



## DOOR HANDLE

Cambridge, Massachusetts

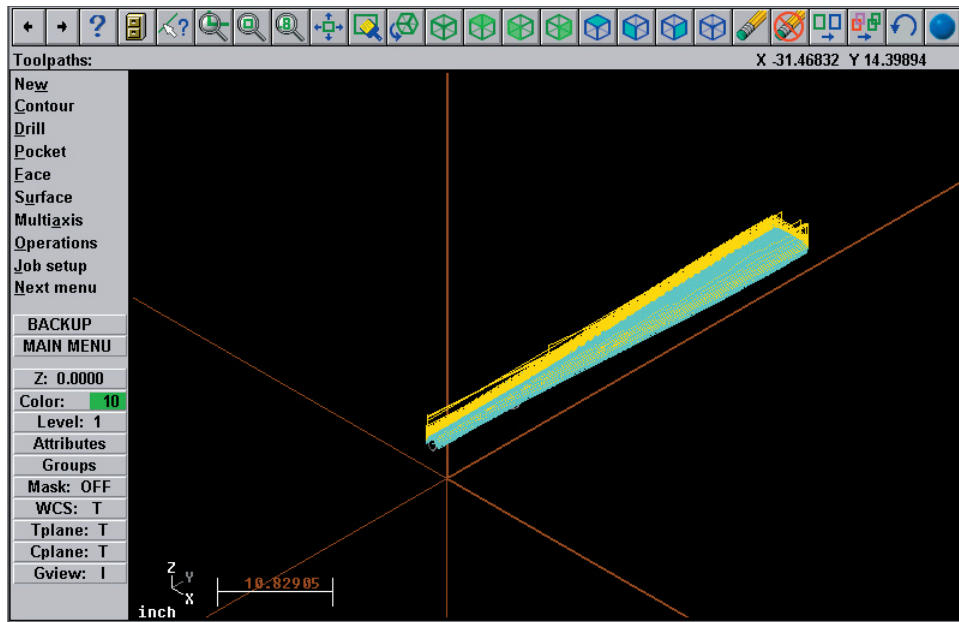
Among the many mysteries in building design is the question of why we have not arrived at a universally successful solution to direct people to either push or pull a door handle.

While working on a small design/build project for a local café, we noticed lines forming at the entry door, which opens in rather than out as apparently expected by a high proportion of customers. It is not uncommon to see major traffic delays when customers on the inside get stuck trying to back into a crowd to allow customers on the outside to push the door open to enter, thus making the congestion worse.

We determined that we would tackle the problem at the new rear door at least. Our handle is designed to be universally applicable by having a flat end that strongly suggests it should be pushed, and a round end that is clearly meant to be grabbed and pulled. By flipping the handle end for end it can be used for either the push or the pull side.

The door handle was designed as a surface model in Rhinoceros. The file was saved as an iges file to be opened in Mastercam to manipulate the surface file and design the toolpath to cut the parts out. We are able to mill the part virtually to verify the shape, to check surfaces that are not intended to be operated on, and to view the smoothness of the final surfaces as well as their accuracy. Once we are satisfied we process a tool path into the g-code that is used to control our CNC router.

There are no traffic jams at the rear door of the café, which is gratifying.



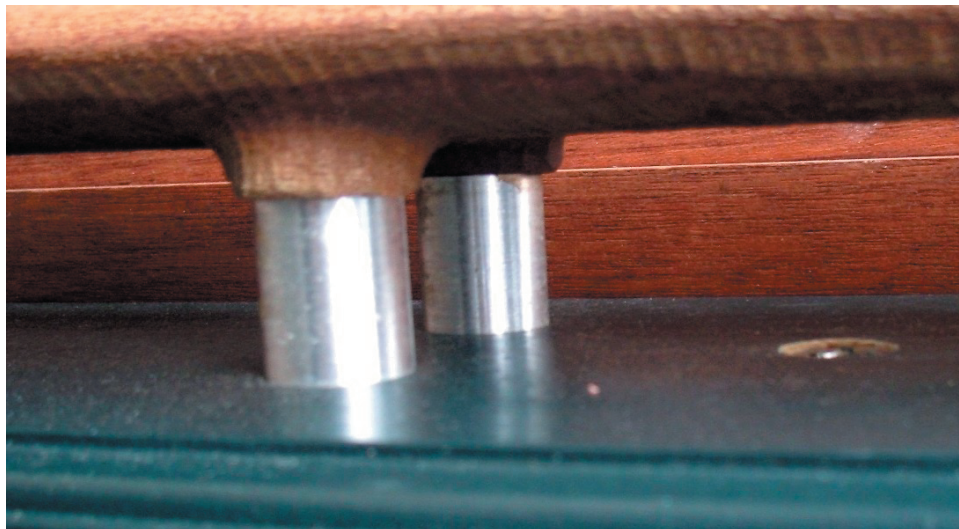
Mastercam toolpath design



CNC routing



Manual drilling for fasteners



Detail of attachment to door





View of exterior door handle installed