CLAIMS

1. A server configured to determine a fee surge for an on-demand service, the server comprising:

one or more processor(s) configured to receive a plurality of requests for the on-demand service from respective requestor computing devices associated with respective service requestors and further configured to receive service provider data from a plurality of provider computing devices associated with respective service providers; and

a memory comprising a size parameter, a map and instructions stored therein, the instructions when executed by the one or more processor(s), cause the one or more processor(s) to perform the following upon receiving each request for the on-demand service:

determine, from the request for the on-demand service, a location where the on-demand service is required;

determine, using the map and the size parameter stored in the memory, a supply area having a particular dimension indicated by the size parameter and centered around the location where the on-demand service is required;

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

determine a surge value based on the number of available provider computing devices and set the fee surge as the surge value;

communicate the fee surge to the respective requestor computing device and to a provider computing device for the associated service requestor and the associated service provider to indicate whether to accept provision of the service at the fee surge; and

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 service at the fee surge,

wherein the one or more processor(s) further perform the following for each provider computing device associated with a service provider available to provide the on-demand service but located outside the supply area:

determine a distance between a boundary of the supply area and the provider computing device;

compare the distance with a distance threshold;

determine an estimated route of the provider computing device over multiple subsequent time instances;

compare the estimated route with the supply area; and

determine the provider computing device as an available provider computing device located within the supply area upon determining that the distance is lower than the distance threshold and that the estimated route intersects with the supply area.

2. The server of claim 1, wherein the supply area is a circular area and the size parameter stored in the memory indicates a radius of the supply area.

3. The server of claim 1 or 2, wherein the one or more processor(s) further perform the following:

compare the number of available provider computing devices located within the supply area with a maximum supply threshold; and

reduce a size of the supply area upon determining that the number of available provider computing devices located within the supply area is greater than the maximum supply threshold.

4. The server of any one of the preceding claims, wherein the surge value which the fee is set as, is determined using a weighted function of the number of available provider computing devices located within the supply area;

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.

5. The server of any one of the preceding claims, wherein the on-demand service comprises an on-demand transportation service.

6. A method of determining a fee surge for an on-demand service, the method comprising:

using one or more processor(s) of a server to:

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

receive service provider data from a plurality of provider computing devices associated with respective service providers; and

perform the following upon receiving each request for the on-demand service:

determine, from the request for the on-demand service, a location where the on-demand service is required;

determine, using a map and a size parameter stored in the memory, a supply area having a particular dimension indicated by the size parameter and centered around the location where the on-demand service is required;

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

determine a surge value based on the number of available provider computing devices and set the fee surge as the surge value;

communicate the fee surge to the respective requestor computing device and to a provider computing device for the associated service requestor and the associated service provider to indicate whether to accept provision of the service at the fee surge; and

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 service at the fee surge,

wherein the one or more processor(s) are used to further perform the following for each provider computing device associated with a service provider available to provide the on-demand service but located outside the supply area:

determine a distance between a boundary of the supply area and the provider computing device;

compare the distance with a distance threshold;

determine an estimated route of the provider computing device over multiple subsequent time instances;

compare the estimated route with the supply area; and

determine the provider computing device as an available provider computing device located within the supply area upon determining that the distance is lower than the distance threshold and that the estimated route intersects with the supply area.

7. The method of claim 6, wherein the supply area is a circular area and the size parameter stored in the memory indicates a radius of the supply area.

8. The method of claim 6 or 7, wherein the one or more processor(s) are used to further perform the following:

compare the number of available provider computing devices located within the supply area with a maximum supply threshold; and

reduce a size of the supply area upon determining that the number of available provider computing devices located within the supply area is greater than the maximum supply threshold.

9. The method of any one of claims 6 – 8, wherein the surge value which the fee is set as, is determined using a weighted function of the number of available provider computing devices located within the supply area;

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.

10. The method of any one of claims 6 – 9, wherein the on-demand service comprises an on-demand transportation service.

11. A non-transitory computer-readable medium storing computer executable code comprising instructions for determining a fee surge for an on-demand service according to any one of claims 6 – 10.

12. A computer executable code comprising instructions for determining a fee surge for an on-demand service according to any one of claims 6 – 10.