

PACKAGE ID - 001143MLTPL00 SPRT/DBMS

KWIC TITLE - Pre-Validated Signal Database Management
System

AUTHORS - Gross, K.C.
Argonne National Lab., IL (United States)

LIMITATION CODE -COPY **AUDIENCE CODE** - LIM

COMPLETION DATE - 01/01/1996 **PUBLICATION DATE** - 01/01/1996

DESCRIPTION - SPRT/DBMS is a pre-validated experimental database management system for industries where large volumes of process signals are acquired and archived. This system implements a new and powerful pattern recognition method, the spectrum transformed sequential testing (STST or ST2) procedure. A network of interacting ST2 modules deployed in parallel is integrated with a relational DBMS to fully validate process signals as they are archived. This reliable, secure DBMS then provides system modelers, code developers, and safety analysts with an easily accessible source of fully validated process data.

PACKAGE CONTENTS - Media Directory; Software Abstract; Media Includes Source Code;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 1 3.5 Diskette

METHOD OF SOLUTION - For signal validation, the front end of the system implements an advanced signal validation methodology, the ST2 procedure. This procedure embodies an extremely sensitive pattern recognition technique that can identify the onset of subtle degeneration in noisy plant variables well before the degradation would be apparent to visual inspection by human plant operators. Object-oriented features, incorporated in C++, provide a tightly integrated language interface to the traditional DBMS features of persistent storage, transaction management, distributed data access, and associative queries.

COMPUTER - MLT-PLTFM

OPERATING SYSTEMS - DOS, UNIX and variants.

PROGRAMMING LANGUAGES - C++

SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - The symbiosis of relational database functionality with a high-sensitivity, high-reliability signal validation tool provides SPRT/DBMS users with a first-of-a-kind industrial signal acquisition/archival/retrieval system.

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UNIQUE FEATURES - (CONT)

HARDWARE REQS - Any hardware configuration that can run C++ code.

TIME REQUIREMENTS - Following a short intialization (or training) period, SPRT/DBMS is designed to run in real time.

ABSTRACT STATUS - Submitted 12/18/96. Released AS-IS 1/13/97

SUBJECT CLASS CODE - T

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
S CODES
DATA BASE MANAGEMENT
PATTERN RECOGNITION
ARTIFICIAL INTELLIGENCE
DATA ANALYSIS
VALIDATION
FAILURES
MONITORING
ELECTRONIC EQUIPMENT
EXPERT SYSTEMS

EDB SUBJECT CATEGORIES -

990200 440800 426000

SPONSOR - DOE/NE

PACKAGE TYPE - AS - IS