

1106-VN-1873 **Kim A. S. Factor*** (kim.factor@marquette.edu), Milwaukee, WI 53201. *Complete (i,j)-domination graphs of tournaments*. Preliminary report.

Domination in graphs has been popular for decades and sports a large following. From the graph-based domination grew domination graphs, founded upon the idea of domination between vertices in a digraph. In the spirit of the initial link between domination and domination graphs, in 2010 Factor and Langley extended the idea of (i, j) -domination in graphs (Hedetniemi *et al.*) to domination graphs. Given a digraph D , the (i, j) -domination graph of D , $\text{dom}_{i,j}(D)$, has the same vertex set as D with edge uv if for every vertex z in $\mathcal{V}(D) - \{u, v\}$, u reaches z in at most i steps and v reaches z in at most j steps. Results have been found for tournaments with specific values of i and j . Here, a combinatorial approach is taken and the minimum values of i and j are determined for certain classes of tournaments for which an (i, j) -domination graph exists that is a complete graph. (Received September 15, 2014)