



New Zealand Search and Rescue

Search and Rescue Telecommunications Working Group (Land)

STWG(L)

Meeting Notes

Thursday 26 October 2017, 1300hrs

Level 2, 318 Lambton Quay,

Wellington.

Present:

Duncan Ferner (Nzsar) -Chair

Stephen Ross (Nzsar) -Facilitator

Rex Aubrey (Nzsar radio consultant) -Scribe

Ian Newman (LSAR NZ)

John Yaldwyn (AREC Wellington)

Alan Munday (Surf Life Saving NZ)

Pat Waite (CEO of LSAR NZ)

Tony Hunt (NZ Police ICT)

Inspector John Pine (NZ Police)

Jono Sands (Ignition Networks) Guest speaker (arrived at 1500 hrs).

1. Welcome

Duncan opened the meeting and welcomed everyone referring to the agenda prepared by Rex and Steve. Duncan asked everyone to introduce themselves as there were a number of people attending for the first time.

2. Apologies

Apologies were received from the following people:

Jo Holden (NZ Police)

Peter Corbett (LSAR NZ)

John Woolf (LSAR NZ)

Jeff Sayer (AREC)

John Lovell (Ministry of Civil Defence)

3. Acceptance of minutes from last workshop

Duncan asked if everyone accepted and the minutes for the previous meeting held on the 30 May 2017. The minutes were approved by all.

4. Matters arising from last workshop

Minutes of the technical workshop (7th September 2017) submitted.
A meeting to arrange with Tait radio engineer for the 28 November 2017

5. NZSAR resources-database

Rex talked about what the technical workshop members agreed as to what information should be added to the NZSAR resources-database. There was a discussion about the fact that not many people actually knew about this database. Duncan talked about different ways that NZSAR could 'publicise' the existence of the database. Mention was made to create a Telecommunications page on the site.

Actions:

STWG(L) activity, including previous meeting minutes, to be published on the NZSAR web site.

VHF fixed repeaters coverage maps to be sourced for publication on NZSAR resources database.

6 Surf Life Saving NZ

Alan Mundy presented a very interesting talk on the new digital radio system developed and used throughout the country by Surf Life Saving NZ. Alan offered to provide permission to have his radio channels programmed into VHF radios used by SAR organisations.

Action:

Obtain Surf Life Saving NZ channel details and arrange formal approval to program them into SAR radios.

7 Annual AREC conference held in Rotorua

Rex talked about his attendance to the annual AREC conference held in Rotorua during Queens Birthday weekend. Rex said that everyone was engaging with him and both Rex and the AREC members benefited from his attendance. Rex held an open microphone session in the main hall for 45 minutes talking on all the subject covered in the Caravel report. Duncan asked John Yaldwyn if the AREC could invite Rex to the next AREC conference held in Dunedin next Queens Birthday weekend.

8 Technical Workshop held on the 7th September at the RCC

Rex presented the minutes from the technical workshop held on the 7th September for everyone to read.

Craig Murray (AREC and Tauranga LSAR) is in the process of writing the data-file for the Tait VHF portable radios which will be emailed at the end of November.

There are technical issues with the quantity of unit IDs for GPS reporting available on the Tait radios with John Yaldwyn from AREC currently managing the allocation of UIDs to various organisations. Rex will be meeting with Tait engineers at the Police College on Tuesday 28 November.

Standard Operating Procedures are to be written on how to set up GPS reporting during a SAR operation (or exercise) to minimise current frustrations.

Voice recording technology on the primary VHF radio channels needs to be developed and implemented and Duncan is keen to see progress on this topic.

Action:

A time-line is to be created for the voice recording of primary VHF channels.

9 Access to the Police VHF digital trunk radio network

Police are able to provide a 'clear voice' talk group on their Wellington digital trunk radio network for evaluation by Wellington Police LSAR and AREC over the months of December '17 and January '18.

John Yaldwyn is providing six Motorola radios, Rex is providing one Tait mobile radio and all Wellington SAR police radios will be programmed with this new talk group.

John Yaldwyn will arrange some evaluation exercises with Wellington LSAR and Police over the summer holidays which Rex will monitor.

Action:

Organise Wellington LSAR & Police to evaluate the new SAR talk group on the Police VHF digital trunk radio network.

10 LandSAR progress report

Ian Newman gave an update of LSAR radio activities. He reported:

- The programming of the SARTrack enabled TP9300's has created some initial problems with functionality.
- There has been an issue of a SARTrack enabled TP8100 also having problems. This is being investigated and any issues with SARTrack on either type of radio is work in progress.
- Some groups requesting the SARTrack capability don't have the personnel to operate the Live Tracking function or information management. The proposed SARTrack training programmed for 2018 should rectify this problem.
- LandSAR can now provide 3 types of VHF Base Sets to groups for desk mounted or forward operating bases. They are all in a Pelican case and portable, but the waterproofing, ruggedness and charging options vary.
- LandSAR will conduct an HF Radio competition scheduled for 1 April 2018. A draft exercise instruction is available.
- More groups are requesting a variety of technology that they have seen on the internet. We are requesting informal evaluations of various items from individuals on the LandSAR Communication Advisory Group or STWG(L) technical working group.

11 AREC progress report

Jeff Sayer emailed a report which was printed and distributed to meeting:

Here is a summary of progress to date with the AREC HF system development. AREC purpose is to support emergency services by providing communications and associated support services. Part of that function is to provide an effective support for HF operations across New Zealand. Whilst HF radio has fallen out of favour for a number of agencies as they switch to front of country VHF and satellite systems for accessible remoter areas, land search operations can take place in areas with poor satellite coverage and at a long distance from available highpoint repeater sites. Participants at the New Plymouth LandSAR conference when polled were clearly in favour of retaining HF capability as when HF communication is required, it is often the only solution that will work. In the commercial world point-to-point HF links can be made using software managed systems such as Advanced Link Establishment (ALE). This requires quite sophisticated and relatively large HF radios at both ends of the circuit. The links are made utilising frequency diversity to get around the vagaries of HF skip distances and ionospheric variability. The Police and DOC HF networks are no longer being actively supported. They currently rely on older technology that operates as a single circuit with an HF transceiver and phone patch at one end of the circuit that is only suitable for short time frame activations on a phone call type basis, not long term monitoring of an active SAR channel. At the field end there are usually small 5W hand held HF stations with a day time frequency of

5680 kHz, a night time frequency of 3023 kHz and in PoiSAR versions 6785 kHz (afternoon early evening). Due to the single channel nature of the field radios, the only way to obtain reliable HF communications is to utilise spatial diversity of the base stations. Ideally if the base station radio operators could monitor all the available base stations from the one console they could then select the best circuit for communicating with the field radios. AREC Solution AREC therefore decided to investigate the latest HF technologies from Codan. The latest Envoy radios are IP capable. If a number of base stations could be set up at suitable locations, connected to the internet, and operators equipped with the latest software in soft or hard console systems, then the most reliable communications with field teams could be assured. In addition the base stations should then be remotely accessible throughout the country from any operational base equipped with the correct terminal software and an internet access point. This plan needed to be tested. This required the purchase of some equipment and installation in varying locations.

12. HF radio national training day

Peter Corbett has sent out an email inviting comments regarding his proposals for conducting an HF radio communications exercise in April 2018.

Action:

HF radio exercise planning to be carried out.

13 Civil Defence update

Rex has spoken to John Lovell on the phone. John is very keen to provide Civil Defence radio channels for SAR use. John has been unable to attend any STWG(L) meetings to date but he is keen to have a meeting with Rex and Stephen the next time he is visiting Wellington

14 Long range digital radio product

Jono Sands from his private company Ignition Networks joined the meeting at 1500 to present information about his relationship with Codan out of Australia. Codan are manufacturers of modern HF radio equipment used by Police and others around the world.

Meeting ended at 15:30

Next meeting to be held in February 2018.

Technical meeting with Tait Radio Engineer to be held at the Police College on 28 November 2017 (to be attended by Rex, Steve, Hamish, John Woolf and John Yaldwyn).



New Zealand Search and Rescue

TASK LIST – STWG(L) Meeting (POST 26 October 2017)			
Agenda Item No.		Responsibility	
5a	STWG(L) activity, including previous meeting minutes, to be published on the NZSAR web site.	Steve	
5b	VHF fixed repeaters coverage maps to be sourced for publication on NZSAR resources database.	John Yalwyn John Woolf Rex and Steve	
6	Obtain Surf Life Saving NZ channel details and arrange formal approval to program them into SAR radios.	Rex	
8	A time-line is to be created for the voice recording of primary VHF channels.	Rex	
9	Organise Wellington LSAR & Police to evaluate the new SAR talk group on the Police VHF digital trunk radio network.	John Yaldwyn and Rex	
12	HF radio exercise planning to be carried out.	Pete and Tony Groome	