

# GT STUDIO

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## I GOT YOUR PROBLEM RIGHT HERE

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Project Name Datong Library

Project Description (How are you going about it now? How would you like to approach it differently? What type of materials are you employing?)

### The situation:

We are designing a library with a large, irregularly shaped atrium in its center. Around the perimeter of the atrium are a series of spiraling ramps each of which is 2.5m wide and has bookshelves on the edge furthest away from the atrium center. The ramp carries library visitors vertically through 4 floors, all of which have a consistent floor to floor height of 4.2m. The ramp is ascending at a slope of 1:20, so that it is only able to connect to the floor plates in one corner of the atrium. The rest of the ramp edges are detached from the floor plates and have to be supported on their edges by columns.

### The method:

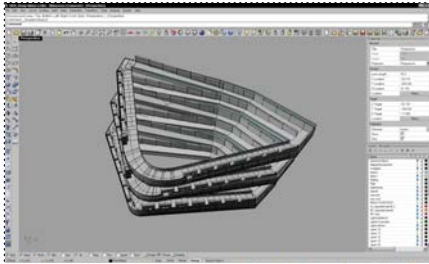
Currently, we are using Rhino to model a number of iterations of the atrium shape, and we are forced to accept vertical columns on the edge of every ramp, because our consultants will only understand 2d, planar, representations of structure.

### Our desired solution:

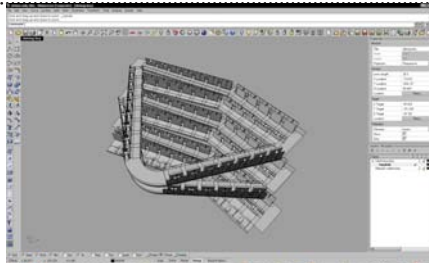
We would like to use digital project to parameterize the geometry of the ramps and atrium openings. Then, we would like to create a system of columns that populates the outer perimeter of the ramps. We would like these columns to slant along with the edges of the ramp, and be quickly updated when we need to change the geometry of the atrium opening. Furthermore, we would like to be able to quickly output each iteration of the structural solution to 2d cad drawings which can be easily understood by contractors and fabricators.

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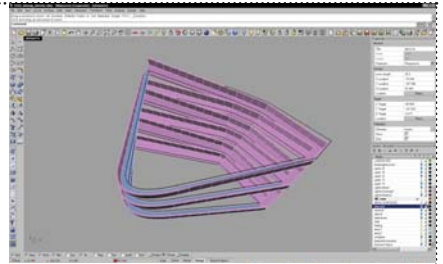
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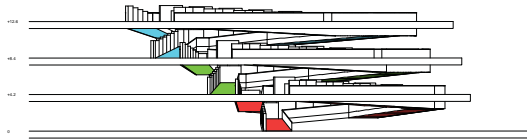
SCHEME 3



SCHEME 2



SCHEME 1



SCHEME 3

