mail to contact@raafradar.org.au

ANZAC DAY 2007

All RAAF and WAAF Veterans and serving members are invited to assemble at the usual 1030am in Elizabeth Street, City (just south of Market Street). Again this year, we will be accompanied by a contingent of serving members from Surveillance and Response Group (SRG), RAAF Williamtown. SRG includes Nos 41, 42 and 44 Wings which were also active in WWII as radar units. We are extremely grateful and delighted that serving RAAF members can once again join with us on this important day.

In addition to serving members, WWII and Post WWII veterans, one relative representing a deceased or disabled veteran may march with the Radar Branch. Representatives of veterans may wear the veteran's medals on his or her right side and are invited to march in the contingent rear rows. Please be assured that Representatives are most welcome and will be looked after.

ANZAC Day Banquet Lunch - \$35 per Head

The ANZAC Day Lunch 2007 will not be held at The Original Peking VIP Restaurant due to closure for building renovations. We are grateful to the management of the Original Peking for making alternative arrangements on our behalf.

ANZAC DAY 2007 VENUE: The Emperor's Choice Restaurant, Corner King and Castlereagh Streets, Sydney

The annual lunch following the Anzac Day March will be held at a new venue in Castlereagh Street a short walk from the Original Peking Restaurant where we have held the function for the past seven years. The Original Peking is closed due to building renovations and has graciously arranged an alternative venue on our behalf. Lunch will commence 1230pm to 3.00pm at the EMPEROR'S CHOICE RESTAURANT, on the corner of King and Castlereagh Streets, Sydney. An usher will be on the corner to direct members to the restaurant.

It is a lovely restaurant with an impressive menu and run by extremely nice folk. The restaurant would not normally open on ANZAC Day and they have eagerly accepted the opportunity to host our Branch and contribute to the spirit of ANZAC Day.

The banquet is open to all members and guest, particularly those who are unable to march but wish to meet up with old friends and make new acquaintances.

Please fill out the slip included in this bulletin and return to the Secretary **by Friday 13th April 2007**. Payment can be made by cheque accompanying the slip or at the restaurant on the day.

COMMITTEE MEETINGS

The first Branch Committee for 2007 was held at 'The Landings' Retirement Village, North Turrumurra. The meeting was chaired by Vice President Terry Delahunty and attended by:

Secretary Howard Campbell, Treasurer Malcolm Le Bas, and Committee Members Stan Burge, Cec Blumenthal, Bette O'Donnell and Shirley Brettle.

The committee reluctantly accepted the resignation from the Branch of Tom and Norma Bond and our appreciation for their dedication and contribution to the Branch on behalf of all members has been formally conveyed.

CHANGE OF BRANCH NAME

The Branch name was changed to **The Radar Air Defence Branch** in the early 1990s to reaffirm the relevance of the Branch to the emergent importance of Air Defence in the RAAF under the leadership of today's Patrons, Air Commodore Dave Bowden and Air Vice Marshal Bob Treloar. The reformation of WWII Wings, namely No 44 Wing and No 42 Wing for Air Traffic Control and Airborne Early Warning respectively has further expanded the interests of the Branch. Moreover, it has widened the pool of membership, which now includes members of military Air Traffic Control, future members of the AEW&C capability, Airservices Australia, Australian Industry, Australian Public Service and Ground Telecommunications and Electronics, and even members of the RAAF involved in Space capabilities.

With the expanded interest and professional expertise in radar in the Defence community, the Committee voted to revert to the original Branch name of **The Radar Branch** to include and encourage new membership and participation in the science and application of radar. The change was not taken lightly and is in no way intended to diminish the importance of Air Defence, which remains a key fundamental element of the defence of Australia and retains a rich heritage in the development our Branch.

Comments on the decision to change the name of The Branch are welcomed. Please contact The Secretary (details above) or e-mail to contact@raafradar.org.au

VISIT YOUR WEBSITE

The Committee has established our Branch on the Internet under the domain name:

www.raafradar.org.au

The name has been approved by the RAAF Brand manager and has been included as a linked site on the RAAF website. In this regard, we have an obligation to uphold the values of the RAAF on our website and comply with Defence rules on the use of official imagery and material.

The site was opened on 6 October 2006 with abbreviated versions of our Branch history, which notes in particular: our Branch formation date, namely 23 August 1960; Radar Research in Australia and Radar at war in the RAAF WWII 1939-1945. The words used re the latter entry reflect those included on the Plaque which was unveiled on 22/03/06 (64th anniversary of RAAF Radar) at the RAAF memorial Grove Remembrance Drive Canberra. We would greatly appreciate any feedback as well as contributions to 'contact@raafradar.org.au'. We would be particularly interested in member preferences to receive an electronic copy of The Bulletin to their email address.

Please note that copies of the Bulletin are posted on the website.

VALE

Vale Frank Harold (Hal) Porter 24 -1 23 to 23-10-06

Last year, we regretfully said good bye to one of the original and influential members of the Radar Community when Frank Harold Porter passed away. Hal Porter's experience in WWII is particularly an exemplar for serving RAAF members today. Due to WWII extenuating circumstances, Hal was appointed a Commanding Officer of a Radar unit at the tender age of 19 years. The comments below from Mr Ed Simmons (with his permission), a good friend of Hal Porter (and also the recognised authority on Radar history in Australia) provides an insight into Hal Porter's service and his major contribution to Radar.

"When Hal passed away I lost a valued friend and Radar Returns lost a keen supporter. Only a week or so before his demise he was encouraging WWII veterans to send their recollections to the editor. After the war while he was waiting to resume his university studies he wrote a book about his wartime experiences. The veil of secrecy about radar that still prevailed, plus brushes with Army censors, stopped its publication. Soon after we started the history exercise his story called Adventures in Radar was privately published.

Those of us who 'signed up' before Pearl Harbour were intended to be technical support for the RAF and we were informed that we would serve overseas but that soon changed. Hal was on the first course of Bailey Boys and one of the youngest commanding officers of a radar station. To me I feel that while W/Cdr Pither had no other option it placed a big responsibility on the shoulders of a 19 year old. Early in 1942 there was no AW at Radar School for instructional purposes but S/Ldr Chilton gave his idea of the gear.

To me the time has now come when the full story of 38RS on Bathurst Island can be told. The unit was on the front line and Hal was appointed the second CO after the first officer panicked. Fearing a Japanese invasion he hid the gear in the scrub and blew through. The gear was an AW and the AW transportable tower and antenna – both of which were new to Hal. Being conscientious, and having a feeling of urgency, there is no doubt that he drove his men hard during the installation so earning him the nickname of 'the angry ant'. The Area Radar Officer took 6 months from Hal's seniority – the bureaucratic-type reason given was that he had installed the unit before building the station's camp.

We first met at 44 Radar Wing early in 1943 when I was posted to that unit and he had just returned from establishing 38RS on Bathurst Island. We were unaware that he had just suffered an injustice. Hal showed no signs of holding any grudges. Being a conscientious officer who believed that all airmen should be trained in the use of weapons he conducted training, which we loosely called 'the mad mile'. At the time we felt no resentment as we felt that the threat of a Japanese invasion was a possibility.

Hal had a more varied career than most. For instance, he was the sole survivor of an air crash and served as the Radar Liaison Officer in Sydney. At 44Wing, with an airman called Jack Fraser, he introduced the concept of 'the spotted dog' to the system. It enabled Radar Wings to give an assessment of a station's coverage and effectiveness.

It is difficult for me to tell the degree of assistance Hal gave to me during the history exercise except to say that it was very large. I am not too proud to say that there were several times he was used as a sounding board. The advice, that came from his brother Chester Porter QC, concerning defamation and libel, was particularly helpful to me.

I believe that F/Lt F H Porter was one of our important radar officers and many of us will retain good memories of him. May he rest in peace."

PROFILES

In this bulletin we profile two important and distinguished members of RAAF Radar. Emeritus Professor John Bennett, AO was one of the original 'Bailey Boys' of 1942 and became a pioneer and leader in the development of computer science in Australia. Sir Bernard Katz, A Nobel Prize winner, was born in Germany and was already an experienced scientist when he joined the RAAF in 1942 and served on active service in 41WG during WWII. Their profiles are not only extremely interesting but also (undoubtedly) inspirational to Radar practitioners today.

Emeritus Prof John M Bennett AO FTSE – ‘ONE OF THE BAILEY BOYS’



I was born in 1921 in Warwick, Queensland. In 1941, with a Civil Engineering degree from the University of Queensland, I applied to join the RAAF. Early in 1942, I found myself a member of the second course conducted by the staff of the University of Sydney School of Physics headed by Professor Victor Bailey. This was to set the theme of my subsequent career in computer science.

The course was excellent. Although the word ‘radiolocation’, as radar was then called, was not mentioned it provided us with the intellectual tools to keep up to date with developments in the field over the next few years – as well as the practical tools for the immediate job in hand. In due course, having been initiated into our responsibilities as officers and the mysteries of radiolocation, came postings to individual units as Pilot Officers. Mine was to no. 312 on Wessel Island, off Arnhem Land. When we arrived, the Wessel Island tribe of about 35 Aborigines had had little or no contact with Europeans. The Aborigines were a great help in carrying our equipment to its final location (made no easier by a tide of at least 13 feet), and in building two airstrips. For this and other work, and in exchange for fish and other food items such as turtle eggs, they were paid in tinned food and tobacco. Although we did not realise it at the time, we were showing the younger Aborigines that there were easier ways of collecting food than hunting and foraging. I later discovered that for a while the RAAF believed that the whole unit had been captured by the enemy. With an under powered transmitter, we had been allocated a radio frequency which was the same as the main Townsville to Port Moresby link - at the height of the New Guinea campaign. In addition we had officially left North Eastern RAAF Area, but could not establish communication with North Western Area, to which we had been transferred

My next posting was as CO of a Ground Control Interception (GCI) station (132) at Knuckey’s Lagoon, a few miles south of Darwin. The lagoon was two or three miles long and one mile wide at the end of the wet season and a few hundred feet at the beginning - and was full of leeches. My next move was to RAAF Headquarters in Melbourne. My assignment there was to write a book – detailing part numbers of all components in RAAF radar equipment!

In 1947, after further university study in maths and electrical engineering, I was accepted as a PhD student in Maurice Wilkes’s EDSAC team at Cambridge, partly because of my radar background. This team was building the world’s first stored program electronic computer. In addition to designing and implementing computing parts of the machine I was able to use EDSAC to carry out the first ever electrical power network and structural engineering calculations on a computer as part of my PhD. In 1950 Ferranti Ltd, manufacturing electrical engineers, were beginning to build computers. They recruited me to work in Manchester, and later in London, to advise on computer design and to build up a software group, mainly to interface with industrial engineering users. These were very exciting times. Everything we touched was new. I also met and married my wife Mary while we were both working at Ferranti Manchester.

By 1955, I felt it was time to return to Australia, initially for three years. The School of Physics in The University of Sydney was building a computer, SILLIAC, and Harry Messel offered me the job of setting it up and teaching people how to use it. We set sail for Sydney, with two small children, in the *Orcades* and managed to get through the canal before the Suez Crisis closed it. I started spreading the word on computers in January 1956 and continued doing just that until I retired in 1986. Our emphasis was on using computers as tools rather than building them. Staff in many disciplines, apart from Physics, soon came to appreciate how SILLIAC and its successors could speed up their research. We trained numerous computer scientists for industry, provided service work for industry, including the Snowy Mountains Authority, and, by the time I retired in 1986, six holders of computer science professorships in Australia and New Zealand and about half Australia’s computer science graduates had come from the Department.



A three year stay has become fifty. I was the founding president of the Australian Computer Society. It is hard to remember now life without computers. Sydney proved an attractive place in which to live and I kept in touch with the outside world as Australian representative on several international bodies. In retirement Mary and I continue to live near Manly, where our four children spent most of their childhood and where they continue to visit from time to time with some or other of our six grandchildren. Life is good.



Sir Bernard Katz

Sir Bernard Katz FRS (March 26, 1911 – April 20, 2003) was a German-born biophysicist, noted for his work on nerve biochemistry. He shared the Nobel Prize in physiology or medicine in 1970 with Julius Axelrod and Ulf von Euler. He was knighted in 1970.

Bernard Katz was born on March 26th, 1911, in Leipzig, Germany, of Russian Jewish origin, only son of Max Katz and Eugenie Rabinowitz. His school education was at the Albert Gymnasium in Leipzig (1921-1929). He studied Medicine at the University of Leipzig, 1929-1934; received the Siegfried Garten Prize for physiological research in 1933 and obtained his M.D. in 1934. He left Germany in February 1935 and was accepted as a Ph. D. student by Professor A.V. Hill at University College, London. Katz worked in A.V. Hill's laboratory until August 1939. He received a Ph.D. (London University) and a Beit Memorial Research Fellowship in 1938. In 1942, he was awarded the degree of Doctor of Science (London University). In 1939, Bernard Katz joined J. C. Eccles' laboratory at Sydney Hospital, Australia, as a Carnegie Research Fellow. He collaborated with J. C. Eccles and S. W. Kuffler in neuromuscular research.

In 1942, after naturalization in 1941, he joined the Royal Australian Air Force, and served as a Radar Officer in the South West Pacific until the end of the war.

In 1946, returning from Australia to University College, London, Katz rejoined A.V. Hill's research unit as Assistant Director of Research and Henry Head Research Fellow (appointed by the Royal Society). He was appointed Reader in Physiology in 1950; since 1952 he held the post of Professor of Biophysics at University College, London. He was knighted in 1969. The major fields of research of Professor Katz include: studies of nerve and muscle, especially of the physico-chemical mechanism of neuromuscular transmission.

Sir Bernard Katz died on April 20, 2003. The following is recollection of Sir Bernard Katz and his WWII service by Branch Committee member Cec Blumenthal who served with Sir Bernard in the Pacific:

“A direct entry into Radar, he came to course No 4 Ground Radar at Radar School at the same time as 2nd division of the Bailey Boys. He had knowledge of electronics from his research into the functioning of nerves (at Sydney Hospital). Posted to 1 RIMU at Croyden off course, he was given the task of taking a small group to Melbourne to bring back a Mobile GCI set from the UK which had been landed there. It was interesting to see the hard rubber tyred WWI prime movers (trucks) that had an estimated cruising speed of 16 miles per hour (25 Kph).

As a Flying Officer, Bernard was posted to 41 Wing. As the Flight Lieutenant Senior Technical Officer (equivalent to SENGO today) he was in charge of the technical installation of 335RS on Pilelo Island, nearby to Arawe, during the assault on Arawe and Cape Merkus to dislodge the Japanese forces. 335RS was the only Radar Station to go in with the assault troops during the Pacific War. (The full story is in 'Echoes Over the Pacific' by Ed Simmons and Norm Smith)”

RADAR IN THE RAAF TODAY



The Royal Australian Air force has established the category of **Air Combat Officers (ACO)** which will replace several categories, including Navigator, Air Defence Officer, and Fighter Controller to prepare for the emergent era of network centric warfare. The following extract from the RAAF News gives an insight into the new era that the Chief of Air force, Air Marshall Geoff Shepherd;'s leadership is taking our Air Force to the forefront of modern Air Forces in the world today'

AIR Force in the 21st century is at the forefront of exciting changes in the way it is addressing its future challenges, and while we all have a role to play in moving ahead. It is the young officers who are charged with the responsibility to take ownership of these changes and carry them on. CAF AIRMSHL Geoff Shepherd challenged them to seize the future when he presented new Southern Cross brevets to fighter controllers and air defence officers and welcomed them into the new Air Combat Officer (ACO) category at a special parade at RAAF Base Williamtown on December 11. More than 100 of Air Force's 160-strong fighter controller and air defence officer contingent attended – the largest gathering of the group ever held.

The ACO category comprises current navigators, airborne electronics officers and air defence and fighter control officers. Its inception follows a March 2005 review of aircrew categories and their role in delivering air combat capability, and a concurrent review of the broader Air Force personnel strategy, which highlighted significant commonality between future officer operators of the Multi Mission Aircraft, AEW&C and maritime UAV, and the air defence ground environment. The studies found that the future concept of operations for network-centric warfare (NCW) will require a person with broader skills and experience than that needed today. The result is the creation of the new ACO category, which combines the skill sets of those existing categories. ACOs and pilots will make up the battlespace command and control teams, which will be responsible for the direct application of air power, regardless of where the operator is physically located.

From an operator on the ground in Australia relaying real-time data to an operator overseas in an AP-3C, NCW will link the ACOs for the execution of the overall mission. "The paradigm of getting in an aircraft and going to deliver combat power to the enemy while being in the aircraft has changed," AIRMSHL Shepherd told the parade. "Right now, at a USAF airfield in the continental US, airmen are flying Predator UAVs in the Middle East, delivering combat air power. Those people aren't in aircraft, but they are directly involved in the real-time command and control and employment of air and space combat power in the three-dimensional battle space."

CAF said the award of the new brevets marked the end of an era. It recognised the end of navigators, airborne electronic officers, fighter controllers and air defence officers, but it marked, far more importantly, the start of a new era – the Network-Centric Warfare delivery of combat air and space power.

The Southern Cross brevet worn by ACOs was first introduced in 1997 as the officer non-pilot aircrew brevet, to be worn by navigators and AEOs. It was intended to replace the various half-brevets worn by those individual categories with a single brevet. It incorporates the Southern Cross in place of the initials 'RAAF' incorporated into a full set of wings. It is worn centrally on the left breast above any medals or decorations.

