If you have issues viewing or accessing this file contact us at NCJRS.gov.



LOS ANGELES POLICE DEPARTMENT EMERGENCY COMMAND CONTROL COMMUNICATION SYSTEM

PROBLEM/FAILURE REPORTING SYSTEM

JET PROPULSION LABORATORY

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA

54866

# Prepared for:

Los Angeles Police Department
Emergency Command Control Communications System
Program Management Office
Los Angeles, California

LOS ANGELES POLICE DEPARTMENT EMERGENCY COMMAND CONTROL COMMUNICATION SYSTEM

PROBLEM/FAILURE REPORTING SYSTEM

# 3390-75-226

June 6, 1975

J. Abraham Task Leader

Approved by:

Project Manager

The preparation of these materials was financially aided through a Federal grant from the Law Enforcement Assistance Administration (LEAA) under the Omnibus Crime Control and Safe Streets Act of 1968, as amended. The opinions, findings and conclusions in this publication are those of the author and are not necessarily those of the LEAA. The LEAA reserves a royalty-free, nonexclusive and irrevocable license to reproduce, publish and use these materials and to authorize others to do so.

This document presents the results of one phase of research carried out at the Jet Propulsion Laboratory, California Institute of Technology, under Contract NAS7-100, sponsored by the National Aeronautics and Space Administration.

JET PROPULSION LABORATORY

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA

# SECTION I

## INTRODUCTION

## A. OBJECTIVE

The objective of the Problem/Failure Reporting System is to provide management insight into the ECCCS performance, which will identify those areas in which corrective action should be taken. The Problem/Failure Reporting System will provide a method of systematically reporting, recording, and reviewing problems and failures that arise in the installation, test, and operation of the ECCCS.

# B. SCOPE

The Problem/Failure Reporting System applies to all problems or failures (hardware, software, or operational) arising from activities directly related to the ECCCS program starting with the initial installation of equipment in City facilities.

## SECTION II

## GENERAL PROCEDURES AND PRACTICES

## A. IMPLEMENTATION

The Problem/Failure Reporting System will be established and controlled through the LAPD ECCCS Program Management Office (PMO). The PMO will establish a Problem/Failure Report (PFR) Control position which will be responsible for:

- 1. Co-ordination with the various departments involved in the ECCCS installation, test and operation to insure adherence to the Problem/Failure Reporting System requirements.
- 2. Issuance of PFR forms, by number blocks, to the ECCCS user areas.
- 3. Maintenance of PFR accountability.
- 4. Distribution of PFR action, information, and review copies to the appropriate departments responsible for problem/failure analysis and corrective action.
- 5. Follow-up action to insure that PFR's are given proper and timely attention.
- 6. Issuance of PFR status and summary reports on a bi-weekly basis. These reports should, as a minimum, contain the following information:
  - a. A listing of all currently open PFR's and all PFR's closed during the reporting period.
  - b. A brief summary statement of the problem/failure documented by the PFR and the latest available status.
  - c. The cognizant agency responsible for each PFR.

d. A flag indicating each PFR remaining open 30 days after initiation.

#### B. PFR FORM

The PFR form to be used for all ECCCS problems or failures is shown in Figure 1. The form will contain three identical pages and utilize pressure sensitive paper.

## C. FLOW DIAGRAM

A flow diagram of the PFR handling process is shown in Figure 2.

#### D. OPERATION

## 1. PFR Origination

Upon observing a problem or failure, the observer (can be anyone involved in the installation, test, operation, or maintenance of the ECCCS) will initiate a PFR. The originator completely fills out Section I of the PFR, including form headings. PFR's will be generated for two major categories of problem/failures. The first category relates to hardware oriented problems while the remaining category is concerned with software and operational problems. PFR's for the two categories will be handled as follows:

#### a. Hardware

After completion of Section I, the originator removes the first page of the PFR and forwards the balance of the form to the PFR Control Center. The first page of the PFR remains with the equipment involved in the problem or failure until the analysis and corrective action has been completed. All equipment delivered to the repair facility must be accompanied by COPY 1 of the PFR.

# LAPD ECCCS

|                           | PROBLEM.   | / FAILURE REI  | PORT NO.   | XXXXXX              |
|---------------------------|--|--|--|---------------------|
| DATE                      |  | F  | <del>-</del>   |                     |
| EQUIPMENT NOME            | NCLATURE   |  |  |                     |
| •                         |  |  |  |                     |
|                           |  |  |  |                     |
| DESCRIPTION OF            | PROBLEM/FAILURE:   |  |  |                     |
|                           |  |  |  |                     |
| ·                         |  |  |  |                     |
|                           | FAILURE:   |  |  |                     |
| REPORTED BY: _            |  | 1,9 .  |  | _DATE:              |
| PROBLEM/FAILUR            | E ANALYSIS:  |  |  |                     |
|                           |  |  |  |                     |
|                           |  |  |  |                     |
|                           |  |  |  |                     |
|                           |  |  |  |                     |
| ·                         |  |  | *  | ·                   |
| PIECE PART FAI            | EM/FAILURE: DE<br>LURE□ TEST EQUIP   | SIGN WORKMA  | NSHIP□ AD<br>ERROR□ MIS  | JUSTMENT   HANDLING |
| OTHER<br>NAME OF PERSON   | COMPLETING ANALYSIS:   |  |  | _DATE:              |
| CORRECTIVE ACT            | ION:   |  |  |                     |
|                           |  |  |  |                     |
|                           | tering and an incident and an action of the costs and analysis of the costs of the  |  |  |                     |
|                           |  |  |  |                     |
|                           |  |  |  |                     |
|                           |  |  |  |                     |
| DISPOSITION OF RETESTED □ | •  | REWORKED  OTHER  | KEADJUSTEDT  |                     |
|                           | MAKING DISPOSITION:_   |  |  | DATE:               |
| CONCURRENCE               | and the second security of the second | والمرافق | - Against also and a state of the state of t |                     |
| NAME                      |  | DATE   | AGENCY   |                     |

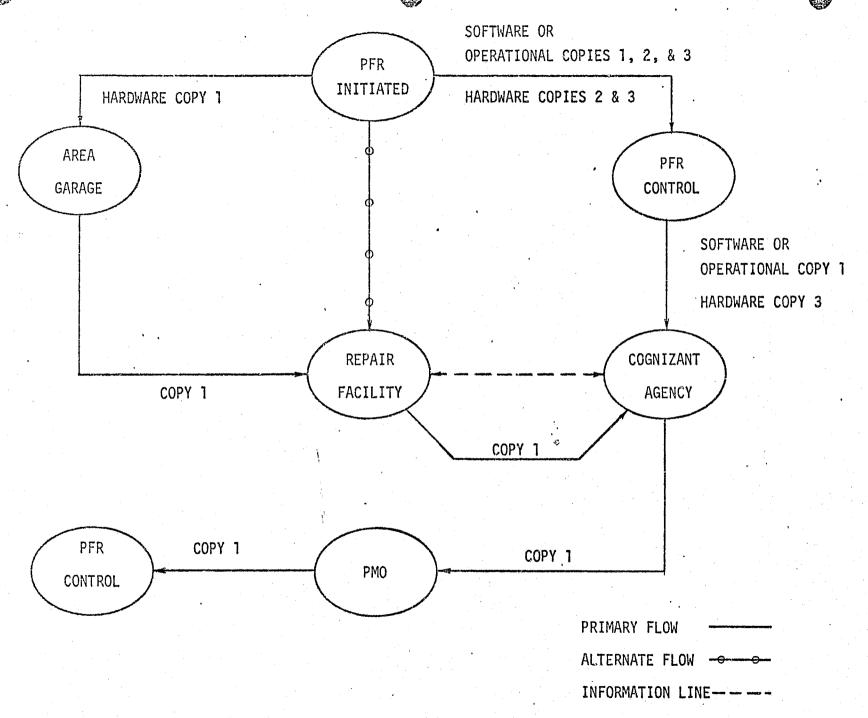


FIGURE 2. LAPD ECCCS PFR FLOW DIAGRAM

COPY 1 of the PFR will be delivered to the Area Garage Shift
Supervisor for all equipment not delivered directly to the repair
facility. The Shift Supervisor will then forward COPY 1 along
with the equipment to the repair facility.

# b. Software/Operational

Upon completion of Section I the originator will forward the entire PFR form to the PFR Control Center.

## 2. PFR Distribution

Upon receipt of the PFR (within 2 working days of PFR initiation), the PFR Control will check Section I for entry completeness and log the PFR as active. Within one working day the PFR will be distributed as follows:

#### a. Hardware

Information copy (COPY 3) to the cognizant agency.

## b. Software/Operational

Action copy (COPY 1) to the cognizant agency.

# 3. Analysis and Corrective Action

Equipment or software to be repaired or modified as a result of a problem or failure must be accompanied by the first page of the PFR which initiated the action. The individual directly responsible for implementing the analysis and corrective measures will complete Sections II and III of the PFR upon completion of the necessary action. The PFR must be filled out such that it is self explanatory and self sufficient (supporting documentation must be referenced on the PFR and attached to it). Detail should be sufficient to permit an evaluation of the depth to which the problem or failure investigation was performed. The

completed PFR along with test results utilized to verify the adequacy of the analysis or corrective action will be forwarded to the cognizant agency.

## 4. Review and Concurrence

The PFR, with Sections I, II, and III completed will be delivered to the Cognizant Agency for review and concurrence with the analysis and corrective action. The Cognizant Agency will determine whether the problem or failure is generic in nature and, if so, the probable extent and impact of the necessary corrective action. Recommendations regarding generic problems will be attached to the PFR and forwarded to the PMO. The PMO will review the PFR and attached recommendations to determine the appropriateness of the problem resolution and any required follow-up action. The PFR will then be sent to the PFR Control for closure and distribution.

## SECTION III

#### DEFINITIONS

<u>Failure</u>. Equipment or software performance outside the limits of specified requirements. This term includes intermittents, cessation of performance or failure of equipment or software to respond as commanded.

<u>Problem</u>. Any anomaly or occurrence which cannot be immediately explained including hardware, software, and operational procedures. Also included in this category is equipment performance which is within limits of the specified requirement, but is consistently approaching one side of the tolerance limit.

<u>Cognizant Agency</u>. The Los Angeles City department having direct responsibility for the maintenance, modification, and operational performance of specific hardware or software.

