

DEMAND PREDICTION FOR TIME-EXPIRING INVENTORY

ABSTRACT

This disclosure includes methods for predicting demand based on the price of a time-expiring inventory. An online system provides a connection between a manager of a time-expiring inventory and a plurality of clients. The online system provides a listing for the manager's time-expiring inventory to clients on the online system. The manager specifies the price of the time-expiring inventory in the listing and is presented with price tips generated by the online system. A demand function predicts the demand for the time-expiring inventory based on features of the listing and the time-expiring inventory. A manager option function predicts the likelihood of acceptance of a price tip by the manager. The online system uses the demand function and the manager option function to create a Monte Carlo pricing model to provide to the manager price tips for the listing.

[FIG. 10]