BODY REFERENCE: WP4/D1/REV.A

TITLE:	SPECIFICATION OF EDP FUNCTIONS: "IDENTIFY AND DISPLAY FAULT LOCALISATION (D1)"
SOURCE:	EDP
STATUS:	FINAL DOCUMENT
EDITORS:	ANÍBAL CARVALHO ALEXANDRE FERREIRA DA SILVA ANTÓNIO FERRO BEÇA
VERIFIED BY:	
DISTRIBUTION:	WP4 AND WP5 TEAM MEMBERS
DATE:	FIRST ISSUE: MARS 1997 FINAL ISSUE: JUNE 1997
NUMBER OF PAGES:	4
INTERNAL REFERENCE:	J:\DOK\13\REMAFEX\WP4\D1.DOC

CONTENTS

PREFACE

This document contains a description of the maintenance function "Identify and display fault localisation" (D1).

1. OBJECTIVE OF FUNCTION

The function provides the identification of the faulty sub-item at the appropriate indenture level (subsystem, component,...).

2. FUNCTION ENVIRONMENT

The function is a part of the fault diagnosis (fault localisation) maintenance domain. The purpose of the function is to identify the faulty sub-item.

The function is automatically activated by an alarm or trip message (fault recognition) and by maintenance alarms (function alarms generation).

The sequences of requests and responses necessary to utilise the function is the following:

Event	Request/Response (RQ/RS)	From	To
Message of an alarm or trip event	RQ	Event Communication Flow	Maintenance Operator (MO)
Maintenance alarms?	RQ	Function	Function
Log address and image	RQ	Function	Identification and Images Tables (IIT)
Present identification and image of the faulty sub-item	RS	IIT	MO
Store the event	RQ	MO	Error Log Table

3. INPUT DATA DEFINITION

Acquired data (from event communication flow):

All events presented in maintenance data tables (Deliverable 3.1) of each experimentation site, identified by the following fields (identifiers):

Data label (tag)	date	time	measure (numeric)	alarm (boolean)	trip (boolean)

Configured data:

Identification table

These data must include the following identifiers:

Data label (tag)	image identifier

Images table

These data must include the following identifiers:

image identifier	image

Tuning data:

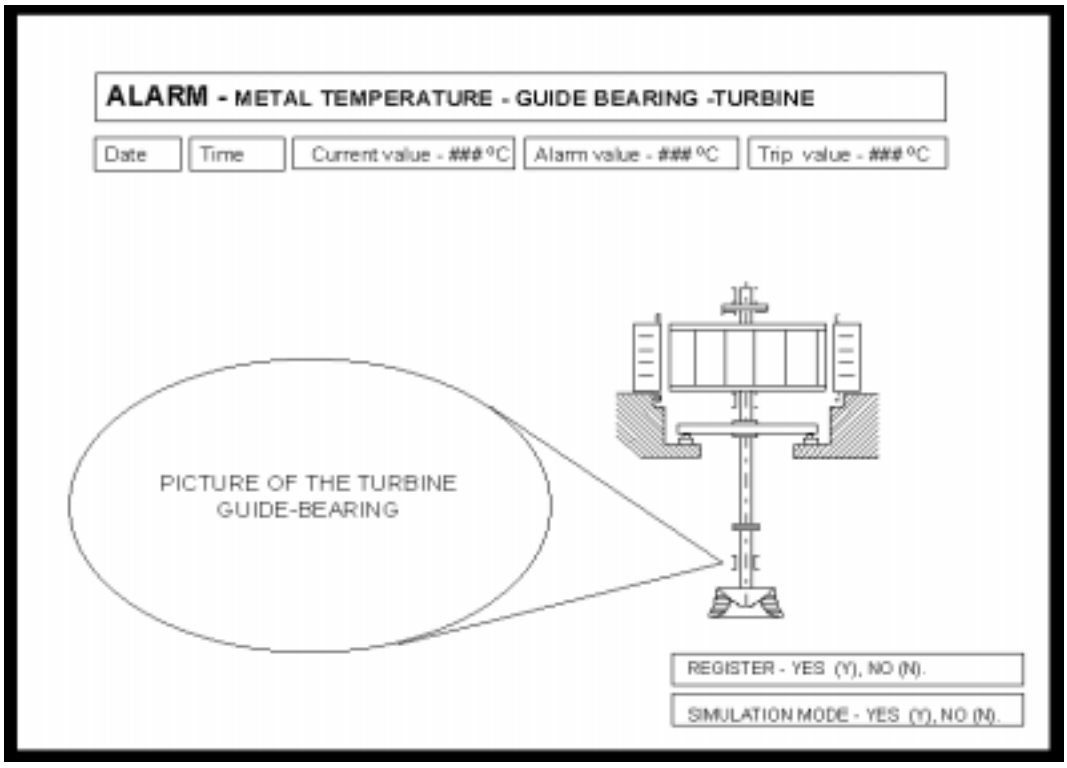
All numeric data to be used to generate the maintenance alarms.

4. OUTPUT DATA DEFINITION

1 - Process display identifying the fault sub-item and data display

2 - Record the alarm in the Error Log Table.

3 - Trigger A5/A6.

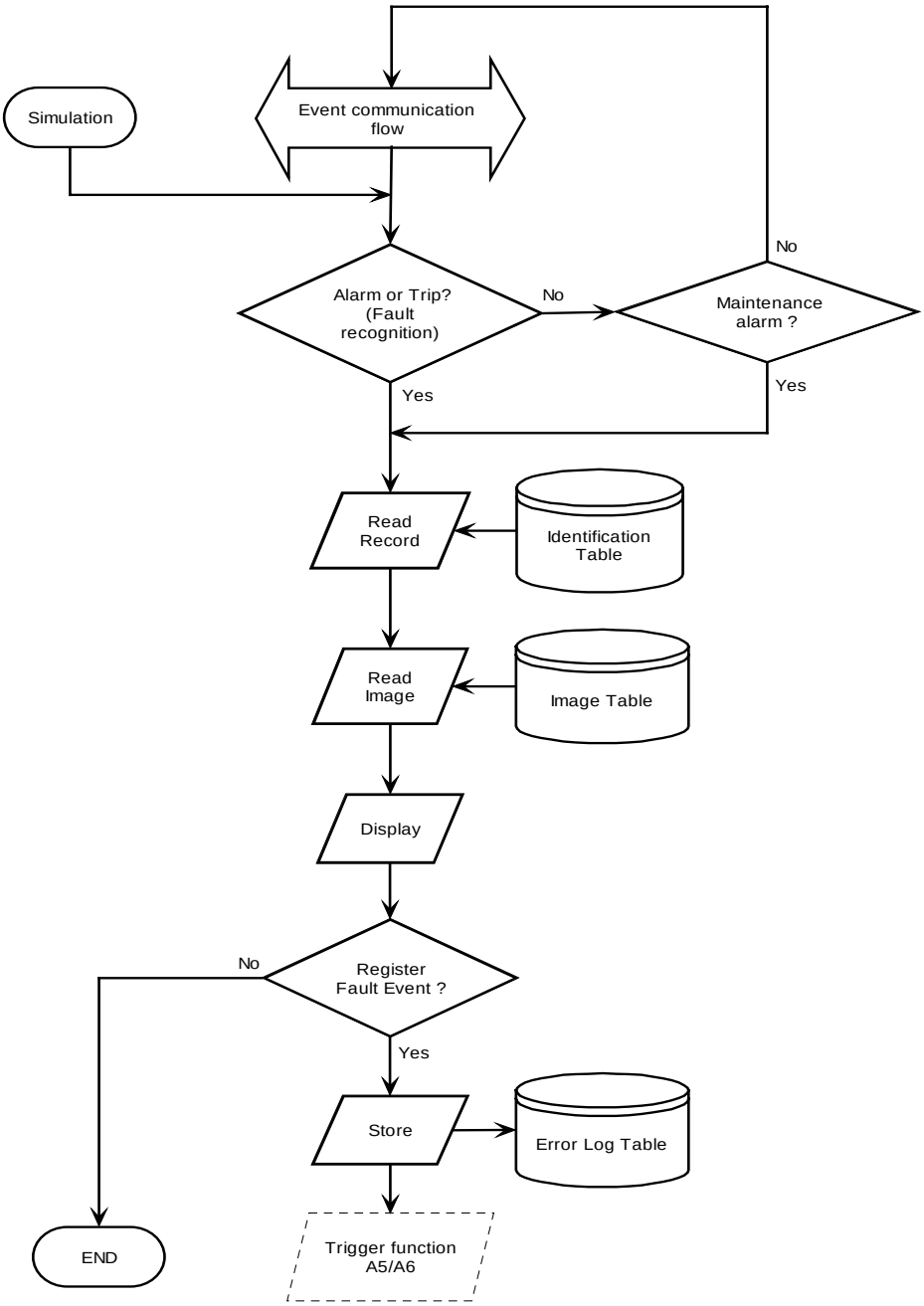


5. DYNAMIC BEHAVIOUR

The function is automatically activated by a fault event being recognised and by a maintenance alarm being generated.

The Error Log Table size and the rule for records cleaning will be defined during the experimental period.

6. DATA PROCESSING (ALGORITHM)



7. INTERFACES

The output to the display must be shown locally and remotely.

The data stored in the Error Log Table should be formatted in order to be stored in the Maintenance Database.

Eventually it could be needed a format conversion interface to the Images Table.

8. ERROR MANAGEMENT

Display messages describing the cause of the error or fault: internal error, missing data,... .

9. CONSTRAINTS

Existence of Identification and Images Tables.

10. HARDWARE AND SOFTWARE REQUIREMENTS

The function can be implemented using a standard PC hardware.

The hardware and software should be able of read and present bit map files, with a graphical resolution of at least 800x600 pixels with 256 colours.

The output display should be of the SVGA type and able of presenting colour information.

11. TEST PLAN

It must be possible to simulate manually a fault event to verify the function response.

The error's cause simulation must also be possible.

The tuning parameters (error log table size ...) will be defined during the experimental phase.

12. REFERENCES

[1] Hydroelectric Set Structuring (EDP/019/REV.B)

[2] Distributed Maintenance Data Needs (Deliverable 3.1)