Hex mesh file *.Qhex and its viewer

if there is any problem, contact

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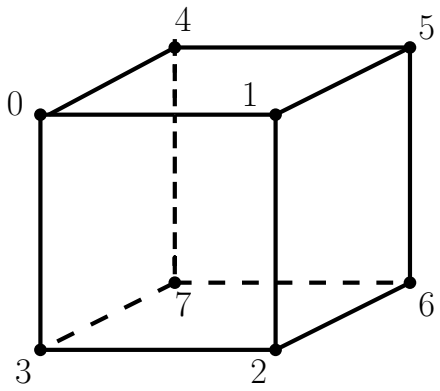
1 Data structure of hex mesh file *.Qhex

Hex mesh file *.Qhex data struction description:

Mesh Vertex information: Vertex indicates that it is a Vertex, and followed by the unique ID number， then the x,y,z coordinates of the Vertex. For example, Vertex 3 0.620232 3.4641 0 describes a mesh vertex with the ID=3, located at the position (0.620232 3.4641 0) in 3d space.

Mesh hexahedron cell information: Hex indicates that it is a hexahedron， which followed by its unique ID number. The next eight numbers are the ID numbers of the eight Vertices of the hexahedron cell. The order of the eight vertices are show as below. The picture below shows a hex cell with ID=77, and the IDs of the eight vertices are respectively 0,1,2,3,4,5,6,7.



hex 77 0 1 2 3 4 5 6 7

2 Usage of the viewer for hex mesh file *.Qhex

Qhex.viewer.exe in the fold is for viewing the hex mesh file *.Qhex.

Open a *.Qhex file with Qhex.viewer.exe, and you will see the hex structure mesh.

1. Mouse control

- Press left button of the mouse and drag to rotate the object;
- Press right button of the mouse and drag to zoom in or out;
- Press the wheel of the mouse and drag to move the object;

2. Keyboard control

- Press 'g' to change the show mode; there is three mode: the default one is to show all the hex cells, edges and vertices, the second one is to show part of the cells and the last one is to show only the edges and vertices.
- In the second show mode(to show part of the cells), press 'x','y','z','o' to see the object sliced by different plane, and then you can press '+' or '-' to move the cutting plane.