



VEROTRACE

The Lifecycle Data Traceability System
by VEROCEL

The verification processes for safety-critical software result in a huge amount of “Lifecycle Data.”

VEROTRACE helps you to produce, manage and deliver this data. A database is used to capture (or import) requirements and their associations with the source code, together with attributes such as *developer*, *reviewer* and so on.

VEROTRACE can use this information to generate files that form the basis of standardized test procedures, as well as review checklists for design, code, test and test results. This makes the capture of review data consistent and the administrative tasks less time consuming. In addition, *VEROTRACE* can use the database records to generate XML files, which can include specially defined tags that identify the data extracted. For example:

```
<HL_REQ Id="RR.5.1.1" Qual="Analysis">Sound Alarm if Temp exceeds HLimit</HL_REQ>
<REQ_AUTHOR Person="GR"/> <REQ_REVIEWER Person="JC"/>
<SOURCE>
  <SOURCE_CM Class="CODE_REVIEW_V1-0" Date="6/20/2000"/>
  <DIRECTORY>src/GRIM/</DIRECTORY>
  <FILE>
    <NAME>Temp_Monitor</NAME>
    <TYPE>.c</TYPE>
  </FILE>
</SOURCE>
```

These files correspond to traceability information which capture the relationship between requirements and their descriptions, source code, tests, test results, the checklists and so on. A number of prescribed “Style Templates” allow the XML files to be displayed in a formatted view using a browser.

These formatted views allow a developer, reviewer or auditor to inspect and navigate the data and its relationships. A link, from requirement to code to test to results, provides the forward traceability required, and links, from code to requirements, show backward traceability.

Although a database is used to capture the original information, it need not be included with the delivery. *VEROTRACE* can extract the information so that it can be delivered in a more comprehensible form. All of this data may be copied to CD-ROM and used as a means of storage, delivery or audit.

Capturing and presenting your Lifecycle Data through *VEROTRACE*, provides the following benefits:

- The results are more accurate (incorrect links and missing links can be detected).
- The tedium of producing and cross-referencing this data is removed.
- The Certification Data is easier to review.