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(54) Title: COMPUTER SYSTEM AND METHOD FOR DETERMINING RELIABLE VEHICLE CONTROL INSTRUCTIONS

(57) Abstract: Computer system (100), computer-implemented method and computer program product for providing SPaT messages for influencing operation of a vehicle. The system receives signal state data from a controller controlling one or more signal groups (S1 to S4) of a traffic light system, with current signal state (SD*) of respective signal groups (S*), and information about the time interval (Te*) which has elapsed since the last state switch of respective signal groups (S*). A feature vector (FV) is generated with a first value indicating the elapsed time (T*p) since the latest switch of the respective signal group (S*) to a pass-state, and a second value indicating the elapsed time (T*s) since the latest switch of the respective signal group (S*) to a stop-state. Based on the current feature vector, a quantile regression neural network (130) predicts, for at least one of the one or more signal groups (S1 to S4) a low conditional quantile (Ql) representing the minimum-end-time (ETmin), a medium conditional quantile (Qm) representing the likely-time (Tl) and a high conditional quantile (Qh) representing the maximum-end-time (ETmax) for respective signal groups (S1 to S4). A SPaT message (402) which includes the predicted minimum-end-time (ETmin), likely-time (Tl), and maximum-end-time (ETmax) of the respective signal groups (S1 to S4) is provided to a receiving device associated with the vehicle (401, 501).

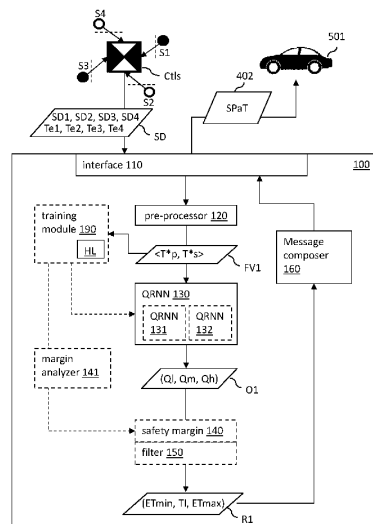


FIG. 1