

Biarc Approximation

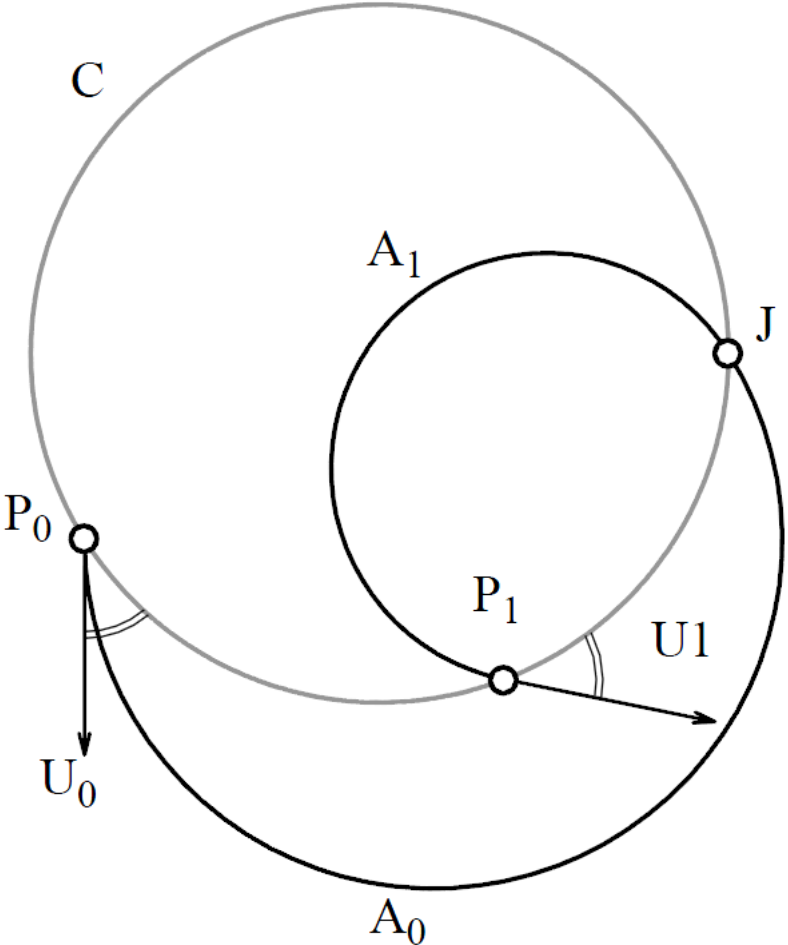
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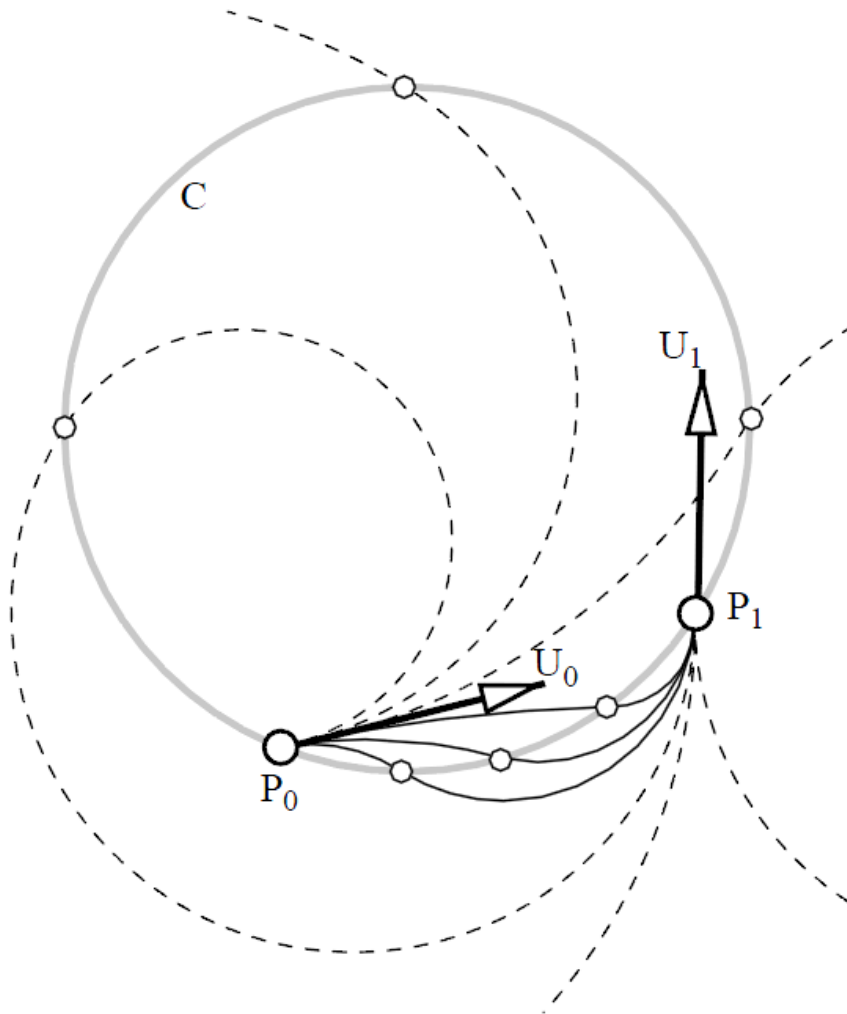
<http://cse.snu.ac.kr/mskim>

<http://3map.snu.ac.kr>

Biarc (black) and Joint Circle (gray)



Biarc Interpolating G1 Data



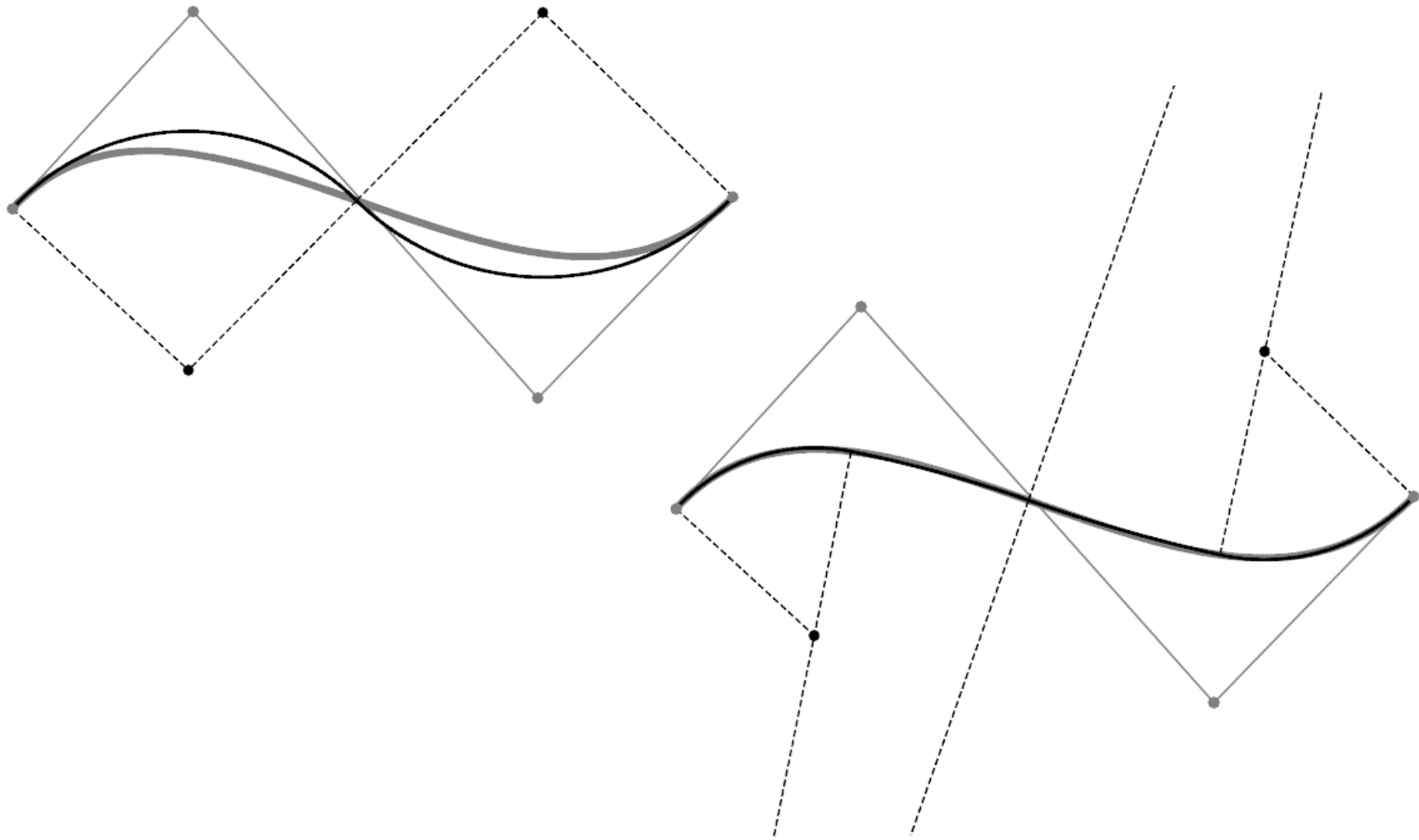
$$\mathbf{P}_0 = \mathbf{c}(t_0)$$

$$\mathbf{U}_0 = \frac{\mathbf{c}'(t_0)}{\|\mathbf{c}'(t_0)\|}$$

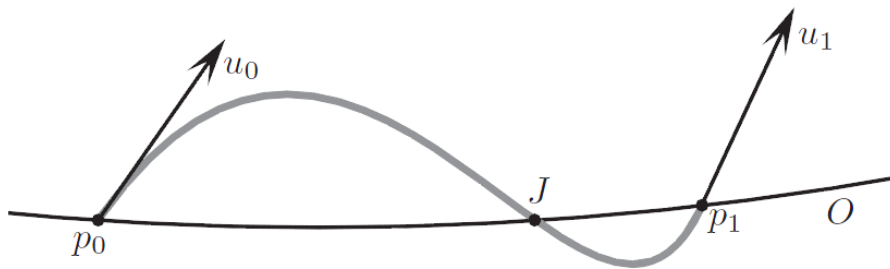
$$\mathbf{P}_1 = \mathbf{c}(t_1)$$

$$\mathbf{U}_1 = \frac{\mathbf{c}'(t_1)}{\|\mathbf{c}'(t_1)\|}$$

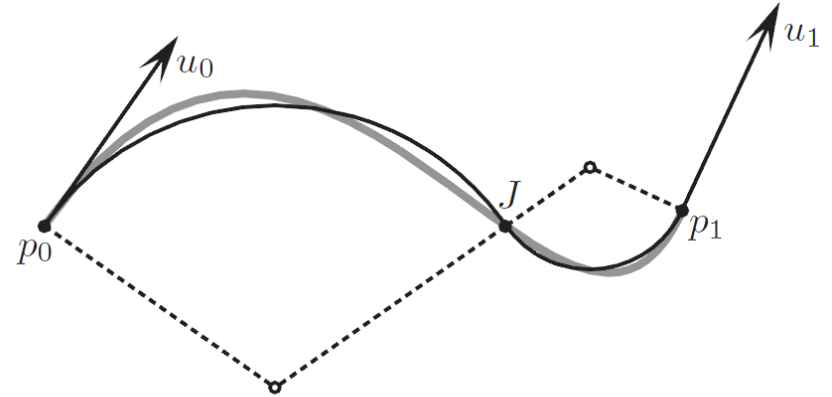
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Biarc Construction



(a)



(b)

Biarc construction: (a) the locus of all possible joints \mathbf{j} forms a circle O that intersects the given curve at a point \mathbf{j} , and (b) a pair of G^1 arcs interpolating the end conditions and meeting at the joint \mathbf{j} .

Distance Map for Circular Arcs

