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Our Ref: AVEG01/C/EP

May 25, 2012

Re: EP Patent Application No. 08725447.0
O'SULLIVAN, SEAN

Dear Sirs,

This is in response to the Rule 80(2) and 70a(2) EPC Communication dated December 13, 2011.

Please find enclosed amended pages 4 and 61 – 64, and copies of these pages with the amendments highlighted.

Articles 123(2) and 84 EPC

The claims are amended to correct the deficiencies indicated in sections 2 and 3 of the above Communication. The apparatus is termed a “shared transport system” throughout, to avoid confusion with the “network of nodes” which it establishes. Also, the term “active monitoring system” has been used for the component which gathers data, for improved clarity.

The examiner is invited to contact the undersigned if there are any outstanding queries in this regard.

Articles 54 and 56 EPC

Claim 1 has been amended to include the subject matter of previous claim 2. Also, the scope of claim 17 (now 16) has been amended accordingly.

Importantly, in the revised independent claims 1 and 16, the system establishes a network of nodes which are pick-up or drop-off points. Also, the system abstracts geographic representation of a vehicle journey to nodes of this network. This is counter-intuitive because the prior art describes the very different approach of instructing the vehicle to drive to the location where the user happens to be located, akin to a taxi company. The invention achieves much more efficient processor operation because there are likely to be

much fewer network nodes in a city than addresses and hence the permutations for journeys are much fewer, by several orders of magnitude.

Referring for example to the abstract of D1, the prior approach involved: “..... *travellers must submit their itinerary requirements to the computer system.*” The computer system then “...*creates a customised road route for this transit vehicle so that each traveller thus grouped is picked up and conveyed exactly according to his itinerary*”. Please also refer to page 64 third paragraph, in which it is stated that the D1 approach is like that of a taxibus, and there is a fare increase for a “diversion time”. D1 is a very lengthy document and it taught the person of ordinary skill at the priority date to devise a shared transport system in such a manner, with routes being instructed in real time according to where the requesting traveller happens to be. D1 relies on supply of journey information in terms of an itinerary and driver navigational instructions (e.g. page 11, page 12 line 26, and page 14). Where D1 uses the term “Intelligent Grouping” it means use of a digitized map (page 14 lines 37 – 40).

Referring again to our claim 1, by abstracting geographical representations of vehicle journeys to nodes as claimed, the system can efficiently perform active monitoring and matching as claimed to match demand with capacity. Even as the system becomes very busy with many drivers and many travellers the computing is relatively straight-forward because of use of the established network of nodes. Also, even though the network of nodes is established, there is still flexibility because the system can automatically adapt to changing circumstances in a dynamic manner. In effect, the network of nodes established by the system uses the real-life movement of the vehicles by virtue of the abstracting step. The system can provide detailed information to prospective users in terms of these nodes, so that the user knows where to go for a drop-off or pick-up.

Further, by providing a network of nodes a computer can computationally generate useful information about the capabilities of the network, as illustrated for example in our Figs. 14 G, H, and I. Also please refer to Fig. 5A, third step, which shows the computer presenting route options in terms of the nodes. The following steps are much simpler computationally than if the driver needed to drive to a specific location provided by the passenger, and all of the consequent co-ordination required for any other passengers.

D2 is concerned with matching a driver's actual route with an existing database of car-pooler's requests for service. We have not found in this disclosure an established network of nodes

Document D3 is concerned with aspects such as fare payment, distance calculations and message analysis. It states in its abstract for example the records are produced according to requested drop-off points and pick-up points. Also, this document is concerned with optimizing the allocation of passengers to vehicles, based on payments and distances etc. It applies especially to public service operators managing rosters of passengers in a fleet of vehicles.

D4 is a general discussion about the benefits of ride-sharing without any suggestion of the claimed invention. It does not provide network definition or journey abstracting. It merely mentions zone-to-zone matching which does not involve a stream of nodes and would thus miss match any routes that were a superset of the nodes traversed in a path. It appears to us that it would therefore miss many potential matches that would be achieved with the invention. Also, it would not have the possibility of matching without requiring re-routing the driver, as zone-based matching would often require further co-ordination between the rider and the driver.

D9 concerns notification communication with "Mobile Things, MTs" and for example providing advertisements (Figs. 11 and 12). As demonstrated in Fig. 14B it relies on received data on individual MT journeys. It describes creating a roster of pick-up or drop-off activity for the benefit of a driver or transport operator. We have not found any disclosure of generating a transport network of nodes as claimed.

In summary, the prior approaches have all involved real time determining of where the traveller is to be picked up and giving instructions to the drivers accordingly, in a manner generally akin to a taxi company. There is no suggestion of the combination of the features of the amended claim 1, in which a network of nodes is established and journey abstracting, matching, and monitoring is performed.

The invention is much more suitable to the bottom-up creation of a general transport network (as shown in Figures 14G H I, rather than the prior approaches' focus on dispatching and optimization from the viewpoint of a single vehicle.

Further the subsidiary claims add several inventive features. For example referring to claims 8 and 9 there is continuous coordinated proximity monitoring, in which distances between a user and a vehicle is determined according to their communication devices, and using this to determines if a journey has ended. We have not found any disclosure or suggestion of this.

As we understand it this claim is allowable, however the examiner is invited to contact the undersigned at +353-23-8852144 if there are any outstanding queries. Also, the applicant hereby requests, in advance of any adverse decision being taken, in order of preference a telephone interview, a personal interview, or oral proceedings under Article 116 EPC.

The amendment to and/or deletion of the claims and specification should not be interpreted as abandonment of those claims or any subject matter and is without prejudice to re-instatement of those claims and subject matter or to the filing of a divisional patent application for those claims and subject-matter.

Yours sincerely,



MICHAEL WELDON
PROFESSIONAL REPRESENTATIVE

Encs.