

CLAIMS

1. A system for facilitating goods or service related activity comprising:

a database storing goods or service related information provided by at least one
5 provider; and

a processor operable to receive a request associated with the goods or service related activity from a requester;

wherein the processor is operable to analyse a plurality of routes that the at least one provider can provide the goods or service to the requester, using the goods or service
10 related information, in order to select at least one route among the plurality of routes, and match the requester with a provider associated with the selected route, and wherein the database includes a decentralized database, the decentralized database includes a distributed ledger.

15 2. The system according to claim 1, wherein the processor is operable to calculate costs for the plurality of routes based on the goods or service related information which is provided by the at least one provider.

3. The system according to claims 1 or 2, wherein the goods or service related
20 information include at least one of the following: producer related information, transmission related information or storage related information.

4. The system according to claim 2, wherein the costs are calculated based on the following mathematical expression:-

$$\min \sum_{i \in [n]} \left((P_i + P_{decay_i}) \times p_i + \sum_{j \in [k(i)]} (T_{loss_{ij}} \times p_{ij} + T_{cost_{ij}}) \right)$$

wherein $[n]=\{1,2,3,..(n-1),n\}$ is the set of providers, $[k(i)]$ is the set of connected transmission lines between the requester and the at least one provider, p is the unit price, P is the power source, T_{loss} is the power loss in a transmission line (ij) , T_{cost} is a cost of the transmission line (ij) , i belongs to the set $[n]$ i.e. $\{i\}$ is a non-empty subset of $[n]$, j belongs to the set $[k(i)]$ i.e. $\{j\}$ is a non-empty subset of $[k(i)]$, and P_{decay} is a power decay constant.

5. The system according to claim 2, wherein the processor is operable to list the plurality of routes that the at least one provider can provide the goods or service to the requester.

6. The system according to claim 5, wherein the processor is operable to sort the plurality of routes based on the goods or service related information associated with the request, in order to select the at least one route.

7. The system according to claim 6, wherein the processor is operable to filter the plurality of routes based on the goods or service related information associated with the request, in order to select the at least one route.

8. The system according to claims 7, wherein the processor is operable to provide the requester with options of routes so that the requester can select the at least one route.

9. The system according to claims 7, wherein the processor is operable to select the at least one route based on the analysis.

10. The system according to claim 9, wherein the processor is operable to send details of the selected route to the requester; and the requester is operable to send a confirmation of the selected route to the processor.

5 11. The system according to claims 8 or 10, wherein the processor is operable to reserve the goods or service related activity to the provider associated with the selected route.

10 12. The system according to claim 11, wherein the processor is operable to update the database to record the goods or service related activity.

13. The system according to claim 12, wherein the processor is operable to allow the requester to provide a feedback for the provider associated with the selected route, and record the feedback on the database.

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14. The system according to claim 1, wherein the distributed ledger comprises a plurality of blocks, and each block of the plurality of blocks stores the goods or service related information.

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15. The system according to claims 8 or 10, wherein the processor is operable to execute a smart contract between the requester and the provider associated with the selected route.

25 16. The system according to claim 1, wherein the request contains at least one of the following information: desired location, capacity, time or duration.

17. A method for facilitating goods or service related activity comprising:

storing goods or service related information provided by at least one provider;

receiving a request associated with the goods or service related activity from a

5 requester;

analysing a plurality of routes that the at least one provider can provide the goods or service to the requester, using the goods or service related information;

selecting the at least one route among the plurality of routes; and

matching the requester with a provider associated with the selected route,

10 wherein the database includes a decentralized database, the decentralized database includes a distributed ledger.

18. The method according to claim 17, wherein the step of analysing comprises a step of calculating costs for the plurality of routes based on the goods or service related

15 information which is provided by the at least one provider.