Abstract—Gold farming is a set of their practices in which players in massively multiplayer online games gather and distribute virtual goods for real money. Using anonymized data from a popular online game to construct networks of characters involved in gold farming, we examine the trade networks of gold farmers, their trading affiliates, and monetized characters at large. Our analysis of these complex networks’ connectomes, assortativity, and stock exchange indicate that farmers exhibit distinctive behavioral signatures which are marked by transactional affinities. Our findings are compared against a real world using trafficking network, and suggest similarities in both organizations’ network structures which reflect similar effects of secrecy, resilience, and efficiency.

Keywords — dark networks, network analysis, online games, MMOG, MMOGIP, EverQuest 2, gold farming, and money trade, cybercrime, data, scale-free, assortativity, attack tolerance

potential source. These large-scale social environments contain players of varying levels of expertise who join cooperative teams to accomplish complex tasks [6, 7]. To the extent that individuals in online virtual worlds engage in similar psychological, social, and economic behavior as they do in the "real" world, player activity in virtual worlds can potentially be translated to understand risk world social distances [8]. However, because the organizations that operate MMOGs maintain archival databases of all players across accounts, it is possible to analyze comprehensive cross-sectional and longitudinal behavioral data on a scale that was unattainable, unobservable, or impossible to do in the real world.

Using a combination of comprehensive, unreported obtained behavioral data and methods as network analysis, we examine the coordination structures and dynamics of a dark network of any particular area of Virtual Location on MMOG IPs.