

Shape Interrogation for CAD/CAM

knotc.c

Insert new knots into the knot vectors of an open NURBS curve at u.

Do:

```
prompt> make knotc
```

```
prompt> knotc -i input_curve_file_name -u u_value -k #_of_knots_to_be_inserted [-o  
output_curve_file_name]
```

Example:

Example 1.5.1 of the hyperbook (or in pages 30-31 of the hardcopy version) to insert 3 knots at $\theta = 45^\circ$ (i.e. at $u = 0.414213562$)

```
prompt> knotc -i c.curv -u 0.414213562 -k 3 -o c1.curv
```

Note: For the file format of the input curve (c.curv), see [../README.pdf](http://.../README.pdf)

knots.c

Insert new knots into the knot vectors of an open NURBS surface at (u,v).

Do:

```
prompt> make knots
```

```
prompt> knots -i input_surface_file_name -p u_value,v_value -k #_of_u-  
knots_inserted,#_of_v-knots_inserted [-o output_surface_file_name]
```

Note: No spaces before or after the "comma" in -p and -k command line options.

Example:

Example 1.5.2 of the hyperbook (or in pages 32-33 of the hardcopy version) to insert 3 knots at $\theta = \phi = 45^\circ$ (i.e. at $u = v = 0.414213562$).

```
prompt> knots -i s.surf -p 0.414213562,0.414213562 -k 3,3 -o s1.surf
```

Note: For the file format of the input surface (s.surf), see [../README.pdf](http://.../README.pdf)