

Newsletter

No. 25.

May 1963

(For the Use of R.R.S. Staff Only)

ABSTRACTS AND REFERENCES

"I dare say it keeps you quite busy
lookin' through all those magazines?" (1)

In July 1926 the editorial of "Experimental Wireless & The Wireless Engineer" carried the heading "Abstracts and References". It referred to work already commissioned by the Radio Research Board and the comment ran ".....our readers will be pleased to learn that arrangements have been made whereby they will share in the benefits of this important service."

This was the public baptism of Dr. Scrawl and his indefatigable assistant, Miss Pinpunch. Their story (2), written sixteen years later, lay limply in the Section archives, but was remembered by all who had read it. It is a story told with wit and sagacity and exemplifies the idealistic approach and sense of devotion which set a standard for future members of the group.

In those days the Abstracts were somewhat different in form from those of later years. 500-word abstracts were commonplace. Before 1935 foreign titles were given and abstracts were not numbered. Graphs and line drawings appeared frequently; maps and even photographs were occasionally reproduced: notable among these were some echo recordings made using a 'Braun' tube. The practice died a natural enough death in 1931 but with a disappointing swan-song - a mere half-page circuit diagram of a valve voltmeter.

Since that time embodiments of the scholarly Dr. Scribble, lower orders of scribes, even the occasional Miss Tapp, have come and gone, leaving the 20,000-word yearly quota on the library shelves for the present enquirer and the future historian.

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The original eight subject divisions became 12, and 15; and in 1946 18 sections made their appearance, with abstract titles in black-face type and U.D.C. numbers. This was a feature of their presentation, often overlooked, which enhanced their value for reference and ease of scanning. In June of that year a contract was secured for the publication of "Abstracts and References" in "Proceedings of the I.R.E.". Their circulation thereby jumped five-fold and the potential readership considerably higher.

The protracted individual stint of former years had given way to a team effort, and with the Station staff contributing - albeit reluctantly at times - it was possible to keep pace with the increasing flow of new journals and the widening horizons of the research field.

During this phase, in 1949, the group was housed in the Babbage Building behind Cromer House in the N.P.L. domain at Teddington. The disadvantage of being segregated from the Division proper was offset by the facility for uninterrupted work, the other occupants of the building being too absorbed in taming an electromechanical monster masquerading under the name "The D.A." to afford more than a quizzical detachment for the strangers along the corridor. Here, despite the temporary absence of a leader, work continued apace. This situation was rectified ere long in an unexpected way - by recourse to the distaff side. Another surprise was just around the corner - in the shape of a removal van charged with transporting the group back to the fold.

The Section reestablished itself, however, with characteristic initiative in the homely confines of its birthplace; but eyebrows were raised when one member of the team insisted on occupying a vacant bathroom and, armed with a photometer, challenged authority to dispute her claim. It was here, in Bushy House, that the group settled down to a period of reconsolidation to meet the impending explosion in the documentary world.

An interesting precedent was set a year or so later. To brighten, visually, the visit of the Radio Research Board to Slough, the Section was asked to exhibit its work. Bearing in mind the monthly deadline for copy, for proofs, and for priority demands, it would have been difficult to devise anything more likely to throw the Section into complete chaos. But it was agreed. Journals by the

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score, embryonic abstracts and index material were transported to Ditton Park, along with boxes of exhibition trivia, of which there was a profusion. The exhibit was set up around a stove-pipe in a convenient hut. The Board had seen nothing quite like this before and their verdict was awaited anxiously. The Section's self-satisfaction at hearing it had been commended received a nasty jolt when it was decreed that a repeat performance be given for the visit of C.C.I.R. delegates some three months later.

This subsequently became a regular feature of the section's extra mural activity and introduced a mid-season hazard to the publication schedule; but it was not without its benefits. Some statistics that would have remained hidden saw the light of day, and eyes opened to the provisions and deficiencies of the service.

During this period the group operated as a closely-knit team and it was only the occasional event such as a Coronation, a printing strike, a transport stoppage, or a protracted Christmas party, which threw the mechanism temporarily out of gear.

The Section was ultimately moved to the top floor of Engineering Building at N.P.L. poised, as it were, for the final descent to Slough. This had an unfortunate effect on certain members of the group whose allegiance could not extend beyond the London area. It also foreshadowed another hurdle. The select band of typists at Teddington were inured to the Machiavellian habits of the Abstracts Section who seemed to operate on a log-normal system, conjuring up half the monthly quota of abstracts a few days before press date. With unveiled threat and breathing fire they would then proceed to do the impossible. But how would their sisters at Slough react to such demands? That an issue was never late on their account speaks volumes for their efficiency and effort. The loss of a member of the team however was always a serious blow, and before the gap could be filled Abstracts relied heavily on the Station staff.

Two important developments in the field of scientific literature - the publication of the Transactions of the Professional Groups of the I.R.E., and the flood of conference reports in recent years - strained the resources of the Section to its limits. A firm policy of selection became difficult to apply and the compromise adopted was never wholly satisfactory; for anything short of 100% coverage of both subject and publication fields detracts disproportionately from the usefulness of an abstracting service.

Changes made during the last years were mainly procedural, some selection of material was delegated, the checking of typescripts and proofs was harshly pruned, and indexing operations were patently streamlined; but the saving in time was soon swallowed up in tackling the influx of new material while attempting to maintain the standard of earlier years. The parent journal, too, underwent changes - of printer, of title, of format, and of title again.

Meanwhile another aspect of the service came under review - an aspect the Group itself had had little time to ponder, and one which would tempt the enigmatic Dr. Scrawl to a wry smile. This was the vexed question of staffing and cost. In 1962 this matter came to a head. In view of the personnel and financial requirements of the research programme to which the Station was committed, and a certain duplication of effort elsewhere in the Abstracts field, the decision was made that "Abstracts and References" must be discontinued at the end of the year.

So ended an era of 36 years which had seen the beginning of the Electronics age: the birth of radar, of waveguides and microwave techniques, of colour television, ultrasonics, ferrites and the transistor; an age in which is recorded the discovery of the radiation belts, the development of the maser and laser, of parametric, cryogenic and thin-film devices, of plasma physics and satellite communication.

- (1) Anonymous feminine comment made brightly to Dr. Scrawl
- (2) A Month in the Life of the Radio Research Board's "Abstracts & References"
- H. Dobell (unpublished).

Lest credit be withheld where it is due, it has been deemed desirable to identify the villains of the piece as follows:

The original Dr. Scrawl was Mr. H. Dobell, who until his retirement in 1945, was the self-styled sole director (technical) of the Abstracts, operating with one assistant (part-time, non-technical) who was variously a member or members of the Staff, or a voluntary worker (unnamed but highly efficient).

Thereafter Mr. Gainsborough carried on the work, aided by the Station staff. The late Mr. Colebrook had been closely and actively associated with the service

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from its inception, and the name of Dr. Ross has been linked with the Station effort at this time. The Section was also indebted to Dr. Stickland who prepared the Index for several years prior to 1950.

No history of "Abstracts and References", however brief, should minimize the work of Miss Phippen (1945-1955) and Mr. A. Wilkinson (1946-1953). In 1947 Mr. Head took over the Section for a two-year term, during which time your present scribe joined the Group as an abstractor. Mr. Head was followed, after a short interval when Mr. Wilkinson was in charge, by Mrs. Loman, who led the Section through a difficult period embracing three moves, and who steered the remnants of the Group - your scribe and Mr. Schur (1953-1957) - to Slough in 1956.

Staff joining the Group subsequently were, in order of appearance, Mr. Newman (1956-1962), Mr. Kay (1957-1962), Mr. Pimm (1957-1959, in charge), Mrs. M.V.W. Smith (1958-1962, part-time), Mr. Medhurst (1958-1960) and Mr. Wright (1960-1962).

Before 1950 the head of the Section was at S.S.O. level; subsequently the normal complement of the Section was one S.E.O. and three E.O.'s, with part-time assistance at a lower level.

The parent journal, generally known as "Wireless Engineer" (the "Experimental Wireless" connotation was dropped in 1936), changed its title in 1957 to "Electronic and Radio Engineer", and in 1960 to "Electronic Technology"; this was discontinued after September 1962 and the last three issues of "Abstracts and References" were published as a loose-leaf insert in "Industrial Electronics". See Wireless Engineer 22 (1945) p.520.

TOPSIDE SYMPOSIUM AND WORKING GROUP MEETINGS

During the period April 17th-19th The Radio Research Station acted as host to sixteen Americans and three Canadians who attended a symposium on the scientific results so far obtained from the Canadian topside sounder satellite "Alouette" and also several meetings at which future ionospheric satellite payloads were discussed. The overseas visitors stayed at a London hotel and travelled to Slough each day in a chartered coach.

Papers were read at the symposium by Scientists from the Defence Research Telecommunications Establishment near Ottawa, the Goddard Space Flight Centre near Washington, the Central Radio Propagation Laboratory at Boulder and the

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R.R.S. The symposium was also attended by ten of the leading British ionospheric physicists, together with Professor Nicolet, who had been specially invited to the R.R.S. to discuss and criticise the results presented. The discussion was lively and many useful points emerged; the whole symposium was very successful indeed.

The last two days were taken up by meetings at which various matters were dealt with; these included some discussion of the payloads for future ionospheric satellites which will probably be constructed in Canada and launched by N.A.S.A. These satellites, known as I.S.I.S. (International Satellites for Ionospheric Studies) will follow after "Alouette" (S27) and the American topside sounder (S48), and it is expected that the satellites will carry carefully integrated payloads designed to yield detached information about the ionosphere during the period between sunspot minimum (1964) and sunspot maximum (about 1969).

Apart from the fact that the various meetings had been successful and scientifically useful, the visitors to the station were favourably impressed by the special arrangements and excellent lunches which had been laid on for them. Credit should go to the administrative staff who were responsible for these arrangements.

J. W. King

SINGAPORE NEWS

The Editor,
R.R.S. News

25th April 1963

Dear Editor,

In considering what to tell you in the way of "News from Singapore", it seems the safest opening gambit is the weather; the thing that English people complain about the world over. I have known Singapore fairly well for approaching five years but I do not remember such an unpleasantly hot and humid spell before. The shade temperature by day is in the nineties with humidity near 100% and we have had very little rain for two months; the result is that we are now rationed for water. The island is divided into zones and water is cut off in any one zone for 6 hours on four days per week.

For people with adequate storage facilities this is not too dreadful but it means that on four days per week air-conditioning in our University Offices is shut off and this can be rather unpleasant, as Mr. Ratcliffe will recall from his visit to us in September 1961. So if you find it rains for most of the summer in England, don't complain, just think how lucky you are!

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So far as personal news is concerned, John and Jose Goodyer are now proud parents and the youngest member of the Hale family continues to thrive. Generally speaking, Singapore is not an unhealthy climate for children, who although they lack the rosy cheeks of colder climates, nevertheless seem to find boundless energy, and school facilities are very good.

There will shortly be a large turn-over in U.K. staff and we are also appointing two Asian members who commence their duties in May. We now have a large group in Singapore and the D.S.I.R. Radio Research Station is well known to many people, both Asian and U.K.-based. We have particularly friendly relations with the B.B.C., Cable and Wireless, and Telecommunications.

Our scientific ties with the University are not as close as we would wish because there is little post-graduate research done in Singapore. However, this is gradually changing under a 5 year expansion plan and in April 1966 the student population will be 5000. The Singapore Polytechnic will also expand and become a College of Advanced Technology. This is important from our point of view because it means that good training facilities exist for members of our staff who care to take advantage of them.

For more senior staff, the University are pleased to offer facilities for higher degrees and it is possible to study for a Master's degree or a Doctorate if you can find time from the many varied activities which are available in Singapore. One of the chief of these is eating, particularly Chinese food, and we had a pleasant Chinese dinner to say Cheerio to Peter Bradley who left Singapore on April 19th in the "Oriana".

This was the first time that the "Oriana" had called at Singapore and the visit of the sixth largest passenger liner in the world created a lot of interest. We went on board to see Peter Bradley off and should have been joined by Mr. and Mrs. Golton. Unfortunately Ted went the wrong way, got mixed up in a Chinese procession, and by the time he had extricated himself it was too late for visitors to go on board. However, Peter disembarked again just to say Good-bye!

It now only remains for me to say that our next visit to the Docks will be to welcome Frank Kift on June 27th. We look forward to his arrival and feel sure he will enjoy his time in Singapore as have the majority of R.R.S. staff.

Yours sincerely,

C. Clarke.

A VISIT TO BENENDEN

As a member of the Civil Service Sanatorium Committee I was invited to visit the Benenden Chest Hospital on Thursday last. I almost wished that I had some mild chest condition which would keep me there for a week or so. Some of my friends are in the medical world and consequently I spend much time in and around hospitals. This is the only hospital which I know where the patient appears to be of more importance than the nursing staff! (There is almost one nurse per patient!)

In ideal surroundings high on the Weald of Kent, it has delightful views, well-laid-out grounds and more important still, a marvellous atmosphere. Having visited it, I can well understand why those who have been patients here

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sing its praises so loudly. I can only add my enthusiastic recommendation to theirs and suggest that if you are not yet a member of the society you should join now!

E. M. Cottenham

VISIT FROM ADVANCE COMPONENTS

Advance Components Ltd. visited the Station on 10th April with their mobile demonstration unit. Although the frequency range of the equipment demonstrated covered the range 0.005 c/s to 300 M/cs the instrument likely to remain longest in the memory of visitors, is the waveform generator, which, in conjunction with a Nagard oscilloscope, can produce waveform strikingly similar to 38-22-36.

L. Bonvini

STAFF NEWS

OBITUARY

We regret to report the death on 7th April 1963 of Mr. I. Matthews at the age of 66. He served as a Rough Rider in the 11th P.A.O. Hussars from 1913-1924, and was for many years an inspector for the R.S.P.C.A.

In his short time at R.R.S. he was well-liked by all. A bachelor, he is survived by his sister Mrs. Gill, to whom we have offered tokens of our sympathy. A letter from Mrs. Gill is now on the main notice board.

Congratulations to:

Mr. N. P. Bates on his promotion from T/Instrument Maker to T/Laboratory Mechanic.

Mr. and Mrs. Goodyer on the birth of a son on 26th March at Singapore.

Welcome to:

Dr. G. J. Burttt of D.P.L. Lower Hutt, New Zealand. He will be working at R.R.S. for about three months.

/New Appointments

New Appointments

Mr. G. H. Gardiner	T/Unskilled Labourer
Mrs. B. A. Nutley	T/Cleaner (Part-time)
Mr. W. Thompson	T/Specialist Teleprinter Operator
Mr. J. H. Spencer	T/Labourer Messenger
Mr. S. U. Khan	T/Clerical Assistant

Resignations

Mrs. J. V. A. Willis	T/Cleaner (Part-time)
Mrs. W. S. Harris	T/Clerical Assistant (Part-time)
Mr. G. D. Millard	T/Laboratory Mechanic

Other Changes

Mr. A. J. Rogers A.E.O. returned from Sandwich Course

Staff Movements

Mr. Dalziel visited Paris from 18th to 20th April to attend a sub-committee meeting of COPERS.

Mr. and Mrs. Peake arrived in this country on 21st April from the Falkland Islands. Also back are Mr. Bradley who returned from Singapore on 5th May.

Mr. Lane was in Milan from 27th to 30th April and Mr. Wilkins attended the meeting about Oblique Ionograms in Landau from 4th to 11th May.

Mr. Mortimer will be going to the Goddard Space Flight Center, Washington from 19th to 31st May.

Mr. Kift leaves on 6th June for Singapore to take over as Officer-in-Charge.

SPORTS AND SOCIAL CLUB

The Annual General Meeting of the Sports and Social Club was held on Thursday 25th April in the Canteen; 21 members attended. The points raised included tennis subscriptions, the Smith-Rose Cup, billiards and the sale of confectionery and soft drinks.

The new members of the committee are Dr. Page, Dr. Fooks, Mr. Baber and Mr. Hanneford. Mr. Thorpe who was co-opted onto the committee last year was also elected.

The Officers for this year are:-

President	-	Mr. Ratcliffe
Vice-President	-	Dr. Smith Rose

/Committee:-

Committee:-

Chairman - Mr. Meadows
Vice Chairman - Dr. Page
Treasurer - Dr. Fooks
Secretary - Miss Horwill
Minutes Secretary - Mr. Thorpe
Miss Peart
Miss Williams
Mr. Baber
Mr. Hannaford

Section Representatives:-

Radio Society - Mr. Thorpe
Badminton - Miss Peart
Billiards - Mr. Reader
Bridge - Dr. Bain
Cricket - Dr. Page
Table Tennis - Mr. Reed
Tennis - Mr. R. Smith
Smith-Rose Cup - Miss Williams

Winkfield Representative is Mr. Cathrew.

Concert outings will be arranged by Mr. Venables. Windsor Theatre outings will be arranged by Mr. Reed.

Anyone wishing to use the Camera Club's Dark Room should obtain the key from Mr. Newman.

Windsor Theatre - in future a notice of an outing will be placed on the Sports and Social Club Notice Boards, and those interested should then see John Reed or Margaret Horwill.

M. J. Horwill

Smith-Rose Cup

The result of the 1962-63 Smith-Rose Cup competition is a win for the North with London a very close second. Congratulations to the North.

I should like to start the 1963-64 Competition as soon as I have a complete list of people who wish to take part. Could everyone help by either sending me a brief note stating the Name and Town to which "they feel they belong" and interests - if married a note giving interests of wife if she would like to take part - or else by paying me a brief visit when I can ask the appropriate questions.

M. Williams

Mid-Summer Dance

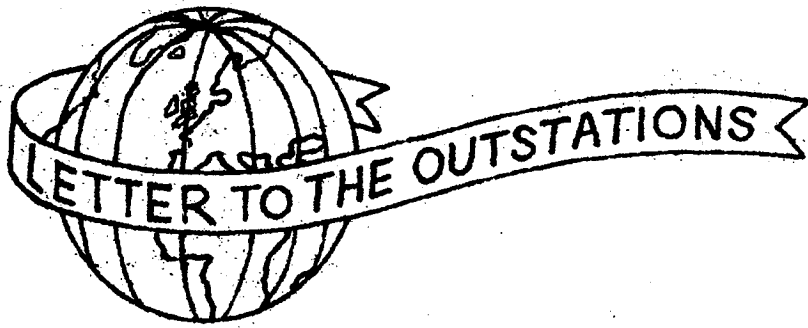
We are hoping to hold a midsummer dance on Saturday June 22nd 1963 at R.R.S. This will be the first dance of the season so we hope it will be a great success. Make a note of the date in your diary now so that you haven't the excuse - "If only I'd known sooner-----!"

R.R.S. Amateur Radio Society

The Amateur Radio Society elected its committee last week and the officers are:

Treasurer - Miss J. Trumper
Secretary - Mr. D. Thorpe
Chairman - Mr. C. H. Scott (Winkfield)

The other two members are Mr. R.G. Flavell and Mr. R.W. Appleton.



Dear Colleagues,

This newsletter is still young enough to take a naive pleasure in the passage of time, and to this end it has been decided that the twenty fifth issue should be marked by a slight change of format, we hope readers will approve.

Mr. Clarke's letter, containing news from Singapore, is very welcome; perhaps this will encourage the other outstations to make similar contributions.

A week ago the Station was visited by the members of the Radio Research Board who examined in detail some particular aspects of our work, as well as paying informal visits to staff working on projects in the remaining laboratories.

On 26th April the Anglo-U.S. satellite completed one year in space. Our prediction service has calculated that this means well over 5000 orbits, and say that Ariel is likely to remain up for years to come.

A two-day meeting, under the chairmanship of Sir Harrie Massey, to discuss results obtained from the satellite was held by the Royal Society on May 2nd and 3rd and some members of R.R.S. attended. In spite of some inconstancy in Ariel's behaviour, Prospero's comment to his Tudor namesake is applicable, 'Ariel, thy charge exactly is performed'.

Yours sincerely,

The Editor

Late News Item from Singapore

Dear Editor,

I thought you may be interested in the latest "water situation report" for inclusion in the R.R.S. News. As from tomorrow, Tuesday May 7th, Singapore will have all water supplies cut off daily from 8 a.m. to 8 p.m.

In certain parts of the Federation, ration cards have been issued entitling the holders to two kerosene tins of water per day. On the black market water has fetched \$5-\$6 for a kerosene tin.

An unlimited supply of pure, cool water is accepted so lightly in most parts of the world that it is difficult to imagine the repercussions of being deprived of it. In a tropical climate the repercussions are multiplied many times over and we view the next few months with some concern.

Yours sincerely,

C. Clarke

Are our Masters Shrewder than we think?

"There will be close day-to-day consultation between the Building Research Station and the new Director-General (of the Ministry of Public Building and Works) to ensure that there is no duplication of wasted effort"

Mr. Denzil Freeth as quoted in this month's State Service.