Face-Based Proposal

submitted by:

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This proposal is an effort to make official a storage method for unstructured grids in CGNS that is already possible, but not documented. Face-based storage means that the nodes of each face (in 3-D) or edge (in 2-D) are provided, along with the two adjacent cells. This is different from the "traditional" cell- or element-based storage method, for which the nodes of each cell are provided.

To facilitate being able to tell what storage method is being used in the CGNS file, this proposal is recommending (in addition to the documentation) one specific change to the SIDS: that a new node called ZoneElementType be added under Zone_t. This new node will tell which storage method is being used. If absent, it defaults to the default CellBased.

See the companion pdf file for details of the proposal. That file gives an excerpt of the SIDS, with the new proposal documentation added (in red). It also includes new examples.