



## GoldSim™ Version 9.60 SP2

### Notes on Errors in IF Tests

#### Introduction

GoldSim 9.60 SP2 corrects a newly-discovered bug that has existed since version 9.00. This bug affects the evaluation of term-by-term IF tests, where each term in two vectors or matrices is compared individually.

Note that the error can only occur under specific circumstances:

- The IF test must compare two vectors or matrices.
- The first term of the IF (the condition that is tested) must have some True and some False results.
- The IF test must be embedded within a more complex expression.
- At least one of the two consequences must itself be an expression (i.e. not just a link to an output).

Thus, the problem could only occur for a complex expression such as:

```
"( if( DetermValue == vector( Species, 0 Bq ) then vector( Species, 0 Bq ) else StochasticInventory ) ) / Species.Specific_Activity".
```

If the error occurs, it affects only the first one or more (but not all) of the results of the IF.

Note that this problem was corrected in GoldSim 9.60 SP 2.

#### Testing Existing Models

If you suspect that an existing GoldSim model might have been affected by this bug, you can take the following steps to determine whether its results were in fact incorrect:

**Step 1:**

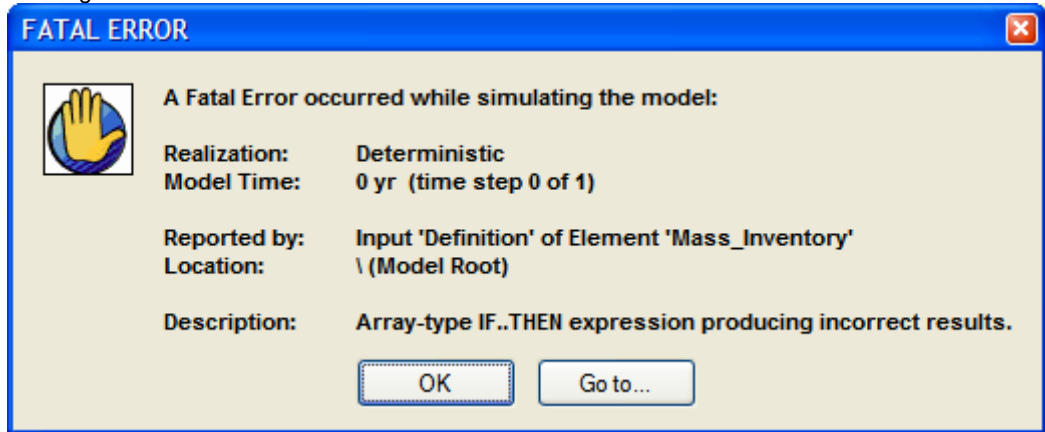
- Start GoldSim 9.60 SP2. Load the model file into GoldSim. Press Ctrl-F10 and click on the option "Check for bad IF .. THEN equation".
- Press F9 to cause a reparse of your model. If your model was potentially susceptible to the bug you will see a dialog like this:



- If you do not see this dialog then your model was not affected by the bug, and you should exit GoldSim. If you do see the dialog then your model's results may have been affected and you should proceed to Step 2.

**Step 2:**

- If Step 1 indicates a potential error existed, press Ctrl-F10 again and select “Fatal error on bad IF .. THEN equation.”
- Run the model (F5).
- If your model’s results were actually affected by the bug you will see a fatal error message:



If you want to evaluate the effects of the error you can repeat Step 1 but continue on to run the model and save the model file with its (erroneous) results. Then compare the results to those for a model run without setting the Ctrl-F10 flags to identify the differences.

- If you do not see this error message your model was OK.
- Exit GoldSim. (This resets the Ctrl-F10 flags).

## Contacting GoldSim Technology Group

If you have questions or encounter problems please send a message to [support@goldsim.com](mailto:support@goldsim.com).