Figure 4

(57) Abstract: Certain systems and methods herein are directed to features of accessing and/or improving building system efficiency, including aspects involving IoT (the Internet of things). For example, some embodiments may include features related to measuring occupant comfort, features related to conserving energy in heating and cooling, improving machine efficiency by increasing maintenance effectiveness, among many others. The safe fusion of sensor data from human devices, machines and space provides a new correlated collection of data for analysis and optimization of building control systems. Innovations herein may pertain, inter alia, to buildings including commercial, homes, industrial and transportation-oriented spaces such as ships, trains, airplanes, and mobile homes.
**INTERNATIONAL SEARCH REPORT**

**PCT/US 15/33626**

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(8) ... Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-8300

Form PCT/ISA/210£>econd sheet) (January 2015)

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - G06N 5/00, G06Q 5/006, G06Q 10/04 (2015.01)

CPC - H04Q 2209/40, H04Q 2209/82, G06Q 5/006, H04L 51/38, G06Q 10/04, G07C 5/008, H04W 84/18

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)

IPC(8) - G06N 5/00, G06Q 5/006, G06Q 10/04 (2015.01)

CPC - H04Q2209/40, H04Q2209/82, G06Q5/006, H04L51/38, G06Q10/04, G07C5/008, H04W84/18

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

IPC(8) - G06N 5/00, G06Q 5/006, G06Q 10/04 (2015.01); CPC - H04Q2209/40, H04Q2209/82, G06Q5/006, H04L51/38, G06Q10/04, G07C5/008, H04W84/18

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>US 2006/0176169 A1 (DOOLIN et al.) 10 August 2006 (10.08.2006), entire document</td>
<td>1</td>
</tr>
</tbody>
</table>

Several categories of cited documents:

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**Date of the actual completion of the international search**

31 August 2015 (31.08.2015)

**Date of mailing of the international search report**

18 SEP 2015

**Name and mailing address of the ISA/US**

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**Authorized officer:**

Lee W. Young

PCT Helpdesk: 571-272-4000

PCT GB: 571-272-7774

Patbase, Google, Google Patent

Search terms used: sensor mobile node analyze data code energy environment framework
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. □ Claims Nos.:
   because they relate to subject matter not required to be searched by this Authority, namely:

2. □ Claims Nos.:
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☑ Claims Nos.: 2-46
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

This International Searching Authority found multiple inventions in this international application, as follows:

1. □ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. □ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. □ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. □ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest
☐ The additional search fees were accompanied by the applicant’s protest and, where applicable, the payment of a protest fee.
☐ The additional search fees were accompanied by the applicant’s protest but the applicable protest fee was not paid within the time limit specified in the invitation.
☐ No protest accompanied the payment of additional search fees.