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Polygonal paths of bounded curvature

We present an elementary and purely geometric proof of a characterization result, analogous to the classical result of Dubins, for minimum length *polygonal* paths satisfying a new sharpness-of-turn constraint. This provides a discrete analogue of continuous motion of bounded curvature, and also gives a fundamentally new proof of Dubins' original result as a limiting case of our constructions.

[Joint work with Valentin Polishchuk, University of Helsinki]