

Erratum:

Implicit UVs: Real-time semi-global parameterization of implicit surfaces

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Blended uv algorithm The final line of Algorithm 2 (Compute blended uv from an atlas) contains an omission. As published, the algorithm returns

$$\frac{L + w_{i^*} L^*}{W + w_{i^*}},$$

where L^* is the (offset-free) log-map coordinate of the query point x with respect to the geodesic-nearest seed p_{i^*} , and L accumulates the neighbor contributions, each already including its own uv-offset:

$$L += w_{j,i^*}(L_j + u_j), \quad j \in \text{Neighbors}(E, i^*).$$

This is inconsistent: every neighbor term in the sum carries its uv-offset u_j , but the self term $w_{i^*}L^*$ does not carry u_{i^*} . The corrected final line should read

$$\frac{L + w_{i^*}(L^* + u_{i^*})}{W + w_{i^*}},$$

which is consistent with Eq. (37) in the main text,

$$u(x) = \frac{\sum_{i=1}^n w_i(x) (\text{Log}_{p_i}^{\text{uv}}(x) + u_i)}{\sum_{i=1}^n w_i(x)},$$

in which every contributing seed's term, including the geodesic-nearest one, is offset by its own u_i before being weighted into the sum.

Adaptive time step. The published time-step formula (Eq. 34), $\tau_i = \sqrt{2 \left(\sqrt{1 + s_i^2 \alpha^2} - 1 \right) / \alpha^2}$, is a 0/0 indeterminate as $\alpha \rightarrow 0$ and thus numerically unstable for small α , requiring a special case ($\tau_i \approx s_i$) to be handled explicitly. Rationalizing the numerator yields the algebraically equivalent but unconditionally stable form

$$\tau_i = s_i \sqrt{\frac{2}{1 + \sqrt{1 + s_i^2 \alpha^2}}},$$

which reduces continuously to $\tau_i = s_i$ on flat regions ($\alpha \rightarrow 0$) with no branching. We use this form in our implementation.

Simpson's rule. The published Simpson approximation of the segment length omitted the coefficient 4 on the midpoint term; it should read $\frac{\tau}{6}(\|\dot{\gamma}(0)\| + 4\|\dot{\gamma}(\frac{\tau}{2})\| + \|\dot{\gamma}(\tau)\|)$.

Robot model artist name. I mistakenly wrote that the artist who created the robot model was named "Julien Dupont", when his name is actually "Lucien Dupont". I sincerely apologize for the mistake.

Figure 4. Figure 4 was ugly, I remade it.

Acknowledgment. Many thanks to Nick Edelhäuser for asking me why his implementation did not work.