

# Problem info

Problem type: DC Conduction

Geometry model class: Plane-Parallel

Problem database file names:

- Problem: *Coupl5cf.pbm*
- Geometry: *Coupl5.mod*
- Material Data: *Coupl5cf.dcf*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *none*

# Geometry model

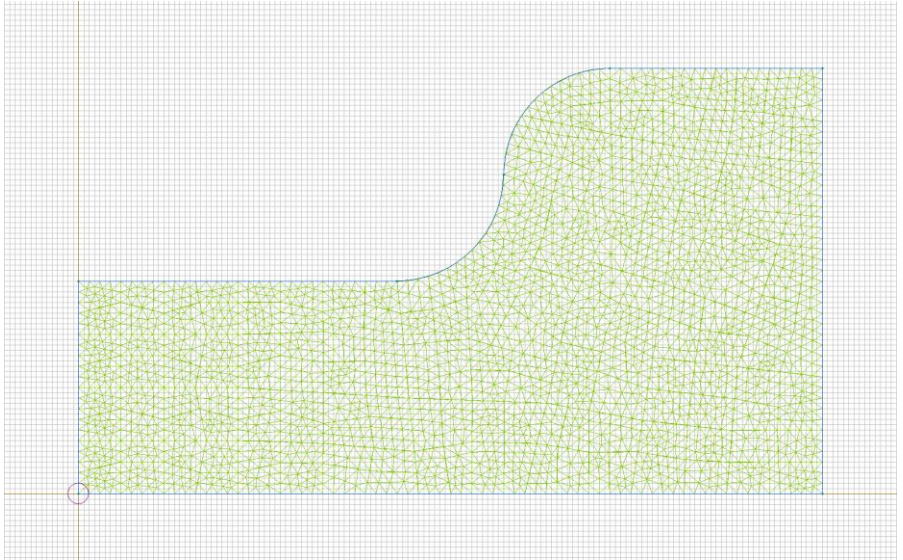


Table 1. Geometry model statistics

	With Label	Total
Blocks	1	1
Edges	3	7
Vertices	0	7

Number of nodes: 2488.

# Labelled objects

There are following labelled objects in the geometry model (Material Data file could contain more labels, but only those labels that assigned to geometric objects are listed)

Blocks:

- [bar](#)
- 

Edges:

- [u1](#)
- [side\\_convection](#)
- [u2](#)
- 

Vertices:

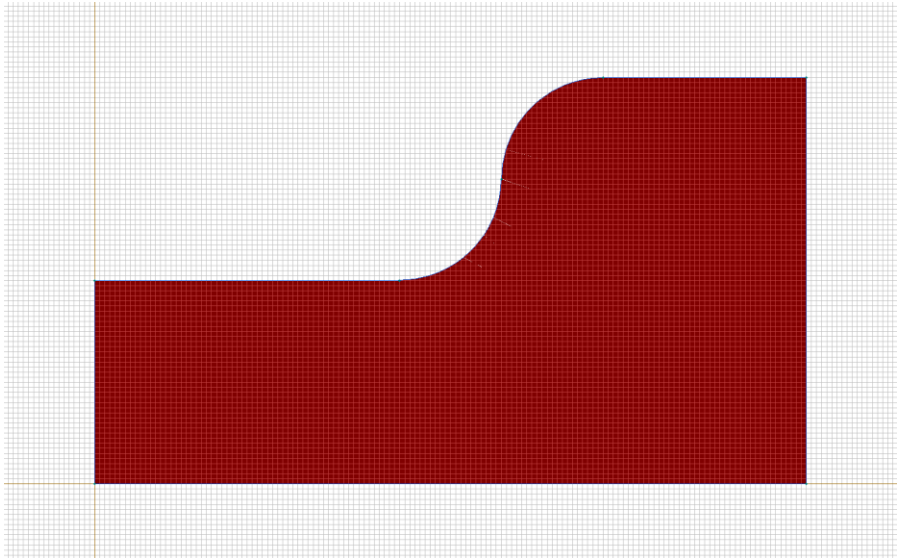
Detailed information about each label is listed below.

Labelled objects: block "bar"

There are (1) objects with this label

Electrical conductivity:  $\sigma_x=10000000$  S/m,  
 $\sigma_y=10000000$  S/m

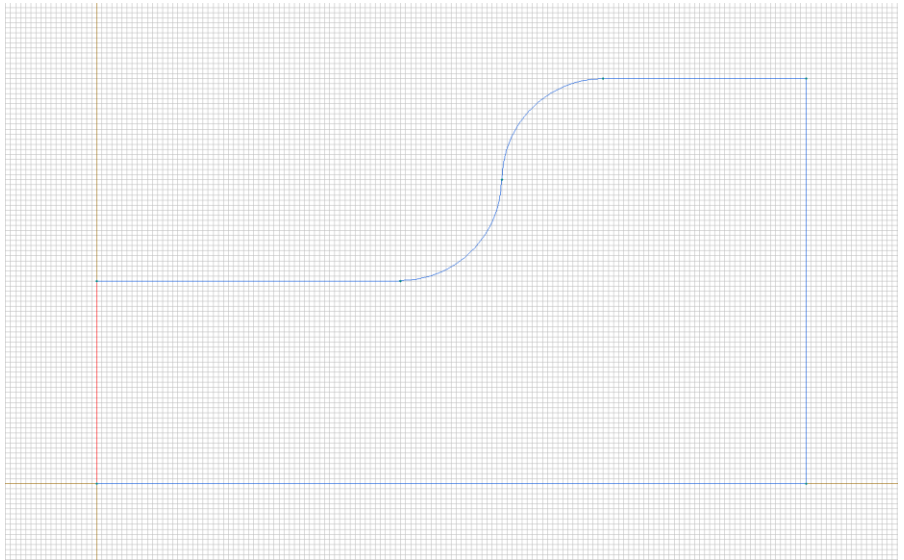
Reference temperature:  $T=0$  K



Labelled objects: edge "u1"

There are (1) objects with this label

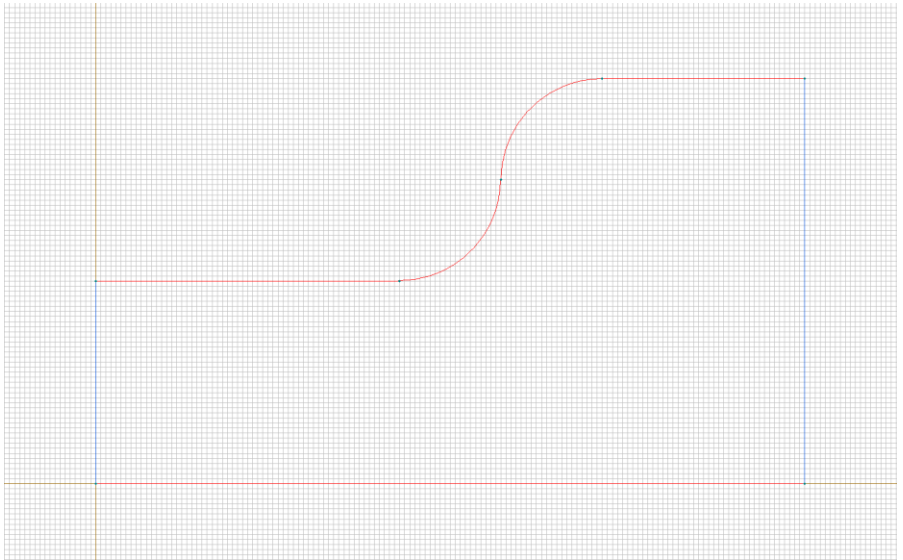
Voltage:  $U = -0.01$  V



## Labelled objects: edge "side\_convection"

There are (5) objects with this label

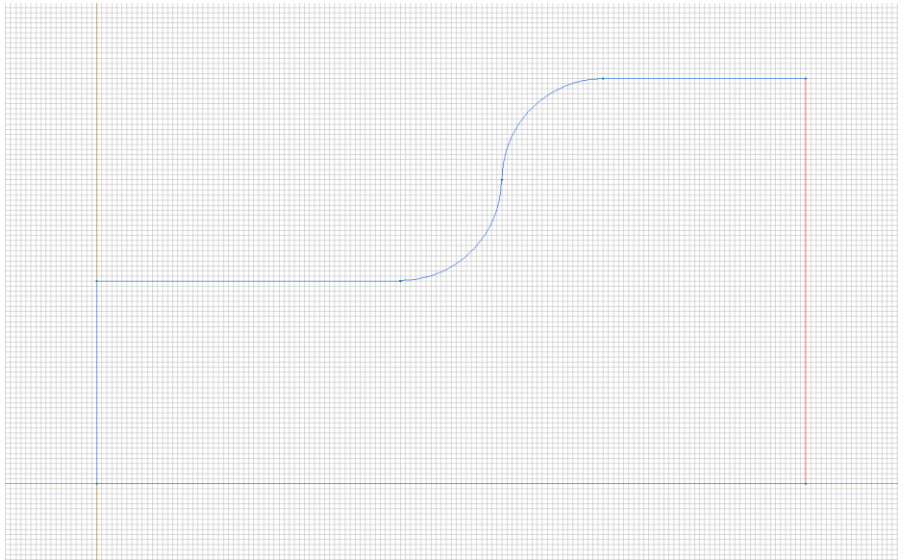
No material data (boundary conditions) are specified



Labelled objects: edge "u2"

There are (1) objects with this label

Voltage:  $U=0.01$  V

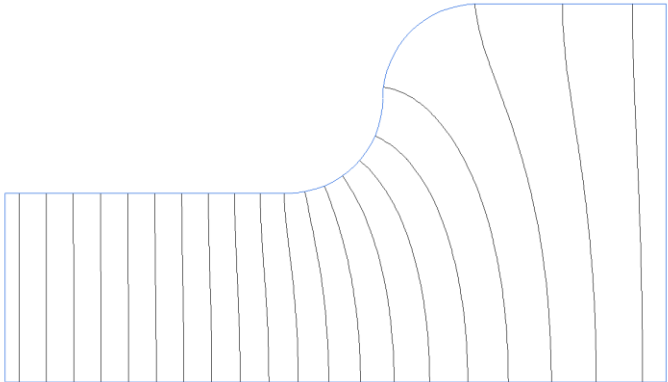






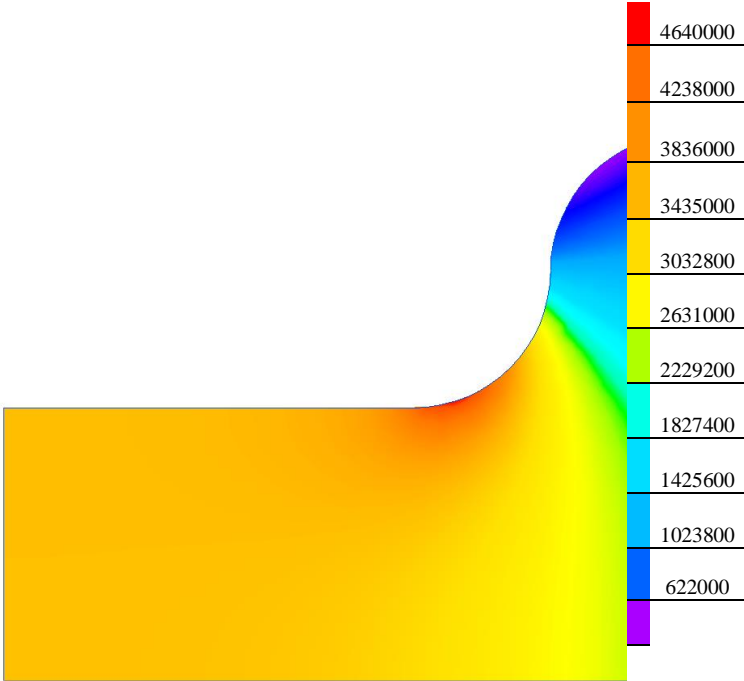
# Results

Field lines



# Results

Color map of Current density  $|j|$  [A/m<sup>2</sup>]



# Nonlinear dependencies

No non-linear dependencies are used in this problem data

