

Fig. 2. Block pattern.

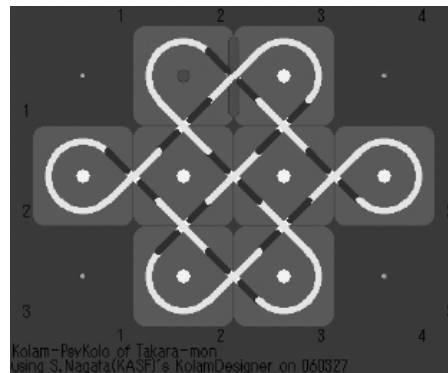


Fig. 3. Creation and tracing in animation soft (Kolam Designer by Nagata).

patterns pasted on the surface of a block. The user makes a single pattern by rotating these blocks and placing them properly.

### 2.3. Kolam pattern with a single stroke

Figure 3 shows Creation and Tracing in Animation Soft (Kolam Designer by Nagata). The PsyKolo3D referenced this software. The stroke must be a continuous curve. The pattern is verified if it is drawn with a single stroke based on the segment number of tracing Kolam pattern in real time animation by this software. All of the basic patterns on the upper sides of the blocks were divided to 4 segments of the lines corresponding with the 4 edges and each segment was assigned with one status switch (memory). When a segment was traced once, a switch of the segment was memorized, and the number ( $S$ ) of the memorized switches was counted as well as the traced block number ( $B$ ). When tracing could come back to the beginning segment, the PsyKolo3D decides if  $S$  is equal to  $4 \times B$  and then the traced pattern should be a single stroke pattern (cycle/unicursal). Figures 4, 5 and 6 show