Abstract: Systems, methods and devices for the automated retrieval/delivery of goods from one location to another using a robotic device such as a tug and accompanying cart. A computer within the tug/cart stores a map of the building floor plan and intended paths for the tug to take when traversing from one location to the next. During the delivery, a variety of different sensors and scanners gather data that is used to avoid obstacles and/or continuously adjust the movement of the tug in order to more closely follow the intended path. The system preferably includes wireless networks that allow one or more tugs to communicate with a tug base station, a primary network located at the site of the delivery and a remote host center that monitors the status and data collected by the tugs.
A  CLASSIFICATION OF SUBJECT MATTER
IPC(8): G06F 19/00 (2007.01)
USPC: 700/245
According to International Patent Classification (IPC) or to both national classification and IPC

B  FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
USPC  700/245

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC  700/258

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PUBWEST(USPT, PGPB, EPAB, JPAB), DialogPRO, WIPO, EPO, CITEDSEARCH, Google patents, Google scholar
Search Terms Used: robot, robotic vehicle, cart, ordering, delivery, tracking, retrieval, infrared, autonomous, independent, unmanned

C  DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
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<td>US 2004/0093650 A1 (MARTINS et al) 13 May 2004 (13 05 2004) entire document especially Fig 3a-3g, Fig 10, abstract, para [0014]-[0021], para [0044], para [0057]-[0059]</td>
<td>1-68</td>
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<td>A</td>
<td>US 4,674,048 A (OKUMURA) 16 June 1987 (16 06 1987) entire document</td>
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<td>US 4,750,123 A (CHRISTIAN) 7 June 1988 (07 06 1988) entire document</td>
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Further documents are listed in the continuation of Box C

Date of the actual completion of the international search
27 July 2007 (27 07 2007)

Date of mailing of the international search report
24 SEP 2007