

### GTop

Program 3dfim+ delivers correct outputs when used for its intended use/purpose in its intended environment.

### S\_Top

G can be decomposed into:

GR. 3dfim+ requirements are documented and documentation of the requirements is complete, unambiguous, correct, consistent, verifiable, modifiable and traceable.  
GD. The design of 3dfim+ complies with its requirements and it is complete, unambiguous, correct, consistent, verifiable, modifiable and traceable.  
GI. The implementation of 3dfim+ complies with its requirements and it is complete, unambiguous, correct, consistent, verifiable, modifiable and traceable.  
GA. Inputs to 3dfim+ satisfy the defined operational assumptions.

Reasoning Proof:

Premise: GR, GD, GI and GA are true.

Conclusion: GTop is valid.

### J\_Top

The major software development lifecycle steps are: Requirements, Design and Implementation with appropriate V&V activities. V&V activities will be reflected in claims regarding validation of requirements, and verification of design and implementation. If requirements are appropriate, and design and implementation are appropriate and they comply with the requirements, then 3dfim+ will have been shown to deliver correct outputs. Moreover, as meeting the input assumptions is of great importance, it is considered as a separate goal; however, the correctness, completeness and consistency of the assumptions have been shown in the GR as a part of the requirements correctness, completeness and consistency.

### GR

3dfim+ requirements are documented and documentation of the requirements is complete, unambiguous, correct, consistent, verifiable, modifiable and traceable.

### GD

The design of 3dfim+ complies with its requirements and it is complete, unambiguous, correct, consistent, verifiable, modifiable and traceable.

### GI

The implementation of 3dfim+ complies with its requirements and it is complete, unambiguous, correct, consistent, verifiable, modifiable and traceable.

### GA

Inputs to 3dfim+ satisfy the defined operational assumptions.