Abstract

We study a game between a network designer, who uses costly links to connect nodes in a network, and a network disruptor who tries to disrupt the resulting network as much as possible by deleting either nodes or links. For low linking costs networks with all nodes in symmetric positions are a best response of the designer under both link deletion and node deletion. For high linking costs the designer builds a star network under link deletion, but for node deletion excludes some nodes from the network to build a smaller but stronger network. For intermediate linking costs the designer again builds a symmetric network under node deletion but a star-like network with symmetric weak spots under link deletion.