



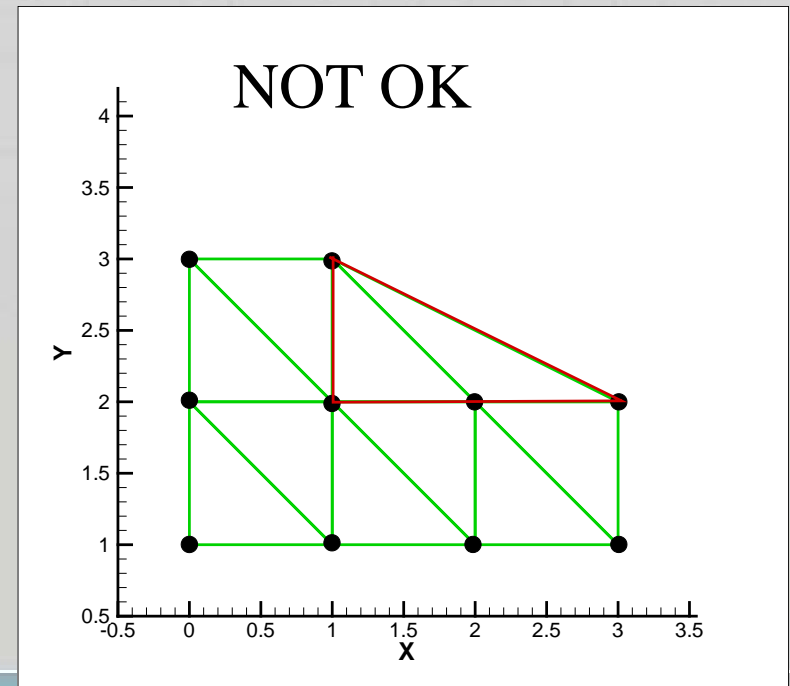
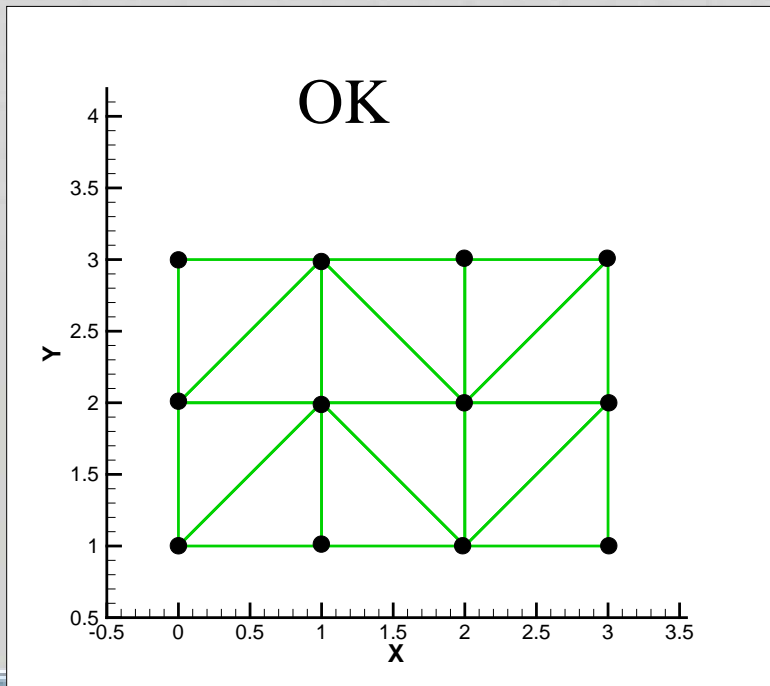
## Presenting 3-D TOUGH2 Output with TECPLOT

- **TOUGH2 is not a finite element program**
  - These calculate a solution over all the problem domain using interpolating functions defined over a set of elements
- **TOUGH2 is not a finite difference program**
  - These calculate solutions at points in a finite element mesh
- **TOUGH2 is an integrated finite difference program**
  - Calculates the average value of the solution over some finite volume of space.
- **Most graphics programs understand finite element and finite difference data.**



## 2D data

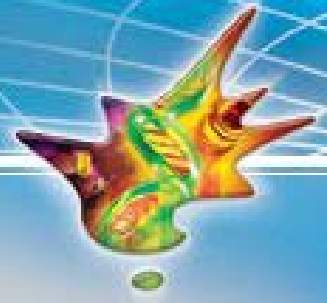
- Associate TOUGH2 results with the center (of mass) of the cell
- Triangulate the data
- Interpolate over the triangles for contouring etc. as with finite elements





## 3D Data

- Associate TOUGH2 results with the center (of mass) of the cell
- Interpolate the data somehow onto a connected 3D-Grid
- Interpolate over the elements as with finite elements
- Same problems as in 2-D with non complex domains



## There is another way

- Tecplot has a data type 'cell centered data' perfectly suited to TOUGH2 output
- Describe element geometry and add a header to your file like

```
VARIABLES= "X" "Y" "Z"
```

```
"Temperature" "Saturation" "Ph" ZONE
```

```
F=FEBLOCK ET=BRICK N= 5824 E= 4590
```

```
VARLOCATION = ([4-0049]=CELLCENTERED) T="36443. Days"
```

