

Proposal for the extension of the Family functionality

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Goal: Allow the creation of moving/rotating mesh type nodes under Family_t and a BCDataSet_t node under FamilyBC_t.

Moving/rotating mesh types under Family_t

Families are used to define certain properties to a set of zones. For moving or rotating meshes it is useful that the motion can be specified for a family. Therefore it is proposed that the following nodes can be created under Family_t:

- RotatingCoordinates_t
- RigidGridMotionType_t
- ArbitraryGridMotion_t

BCDataSet_t under FamilyBC_t

In the current CGNS release, 2.2, it is possible to specify boundary conditions per family. This is very useful and allows users to group boundary faces to a superstructure. However the usefulness is severely limited by the fact that it is not possible to specify boundary conditions per family. If either Dirichlet or Neumann conditions are needed they must be specified for every individual boundary face of the family. This is quite cumbersome and it is only logical to allow BCDataSet_t nodes under FamilyBC_t.