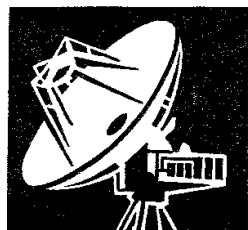


RESEARCH LAB REPORTER



PRODUCED BY RESEARCH LABORATORIES, 59 LITTLE COLLINS STREET, MELBOURNE

"RESEARCH LAB REPORTER"

In my earlier days in the Laboratories when we were housed in two buildings, namely 59 Little Collins Street and Poster House, I used to know everyone on the staff mostly on Christian name terms because within a year or so after joining the Laboratories' staff the normal daily activities brought one into contact of some sort with everybody else in the Laboratories. Unfortunately this desirable state of affairs is no longer the case so I was most interested to read the first issue of the "Research Lab Reporter" and so improve my personal knowledge of some members of the Laboratories' staff.

Apart from keeping people informed about the doings of the various members of staff one would not otherwise hear about, there could be some scope for including in the "Research Lab Reporter" accounts of some of the events which in retrospect at least appear amusing and which could be worth telling to a wider audience. In particular, members of the Laboratories' staff who regularly participate in field work may be able to contribute items of this nature.

What about doing your bit to make the "Research Lab Reporter" a more interesting and lasting feature of the Research Laboratories by contributing a suitable item or items to the Editor for publication in a forthcoming issue?

E. Lamb

thUMBnAIL SkEtChes

Mr. E. Sandbach, B.A., B.Sc., Assistant Director-General
(Apparatus and Services).

Mr. Sandbach is the second generation of Australian Postal Engineers and Central Office Engineers at that. His father Wally Sandbach was for several years on the staff of the Chief Engineer's Branch. Later he transferred to Melbourne and on retirement held the position of Superintending Engineer, Victoria. Eddie entered the Commonwealth Public Service as a Central Office Clerk, was selected as a Cadet Engineer and since completion of the course progressively performed the duties of each class of the Engineers' Classification. In 1964 he was promoted to his present position of Assistant Director-General (Apparatus and Services). As Departmental representative he regularly attends conferences especially in space and satellite matters, in various countries of the world.

Kevin Curley, Senior Technical Officer, Grade 2, Electronic
Switching Division.

Kevin enlisted from his home town Ballarat and after seeing service in the Middle East and the Islands, took a position on his discharge in 1946 with the Postal Services Division. Six months later he became a Technical Assistant, Engineering Branch, Melbourne. Incidentally the six months in the Mail Branch was long enough for Kevin to meet his fate and join the benedicts. In 1950 the Senior exam was passed and in 1953 he was sent to Central Office on loan for six weeks to take up duty with the Circuit Laboratory - How many have been trapped by the few weeks on loan - Needless to say he has never returned to his home base. For a time Kevin acted as Group Engineer, Telephone Equipment. In view of the world wide interest in the development of electronic switching, Kevin with his specialised knowledge was transferred to Harry Wragge's Section in Cheney's Building. Kevin is a one eyed Tiger

supporter and on Monday mornings we are not sure whether he is suffering from an excess of barracking or deserving of sympathy for bronchitis. He takes an active interest in his workmates and is at present a Branch Councillor on the P.T.T.A.

Marj. McDonald, Steno-Secretary to the S.A.D.G.

Marj is one of the pillars of the Laboratories. It's a year or so back when a shy little typist from the far off city of Bendigo took up duty at the Research Laboratories. Marj's first job at the Labs. was typist to Mr. S. Witt. She has seen and recorded plenty of development since then. During the war years when the Labs. were contributing so much to the war effort Marj was Records Clerk. Naturally she is now an authority on procedures. Recently she left her East Melbourne flat and now has a nice flat at Glen Iris where she has plenty of opportunity to indulge in her fondness for gardening. As a member of Canterbury Fellowship Choir Marj has sung her way through the years. Hope the voice and health of Marj will allow these pleasures to continue.

Rudolph Buring, B.E., B.Sc., Engineer Class 3, Transmission Lines Division

Rudolph comes from Tasmania having obtained his Bachelor of Science and Bachelor of Engineering at the University of Tasmania graduating in 1930, the fateful year that the Great Economic Depression hit Australia. From 1932 to 1937 he worked at Broadcasting stations in Tasmania and Victoria and then took a position with Transmission Equipment, the firm later to become B.G.E. In 1942 Rudolph appeared at the Research Laboratories in the capacity of temporary Engineer. He was immediately teamed up with Bruce Mair, Alec McKenzie and Clarrie Brown in the building of a 5 KW transmitter at Lyndhurst. As a slight diversion Rudolph nearly succeeded in discharging a 32 microfad capacitor charged to 3000 V. Rudolph vows the only reason it didn't discharge was his very valuable practice of standing on dry boards and keeping one hand in his pocket. We are thankful Rudolph indulged in that practice. As a mathematician of no mean order it was only logical, that in 1947 when Ern Palfreyman sought wider fields, Rudolph should take on his mantle. The wonder child of the scientist the computer has come to

stay and the one on the Research Assets is controlled by friend Rudolph. Don't be mistaken in thinking that the kindly elderly gentleman you may meet at Taubmans is a Professor, Looks are apt to belie - It is Rudolph Buring.

Miss K. O'Keeffe, Library Officer, 59 Little Collins Street

Kay is generally the first Library official one meets as you enter the Library through the F.P. O'Grady Reading Room. Kay came to the Research Library from Queensland University Library in 1964. Prior to taking up duties in Queensland Kay had spent seven years overseas in various countries and various jobs so we can truthfully say that Kay is literally a well travelled and well read officer. It is rather a feather in Melbourne's cap that she has sought fit to settle here especially when one is aware of the libelous propaganda that is disseminated in Queensland regarding Melbourne's weather. Kay's recent vacation was spent enjoying a launch cruise with four other Queenslanders on the Hawkesbury.

Joseph Thomas Blake, A/g. Supervising Technician, General Services Division

On his discharge in 1946 from the R.A.N. where he had served for $6\frac{1}{2}$ years as a Petty Officer, Telegraphist, Joe joined the Research Laboratories. For the next 12 years Joe as a good utility man worked in various jobs in the Model Shop and in passing collected his Seniors qualification. He was then transferred to the Training Annexe, presumably as an attempt to instill fear and knowledge into the highspirited up and coming trainees. Several officers who have since completed their training have pleasant memories of those days, as Joe's general characteristics, do not fit into those of the text book Petty Officer. After a break at Watkins Joe is back again at the Leichardt Training Annexe with another generation of trainees. Joe's hobbies appear to consist of Mazda Motor Cars and Television sets, brewing fruit Wines and last but not least organising that non-profit operation the "Drag-Out".

Miss D. Chapman, Clerical Assistant, Grade 3, Laboratory Equipment Division

Dolly arrived from Ceylon on Christmas Eve 1950 and joined the library staff in January 1951. A year later she transferred to the Equipment Division and since then has become well known to us all as she endeavours to balance her Asset Ledgers at the Annual Stocktaking. Her cheerful persistence generally unearths the invisible or forgotten asset. Naturally the Equipment Records housed with Dolly at Watkins Building are recognised for their reliableness. Dolly's comments "I am one "New Australian" who thinks Australia is a wonderful place". We are pleased with her opinion of us and are sure that Australia has benefited by her industrious presence.

MICROWAVES ? wise & otherwise

Mrs. Nicholson. Near panic ensued amongst the early morning staff at 59 Little Collins Street during morning tea the other day when the slender schoolgirl figure of Mrs. Nicholson gracefully collapsed. Mrs. Bishop with the assistance of Miss Sullivan managed to reassure Mrs. Nicholson's workmates that she would come round. Ken Hall's first aid treatment, aided by brandy quickly obtained by Miss Sullivan, managed to extract a wan smile from the patient. Charlie Bates in his inimitable style then took over and drove Mrs. Nicholson to the Doctor thence home. Pleased to say Mrs. Nicholson has now resumed duty and we sincerely hope her health will continue to improve.

Ancient and Modern - Path Evaluation Division. Japanese delegates attending the I.T.U. Conference, whilst visiting Taubmans, to inspect the Computer with all its technical complexities were surprised to see what they thought was an abacus in operation in the Path Evaluation Division. Actually the device which looks like an abacus was a bead counter developed within the Division to obtain the medium and the upper and lower decile values

of the hourly values of radio noise levels for each day of the month. These values are those measured at the Cook station where South Australian staff operate atmospheric radio noise measuring equipment for the National Bureau of Standards, U.S.A. The device isn't actually used in multiplication or division but it certainly saves time in determining these signal level values, to define the distribution of the radio noise level figures received by the Path Evaluation staff.

John Hughes, Multichannel Division is on six months L.W.O.P. in New Zealand and with calculated discretion has kept the staff informed of his movements. By all accounts he is really having a ball. John, as your workmates are almost sick with worry, will you please come clean and set their minds at rest. Was this hurried holiday taken to lose a skirt or find one.

Jim Richardson, Microwave Division. On Tuesday, 20th September, at the Radio Theatre, R.M.I.T., Jimmy tickled the ears of the members of the I.R.E.E. Australia with a lecture on "Some Aspects of Microwave Strip-Line Design".

E.P. Wright (Retired). Eric dropped a line wishing Bill Stent on his retirement as much happiness as he is experiencing in his. Eric with his wife, Valiant and Caravan were spending a few weeks in Canberra with his sons Don and Ian. Ian, accompanied by his wife and two children, was on a short term visit from the Sheffield University to the Australian National University. Ian and family returned to Sheffield on 29th September. Eric sends his good wishes and regards to all his old colleagues.

Fond Dads.

Eddie Sandbach, Apparatus and Services. The meeting for the "Review of the Telephonometry Division's activities" on 8.9.66 was slightly thrown off course when word leaked through to the Conference Room that Eddie was again the proud father of a daughter. Eddie now has two sons and two daughters. Having successfully managed twins in the initial stages of

parenthood Ed and his wife will make child's play of coping with the new arrival. Congratulations and best wishes for undisturbed nights.

Lyle Perkins, Path Evaluation Division. The stork was most considerate to Lyle, for between his scheduled and unscheduled visits to the Nullarbor and other outlandish places, it brought little Deborah Jane a brand new brother "Rodney Neil". Congratulations and pleased everyone is well and happy.

Graeme Read. Congratulations to Graeme and Adele on the arrival of Todd Stewart at the Mercy Hospital on Show Day. As the I.T.U. Conference at the Southern Cross was in full swing Graeme was to have been on duty as usual on Show Day. It certainly turned out a busier day than anticipated, however all's well that ends well. Graeme took Adele to the Mercy, dashed over at lunch time to introduce himself to Todd Stewart and then returned to 59 and efficiently tied up all the loose ends for the Friday visit to the Laboratories of the International visitors. Granddad and Grandma Read arrived from Graeme's home State Western Australia on Friday and thus missed being on the reception committee by a day. Adele is Dutch born but her parents are also living in Western Australia.

John Erwin, Electrical Standards Division. With the arrival of Laurice Margaret at the Mitcham Hospital, it is expected that John will now rest on his laurels. To get a little sister for those three little boys is no mean achievement. Congratulations John, quite sure you will have no worries - well at least for 16 years.

Marriage Bells - Bill Mathews. On their return to work after Show Day the Model Shop boys were stunned to learn that their long established most eligible bachelor Bill Mathews had stolen a march on them and joined the benedicts. Although it was known that building operations were going on at Noble Park it was assumed that Bill and his mother would be the occupiers. As Bill and his bike appeared inseparable they concluded it was his first and only love. How blind can they be. However, now that Bill has taken up his abode at Noble Park the bike will have to be relegated to the discards or Bill would be a shadow of his former self with such a ride. The best of good wishes for a long and happy run for Bill and Margaret in double harness.

Neil Walker, Transmission Group. Neil's son Norman was caught in the marble ballot and has been seconded from Gas and Fuel Corporation to do his two years National Training. Neil, ex naval man, was very critical of Army procedures. Son Norman was hospitalised for three weeks with penumonia and his father was unaware until another patient on his discharge thoughtfully wired him. Norm now out of hospital has to recommence his initial 10 weeks training.

Denis Page, Advanced Techniques. Appeared to be walking on air a few weeks back. The National Service marbles had rolled the right way for him.

Golf. The second challenge golf round was held between the "UNTOUCHABLES" Bladier, Eyre, Arter and Thomas and the "UNMENTIONABLES" Allen, Walsh, Bates and Hillier. In a pre-match battle of tactics the UNMENTIONABLES managed to obtain a bonus of 20 strokes and attempted to unsettle the opposition by a last minute switch of players - "BRABHAM" BATES was replaced for the occasion by "DR. CASEY" HALL. However, the results were never in doubt once the match got under way, the UNTOUCHABLES showed just a glimmer of the talent they possess in this particular field. Although the Rules of the Royal and Ancient Game were written to cover all normal behaviour on the course they obviously require some modifications and additions - Example, players are expected to bellow, "FORE", before their ball hits an opponent, not a soft, "SORRY FORE", with a permanently built in propagation delay. It is also not the "DONE" thing to arrange for the "greenkeeper" to needle the public relations man of the opposing team on the 10th hole. Whilst it is not possible to single out any outstanding feature of the game as played by the UNTOUCHABLES, they were amongst the first to be impressed by the UNMENTIONABLES unusual talents in the field of practice drives and fourth putts, they were a joy to behold.

East-West Systems, Path Evaluation and Propagation Research Satellites Division. Kangaroos and wombats on the Nullarbor Plain have been frightened out of their wits by aircraft doing some very peculiar aerobatics just over their heads. This free flying display was put on to help in picking sites for more radio propagation

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measurements near the Head-of-the(Great Australian)-Bight in South Australia, and near Mundrabilla which is between Eucla and Madura in West Australia. This part of the country is by now well known to the Propagation Divisions. Since last year they have been regularly going on safari from the second floor of Taubmans to Ivy Tanks in South Australia and Kalgoorlie in the West and live the life of bushmen for a week or two. The radio measurements at Ivy Tanks have turned up a few unusual effects and it is because of this that measurements at the new sites are needed. It is hoped to have the extra equipment going before Christmas to fit in with the timetable laid down for the East-West System. The East-West system is to be a microwave radio system between Port Pirie (S.A.) and Northam (W.A.). When it is finished, Adelaide and Perth will be connected by a main and standby broadband system which gives 600 telephone circuits and a television relay. The Research measurements are to be used in the design of the system.

MEN ON THE ~~MADE~~

Alan Gibbs, B.E.(Elect.), Pulse Systems Division. Alan Gibbs was promoted to Cadet Engineer, Melbourne, in 1956 and graduated B.E. (Elect.) from Melbourne University in 1960. On joining the Laboratories in 1961 he took up duty with the Circuit Theory Division being concerned with the synthesis of electrical networks in both time and frequency domains. Recently he joined the Pulse Systems Division where he is investigating certain aspects of data transmission over the Department's network. Alan has been awarded a Public Service Board Scholarship for post-graduate study at the University of Wisconsin, U.S.A. This research field will be the transmission of sampled information and pulse modulation techniques. Alan hopes to leave with his wife and children early in the New Year. Congratulations and hopes that he and his family find the American way of life to their liking. Incidentally Alan has had two recent additions to the family, one a daughter, Meridith Kaye, (a playmate for big son Russell), and the other, a Miss Sarah Ives allocated to him by the University of Wisconsin under its brother and sister movement to assist "Foreign Students" (a playmate for Alan? - not likely).

Overseas Official *INVESTIGATIONS*

Roger Smith, M.E., Engineer Class 3, Pulse Systems

Division. Roger Smith was appointed Cadet Engineer, Adelaide, in 1952. In 1955 he graduated B.E. with Honours. He subsequently did a post-graduate course at Adelaide University related to "Bandwidth compression of speech signals" and had the honour of Master of Engineering conferred on him in 1959. Roger joined the Multichannel Division of the Laboratories in 1958 and later on worked in the Electronic Switching Division. For the past 12 months he has been in charge of the newly created Division of Pulse Systems. Roger is about to proceed overseas to attend CCITT Study Group XV at Geneva and then to continue investigations into Pulse Code Modulation systems in Holland, Great Britain, Italy and Japan and expects to return to Australia in December. Roger's previous overseas trip included two months at the Electrical Communication Laboratory N.T.T.P.C., Tokyo.

Ron Trainor, B.Sc., Engineer Class 3, Frequency

Standards Division. Ron joined the Laboratories staff in 1946 after his discharge from the RAAF in which he had served as a Radar Officer. He was appointed as Physicist Class 1 to the Information Section of the Research Library. In 1948 he transferred to Frequency Standards, where he is now Divisional Engineer. Such is the "crazy" onrush of technological progress that, whereas in those days one was tickled pink if the frequency standard beat an accuracy of one part in one hundred million, today an error of one hundredth of this figure would cause chagrin. On 4th September, Ron returned via America from a three months overseas trip. His main mission was as a member of the Australian delegation to the CCIR Eleventh Plenary Assembly in Oslo, Norway. Subsequently he investigated the standard frequency and time signal services and other telecommunication matters, in Sweden, Germany, France, England, U.S.A. and Japan. On the last leg of his return trip Ron, at Hong Kong, was reunited with his sister who has been a resident there for the past 4 years. He now has the task of establishing a revised time signal service within Australia.

Gerry Flatau, Fellowship Diploma Applied Physics,
Principal Officer, Physics and Polymer Group. Gerald Flatau graduated at the R.M.I.T. in Applied Physics in 1951 and immediately joined the Laboratories as a Grade 1 Physicist. Gerry was born in Berlin and his early education was at St. Pauls, London. He arrived in Australia in the early days of the War. On reaching military age he joined the Services and on discharge studied at the Royal Melbourne Institute of Technology. Amongst other things Gerry has been closely associated with work on such things as termite and ant attacks on plastic cables, contact and connector reliability, component evaluation, dust in exchanges, etc. Gerry left on 1st October on a three months overseas visit. His first stopover was for a fortnight at Tel Aviv where he represented Australia at the I.E.C. meetings. He is now engaged on a comprehensive tour examining overseas developments in component and connector reliability studies, instrumental methods of gathering lightning statistics, etc., in Great Britain, Sweden, Germany, Switzerland, France, and will end his investigations by presenting a paper on the Termite Problem at the Wire and Cable Symposium in Atlantic City. Whilst in America Gerry will have the good fortune of taking a weeks recreation leave and enjoying it with his parents who are now living in New York. Gerry's father is a retired solicitor. Gerry will be back by Christmas to be met by fond wife and his three daughters. Although Gerry is a keen Essendon supporter, it is rumoured that since Father's Day he has become the proud possessor of Golf Clubs so it may be off with the old love on with the new. Gerry is very keen on Education in the World of Physics and is one of the popular lecturers at R.M.I.T.

Valedictory Bill Stent.

After almost nine years on the staff of the Research Laboratories and another 28 years of close association with it, the relentless Father Time has played the joker, and thus I regretfully, but I hope gracefully, bow out of the life of the Research Laboratories.

When this issue of the Research Lab. Reporter is circulated I will be a gentleman of leisure, and so I have taken this opportunity to let each of you know how much I have appreciated the friendship and association of all the members of the staff, your many kindnesses as well as the understanding and overwhelming generosity to Mrs. Stent and me at our farewell parties. I wish to sincerely thank those responsible for organising the memorable and most delightful Russell Exchange party where I was able to say farewell in such happy circumstances. I also especially thank the Office Staff for the most enjoyable evening at the Savoy Plaza where Mrs. Stent and I were their guests. Just as well I belong to the no hat brigade for after such compliments I would not have got a hat big enough. It is not given to everyone to shout from the Mountain Tops but it has been very pleasant for me, travelling in the valleys with such agreeable company - The Research Staff. I retire with the most pleasant memories of my connection with the P.M.C. Headquarters staff in general and the Research Laboratories in particular.

W.B. Stent.