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Bounding the tripartite-circle crossing number of complete tripartite graphs. Preliminary report.

A tripartite-circle drawing of the complete tripartite graph $K_{m,n,p}$ is a drawing in the plane, where each part of the vertex partition is placed on one of three disjoint circles, and the edges do not cross the circles. The tripartite-circle crossing number $\text{cr}_{c3}(K_{m,n,p})$ of $K_{m,n,p}$ is the minimum number of crossings among all tripartite cylindrical drawings of $K_{m,n,p}$. We bound $\text{cr}_{c3}(K_{m,n,p})$ and $\text{cr}_{c3}(K_{n,n,n})$. (Received September 24, 2018)