Supplementary Material

for

The Effects of Different Triangulation Techniques for Cage Based Image Deformation Using Generalized Barycentric Coordinates

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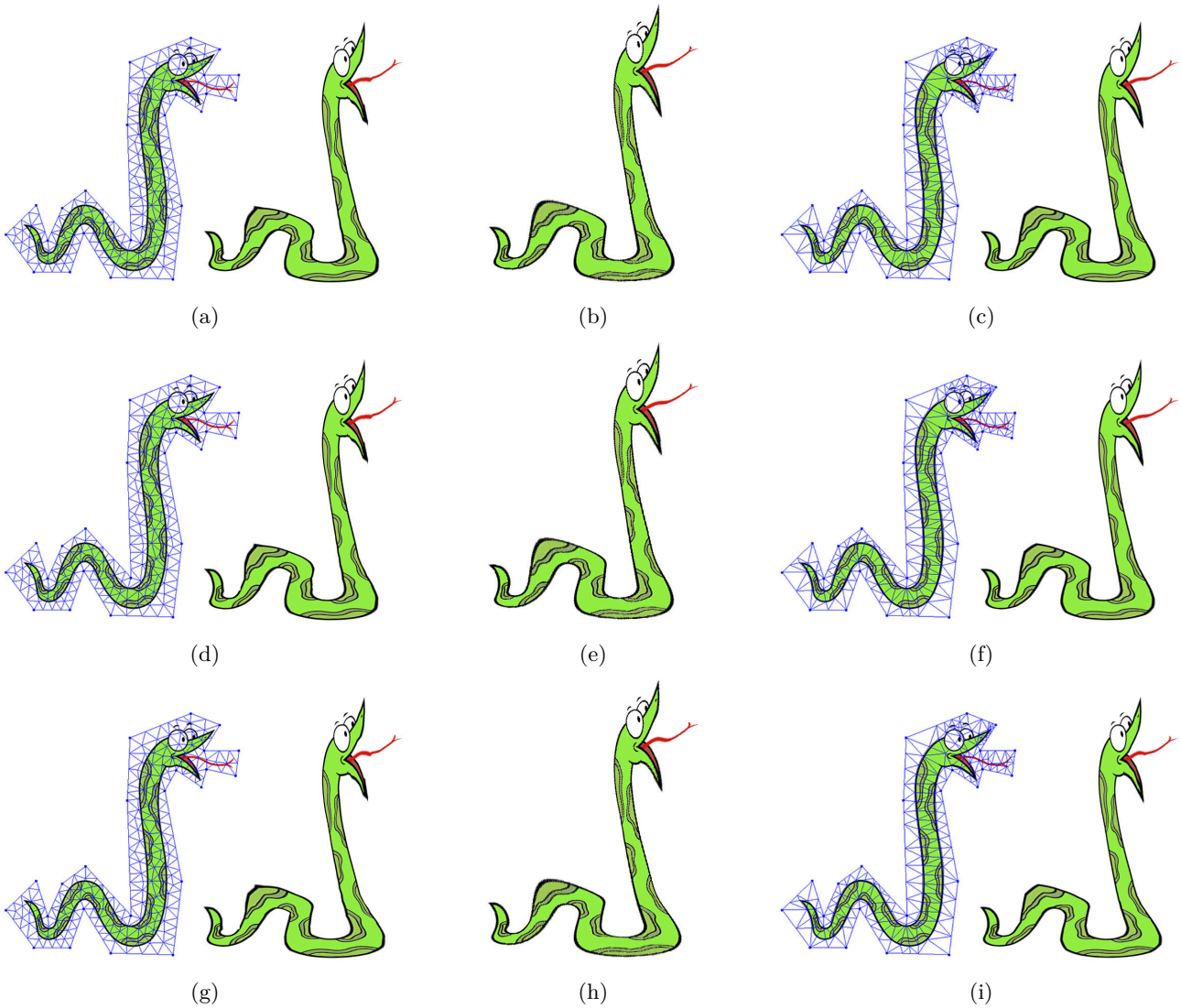

Figure 1: Input images and deformation results with uniform Delaunay triangulation (a, d, g) and our non-uniform one (c, f, i). The reference resulting images (b, e, h) are in the middle. Up to down, we used mean value, Poisson, and maximum entropy coordinate methods.

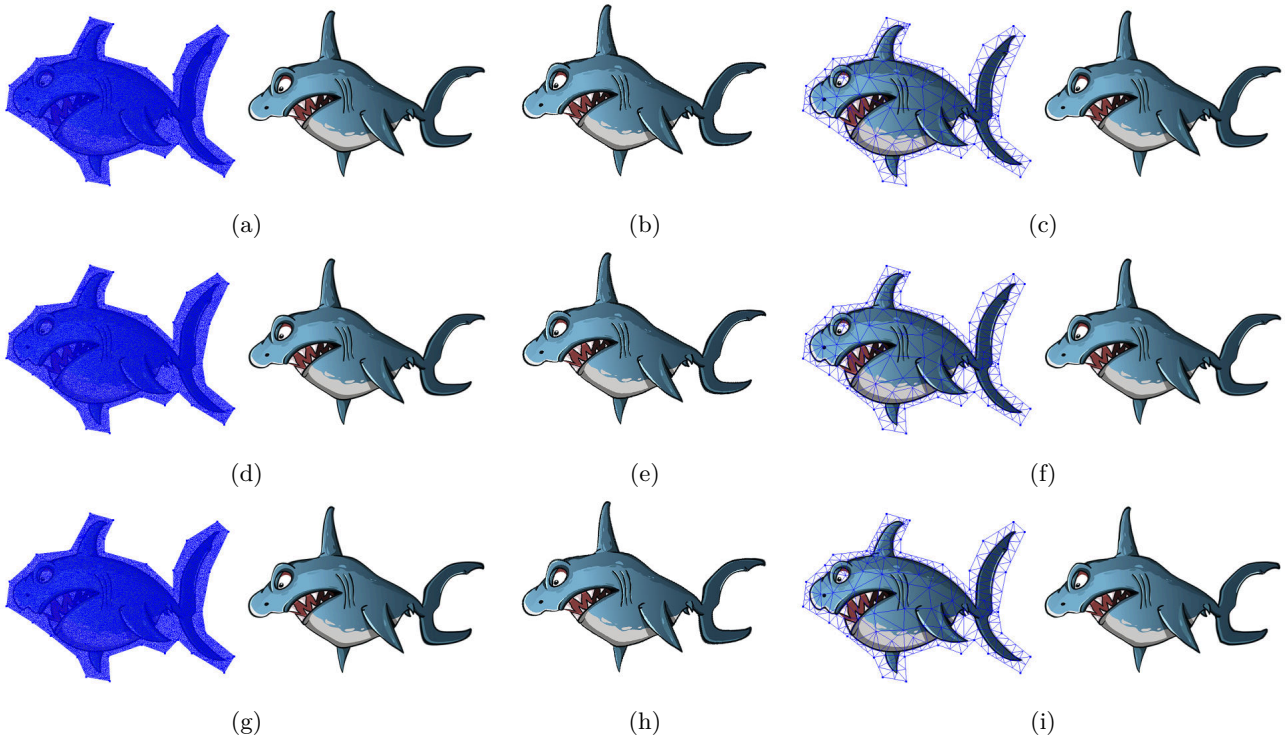

Figure 2: Input images and deformation results with uniform Delaunay triangulation (a, d, g) and our non-uniform one (c, f, i). The reference resulting images (b, e, h) are in the middle. Up to down, we used mean value, Poisson, and maximum entropy coordinate methods.

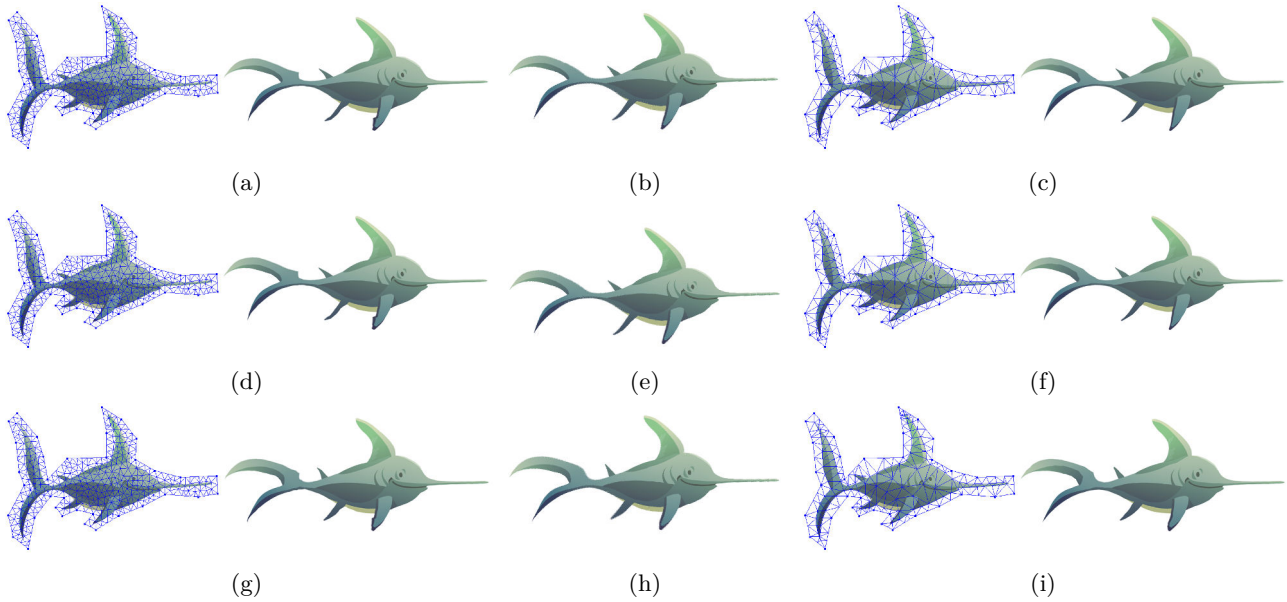

Figure 3: Input images and deformation results with uniform Delaunay triangulation (a, d, g) and our non-uniform one (c, f, i). The reference resulting images (b, e, h) are in the middle. Up to down, we used mean value, Poisson, and maximum entropy coordinate methods.

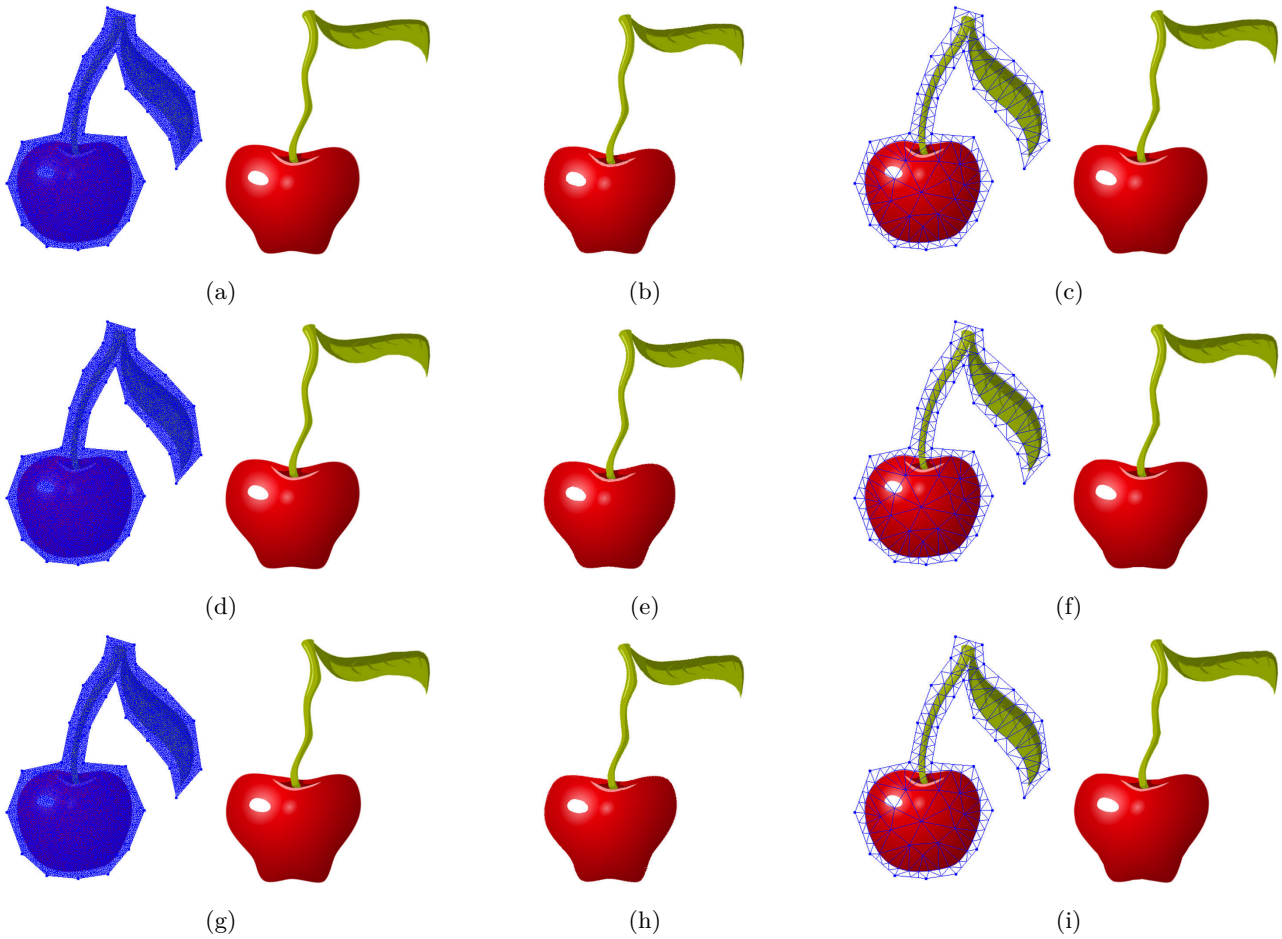

Figure 4: Input images and deformation results with uniform Delaunay triangulation (a, d, g) and our non-uniform one (c, f, i). The reference resulting images (b, e, h) are in the middle. Up to down, we used mean value, Poisson, and maximum entropy coordinate methods.

		Snake		Shark		Swordfish		Cherry	
		uniform	non-uniform	uniform	non-uniform	uniform	non-uniform	uniform	non-uniform
Triangles	MV	345	334	33035	375	617	298	20310	278
	P	345	329	33035	375	617	298	20310	278
	ME	345	328	33035	387	617	316	20310	278
Computation time (s) of the triangulation	MV	0.001	0.001	2.341	0.001	0.002	0.001	0.881	0.001
	P	0.001	0.001	2.341	0.001	0.002	0.001	0.874	0.001
	ME	0.001	0.001	2.351	0.001	0.002	0.001	0.885	0.001
Computation time (s) of the coordinates	MV	0.002	0.002	0.026	0.001	0.003	0.001	0.014	0.001
	P	0.002	0.001	0.254	0.003	0.003	0.001	0.198	0.002
	ME	0.002	0.001	0.291	0.003	0.003	0.001	0.16	0.002
SSIM	MV	0.972854	0.972925	0.978425	0.973608	0.986987	0.987197	0.992694	0.990142
	P	0.972968	0.972295	0.978179	0.973341	0.986878	0.987312	0.992749	0.990369
	ME	0.974186	0.969118	0.977952	0.973507	0.987749	0.987315	0.992811	0.990366

MV - mean value, P - Poisson, ME - maximum entropy

Table 1: The comparison of uniform Delaunay and our non-uniform triangulation using different coordinate methods.

Figure 5: Larger input images and deformation results with uniform Delaunay triangulation (first images in the first and third rows) and our non-uniform one (first images in the second and fourth rows), while their deformation results using mean value coordinates in the second column. The input images are designed by Freepik.

	Elephant		Bat	
	uniform	non-uniform	uniform	non-uniform
Triangles	80350	2051	52720	1830
Computation time (s) of the triangulation	93.837	0.015	40.26	0.012
Computation time (s) of the coordinates	0.216	0.005	0.081	0.003

Table 2: The comparison of uniform Delaunay triangulation and our non-uniform one on larger images, using mean value coordinates.

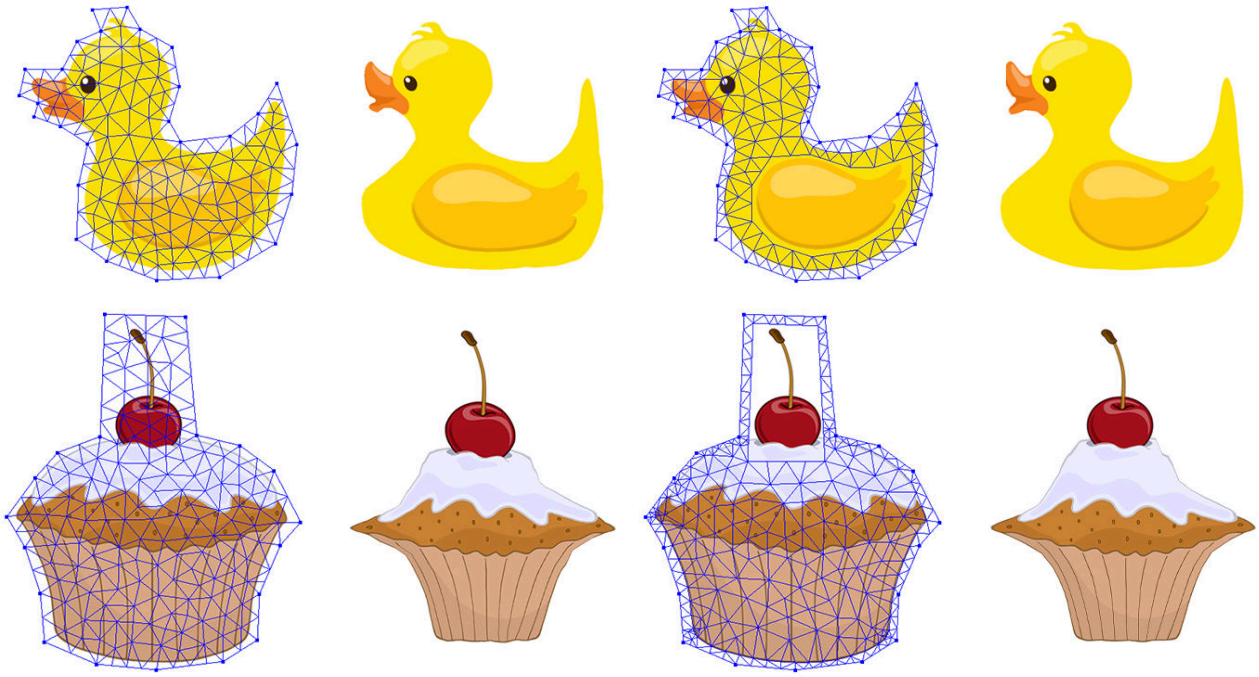

Figure 6: Input images with generated meshes with and without holes, and their deformation results using mean value coordinates. In the first row, the image is designed by Freepik.