

Internal Memo



To [Redacted]

Consumer CAN Design and Construction Tas/Vic
CAN Technologies

From David Polson
Technical Manager

K00942

PO Box 115 Ballarat Vic 3353
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Subject Cape Bridgewater RCM's

Australia

Date 24 March 1994

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File

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Attention [Redacted]

Pager 016 530 726

Following a request from Service Delivery for assistance at Cape Bridgewater late on 19-3-94 I arrived at Portland early Sunday morning on the 20-3-94. There was a problem with RCM system no 1 between Portland and Cape Bridgewater the previous day. Ongoing problems were experienced by customers since 8-3-94 on RCM number 1. The problems were normally of a very short duration and had often cleared by the time staff arrived on site.

It appeared that the line system was intermittently failing for short periods of time (15 seconds or so) and then coming back up. The systems are all on copper bearers with 10 regenerators on them. The RCM's are fitted with auto power feed restart cards, and the alarms are inputted to AMS. Occasionally on a failure the channel cards would loose their programming and flash. No alarm indication is given for this. The SCU fail light at Cape Bridgewater and AIS at Portland would also be up, although this was not consistent for a long period of time. The SCU and all common cards had previously been changed by local staff.

We were able to duplicate the SCU fail light coming up with a short bearer break on a test model, and was assumed we were experiencing intermittent line system failure on the system. The original installation was for 2 RCM's with 9 regenerators and supervisory filters for each direction of transmission. When a third system was required, considerable difficulty was experienced in getting the third system working, to such an extent that an additional regen was installed between locations 8 & 9.

With a suspect line system we proceeded to do a trios test when all traffic was off, after having advised Network Management. We could not see any regens. Suspecting faulty supervisory pairs a regen was opened and pairs tested, only to find the regen housings were connected to pairs 5 & 6 and the terminal supervisory connected to pairs 11 & 12. This explained our failure to find any regenerators. With this changed at the terminals to pairs 5 & 6 we could see all regens except the extra one installed between 8 & 9. On investigating this cause the supervisory pairs at this location were on pairs 11 & 12. This was rectified enabling the testing of each regenerator. If the line system failed we should now be able to localise the fault. The original

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acceptance test results show filter testing at Portland (location 00) and Cape Bridgewater (location 10). In our testing no reading was obtained at 00 and the reading for location 10 was the regenerator and not the Cape Bridgewater terminal as shown on the test sheets. RCM terminal regenerators do not have the TX and Rx monitor points extended for supervisory filter purposes. All of this added to the difficulties in identifying the fault with the supervisory system.

It must be noted that the faulty supervisory system does NOT effect the bearer performance but is used as a maintenance tool if the line system is faulty.

During the Sunday and Monday that I was in attendance the system did not fail, although it was out of service for short periods (approx 1-2 minutes) for trios testing.

With further investigation it appeared one of our problems may be more temperature related, as when the remote end was not opened for some time, that appeared to be when we had the failures. This would also explain why no failures occurred when I was there with the door open for a large proportion of the time on Sunday and Monday. Another SCU was obtained and installed in system 1 on 23-3-94. The unit replaced has obviously been repaired and may indeed be suspect. Further testing will be done on this unit, especially with elevated temperatures.

Additional testing has confirmed that the replaced SCU was indeed faulty. No other problems have been experienced since the SCU was replaced on the 23-3 94

Danid Polson- CAN Technology - Ballarat

Ross Anderson - Service Delivery - Portland

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Doody, Chris

K04604

From: ~~Chris Doody~~
To: ~~Chris Doody, Hew~~
Subject: Request for information on failure of CCAS monitoring Equipment
Date: Wednesday, 4 May 1994 4:00PM

Hew,

The question has been asked by staff from the Commercial Customer Response Unit, as to the reason for the change in the monitoring equipment of Mr A Smith's lines from CCAS to Smart 10. I have given them a brief note on the reasons, ie, modifying the CCAS to operate on AXE lines and the possibility of corrupted data. The CRU wants a more comprehensive report as to the reasons for the discrepancies in the reports. In particular, they require an explanation of the long held calls (as interpreted from CCAS data) as well as the reason for the "1" that often appears on the start of these long held periods.

~~Chris Doody~~ gave me an abridged version of the reasons over the telephone, however I believe that we will require something a little more substantial, particularly if the issue is raised during the arbitration process.

Could I please get from you a description of the reasons for this incorrect CCAS data. Looking back through the CCAS reports, it seems that the incidence of the long held periods started about November 1993.

If you require any additional info, please don't hesitate to give me a ring.

Cheers

CAPE BRIDGEWATER HOLIDAY CAMP

CALL DETAILS - 267230

SOURCE DOCUMENTS F.O.I 0628 TO 0660 INCLUSIVE

These documents (attached) cover period 2200 hours on the 27.9.93 to 0715 hours on the 14.12.93, approximately 77 days.

They display lock up times of up to 17 hours, ring times > 1 hour, conversation times of up to 17 hours, short burst rings consecutively of 2 - 1 - 2 seconds.

It would appear that the majority (88) of lock ups are created by a generated "1", often followed by 3599 seconds of ring, then from zero to 17 hours conversation time. There are 88 such calls totalling 863 hours out of total time of approximately 1848 hours - this equals 46.7% unavailability.

From January to December '93 and through '94, Alan Smith repeatedly reported "echo" on the line, "dead lines", no dial tone, together with incoming fax complaints of busy when not. This explains why.

We have random sheets (non concurrent) for December '93 and January and February '94, showing the continuation of the fault. This (detail follows) gave blockage time of 52.7% of the period covered.

David Stockdale's (Telecom) letter instances that this is common (attached FOI 0125).

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<u>F.O.I. NO.</u>	<u>LOCK UP I/C</u>	<u>LOCK UP OUT</u> <u>OUTGOING</u>
0628		33.6
0629		7.4
0630		69.9
0631		19.5
0632		27.7
0633		31.9
0634	12.7	34.4
0635	1.0	14.2
0636		80.7
0637		11.7
0638		13.8
0639		9.3
0640		9.9
0641		55.8
0642		21.7
0643		31.1
0644		59.4
0645		23.1
0646		21.2
0647		33.8
0648		21.4
0649		55.7
0650		
0651		23.7
0652		12.2
0653		25.6
0654		11.1
0655		5.7
0656		19.2
0657		26.6
0658		9.5
0659		9.9
0660		18.8
<u>TOTALS</u>	<u>13.7 HRS.</u>	<u>849.5 HRS.</u>

COMBINED TOTAL = 863.2 HRS.

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