Letter to the Editors:
A Method for Displaying Metaballs by using Bézier Clipping

Roland Heinze

Computer Graphics Lab, Dept. of Computer Science, University of Bonn, Germany
E-Mail: heinze@graphics.cs.uni-bonn.de

The article "A Method for Displaying Metaballs by using Bézier Clipping", by Nishita et al., EUROGRAPHICS '94, Computer Graphics Forum (CGF), 13(3), pp. C-271 – C-280, contains two minor errors which we would like to correct:

In Section 3.3, "Process for ellipsoids", p. C-277, the formula for B should be

$$B = -(\frac{V_x x_0}{a^2} + \frac{V_y y_0}{b^2} + \frac{V_z z_0}{c^2}) \text{ (note the "−" sign).}$$

In Section 3.2, "Intersection test between a ray and multiple metaballs", pp. C-275 – C-277, the formula for d_3^i in eq. (14) should be

$$d_3^i = 8\frac{(8a_i + 5)a_i^2}{45} \qquad \text{(note the "8")}$$

With these modifications the algorithm has been implemented within the mrt (Minimal Rendering Tool[1]) platform for spherical and ellipsoidal metaballs. As already pointed out by the authors of the article the algorithm works well and presents an efficient way to compute the intersection between a ray and a (sequence of) metaball(s).

References

1. D. Fellner, *Extensible Image Synthesis*, 4th Eurographics Workshop on Object-Oriented Graphics, pp. 1-18, (May 1994).

2. T. Nishita, E. Nakamae, *A Method for Displaying Metaballs by using Bézier Clipping*, EUROGRAPHICS '94, Computer Graphics Forum (CGF), Vol. 13, No. 3, pp. C-271 – C-280, (1994).