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Chris Caragianis* (cjcara01@louisville.edu). *Performance of covert networks*. Preliminary report.

The social structure of an covert organization can be modeled with a graph- placing edges between individuals with direct knowledge of one another. Which graphs best balance the need for secrecy with the need for efficient transmission of information? At the 24th Cumberland Conference, Doty introduced a toughness-like measure for covert network performance and conjectured on the best performing trees. We prove Doty's conjecture and describe infinite families that achieve the best possible order of growth for general graphs. (Received September 12, 2011)