CLAIMS

1. A method of setting a fee surge for a supply area comprising:

determining the fee surge based on the supply area;

determining a first rate using a first number of fulfilled requests at a respective first fee surge during a first set of time intervals;

determining a second rate using a second number of fulfilled requests at a respective second fee surge during a second set of time intervals;

determining a historical allocation rate using a weighted function of the first rate and the second rate;

determining a surge lower bound based on the historical allocation rate;

comparing the fee surge with the surge lower bound for the supply area; and

setting the fee surge as the surge lower bound, upon determining that the fee surge is lower than the surge lower bound.

2. The method of claim 1, wherein the first set of time intervals has a first characteristic similar to a time interval of interest, and the second set of time intervals has a second characteristic similar to the time interval of interest, wherein the first characteristic differs from the second characteristic.

3. The method of claim 1 or claim 2, wherein the first rate is determined, based on a determination of a first average of percentages of the first number of fulfilled requests out of a total number of first requests across all time intervals in the first set of time intervals; and wherein the second rate is determined, based on a determination of a second average of percentages of the second number of fulfilled requests out of a total number of second requests across all time intervals in the second set of time intervals.

4. The method of claim 1 or 2, wherein the first rate is determined, based on a determination of a percentage of the first number of fulfilled requests out of a total number of first requests across all time intervals in the first set of time intervals; and

wherein the second rate is determined, based on a determination of a second percentage of the second number of fulfilled requests out of a total number of second requests across all time intervals in the second set of time intervals.

5. The method of any one of claims 2 to 4, further comprising:

determining a third rate using a third number of fulfilled requests at a respective third fee surge during a third set of time intervals; and

determining the historical allocation rate using the weighted function of the first rate, the second rate and the third rate.

6. The method of claim 5, wherein the third set of time intervals has a third characteristic similar to the time interval of interest, wherein the third characteristic differs from the first characteristic and the second characteristic.

7. The method of any one of claims 1 to 6, wherein the surge lower bound for the supply area is determined as a minimum of the first and second fee surges corresponding to the historical allocation rate above a percentile threshold.

8. The method of claim 7, wherein the percentile threshold ranges from 10 % to 80 %.

9. The method of any one of claims 1 to 8, wherein the supply area comprises a location at which an on-demand service is required, and wherein the supply area is determined using a map.

10. The method of claim 9, wherein the on-demand service comprises an on-demand transportation service.

11. The method of claim 9 or claim 10, wherein the map comprises a plurality of geohashes and wherein the supply area is determined as the geohash within which the location at which the on-demand service is required.

12. The method of claim 11, wherein determining the fee surge based on the supply area comprises:

periodically determining for the geohash, a surge value determined at a particular time point based on a number of available providers computing devices associated with service providers available to provide the on-demand service and located within the geohash at the particular time point;

setting the fee surge based on the supply area as the most recently determined surge value for the supply area.

13. The method of claim 9 or claim 10, wherein the supply area comprises an area having a particular dimension and centered around the location at which the on-demand service is required, and wherein the supply area is determined based on a size parameter indicative of a particular dimension of the supply area.

14. The method of claim 13, wherein determining the fee surge based on the supply area comprises:

determining, a number of available provider computing devices associated with service providers available to provide the on-demand service and located within the supply area;

determining, a surge value based on the number of available provider computing device; and

setting the fee surge as the surge value.

15. The method of claim 13 or claim 14, wherein the supply area is a circular area and the size parameter indicates a radius of the supply area.

16. The method of claim 12 or claim 14, wherein the surge value at which the fee surge is set as, is determined using a weighted function of the number of available provider computing devices; wherein the weighted function comprises weights associated with respective available provider computing devices, each weight being related to a distance between a location of the associated available provider computing device and a center of the supply area.

17. A system configured to set a fee surge for a supply area, the system comprising:

a plurality of respective requestor computing devices, associated with respective service requestors, configured to send a plurality of requests for an on-demand service; and

a server comprising one or more processor(s) configured to:

receive the plurality of requests for the on-demand service from the plurality of respective requestor computing devices;

determine the supply area based on the plurality of requests for the on-demand service;

determine the fee surge based on the supply area;

determine a first rate using a first number of fulfilled requests at a respective first fee surge during a first set of time intervals;

determine a second rate using a second number of fulfilled requests at a respective second fee surge during a second set of time intervals;

determine a historical allocation rate using a weighted function of the first rate and the second rate;

determine a surge lower bound based on the historical allocation rate;

compare the fee surge with the surge lower bound for the supply area; and

set the fee surge as the surge lower bound, upon determining that the fee surge is lower than the surge lower bound.

18. The system according to claim 17, further comprising: a plurality of provider computing devices, associated with respective service providers, configured to send service provider data, and

the server is further configured to: communicate the fee surge to the respective requestor computing device and to the respective provider computing device for the associated service requestor and the associated service provider to indicate whether to accept provision of the on-demand service at the fee surge.

19. The system according to claim 18, wherein the server is further configured to: allocate the associated service provider to fulfil the request at the fee surge upon receiving indication that both the associated service requestor and the associated service provider accept the provision of the on-demand service at the fee surge.

20. A server configured to set a fee surge for a supply area, the server comprising one or more processor(s) configured to:

determine the fee surge based on the supply area;

determine a first rate using a first number of fulfilled requests at a respective first fee surge during a first set of time intervals;

determine a second rate using a second number of fulfilled requests at a respective second fee surge during a second set of time intervals;

determine a historical allocation rate using a weighted function of the first rate and the second rate;

determine a surge lower bound based on the historical allocation rate;

compare the fee surge with the surge lower bound for the supply area; and

set the fee surge as the surge lower bound, upon determining that the fee surge is lower than the surge lower bound.

21. The server of claim 20, wherein the first set of time intervals has a first characteristic similar to a time interval of interest, and the second set of time intervals has a second characteristic similar to the time interval of interest, wherein the first characteristic differs from the second characteristic.

22. The server of claim 20 or claim 21, wherein the first rate is determined, based on a determination of a first average of percentages of the first number of fulfilled requests out of a total number of first requests across all time intervals in the first set of time intervals; and wherein the second rate is determined, based on a determination of a second average of percentages of the second number of fulfilled requests out of a total number of second requests across all time intervals in the second set of time intervals.