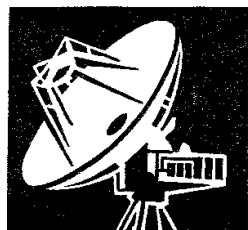


RESEARCH LAB REPORTER



PRODUCED BY RESEARCH LABORATORIES, 59 LITTLE COLLINS STREET, MELBOURNE

These days when we are asked to read all manner of things, both in our work and in our homes, one needs to think hard before adding to the flood of printed material in circulation. However, I have been conscious for some time that with our activities split into five different buildings and with our fairly self-contained sectional organisation it is difficult to get to know one another unless we have some reason for making day-to-day contact and we tend to think of ourselves as "Watkins", or "Cheneys" or "Taubmans" staff rather than as Research Laboratories' staff.

For this reason a few of us felt that there would be value in producing and circulating a staff magazine with the express purpose of helping us to get to know more about each other and about the things we do in the Research Laboratories and, maybe also, about the things we do outside. We talked the matter over with representatives of various staff groups in the Laboratories a week or so ago and this first issue of the Research Lab Reporter is the result.

Future issues will be at two monthly intervals and the material to be published will be anything of an interesting nature concerning members of the staff or of general interest to the staff - personal jottings, biographical sketches, items of a semi-technical nature involving our staff, sporting and social notes, etc. - all seem appropriate material.

To be successful as a continuing publication we will be very dependent on the readers for material and I know you will help the reporters by bringing suitable items to their notice. If the magazine proves to be successful and to fulfil a real need a more ambitious production with photographs and cartoons may be considered.

I am optimistic enough to hope that the publication of this magazine will be of interest to all the staff and help to build us into an effective, cohesive and companionable group. I am confident that your active support will ensure it a long and happy life.



In our first hesitant steps towards the issuing of a publication For and By the staff of the Research Laboratories, we record, in the initial issue a few thumbnail sketches of a cross section of the people who make up the staff of the Laboratories.

The wide scope of the matters which range from the satellite communication and the ionosphere to the prosaic but very human job of creating telephones by which the deaf, the voiceless, and the aged can talk and listen effectively are encompassed by the Laboratories. In short, if its a communication matter or a problem requiring scientific investigation we have officers who are prepared to handle it.

thUMBnAIL sketches

Mr. P.R. Brett, B.Sc., Senior Assistant Director-General.

Mr. Brett graduated Bachelor of Science at the Melbourne University in 1944. He joined the Physical Sciences Section of the Laboratories as a Physicist Class 1 and passed through all classes to Senior Physicist. He then continued to advance progressively until in 1964 he was appointed to his present position in charge of the Laboratories. During 1962 he represented the Post Office overseas, when he investigated research problems associated with production of magnetic iron for Australian manufacture of crossbar equipment, the control of plastic material and colour in the local production of coloured telephones, and the plastic materials in telephone cables.

Don Raines and his Pay Team, Ken Hall and Ian Jungwirth,
59 Little Collins Street.

Don, known for his breezy manner, has been attached to the Research Laboratories for nine years, where his duties have been closely associated with staffing and its relative problems. With Ken (Afghan) who periodically produces a luxuriant beard

(at present in full growth) and Ian Jungwirth the Master at Arms from the Model Shop, Don is responsible, every alternate Thursday, for handing out, before lunch, the just rewards to the work force of the various laboratories. Up to date he has not failed.

Don ex R.A.A.F. and Fitzroy Footballer has now settled for four leg trotters as his main love.

Miss Merl Cuzens, Librarian, 59 Little Collins Street.

Miss Merl Cuzens transferred from the Repatriation Department in January 1964 to take up the onerous job of making a prestige library out of the then existing facilities. During the previous years the Library had been lamely functioning under the handicap of chronic staff shortages and limited accommodation. On the 6th-8th July the first conference of all Engineering Division Library staff, with representation from all States as well as representatives from the Administration was held at 59 Little Collins Street. As a result, instead of isolated libraries an integrated library system for Engineering Divisions throughout the Commonwealth is planned. Best wishes to the Library staff for a continuation of services under pleasant surroundings.

Charlie Eyre, Supervising Technician in charge of Model Shop, 59 Little Collins Street.

Charlie came straight from the R.A.A.F. to the Laboratories in 1946. Over the past 20 years he has experienced the vicissitudes of work and responsibilities of the Model Shop. His main concern at the moment is to hold the tradesmen he now has, let alone filling the many vacancies. Just as his apprentices have completed their courses and are ready to step into the vacancies, he beholds the exasperating spectacle of the lads proceeding to the lush pastures of outside industry where the emoluments are so much greater.

Dianne Linnell, Stenographer, Cheneys, 140 Exhibition Street.

Dianne came from the Stores and Contracts Branch early this year and took up duty in Cheneys Building. She has the doubtful honour of being the only female employee in the building, however,

she copes extremely well with the situation. On the 12th July Dianne was one of the 21 debutantes at the Royale Ballroom presented to the Vice Chancellor of Latrobe University, Dr. D.M. Myers and Mrs. Myers at the Old Paradian's Ball. Occasionally Dianne is seen gracing the carpeted domain of the Steno-Secretaries. Apparently a little relieving in the higher echelon comes her way.

Garth Jenkinson, B.Sc., Engineer Class 3, Propagation Research and Satellites Division, Tautmans, 10 Lonadale Street.

Garth came from the A.B.C. to the Research Laboratories in August 1960. Garth and his team are literally birds of passage. One week they may be over Bass Strait, in Tasmania or New South Wales. At present one of the main projects is relating radio fading to meteorological conditions and is being carried out at Ivy Tanks on the Nullarbor Plain.

J. Der, Chemist Class 2, Watkins, 262 Exhibition Street.

Mr. Der received his Science Degree at the Budapest University between 1953 and 1957. He was employed as an analytical chemist at an Electrical Coy. in Budapest. He joined the Research Laboratories in 1958 and took up duty in the Chemistry Division where he has been working on corrosion and other problems in the field.

MICROWAVES ? 
wise & otherwise

Bryan McMahon of the Crossbar Development Division has not left our establishment. The reason for his rare appearance at Cheneys these days is that he has spent the greater portion of this year at L.M. Ericsson's plant at Broadmeadows assisting in the final detailed design work, modification and laboratory testing of the 3-stage Group Selector for Crossbar Exchanges. The selector, the brainchild originally of Norm Smith of the Planning Branch, is designed to improve the present telephone service in the metropolitan network by increasing the outlets

from the G.V. stage which will allow a greater deal of alternate routing. It has been estimated that this development will eventually save the Department \$500,000 per year. You are the hope of the side Bryan.

Don McKelvie of the Material Physics Division. Sorry Don that the sudden arrival of the new son has cast a cloud over your reputation as a calculator. Delighted that even without the hospital he and his mother are in the pink. Hurry up with a name, he didn't beat the gun by that much. The McKelvie family now consists of two sons and a daughter.

Taubmans. The combined effects of overseas visits, Nullarbor visits, Recreation Leave and the Flu have greatly changed life at Taubmans. With everybody acting vice some one else its becoming that way that - like the Navy - you act on the theory that if it moves you salute it and if its standing still you polish it. We play it safe by saluting first. (Won't it be nice when the staff chart shows, every person appearing in the nominal position also appears in the actual.)

Harry Wragge of the Switching Group has returned from Paris where his paper "On the method of modulation for use in metropolitan integrated switching and transmission systems" was received with great interest. The possible outcome of this visit may be a major project on I.S.T.

Fond Dads. Ron Porteous with the arrival of Diana Lisa is enjoying for the first time the responsibilities of a father. Emanuel Pincozower greeted the arrival of a son like a veteran. Emanuel now has two sons.

Kevin Bartlett of Watkins who is in his final year as an Instrument Maker is having a good year as a Rover in Richmond Firsts. Although he was supremely confident that the tigers would not only keep in the four but would come home with the bacon with Collingwood runners up. The gods decided otherwise. Kevin is now tackling a 3-year Industrial Electronics course.

Brian Lafferty. When Brian returned from his Annual Leave which he had recently taken on account of his father's serious illness, we were greatly pleased to learn that his father is now making progress. Sincerely hope that this continues.

Les Eden-Jones of the Store. It is some weeks since Les tripped on the broken linoleum in the Store and fractured his hip and arm. He has left St. Thomas's ward St. Vincent's Hospital for home, however, his leg is now in a more natural position and he appears a little more comfortable. The pain gives him a good deal of trouble. Hope this unfortunate accident will soon be an unpleasant memory.

Voice Ear Team. Despite all its imperfections as a blissful corner of the Laboratories the Voice Ear Team, under Eric Koop's guidance manages to get hours of concentrated work from its members. Two members of the team, Jeanette Crook and Kay Baillie, are about to celebrate the 2nd Anniversary with the team by going to a "Ball". Have fun girls and keep up the good work.

Pollias Bergere, Paris. Mike Hunter has staggered the young male members of the staff by setting an unprecedented example in taking his bride to Paris (see page 11).

Roy Potter (Wimpy). In spite of foul weather encountered in Britain whilst touring 3,300 miles in Wales and Scotland, Roy and his wife are enjoying furlough life in the 1964 Bedford Van he purchased in England for £300. Last report he was in Zurich amongst the breathtaking scenery of the Swiss Alps. After crossing the channel they proceeded through Belgium and the Rhine Valley in Germany. He commented on the friendliness of the German folk. He sends regards to all. Roy returns to his bench in November.

Eric Craig of the Transmission Media Group. It is understood that Eric's face was a study (the understatement of the year) when advised at 10.00 a.m. one bright sunny morning that he was to catch the 4.00 p.m. plane en route for

Philadelphia to replace Mr. L. Harris who had unfortunately been stricken with illness. It necessitated a hurried 26 mile trip home to Frankton, pack his bag, locate a wife whom he vaguely remembered was that day attending a youth conference but unaware of its location, get final briefings as the A.P.O. representative and obtain air bookings. With messengers, clerks, telephones and cars in full cry Mrs. Craig was located, the air bookings made and with hurried farewells a very dishevelled Eric fell into the plane on schedule. A masterful piece of official and unofficial co-operation.

Eddie Sandbach. A few days later the above incident was duplicated. Eddie was called out of a conference at 10.00 a.m. handed air tickets and two days later was headed for Oslo.

Such are the hazards for those who represent Australia at overseas conferences. A week or so later Eric met up with Ed Sandbach at Oslo, both can be congratulated on a good job done.

Moral. Beware if you have a current passport and all injections up to date.

Merv Vagg. Merv who was given a retiring send off in May, gave us cause for concern when he appeared far from well on the day of his departure. It is pleasing to note that the voyage to Britain on the "Orcades" which he and his wife took immediately on his retirement, seemed to restore him to good health. The latest report is his health is still good, the English countryside from Devon to Wales was a picture. His headquarters are at Oxford where his relatives are. Merv took with him a bronze plaque of Australian workmanship to be placed in a Somerset Church recording the fact that the Australian descendants of the Vagg family remembered the church where their forefathers worshipped more than a century ago. Merv has sent cards from Moscow whilst on a three weeks tour of Russia. He sends greetings to all his Research associates.

Golf. Since June, on selected Saturday mornings, male members of the Laboratories' staff have been enjoying regular Golf tournaments at the Ivanhoe Golf Links. As the weather

improves it is anticipated that the tournaments will take the form of picnics and be held further afield, such as Woodend, etc. To make the picnic complete some of the ladies may enter for the tournaments. It is impishly thought that some of the bravado of the top-notches may seep away under the watchful eye of the spouse or the girl friend. The first tournaments in the various groups were won as follows:

- Group A - Bert Bladier from the Model Shop won on a count-back from 18th hole from G. Adam, Pulse Systems.
- Group B - Gavan Rosman, Pulse Techniques Division.
- Group C - Doug Hillier of the Services Division.

These wins were the outcome of the handicappers system, whether it was foul or fair we will not comment.

In an endeavour to build up their golfing prowess and get a bit of under the lap practice in the Model Shop the boys held a challenge round. The teams were: B. Bladier (Captain), C. Eyre (Coach), F. Arter and V. Thomas against A. Allen (Captain), J. Walsh (Coach), C. Bates and D. Hillier.

Allen's team was described as superb in Victory. The beautiful cup was duly presented. Unfortunately a disturbing influence crept into this splendid social event. It appears certain individuals have cast aspersions upon the authenticity of the dates on the lottery tickets which changes hands in the side-wager and that the Silver Cup has been despoiled by saboteurs or vandals.

In spite of all comment Brian Lafferty is willing to receive more nominations for the tournaments and give a speech vindicating the handicap system. In case the winners are not well versed in proverbs we with great temerity quote "Pride goes before a Fall".

Clerical Organisation. The Public Service Board's approval for the re-organisation of the Laboratories' clerical organisation, which had been static for a couple of decades, was finally granted. All the positions with the exception of the Administrative Officer and Procurement Officer have been filled and it should be a short matter of time before the appeals have

been determined and these positions manned. It is understood there was quite a Melbourne Cup Field of applications for all the jobs. The professional officers, with confidence and pleasure, should now be able to divest themselves of most of the irksome clerical duties which over the years have dogged them with frustration and exasperation.

Clerks the ball is now in your court.

Review of Technical Grade Organisation. After many weeks of intensive study and research, Messrs. Sloss and Hahn prepared the basis of a voluminous report for the S.A.D.G. on the Technical Grade organisation. The proposal was duly submitted to the Board. The Public Service Inspector's representative has made an examination of the areas concerned and is believed to have made his report to the Board. It is hoped favourable. A reply from the Board indicating its reactions to the proposed recommendation should be received shortly. Providing the proposals are generally agreed to the long awaited period of stability in this area of the Laboratories should be about to commence.

Integrated Switching. A study of integrated switching and transmission is being commenced in the Systems Section with the immediate objective of gaining experience in the operation and design of this type of equipment as it offers the possibility of meeting the requirements of the next generation switching system.

The study will include the design of an elementary experimental network which will be installed in one of the larger metropolitan networks for trial purposes and will be capable of interworking with both crossbar equipment operating as a common control basis with multi-frequency signalling and with step-by-step equipment operating on a loop signalling basis.

A feature of the network will be that the control equipment will be based on a small general purpose digital computer operating under the control of an internally stored programme.

Julian Ophel. "The best laid plans of mice and men gang oft awry." Bearded Julian with his brother and wife had made detailed and extensive plans in fitting out their 4-wheel drive vehicle to enjoy their recreation leave in the snow country of the Australian Alps.

Provision was not made for a broken axle in the snowy hinterland of Thredbo.

Fifteen days later when Julian was due to resume duty the party was still snow bound and the rest of the world unaware of their predicament. A week after, Julian and his party had made national headlines, and search parties from New South Wales and Victoria including airsearches were working during all the available daylight hours. Ken Hall, our first aid officer, Eddie Fall and Eric Dodge volunteered to take the Land Rover and join the search parties foregoing any extraneous payments, travelling time, etc. Bill Armstrong from the Survey Section, Melbourne, was prepared to make a Land Rover available. Mr. Stackpole, A.D.G. Personnel, acquainted the Superintendent of Police, Bairnsdale of the offer. The Superintendent thanked the Department for its offer but at that time decided to await further events. Two days later the lost were found comparatively well but very hungry. They were taken to Thredbo and then to Cooma where Julian remained a few days recovering from his ordeal. Congratulations Julian in returning to work whole.

Football. The Research Laboratories played the Postal Workshops at Albert Park on Sunday, 21st August, 1966. Final scores were Research 10.12 - 72 defeated Workshops 8.4 - 52. Chief goal getters were Ray McIntosh 4, Barry Woolcock 3 and Terry Dillon 2.

Sincere thanks to Eddie Durand (Umpire), Ken Young (Goal Umpire) and particularly Keith Guilliard for his untiring efforts as Trainer, Orange Boy and anything else that needed doing.

MEN ON THE ~~MED~~ ~~V/E~~

Overseas Scholarship Winners

Max Casley, M.Sc., Telephony Division.

Max Casley entered the Department as a Cadet Engineer in 1957 and obtained his Bachelor of Engineering (Electrical) at Melbourne University in 1960 with 2nd Class Honours, and went on to obtain his Master of Engineering Science in 1963. He joined the Telephony Division of the Laboratories in 1962 and has been engaged on design and testing of equipment associated with subscribers apparatus. The equipment will be located in Automatic Exchanges and will be used to test transmission characteristics of subscribers lines and telephones. Max a recipient of our congratulations leaves this month to take up his 3-year P.S.B. Scholarship for post-graduate study at the London University. Max's carefree appearance denotes a bachelor guy and we are sure that the sea trip to Britain will be very enjoyable. His main sporting interests are tennis, table tennis and skiing.

Mike Hunter, B.E.E., Pulse Systems Division.

Mike joined the Laboratories in 1960 as a Technician in the Radio Propagation Division and in the same year obtained a Cadet Engineers position. He graduated B.E.E. with honours in 1964. On his return to the Laboratories he took up duty in the Pulse Systems Division where he has since been concerned with multichannel telephone carrier systems using Pulse Code Modulation (P.C.M. systems). His main projects have included the detailed study and testing of a 24-channel P.C.M. system made by N.E.C., the trial incorporation of this system into our local P.B.X. networks, and the direct "on line" connection of one terminal of the system with the Research C.D.C. computer in a study of statistics of speech signals. He is currently working in the team on the integrated switching transmission project. Mike leaves shortly for France with his young bride, to take up his eight months overseas fellowship with the French Administration where he will be engaged in further studies in this field. Congratulations Mike wishing you a happy return to Australia.

Overseas Official *INVESTIGATIONS*

Dr. W. Williamson, Ph.D., B.E., Engineer Class 2, Microwave Division.

Dr. Williamson entered the Engineering Division in Perth in 1954 as a Technician-in-Training and two years later was promoted as Cadet Engineer. He graduated in 1961 as Bachelor of Electrical Engineering at the University of Western Australia. In 1965 the Western Australian University awarded Bill the Degree of Doctor of Philosophy. Since 1963 Bill has been employed in the Microwave Techniques Division currently working on galvanic-magnetic effects in semiconductors etc. Dr. Williamson is about to proceed to Tokyo to attend the International Conference in September on Semiconductor Physics. At the conclusion of the conference Bill will then investigate in Japan, U.S.A. and Great Britain, solid state devices for microwave application. Dr. Williamson is expected to return to the Laboratories late in October.

Max Warner, B.Sc., Engineer Class 3, Electrical Standards Division

Max Warner graduated Bachelor of Science at the Hobart University and joined the Laboratories in 1948. Max who is in charge of the Electrical Standards Division which is responsible for the provision and maintenance of the Department's Electrical Standards and for the dissemination of these to other Divisions of the Laboratories and to the Department generally is making preparations for a visit to the United States and Great Britain. On his trip Max will attend the 1966 West Coast Convention of the Institution of Electrical and Electronic Engineers (WESCON) to be held in Los Angeles from 23rd-26th August and visit the N.B.S. Radio Standards Laboratory at Boulder, Colorado, U.S.A., which is regarded as the leading centre in the world for standardisation of electrical quantities at radio frequencies.