SYSTEMS AND METHODS FOR QUANTIFYING TEMPORAL FAIRNESS ON ELECTRONIC TRADING VENUES

ABSTRACT OF THE DISCLOSURE

A system and method is disclosed for quantifying temporal fairness on an electronic trading venue as a scalar value with unit time. The system may, for an instrument traded on the venue, construct some pluralities of time deltas associated with each pair of market participants in a plurality of such that are active on the instrument. The system may populate these pluralities of time deltas by determining the amount of time that elapses between when the first and second participant in a pair each send (or are sent) a similar message to (or from) the venue. Through analysis of these pluralities of time deltas the system may find two minimum values, f_{ords} and $f_{mktdata}$, the sum of which may quantify temporal fairness for the instrument on the venue. The resultant sum may inform the value of a latency floor deployed for the instrument on the venue.

(Fig. 1)