Mesh generated for an 8 voxel cube

This example mesh supposes that a motion field is produced for a voxel cube of with $nx = 2$ by $ny = 2$ by $nz = 2$ voxels, where nx, ny, nz are the number of voxels in x,y,z direction respectively. The motion field is defined at the centre of each voxel. There are 8 nodes, which correspond to the voxel centres. The node spacing is 0.004.

There are $(nx - 1) \times (ny - 1) \times (nz - 1) = 1$ cubic spaces defined by the nodes, which are then meshed by gmsh. Gmsh defines 6 tetrahedra for each space, resulting in 6 tetrahedra. These are listed as Elements 33-38, which correspond to tetrahedra numbers 1-6 in the tetrahedron list.

```
$MeshFormat
2.2 0 8
$EndMeshFormat
$Nodes
8
1 0 0 0
2 0.004 0 0
3 0 0.004 0
4 0.004 0.004 0
5 0 0 0.004
6 0.004 0 0.004
7 0.004 0.004 0.004
8 0 0.004 0.004
$EndNodes
$Elements
38
1 15 2 0 1 1
2 15 2 0 2 2
3 15 2 0 3 3
4 15 2 0 4 4
5 15 2 0 5 5
6 15 2 0 6 6
7 15 2 0 10 7
8 15 2 0 14 8
9 1 2 0 1 1 2
10 1 2 0 2 3 4
11 1 2 0 3 1 3
12 1 2 0 4 2 4
13 1 2 0 7 5 6
14 1 2 0 8 6 7
15 1 2 0 9 7 8
16 1 2 0 10 8 5
17 1 2 0 12 1 5
18 1 2 0 13 2 6
19 1 2 0 17 4 7
20 1 2 0 21 3 8
21 2 2 0 5 3 1 4
22 2 2 0 5 1 2 4
23 2 2 0 14 5 1 6
24 2 2 0 14 1 2 6
25 2 2 0 18 6 2 7
```

```
26 2 2 0 18 2 4 7
27 2 2 0 22 8 7 3
28 2 2 0 22 3 7 4
29 2 2 0 26 5 8 1
30 2 2 0 26 1 8 3
31 2 2 0 27 5 6 7
32 2 2 0 27 5 7 8
33 4 2 0 1 1 2 4 7
34 4 2 0 1 6 5 7 1
35 4 2 0 1 2 1 6 7
36 4 2 0 1 1 4 3 7
37 4 2 0 1 7 5 8 1
38 4 2 0 1 3 1 7 8
$EndElements
```