NATIONAL CERTIFICATION LABORATORY
8370 Court Avenue, Suite B-1
Ellicott City MD 21043
(410) 461-5548

FCC REPORT OF RADIO INTERFERENCE

for

SCii Telecom
5, Ter rue du Dome
Paris, France 75116

FCC ID: LJ90498184S

May 20, 1998

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EXHIBITS

1.0 Introduction

This report has been prepared on behalf of SCII Telecom to support the attached Application for Certification of a Part 15 Class B Digital Device. The Equipment Under Test was the SCII Telecom **Data Voice Pro2s PCI ISDN Card.**

Radio-Noise Emissions tests were performed according to the ANSI C63.4- 1992, Chapter 11 titled "Measurement of Information Technology Equipment". The measuring equipment conforms to ANSI C63.2 Specifications for Electromagnetic Noise and Field Strength Instrumentation.

Testing was performed at National Certification Laboratory in Ellicott City, MD. Site description and site attenuation data have been placed on file with the FCC's Sampling and Measurements Branch. FCC acceptance was granted on May 26, 1993.

1.1 Summary

The SCII Telecom **Data Voice Pro2s PCI ISDN Card** complies with the limits for a Class B Digital Device.

2.0 Description of Equipment Under Test (EUT)

The EUT Features:

	OSCILLATORS
ISDN Interface	7.680 MHz
Handset Port	7.680 MHz
PCI BUS	
128 KBPS Data Rate	
Novell Compatible	
2 RJ45 Connectors	
4 Data Channels	

2.1 EMI Countermeasures

No modifications were made to the EUT, by the project engineer to assure compliance to Class B specifications:

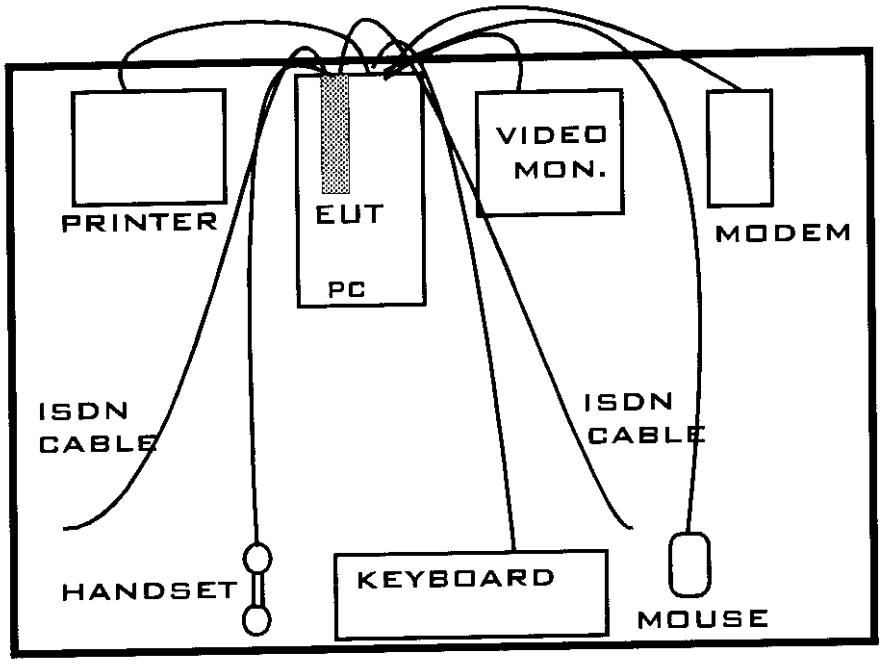
3.0 Test Program

A program was written to send a continuous stream of "H's" to the video, serial, and parallel ports of the computer. The EUT was tested with the "Data Voice" software drivers that enable the ISDN interface to be exercised by simulating a Data or Voice call. Worst case emissions are recorded in the data tables.

BASIC program used:

```
10 FOR N=1 TO 35
15 FOR M=1 TO 80
20 PRINT "h";:
25 NEXT M
30 NEXT N
40 OPEN "COM1:1200,E,7,1,CSO,DSO" FOR OUTPUT AS #1
50 OPEN "COM2:1200,E,7,1,CSO,DSO" FOR OUTPUT AS #2
52 FOR I=1 TO 160
54 PRINT #1,"H";:
56 PRINT #2,"H";:
58 NEXT I
60 FOR J=1 TO 80
65 LPRINT "H";:
70 NEXT J
75 CLOSE
80 GOTO 10
```

TEST CONFIGURATION



4.0 Test Configuration

The EUT was installed in the Host Computer. The computer system and support equipment were setup on the test table in a manner which follows the general guidelines of ANSI C63.4, Section 6.2.1. The support equipment consisted of a keyboard, video monitor, printer, handset, modem and mouse prescribed in Section 11.2 (ANSI C63.4). The computer was centered on the table with it's rear flush with the rear of the table.

The video monitor was placed 10 cm from the right of the computer. The mouse was placed 10 cm from the left side of the keyboard. The printer was set on the left side of the computer also 10 cm away. The keyboard was placed in front of the monitor, and flush with the front of the test table. The handset was placed 10 cm from the right side of the keyboard.

Serial, video and parallel I/O cables were draped over the back edge of the table, and the keyboard, ISDN, and handset cables were placed on top of the table. Cables were more than 40 cm from the ground plane during radiated and conducted tests. The video monitor was powered from the floor 120 VAC mains, which produced wost-case radiated emissions. Photographs and interconnection diagrams are provided in Exhibit 1.

5.0 Conducted Emissions Scheme

The EUT is placed on an 80 cm high 1 X 1.5 m non-conductive table. Power to the CPU is provided through a Solar Corporation 50 Ω/50 μH Line Impedance Stabilization Network bonded to a 2.2 X 2 meter horizontal ground plane, and a 2.2 X 2 meter vertical ground plane. The LISN has its AC input supplied from a filtered AC power source. A separate LISN provides AC power to the peripheral equipment. I/O cables are moved about to obtain maximum emissions.

The 50 Ω output of the LISN is connected to the input of the spectrum analyzer and emissions in the frequency range of 450 kHz to 30 MHz are searched. The detector function is set to quasi- peak and the resolution bandwidth is set at 9 kHz, with all post-detector filtering no less than 10 times the resolution bandwidth for final measurements. All emissions within 20 dB of the limit are recorded in the data tables.

6.0 Radiated Emissions Scheme

The EUT was initially scanned in the frequency range 30 to 1000 MHz indoors, at a distance of 1 meter to determine its emissions profile. The EUT was then placed on an 80 cm high 1 X 1.5 meter non-conductive motorized turntable for radiated testing on the 3-meter open area test site. The emissions from the EUT are measured continuously at every azimuth by rotating the turntable. Biconical

and log periodic broadband antennas are mounted on an antenna mast to determine the height of maximum emissions. The height of the antenna is varied between 1 and 4 meters. Cables are varied in position to produce maximum emissions. Both the horizontal and vertical field components are measured.

The output from the antenna is connected to the input of the spectrum analyzer. The detector function is set to quasi-peak. The resolution bandwidth of the spectrum analyzer system is set at 120 kHz, with all post-detector filtering no less than 10 times the resolution bandwidth. All emissions within 20 dB of the limit are recorded in the data tables.

To convert the spectrum analyzer reading into a quantified E-field level to allow comparison with the FCC limits, it is necessary to account for various calibration factors. These factors include cable loss (CL) and antenna factors (AF). The AF/CL in dB/m is algebraically added to the Spectrum Analyzer Voltage in dbμV to obtain the Radiated Electric Field in dBμV/m. This level is then compared with the FCC limit.

Example:

Spectrum Analyzer Volt: VdBuV

Composite Factor: AF/CLdB/m

Electric Field: EdBμV/m = VdBμV + AF/CLdB/m

Linear Conversion: EuV/m = Antilog (EdBμV/m/20)

FCC CLASS B RADIATED EMISSIONS DATA

FCC ID: LJ90498184S

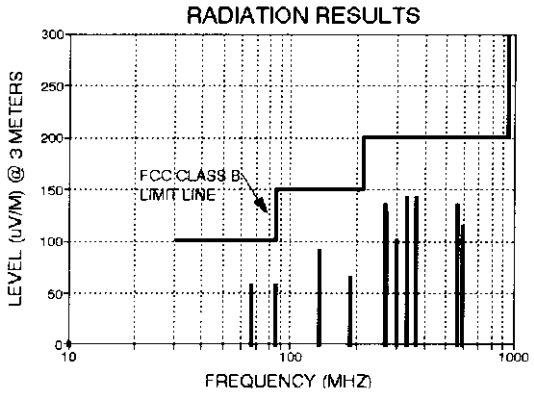
CLIENT: SCII TELECOM
EUT: DATAVOICE ISDN

3-METER TEST		QP LVL				DATE: 5/15/98	
FREQ MHz	POL H/V	SPEC A dBuV	AF/CL dB/m	E-FIELD dBuV/m	E-FIELD uV/m	LIMIT uV/m	MRG dB
66.54	H	27.0	8.0	35.0	56.2	100.0	-5.0
85.88	H	26.0	9.0	35.0	56.2	100.0	-5.0
135.37	V	24.0	15.0	39.0	89.1	150.0	-4.5
186.09	H	17.0	19.0	36.0	63.1	150.0	-7.5
266.25	H	20.5	22.0	42.5	133.4	200.0	-3.5
269.92	V	20.0	22.0	42.0	125.9	200.0	-4.0
299.51	H	17.0	23.0	40.0	100.0	200.0	-6.0
332.77	H	27.0	16.0	43.0	141.3	200.0	-3.0
366.07	H	25.0	18.0	43.0	141.3	200.0	-3.0
565.69	V	21.5	21.0	42.5	133.4	200.0	-3.5
594.87	H	20.0	21.0	41.0	112.2	200.0	-5.0

TEST ENGINEER

Dan Owens

DANIEL OWENS



FCC CLASS B CONDUCTED EMISSIONS DATA

FCC ID: LJ90498184S

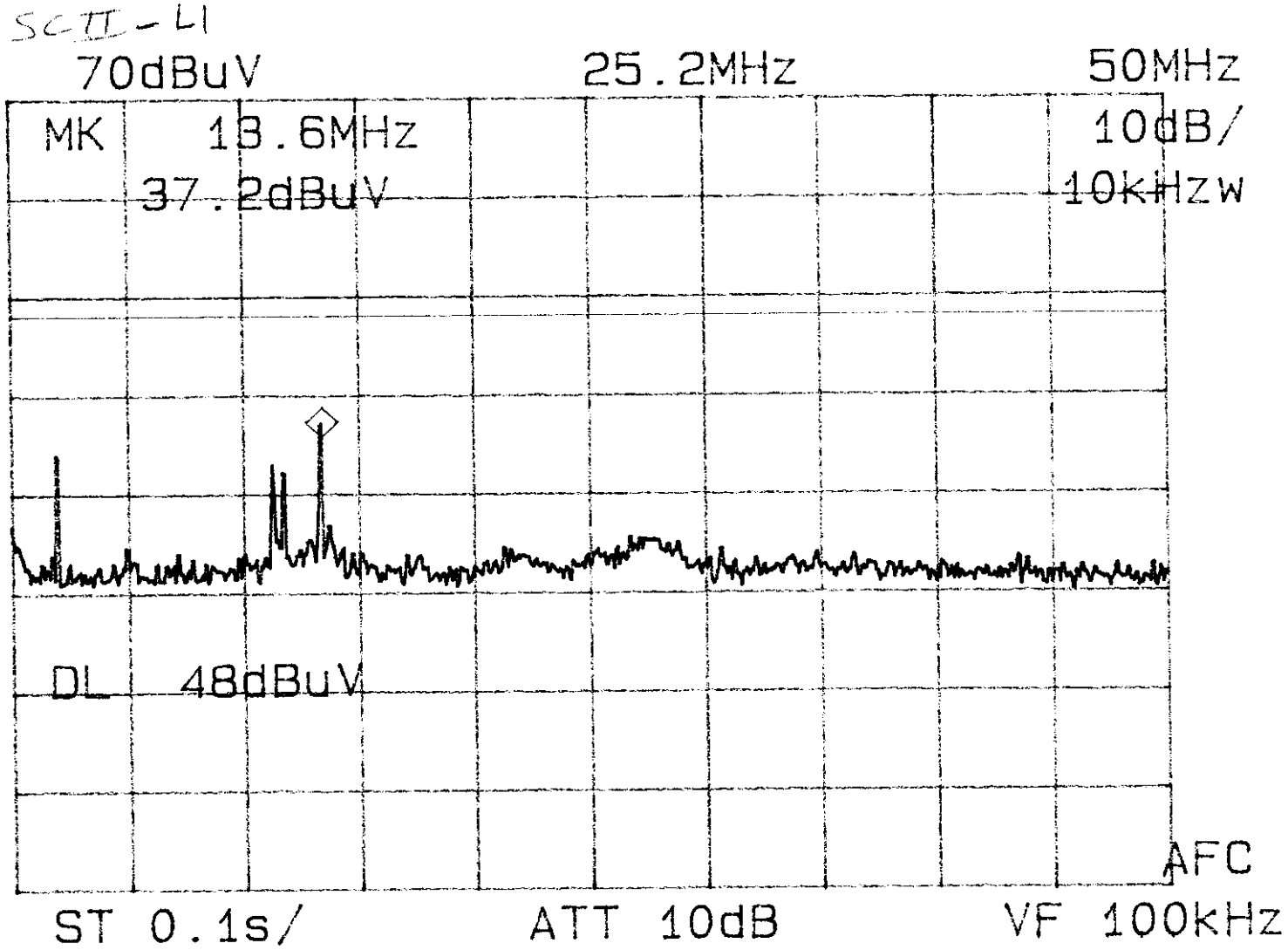
CLIENT: SCII TELECOM
EUT: DATAVOICE ISDN

LINE 1 - NEUTRAL

		QP LEVEL		
FREQ MHz	VOLTAGE dBuV	VOLTAGE uV	FCC LIMIT uV	MARGIN dB
0.423	24.4	16.6	250	-23.6
2.165	34.1	50.7	250	-13.9
11.532	33.1	45.2	250	-14.9
12.001	32.2	40.7	250	-15.8
13.611	37.2	72.4	250	-10.8

LINE 2 - PHASE

		QP LEVEL		
FREQ MHz	VOLTAGE dBuV	VOLTAGE uV	FCC LIMIT uV	MARGIN dB
0.443	41.1	113.5	250	-6.9
0.951	37.2	72.4	250	-10.8
1.629	35.1	56.9	250	-12.9
12.001	34.2	51.3	250	-13.8
13.601	26.8	21.9	250	-21.2


SC II - L1
70dBuV
25.2MHz
50MHz
MK 13.6MHz
37.2dBuV
10dB/
10kHzw
DL 48dBuV
AFC
ST 0.1s/
ATT 10dB
VF 100kHz

SCII-L2

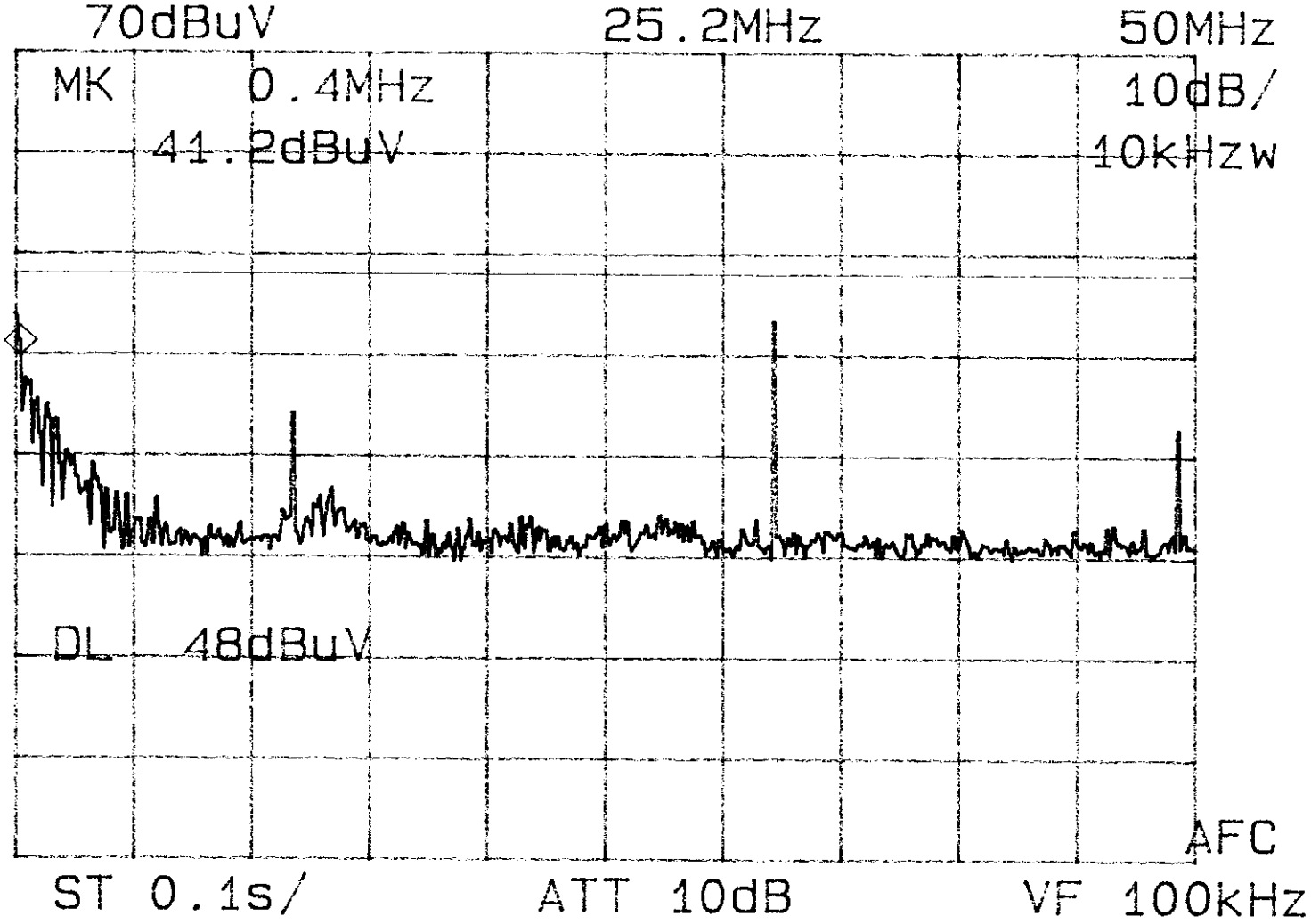

70dBuV
25.2MHz
50MHz
MK 0.4MHz
41.2dBuV
10dB/
10kHzw
DL 48dBuV
AFC
ST 0.1s/
ATT 10dB
VF 100kHz

Table 1

Support Equipment

MANUFACTURER	FCC ID #	SERIAL #
MONITOR: Samsung CVB4917 SVGA	A3LCVB491	H2EB802157
SERIAL DEVICE: US Robotics Modem	CJE794COURIER2400	30-039207
PARALLEL DEVICE: Epson T-1000 Printer	BKM9A8P7ORA	OAOO59174
KEYBOARD: Fujitsu	C9S4D5KB4700	None
HOST COMPUTER: Mitsuba Pentium MT	C9MSM31	S605010229
HANDSET La Phone	ED56LD-14659-TE-E	7802135

Table 2

Interface Cables Used

HOST to Printer	1.5 meter bundled to 1 meter in length - shielded
ISDN Cable	2.5 meter bundled to 1 meter in length - shielded
EUT (connected to RJ-11 handset jack)	Standard Coiled RJ-11 cable - unshielded
HOST Power	Shielded 120 VAC power cord
All other I/O cables such as monitor, keyboard, mouse are permanently attached to the peripherals - presume shielded.	
Note: There are no ferrite beads attached to any I/O cables for this test. The ISDN RJ-45 connectors were terminated with a shielded cable bundled to 1 meter in length.	

Table 3

Measurement Equipment Used

The following equipment is used to perform measurements:

EQUIPMENT	SERIAL NUMBER
Wavetek 2410A 1100 MHz Signal Generator	1362016
EMCO Model 3110 Biconical Antenna	1619
EMCO Model 3146 Log Periodic Antenna	1222
Solar 8012-50-R-24-BNC LISN	924867
Advantest Model R4131D Spectrum Analyzer	54378A
Solar 8012-50-R-24-BNC LISN	927230
4 Meter Antenna Mast	None
Motorized Turntable	None
RG-233U 50 ohm coax Cable	None