A two dimensional lattice of knots by C_{2n}-moves

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Abstract. We consider a local move on a knot diagram, where we denote the local move by M. If two knots K_1 and K_2 are transformed into each other by a finite sequence of M-moves, the M-distance between K_1 and K_2 is the minimum number of times of M-moves needed to transform K_1 into K_2. A M-distance satisfies the axioms of distance. A two dimensional lattice of knots by M-moves is the two dimensional lattice graph which satisfies the following : The vertex set consists of oriented knots and for any two vertices K_1 and K_2, the distance on the graph from K_1 to K_2 coincides with the M-distance between K_1 and K_2, where the distance on the graph means the number of edges of the shortest path which connects the two knots. Local moves called C_n-moves are closely related to Vassiliev invariants. In this talk, we show that for any given knot K, there is a two dimensional lattice of knots by C_{2n}-moves ($n > 1$) with the vertex K.