	Country

Part III
Multi-Level Block Maze

9th World Puzzle Championship
October, 2000

This is a multi-level rolling block maze with the following rules:

1. Each of the dark blocks (B_0, B_1, B_2) can roll in any of four directions, using one of its base edges as the axis of rotation. The gray-colored walls are barriers, not blocks, and do not move.
2. A block cannot roll if it is obstructed by other blocks or barriers, if it would fall outside the edge of the maze, or if the new base would not be fully supported from below.
3. The blocks can never change levels. Block B_0 must always rest of the floor of the maze; block B_1 must always rest on the first level; and block B_2 must always rest on the second level.

Note the dimensions of the blocks and barriers: B_0, B_1 (1x1x2), B_2 (1x1x1); the gray barriers are all (1x1x1) cubes. The diagram is shown in perspective, so some blocks may be more distorted than others.

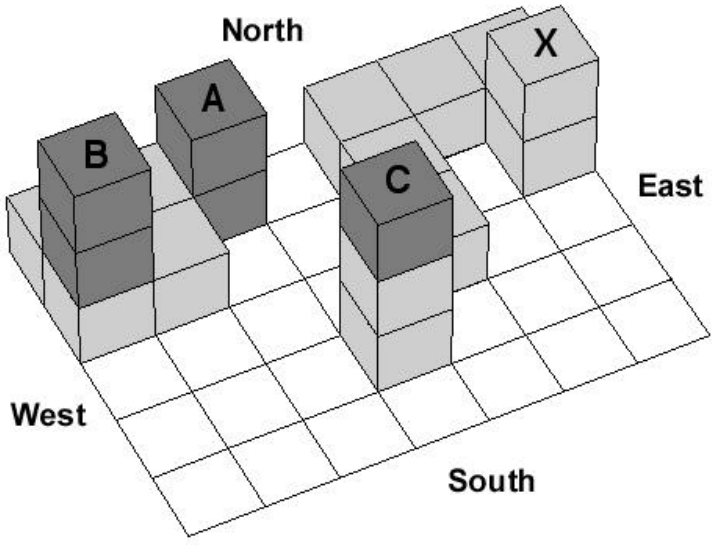
The goal of the maze is to move block B_2 to the space covered with a checkered flag. A complete and correct solution earns 200 points. Any team matching the fewest possible number of moves receives a 50 point bonus.

You will get partial credit for incomplete solutions that reach certain intermediate milestones. (The milestones and % credit cannot be revealed until after the round.) Minor errors in recording the moves for B_0 will reduce your score by 20 points for each instance. Errors in recording moves for B_1 and B_2 will NOT be forgiven.

In the example, block B cannot move first. Block A can roll only South. After that, B can roll East (partially supported by A), but not North, South or West. If, instead, block A first rolled South twice, then C could roll West (supported by A), but in no other direction.

Answer to example:

A: ss-w-n-e-n
B: e-n-w
A: s-w
B: s-e-n
A: e-s-w-n-e-n-n
B: ee-s
A: ss-w-s-w-n-ee
C: n-e-n
A: w-ss-eee-n-w-n
C: ee



Multi-Level Block Maze — 200 points

On this sheet, list the moves, grouped by consecutive moves of the same block, as shown in the example. Use the back of the sheet if necessary.

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