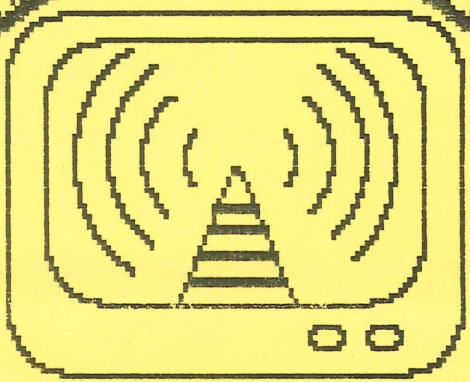
GATEWAY



GGREC

THE OFFICIAL JOURNAL OF
THE GIPPSLAND GATE RADIO
AND ELECTRONICS CLUB

MAY 1988

GIPPSLAND GATE RADIO AND ELECTRONICS CLUB

COMMITTEE MEMBERS 1988/89

President.....	Kerry Clayton	VK3KFC
Secretary.....	Andy Beales	VK3KCS
Treasurer.....	Dave Campbell	VK3XMF
Member.....	Ian (Boris) Buczak	VK3KGB
Member.....	Peter Vat	VK3KCW
Member.....	Cant Remember (ed.)	VK3???

Magazine editorial, print & despatch:

Ian Jackson VK3BUF ph. 789 7339

Club meetings held at the 1st Oakwood park Scout Hall in Heyington Crescent, Noble Park North. Meetings commence on the third Friday of each month at 8:00 pm. (+/- 10%)

Club Station: VK3BJA Located at the Scout Hall

Postal address: P.O. Box 98 Dandenong 3175

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ALL VISITORS WELCOME
****

PRESIDENTS REPORT - MAY 88

Now that the weather is settling into our winter period, it becomes easier to spend time in our radio shacks in front of the heater, working on the latest project.

I would like to encourage club members to try and use some of our less fashionable bands. You know the ones 10 metres, 15 metres, 6 metres and 70 cm.

Listening around the bands recently I was disappointed to hear what appears to be a lot of illegal transmissions. Nothing unusual about that you say! What disappointed me was the lack of legal VK radio traffic.

Now some of our frequencies are not for our exclusive use, but unless we use more frequencies more often we may loose our chance to retain them. So don't complain about congestion on 80 metres or metre repeaters, join me on some of the other frequencies. A local chit chat frequency seems popular so how about having one on each band? Let me know on what you think.

73 Kerry VK3KFC

ATTENTION - MEETING CHANGE

The June 17 monthly meeting has been changed to the fourth Friday, the 24th. This is following a request from the Scouts due to a planned trip to EXPO. Now it so happens that the Moorabbin Radio Club is holding a white elephant sale on the night when we would have normally held our meeting. (The 17th of June) Hence it provides an opportunity for members to attend both events.

TEN YEARS AGO TODAY....

- The Gateway Magazine costs 30 cents!!

- The Victorian Inter-Club committee of Amateur Radio Clubs was formed. (Wonder what happened to it?..KFC) (They had one meeting, declared that was a really good idea, and never got around to another meeting. ed.)

- P & T Department announced that Novices can use V.F.O's

- Plans to start a Club Library and a Club station.

- An article on SWR.

- Another Goldenboy cartoon.

- A cryptic crossword.

- An article on converting CB's to 10 M.

- The Dandenong Journal ran an article on GGRC as part of a publicity campaign. (Sounds like a great Idea?..KFC)

SCIENCE QUIZ

How well acquainted are you with the language and the facts of science? You'll enjoy testing yourself this entertaining way. There is one correct answer for each of the twenty numbered questions below. See if you can find it, keeping a list of the corresponding letters. Then compare your list with the correct one on page 221 and add up the points for your score.

1. Whales are (a) reptiles, (b) fish, (c) mammals, (d) amphibians.

2. Radio sets use (a) Venturi tubes, (b) audion tubes, (c) Eustachian tubes, (d) inner tubes, (e) capillary tubes.

3. Knowing the length of two sides of a right triangle, you can compute the length of the third side by means of (a) the 5-5-3 ratio (b), the law of torts, (c) the Pythagorean theorem, (d) Foster's rule of eleven, (e) the Einstein theory.

4. To cut off the ends of wooden strips at a uniform slant, you should use (a) countersink, (b) an angle iron, (c) a rabbet plane, (d) a miter box (e) a cold chisel.

5. Seeds of the sort called "Mexican jumping beans" bounce about because of (a) a musclelike mechanism for scattering them widely, (b) their responsiveness to atmospheric electricity, (c) the spasmodic twitching of a small parasitic caterpillar in the seed.

6. After development is complete, you should put photographic film in (a) boiling water, (b) hypo, (c) aqua regia, (d) cotton batting, (e) gamboge.

7. Storage batteries should be replenished from time to time with (a) ammonia water, (b) distilled water, (c) Javelle water, (d) carbonated water.

8. The weather man calls rain and snow, (a) hypothecation, (b) precipitation, (c) decantation, (d) insolation.

9. Instead of lenses, some of the largest astronomical telescopes use (a) sky filters, (d) Nicol Prisms, (c) planetary gears, (d) concave mirrors.

10. Ohm's law (a) entitles you to be considered innocent until you are proved guilty. (b) shows the effect of pressure upon the volume of a gas, (c) explains the workings of economic supply and demand, (d) sums up in a simple formula the relationship between electric voltage, current and resistance.

11. Mariners reckon their longitude from (a) the Rome-Berlin axis, (b) the Greenwich meridian, (c) the equator, (d) the line of syzygies.

12. You can use linoleum for making (a) bromide prints, (b) finger prints, (c) block prints, (d) blueprints.

13. The Arctic lemming is noted for (a) the fact that it is six months long, (b) suicidal migrations in which hordes of the rodents march into the sea and perish, (c) its marvellous arches and streamers of colored light in the sky.

14. What enables some insects to walk on water is (a) aqueous tension, (b) surface tension, (c) nervous tension.

15. Automatic sprinkler systems use (a) fire plugs, (b) spark plugs, (c) fusible plugs.

16. The banging noise you hear in steam-radiator pipes is called (a) water hammer, (b) foot pound, (c) carbon knock.

17. Resolving power means (a) strength of will, (b) clearness as well as magnification in what you see through a microscope or telescope, (c) a number like the 7 in 10".

18. C. G. S. stands for (a) an alloy of copper, gold, and silver, (b) the centimeter-grain-second system of units, (c) "cum grano salis."

19. The boundary between the cold air of high latitudes and the warmer air of lower latitudes is called a (a) rising front, (b) united front, (c) polar front, (d) popular front.

20. A dashpot (a) keeps glue ready for use, (b) requires a player to have jacks or better to open, (c) acts as a shock absorber in machinery.

WHEN CHEMICALS RUN SHORT

Those who prepare their own developing solutions will find that ordinary washing soda may be used in place of carbonate of soda in case of necessity. It is not so pure chemically as photographic carbonate but gives satisfactory results.

If the supply of hypo for fixing runs out, sulphite of soda, although it is not so effective, may be used in the proportions of 1 oz. to 5 ozs. of water.

TREASURERS ANNUAL REPORT FOR PERIOD ENDING 31/3/88

FOR GIPPSLAND GATE RADIO AND ELECTRONICS CLUB.

This statement shows the Total Assets of the Club on the assumption that the values given to all non-monetry items is the estimated cash return value if these items were sold in their present physical condition.

ASSETS OF VALUE, APRIL 1988

NALLY TOWER	$ 500.00
TH3 HF TRIBAND YAGI	$ 150.00
UHF TV YAGI	$ 20.00
J POLE ANTENNA FOR 6M AND 2M	$ 80.00
ANTENNA ROTATOR	$ 120.00
COAX FEEDLINE FOR CLUB STATION	$ 80.00
POWER SUPPLY 12V @ 20A	$ 100.00
KENWOOD HF TRANSCEIVER	$ 500.00
PYE OVERLAND 6M TRANSCEIVER	$ 50.00
KENWOOD VHF TRANSCEIVER	$ 150.00
CLUB STATION EQUIP. RACK	$ 50.00
500MHz FREQU. COUNTER	$ 140.00
RF NOISE BRIDGE	$ 80.00
DIGITAL CAPACITANCE METER	$ 40.00
2 J POLES FOR REPEATER PROJECT	$ 100.00
POWER SUPPLY FOR REPEATER PROJECT	$ 80.00
EQUIPMENT RACK FOR REPEATER	$ 15.00
2 x TRANSCEIVERS FOR REPEATER	$ 300.00
RTTY TERMINAL TV MONITOR	$ 20.00
RTTY TERMINAL COMPUTER VZ200	$ 70.00
RTTY TERMINAL MODEM	$ 70.00
CLUB REPEATER CONTROLLER	$ 150.00
CLUB REPEATER RTTY MODEM	$ 32.00
UNSOLD COMPONENTS	$ 480.00
TELECOM CHEQUE ACCOUNT	$ 228.41
TELECOM INVESTMENT	$2000.00
PETTY CASH BALANCE	$ 129.11
TOTAL ASSETS	$5734.52

Audited
J P Wilson 14.4.88
Hon Auditor

GIPPSLAND GATE RADIO AND ELECTRONICS CLUB STATEMENT OF INCOME AND EXPENDITURE FOR YEAR ENDED 31/3/88

INCOME		EXPENDITURE	
SUBSCRIPTIONS	$190.00	CLUB LICENCE	$ 26.00
INTEREST	$321.10	STATIONERY	$155.67
COFFEE	$ 10.00	REPEATER	$367.37
COMPONENTS	$ 1.00	HALL HIRE	$192.00
SPECIAL EFFORTS	$ 66.56	WIA SUBSCRIPT.	$ 49.00
C/VAN PARK FEES RECOVERED	$115.00	PHOTO ALBUM	$ 11.98
THEATRE TICKETS	$ 45.00	SOCIAL ACTIV.	$109.65
GENERAL	$ 14.40	HALL HEATING.	$ 4.80
WHITE ELEPHANT	$ 40.95	THEATRE TICKETS	$200.00
REPEATER FUND	$190.00	C/VAN PARK FEES PAID	$115.00
	$994.01		$1231.47

DEFICIENCY OF $237.46 FOR 1987 - 1988 YEAR

Audited

J.B. Wilson.
14/4/88.
Hon Auditor.

THE 1988 HORSE ENDURANCE RIDE

This years horse endurance ride was quite a successful event, even though the tracks were a little slick. Manfred VK3JMB and Erica found this out on the Saturday when they had to use snow chains to get up a hill. Other operators were Richard, VK3XRO, Doug VK3KMN, Andy VK3KCS, Peter VK3YZP, Neil VK3KAL, Mark VK3TCD, myself, Ian VK3BUF & Dianne & co. at the trial headquarters and of course Dave VK3XMF & Phil VK3BHN who went to (Mt.) Buggeree. I shall seize this occasion to dob Philip in who mentioned that he is going to write a complete story on the event for the next edition of Gateway.

The organisers of the trial, who did a splendid job, have already sent a letter of appreciation which is included below.

R.M.B. 1080

ANCONA 3715

MAY 10th.

GIPPSLAND GATE RADIO AND ELECTONICS CLUB.

Dear Ian,

Many thanks to your group of enthusiastic maniacs who like to get up at 4.30 in the morning to do battle with slippery roads, rain and hail to help us out. (You sound a lot like Endurance riders actually).

You all did a great job and many commented on the efficiency of the ride which was due in large measure to you.

Hope you will be available next year and we'll do it all again.

Thank you once again,

yours sincerely,

Marilyn Wood.

Text compression is key to electronic books

A designer working for Techway in Canberra has produced a text compression algorithm which has led to the development of a handheld electronic book. Believed to be a world first, it can accommodate the entire text of the bible, complete with dictionary and concordance, onto a plastic module the size of a credit card.

Known as the Smart Book, it features a reader unit with LCD display and six control keys, and a card containing the text. The Smart book was conceived by industrial designer Tom Treseder of the Bible society, working with David Jamieson.

They contacted Roger Purcell of Techway, who produced the text compression system, and with support from Weldon-Hardie and R & D funds from James Hardie Industries, a prototype was constructed. Manufacturing of the Smart Book is expected to commence in mid-1988.

Compressing texts

The text compression method, which is the basis of the Smart Book, allows it to fit its text in one megabyte of memory.

Rather than storing the entire text as a string of ASCII characters from end to end, the text was analysed to derive its total vocabulary. This was found to be around 12,000 words for the Bible, which are each stored once only as ASCII strings in memory. Given an average word length (for the Bible) of about five letters, the lexicon of the Bible text (the prototype and intended first production model) occupies around 60,000 bytes of memory.

Since it is assumed that except where punctuation is present each word of text will appear between two spaces, storage of spaces is unnecessary, yielding a further saving of memory.

The actual text is then stored as a series of 14 bit tokens. The reader module examines a token, retrieves the appropriate ASCII string from the word table, and displays this on the screen.

Dictionary functions

As well as representing a word, the 14 bit token can also be used to represent a phrase. Two bits are added to the front of the token (making a total of 16 bits) to identify whether the token represents a word or a phrase. If it is a phrase, the reader is sent to another token, so that phrases are iteratively broken down into their component words by the reader for display.

By indexing phrases as well as individual words, the Smart Book is able to implement its concordance and dictionary

(continued...)
→

functions. It can search through the whole of its text in 31 seconds.

The text card in the production model will comprise two 4Mbit mask PROMs, to give a total of 1Mbyte of memory space. The reader module will contain the LCD display, control microprocessor, diagnostics, control memory and a range of fonts which will be selected according to information on the card.

Text processing

The reduction algorithm is processed on a mainframe computer. The computer translates the text into the 14 bit tokens, starting with individual words. The program then identifies frequently occurring phrases, starting with those most commonly used and continuing until the memory available to the token addresses are used.

To make the unit comfortable to read, the LCD display on the production model will be 400 x 256 dots in size. The six control keys control the display left/right (page control), up/down (cursor control) and start/stop (search function control).

"Most exciting"

A company formed to research and market the product, Megaword, has contacted publishing houses in the USA, who confirmed that no other such product exists in the USA, the UK, or Europe. Australian publisher Kevin Weldon described the Smart Book as "the most exciting thing I have ever seen in publishing".

As well as the Bible card already prototyped, plans are underway for a complete dictionary and thesaurus using the Smart Book. Applications are already forecast in reference books, service manual libraries and other technical publications.

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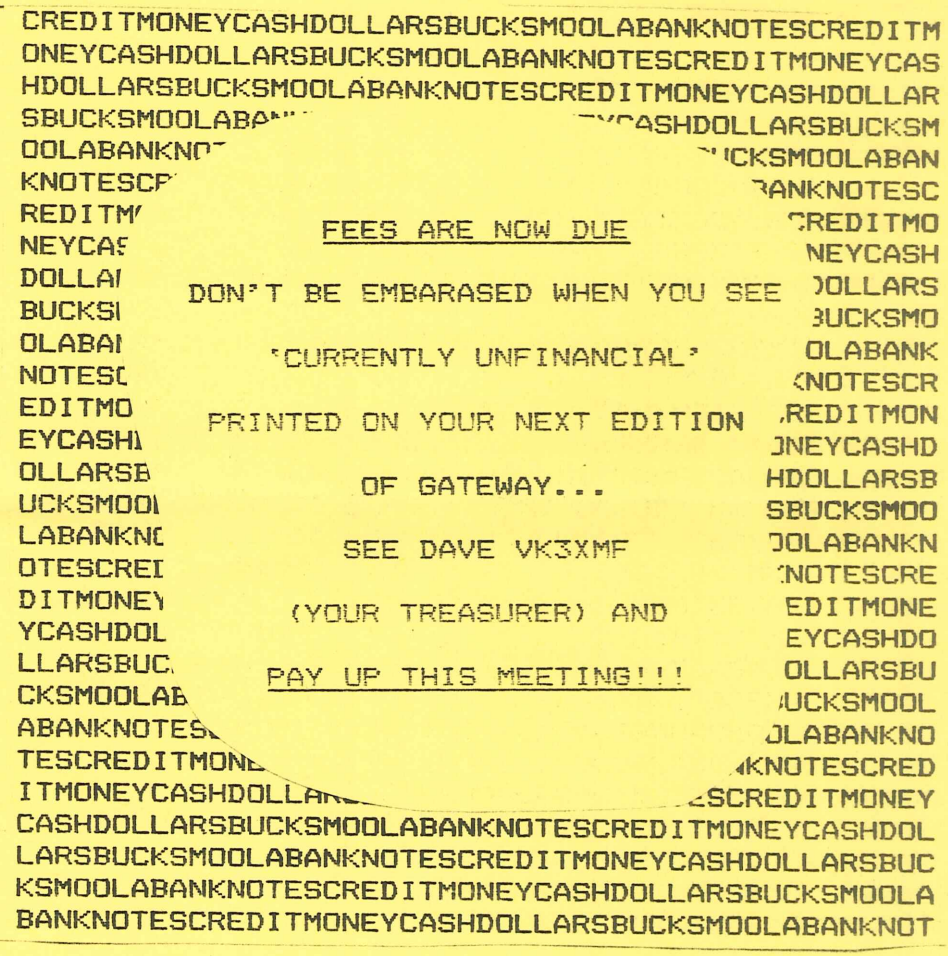
for field coils to set up the magnetic field for the motor to operate, resulting in improved efficiency.

The new magnet is manufactured from iron, boron and the rare earth element, neodymium. CSIRO is keen to find


FEES ARE NOW DUE
DON'T BE EMBARASED WHEN YOU SEE
'CURRENTLY UNFINANCIAL'
PRINTED ON YOUR NEXT EDITION
OF GATEWAY...
SEE DAVE VK3XMF
(YOUR TREASURER) AND
PAY UP THIS MEETING!!!