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# NZLSAR News

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Volume 4 Issue 5

October 1998

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## Combining GPS and Computers

The GPS receiver is becoming as ubiquitous as the digital watch, and like the digital watch it cannot compensate for the shortcomings of the holder. However, GPS *is* a marvellous tool when used intelligently and in the next few paragraphs I shall be illustrating new developments in linking GPS with computers and speculating how these may be employed to help search controllers in decision making. Who am I? My paid job is "National Voice Communications" for DoC as part of which I am a member of the NZLSAR CSC. In my "copious" free time I have an alter ego: CAPTØ (Coastguard Air Patrol Training Officer).

The CAP is using light aircraft for offshore search. The problem with searching over the sea is that it is extraordinarily difficult to recognise by direct means whether you have passed over a given patch of waves before. We have overcome this problem by using GPS linked to a laptop computer. The computer contains scanned charts and the GPS superimposes the actual track flown. Therefore we can subsequently prove, with a printed map, exactly what area has been searched and with what degree of confidence. Naturally we get the computer to do as much of the "mindless" thinking as possible, so we also use it to plot out the search patterns that we are going to follow.

The software that we are using is called *SkyMaster* and it is also in use with, or being evaluated by :

- The Police Eagle Helicopter and other Police departments
- Westpac Trust Helicopters in Auckland and Wellington
- Northland Emergency Services Trust
- RNZAF for 3 Squadron helicopters

Similar software from the same source called *MapMaster* permits lines and symbols to be drawn upon scanned maps and exchanged between computers. This is being looked at by the Maritime Safety Authority as a means of promulgating changes to charts and possibly for recording and transmitting the position and extent of oil spills.

So far this has little application for Land SAR, so let me look a short way into the future and add two details:

1. *MapMaster* and *SkyMaster* are so similar that one can display the data of the other, and
2. The current position of any GPS linked with a radio modem can be displayed upon the scanned maps.

These factors give the ability for a Search HQ to use a portable computer to plan searches, exchange those plans electronically with other interested parties, and to monitor in real time where any search party is and therefore the track that they have followed. From this one can be confident about how thoroughly the search has been conducted and have a record for any subsequent Board of Inquiry. How well this works in practice will largely depend upon radio coverage to carry the data from the search parties to HQ. However, if the search is large enough or long enough to merit this degree of co-

ordination it should include an air asset any way, which can then also act as a radio repeater.

As I said, this is a look into the near future and just because something *can* be done it does not follow that it *should* be done. On the other hand if similar ideas are being tried out in different parts of the country would you please keep the Communications Subcommittee informed so that we can act as the repository of NZLSAR's

collective knowledge and, perhaps, in the future run trials with these or similar ideas.

PS The Coastguard Air Patrol searches over land as well as over the water and costs less per hour than helicopters.

**Matthew Lloyd**  
NZLSAR Communications Subcommittee

## Missing Locater Beacon

New Zealand Safety Limited put on a display at the Mystery Creek National Field Day and amongst the exhibits shown by them was a number of "Res Q" personal locater beacons. When it came time to pack up they found one unit missing, believed stolen. The beacon has a serial number PLB 0173 or PLB 0176 and requires servicing by the manufacturer in 2001. As it could become a real nuisance in the wrong hands keep an eye out for this beacon and ring **Nick Grace** of NZ Safety on **025-734-992** if you spot it.

**John P Tristram**  
NFO

## One answer to all the training and why we are involved in SAR

It was a mild overcast Friday in July this year. We stood on the edge of the sparsely used Old Motu Road looking down a 300 metre near vertical bush clad face.

Five months previously, probably on the 13 of February, a lone man had stood at this same spot. He would have been checking to see his car was hidden and well out of sight down the extremely steep drop. Nearby on the side of the road lay his pack and rifle. In his hand may have been a can of beer, he was living the last hour or so of his life, depression had taken control.

My thoughts of that lone person and his grieving family were interrupted as Opotiki Police Officer Paul Roonie explained how the car, a brown Commodore station wagon had been rolled off the road coming to rest out of sight just 20 metres below. "It was fortunate it did stop where it did, Paul said, a few metres further and it would have plunged another 100 metres down."

The four of us from Gisborne, SAR Sergeant Tony Yeoman, Don Welch, Vaughan Neil and myself listened as Paul explained how a hunter had stopped his car at this very spot on 6 April to try to roar a stag. He must have been very observant as there were only very faint marks on the edge and some disturbed foliage. It appeared to him something had gone over the edge so he climbed down to investigate. If he hadn't the car would still be there totally hidden. After the removal of the vehicle by the Opotiki Police, two Officers spent four hours walking the nearby game trails but discovered nothing.

Paul explained how they had met the family there to show them where the car had been found. They agreed that it would have been a fruitless exercise to mount a search. Pointing to the maze of bush clad ridges and valleys he said they were not even sure if he was in there. The many possible scenarios covered a huge area.

None of us were sure what we had let our selves in for as the four of us stood there looking over the panorama of the Urutawa Range with its slip prone fine earth, shrouded rock faces and extensive covering of supple jack and thick crown ferns. Questions like where do we start, how can we be sure he is in there and are we wasting our time crowded in. And then the comment that we may need 50 persons for 50 days to search even a small part of the area revealed the thinking on the enormity of the task. All these were our initial thoughts as we stood on the side of the road, five months after his disappearance.

Mission impossible? Or was it? Let's start at the beginning.

After a suicide note was found, the Gisborne Police had searched for his car with a helicopter just a few hours after he was known to have left his home. The family had searched all the likely roads in the District for many days after his disappearance. They had also searched with a fixed wing aircraft for five days looking over rivers and bush line areas known to their missing relative. The news papers and radio were used to make known to the public the problem and seek information from them. As well the

TV programme "Crime Scene" ran an article on the mans disappearance. All to no avail.

Then the car was found. The family then surveyed the site and feelings of the hopelessness of the success of further searching was felt. However as the months passed the family's attitude changed and they became concerned that an insufficient search had been made around the car and the adjacent area.

Contact was made with a member of Gisborne SAR who discussed it with Police and a decision was made to have "an exercise". The Gisborne Police SAR Squad were due to have such an event and invited the Gisborne SAR volunteers to combine with them and use the situation as the focal point of the exercise.

So started our search investigation and the many points of consideration we needed to make. Firstly the apparent wish of the missing person not to be found was a real concern. Reinforcing the thought that he did not wish to be found was the determination with which he had hidden his car. To search for someone who wants to be found is one thing. For someone who doesn't, is entirely another and could decrease the POD to near impossible odds.

Another consideration was the rumours running around Gisborne. These ranged from he had left New Zealand, to he was out there living in the bush. The possibilities included - the car had been dumped by persons unknown after being stolen from elsewhere, he could have gone far or near into the local bush, or even anywhere else in the country. The fact he had taken a pack from home indicated the possibility of more distant travel, somewhere. The "Crime Scene" program and media coverage replies also provided room for confusion, as we had reports that he had been seen in town after his disappearance, on a highway two weeks later and in Northland.

Tempering our search management was the myriad of "information bits" that we had got from quite a number of family members and friends that we had had interviews with. We should note that one small piece of information given by the family, namely his recent drinking habits, was to play an important part in the eventual success of the search

Finally and providing a clear guide was the information we were able to obtain on other suicides that had take place in the bush and which showed a trend in behaviour patterns. This was that in most cases the person had not travelled more than 200 metres from either car or road before carrying out their intentions. We might also add that some family and friends believed he would not have

walked far and he was not considered a competent "bush person".

Collectively all this information was to prove invaluable in raising our confidence that the area we had decided to search was one with a high POA. It was with this new found confidence that we were able to plan the search.

Our Plan was simple.

Day One - 22 field searchers.

a From maps and aerial photos we had determined possible "natural exits" off the road. There weren't many. A team was to be tasked to check these out.

b A close contact search in the immediate area of where the car was found using the road as a base line to a 300 - 400 metre radius.

Day Two - 35 field searchers.

a Continue with or extend the area of close contact search if it was found to be warranted.

b Team searches of gullies and spurs in adjacent area.

Day Three - 35 field searchers

Depending on the results of the previous two days we might consider "purposeful wandering" techniques of teams in an extended area.

The Search.

A 0530 start from town in cloudy conditions resulted in a wet arrival at what was to be the search base, an old farm house site. No power, no phones and an area just sufficient for two marquees. By 0930 base was set up. It had been a mission ferrying the equipment up the slippery 200 metre driveway, the metal surface had long ago been covered by grass and soil. However once the work was completed - the rain stopped! Cuppa tea all round. The briefing was concluded and the teams moved to the search area six kilometres away.

As per the plan one team was dispatched to recheck for possible exits off the road in the vicinity of where the car was found. The remainder were moved off the road some 100 metres south of this point. This spot was a natural exit onto a spur with a game trail that led a short distance along it. The searchers were to spread themselves along the spur with the intention of close contact searching a sweep parallel to the road. Those in the lead had only moved in 30 - 40 metres when they found four empty beer cans. In the knowledge that the family believed the man may have been carrying beer with him, this find had possible significance. An immediate halt was called (just

30 seconds into the search) and the site given close inspection. The cans were scrutinised and revealed a production date of 25-1-98. Information was sought and was quickly forthcoming that "most canned beer is sold within six weeks of production". This meant that these cans had been sold within the time frame of when this man disappeared. A team was dispatched to search this immediate area and along the spur. The sweep continued with a real awareness in the in the minds of the searchers of the area having a high POA. The first 300 metre sweep was completed. A short breather taken and a bite to eat. Falling rocks and supplejack were proving to be a bit of a problem.

By now the team diverted from the main search to check out a spur had dropped a long, long way down and were suddenly surprised to come across the wreck of a truck. It took them a good 30 minutes to scramble back to the road from the site of the wreck. It was steep country.

The contact searchers moved down hill and lined up for the second sweep. The newly issued ICOM VHF radios were invaluable for controlling the line. Searching was intense. This was our first search since our Gisborne SAR had completed four EML Track and Clue Awareness and Search Methods Courses. Toward the end of the second sweep as the search line neared the top of the spur another can was found. Same date as the above and too far to have been thrown there. The line was halted. A sixth can was spotted. The site was a small bench on a steep face. No tracks or animal trails led onto it or passed it. A tree with an unusual root formation grew on the bench. The search line was held whilst those nearest the can carefully eyed the area. An empty cigarette packet was spotted and then an odour was detected. This was unexpected, he had been missing for nearly six months. A small (and we mean small) opening in the tree root formation caught a searchers eye. And there in the cavity under the tree lay the missing persons remains. Totally hidden with his pack and rifle and only

150 metres in line of sight from where the car was found. The pack contained a length of rope and a small tarpaulin. He had with him also a map and compass which had been placed at arms length away from him on a ledge in the cavity. This may suggest that he had intended to travel into the bush further (remember our concerns previously mentioned regarding the pack) but once inside the inclusive surroundings of the bush, fell into the behavioural pattern of other suicides.

The search was successfully concluded in two and a half hours. It had originally been considered a near impossibility and a fruitless task. It is a lesson to be learnt.

We are so very pleased to have been able to return the body to the family, provide them with answers as to what had happened and so give everybody some small comfort in this tragedy. That in itself makes our involvement in SAR worthwhile. We are from a SAR point of view, "chuffed" with ourselves but in saying so acknowledge the part that NZLSAR has played in our training over the last three years or so and in particular the Standards that have been set by NZLSAR which so clearly define our responsibilities and search procedures. Secondly and by no means least is the valuable training received from Ross Gordon of Emergency Management Limited. We have held four of Ross's courses in Gisborne. The training received from him and NZLSAR played an important part in the success of this search, as did the enthusiasm and dedication of our Gisborne volunteers and Police SAR Squad members.

**Brian Burgess**  
NZLSAR Adviser  
Gisborne  
**Tony Yeoman**  
SAR Sergeant  
Gisborne

### **Postscript**

For some of those who found the body the next few days were unsettling and some form of counselling may have been an advantage. Please remember the following.

- There is a Police Procedural Trauma Policy document.
- It is held by each Police Welfare Officer.
- In this instance the Policy does not differentiate between Police and volunteers.
- People who feel in need of this service need only contact the local SAR Sergeant or an Adviser who can assist.
- All costs are met by the Health Services Group at Police National Headquarters.

On thankfully rare occasions, the grim realities of life for SAR participants can be very unpleasant. You don't have to carry the load alone, there are professionals to share it with in a confidential manner, so don't hesitate to contact the persons mentioned.

## Search, Rescue and Air Ambulances

For some time now there has been disquiet voiced as to the appropriateness or otherwise of the helicopter and even the crew, used for some specific rescue. From a management point of view NZLSAR finds it difficult to assess whether there is a problem, the size of it or if it exist at all. Anecdotal evidence is not sufficient to build a case on. To aid in our understanding of the situation, I would request that if any air ambulance usage occurs in your District that you think should have been done

differently, you document the instance with date, situation, location and your contact details and send to NZLSAR, PO Box 12081. Alternatively contact myself phone (evenings) 06-877-4436, Fax (06) 876-3009, email rmb@clear.net.nz or the NFO direct with your concern.

### **Ross Berry**

Chairman NZLSAR Aviation Subcommittee

## ACC and Air Rescue Services

ACC is currently in the process of evaluating tenders received for the provision of Air, Road and Water ambulance services throughout New Zealand. This is the first time a national tender for the provision of ambulance services has been conducted.

Historically, ACC has provided payment for the emergency transport of ARCI Claimants under the Accident Rehabilitation and Compensation Insurance (Costs of Transport related to Treatment, Service or Physical Rehabilitation) Regulations 1992. This means that any number of Providers can provide transport services and claim under the Regulations.

Where a helicopter is used in a Police Search and Rescue mission (SAR), ACC is able to pay for the transport involved if the transport meets the requirements under the Regulations. ACC cannot, however, pay for the costs involved in the 'search' aspect of a SAR.

ACC is aware that the current Regulations do not provide controls to ensure that minimum service provision standards are met, or that the efficient co-ordination of services is promoted. Accordingly, with the introduction of the contracting environment there has been increased emphasis on contracts to replace Regulations to:

- co-ordinate services;
- ensure quality management;
- promote efficient use of scarce resources;
- promote service quality;
- ensure accountability; and
- promote the use of relevant and useful reporting requirements, to measure the above.

The intention of the current contracting round is to ensure that contracts with ambulance service providers will replace the provision of these services under the Regulations, to enable the provision of these services in an identified region by one Provider. This would promote

Provider accountability for the coverage of the region and the quality of the services provided through the '111' communications system.

ACC acknowledges the important work of SAR helicopter operators in SAR missions, and that there are many instances where, when the person is located, an emergency transport is required for which payment should be made. To this end, ACC is working closely with the Police and the New Zealand Land Search and Rescue Incorporated organisation to amend the proposed contracts to ensure means of cost recovery are available where appropriate.

ACC is aiming to have most contracts in place by 18 October 1998, at which time the Police and SAR organisations will be informed of the Air Ambulance Providers operating in their regions, and appropriate protocols to be followed for the emergency air transport of accident victims.

### **Justin Parker.**

Senior Business Analyst. Health Providers Division.  
Accident Rehabilitation and Compensation Insurance Corporation (ACC)

## Maps for Emergency Purposes

LINZ have issued a "LINZ Personnel Emergency Callout List" with names and telephone numbers for the provision of maps for an emergency. A copy of the list has been issued to all District SAR Coordinators who may be able to provide you with a copy, or alternatively ring this office and I will send you one.

John P Tristram  
NFO

## Committee News

On Saturday 22 August NZLSAR had its AGM, and a Committee meeting was held attended by 16 people. The AGM received the Annual, Financial and Performance Audit Reports and there was agreement it has been a busy and worthwhile year. One very clear example of the year can be taken from the statistics contained in the Training Subcommittee Report which showed that NZLSAR had sponsored/facilitated 37 training courses over the last year most of which were for two day and represented over 1500 person days of training. The Performance Audit was felt to be a worthwhile guide to the future and its near 20 recommendations and suggestions are being studied carefully by the Committee.

The Auditor, Hugh Redpath has resigned from the position. Hugh, as Auditor, has guided us through the first four years and NZLSAR extends its appreciation to him and wishes him all the best.

Amendments to the Constitution were made. The first allows a Region who's Regional Representative becomes Committee Chairman to appoint another Representative. This is felt necessary in light of the workload the Chairman carries. The other change was of a technical nature to do with length of terms a Representative may serve.

The Committee meeting covered a wide range of events including:-

- NZLSAR and SWAZI Apparel. This business arrangement has been finalised where for the use of the NZLSAR logo on each SWAZI manufactured SAR Supporters Shirt, NZLSAR will receive a vest for distribution. SWAZI have subsequently begun manufacture of the Shirts and NZLSAR has arranged for SAR Organisations to make bulk purchase of the shirts at a discounted price.
- Meeting Venue. It has been decided to canvas the idea of having meetings outside Wellington, especially the AGM. This could be in the form of a two day get-

together with the AGM and Committee meeting one day and a seminar/workshop/trade display on the other. Possibly similar to the Advisers Seminars run successfully by Regions Two, Three and Five Canterbury/West Coast. I welcome, preferably in writing, thoughts on this idea, format, venue, accommodation, catering, how it could be organised and financed, etc.

- Police Review. Although the Review seems to have gone very quiet, the Committee feels that there are still areas in the relationship between Police and volunteers that can be enhanced. It was decided to request a meeting with representatives of the Department and NZLSAR to consider our concerns and better ways to provide the service both for the volunteers and the end customers.
- Regional Representative Boundaries. This is still a vexed question especially for Region Four with Wellington and Nelson split by the Cook Strait. Both the Nelson Police District Committee and the Blenheim SAR Organisation have written and requested that Nelson become a stand alone Region. After consideration this was felt to be bound up in the philosophy of representation, how many people can NZLSAR afford to bring to meetings. As well the Police boundaries are still in a state of flux, so it was decided to make finances available for Mike Sheridan as Region Four Representative to attend meetings more frequently in the old Nelson District.
- Business Plan re-forecast. Upon request by the Chairman, the Police have given NZLSAR an interim grant of some \$25,000. As the amount of the total grant is still not known, it was not possible to finalise the budgets for each activity. However, as there is a need to organise and plan weekend training with reasonable lead times both for the volunteers and the training providers, it was decided to allocate to each Region \$4,000 for specific training. Nearly three

months into the new financial year it is still not known the amount of the grant.

- Motor Vehicle reimbursement rates. It was felt timely to review this and has been set at 28 cents per kilometre travelled.
- Elections of Officers. It was resolved that Graham Thorp be appointed Chairman, Roscoe Tait Secretary and Phil Rundle Treasurer. This was approved with applause and members made comments of appreciation for the work done by these three.
- Steve Davis from AREC updated the Committee on the website. It was agreed that material such as the Constitution, Annual and Performance Reports and the Field Guide should all go on the NZLSAR webpage.
- Concern is felt by the Communications Subcommittee that the newly issued ICOM VHF radio sets may be split up and problems also may occur with the

frequencies. A questionnaire is to be sent to all Police District SAR coordinators.

- It was resolved that **Jim Farley, Rod Mills, Ray Fernis and Anthony Jones** be presented with a **NZLSAR Award**.
- Field Guides. All of the edition just printed appear to have been issued and there is still a demand for more. The Training Subcommittee is to consider a reprint. In the meantime can all SAR personnel check and see that some magpie amongst us hasn't made a little squirrels store (sorry for the mixed metaphor's). If you have a surplus please let me know so some of the demand can be met.

**John P Tristram**  
NFO

#### **Editors Comments**

To **Matthew, Brian, Tony, Ross and Justin** a big thank you for your articles. To those who proof read and check the spelling and grammar, thank you also.

Copy for the **December News** is most welcome and the close-off date is **Friday 24 November**. Articles on gear, SAR training or operations are most welcome. Please either mail as neatly hand-written, printed hard copy or on a disc to **NZLSAR, PO Box 12081, Thorndon, Wellington**. Alternatively email it to **tristram.nzlsar@xtra.co.nz**. Regards **John P Tristram**  
National Field Officer.