NASA TECH BRIEF

John F. Kennedy Space Center

The Design of an Automated Verification of Redundant Systems

A handbook, entitled Design of Automated Redundancy Verification, has been published as a guide to designers who work with redundant systems. The handbook presents a general systems approach to this topic in which it discusses design methods for automated redundancy verification systems.

The design approaches described depend on the characteristics of the Item Being Verified (IBV), which is any system requiring automated redundancy verification. In general, there are three approaches to indicate the status of IBV, i.e.: whether the redundancy is present or not, whether the item is working or not, or whether the redundancy complement has degraded from, for example, three to two. In all cases, verification is in discrete form. The verification in the first case requires a form of "present" or "not present." In the latter two, the verification takes forms of "go" or "no go" or the green, amber, and red.

The handbook provides the following:

1. It describes the design processes.
2. It presents step-by-step design considerations with appropriate design techniques.
3. It gives a sufficient amount of tutorial material on implementation and methodology.
4. It shows design aids in the form of charts and graphs for ready reference.
5. It illustrates the use of each design aid in addition to application examples of the overall process.
6. Finally, it discusses design guidelines and identifies general practices to be adhered to or avoided.

Note:

The following documentation may be obtained from:

National Technical Information Service
Springfield, Virginia 22151
Single document price $3.00
(or microfiche $0.95)

Reference: NASA-CR-125311 (N-72-15228)
Handbook-Design of Automated Redundancy Verification

Patent status:

No patent action is contemplated by NASA.

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