

Process Query Systems for Cartel Detection

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Price fixing agreements between large corporations is a notoriously difficult problem to detect as no stone is left unturned to keep these agreements secret. Often, little-known connections between senior officers in these organizations are used to arrange meetings to discuss pricing fixing, territories assignments, and other practices contrary to free market competition. Any hope of detection will therefore depend on the strategic analysis of massive quantities of data which is noisy and incomplete. Process Query Systems (PQS) are a new and novel approach to solving large data analysis problems by defining the search queries as process descriptions. PQS has proven to be a powerful tool in a wide number of areas, such as the detection of malicious patterns in social networks, and the tracking of complex computer network attacks. This presentation will discuss the merits of the PQS approach by analyzing previous successful applications, including the detection of large scale corporate fraud, and speculating how an PQS based application would help in the monitoring of communication patterns that are typical for collusion.