Ábrego, B. M.; **Cetina, M.**; **Leaños, J.**; **Salazar, G.**

Visibility-preserving convexifications using single-vertex moves. (English) Zbl 1237.68234

Inf. Process. Lett. 112, No. 5, 161-163 (2012).

Summary: Devadoss asked: (1) can every polygon be convexified so that no internal visibility (between vertices) is lost in the process? Moreover, (2) does such a convexification exist, in which exactly one vertex is moved at a time (that is, using single-vertex moves)? We prove the redundancy of the "single-vertex moves" condition: an affirmative answer to (1) implies an affirmative answer to (2). Since Aichholzer et al. recently proved (1), this settles (2).

MSC:

68U05 Computer graphics; computational geometry (digital and algorithmic aspects)

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Keywords:

computational geometry; convexification; visibility; visibility-maintaining; visibility-preserving; polygon; single-vertex moves

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