

ABSTRACT

Described are a system, method, and computer program product for real-time automated teller machine (ATM) fraud detection and prevention. The method includes receiving transaction data of a plurality of transactions in real-time during processing at a transaction service provider system. The method further includes storing the transaction data in a distributed cache and receiving a transaction request for a user transaction at an ATM using a payment device. The method further includes modifying a profile of ATM activity stored in the distributed cache and comparing at least one metric of the profile to at least one predetermined ATM activity threshold. The method further includes activating a fraud prevention operation before the user transaction is completed at the ATM, including declining the user transaction, disabling a transaction account, communicating an alert to an issuer, or any combination thereof.

<Figure 1>