



CHAPTER 2 - 709 SIGNAL TROOP

2 Signal Regiment

In late April 1965, 2 Signal Regiment in Watsonia received a warning order to form a composite troop of 50 all ranks and move it into a concentration area in Ingleburn.

The order was typical of previous exercises and the troop commander, Captain Richard Twiss, thought the task would be the provision of a high frequency rear link within Australia. However he was given the run of the regiment in selecting his men to form up a heavy radio detachment, a medium radio detachment and a communications centre detachment.

Preparations

Captain Twiss selected Lieutenant Nev Grieve as the second in command of the new troop, 709 Signal Troop, because no operator had ever seen an AN/TRC-75, now the basis of a medium radio troop, and Lieutenant Grieve had had the task of bringing them into service. Even then there were training problems as there were only two AN/TRC-75's in 2 Signal Regiment and the troop needed three. The third was later received direct from the manufacturer.

It was early May before Captain Twiss was told that the role of 709 Signal Troop was to support Headquarters Australian Army Force Vietnam (HQ AAFV) by providing a rear link to Australia and a forward link to a battalion group. He was not told where HQ AAFV (later redesignated HQ AFV (Army Component)) nor 1 Royal Australian Regiment (1 RAR), the infantry component of the battalion group, were to be located in Vietnam.

After 709 Signal Troop concentrated in Ingleburn its main tasks were to get equipment serviceable, to carry out tropic proofing and to acquire maintenance stores.

First Communications

Captain Twiss arrived on an Air Vietnam plane at Tan Son Nhut airport in Saigon with the small Force reconnaissance party on 25th May 1965.

He immediately contacted the US 39 Signal Battalion, the only US signals unit in theatre at that time and one with which RA Sigs was to have a lot of contact in the future. He also found that HQ AAFV was to be in the Cholon area of Saigon whilst 1 RAR Group would be with the US 173 Airborne Brigade in Bien Hoa about 30





kilometres away.

The advance party arrived at Tan Son Nhut by RAAF C130 at the beginning of June 1965. There were now 7 members of 709 Signals Troop present and they had two AN/TRC-75's and four generators.



Photo 2.1 (left) - The 709 Badge

Photo 2.2 (right) - Saigon Street (June 1965)



Photo 2.3 - Cpl Ron Preddice and Cpl Barry Billings with the AN/TRC-75 Vehicle at Tan Son Nhut. Insert USAF loan jet turbo generator (June 1965)



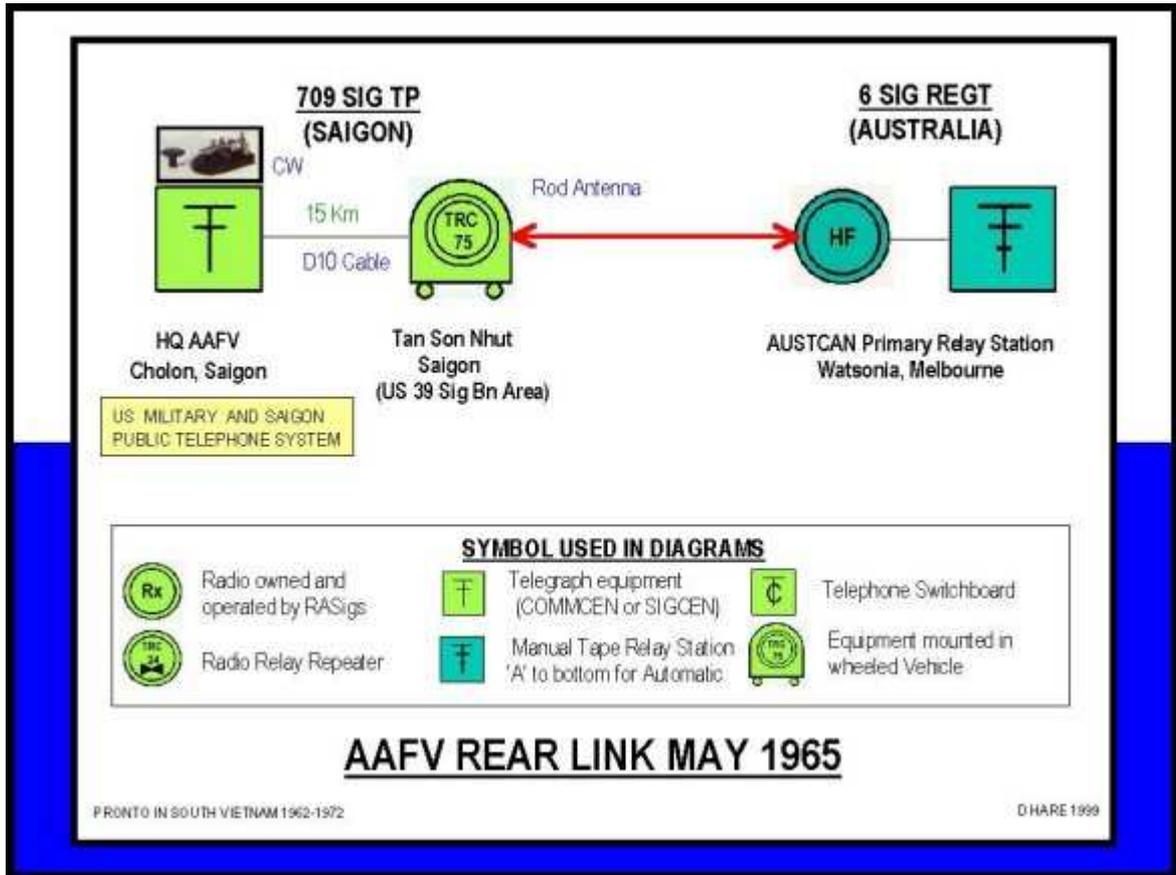


Diagram 2.1 - AAFV Rear Link Communications (May 1965)

They set up in a US 39 Signal Battalion area at Tan Son Nhut, ran some D10 cable into HQ AAFV in Cholon and by the morning after their arrival were ready to call Melbourne on CW with an AN/TRC-75 feeding its rod aerial. They were very jubilant when their first call was answered.

This started six and a half years of communications with and dedicated service by 6 Signal Regiment in Victoria. Over the next few weeks, communications to Melbourne were opened on CW and then went to keyboard for about 4 hours. There was little priority traffic. The major problem was long press releases which were classified, as they had to be cleared in Canberra, and only off-line encryption was available; they also had a priority precedence and many had to be sent by hand speed morse.

The AN/TRC-75

The bane of the existence of 709 Signal Troop, the Directorate of Signals, Army Design Establishment and others in those days was the AN/TRC-75.





This radio was used most successfully by the US Air Force and the US Marine Corps in its originally designed simplex mode. The Australian sets were modified for duplex operation and came equipped with a different generator, the infamous Bucknell. Our problems were compounded by our total inexperience with the equipment and a handbook which was for the unmodified radios.

In an immediate effort to improve the circuit to Melbourne, a long wire antenna was erected. Each time an attempt was made to load it, the AN/TRC-75 aerial tuning unit burned out. It took a few burn-outs before it was discovered that the Australian version of this radio could only load a whip or a balanced antenna, something not mentioned in the US handbook. The Bucknell generators initially would run for only about 6 hours before blowing an oil seal. In the first three weeks, power to the radio was maintained by constantly repairing the four generators and then acquiring two different generators from the USAF.

The Bucknell generator had a 400 hertz output, necessary for the AN/TRC-75, and so it was not possible to operate the radios from the mains supply at Tan Son Nhut.

Heavy Radio Detachment

The main body of 709 Signal Troop arrived by sea at the end of June 1965. Within a day the heavy radio detachment was sited and ready to operate.

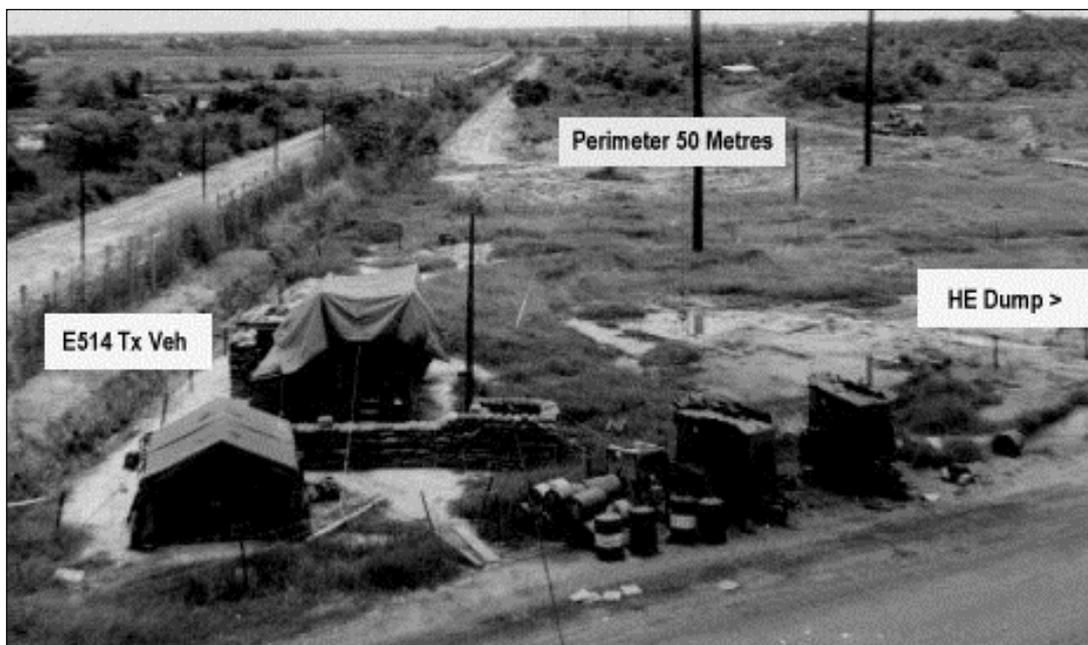


Photo 2.4 - Transmitter site at Tan Son Nhut (June 1965)

The Australian made E514 transmitter was located, in its vehicle, within 50 metres of the perimeter of Tan Son Nhut, close to an HE dump on one side and a napalm one





on the other.

General Wilton, then Chief of the General Staff, recalled visiting Captain Twiss **"on the fringe of the airfield. He was very hot and worried and looked harassed. This was not surprising because apart from his technical problems there was a security problem. He was beyond the perimeter defences and after dark could have been a very easy target for the VC."**

Surprisingly, even with the sloping V antenna, there was no interference to adjacent USAF receivers. The main transmitter problem was the pair of unreliable 25 KVA generators, and since a 240 volt input was required no support could be sought from the US. Also, there was no possibility of US technical support for the transmitter.

The receivers were co-located with the US STRATCOM receivers in Tan Son Nhut and a pair of sloping V Antennas were erected in the US antenna farm. There was commonality of equipment and power.

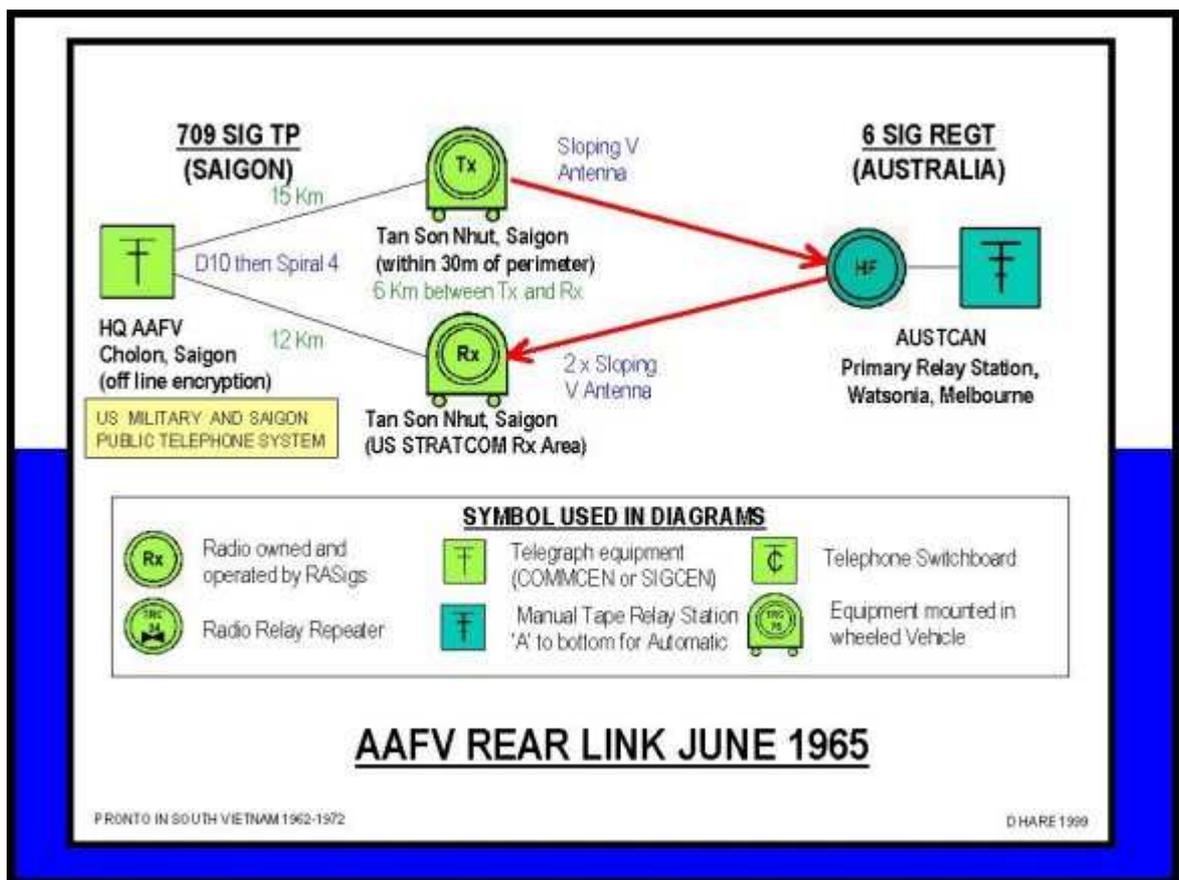


Diagram 2.2 - AAFV Rear Link Communications (June 1965)

The transmitter and receiver sites were about 6 kilometres apart; it was about 15 kilometres from the transmitter site to HQ AAFV and about 12 kilometres from the





receivers to the headquarters. All interconnecting circuits were initially by D10 field cable which was then duplicated with spiral 4. Two rigger/linesmen laid all this cable in 10 days.

The speed of setting up was not matched by the time taken to establish a satisfactory circuit to the Primary Relay Station in Watsonia. The engineering took a week primarily because of technical and traffic procedural differences between 709 Signal Troop and 6 Signal Regiment. The keying lines wandering around Saigon also caused problems.

Eventually the circuit settled down to a single channel traffic availability of 14 or 15 hours. An engineering channel was also maintained. All encryption was off line, which made for slow clearance of traffic.

Manpower

The troop lacked sufficient men for all its tasks. For 24 hours a day it had to man the rear link transmitter and receiver, the communications centre and the cipher office, both ends of a one-to-one AN/TRC-75 link to 1 RAR Group plus the switchboard there, it had to provide a VHF manpack detachment for the battalion rear link when away from Bien Hoa and it provided an alternative HQ AAFV rear link to Australia using an AN/TRC-75 located in Bien Hoa. Other units supporting the force were also having problems through manpower shortage.



Photo 2.5 - AN/TRC-75 Vehicle and main 709 Bunker at Bien Hoa (July 1965)



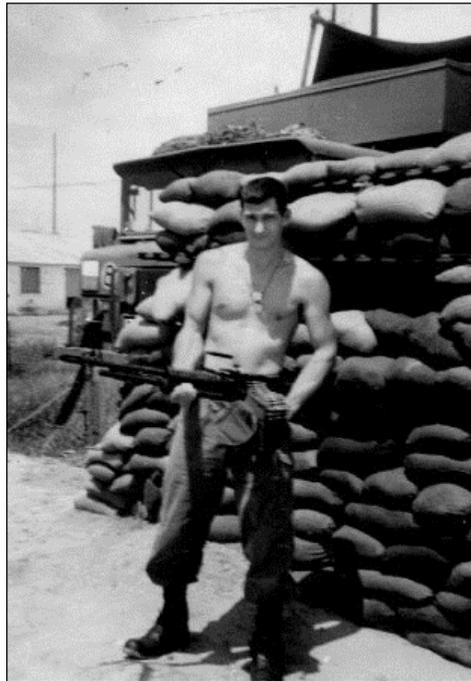


Photo 2.6 (left) - Cpl Ron Preddice holding a M60 at Tan Son Nhut. Note front of E514 Transmitter Vehicle behind sandbags (July 1965)

Photo 2.7 (right) - Cpl Rex Gabel, Sig Hugh McClintock and Sig John James digging in at AN/TRC-75 Site at Bien Hoa (July 1965)

Improvement

In July 1965, 709 Signal Troop was having more than enough problems. Apart from the manpower shortage, equipment failures were frequent and the US was unable to give technical support for some major items such as transmitters and generators. The telegraph machines, telegraph terminals, off line cipher machines and receivers were the only common equipment's and the US gave good support to them. Much advice went from 709 Signal Troop to the Directorate of Signals at Army Headquarters Canberra but no real help seemed to be possible.

The problems of the theatre itself and of the technical situation did not seem to be adequately known in Canberra. 709 Signal Troop was virtually operating in a tactical role (all major equipment was still mounted in vehicles) whilst its basic task was to work into a fixed communications network.

Major Bill Bodger, a staff officer with the Directorate of Signals, was called from a meeting he was chairing in Sydney in mid July 1965 to take a telephone call. After confirming his inoculations were all up to date, he was told he was to visit South Vietnam beginning in 2 days' time.



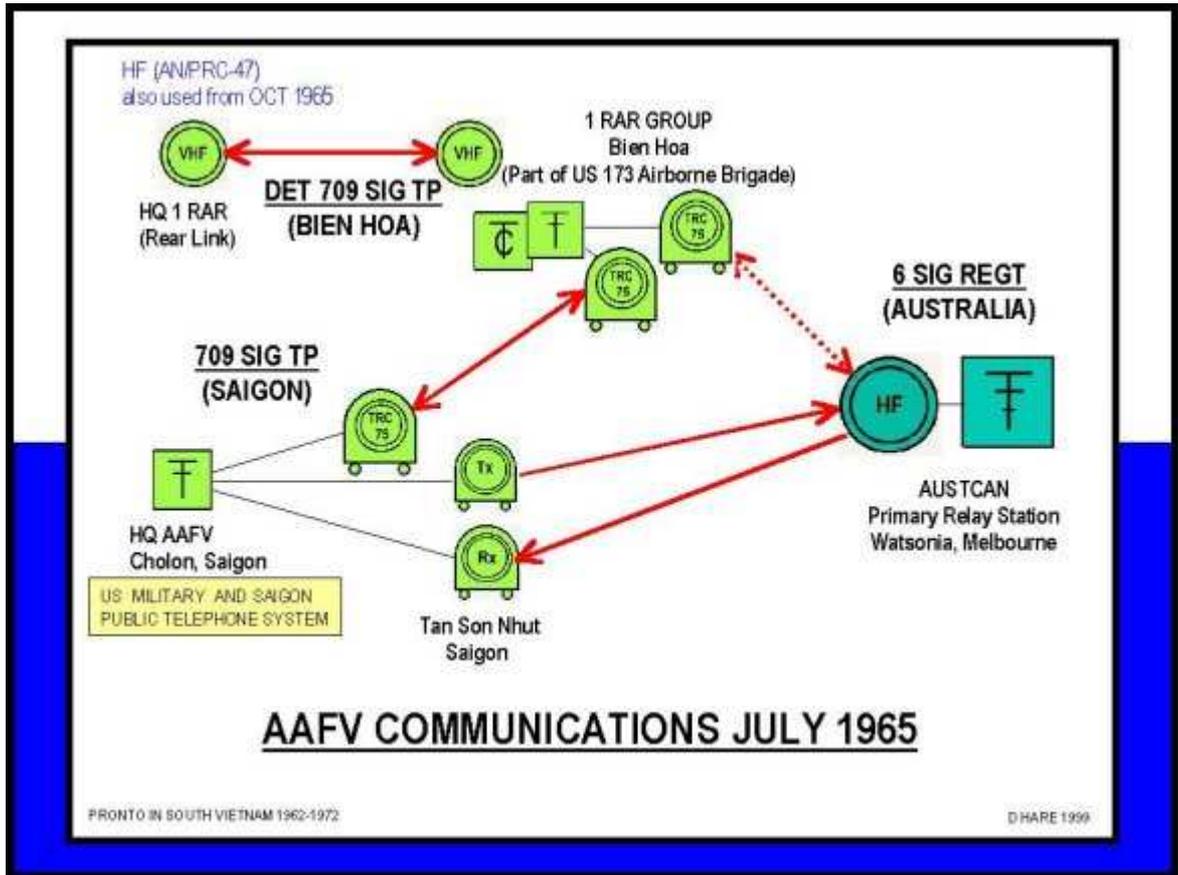


Diagram 2.3 - AAFV Communications (July 1965)

Major Bodger was to go for a week to assess the signals situation, seek better sites and obtain improved in-theatre technical support, but he stayed for nearly 6 weeks.

One of the first sights to greet him was melting solder on telegraph machines in the unairconditioned communication centre vehicle which had to be parked in the sun along side the building HQ AAFV occupied.

Apart from confirming the reports Captain Twiss had been sending, being an officer of field rank gave Major Bodger some advantages which a captain lacked in discussion with US officers.

Being an experienced technical officer, Major Bodger with Staff Sergeant John Grindley of 709 Signal Troop, planned a communication centre in a newly allocated HQ AAFV building adjacent to its existing building. He then arranged local supply of materials and supervised the installation.

Undoubtedly the prime outcome of Major Bodger 's visit was the increase in strength and equipment. 527 Signal Troop arrived with 2nd Lieutenant Jock Lonie and 29 NCO's and other ranks on 14th September 1965.





**Photo 2.8 - Cpl Rex Gabel, 709 Signal Troop, transmits in morse code at Bien Hoa to HQ AAFV in Saigon.
The radio set in use is the medium-power AN/TRC-75 (Sept 1965)**

New telegraph equipment arrived and the troop received AN/PRC-47 radios which had just been delivered to the Australian Army. These man portable HF radios allowed 1 RAR to deploy further from Bien Hoa than the 40 kilometre limit which the VHF manpack radios imposed. This radio is normally complete with lightweight nickle cadmium batteries but the equipment received by 709 Signal Troop had lead acid accumulators and petrol engine charging generators which restricted portability.

At the end of October 1965, HQ AAFV moved into the Free World Military Assistance Organisation (FWMAO) building and so a new communications centre had to be provided. This was planned and installed to fixed station standards by a detachment of 127 Signal Squadron under the command of Lieutenant Owen Richards. It included the vast improvement of on line cipher. The rear link to Watsonia now had one classified circuit plus one unclassified and one engineering circuit.

Traffic availability had now risen to about 13 hours a day and there was some relief for operators.

Also at this time a classified line circuit, with AN/TRC-75 back up, was opened to 1 RAR in Bien Hoa and a formal DR service between HQ AAFV and Bien Hoa began.

New receivers, the fixed station equipment R5232, were installed in a Kingstrand hut at the same Tan Son Nhut site.





Photo 2.9 - 6 RAR on patrol with new VHF radio communications (1966)

New Transmitter Station

The E514 was still operating out of its vehicle in Tan Son Nhut. A new site was allocated in a military compound at Phu Tho in Saigon.

Australian sappers loaned a bulldozer to RA Sigs and men from 709 and 527 Signal Troops promptly cleared the area, constructed a rhombic antenna to fixed station standards, built an air-conditioned Kingstrand hut for two new E513 transmitters and drive equipment. They also put up a shed to house the three new 30KVA generators.

The new installation was commissioned in April 1966. Circuit availability improved, generally to about 22 hours a day.

Keying lines were still spiral 4 but identification had become a problem. When these lines were installed less than a year before, they were on a pole route with only a few other lines belonging to US or ARVN forces. By April 1966 there were some 200 spiral 4 cables on the one route. Linesmen of 709 Signal Troop had painted red kangaroos on all connections but identification was still difficult. One way some allied forces overcame the problem was to cut a cable and then wait and see who turned up.

Force Increase

One of 709 Signal Troop's last tasks was to set up an AN/TRC-75 link from Saigon to





the port of Vung Tau in preparation for the arrival of 1 Australian Task Force (ATF) and supporting units. These included 145 Signal Squadron, which took over from 709 and 527 Signal Troops.

Major General K. Mackay, the first commander of AFV (for nearly 3 years) commented later. ***"Like other senior commanders I was well aware of the fact that tail to teeth would be at least 2 to 1 for a small force and a separate independent national communications link from the Force to Australia was essential. However US willingness to provide all we needed (the US, for United Nations purposes, desperately wanted another Western nation to join them quickly) plus our political need for maximum mileage from the smallest number produced a force with mostly teeth and little tail. This had serious repercussions for Engineers, Signals, etc. Our tactical communications were always good but it was not until we were able to deploy more supporting arms, including Signals, and we got our share of modern equipment that we were happy with our communications"***

