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Public Counsel's 42ND  
P.O.D.

ITEM 100 (staff's  
34th ITEM 2)

File date 6/18/93

~~Proprietary~~

Redacted version  
of 6916-93  
DOCUMENT NUMBER-DATE

06915 JUN 25 83

PPSC-RECORDS/REPORTING



**BellSouth Services**

675 West Peachtree Street, N.E.  
Atlanta, Georgia 30375

April 26, 1988

Mr. J. Moore  
Staff Manager  
6451 North Federal Hwy.  
Fort Lauderdale, FL. 33308

Dear Mr. Moore,

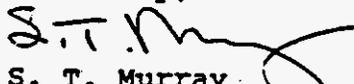
This is in response to your memo of March 22, to Jim Waters regarding the failure of Craft Access Terminals (CAT) returning from repair.

~~In December 1987, a review of the AT&T, CAT repair facility in Kansas City was conducted. As a result of our observations, several recommendations were made to correct deficiencies in the handling and flow of the CAT through that operation. In February 1988, a return visit was made to evaluate the corrective action implemented by AT&T.~~

Included in the corrective action was the establishment of a file on units that have been repaired. When a CAT is received, the file is checked to determine if the CAT has been returned more than once. On repeat repairs the CAT is sent directly to a repair technician (minor repairs ie; belt loop, etc., do not necessarily go to a Repair tech.) for diagnostic testing and evaluation of past history. Once the CAT is repaired it must pass a series of acceptance tests. Additionally, I have requested a monthly analysis report on CAT repairs, which includes repeat repairs, that both Jim Waters and I will be monitoring.

I anticipate that we should see some dramatic improvements in the CAT repair operation based on the changes they have made. I'd like to stay in touch and compare notes in the next couple of months to ensure that the service you're getting is improving. In the meantime if you have immediate problems or something I can help you with, please give me a call at 404-420-2164.

Sincerely,

  
S. T. Murray  
Associate Manager  
Quality Assurance

cc: J. Waters  
J. DiGeorge  
S. Gheesling

8/28  
Jerry  
As into -  
Pls return -



**BellSouth Services**

Room 33D55 - 675 W. Peachtree Street, N.E.  
Atlanta, Georgia 30375  
404 420-2370

Joseph L. Boyette  
Corporate Purchasing Manager  
Transmission

August 28, 1987

Mr. R. M. Allen  
Vice President/Manufacturing  
9595 Mansfield Road  
Shreveport, LA 71130

Dear Mr. Allen,

Attached is the Final Report for the Quality Overview conducted at the Shreveport Works on July 21, 1987.

Please note that this document is labeled proprietary to protect the mutual interests of AT&T and BellSouth.

If you have any questions concerning the Facility Review/Quality Overview, please call Steve Murray at (404) 420-2164.

Sincerely,

*J. W. Mitchell Jr.*  
fw

cc: S. Murray  
~~J. Waters~~  
L. Kulpa  
H. Kniskern  
D. Faley

QUALITY OVERVIEW

American Telephone and Telegraph

Shreveport Works

Shreveport, LA.

(PERFORMED July 21, 1987)

A Quality Overview of the manufacturing facility was conducted, by BellSouth Services/Quality Assurance at AT&T/Shreveport Works on July 21, 1987. AT&T manufactures and packages the Craft Access Terminal for BellSouth.

The following were in attendance:

<u>NAME</u>	<u>TITLE</u>	<u>REPRESENTING</u>
S.T. Murray	Staff Manager	BellSouth Services
J. Mitchell	Associate Mgr.	BellSouth Services
J.D. Waters	Manager	Southern Bell
L. Kulpa	Account Manager	AT&T
R. Boswick	Product Manager	AT&T
D. Faley	Quality Assurance	AT&T
B. Poston	Manager	AT&T
J. Carter	Quality Assurance	AT&T

The overview of the vendor's quality program was conducted using 14 basic elements derived from the American National Standard Z-1.15, which was prepared by the American Society for Quality Control.

## QUALITY OVERVIEW

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**QUALITY OVERVIEW**  
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**I. MANAGEMENT COMMITMENT AND ORGANIZATION**

It appears that both management and the employees observed during the review are completely dedicated to producing a quality product. Top management has established and documented the quality related responsibilities and action authority for activities such as quality assurance/quality control, engineering, manufacturing, production and procurement.

The quality group has the organizational freedom and capability of identifying, assessing and reporting deficiencies and for initiating and obtaining positive corrective action.

**II. DOCUMENTATION OF THE QUALITY SYSTEM**

AT&T at Shreveport has a documented Quality Control (QC) system in place. The document covers all quality related activities including those not performed by the QC/QA organization.

The manual is in the process of being updated to include the "Just in Time" program procedures presently being implemented at the facility.

Internal audits are conducted and documented to ensure compliance to the QC instructions.

**III. CONTROL OF DESIGN CHANGES**

There are procedures for the control of design drawings and specifications and the incorporation of subsequent changes thereto. The system describes responsibilities for monitoring and distributing documents and changes to appropriate points at the proper time to ensure that the work is performed and all functions are accomplished in accordance with the latest applicable requirements.

Basically, the Document Control group maintains existing drawings and incorporates approved changes to those documents. The New and Change organization monitors changes and coordinates the implementation effort between manufacturing and engineering.

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#### IV. CONTROL OF PROCURED MATERIAL

Initially, preferred vendors of procured material were selected by the "Code Six Reduction" committee and AT&T Labs. The commodity team at Shreveport is currently implementing the "Partner Plan", a team approach to manufacturing, at suppliers of raw material.

AT&T does vendor facility reviews at supplier locations and has source inspectors on site at some locations. Parts that are not source inspected are inspected at receiving by QC.

Incoming material is logged into an automated material control system. The system indicates what material requires inspection and automatically generates the request for inspection to QC. The material is held at receiving and can not be moved until stamped by QC.

Layout sheets for each part are maintained in the QC Lab. The sheet, which details the the appropriate sampling plan, the inspection criteria and acceptable parameters, is pulled for the item being inspected.

#### V. MANUFACTURING CONTROLS (IN-PROCESS)

In-process inspection is documented in the QC manual. Additionally, inspection instructions are detailed in the manufacturing layout. There are inspection instructions at each station. Inspection results are maintained for each operation.

##### Circuit Boards

- 100% inspected at the solder reflow operation. AT&T workmanship standards on solder are utilized.
- The majority of components are placed by an automatic insertion machine. Pull sheets are provided to the operator indicating component part, firing sequence, etc.
- Rosin Flux is utilized at the wave solder operation. Boards are cleaned with freon and inspected visually.

-con't-

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- Boards are bar coded and Genrad tested on a bed-of-nails test fixture. Records are maintained on 1st pass yield testing and those results are summarized weekly. Any board that fails is repaired and retested.
- \* Each board is functionally tested. Any fall outs are repaired and sent back through Genrad testing.

#### Assembly

- Component parts and a completed board are assembled into a CAT housing. Each CAT is serialized and tagged. All information related to the test of that CAT are recorded on the tag.
- A pre-burn-in test is performed and results are recorded on the tag. Defects are sent to repair and when returned are re-tested.

#### VI. COMPLETED ITEM INSPECTION

Each CAT, inspected by QC personnel, is tested for:

- Appearance - gaps in housing shell, blemishes, scratches, etc
- Joy Stick Operation - free movement utilizing a gram force measuring tool
- \* Dial Pad Operation - each button is actuated utilizing a gram force measuring tool
- Mode Switch Operation - the mode switch is operated utilizing a gram force measuring tool
- Battery Low Indication - display is checked using an adjustable power supply
- \* Quick Test - simulates user initiated call to AP
- Microtronix Test - automated test fixture that tests:

Dial operation  
Transmission  
Varistor test  
Receiver Gain  
Monitor Mode Receive Response

Inspection results are maintained on all tests performed.

Prior to shipment, all CATS are submitted in lots to QA where a sample is pulled and inspected. QA utilizes a Quality Measure Plan which works on a demerit system (rating each defect based on its significance). Records are maintained on their inspection results.

**VII. EQUIPMENT CALIBRATION AND MAINTENANCE**

Shreveport utilizes a mechanized system to schedule the recall of measurement and test equipment. Equipment is calibrated against certified standards traceable to the National Bureau of Standards.

**VIII. CONTROL OF NONCONFORMING MATERIAL**

Nonconforming material is recorded on an Outside Specification Limitation form and submitted to the Product Engineer. If the material is rejected, it is returned to the vendor. Use of defective material that may affect the final product requires the signature of QC and the Labs.

There is a Quality "hold" area where material is segregated awaiting disposition.

**IX. STORAGE, HANDLING AND PACKAGING**

It appears that appropriate care is exercised in storage, handling and packaging to protect the product during manufacture and shipping.

Antistatic protection for components susceptible to electrical discharge damage was evident throughout the facility.

**X. CORRECTIVE ACTION PROGRAM**

The QC document details a comprehensive defect analysis/corrective action program for reporting and follow-up on product and/or program deficiencies.

There are Quality Improvement (QIP) teams which meet regularly to review quality results and recommend corrective action.

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**XI. PRODUCT IDENTIFICATION**

Each CAT is stamped with the date of manufacture and individually serialized in the battery compartment. Additionally, each circuit board is bar coded. Shreveport is presently converting to a "Just-in-Time" manufacturing philosophy. This will virtually eliminate the need to store component material. Therefore the date of manufacture appears adequate for traceability to raw material.

NOTE: Records are not maintained on CAT serial numbers that would enable inventory or customer recall if necessary.

**XII. PERIODIC PRODUCT QUALIFICATION**

Value Engineering is performed periodically on the CAT to evaluate compatible and/or equivalent component availability. Also, Lab Design Information used to qualify the CAT is periodically updated per FCC regulations.

**XIII. QUALITY INFORMATION**

Quality records are maintained, compiled and analyzed to aid in identifying, correcting and preventing specific quality deficiencies.

QC publishes daily results on completed items. In-process information is kept in house and utilized by the QIP teams.

QA results are published weekly (Attachment I).

**XIV. COLLECTION AND ANALYSIS OF FIELD PERFORMANCE DATA**

CATs that are sent to Shreveport for repair are tagged and sent to the final line. Once they are repaired, the CAT becomes essentially a new CAT and is tested as such. Information is recorded on the tag along with the serial number of the defective CAT. Raw data on the repair of each CAT is sent to the Labs for analysis.

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**SUMMARY**

To the extent the review was performed, it appears that AT&T has the ability to produce and supply a continuously conforming product. The following noted exception and recommendation is the only apparent concern that was evident during the review.

NOTE: Records are not maintained on CAT serial numbers that would enable inventory or customer recall if necessary.

RECOMMENDATION: A tracking mechanism should be implemented that would facilitate the recall of CATs in inventory or in the possession of a customer should circumstances require it.

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PRELIMINARY INSPECTION AND QA RESULTS FOR 07/20/87

Attachment I

INSP FT&I SAMPLE SIZE [REDACTED] INSP STROKES [REDACTED] INSP WKS-COMP SAMPLE SIZE [REDACTED] INSP DEMERITS [REDACTED]  
 QA FT&I SAMPLE SIZE [REDACTED] QA STROKES [REDACTED] QA WKS-COMP SAMPLE SIZE [REDACTED] QA DEMERITS [REDACTED] QA EXPECTED DEM/STKS [REDACTED]

CLASS PRODUCT SS DM/ST DEFECTS  
 =====

\*\*\*\*\*  
 490 CRAFT ACCESS TERMINAL - INSP - FT&I 21. 0.  
 PERIOD CUM ACTUAL % DEF = 0.00  
 WKS 21. 10. PARTS IMPROPERLY ASSEMBLED  
 100% OPERATION MISSING  
 100% NO SOLDER  
 TOTAL DM/ST 210.  
 PERIOD-CUM-ACTUAL-DPU = 8.89

DAILY LOTS INSPECTED = 0 DAILY LOTS REJECTED = 0 PERIOD CUM % LOTS REJECTED = 0.00

\*\*\*\*\*  
 490 CRAFT ACCESS TERMINAL - QA - FT&I 6. 0.  
 PERIOD CUM ACTUAL % DEF = 0.00 PERIOD CUM EXPECTED % DEF = 1.50  
 WKS 6. 0.  
 PERIOD CUM ACTUAL DPU = 0.00 PERIOD CUM EXPECTED DPU = 0.80  
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 \*\*\*\*\* QUALITY ASSURANCE SUMMARY \*\*\*\*\*  
 \*\*\*\*\*

TUESDAY, JULY 21, 1987 PERIOD VII WEEK IV

PLANT DEMERIT INDEX [REDACTED]

(B) ITEMS BELOW NORMAL (A) ITEMS ON ALERT (C) ITEMS ON CAUTION

(BE) ITEMS BELOW E.O. (CURRENT PERIOD DATA ONLY)

(+) POSITIVE TREND (0) NO TREND (-) NEGATIVE TREND (O) INSUFFICIENT HISTORY

CLASS	DESCRIPTION	SS	STK/DEM	EXPT	CAUTION	ALERT	BN	99%	95%	CURR	TREND
490	CRAFT ACCESS TERMINAL FT&I	42.0	0.0	0.6	2.3	3.9	5.5	0.02	0.06	0.00	0
490	CRAFT ACCESS TERMINAL COMP WKS	42.0	0.0	36.8	120.9	205.0	297.0	0.09	0.19	0.00	0
**	490 CRAFT ACCESS TERMINAL EXT WKS	42.0	0.0	12.6	36.8	61.0	73.8	0.00	0.01	0.00	0
**	490 CRAFT ACCESS TERMINAL INT WKS	21.8	0.0	24.1	104.6	185.0	308.0	0.06	0.17	0.00	0

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 DELTA SOUTH COMPANIES except under

F03A42Z 0000202

F03B34Z 0000202

Jim - you're better  
along.



L. M. Kulpa  
Account Manager

Western Electric® Products

6701 Roswell Road, N.E.  
Atlanta, Georgia 30328  
404-257-6763

September 9, 1987

MR. J. P. KEPHART  
Network Manager  
Southern Bell Telephone & Telegraph Company  
SBC - 25R67  
675 West Peachtree Street, N.E.  
Atlanta, Georgia 30375

Dear Mr. Kephart:

Re: Repair & Return Procedures  
for the Craft Access Terminal

Effective September 1, 1987, all Craft Access Terminals will be repaired at AT&T's Kansas City Service Center located in Merriam, Kansas.

Procedures

Pack each Craft Access Terminal (individually) in the original shipping container, if possible. When the original box is not available, please use sufficient packing material to ensure the safe delivery to the repair location.

Each terminal shall be tagged with a description of the reported trouble, identification of owner and contact name with a telephone number. If address for return of the repaired terminal is different than shipper, please specify.

Mark the outside of the shipping container with the word "REPAIR." Also, label the shipping container with "TO:" and "FROM:" information in addition to the packing slip.  
Address shipping container as follows:

FROM: Company Name  
Address

TO: AT&T  
Kansas City Service Center  
9501 West 67 Street  
Merriam, Kansas 66203

ATT: Ms. Ruby Johnston

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Fill out your Repair/Service and Return Form (e.g. R/S&R, CAPRI, DPIC, other) and send it with the terminal to be repaired.

Repair Interval

The Craft Access Terminal will be repaired and returned to the BOC within 5-7 days. This excludes shipping to the repair center and back to the customer.

Status of Repair

You may call 800-255-7333 to find out the status of terminals returned for repair.

Pricing

~~A two-tier pricing system has been established for Craft Access Terminals when repaired out of warranty. We will provide you with additional information when the details have been finalized.~~

If there are any questions, please do not hesitate to call me on 404-257-6763.

Sincerely,

*Law*

Letter to:  
J. P. Kephart  
J. D. Waters



**AT&T**  
Network Systems

L. W. Moore  
Account Director

Western Electric® Products

6701 Roswell Road, N.E.  
Atlanta, GA 30328  
Ph: (404) 257-7719  
800-241-4944

Birmingham:  
Ph: (205) 988-9320  
800-638-3954

July 27, 1987

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3  
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MR. J. J. SEABOLT  
Assistant Vice President - Network Operations  
Southern Bell Telephone & Telegraph Company  
SBC - 21S85  
675 West Peachtree Street, N.E.  
Atlanta, Georgia 30375

8

Dear Jerry:

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Per our conversation of July 22, we have looked into other possibilities concerning the purchase of additional Craft Access Terminals. In accordance with our past correspondence and agreements we can offer the following options:

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1. Per our agreement, the change-out of the  loaner CATs with new CATs could begin during the month of September.
2. Our understanding is that you require approximately  CATs to be totally deployed in 1987. Therefore, we would need for you to place an order for the  additional CATs needed. This order could be for either new or refurbished CATs at your option. If you choose new CATs, deliveries would begin in August and would be applied to your present orders for  CATs. Once you had sufficient CATs (a total of  in the field, we could begin the change-out procedure. As CATs are returned and refurbished, they will be applied against the second order if it specified refurbished CATs. It is important to understand that we cannot guarantee a total of  refurbished CATs. This will depend on availability. We think, however, it will be certainly possible to provide them.

I hope one or more of these options are acceptable to you. If you have any questions, please call on 205-988-9320.

Sincerely,



J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404 257-7000

October 31, 1986

MR. R. K. SNELLING  
~~Executive Vice President~~ - Network  
Southern Bell Telephone & Telegraph Company  
4505 Southern Bell Center  
675 West Peachtree Street, N.E.  
Atlanta, Georgia 30375

Dear Mr. Snelling:

This is in response to your letter dated October 13, 1986 concerning the Craft Access System. The staff support you have provided for this project is greatly appreciated. Both of our corporations have dedicated a significant level of resources and investment for the success of this system. As you will see in the response below, we are making progress in resolving these issues.

1. System Stability: APM Operation

Over the last few months a large number of software problems have been resolved. Specifically, the GI2.0 software release, delivered to Miami the weekend of 10/18/86 fixes over 133 MRs including the problem that prevented the system from being able to handle 14 APs and 40 APMs. GI2.0 will actually support 14 APs and 100 APMs. In the first quarter of 1987, we expect to deliver GI3.0 which will support 30 APs and 150 APMs.

The problem of the secondary trunk APM not always taking over when the primary fails has been traced to a firmware problem which has been fixed and is being tested. A workaround solution was provided to customers in a TWX released 9/25/86. We expect to release the firmware change to the factory by the end of November.

## 2. CAT Failure Rate

We agree that the 11.4 CATs have performed better than earlier models and we fully expect a decrease in the failure rate. However, it is important to understand the nature and trend of the failures.

First, of the 26 verified failures, 13 have been traced to process flaws. There has been additional training and tightened inspection procedures initiated to improve the process. A new test has been added to identify any potential field problems introduced during manufacture. Second, 8 failures occurred because of defective components. We have changed to a more robust component in one case and have corrected other supplier related issues. Finally, 5 failures have resulted from field stress beyond the limits that the CATs are designed to withstand. For example, 2 units were submerged in water and another had an alligator clip pulled from its cord.

In summary, design improvements and subsequent test convince us that the CAT design is now sound. Recent field failures indicated a need for improved processing and inspection steps which have now been introduced.

## 3. System Size: #APs/APMs

As indicated in item #1, the G1I2.0 release fixes the problem that precluded the system from being able to handle the 14 APs that G1I1.2 should have been capable of accommodating. G1I2.0 will support configurations as large as 14 APs and 100 APMs. The planned capacity in G1I3.0 of 30 APs and 150 APMs is sufficient for the largest Southern Bell configuration we are aware of to date.

## 4. APM Firmware Changes

The firmware change being planned is to fix certain high severity problems. These changes will be delivered to those APMs that are being used by production craft as quickly as possible. We will arrange with our Regional Installation force to make special repair and return procedures for any problems encountered as a result of the firmware change.

5. 3B-5 Memory

We completed the installation of an additional 2 megs of memory, an increase of 6 to 8 megs, in the Miami Administrative Computers on October 10. Plans for upgrading the other data centers are in place; these data center machines will be upgraded well before they see actual craft usage.

6. Size of AC

GLI2.0 software significantly improves our system's ability to handle the most CPU intensive activity that takes place on the CAS AC - user logins. Preliminary GLI2.0 load test results support our confidence that a duplexed 3B5 is sufficient for Southern's largest CAS installation.

7. APM Diagnostics - Apparent Slot Dependency

Based on input from your installers, two APMs have exhibited this unusual diagnostic behavior. We believe that the correlation to APM slot location is not as significant as it may appear, and that the problem is most likely an intermittent failure of these APMs.

The boards were not returned to AT&T because your installers were satisfied with their operation. AT&T has talked to the two installers directly, and they have agreed to advise us if further problems arise and they need our help to understand the cause. In addition we have offered to accompany them when they next do a tour of their sites (10/27-10/31) so that we can be there to evaluate any unusual occurrences. These agreements were initiated on 10/6/86 shortly after we learned about the intermittent behavior.

8. D Affective APMs Returned

We are working with our factory to ensure a smooth and reliable return and repair process for the APMs. An enhanced factory port test implemented on October 7, 1986 should eliminate the possibility of APMs being returned to you unrepaired. We will also provide your staff with the proper repair contact name and documentation to avoid any procedural discrepancies.

9. APM Failure Rate

Over the last year 600 APMs have been shipped from AT&T. Only 14 APMs have been received at AT&T Network Systems for repair (2.3%). The Tucker and North Broward situations are not typical. The Tucker AP had 5 APMs that exhibited port related failures; one ran diagnostics continuously. These failures are not acceptable but are understood and will be repaired as soon as the APMs have been returned.

We have added tests which will more fully exercise the dial-in ports of the APMs. This process should eliminate port related field failures like those that were identified in the Tucker installation. The additional tests have been in use since 10/07/86.

10. Application Generator

The Application Generator was presented to your staff during August. Both parties have benefited from the early trial activity of this product, and as result of your input we have made several significant changes to the user interface. These changes will be reviewed with your staff in early November, 1986, in New Jersey. If no significant changes result, we would anticipate completing the demonstration of the Application Generator in Atlanta in mid to late November.

11. Front End Simulator

The Front End Simulator was made available to your staff at their request in late August. Both parties knew at that time that there were two transactions that were not completed, but there was agreement that it would be beneficial to proceed. Our feedback from this effort was positive, as indicated by comments made by your staff in the September 18, 1986 trial meeting in Atlanta.

The final transactions for the Front End Simulator should be completed and made available to Southern Bell in mid-November.

## 12. CAT Warranty and Repair

On 7/22/86, a letter describing our repair procedures was published. A copy of this letter was provided to your staff at the 10/24/86 Steering Committee Meeting. While the experience gained by BL during the Beta Test has provided useful repair statistics, our factory and service center will be responsible for CAT repairs. A repair study is currently underway but has been delayed by the unavailability of final production CATs. Repair costs for out of warranty repairs will be shared with customers upon the completion of this study.

Considering that the terminal is seen as a high technology product that would experience start-up problems, we extended our original 90-day warranty to 1-year under our normal contractual terms and conditions. The manufacturing date will initialize the warranty period. In accordance with our General Agreement with your company, the warranty will not be extended for those time periods the CAT may be in repair.

As previously agreed upon, the one year warranty for all your APs and APMs currently installed and the 250 CATs you will have for evaluation will begin upon completion of the 60-day evaluation period.

Regarding the 30 day supply of CATs for Southern Bell, AT&T will provide an adequate number of CATs to facilitate the rapid turnaround of CATs suffering infant mortality. This 30 day period will begin on the date of the first delivery of production CATs to Southern Bell.

We are dedicating all of our available resources for the fulfillment of the evaluation criteria. We will be able to demonstrate a quality production system to you although we will have problems completing two of the items by December, 1986. Our current software supports the operations of the Craft Access System for 14 APs and 100 APMs. The demonstration of CAS with 30 APs and 150 APMs will be available in the first quarter of 1987 with our new software release. By December 1, we will be able to provide you with an additional 135 of the latest model CATs that will demonstrate to you their reliability. The availability of final production CATs incorporating all processes will follow.

All of our efforts are committed to completing the evaluation criteria and supporting you throughout the coming months. We believe all of our problems are resolveable and are anxious to meet with you to review joint actions required to complete this trial.

Very truly yours,

**Original Signed By**

**J.M. Mauriello**

J. M. MAURIELLO



**Southern Bell**

Southern Bell Center  
675 West Peachtree Street, N.E.  
Atlanta, Georgia 30375  
404 529-8993

R.K. Snelling, P.E.  
Executive Vice President—Network

1 October 13, 1986

2 File Code: 248.0307

3 Mr. J. M. Mauriello  
4 Vice President (Southern)  
5 American Telephone & Telegraph  
6 6701 Roswell road, N.E.  
7 Atlanta, Georgia 30328

8 Dear Sir:

9 In your letter to Mr. Ferris on January 23, 1986, you stated  
10 that the Craft Access product "General Availability" was planned  
11 for April 1, 1986. In this letter you also made a commitment to  
12 support our rapid deployment plan which was originally scheduled  
13 to conclude in August 1986. Based on your commitment, all  
14 necessary hardware was ordered and has been installed. Because  
15 of your failure to provide the system as committed, we have  
16 approximately of hardware sitting dormant in our  
17 Central Offices and Data Centers. In addition, we have ordered  
18 CATs that are of little value to us without the total  
19 system.

20 On July 10, 1986, AT&T loaded what was called "release" software  
21 in the 3B5s in the Miami Data Center. After this software had  
22 been operational for about a week, AT&T insisted that the system  
23 was ready for release and requested my staff to begin the 60 day  
24 evaluation period and take over operation of the trial site.

25 Since that time, some improvement has been made by loading  
26 improved software and providing the latest version CAT.  
However, much more must be accomplished before implementation  
can begin. The following is a list of some of the outstanding  
problems:

1. The system has not demonstrated performance reliability. In addition, the trunk APMs do not work as advertised i.e., when the primary fails, the secondary does not always take over trunking responsibilities. When this problem occurs a visit to the AP location to manually reset the APMs is required.

2. Although the failure rate of the 11.4 CATs is lower than previous models, it remains unacceptable. Therefore, our outstanding orders for CATs should not be filled until the failure rate is acceptable and the total system is available.
3. We recently discovered that the current (improved "release") software can only support a total of 2 APs and 25-30 APMs. I think this could be a very serious problem since our smallest site has 16 APs and 48 APMs.
4. The firmware in the APMs must be changed out again. Several APMs were found to be defective after the last firmware change. We feel the same will happen this time. In the event we are right, you should be prepared to implement special repair procedures to repair and return these boards in an expeditious manner.
5. Additional memory must be added to the 385s to support more than 5 APs. This is in addition to the recent requirement to increase memory to support the latest software. Currently, we are 2 megs short in each of the machines in Miami and 4 megs in all others.
6. There is much concern that your recommended Administrative Computer (385) is too small. Especially in the North Carolina Data Center where one must support 30 APs.
7. While testing APMs, we have noticed that some fail self diagnostics in one slot of the AP but pass in another. Should these APMs be considered good?
8. Defective APMs returned for repair were returned to us with the same defects.
9. We feel the APM failure rate is excessive. In the Tucker Central Office, 6 of the 7 APMs were found defective. In North Broward district, 2 of 10 APMs were found defective and another failed self diagnostics in slot 2 but passed in slot 9.
10. In an earlier letter, you stated that the Application Generator was available on August 6, 1986. You were obviously misinformed, because the Application Generator remains unavailable at this time. In addition, many revisions are needed to make this feature user friendly.

11. In the letter mentioned in item 10, you stated that the Frontend simulator would be delivered on August 25, 1986. Pieces of this feature have been provided, however, the entire package with all agreed upon features has not been delivered.
  
12. On numerous occasions we have requested written CAT repair procedures and estimated repair costs but have not received them. I realize that the estimated repair times may not be completely accurate but you should have a good idea since you have repaired hundreds at the Labs and have repaired most every type defect. Even if the repair times are not completely accurate, you must know what your parts cost and what labor rate you expect to charge. By now you should have also determined where you would like us to send our defective CATs and what paperwork you expect. Originally we were told that the warranty would be extended for the period of time the CAT was in for repairs but now we are told it is only one year regardless of how long it is in the repair shop. This needs to be clarified. We feel the warranty must be extended in light of the failure rate and the extremely long repair interval. Another point which must be clarified is the issue concerning the first thirty day period after a CAT is received.

As of today, I have provided staff support for this project for approximately two years. It would seem that would be sufficient time to completely build the entire system. In order to take advantage of my investment in the very near future, I insist that you place whatever resources that are necessary to correct the above problems so we may complete our evaluation period no later than January 1987.

Yours truly,



Executive Vice President - Network

Copy to: F. D. Ackerman  
C. S. Ferris



J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404 257-7000

November 21, 1986

RECEIVED  
EXEC. VP. NETWORKS

1 MR. R. K. SNELLING  
2 Executive Vice President - Network  
3 Southern Bell Telephone & Telegraph Company  
4 4505 Southern Bell Center  
5 675 West Peachtree Street, N.E.  
6 Atlanta, Georgia 30375

NOV 21 1986

7 Dear Mr. Snelling:

8 In our October 31, 1986 letter to you regarding the Craft Access System  
9 (CAS) Trial in Florida, we provided you with the latest available  
10 information on the key issues of the CAS trial. In response to your  
11 letter dated November 6, 1986, we are able to make the following  
12 commitments to you:

- 13 1. The new APM firmware development and testing with a complete  
14 change-out at the trial site is scheduled for completion by  
15 January 1, 1987.
- 16 2. Two-hundred and fifty production Craft Access Terminals (CATs)  
17 will be shipped to you by January 1, 1987.

18 Upon completion of a positive trial evaluation, AT&T will ship  
19 CATs at a rate of \_\_\_\_\_ onth to fill the SBT orders and  
deployment needs by June 1987.

On November 6, 1986, Bob Sterner, Manager, OS Product Management met with members of the I&M Panel to present AT&T's plan to offer the CAT-AP interface to interested terminal vendors. AT&T is committed to supporting licensees of this interface specification in order to provide Craft Access customers with a choice of terminal vendors.

Mr. R. K. Snelling

2.

3. In order to ensure adequate testing and a quality review of the GLI3.0 software which solves the capacity issue (30 APs and 150 APMs), we estimate delivery to SBT by January 28, 1987.

In order for SBT to begin the trial evaluation on January 1, 1987, the system could be evaluated at the Beta site with CAS GLI2.3 to verify the system features. This release, which supports 14 APs and 100 APMs, will support most SBT sites in the early stages of deployment and allow time for additional craft training.

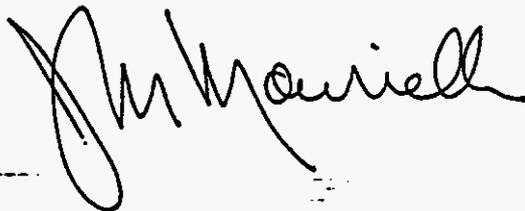
On January 28, GLI3.0 would be delivered to the Charlotte Data Center where the appropriate number of APs (30) are in place to accurately evaluate the capacity feature of this release. We will work with you to assure the availability of CATs and APM firmware to test this feature. The capacity increase and associated capacity management features are the critical differences between GLI2.3 and GLI3.0. Outstanding Maintenance Reports (MRs) will continue to be addressed and fixes delivered to you upon completion of proper testing. The Beta site evaluation and the capacity feature evaluation would be done in parallel with one another.

Another option would be to deliver GLI3.0 to Miami on January 28th. This option may impact your ability to fully deploy by June.

AT&T is also in the process of verifying CAS software in preparation for SBT's transition from 11/70 Front Ends to the HICAP Front Ends. Each AP will be able to work with HICAP FE or an 11/70 FE, and configuration plans should consider this aspect of the system.

We believe this plan enables you to get the majority of your users up on Craft Access in the required timeframe. We are anxious, as you are, for the CAS Trial evaluation to begin and the completion of the Beta trial criteria is our number one priority. Please let us know if our plan meets with your satisfaction.

Very truly yours,



12/9/86: Copy to Mr. Danford

*ple prepare response*



J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404 257-7000

November 21, 1986

1 MR. C. S. FERRIS  
2 Vice President - Corporate Support  
3 BellSouth Services Incorporated  
4 4517 Southern Bell Center  
5 675 West Peachtree Street, N.E.  
6 Atlanta, Georgia 30375



7 Dear Mr. Ferris:

8 In our October 31, 1986 letter to you regarding the Craft Access System  
9 (CAS) Trial in Florida, we provided you with the latest available  
10 information on the key issues of the CAS trial. In response to your  
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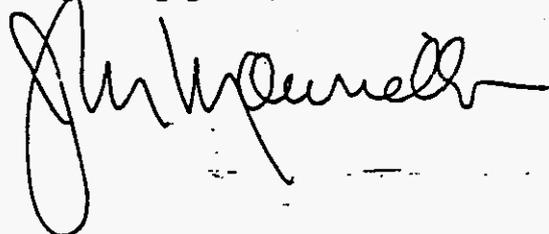
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Very truly yours,



11/22

George Foster  
George King  
Doug Wickness - See last para. last's problem.  
As info.  
Jerry Seabolt



AT&T  
Network Systems

J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404 573-7000

November 18, 1988

MR. R. M. WOLFE  
Vice President - Network Strategic Planning  
BellSouth Services  
600 North 19th Street, 16th Floor  
Birmingham, Alabama 35203

Dear Bob:

We share your concern in regard to the recent Craft Access Terminal (CAT) failure rate referenced in your letter dated September 26, 1988. We have identified some manufacturing process and component issues that occurred during the manufacturing of the CAT's in question that were shipped to Florida. As a result, we did have a higher failure rate than normal.

Our analysis indicates that the majority of the failures were attributed to magnets and Integrated Circuits (ICs). As a result our factory has instituted additional process controls and inspections to insure that the terminal failures will not exceed the expected level. Specifically, the following actions have been taken to correct the areas of failures identified above.

1. MAGNETS - We have changed to a new supplier and have implemented source inspections at the new vendor's site.
2. INTEGRATED CIRCUITS - We have identified a solder process problem with one of our ICs and have taken steps to correct the situation. Our solder process engineers from the Engineering Research Center have evaluated the IC solder process and have recommended changes that will significantly improve the operation of this particular IC.

Also mentioned in your letter was a concern for the charger jack. The results of our analysis indicated that the charger jack showed no abnormal failures. We have, however, created a new charger jack specification with more stringent design requirements which should even further minimize any future charger jack problems.

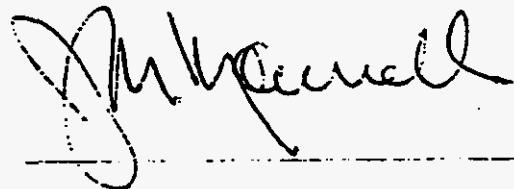
MR. R. M. WOLFE

- 2 -

In summary, we have every intention to take the necessary actions to insure that you will receive a quality terminal.

\*  
In addition, I would like to propose a meeting between your project team and our Quality Service Managers to implement some new procedures which would help solve this quality problem. Please have your staff contact Mr. J. L. West at 404-573-6736 to set up this meeting.

Yours truly,



---

C: JJ Seabolt

RKS

3/18/87  
/c

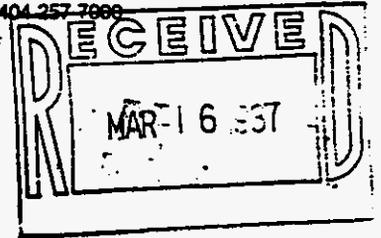


AT&T  
Network Systems

J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404.257.7999

MAR 9 1987



MR. C. S. FERRIS  
Vice President - Corporate Support  
BellSouth Services Incorporated  
4517 Southern Bell Center  
675 West Peachtree Street, N.E.  
Atlanta, Georgia 30375

MAR 13 1987

Dear Mr. Ferris:

This is in response to your letter dated January 20, 1987, concerning the Craft Access System (CAS). As suggested in your letter, many items have been discussed with the various staff organizations. A current update is as follows:

- The 60 day evaluation period of CAS began on February 2, 1987. The scheduled end date is April 3, 1987.
- The version GLI3.0 of the CAS software was installed in Miami on January 23, 1987 and loaded in Charlotte on February 23, 1987. This should provide the staff organizations the capability to evaluate the software's ability to handle the 30 AP capacity requirement.
- With regard to your requested visit to Shreveport, a visit between BellSouth Services and our Quality Assurance department in Shreveport was held on March 6, 1987. A follow-up meeting is being planned.
- Discussions regarding the immediate replacement policy for all CAT's has occurred. Routines are expected to be finalized by March 21, 1987. This process will cover all CAT's for the initial 30 day period after shipment. This will only cover the initial orders for 3267 CAT's that are scheduled to be delivered in increments of approximately 1000 units per month during March, April and May.
- The complete APM firmware change-out at the trial site has been accomplished. The schedule for changing firmware in the South Sector is following the latest CAS deployment schedule delivered to AT&T on February 10, 1987. Our goal is to complete this change-out by the end of the 60 day evaluation period.

- The North Sector has been supplied with the bulk of their required firmware kits in two shipments. One shipment for the Carolinas occurred on February 1 for 82 sets and 65 sets were shipped to Georgia on February 9. All remaining quantities will be delivered in time to meet the deployment schedule.

In addition to the status of the items covered above, we want to take this opportunity to review with you other areas that have occurred since the initiation of this evaluation period.

- A new DATAKIT generic release is being furnished to support the 30 AP requirement. Previously, only 19 were attained. This release will be installed by March 21, 1987 or earlier.

- The CAT occasionally experiences difficulty drawing dial tone from SESS offices. To resolve this, both short and long term solutions have been proposed recently to Southern Bell. Further discussion regarding these solutions will occur in a conference call scheduled for March 13, 1987.

- While the currently published interval remains at 28 days, we are experiencing an improved repair and return cycle in as low as 12 days; that is from the date CAT's are put in the mail to the date they are received back at the trial site. While this is still a trial site, we are working to improve this interval even more.

I will continue to update you as conditions warrant.

Sincerely,

Original Signed By  
J.M. Mauriello  
J. M. MAURIELLO

Copy to:

F. D. Ackerman - BellSouth, Atlanta

R. K. Snelling - Southern Bell, Atlanta

THIS COPY FOR 43



## BellSouth Services

C.S. Ferris  
Vice President - Corporate Support

4422 Southern Bell Center  
Atlanta, Georgia 30375  
404 529-5600

April 21, 1987

Mr. J. M. Mauriello  
Regional Vice-President (Southern)  
AT&T Network Systems  
6701 Roswell Road, N.E.  
Atlanta, Georgia 30328

Dear Mr. Mauriello:

We are pleased with the progress being made with the Craft Access System during the sixty day evaluation period in Southern Bell. This trial has taken a substantial amount of effort from both parties and I am sure that you are as pleased as we are with the progress that has occurred.

We are aware of the recent visits to Shreveport and discussions with your Quality Assurance department regarding the Craft Access Terminal (CAT). To date, we have not been allowed to review the quality processes nor look at the factory operation. Before production version CATS are accepted, these reviews need to be satisfactorily completed. The items to be observed during this review are attached and were addressed in a January 29, 1987 letter from Mr. S. T. Murray of our Quality Assurance group to Mr. Hank Kniskern at AT&T.

Would you please have someone in your organization contact Mr. James Mitchell on 420-2387 to set up a meeting to address the quality review.

I appreciate your giving this matter your personal attention.

Yours truly,

*C.S. Ferris*

Attachment

cc: R. K. Snelling  
R. D. Ackerman



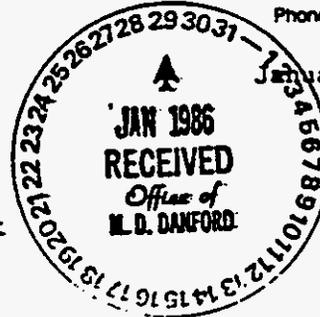
*cc: Jerry Seabolt  
Jerry Kephart*



**AT&T**  
Network Systems

J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, Georgia 30328  
Phone (404) 257-7000



1 MR. C. S. FERRIS  
2 Vice President - Corporate Support  
3 BellSouth Services  
4 675 West Peachtree Street, N.E.  
5 Atlanta, Georgia 30375

6 Dear Mr. Ferris:

7 This is in response to your letter dated December 9, 1985,  
8 concerning the Craft Access System (CAS) Trial and the  
9 subsequent availability of the final product. Let me take  
10 this opportunity to clarify the present situation.  
11 Preparations for the second phase of the CAS trial are on  
12 schedule and the trial will begin on February 3, 1986 with  
13 product "General Availability" planned for April 1, 1986.

14 We are doing everything possible to meet your planned  
15 deployment schedule. The Application Processors (AP's)  
16 will begin shipping as scheduled on February 8, 1986 with  
17 the Generic 1 version of the Application Processor Modules  
18 (APM's).

19 On March 8, 1986 we will begin field modification from  
20 Generic 1 to Generic 2 of the APM's already installed and  
21 from that point on all factory shipments will be with the  
22 latest available version of the APM's. This will permit  
23 us to meet the requested deployment schedule of Southern  
24 Bell and complete shipments for deployment during June of  
25 1986. This assumes a smooth installation period outside  
26 the control of AT&T as mentioned in my October 14, 1985  
27 letter.

28 We are appreciative of the suggestions made by BellSouth  
29 Services during the early part of this trial. This is a  
30 national outcome of an early application that we feel is  
31 mutually beneficial to both companies. In fact, many of  
32 the suggestions made have been incorporated and delivered

33 They include Installation Job Entry, Bulk  
34 Dispatching and the Supervisory Scripts. Beyond that,  
35 Southern Bell is receiving a full set of scripts custom  
36 cut by AT&T-BL. In addition, another benefit of your  
37 early participation in the CAS is the  
advantage for BellSouth in the purchase of CAT's. This  
enhanced price will result in a sizeable savings when  
applied to all BellSouth purchases.

Western Electric® products

FOIA42Z 0000224

FO3B34Z 0000224

However, one suggestion that does not translate into an immediate application is the "drop off" feature. We are concerned with this enhancement for several reasons. While it is true that we are continuing to work on the design of this feature, it is difficult to implement with reliability. At your request, we have been pursuing it but it will not be available in the foreseeable future. Moreover, other BOC's and some technicians trialing the CAS, see the feature as an impediment to craft productivity.

With regard to your itemized request, we regret that we can not offer a complete positive response. However, what we can offer is the following:

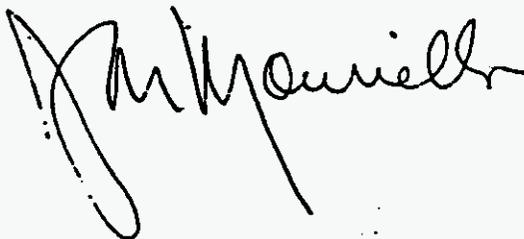
- 1) We will defer the start of warranties to commence with the system General Availability date of April 1, 1986. This would apply to the start of the 90 day warranty on the terminals and the one year warranty on the AP's and APM's.
- 2) We are committed to releasing a "standard" interface between the AP's and CAT's in the 1987 timeframe.
- 3) We have recently announced a change in our networking schemes that utilizes DATAKIT to a greater extent than originally planned. As our Universal Operations Systems Architecture matures, we are confident additional modifications will be made.

We trust you will find these additions to our original proposal of value.

As stated earlier, the General Availability date is set for April 1, 1986. With this in mind, it is urgent that the orders for CAT's be placed immediately so that we can insure your demand will be met.

If I can be of any further assistance, please give me a call.

Very truly yours,



Attachment

Copy to:  
R. K. Snelling  
F. D. Ackerman



*cc: Mr. Danford*

**BellSouth Services**

4517 Southern Bell Center  
Atlanta, Georgia 30375  
404 529-5600

C.S. Ferris  
Vice President - Corporate Support



Mr. J. M. Mauriello  
Vice President (Southern)  
American Telephone & Telegraph  
6701 Roswell Road, N.E.  
Atlanta, Georgia 30328

Dear Sir:

~~We appreciate the effort that has been expended preparing for phase two of the Craft Access trial and the subsequent availability of a final product. However, we must take this opportunity to express our disappointment in your inability to meet your previous commitments to support our deployment schedule and to provide the release of general availability software in February 1986.~~

As a result, we are now forced to reconsider our decision to implement your Craft Access system in the timeframe outlined in my letter dated August 28, 1985. We will continue to pursue an aggressive schedule and will assist your people in completing the trial to expedite the delivery of your product.

Throughout the trial, our Company has made numerous suggestions to enhance the original design of the Craft Access System. Most of these suggestions have already been implemented. One which has not been implemented is the "drop off" feature. This enhancement will enable the CAT to detect a subscriber attempting to make a call and would automatically drop off. Your people committed to provide this feature in the initial production CATs.

A BELLSOUTH Company

F01A42Z 0000226

F03B34Z 0000226

Improvements brought about due to input from our Company have added value and marketability to the Craft Access System. Because of this, we believe you should commit to the following at no additional cost:

1. Retrofit all craft access terminals with the drop off feature.
2. Data transfer architecture between the CATs and APs be made non-proprietary so that we can begin looking at industry solutions.
3. Any Systems enhancements for a two year period after full deployment.
4. An unlimited one year warranty on CTS.
5. AP to Datakit communications over a X.25 network.

~~In view of our commitment to Craft Access, an additional item which should be addressed is enhanced pricing other than that provided in your letter of October 14, 1985.~~

Yours truly,

*AS*  
*12/3/85*  


CC: R. K. Snelling  
F. D. Ackerman

4/2/86: TO MR. DANFORD



J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, Georgia 30328  
Phone (404) 257-7000

March 31, 1986

Mr. C. S. FERRIS  
Vice President - Corporate Support  
BellSouth Services Incorporated  
675 West Peachtree Street, N.E.  
Atlanta, Georgia 30375



Dear Mr. Ferris:

The purpose of this letter is to bring you up to date on the status of the Craft Access System (CAS) trial and deployment. Since our last discussion there have been a number of positive occurrences.

The warranty on our Craft Access Terminal (CAT) is changed from 90 days to one full year. Standard production CAT's will have the following major improvements:

1. A tip-ring modular jack replaces the headset jack.
2. Memory capability is increased from 100 pages to approximately 120 pages. (Required Firmware Change).
3. Padded shoulder rest.
4. Improved transmitter assembly.

A full Quality Assurance inspection program has been initiated. These reinforce our commitment to offer you the best solution for your needs.

In addition, the Application Generator feature will be provided as part of the basic CAS package to Southern Bell. This feature will provide a great deal of flexibility necessary to tailor the scripts to meet the changing needs of your diverse operating groups.



MR. C. S. FERRIS

2

The BLX trial CAT's will be replaced with standard production CAT's directly from manufacturing. These products are considered to be the latest equipment available and will be identical to the CAT's on order for your other maintenance districts. At the end of the trial these CAT's can be purchased for normal use in the West Palm Beach district.

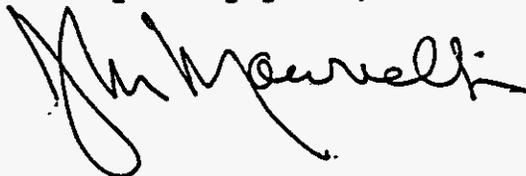
There has been a minor change in the availability of the CRAS interface software. The CRAS software availability is now, March 31, 1986 instead of March 17, 1986.

Our System Support group has proposed the following software loading schedule to meet your full deployment requirements. Atlanta, Charlotte and Jacksonville Data Centers can be loaded in sequence beginning on April 14 with Atlanta. This procedure requires approximately 1 week at each Data Center. Therefore the loading at Jacksonville would begin April 28. This software would be sufficient to verify that the communication links and Application Processors (AP's) are functioning properly. However, in order to support users, the existing firmware on previously shipped AP's must be changed to the latest available version. This conversion process can be started during the week of April 20, 1986. The scheduling details must be worked out between our staff's to properly coordinate the conversion of your most important maintenance districts first. After April 20 Application Processor shipments from manufacturing will contain the latest firmware. This firmware change is required before users can be put on the system.

With this in mind, it is most likely that there will be no users on the deployed system at any location until approximately May 5, 1986.

I will continue to update you as conditions warrant.

Very truly yours,



Copy to:  
R. L. Martin - Morristown  
R. K. Snelling - Atlanta



**BellSouth Services**

4517 Southern Bell Center  
Atlanta, Georgia 30375  
404 529-5600

C.S. Ferris  
Vice President—Corporate Support

April 4, 1986

Mr. J. M. Mauriello  
Regional Vice President (Southern)  
AT&T Network Systems  
6701 Roswell Road, N.E.  
Atlanta, GA 30328

Dear Mr. Mauriello:

We would like to advise you of concerns we continue to have regarding the Craft Access System (CAS) and solicit your support in resolving these concerns.

We are displeased that the "drop-off" feature will now not be available in the foreseeable future. This feature was advertised to be a part of the Craft Access Terminal (CAT) before Phase I of the trial began. We have recently been advised that there is no possibility for AT&T to retrofit existing CATs with the "drop-off" feature when it does become available. This will mean junking CATs previously purchased and buying new ones to acquire this feature. We would be interested in some type of trade-in provision of existing CATs for later versions.

We strongly oppose your newly developed policy regarding support charges for self-installation. This is contrary to the statements that AT&T will support self-installation efforts. The execution of additional license agreements between our companies in order for us to install, test and maintain equipment is inappropriate. The provisions of General Agreements PR-1038A and PR-1078A provide for documentation and use. BellSouth is due adequate documentation and we expect your timely provision of this documentation in order that our installation may proceed on schedule. Your personal support in resolving the documentation issue will be appreciated.

There continues to be a high level of failures in the terminals we are receiving in WPB. We understand that these terminals are being inspected individually by AT&T

1 personnel in Whippany, New Jersey. As of February 27,  
2 1986, 160 new terminals were shipped to WPB. Of these,  
3 69 experienced some sort of failure. Some of the terminals  
4 were found with failures in the box they came in. Other  
5 failures were experienced after just a few days of field  
6 use. In the February 21, 1986 CAS steering committee  
7 meeting, Bell Labs representatives stated that many of the  
8 failures being experienced were because of the battery of  
9 tests that the terminals were subjected to in Whippany. It  
10 was stated that the production terminal from Shreveport is  
11 now of a much higher quality and would not need to be sub-  
12 jected to these tests. We are hesitant to believe this  
13 because:

14 1. Deliveries from Shreveport in the past  
15 experienced a similar failure rate and;

16 2. There is no evidence to support a belief  
17 that Shreveport will have the quality control  
18 and inspection that the terminals received by  
19 going through the tests in Whippany.

20 Because of this, we now feel we must limit our commitment  
21 to purchase CATS at the level. This reflects those  
22 currently under order. If the quality of the CATS improves  
23 significantly and you commit to our other requests of  
24 features and price, we will review our commitment with a  
25 high probability of additional orders.

26 As we requested in our December 14, 1985 letter to you,  
27 we feel that enhanced pricing, other than that provided  
28 in your October 14, 1985 letter, should be provided to  
29 BellSouth. In view of the sizeable amounts of CAS equip-  
30 ment purchases planned within Southern and South Central  
31 Bell and since the CAT will not be retrofitted with the  
32 "drop-off" feature, discounted pricing to BellSouth is  
33 appropriate. We appreciate the discount you  
34 have provided on the terminals. This discount represents  
35 a discount off of the price of which we were  
36 earlier advised. This is insufficient in view of AT&T's  
37 decision regarding the "drop-off" feature. We do not feel  
38 that the terminals should be the only component of the CAS  
39 that receives discounted pricing. The September 13, 1985  
40 response from Mr. J. T. Bauer of your organization provided  
41 price estimates for terminals and application processors  
42 which appear to be list prices. Your people have been  
43 working very closely with Southern and South Central Bell  
44 personnel and are aware that the amount of anticipated CAS  
45 purchases could approach . With this in mind,  
discounted pricing to BellSouth to include additional CAT  
discounts and application processors seems appropriate.  
Please advise us of additional CAS discounted pricing which  
BellSouth will be afforded.

Please provide the complete warranty provisions for the terminals. We need information concerning the conditions for warranty repair, the repair interval, itemized material charges for out-of-warranty repairs and charges for repairs not covered by warranty.

Plans are underway for reviewing the economics of using these terminals with cellular phones in supervisory vehicles equipped with an interface between the cellular phone system and the terminal. We feel confident that the terminal can be used in this application. We will proceed with this review and implementation unless AT&T can identify technical problems with this application of the terminal.

I would appreciate your timely response to our concerns and questions.

Yours truly,

*MSD*  
*only*  
*JS*

cc: R. K. Snelling  
F. D. Ackerman



**BellSouth Services**

4517 Southern Bell Center  
Atlanta, Georgia 30375  
404 529-5600

**C.S. Ferris**  
Vice President - Corporate Support

December 9, 1985

Mr. J. M. Mauriello  
Vice President (Southern)  
American Telephone & Telegraph  
6701 Roswell Road, N.E.  
Atlanta, Georgia 30328

Dear Sir:

We appreciate the effort that has been expended preparing for phase two of the Craft Access trial and the subsequent availability of a final product. However, we must take this opportunity to express our disappointment in your inability to meet your previous commitments to support our deployment schedule and to provide the release of general availability software in February 1986.

As a result, we are now forced to reconsider our decision to implement your Craft Access system in the timeframe outlined in my letter dated August 28, 1985. We will continue to pursue an aggressive schedule and will assist your people in completing the trial to expedite the delivery of your product.

Throughout the trial, our Company has made numerous suggestions to enhance the original design of the Craft Access System. Most of these suggestions have already been implemented. One which has not been implemented is the "drop off" feature. This enhancement will enable the CAT to detect a subscriber attempting to make a call and would automatically drop off. Your people committed to provide this feature in the initial production CATs.

Improvements brought about due to input from our Company have added value and marketability to the Craft Access System. Because of this, we believe you should commit to the following at no additional cost:

1. Retrofit all craft access terminals with the drop off feature. ✓
  2. Data transfer architecture between the CATs and APs be made non-proprietary so that we can begin looking at industry solutions.
  3. Any Systems enhancements for a two year period after full deployment. ✓
  - ← 4. An unlimited one year warranty on CATS. ✓
- 
5. AP to Datakit communications over the X.25 network.

In view of our commitment to Craft Access, an additional item which should be addressed is enhanced pricing other than that provided in your letter of October 14, 1985. ?

Yours truly,

*C.S. Jam*

CC: R. K. Snelling  
E. D. Ackerman

1. Drop off feature
2. System Enhancements
3. Standard interface = Data transfer arch. between CATs & APs. ?
4. <sup>there</sup> # 3 = <sup>our</sup> # 5
5. CAT orders

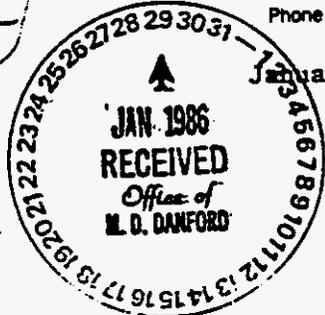
729-7064  
201 631-5807



J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, Georgia 30328  
Phone (404) 257-7000

Meeting March 5  
Universal operating  
Systems  
Meeting



January 23, 1986

1 MR. C. S. FERRIS  
2 Vice President - Corporate Support  
3 BellSouth Services  
4 675 West Peachtree Street, N.E.  
5 Atlanta, Georgia 30375

6 Dear Mr. Ferris:

7 This is in response to your letter dated December 9, 1985,  
8 concerning the Craft Access System (CAS) Trial and the  
9 subsequent availability of the final product. Let me take  
10 this opportunity to clarify the present situation.  
11 Preparations for the second phase of the CAS trial are on  
12 schedule and the trial will begin on February 3, 1986 with  
13 product "General Availability" planned for April 1, 1986.

14 We are doing everything possible to meet your planned  
15 deployment schedule. The Application Processors (AP's)  
16 will begin shipping as scheduled on February 8, 1986 with  
17 the Generic 1 version of the Application Processor Modules  
18 (APM's).

19 On March 8, 1986 we will begin field modification from  
20 Generic 1 to Generic 2 of the APM's already installed and  
21 from that point on all factory shipments will be with the  
22 latest available version of the APM's. This will permit  
23 us to meet the requested deployment schedule of Southern  
24 Bell and complete shipments for deployment during June of  
25 1986. This assumes a smooth installation period outside  
26 the control of AT&T as mentioned in my October 14, 1985  
27 letter.

28 We are appreciative of the suggestions made by BellSouth  
29 Services during the early part of this trial. This is a  
30 national outcome of an early application that we feel is  
31 mutually beneficial to both companies. In fact, many of  
32 the suggestions made have been incorporated and delivered  
33 at no cost. They include Installation Job Entry, Bulk  
34 Dispatching and the Supervisory Scripts. Beyond that,  
35 Southern Bell is receiving a full set of scripts custom  
36 cut by AT&T-BL. In addition, another benefit of your  
37 early participation in the CAS is the  
advantage for BellSouth in the purchase of CAT's. This  
enhanced price will result in a sizeable savings when  
applied to all BellSouth purchases.

However, one suggestion that does not translate into an immediate application is the "drop off" feature. We are concerned with this enhancement for several reasons. While it is true that we are continuing to work on the design of this feature, it is difficult to implement with reliability. At your request, we have been pursuing it but it will not be available in the foreseeable future. Moreover, other BOC's and some technicians trialing the CAS, see the feature as an impediment to craft productivity.

With regard to your itemized request, we regret that we can not offer a complete positive response. However, what we can offer is the following:

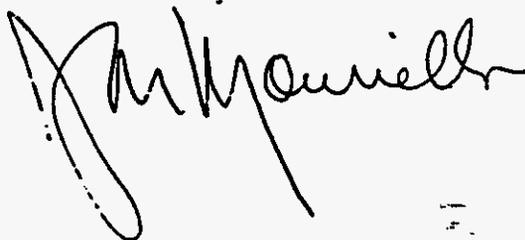
- 1) We will defer the start of warranties to commence with the system General Availability date of April 1, 1986. This would apply to the start of the 90 day warranty on the terminals and the one year warranty on the AP's and APM's.
- 2) We are committed to releasing a "standard" interface between the AP's and CAT's in the 1987 timeframe.
- 3) We have recently announced a change in our networking schemes that utilizes DATAKIT to a greater extent than originally planned. As our Universal Operations Systems Architecture matures, we are confident additional modifications will be made.

We trust you will find these additions to our original proposal of value.

As stated earlier, the General Availability date is set for April 1, 1986. With this in mind, it is urgent that the orders for CAT's be placed immediately so that we can insure your demand will be met.

If I can be of any further assistance, please give me a call.

Very truly yours,



Attachment

Copy to:  
R. K. Snelling  
F. D. Ackerman

*Mr. Sanford*



J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404 257-7000

June 29, 1987

MR. C. S. FERRIS  
Vice President  
Corporate Support BellSouth  
SBC - 4517  
675 West Peachtree Street, N.E.  
Atlanta, Georgia 30375

JUN 30 1987

Dear Mr. Ferris:

This is in response to several past inquiries concerning the ~~Craft Access Systems (CAS)~~. ~~The nature of these inquiries~~ have resulted in lengthy discussions with members of your organization prior to this reply. These complex issues have since been resolved. We can, therefore, respond meaningfully at this time on all past issues raised. For reference, please refer to letters dated March 26 and April 21, 1987.

Regarding the installation and planning for the CAS/HCFE project, we have provided assistance when requested and we understand you are on schedule. Items provided are as follows:

1. CAS/HCFE planning meeting held on March 31, 1987..
2. HCFE Conversion Seminar held on April 8, 1987.
3. HCFE G1I3.0 software was delivered on April 20, 1987.

To our knowledge all of these dates met or exceeded your request.

With regard to viewing our systems integrated testing facility, we have discussed our procedures in the past with your staff. However, it is not feasible to schedule a meaningful tour without impacting the production of this facility. With our commitments to you and other customers to provide products on a timely or accelerated basis, any delays would not be acceptable.

MR. C. S. FERRIS

2.

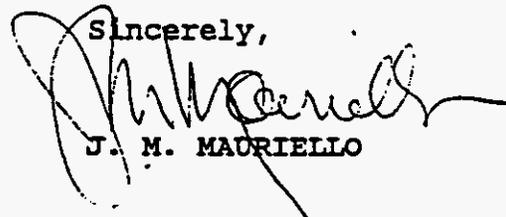
1 We have been in contact with Mr. S. T. Murray of your  
2 Quality Assurance group regarding the performance of the 14  
3 point QPE on the Craft Access Terminal (CAT) production  
4 line. We have scheduled a visit by Mr. Murray to the  
5 Shreveport manufacturing facility on July 21, 1987 for two  
6 purposes. One is to perform a QPE on only that product line  
7 and secondly, to view the ongoing production of the  
8 terminals by a small group (2-3) of BellSouth or Southern  
9 Bell employees. This visit had been agreed to in the past  
10 but has been delayed due to limited production of the CAT  
11 and a two week factory vacation shutdown. This visit will  
12 occur prior to the final production CATs being delivered to  
13 BellSouth at the end of July or the beginning of August.

14 In order to minimize any further delay in your CAS  
15 deployment plans, we have made arrangements to provide  
16 current production CATs on a loaner basis. This  
17 quantity matches the orders currently held for final  
18 production delivery. We have agreed to this loaner program  
19 under the assumption that these orders will not be  
20 cancelled. If there is any change in this good faith offer,  
21 the associated cancellation charges will apply.

22 Knowing that this current CAT production is not our final  
23 product, we are willing to offer for sale the CATs  
24 currently in use by Southern Bell. The price of this offer  
25 is  $\frac{\text{current CAT}}{\text{new final product}}$  vs. a new final product price of  $\frac{\text{current CAT}}{\text{new final product}}$  per  
unit. Treated as used products, these CATs will be returned  
to AT&T and upgraded to the level of our final production  
product. However, the warranty will be limited to six (6)  
months from date of delivery. This offer is contingent upon  
availability of product.

If the arrangements we are making are not satisfactory, please  
let me know.

Sincerely,



J. M. MAORIELLO

Attachments

Copy to:

F. D. Ackerman - BellSouth, Atlanta  
R. K. Snelling - Southern Bell, Atlanta  
D. E. Daniels - BellSouth, Birmingham  
J. W. Mitchell - BellSouth, Atlanta



*C. N. Seabolt*



**BellSouth Services**

J.W. Mitchell  
Vice President—  
Corporate Support

*Jeremy Kephart*  
*Jim Waters*

P.O. Box 771  
Birmingham, Alabama 35201  
205 321-3341

August 7, 1987

*FJM*  
*J*



Mr. J. M. Mauriello  
Regional Vice-President (Southern)  
AT&T Network Systems  
6701 Roswell Road, N.E.  
Atlanta, Georgia 30328

Dear Mr. Mauriello:

We appreciate the response in your letter of June 29, 1987 and would like to thank you for the assistance you have provided concerning the CAT/HCFE project. Additionally, the fact that our Quality Assurance Group was allowed to perform our Quality Program Evaluation (QPE) on the Craft Access Terminal (CAT) and view the production of the CAT is extremely gratifying. As you know, BellSouth is most concerned about the quality and performance of the CAT.

In regard to your offer to purchase the CATs currently on loan to Southern Bell, it appears to have substantial merit. This offer is currently being studied and we should be able to advise you of our requirements in the near future.

Members of both the Southern Bell and BellSouth Services Staffs are pursuing information relative to the rate of delivery of both final production and refurbished CATs. This information is needed for the planning and scheduling of the change out of CATs currently deployed in Southern Bell. They will be working with their coordinates within your organization to obtain this data.

There are two additional areas in which we are requesting further assistance. First, we would like assistance in clearing up suspected billing discrepancies for Craft Access System (CAS) application hardware purchased by Southern Bell. The individual to be contacted concerning this matter is J. D. Waters at 529-7656. Secondly, we would like to expedite the negotiation of contractual issues for the CAS agreement, PR-2105-A. Tom Beaird at 420-2257 should be contacted for this matter.

Your efforts in resolving these two items are appreciated.

Yours truly,

*J.W. Mitchell*

cc: F. D. Ackerman  
R. K. Snelling



MELARD TECHNOLOGIES, INC Five Odell Plaza, Yonkers, New York 10701 (914) 376-0100 FAX (914) 376 1936

March 18, 1991

Mr. Ron Fairbanks  
Southern Bell  
Southern Bell Center  
Room 25R67  
Atlanta, GA 30375

Dear Mr. Fairbanks:

Melard Technologies, traditionally the leader in the AT&T Craft Access Systems (CAS) environment, both as a provider of related hardware and software systems, recently announced a major new product for CAS supervisory personnel. Melard proudly introduces a new CAS interface called DOSCAT. DOSCAT is a communications package for the AT&T Craft Access System designed to run on your existing MS-DOS compatible PC or laptop. DOSCAT will give you access to the same information as MCAT but in a full size screen format on the same computer you use for your other PC-based applications for spreadsheets, microcomputer communications and word processing.

For more information regarding DOSCAT, please see the enclosed product specification sheet or call Jim Boylan, Regional Manager at (914) 376-0100.

Sincerely,

MELARD TECHNOLOGIES, INC.

# ACCESS II-80



80 Column Display  
Hand-Held Computer

ACCESS II-80 is a powerful hand-held computer with full-width screen capability designed for field force management systems. It specifically addresses the needs of data intensive applications and operates on all craft access systems available today.

The large 16 line by 80 character Supertwist LCD is integrated into the 'clam shell' design of the standard ACCESS II. This compact, innovative packaging provides the functionality of a laptop computer in a hand-held size. Information is viewed on a full-width screen, eliminating the extensive scrolling associated with small hand-held displays. The ergonomics of the ACCESS II-80 also provides desktop use for hands-free viewing of information as well as an adjustable display for an optimum contrast level. The standard 'QWERTY' keyboard features tactile and audible feedback for accurate data entry and accommodate application specific templates.

ACCESS II-80's modular hardware and flexible software design offers significant advantages. Application software typically resides on interchangeable battery-backed RAM memory cartridges and can be updated in the field, eliminating costly PROM changes. As the complexity of the applications grow, higher capacity cartridges up to 512K can be utilized. Therefore, ACCESS II-80 can be easily tailored to interface with the systems of different application groups using the same base hardware. This universal hardware interface, which is fully compatible with that of the standard ACCESS II, minimizes training costs and improves field logistics.

With its enhanced features, ACCESS II-80 overcomes application barriers, extending its usage to central office and business systems environments.

ACCESS II-80 not only offers a flexible package with minimum investment to meet the current needs of field force management systems, but can also be easily expanded to keep pace with your changing requirements.

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 MELARD  
TECHNOLOGIES

# DOSCAT



*Are you fighting a double-standard?*

Are you tired of having two platforms in your office, one for your PC and the other for your CAS communications? If so, then you should consider DOSCAT, a highly flexible communications package specifically designed to be used with AT&T's Craft Access System. DOSCAT will run perfectly on your existing MS-DOS or PC-DOS personal computer, while still giving you the direct access to CAS that you *must* have.

But DOSCAT is much more than a simple communications program. It has been developed with your particular needs in mind. It takes advantage of your PC's full-size screen and communications capability. For example, when you're off-line, DOSCAT makes the most of the PC's 80 character by 24 line screen format, which means that you can display up to eight pages of CAS data at once, rather than be forced to use CAS's restrictive 4 x 20 page format.

DOSCAT has a simple and straight-forward interface, with "logical" "pull-down" menus written in English, not confusing technical jargon. Even better, there's "context-sensitive" help, which simply means you

won't have to plow through menu after menu while you're trying to perform a specific function. Just one key-press will give you your answer.

DOSCAT remembers what you've been doing and reminds you of it, so that you can never forget where you've been and how you got there. Installation is quick and painless. No technical manuals and piles of floppy disks. DOSCAT comes ready-to-use on a single floppy, but there's also a completely automated hard disk installation program which determines what hardware you have and configures the program transparently. No more digging through old manuals or guessing at communications parameters!

DOSCAT combines ease-of-use with surprising power to help to better integrate the system in your office and on the road so that you can do your job. Easy enough for even the novice user, DOSCAT will become a fixture in your daily activities. *For all these reasons. And more.*

*DOSCAT. Working for you.*



MELARD TECHNOLOGIES, INC. Five Odell Plaza, Yonkers, New York 10701 (914) 376-0100 FAX (914) 376-1936

### MELARD 80-COLUMN IMPACT PRINTER

#### Features:

- 100 cps print speed in draft mode (25 cps in nlq mode)
- rugged construction
- light weight (4.25 lbs.)
- multicopy form capability
- low cost ribbon cassette
- fan-fold or single sheet paper handling standard
- roll paper handling optional
- bidirectional logic seeking
- subscripts, superscripts, doublestrike, underline, enlarged and condensed type size, emphasize and italics
- serial and parallel interfaces standard
- print buffer (4,000 characters)
- 12VDC and A/C adapter standard
- internal rechargeable battery module optional
- one year warranty

#### Specifications:

- printer method: dot matrix impact, 9X9 draft and nlq, 18X23 pin matrix
- character set: 96 ASCII, 12 International sets, 16 Greek, 48 graphic, 21 math & misc. symbols
- character pitch: 5, 6, 8, 10, 12, 17 cpi
- character density: 80 or 136 columns
- dimensions: 13.1" wide, 7.5" deep, 2.8" high, weight 4.25 lbs (w/o battery)
- print per charge: 175,000 characters (approximately 85 pages)
- interfaces: Centronix parallel and RS232 serial std. IEEE488 and Applewrite optional
- noise level: less than 60 dba
- controls: on/off switch, online/test switch, line feed./HEX debug switch-
- indicators: nlq, power lights, low battery indicator, online light, error light, paper out detection.
- self-test modes: rolling ASCII, debug in HEX 80, hardware diagnostics

XRF  
Jim Brown  
GAR  
return

11/22

~~George Forner  
George King  
Doug Alkness - See last page. last page.  
As info.~~  
Jerry Sebolt

NOV 29 1988



**AT&T**  
Network Systems

J. M. Mauriello  
Regional Vice President  
(Southern)

6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404 577-7000

November 18, 1988



MR. R. M. WOLFE  
Vice President - Network Strategic Planning  
BellSouth Services  
600 North 19th Street, 16th Floor  
Birmingham, Alabama 35203

Dear Bob:

We share your concern in regard to the recent Craft Access Terminal (CAT) failure rate referenced in your letter dated September 26, 1988. We have identified some manufacturing process and component issues that occurred during the manufacturing of the CAT's in question that were shipped to Florida. As a result, we did have a higher failure rate than normal.

Our analysis indicates that the majority of the failures were attributed to magnets and Integrated Circuits (ICs). As a result our factory has instituted additional process controls and inspections to insure that the terminal failures will not exceed the expected level. Specifically, the following actions have been taken to correct the areas of failures identified above.

1. **MAGNETS** - We have changed to a new supplier and have implemented source inspections at the new vendor's site.
2. **INTEGRATED CIRCUITS** - We have identified a solder process problem with one of our ICs and have taken steps to correct the situation. Our solder process engineers from the Engineering Research Center have evaluated the IC solder process and have recommended changes that will significantly improve the operation of this particular IC.

Also mentioned in your letter was a concern for the charger jack. The results of our analysis indicated that the charger jack showed no abnormal failures. We have, however, created a new charger jack specification with more stringent design requirements which should even further minimize any future charger jack problems.

MR. R. M. WOLFE

- 2 -

In summary, we have every intention to take the necessary actions to insure that you will receive a quality terminal.

In addition, I would like to propose a meeting between your project team and our Quality Service Managers to implement some new procedures which would help solve this quality problem. Please have your staff contact Mr. J. L. West at 404-573-6736 to set up this meeting.

Yours truly,

A handwritten signature in black ink, appearing to read "J. L. West". The signature is written in a cursive style with a large, looping initial "J".

CAT  
Quality



**BellSouth Services**

Norman K. Owen, C.P.M.  
Operations Manager  
Product Planning & Contracting  
Transmission Products

675 West Peachtree Street, N.E.  
Room 33055  
Atlanta, Georgia 30375  
404 420-2370

June 8, 1989

Mr. J. M. Mauriello  
Regional Vice President (Southern)  
AT&T Network Systems  
6701 Roswell Road, NE.  
Atlanta, GA. 30328

Dear Joe:

We have been engaged in discussions with your staff regarding solutions to the lingering problems of reliability of the Craft Access Terminals, the hand held units of the Craft Access System. As you know, BellSouth has a large investment in the entire system and is dependent upon the system's overall success to accomplish operational efficiencies in maintaining BellSouth's outside plant.

As stated by Mr. J. J. Seabolt in an April 6, 1989 meeting at AT&T, and again in correspondence dated May 1, 1989 from me to your Mr. T. N. Thacker, BellSouth has requested a full refund of purchase price paid for Craft Access Terminals (CATs). This is due to AT&T's inability to provide a reliable product that does not fail under normal and intended use. We are expecting a response in regard to these requests. We have also requested refund of any erroneous charges paid for repair of CAT units.

In a meeting on June 6, 1989, I agreed to offer the following proposal that seems to have potential advantages to AT&T over a direct refund. Your representatives in that discussion were Ted Thacker, Bill Newell, and Lawrence Conroy, Product Management, Morristown.

**PROPOSAL:**

In the interest of AT&T maintaining system continuity and being regarded as a total system supplier, BellSouth proposes to entertain a specific AT&T offer to include the following elements:

A BELLSOUTH Company

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1. AT&T to replace all CATs purchased in BellSouth with a replacement product of our selection. Monthly and annual failure rates to be mutually agreed upon. We have reached an agreement in principle including acceptable failure rate limits with at least one company under license to AT&T. This company is aware of this potential arrangement with AT&T. We are also interested in evaluating other products licensed to interface with the Craft Access System before final selections for replacement units.

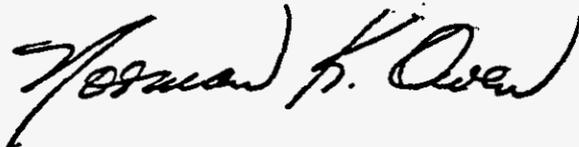
2. Loaner CATs will be returned to AT&T and replacement units purchased as described in 3. below.

3. BellSouth would continue the buying program at prices and quantities agreed to in Agreement PR-2105-A. This means that approximately \_\_\_\_\_ terminals would have been purchased at \_\_\_\_\_ and \_\_\_\_\_ additional terminals purchased at the refurbished terminal price by the conclusion of this program.

If AT&T makes such an offer, we would accept it by amending PR-2105-A. If these conditions cannot be met by AT&T, BellSouth requests to receive a full refund of CATs purchase price paid.

A timely response to this proposal in the form of a specific offer is appreciated.

Sincerely,





**AT&T**  
Network Systems

Network Systems Sales

Western Electric® products  
6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404 573-4000

July 5, 1989

MR. N. K. OWEN, Operations Manager  
BellSouth Services, Incorporated  
33D55 Southern Bell Center  
675 W. Peachtree Street, N.E.  
Atlanta, Georgia 30375

Dear Mr. Owen:

This is in reply to your letter dated June 8, 1989 to Mr. J. M. Mauriello regarding the Craft Access Terminal Product.

We have reviewed each of the points of your proposal and offer the following considerations and specific actions which we are taking in response to your concerns:

With respect to AT&T maintaining system continuity and remaining the total system supplier for the Craft Access System, we are willing to consider specific proposals from BellSouth with regard to OEM suppliers of access terminal products. However, our consideration of this arrangement would be limited to new and separate agreements on a going-forward basis.

In regard to your Item 1 proposal, we do not accept nor elect to replace existing CAT terminals with the product of your selection as a reasonable remedy to your warranty claim. Our discussions on this point continue to involve the question of quality which, up to this time, has been non-specific. As we recommended in our May 10, 1989 meeting, BellSouth should submit a Customer Assistance Request (CAR) citing specific data and your claim, accompanied by a sample defective product. Our obligations under this arrangement are to the identified defective and unrepairable purchased terminals and not to all terminals ordered under the contract.



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F03B34Z 0000251

MR. N. K. OWEN

-2-

With respect to Item 2, our previous correspondence stated that the loaner program was formally terminated effective June 1, 1989. We view your desire to continue to use this product in your network operations as faith in a product that continues to provide value for your client companies.

AT&T will continue to honor the terms and conditions specified in Contract PR-2105-A. As you stated in Item 3, we welcome your continued purchases under this agreement and, if unilaterally terminated with unfulfilled volume, we believe that unearned discounts are due AT&T.

AT&T considers the issues addressed in this correspondence as crucial to our continued business relationship regarding Craft Access Terminals and related Craft Access System Products. Please be assured that we desire a speedy and equitable resolution to these issues, specifically, fulfillment of the terms of the volume purchase agreement and settlement of the loaner program. If you require additional information or further clarification in this matter, please contact me.

Yours truly,



T. N. THACKER

Manager, Customer Satisfaction



## BellSouth Services

Norman K. Owen, C.P.M.  
Operations Manager  
Product Planning & Contracting  
Transmission Products

675 West Peachtree Street, N.E.  
Room 33055  
Atlanta, Georgia 30375  
404 420-2370

May 17, 1989

Mr. T. N. Thacker  
Customer Satisfaction Manager  
AT&T Network Systems  
6701 Roswell Road  
Atlanta, GA 30328

Dear Ted:

I appreciated meeting with you and Bill Newell last Wednesday in order to clarify issues related to continuing quality problems associated with the Craft Access Terminals (CATS).

Regarding AT&T's intent to terminate the CAT Loaner Program, BellSouth fully intends to return the loaner CATS. However, this cannot be done in a manner which negatively impacts our BOCs daily operations. As previously stated, we cannot agree to any piecemeal mandate such as June 1, 1989. Beginning in July, we will return all units in Southeast Florida as the beginning of the return of loaner CATS. We intend to accelerate our efforts thereafter. BellSouth intends to have all loaner CATS returned to AT&T by the end of the year.

Please call me if you have any questions regarding the return of loaner CATS.

Yours truly,

cc: Messrs. Seabolt/Giovanni  
Mr. Fiscarelli

A BELLSOUTH Company

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**BellSouth Services**

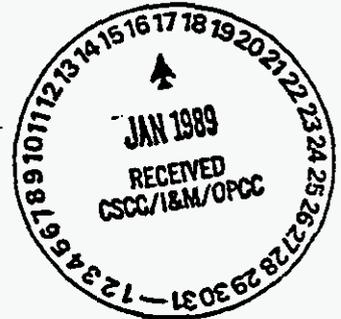
675 West Peachtree Street, N.E.  
Room 24C55 Southern Bell Center  
Atlanta, Georgia 30375  
404 529-8354

J. J. Seabolt  
Operations Manager-Network

*+ Ann St. U  
Ron Fink  
Jim Brown  
Note - replacement  
CATs are shipped  
to ship 11/24/89  
Return  
15*

January 13, 1989

Mr. A. P. Fiscarelli  
A T & T  
Sales Manager-Operations Systems  
6701 Roswell Road NE  
Atlanta, GA 30328



Dear Mr. Fiscarelli:

On December 16, 1988, representatives of AT&T Network Systems met with Mr. George Fortner and members of his staff to provide Southern Bell an update on some open issues. One of the items discussed in this meeting was customer dissatisfaction concerning the failure rate of AT&T's 206A2 Craft Access Terminal.

Information presented to Southern Bell on this subject indicated that AT&T's anticipated failure rate for this product to be 4% per month (See Attachment). When this failure rate commitment was challenged by Southern Bell, your representatives made it clear that the 4% anticipated failure rate per month was indeed your commitment. It was further stated that my staff had agreed to accept that rate as a reasonable figure.

In meetings on August 28, 1986, and November 6, 1986, with the Regional BOCs and Mr. Bob Sterner, AT&T stated a commitment of 3%. In my negotiations with you and Mr. Sterner last November-January, the 3% performance level was reconfirmed and we entered into the CAS Bulk Purchase with that clear understanding. For the record and contrary to the statement that my staff had accepted the 4% level, the 4% per month failure rate (48% annually) is totally unacceptable to BellSouth. As information, the 3% per month level is also unacceptable and we entered into the agreement only because there was no reasonable alternative to the CAT at that time.

For four years now we have deployed the CAT on the belief that AT&T intended and could rectify the continuing maintenance deficiencies. The recent announcement about your 4% objective causes me to question your commitment or ability to significantly improve this product. I propose that we move the issue to a more professional plane and modify our purchase agreements to establish your committed failure rate along with contractual remedies for non-performance.

Our staff groups must spend considerable effort to analyze performance levels. Using the Kansas City Repair Reports to determine causes of failures and failure rates has always been a challenge due to the poor quality of the data, but since October 1988 we haven't received even those reports in a timely manner. Apparently the performance data of this product has become so sensitive that the report must be screened and censored before delivery to us. The result is that we have not received the data in a timely fashion.

I would appreciate your response to AT&T's committed performance level for the CAT, how we can establish a contractual understanding to eliminate this ongoing source of conflict between our companies, and your proposal to provide us the Kansas City Repair Report by the 10th day of each month.

Sincerely,



Attachment

cc: G. W. Fortner  
K. D. Franklin  
M. M. Lysak  
T. E. Settle

## CUSTOMER SATISFACTION ISSUES

### ISSUE:

Craft Access Terminal (CAT) Failure Rate

### STATUS:

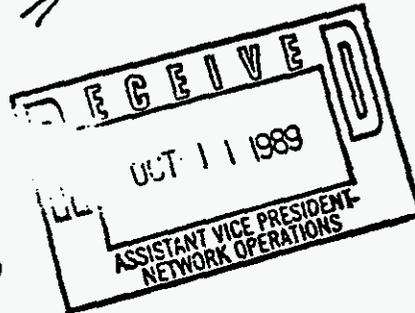
The most recent issues with the 206A2 CAT concern two recent shipments of this product to Southern Bell, 341 terminals to South Florida and 212 terminals to the North Sector.

Of the 341 terminal shipment, 68 have failed resulting in a cumulative failure rate of 18% for 3 months, much higher than our committed rate of 4% per month. This entire shipment will be replaced in total by the second week in December 1988.

Procedures are now in place to track and measure the replaced 341 206A2 CAT's during their service. Our goal is to demonstrate this reliability by focusing on the First Quarter 1989 performance data.

Coff to  
Fainbanks +  
netow / R

R. K. Snelling  
Executive Vice President-Network



Southern Bell

Southern Bell Center  
675 West Peachtree Street, N.E.  
Atlanta, Georgia 30375  
404 529-8993

DATE: October 9, 1989



1 Mr. J. M. Mauriello  
2 Regional Vice President (Southern)  
3 AT&T Network Systems  
4 6701 Roswell Road  
5 Atlanta, GA 30328

6 Dear Joe:

7 The AT&T Craft Access Terminal (CAT) has not performed to the  
8 reasonable quality and performance levels originally specified.  
9 The results have shown that the AT&T CAT product fails  
10 frequently under normal and intended use. The effect of these  
11 failures adversely impacts operating costs and negates savings  
12 of the Craft Access System. For this reason, I regret to inform  
13 you that Southern Bell intends to remove the CATs from service  
14 over the next several months and redeploy more suitable  
15 terminals for the Craft Access System.

16 Initially, all of the "loaner" CATs deployed throughout Southern  
17 Bell will be returned to AT&T by the end of the year. As these  
18 CATs are returned I do not expect to receive any billing. I  
19 understand that at some point we will be billed for any  
20 "loaner" CATs not returned. Any additional billing will be  
21 declined.

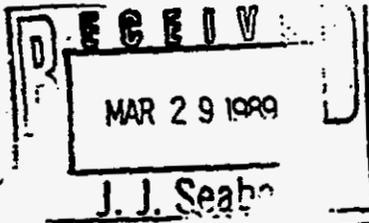
22 Next, Southern Bell has leased CATs that were purchased  
from AT&T and were to be subsequently upgraded. Because of the  
performance problem, we will be attempting to terminate this  
lease prematurely but the upgrade is important for the interim  
period. A full refund for these units was requested in meetings  
with your Customer Satisfaction team months ago and in previous  
correspondence. Since AT&T has yet to provide a refund, we  
continue using these CATs with the resulting operational  
disadvantages. We still expect AT&T to upgrade these CATs as  
previously committed. We are ready to return these CATs to be  
upgraded now.

I regret that everyone's apparent best efforts on these CAT units has not been more successful. I know that you will actively support the Craft Access System and those under license to interface with the centralized elements of the system. The overall Craft Access System purchased from AT&T plays a key role in Southern Bell's operations. I trust you will agree with the action I have stated above and seek your support in bringing this matter to a satisfactory conclusion.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. J. Sullivan". The signature is written in dark ink and is positioned to the right of the word "Sincerely,".

Executive Vice President-Network



Doug [unclear]  
Jim Waters

Input for meeting on  
4/6.



**AT&T**  
Network Systems

Network Systems Sales

Western Electric® products  
6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404 573-4000

March 28, 1989

Mr. J. J. Seabolt  
Operations Manager-Network  
BellSouth Services  
675 West Peachtree Street, NE  
Room 24C55 Southern Bell Center  
Atlanta, Georgia 30375

Dear Mr. Seabolt:

In regard to your letter dated January 13, 1989, to Mr. A. P. Fiscarelli, we have addressed your concerns regarding the repair rate of AT&T 206A2 Craft Access Terminals.

The message conveyed from your letter concerns us all and leads us to believe that you have a deep feeling that AT&T has not had BellSouth's best interest at heart with the Craft Access Project. We have always held and will continue to regard BellSouth's interests and concerns in the highest regard and have worked to help your operation's performance and expedite your benefits gained from field deployment of AT&T products. We agree that we need to move the issues surrounding this product to a more professional business plane.

In this regard, there are a number of issues that we feel need to be addressed for ultimate and final resolution. These issues and their discussion are offered here for your consideration.

• CAT Unit Failure Rate Commitment

Our customer commitment failure rate percent on a monthly basis has been set at 4%. Although our internal commitments and goals have been stated in terms of less failures and, on occasion, stated in that context in public forums, our policy and commitment to you has always been 4% per month. We recognize that our performance in this regard has been less than satisfactory in some geographic areas and with specific production lots, although AT&T has met this goal for all of BellSouth and national production. For this reason and our own dissatisfaction with our performance, we extended our warranty on this product from 90 days to 1 year, then to 18 months. These circumstances gave rise to the "loaner" program benefitting your company with cost-free use in excess

1 of 4.8 million dollars in net present value of network  
2. operations equipment for over 2 years. This was a mutually  
3 satisfactory approach that set in motion a purchase commit-  
4 ment based on our company's best judgement at that time. In  
5 addition, this arrangement was entered in a partnering atmo-  
6 sphere consistent with the explicit willingness to insure  
7 that your companies benefitted from this technology as  
8 quickly as possible prior to our being ready for final pro-  
9 duction. It is our belief that this goal was accomplished  
10 on your behalf. It is for these reasons that we are not in  
11 agreement to modify our purchase agreements to include a  
12 non-performance clause. Additionally, we are excluded from  
13 entering such agreements according to our General Agreement  
14 FR-3200-B, Article I, Page 56, Paragraph 81.

15 ● Craft Access Terminal Repair Reports

16 We have, as your letter suggested, discontinued the distri-  
17 bution of the detailed repair reports for this product. We  
18 have taken this action because of the accuracy of the data  
19 and because the repair statistics include both 206A (loaner)  
20 and 206A2 products. Specifically, the information referenc-  
21 ing the nature of the problem provided by your field person-  
22 nel does not match the repair action reported in these  
23 reports. This inconsistency leads to confusion in interpre-  
24 tation of the data and does lead to misunderstandings as to  
25 the quality of the 206A2 CAT product. Once the 206A product  
26 has been updated and the field deployment consists totally  
27 of Alpha products, we will continue some form of statistical  
28 reporting of returns and repairs for all product out of war-  
29 ranty.

① Why can't  
206A2 be  
identified?

② Need repair  
on all product  
not just <sup>these</sup> out  
of warranty!

30 ● 206A Craft Access Terminal Loaner Program Termination

31 Between December 1986 and June 1987, AT&T loaned 3540 206A  
32 CATs to Southern Bell that were intended to be used for a  
33 short period of time and then would be returned and upgraded  
34 to the latest available product standard. We believe that  
35 we have now reached that product standard state and that it  
36 is now time to implement the agreed upon refurbishment of  
37 CATs. With your concurrence and order placement, we  
38 will begin implementing this process by April 1, 1989. For  
39 those loaner CATs not committed to the refurbishment  
program, you may either elect to purchase under Agreement  
No. FR-2105-A or ship directly to our Kansas City facility  
by June 1, 1989.

In conclusion, we believe that we have done everything that you  
have asked in order to be your vendor of choice on this product.  
It is also our belief that we have stabilized this product and

1 feel strongly that we should go forward with our mutual business  
2 commitments. Specifically, we encourage you to release all  
3 active orders for the AT units remaining to be purchased  
4 along with refurbished units mentioned above... As discussed  
in our recent conversation, we look forward to meeting with you  
in the April timeframe to discuss these and other items of mutual  
concern to our companies.

Yours truly,



T. N. Thacker  
Customer Satisfaction Manager

Copy to:  
A. P. Fiscarelli

FOR YOUR INFO.



Network Systems Sales

Western Electric® products  
6701 Roswell Road, N.E.  
Atlanta, GA 30328  
404 573-4000

April 24, 1989

1  
2 MR. N. K. OWEN, Operations Manager  
3 BellSouth Services, Incorporated  
4 33D55 Southern Bell Center  
5 675 West Peachtree Street, N.E.  
6 Atlanta, Georgia 30375

7 Dear Mr. Owen:

8 In our recent meeting on April 6, 1989, we discussed our intent  
9 to terminate the Craft Access Terminal Loaner Program. This pro-  
10 gram, which began in March 1987, was originally designed to be of  
11 a temporary nature. As I detailed in my letter of March 28,  
12 1989, to Mr. J. J. Seabolt, we will terminate this program  
13 effective June 1, 1989.

14 We have designated our Kansas City Repair Facility as the receiv-  
15 ing point for all returned CAT terminal products. For those  
16 units in your possession after June 1, 1989, we will assume that  
17 you have elected to purchase these units at the current contract  
18 price of per unit. Our records indicate that there are  
19 Loaner terminals in operation throughout BellSouth. If you  
20 should decide not to return these units as discussed here and  
21 wish to purchase the entire volume, your purchase price,  
22 exclusive of any state and local taxes, will be as follows:

23 Southern Bell  
24 South Central Bell

If you should have any questions regarding this matter, or any of  
the other outstanding issues on this product, please give me a  
call on 404-573-6690.

Yours truly,

  
T. N. Thacker  
Customer Satisfaction Manager

1.7 1989

FO3A42Z 0000260

FO3B34Z 0000262

May 1, 1989

Mr. J. M. Mauriello  
Regional Vice President - Network Systems  
6701 Roswell Road, N. E.  
Atlanta, Georgia 30328

Dear Mr. Mauriello:

During the month of January, 1988, South Central Bell made a decision to deploy the AT&T Craft Access System (CAS) and Craft Access Terminal (CAT). As a result, a bulk purchase agreement was negotiated with AT&T by BellSouth Services.

The decision to purchase the Craft Access System and Craft Access Terminals was made after several meetings with BellSouth Services, AT&T and other vendors. The commitment by AT&T to provide a product that would have a failure rate of no more than 2-3% was a determining factor in South Central Bell's choice of AT&T over other available vendors.

Until October, 1988, the failure rate of these terminals was computed monthly using the Repair Activity Log provided by AT&T. The failure rate was very difficult to compute because we were involved in deployment and our base was constantly changing. However, we always found the failure rate to be around 3%. Now that AT&T has refused to continue providing the Repair Activity Log (which was mutually-agreed to), failure rate tracking is more difficult. However, we do have partial data from two states. This information indicates that the failure rate exceeds 3% in both states. In addition, the only failures used to compute this failure rate were terminals returned through Material Management. Because we know many terminals are returned direct from the field, the actual failure rate is probably 4-5%.

Considering the above it is our feeling that AT&T has failed to meet their commitment to produce a quality terminal, therefore, we request that all AT&T terminals be returned for full refund.

CLEAR

Yours truly,

May 1, 1989

Mr. J. M. Mauriello  
Regional Vice President - Network Systems  
6701 Roswell Road, N. E.  
Atlanta, Georgia 30328

Dear Mr. Mauriello:

As you know, since the beginning of the Craft Access System (CAS) field trial in 1985, AT&T has made numerous commitments to Southern Bell. These commitments were to provide a quality Craft Access Terminal (CAT) that would perform to our satisfaction. We have lost thousands of productive hours changing out each new version of your CAT.

In June of 1988, we were informed that all outstanding problems with the CAT had been corrected. AT&T agreed to begin shipping CATs to changeout the loaner CATs that had earlier been placed in service because a final product was not available as committed.

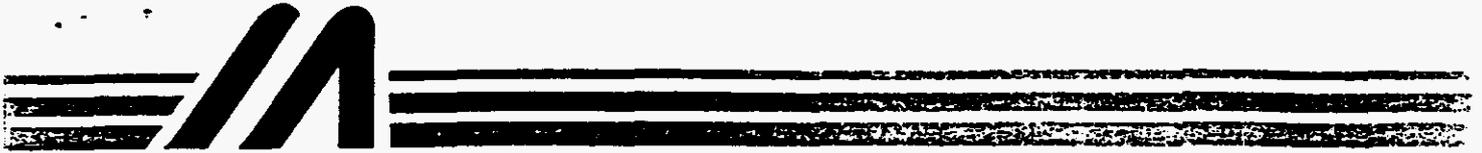
The changeout began in South Florida with 341 terminals in September, 1988. In a short two weeks these terminals had a 6% failure rate. BellSouth Services wrote you a letter advising of the problems and requesting your plans to provide a reliable terminal.

AT&T responded saying they had identified a component problem and would send 341 replacement terminals that would perform to our satisfaction.

Starting on January 24, 1989, BellSouth Services and Southern Bell personnel conducted another changeout of 341 terminals in Miami. Over the first 90 days in service the failure rate exceeded 4% per month. One of the most alarming facts has been the type failures are the same today as they were during the 1985 field trial.

Every new shipment of CATs continues to exceed the AT&T failure rate commitment. Since AT&T has failed to show any signs that they are capable of manufacturing a quality terminal it is our proposal that all terminals in Southern Bell be returned to AT&T for full refund.

SWELLING  
Yours truly,



MELARD TECHNOLOGIES, INC. Five Odell Plaza. Yonkers, New York 10701 (914) 376-0100 FAX (914) 376-1936

October 12, 1989

Mr. R. Fairbanks, Manager  
Southern Bell  
25 Route 67 Southern Bell Center  
675 West Peachtree Street N.E.  
Atlanta, GA 30375

Dear Mr. Fairbanks:

Conversations with John King indicated that you might be interested in evaluating Melard Technologies hand-held computer.

Enclosed please find some information about our products. If you have any questions, please do not hesitate to call me at (914) 376-0100. I can also make a demonstration unit available to you, if necessary. Thank you.

Sincerely,

*Nick Scalera*

Nick Scalera  
Regional Manager

cc: U. Cinali, Melard Technologies  
J. King, Bell South Services, Atlanta

F01A42Z 0000265

F03B34Z 0000267

# ACCESS II-80



**80 Column Display  
Hand-Held Computer**

ACCESS II-80 is a powerful hand-held computer with full-width screen capability designed for field force management systems. It specifically addresses the needs of data intensive applications and operates on all common access systems available today.

The large 16 line by 80 character Supertwist LCD is integrated into the 'clam shell' design of the standard ACCESS II. This compact, innovative packaging provides the functionality of a laptop computer in a hand-held size. Information is viewed on a full-width screen, eliminating the extensive scrolling associated with small hand-held displays. The ergonomics of ACCESS II-80 also provides desk use for hands-free viewing of information as well as an adjustable display for an optimum contrast level. The standard 'QWERTY' keyboard features tactile and audible feedback for accurate data entry and accommodates application specific templates.

ACCESS II-80's modular hardware and flexible software design offers significant advantages. Application software typically resides on interchangeable battery-backed RAM memory cartridges and can be updated in the field, eliminating costly PROM changes. As the complexity of the applications grow, higher capacity cartridges up to 512K can be utilized. Therefore, ACCESS II-80 can be easily tailored to interface with the needs of different application groups using the same base hardware. The universal hardware interface, which is fully compatible with that of the standard ACCESS II, minimizes training costs and improves field logistics.

With its enhanced features, ACCESS II-80 overcomes application barriers, extending its usage to commercial office and business systems environments.

ACCESS II-80 not only offers a flexible package with minimum investment to meet the current needs of field force management systems, but can also be easily expanded to keep pace with your changing requirements.

 **MELARD  
TECHNOLOGIES**

FO3A42Z 0000266

FO3B34Z 0000268



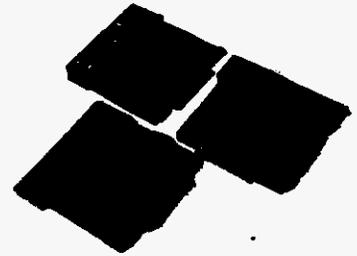
I/O Ports



SMARTPACK® Batteries



Vehicle Adaptor (Optional)



Memory Cartridges for Program/Data

## ACCESS II-80 Features and Specifications

### Physical Properties

- Length: 8.25 inches
- Width: 3.75 inches
- Height: 2.50 inches
- Weight: 2.6 lbs.
- Lexan® shell material

### Display

- Liquid Crystal Display (LCD)
- Supertwist
- 16 lines by 80 characters per line, dot matrix graphics
- Full ASCII character set
- Contrast control

### Keyboard

- 49 Key 'QWERTY' layout with cursor keys
- 16 function keys
- Full travel silicon rubber keys with tactile feedback
- Templates for custom applications

### Processor

- 6303R, 8 bit CMOS

### Memory

- Total: Up to 568K, configurable
- Local: 56K allocated between RAM and ROM
- Cartridge: Expandable to 512K Battery backed RAM

### Communications

- Internal Bell 212, 103 CCITT V.21, V.22 compatible modem
- 1200/300 Baud asynchronous data transmission rate
- Originate/answer operating mode, full duplex
- Auto dial/auto answer
- Call progress monitoring

### Power

- Rechargeable NiCad SMARTPACK® (removable)
- 8-hour usage period
- SMARTPACK® overcharge protection circuitry
- LED indicator for full charge
- Auto shut-off
- Low battery indicator
- 30 day data integrity of local memory after low battery indication
- Lithium battery backup for cartridge memory
- Adaptor charges batteries during operation

### I/O Ports

- RS232C up to 19.2 K, DTR/DSR and XON/XOFF handshaking, asynchronous
- Serial TTL (optional)- 300/1200/9600 Baud, DTR/DSR and XON/XOFF handshaking, asynchronous
- Two RJ-11C ports (1-Voice, 1-Data)
- RS422 and RS485 available

### Program Development

- MADS (Melard Access Development System) for application development in C
- Custom programs developed by Melard Technologies

### Software

- MCAT™ communications program for AT&T Craft Access System (CAS), and CAS SARTS
- Interface for Bellcore Technician Access Network (TAN)
- MCOMM™ for generic ASCII communication (i.e. SSCATS)
- VT-100

### Accessories

- LAN communications/Rack recharge system
- Industrial carry case
- Memory cartridges
- Printer
- Bar code reader/scanner
- SMARTPACK® - battery packs
- Acoustic coupler
- 12 VDC vehicle adaptor
- Analog/Digital interface
- AC adaptor

F01A42Z 0000267 F03B34Z 0000269



Melard Technologies, Inc., 5 Oast Plaza, Yonkers, NY 10701 (914) 376-0100

Lexan® is a registered trademark of General Electric.

Melard Technologies, Inc., reserves the right to make changes in the product described at any time without notice.

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MELARD TECHNOLOGIES, INC Five Odell Plaza, Yonkers, New York 10701 (914) 376-0100 FAX (914) 376 1936

May 18, 1990

Mr. J. King  
BellSouth Services

Dear John:

I received your letter of May 3 approximately a week ago. We have spent the intervening time completely investigating and documenting the many issues you raised, in order to address them in as comprehensive a manner as possible.

First, I wish to reiterate Melard Technologies' deep concern ~~that your company has experienced a high problem rate with our~~ products. This situation is particularly disturbing given our corporate goal of providing the highest quality hand-held terminals to the craft access market. Secondly, your disturbing comments regarding our responsiveness initiated a number of additional efforts beyond those already underway. I hope that the information contained in this letter will clearly demonstrate our commitment to respond in a responsible and professional manner to any problems that may exist.

The conference call of May 7 between yourself, J. Waters, R. Fairbanks and U. Cinali served to further focus attention on this issue within our company. However, even before this call, one of your suggestions had already been implemented. Liz Rombek of Melard Technologies was assigned the responsibility to investigate these problems. She has met with several Southern Bell users regarding their experiences. I also met with Bob Madden earlier this week to discuss problems within his area.

During this conference call, BellSouth indicated that repair returns had been requiring two to three weeks. We subsequently developed a "bench analysis" of the most recent returns and faxed a copy to Jim Waters the next day. It revealed that our repair department, during this period, averaged two day turnaround, providing a level of service 8 days better than that required by our contract service commitment and 24 hours better than our own internal objectives (both of which are exceptional in the industry).

Regarding the "the printer problem", my memo to you on May 7 provided pricing and availability information for the MelardWrite 40 Power Manager. Several dozen devices are now completely assembled and awaiting enclosures; general availability is scheduled for next week. Further, on our own initiative, we

developed a special arrangement allowing Southern Bell users to receive full credit for returned cables that this product eliminates. I called Mike Williamson last week with these details, but have not received any response or orders. We recently sent him an engineering prototype for evaluation purposes.

Regarding other apparent problem areas, we currently have sufficient detail regarding problems reported by Southern Bell users. If at some time in the future it becomes necessary to gather additional information, I will contact you for assistance.

Information analyzed to date indicates that the "screen lock-up" problem is related to the AT&T system rather than any of the terminals used to access it. Bob Madden (who was contacted by Ginny Palmer of Bell Atlantic at our suggestion) supports this conclusion. We therefore recommend that BellSouth Services establish a task force to investigate this issue. The task force should include BellSouth Services, AT&T, Melard Technologies and CMC. We are prepared to contribute whatever technical resources are necessary to investigate, isolate and solve this problem. Since BellSouth is AT&T's customer for the system software, we feel that this solution would prove to be the most effective one.

Bob Madden believes that the cartridge battery leakage problem may be related to heat conditions present in the cab organizers where some units are stored. He indicated that temperatures within the vehicle interior can reach 120 degrees F. or more; the interior of the organizer may reach well beyond this temperature. He is gathering additional information in order to conclusively identify this as the cause of the cartridge battery problem. We are also pursuing this issue with our battery supplier.

Also related to the heat issue, the ACCESS battery module's performance can be adversely affected by temperatures greater than 113 degrees F. Note that the user manual of ACCESS II specifically warns against exposure to excessive heat. I would therefore recommend that the units not be stored in the cab organizer. This should further reduce any battery-related problems in the future.

We have determined that the "Invalid System" problem is due to inadvertent overwriting of a unit's cartridge-resident software. This can be caused by a set of relatively rare combination of environmental and user conditions. For example, the primary condition can occur when a technician repeatedly turns the unit on and off while in "low battery" condition. To protect the cartridge-resident software from being overwritten, a modification has been developed. An Engineering Change Order, which describes this modification, has been developed and implemented. Furthermore, any cartridges returned for repair will automatically be modified to also provide this additional protection, whether they were susceptible to this problem or not. All new and modified cartridges will therefore be immune from this type of condition. It should be noted that this issue may become moot if you decide

to replace deployed SMC cartridges with higher capacity EMC cartridges to accommodate planned future requirements, i.e., Gateway, customer billing, inventory management, etc. In the meantime, we will continue the immediate replacement program already employed for these repair situations.

In this regard, without any formal obligation on our part, we have already provided immediate replacement cartridges to a number of Southern Bell locations as the following details illustrate:

	Jan	Feb	Mar	Apr	May
FL	1	1	7	8	5
SC		2	1		2
NC			1		
GA			1	2	

Your concern regarding our failure to implement a "seed" program for the month of January is simply the result of the timing of the report's publication. The report reflecting 1990 repairs was released in March. It contained both January and February results which indicated that although a seed program would have been necessary in January, it would also have been unnecessary in February. This information only came to light in March, at which time we had succeeded in eliminating the need for a seed program.

We apparently are not in agreement regarding the definition of a "functional" problem. I suggest that we discuss this issue at your convenience and develop a common understanding. This should facilitate future repair analyses and eliminate duplicate repair result statistics.

Also regarding the "seed" program, you and I discussed this issue in New Orleans during the initial South Central Bell "Coin" deployment which took place the last week of March. At that time I thought that we had agreed that an alternative (such as immediate replacement) might be a preferable alternative. I have therefore been operating under the assumption that rather than a seed program, an immediate replacement program would be used if necessary. If I misunderstood your wishes in this regard, please let me know and we will discontinue the immediate replacement program and initiate a seed program in the affected areas. Repair reports for March and April indicate that only one area (North Carolina) would qualify for this program. As my memo to you last month indicated, this is primarily due to the very few (32) units deployed there; i.e. the failure rate of 3.13% reflects only one return for the entire state during the month. If you wish we will immediately ship one seed unit there.

I am very anxious to also address the other concerns raised in your letter. If you believe that our lines of communication are not open enough, then I am committed to further expand them. If you have any specific recommendations that would improve these lines of communication, we will implement them as completely and quickly as possible. I believe that Melard Technologies has acted in a responsible manner towards BellSouth Services and your local operating telephone companies. However, as our customer, it is your perception that ultimately determines successful achievement in this area. Therefore, my intention is to further improve our performance that we might better satisfy your needs.

I await your response regarding your intentions to implement a seed program (or remain with the alternative currently underway) and my recommendation regarding the formulation of a task force to investigate the lock-up problem. I also wish to initiate discussions related to all the other issues addressed, and would ask that you contact me as soon as possible.

Sincerely,



Nick Scalera

Regional Manager

cc: U. Cinali, Melard Technologies, Inc.  
B. Diamond, Melard Technologies, Inc.  
K. Pan, Melard Technologies, Inc.  
L. Rombek, Melard Technologies, Inc.  
J. Waters, BellSouth Services  
R. Fairbanks, Southern Bell



MELARD TECHNOLOGIES, INC Five Odell Plaza, Yonkers, New York 10701 (914) 376-0100 FAX (914) 376-1936

COPY

July 31, 1990

Mike Williamson  
Southern Bell  
125 Perimeter Center West, Rm. 317  
Atlanta, GA 30375

Dear Mike,

I would like to thank you for your feedback at our July 3, 1990 meeting. The time you spent and your helpfulness are greatly appreciated. I would also like to extend my thanks to James Page, Buddy Medlock, Doug Gober, Tom Kitzmiller (the technician I rode with), and all the other technicians present at the meeting.

Below please find a summary of some of the points highlighted in the meeting:

1. Although we have been enclosing written notes on No Trouble Found repairs, we will now change to a standard form sheet which requests the technician to let us know upon return if the problem is still occurring. We learned from this meeting that the technicians do not always report that a problem is reoccurring because they do not want to send the unit back in and be forced to call in live.

RESPONSE: Attached please find the response request forms to be included with all repair units that have been repaired or diagnosed as 'no trouble found' (2 different forms).

2. Customer Support has been alleviating the majority of repairs (Invalid Systems on cartridges) by shipping immediate overnight replacements. However, other unit problems are not always reported if the technician knows he or she will have to send in their unit. It was requested that we look into alternate solutions, i.e. immediate overnight replacements on all repairs or additional spares, to encourage technicians to have problem units repaired.

RESPONSE: I notified Nick Scalera, your Account Manager who will investigate alternate possibilities. We will continue to send immediate overnight replacement cartridges for invalid systems.

3. On very hot days and in direct sunlight the displays are getting too dark and are not readable even when the contrast is lightened.

RESPONSE: I have issued a memo to our Engineering and Production Departments to investigate this reported problem.

5. I issued 8 Printer Power managers for the technicians to evaluate and test for effectiveness. The technician I rode with, Tom Kitzmiller, had the original prototype. During my ride that day using the new production model we did not experience any problems.

RESPONSE: I retrieved the original prototype and submitted it to Engineering for testing - it has tested OK. I have touched base with Buddy on the status of the Power Manager testing; they just recently received the cable missing for the Power Managers. I will follow up accordingly.

6. Some of the techs are not "3-key rebooting" properly - which is also what I have found in other areas visited.

RESPONSE: A Customer Support reminder memo will be issued to the field along with troubleshooting procedures which will both complement and reiterate some of the procedures found in the user manual. I will schedule this project and begin as soon as possible.

7. It was mentioned that other vendors send newsletters to supervisors and techs and that they are well-received.

RESPONSE: We had already budgeted and scheduled to develop a newsletter. Your enthusiastic response to this idea has been addressed to our Marketing Department so that it may be moved up in priority. It seems that this idea is more welcome than we originally thought.

8. It was requested that we supply you with the date of when we began shipping immediate overnight replacements for cartridges which are invalid. It was also requested to supply the percentage of these occurrences compared to other failures.

RESPONSE: The immediate overnight replacements actually began in January when the problem began to surface and we wanted some immediate samples in; although at that time the cause was unknown. In March we had decided to implement this policy fully and have been ever since. We feel it has worked well in keeping the technician down-time to a minimum. For the month of June invalid cartridge returns comprised over 80% of all returns.

9. It was discussed that although we report regularly to BellSouth Headquarters, the field needs to be kept better informed on statuses. While sales efforts seem to be geared directly at Headquarters, and Support efforts are geared mainly toward Supervisors and techs, the levels in-between are not always being thoroughly informed.

RESPONSE: Our planned newsletter will help resolve this problem. Copies of repair information sent to BellSouth Headquarters will also be issued from John King (per my conversation with him 7/31/90). Nick Scalera is also planning visits in July and August to all Sector Staff Managers.

I will be working to resolve the issues presented here. Your comments and suggestions are ALWAYS welcomed and are greatly appreciated. In the future please do not hesitate to express any concerns you may have so that we can address the appropriate persons, thus eliminating any misunderstandings or communication gaps. Please contact me if there are additional points from the meeting which I may be missing in this summary.

Thank you again, Mike.

Sincerely,



Lizabeth Rombek  
Customer Support Manager

LAR/rl

cc: James Page, Southern Bell  
John King, BellSouth Services  
Nick Scalera, Umit Cinali, Kelly Pan: Melard

ATTENTION: REPAIR NOTIFICATION MELARD TECHNOLOGIES, INC

DATE: \_\_\_\_\_/90

THIS IS TO INFORM YOU THAT (ITEM) \_\_\_\_\_ (S/N) \_\_\_\_\_  
HAD THE FOLLOWING REPAIR RESULTS:

- UNABLE TO REPRODUCE THE PROBLEM REPORTED
- THE EQUIPMENT WAS INSPECTED & TESTED WITH NO TROUBLE FOUND
- OTHER \_\_\_\_\_

COMMENTS: \_\_\_\_\_

PLEASE NOTIFY US AS SOON AS POSSIBLE IF THE REPORTED PROBLEM CONTINUES.  
NOTE ANY SPECIFIC CIRCUMSTANCES IN WHICH THE PROBLEM OCCURS.

CALL MELARD CUSTOMER SUPPORT TOLL FREE AT: (800) 635-2734 / (800) MEL-ARD4

WHEN CALLING, PLEASE REFERENCE RMA# \_\_\_\_\_

PLEASE NOTIFY YOUR IMMEDIATE SUPERVISOR (FOR TRACKING PURPOSES)

NTFRMA\_FRM072390

ALLRMA\_FRM072390

WHEN CALLING, PLEASE REFERENCE RMA# \_\_\_\_\_  
PLEASE NOTIFY YOUR IMMEDIATE SUPERVISOR (FOR TRACKING PURPOSES)

CALL MELARD CUSTOMER SUPPORT TOLL FREE AT: (800) 635-2734 / (800) MEL-ARD4

PLEASE NOTIFY US AS SOON AS POSSIBLE IF A PROBLEM OCCURS AGAIN.  
NOTE ANY SPECIFIC CIRCUMSTANCES IN WHICH THE PROBLEM OCCURS.

0000275

FC3B34Z 0000277

ADF

# BellSouth Services

G. Thomas Abernethy, Jr.  
General Attorney

Legal Department - South E901  
3535 Colonnade Parkway  
Birmingham, Alabama 35243  
205 977-3528

February 14, 1991

VIA AIRBORNE EXPRESS  
Ms. Bonnie Jean Peter  
Senior Attorney  
Room 3139C2  
295 North Maple Avenue  
Basking Ridge, NJ 07920

FEB 1991  
RECEIVED  
GSCN/18A

Dear Ms. Peter:

As background, you will recall that BellSouth Services Incorporated ("BellSouth") has been trying to resolve the title question regarding the 994 AT&T Craft Access Terminals ("CATs") that were shipped to Southern Bell (commencing during the latter part of 1988 and continuing into the first part of 1989). These 994 CATs that were shipped to Southern Bell actually consist of four separate shipments, as follows:

- new units shipped to Miami and rejected defective after testing
- replacement units shipped to Miami and also rejected as defective after testing, with AT&T representative on-site, at which time Lou Kulpa in Atlanta and Larry Conroy in New Jersey, among others at AT&T, were verbally notified by BellSouth to stop any further shipments of CATs to Southern Bell
- 2 additional shipments (one to Jacksonville and one to Atlanta) of new CATs made after the notice to stop shipments was given to AT&T

As stated in a previous letter, dated July 26, 1990, from George Giovanni to Hugh D. Scott, BellSouth Services has no intention of remitting the purchase price for any of the 994 terminals, because Southern Bell promptly notified AT&T that such equipment was defective and to cease shipping all such units in the future.

Bonnie Jean Peter  
February 14, 1991  
Page 2

Concerning any potential third-party lease arrangement with CIS, Southern Bell did not execute Certificates of Acceptance for any of these 994 CATs. Thus, BellSouth's position throughout this complicated transaction has been that any potential CMI/CIS lease arrangement was never applicable to these 994 CATs. However, because BellSouth understood AT&T's concern over a possible cloud of title by CMI/CIS, BellSouth continually pursued obtaining from CMI/CIS a release of any claim of title which CMI/CIS might have over these 994 CATs.

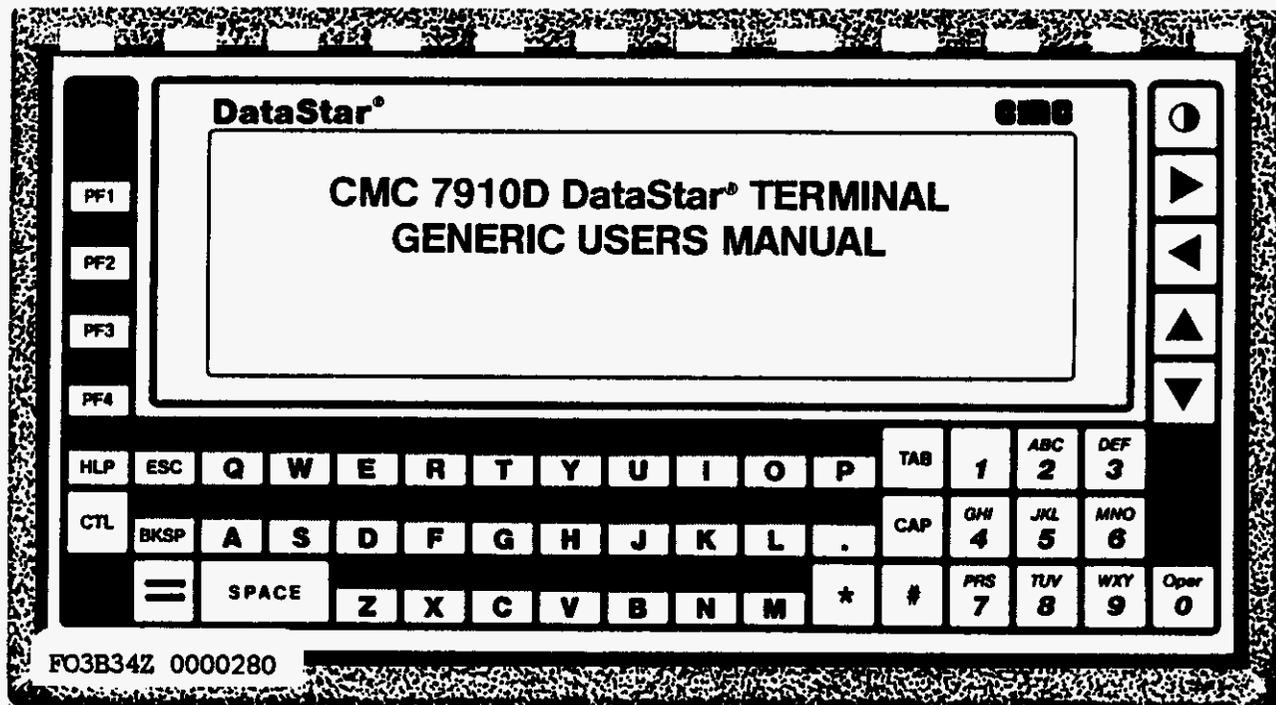
In light of the foregoing, this is to certify that BellSouth Services has official documentation in which CMI/CIS acting through the Trustee (and Wellesley Leasing Partnership, an assignee of CMI/CIS) have disclaimed any right, title or interest, whether reversionary or otherwise, in these 994 CATs; that neither party has remitted payment to AT&T for these CATs; and that any return to AT&T by BellSouth of these terminals shall be without obligation on the part of either BSS or SBT to Wellesley or CMI.

Thus, because the controversy surrounding title to the equipment has been resolved, BellSouth herewith gives notice that BellSouth will ship all 994 terminals to AT&T no later than March 1, 1991.

Sincerely,



cc: W. D. Scott (AT&T)  
R. Fairbanks (SBT)  
J. D. Waters (BSS)  
E. A. Storm (PPSM)  
J. Mitchell (PPSM)



**ACCESS II**

**User**

**Manual**

FO3B34Z 0000310

 **MELARD TECHNOLOGIES**

FO1A42Z 0000308

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**ACCESS II**

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**Software**

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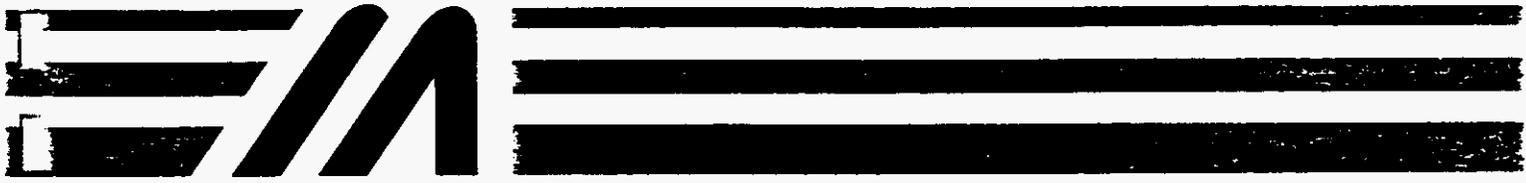
**Manual**

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 **MELARD TECHNOLOGIES**

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**F03A42Z 0000367**



**MELARD TECHNOLOGIES, INC.**

F03A42Z 0000505

F03B34Z 0000507

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**AN INNOVATION IN SMART DATA TERMINALS**

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**DataStar<sup>TM</sup>**  
**CMC 7910D**

**A PROPOSAL FROM CMC**

COMMUNICATIONS MFG. CO.

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FO3B34Z 0000534

2/1/90

## CAT<sup>XL</sup> Product Announcement

CAT<sup>XL</sup> (EXCEL) is a powerful new hand held Craft Access System (CAS) terminal from AT&T specifically designed for use in the outside plant environment. This unit is intended for personnel who need a reliable, sturdy terminal with critical features incorporated into the same unit. CAT<sup>XL</sup> is a very sound choice economically for CAS users, not only because of AT&T's low price but also because of AT&T's guaranteed reliability. AT&T is so confident of the quality of this new terminal that we will guarantee it's reliability with a special program. A special trade-up offer for current CAT I users will also be available.

### FEATURES AND BENEFITS

- ◆ Total Power Management System - Numerous power management features are included in this unit. We expect that these features will work together to allow the user to use the terminal up to a week without recharging CAT<sup>XL</sup>. This estimate is based on an average workday of 6 jobs a day and 10 minutes a job. This estimate will be verified during the first field application prior to general availability. The power features include:
  1. Rechargeable NICAD Battery for dependable everyday power
  2. A Reliable Charger designed for daily use.
  3. Nine (9) Volt Compatibility for emergency replacement.
  4. ON/OFF Switch which will enable the technician to turn the unit totally off when not in use to save battery power.
  5. Sleep Mode to save battery power if the unit is inadvertently left on when not in use. If the terminal is not used after a specified amount of time, currently set at 10 minutes, it will power down to a sleep mode. The technician can press any key to return to the last screen used.
  6. Lithium Battery Backup will save information in the terminal if the unit is turned off, the battery runs down, or the battery is removed for replacement.
  7. Low Battery Indicator will notify the user on the screen that power is low and the battery should be charged soon.
  8. Twelve (12) Volt Adaptor is an optional tool that allows the craft to charge the unit from the cigarette lighter of a vehicle for on the road charges.
- ◆ Memory - To prepare for CAS users' growing memory needs, CAT<sup>XL</sup> has 32k RAM and 64k ROM. This will allow technicians to download required information into their terminal. As a company grows their script and/or accesses new systems through the CAS Gateway, this large memory will be very valuable.
- ◆ Water Resistant - CAT<sup>XL</sup> has been designed to resist water damage. The internal hard circuit board and the special protective coating on the board and components help prevent harm to the terminal. The sturdy rubber jacketed interface cord helps prevent operations from being affected by a cloth cord getting wet.
- ◆ Voice, Monitor and Data Modes in One Unit - AT&T has incorporated all three critical modes: voice, monitor and data into one unit to minimize the number of additional butt sets, if any, required by the technician. The modes are all noiseless and are controlled by a standard 3 position rocker switch.
- ◆ 4x20 Liquid Crystal Display - The screen on the terminal is a 4x20 LCD totally compatible with CAS scripts. This size LCD is easy to read and less vulnerable to damage than larger screens during everyday use, which could include drops and hits to





MELARD TECHNOLOGIES, INC.

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MELARD TECHNOLOGIES, INC.

FOIA42Z 0000626

FO3B34Z 0000628