Martin Luther King Jr. in Dominoes

Robert Bosch
DominoArtwork.com
(bob@dominoartwork.com)

This document describes how to build a portrait of Martin Luther King Jr. out of 12 complete sets of double nine dominoes. In January 2003, a group of school children at Eastwood Elementary School in Oberlin, Ohio, assembled the portrait out of real dominoes under the supervision of Sharon Blecker and Gail Burton.

The portrait is diplayed in figure 1. I've provided two versions of the plans for the design (figures 2 and 3). *Teachers have my permission to use the design, provided that they promise to (1) credit the artist (Robert Bosch) and his website (DominoArtwork.com), and (2) send in a photograph of the completed work for possible use on the website.*

Materials

1. **Twelve sets of double nine dominoes.** The dominoes must be black with white dots. I use dominoes manufactured by the Pressman Toy Corporation. These dominoes appear to be made out of pressed wood. Each one is slightly less than $0.875''$ wide and slightly less than $1.75''$ long. (Note: they are definitely not of uniform size and shape.) Each set costs between \$3.00 and \$3.50.

2. **Twelve $8.75''$ by $9.625''$ panels.** I once used plywood, but ran into trouble when it warped. Recently, I've been forming my panels by cutting down $12''$ by $12''$ vinyl floor tiles. Vinyl floor tiles are light, flexible, and can be cut with a utility knife. They have adhesive backing. Armstrong makes a black tile that costs about \$1.00.

3. **Adhesive.** If you are using plywood for your panels, you can use Elmer's Carpenter's Wood Glue. If you are using vinyl floor tiles, I recommend Liquid Nails Perfect Glue # 1. Perfect Glue #1 is expensive—approximately \$4.00 for a small tube—but it works really well. (It is strong and it is easy to clean up—it peels off of fingers!) You'll need about sixteen tubes: twelve tubes (one per panel) for attaching the dominoes to the panels, two tubes for attaching the panels to the frame (the adhesive on the back of the tiles isn't sticky enough), and two tubes for attaching the inter-panel dominoes.

4. **Frame.** The completed portrait measures $35''$ high by $28.875''$ wide. The frame's interior should measure $35.25''$ high by $29.125''$ wide.

Preparing the panels

To enable the children to position their dominoes on their panels, it is necessary to draw or etch a 10×11 grid of squares onto the panels. Each square must be $0.875''$ per side.

Preparing the dominoes

Each team of children should be given a clear plastic bag containing the dominoes they'll need to construct their portion of the portrait. If the children assemble these bags, an adult should check them carefully! If an adult assembles these bags, an adult should check them carefully!

Constructing the panels

The children should be instructed to start at a corner of their panel and work outward, making sure that they keep the dominoes within the grid lines and making sure that they don't leave any "holes" (after the glue sets, it may be hard to fit a domino into a "hole"!). After finding the next domino that they wish to place, they should squeeze some adhesive onto its back (enough to cover the entire surface of the back in a thin layer) and press it firmly onto the panel.

Assembling the completed panels

After the children have finished their panels (and their work has been checked), the panels must be glued to the frame. If you are using vinyl floor tiles, peel off the paper backing, place dots of adhesive in the corners and in the center, and position the panel on the frame. Press firmly.

Inter-panel dominoes

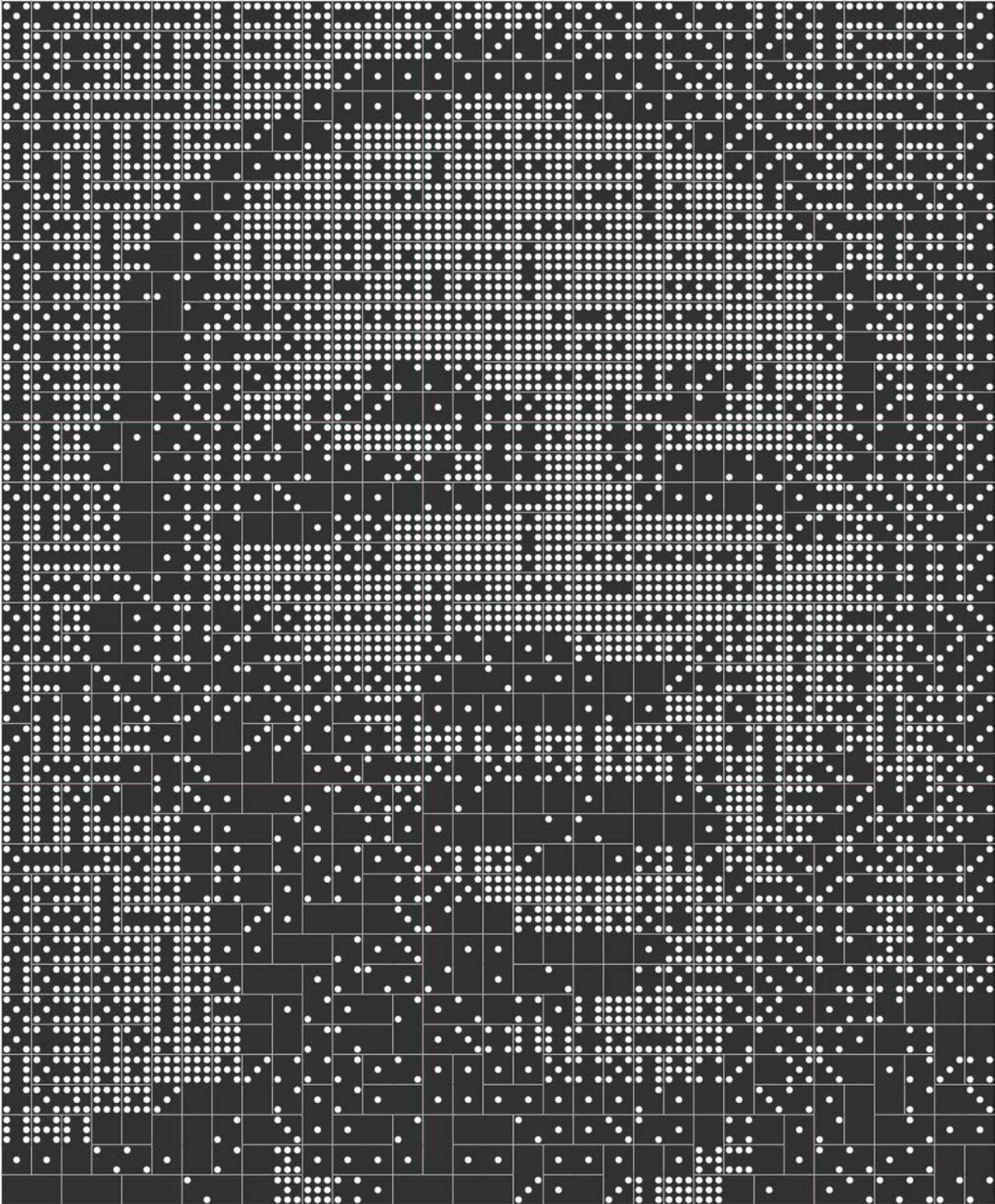The last step is to glue down the inter-panel dominoes.

Figure 1: Martin Luther King Jr. rendered in 12 complete sets of double nine dominoes
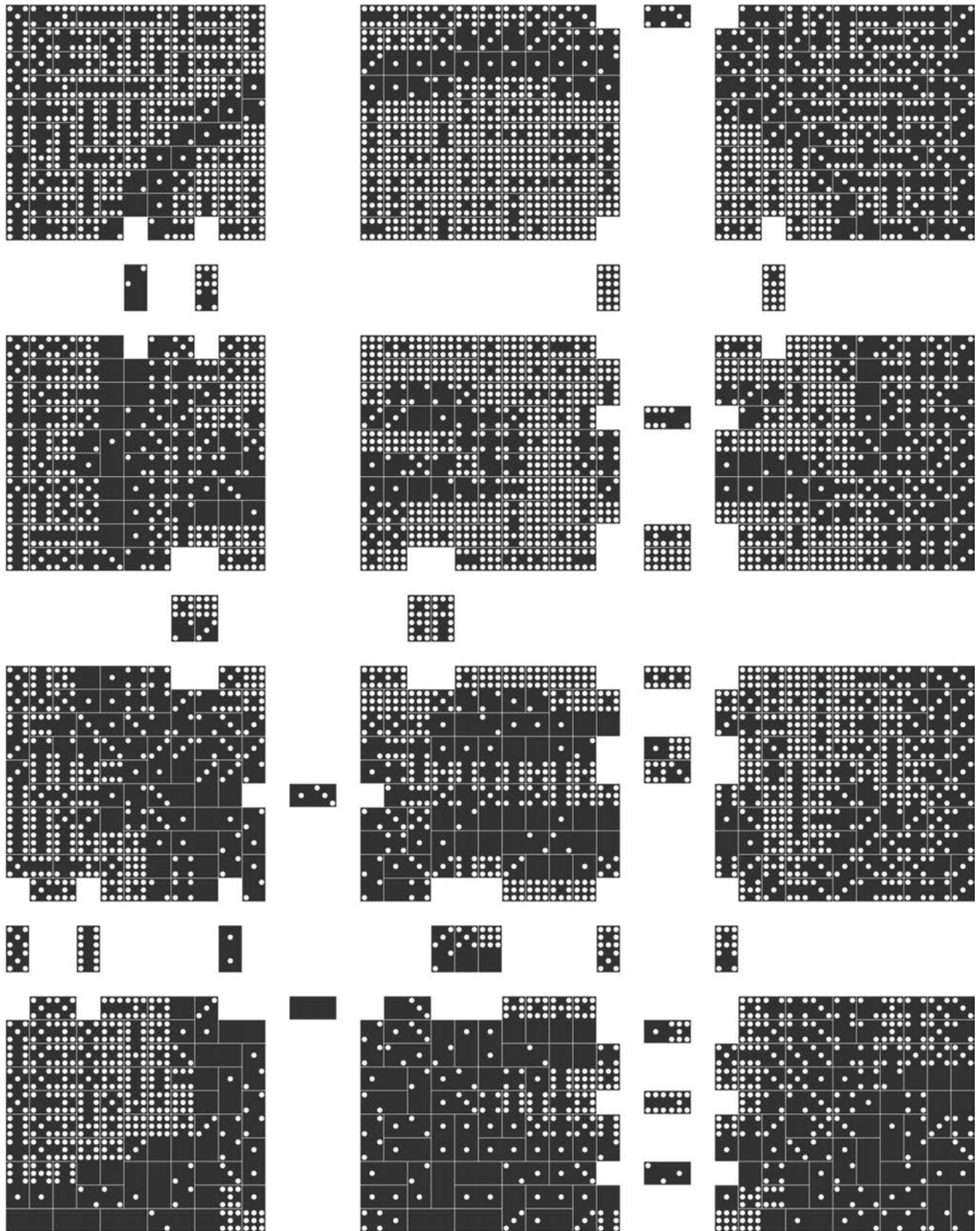
Figure 2: Plans for 12-set MLK (version 1)

```
5 4 7 6 6 6 7 6 6 8 7 6 7 7 5 7 7 7 5 5 3 4 3 4 4 6 5 4 6 4 6 4 3
6 5 4 7 5 6 8 8 6 8 7 8 8 8 5 2 3 2 3 5 4 4 4 3 4 3 4 6 5 6 5 4 3
5 5 4 7 7 6 6 7 7 9 3 1 1 1 1 1 1 1 1 1 2 3 5 4 3 7 4 5 5 5 5 2
5 4 7 6 6 6 8 8 9 7 1 1 1 2 4 7 7 8 7 4 2 1 2 4 5 4 5 5 6 6 3 4 3
4 4 7 6 6 6 8 6 3 1 2 7 9 9 9 7 8 8 8 9 9 9 5 1 3 3 6 5 6 4 6 4 3
6 4 6 6 7 7 8 2 1 6 9 7 8 9 6 9 8 7 9 7 7 7 9 9 3 3 7 5 5 4 5 3
4 7 6 6 7 8 1 1 8 7 9 8 9 7 9 8 9 9 9 7 7 7 9 9 6 3 6 4 6 3 5 3
6 5 7 6 8 2 1 5 9 9 8 8 8 8 9 8 8 8 7 7 9 7 9 8 7 9 3 3 6 4 4 4 3
5 4 7 6 6 0 1 8 6 8 7 7 7 8 9 8 8 7 9 9 9 9 8 8 8 9 8 2 7 6 5 4 4
6 4 7 8 2 2 2 6 8 6 8 6 9 8 6 8 9 7 8 9 9 9 7 8 8 7 9 2 2 6 3 4 3
5 5 5 7 0 0 2 5 4 5 8 9 7 9 9 8 8 9 8 6 8 9 7 7 9 9 9 3 2 5 4 5 3
5 4 7 7 0 0 4 2 6 5 8 9 9 9 9 9 8 9 8 8 8 9 9 9 9 8 9 5 0 6 4 4 4
6 5 7 6 0 0 4 4 3 8 9 8 4 2 2 5 9 9 7 8 9 6 4 3 4 6 9 9 0 5 4 5 2
4 4 7 5 0 2 3 3 8 8 4 3 3 0 1 2 4 5 9 8 6 6 2 2 8 8 5 8 1 3 4 4 3
4 6 7 2 1 2 3 4 3 2 5 9 9 9 8 4 4 4 8 9 4 4 8 9 9 9 8 7 3 2 5 5 3
6 5 6 1 0 2 4 4 4 2 2 1 2 5 2 8 2 4 9 9 5 4 1 0 2 2 5 7 2 4 4 3 3
5 5 5 5 0 1 4 4 1 3 0 1 1 0 2 2 4 6 9 9 9 3 1 1 0 2 1 6 5 3 5 3 3
6 6 5 5 0 1 5 2 0 0 1 5 5 9 9 9 9 7 9 9 7 9 9 9 8 8 3 4 7 3 5 2 3
6 6 6 6 0 1 5 6 8 8 8 5 5 9 8 9 9 7 9 8 8 7 7 7 6 8 9 8 4 4 4 3
6 5 5 4 3 2 4 8 9 7 7 8 9 8 8 6 9 7 8 9 6 9 9 9 7 9 9 9 8 4 4 4 3
5 6 7 0 1 4 4 2 3 5 9 7 8 8 6 8 9 9 9 9 9 7 8 9 8 9 8 9 6 5 4 3 3
5 5 5 1 1 4 2 3 2 6 8 9 9 9 5 2 2 1 2 7 9 8 8 5 7 8 7 8 5 8 3 3 3
6 6 2 3 1 3 2 2 2 3 3 5 5 7 1 0 2 1 1 1 0 0 3 4 6 9 7 8 4 8 3 4 3
3 4 2 2 3 2 3 3 2 3 3 2 6 4 1 1 1 0 0 1 2 1 9 8 3 9 7 7 5 6 5 4 3
3 6 6 7 6 1 1 0 3 3 2 1 4 6 7 6 4 6 7 6 7 8 3 9 4 6 8 4 7 6 7 3 3
6 5 5 6 1 2 3 0 0 0 1 3 2 6 5 2 5 4 5 6 7 7 6 4 8 6 7 3 2 7 7 5 3
6 6 5 3 0 4 3 1 0 1 2 2 3 5 0 2 0 0 0 1 0 0 1 3 9 6 6 2 3 2 3 5 2
6 6 6 7 8 7 1 1 0 2 1 0 4 1 1 0 0 0 2 2 0 0 0 1 8 7 7 2 3 5 4 5 2
5 6 4 7 5 9 0 4 0 2 1 2 1 3 3 6 8 3 0 0 1 5 6 3 7 7 3 3 3 5 5 2 3
5 5 7 6 8 8 2 4 0 1 2 2 0 4 3 5 9 9 9 8 9 8 8 7 3 6 3 3 2 6 4 4 3
5 5 5 6 6 7 8 0 3 1 0 0 0 3 2 0 0 7 8 7 8 5 4 8 4 4 3 4 2 7 4 5 3
5 5 7 5 8 6 8 1 1 0 0 2 1 3 0 1 1 0 0 0 1 7 7 5 4 3 2 2 7 4 5 2
6 5 7 5 8 7 8 3 0 0 1 2 2 1 2 0 1 0 2 0 0 4 5 6 3 3 3 2 4 4 5 5 5
5 5 7 5 8 6 6 6 0 1 2 1 0 2 1 2 0 4 1 6 9 8 8 8 3 5 1 1 4 2 0 0 0
5 4 7 6 5 7 8 9 0 0 2 2 0 0 1 3 4 6 6 4 8 6 7 8 2 2 3 4 1 0 4 0 0
6 5 7 7 8 9 9 7 3 2 2 2 1 2 1 1 1 1 5 4 5 6 7 4 3 0 5 3 0 1 2 3 4
4 5 7 8 8 3 0 0 0 2 1 2 1 0 1 1 1 1 1 1 2 1 0 1 3 2 1 0 0 2 0 3
6 7 6 0 0 0 0 2 0 3 1 1 0 2 0 0 0 2 1 1 3 2 1 0 4 0 1 2 0 0 2 1 1
1 1 0 2 2 1 0 2 0 7 1 1 1 1 0 1 1 0 1 1 1 0 1 7 6 0 1 2 2 1 2 0 0
0 0 0 0 0 0 2 0 0 7 9 4 1 0 0 0 0 3 1 0 3 6 9 9 0 1 0 1 2 2 2 2 2
```

Figure 3: Plans for 12-set MLK (version 2)