

**ABSTRACT**

A server configured to determine a fee surge for an on-demand service may include processor(s) that may perform the following upon receiving each request for the service: determine, from the request, a location where the service is required; determine, using a map and a size parameter from the memory, a supply area having a particular dimension indicated by the size parameter and centered around the location where the service is required; determine, using service provider data, a number of available provider computing devices 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 a provider computing device; and allocate the associated service provider to fulfil the request at the fee surge if both the service requestor and service provider accept the fee surge.

FIG. 3