### REPORTING....

WHY DO WE ASK FOR SPECIAL REPORTING ON NEW PRODUCTS?

TO PROVIDE FEEDBACK TO ENGINEERING GROUPS IN ORDER THAT
THEY MAY DESIGN PRODUCT IMPROVEMENTS AND ELIMINATE
MANUFACTURING AND ENGINEERING PROBLEMS THAT CAUSE DIFFICULTIES
TO YOU, THE CORPORATION, AND THE CUSTOMER.

THE RESULTS OF THIS FEEDBACK ARE-

A MORE SALEABLE PRODUCT,

A MORE RELIABLE PRODUCT,

A MORE MAINTAINABLE PRODUCT

IN REPORTING -

NO NEWS IS NOT GOOD NEWS . . . . . .

GOOD REPORTING MAY BE USED AS A MANAGEMENT AND

PERSONNEL DEVELOPMENT TOOL IN THE FIELD, IN THE

BRANCH, AND IN THE SUBSIDIARY, AS WELL AS PROVIDING

RELIABLE INFORMATION ABOUT THE PRODUCT.

POOR REPORTING IS OF NO VALUE AS A MANAGEMENT TOOL,
CONSUMES VALUABLE TIME AND MAY CREATE INCORRECT
UNDERSTANDINGS ABOUT PRODUCT PERFORMANCE.

GOOD REPORTING REQUIRES THREE ELEMENTS -

- 1. COMPLETENESS
- 2. QUALITY
- 3. PROMPTNESS.
- ONLY BY COMPLETENESS MAY ACCURATE ASSESSMENTS

  BE MADE OF TRENDS, TECHNICAL PROFICIENCY,

  HARDWARE STATUS.
- ONLY THROUGH QUALITY REPORTING MAY <u>FULL</u> ADVANTAGE

  BE TAKEN OF THE FIELD ENGINEERS CLOSENESS

  TO THE PRODUCT.
- 3. A REPORT DEFINING A TREND IS OF LITTLE
  VALUE AFTER THAT TREND HAS BECOME AN
  ESTABLISHED PATTERN.

QUALITY REPORTING COMPRISES OF MORE THAN STATEMENTS OF FACT.

IT PROVIDES THE INFORMATION NECESSARY TO PREDICT FUTURE TRENDS, TO HIGHLIGHT PRODUCT AND SUPPORT DEFICIENCIES AND IT OFFERS CONSTRUCTIVE INSIGHTS INTO METHODS OF IMPROVING PERFORMANCE AND MAINTAINABILITY.

WE SUBMIT THE FOLLOWING POINTS FOR YOUR

THOUGHTFUL CONSIDERATION IN PROMOTING QUALITY REPORTING . . .

### M E M O R Y.

1.	SOI	LID OR	INTERM	ITTENT?			
	IF	INTERN	4ITTENT	MECHANICAL	OR	TEMPERATURE	SENSITIVE

- 2. SOCKET CONTACT PROBLEM?
- position sensitive problem?
- LOCATED BY TEST ROUTINES?

  COULD TEST ROUTINE BE IMPROVED TO MAKE FAULT MORE

  READILY LOCATABLE?
- 5. WAS PROBLEM PROGRAM SENSITIVE? IF SO GIVE DETAILS.
- 6. HOW DID PROBLEM FIRST EVIDENCE ITSELF?
- 7. PREVIOUS HISTORY IN AREA?
- 8. PARTS AVAILABILITY.
- 9. TECHNICAL HOURS TO SOLVE PROBLEM.
- 10 . SYSTEM POWER ON TO DATE TIME.
- 11. FAULTY PARTS SUBMITTED?

### PROCESSOR AND I/O CONTROLS.

- 1. SOLID OR INTERMITTENT?

  IF INTERMITTENT MECHANICAL OR TEMPERATURE SENSITIVE?
- DID DIAGNOSTIC ROUTINE ASSIST IN LOCATION OF FAULT?

  COULD DIAGNOSTIC BE IMPROVED TO MAKE FAULT MORE READILY

  LOCATABLE?
- 3. WAS I/O DEBUG USED?

  HOW EFFECTIVE WAS THIS?
- 4. WAS PROBLEM PROGRAM SENSITIVE? IF SO GIVE DETAILS.
- 5. HOW DID PROBLEM FIRST EVIDENCE ITSELF?
- 6. WAS THE FAULT ISOLATED BY THE FIELD CARD TESTER?

  HOW EFFECTIVE WAS THE FIELD CARD TESTER IN THIS INSTANCE?

  DO YOU HAVE ANY SUGGESTIONS FOR IMPROVING THE

  EFFECTIVENESS OF THE FIELD CARD TESTER?
- 7. PREVIOUS HISTORY IN AREA?
- 8. PARTS AVAILABILITY.
- 9. TECHNICAL HOURS TO SOLVE PROBLEM.
- 10. SYSTEM POWER ON TO DATE TIME.
- 11. FAULTY PARTS SUBMITTED?

# POWER

1.	SOLID OR INTERMITTENT?
	IF INTERMITTENT MECHANICAL OR TEMPERATURE SENSITIVE?
2.	IS THERE ANY REASON TO SUSPECT ABNORMAL INPUT
	POWER CONDITIONS?
3.	DID IT OCCUR ON SYSTEM OR PERIPHERAL POWER UP?
4.	HAVE POWER SUPPLY ADJUSTMENTS BEEN PERFORMED RECENTLY?
5.	HOW DID PROBLEM FIRST EVIDENCE ITSELF.
6.	WHAT TROUBLESHOOTING METHODS WERE EMPLOYED TO
	LOCATE FAULT?
7.	WAS IT NECESSARY TO ADJUST SUPPLY AFTER REPAIR?
8.	DID YOU CHECK SUPPLY MECHANICALLY FOR LOOSE
	CONNECTIONS ETC?
9.	PREVIOUS HISTORY IN AREA?
10.	PARTS AVAILABILITY.
11.	TECHNICAL HOURS TO SOLVE PROBLEM.
12.	SYSTEM POWER ON TO DATE TIME.

13. FAULTY PARTS SUBMITTED?

#### MISCELLANEOUS

MISCELLANEOUS FAILURES ARE OFTEN MECHANICAL IN NATURE.

THOUGHTFUL ANALYSIS OF PROBLEM MAY LEAD TO DIAGNOSIS OF

CAUSE AND THE DEFINITION OF PREVENTIVE MEASURES. REPORTING

OF THESE MAY LEAD TO PRODUCT IMPROVEMENTS ELIMINATING

FURTHER INSTANCES OF THIS TROUBLE.

REPORTS SUCH AS "LOOSE FRONTPLANE CONNECTOR" ARE MEANINGLESS
UNLESS QUALIFIED BY SUCH STATEMENTS AS "ALL FRONTPLANE
CONNECTORS WERE CHECKED FOR FULL SEATING AT LAST P.M. ATTENTION
ONE MONTH AGO" OR MAY HAVE BEEN DISTURBED DURING RECENT
TROUBLESHOOTING ACTIVITIES".

CAREFUL CONSIDERATION OF "MISCELLANEOUS" PROBLEMS OFTEN
ALLOW THEM TO BE CATEGORISED AS "PROCESSOR", "POWER" ETC.

## PERIPHERALS

IN REPORTING PERIPHERAL PROBLEMS THOUGHT SHOULD BE GIVEN TO THE EFFECTIVENESS OF THE TEST ROUTINES IN -

- (a) ISOLATING THE PROBLEM TO THE PERIPHERAL.
- (b) EXERCISING THE PERIPHERAL TO ENABLE TROUBLESHOOTING, REPAIR AND VERIFICATION.
- (c) PROVIDING A DEGREE OF CONFIDENCE THAT THE PROBLEM
  HAS INDEED BEEN FIXED.

EVERY PERIPHERAL ATTENTION SHOULD BE REGARDED AS AN OPPORTUNITY TO ASSESS THE CENTRAL SYSTEM'S CAPABILITY AS A TROUBLESHOOTING AID, TO BECOME PROFICIENT IN THE USE OF THE I/O TEST ROUTINES, AND TO SEEK AND REPORT BETTER METHODS OF ISOLATING PERIPHERAL PROBLEMS.

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