Claims

1. A communications server apparatus for estimated time of arrival (ETA) estimation for a delivery trip, the communications server comprising a processor and a memory, the communications server apparatus being configured, under control of the processor, to execute instructions stored in the memory, to:

determine an ETA for the delivery trip;

determine a level of confidence for the ETA;

determine a delivery time threshold based on a delivery distance for the delivery trip;

determine a customer sensitivity factor based on historical transaction data for a user related to the delivery trip; and

determine an ETA buffer time based on the level of confidence, the delivery time threshold and/or the customer sensitivity factor.

2. The server apparatus of claim 1 wherein the level of confidence is based on a comparison to historical delivery trip data.

3. The server apparatus of claim 2 wherein the historical delivery trip data includes separate single trip delivery data and batched trip delivery data, and the determining the level of confidence includes determining a probability that the delivery trip will be a batched trip compared to the probability that the delivery trip will be a single trip.

4. The server apparatus of any preceding claim wherein the customer sensitivity factor is based on any patterns in relation to that user's behaviour in respect of previous orders and published ETAs for those corresponding previous orders.

5. The server apparatus of claim 4 wherein the behaviour includes analysing the user's historical proposed orders, in particular analysing instances where the user declined the order after being informed of the ETA.

6. The server apparatus of any preceding claim wherein the communications server apparatus is further configured to optimise a model for determining an ETA buffer time.

7. The server apparatus of claim 6 wherein the communications server apparatus is further configured to optimise the model based on maximising an objective function.

8. The server apparatus of claim 7 wherein the communications server apparatus is further configured to optimise further models for determining an ETA buffer time based on an Exploitation model or an Exploration model.

9. The server apparatus of claim 8 wherein the communications server apparatus is further configured to test the further models using a small number of delivery trips, and if they prove successful, replacing the model with one of the further models.

10. A method performed in a communications server apparatus for data aggregation, the method comprising, under control of a processor of the communications server apparatus, comprising:

determining an estimated time of arrival (ETA) for the delivery trip;

determining a level of confidence for the ETA;

determining a delivery time threshold based on a delivery distance for the delivery trip;

determining a customer sensitivity factor based on historical transaction data for a user related to the delivery trip; and

determining an ETA buffer time based on the level of confidence, the delivery time threshold and/or the customer sensitivity factor.

11. A computer program or computer program product comprising instructions for implementing the method of claim 10.

12. A non-transitory storage medium, storing instructions, which when executed by a processor, causes the processor to perform the method of any of claim 10.

13. A user communications device for communicating with an e-commerce server comprising a processor and a memory, the communications device being configured, under control of the processor, to execute instructions stored in the memory to:

request the e-commerce server to provide an estimated delivery time (ETA) for a proposed transaction;

receive the ETA, including an ETA buffer time based on any patterns in historical proposed orders that the user had rejected; and

send a payment authorisation request for the transaction if the user accepts the ETA.

14. An e-commerce server payment system, comprising:

a communications server;

at least one driver communications device;

at least one user communications device; and

a communications network equipment configured for the communications server, the at least one driver communications device, and the at least one user communications device, to establish communication with each other therethrough;

wherein the driver communications device comprises a first processor and a first memory, the driver communications device being configured, under control of the first processor, to execute first instructions stored in the first memory to:

send data regarding the driver's location;

and wherein the communications server comprises a second processor and a second memory, the communications server being configured, under control of the second processor, to execute second instructions stored in the second memory to:

receive a proposed new transaction,

estimate an estimated time of arrival (ETA) for the proposed new transaction based on the data regarding the driver's location, including an ETA buffer time based on any patterns in historical proposed orders that the user had rejected, and

if the user accepts the estimated ETA, receive a payment authorisation request for the transaction; and

wherein the user communications device comprises a third processor and a third memory; the user communications device being configured, under control of the third processor, to execute third instructions stored in the third memory to:

receive a payment authorisation if the transaction has been approved.

15. A method, performed in an e-commerce server, the method comprising, under control of processors for one or more server instances:

receiving a proposed new transaction;

estimating an estimated time of arrival (ETA) for the proposed new transaction, including an ETA buffer time based on any patterns in historical proposed orders that the user had rejected; and

receiving a payment authorisation request for the transaction if the user accepts the estimated ETA.

16. A computer program or computer program product comprising instructions for implementing the method of claim 15.

17. A non-transitory storage medium storing instructions, which when executed by a processor, causes the processor to perform the method of claim 15.