TRACE Review

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Introduction - The TRACE review group was charged with reviewing the TRACE code with my special responsibility the models used for the system components. A secondary assignment was to review the test assessment matrix. Even with my restricted responsibilities, I found the task daunting, both in the sheer volume of information involved and in the limited time available to master it. Under the circumstances I focused on the review of the component models with the goal of identifying potential enhancements and, perhaps uncovering some mistakes. To this end, models for the components listed on pages 21 and 22 of Volume 2 of the "TRACE Users Manual" were reviewed in some detail. Most of the material not in Volume 2 or the TRACE Assessment Manual, I have not even read.

In so far as most of the models incorporated in the TRACE code are drawn from earlier work done for RELAP and TRAC, a detailed review of the entire code, which is out of the question here in any case, is probably not called for anyway.

In the course of reading the manual it became clear the writing needed some revision if the manual was to be very useful. A manual is both a handbook and textbook. A handbook is characterized by having a number of free standing, clear answers and good indexing. A textbook, in addition, tells the reader why things are done in the manner chosen. This means that, for a user-friendly text, acronyms need to be explained close to the place where they are introduced. In addition, if writing a complete solution to the problem would be repetitious, a citation as to where the solution is to be found should be provided. Suggestions as to how the text in this manual can be improved are made throughout this review. Specific suggestions as to how certain models can be improved have also been made. These suggestions are made with the awareness that simplicity is a virtue too and, if implementing a change results only a marginal improvement, I'd recommend staying with the simpler option.

Though I knew of no new sources of system level experimental data that could be used to test the whole code, some suggestions of component level data that might be used to evaluate component level models have been made.

Before proceeding, I'd like to say the section entitled "Preparing an Input Model" is uncommonly well-written, to the point, and clear and could serve as a model for the rest of the manual.

[Exemption 5]

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