



- (51) International Patent Classification:
G06Q 10/08 (2012.01)
- (21) International Application Number:
PCT/US2012/030651
- (22) International Filing Date:
27 March 2012 (27.03.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
13/077,310 31 March 2011 (31.03.2011) US
- (71) Applicant (for all designated States except US):
NetCracker Technology Corp. [US/US]; University Office Park III, 95 Sawyer Road, Waltham, Massachusetts 02453 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SKIDANOV, Nikolay Sergeevich** [RU/RU]; Vilisa Lacisa str 11-3-21, Moscow, 125480 (RU). **EVSEEV, Oleg Sergeyevich** [RU/RU]; 52-4-1 Zuzinskaya Street, Moscow, 117418 (RU). **SLUCHANKO, Ksenia Alexeevna** [RU/RU]; Avtozavodskaya, 4/1 Apt 59, Zheleznodorozhny, Moscow (RU).
- (74) Agents: **BECK, George C.** et al.; Foley & Lardner LLP, 3000 K Street, NW, Suite 600, Washington, District of Columbia 20007 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))

[Continued on next page]

(54) Title: CABLE MANAGEMENT AND INVENTORY ENHANCEMENT

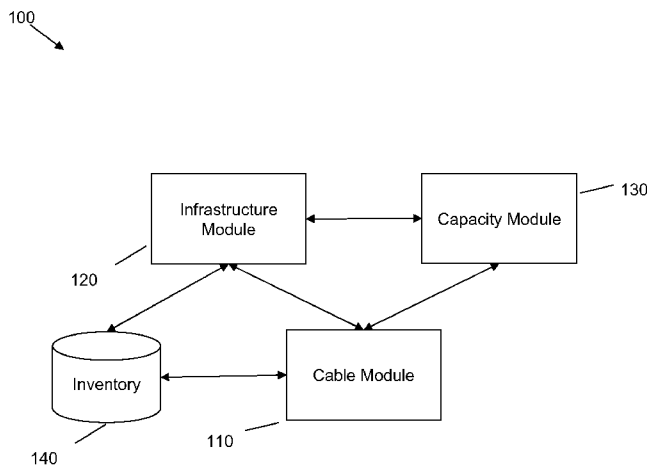


Fig. 1

(57) Abstract: A cable-management system that integrates management information about infrastructure into objects and provides a visualization of cable and inventory objects within a building. An embodiment of the present invention comprises a computer-implemented cable management system comprising a cable module configured to manage at least one cable object associated with at least one physical cable and to automatically synchronize cable availability information with at least one inventory database, an infrastructure module configured to manage at least one infrastructure object associated with a building layout, wherein attributes of the at least one infrastructure object are associated with the at least one cable object, and a capacity module configured to calculate at least one utilization value associated with the at least one infrastructure object, whereby the at least one utilization value, the at least one cable object, and the at least one infrastructure object are integrated into a visualization of the building layout.

WO 2012/135164 A3

(88) Date of publication of the international search report:
1 May 2014

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/030651

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G06Q 10/08 (2012.01) USPC - 705/28 According to International Patent Classification (IPC) or to both national classification and IPC</p>																				
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) IPC(8) - G06Q10/00, 10/06, 10/08 (2012.01) USPC - 705/1.1, 28, 29</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Patbase, Google Patents, Google.com</p>																				
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <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>Y</td> <td>US 2007/0090951 A1 (CHAN et al) 26 April 2007 (26.04.2007) entire document</td> <td>1-22</td> </tr> <tr> <td>Y</td> <td>US 2009/0216367 A1 (MEJOUDEV) 27 August 2009 (27.08.2009) entire document</td> <td>1-22</td> </tr> <tr> <td>A</td> <td>US 2003/0036983 A1 (HOUGEN et al) 20 February 2003 (20.02.2003) entire document</td> <td>1-22</td> </tr> <tr> <td>A</td> <td>US 2009/0136333 A1 (SCHAFER) 28 May 2009 (28.05.2009) entire document</td> <td>1-22</td> </tr> <tr> <td>A</td> <td>US 7,117,162 B1 (SEAL et al) 03 October 2006 (03.10.2006) entire document</td> <td>1-22</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	Y	US 2007/0090951 A1 (CHAN et al) 26 April 2007 (26.04.2007) entire document	1-22	Y	US 2009/0216367 A1 (MEJOUDEV) 27 August 2009 (27.08.2009) entire document	1-22	A	US 2003/0036983 A1 (HOUGEN et al) 20 February 2003 (20.02.2003) entire document	1-22	A	US 2009/0136333 A1 (SCHAFER) 28 May 2009 (28.05.2009) entire document	1-22	A	US 7,117,162 B1 (SEAL et al) 03 October 2006 (03.10.2006) entire document	1-22
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																		
Y	US 2007/0090951 A1 (CHAN et al) 26 April 2007 (26.04.2007) entire document	1-22																		
Y	US 2009/0216367 A1 (MEJOUDEV) 27 August 2009 (27.08.2009) entire document	1-22																		
A	US 2003/0036983 A1 (HOUGEN et al) 20 February 2003 (20.02.2003) entire document	1-22																		
A	US 2009/0136333 A1 (SCHAFER) 28 May 2009 (28.05.2009) entire document	1-22																		
A	US 7,117,162 B1 (SEAL et al) 03 October 2006 (03.10.2006) entire document	1-22																		
<p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/></p>																				
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </td> <td> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p> </td> </tr> </table>			<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>																
<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>																			
<p>Date of the actual completion of the international search</p> <p>12 June 2012</p>		<p>Date of mailing of the international search report</p> <p>20 JUN 2012</p>																		
<p>Name and mailing address of the ISA/US</p> <p>Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201</p>		<p>Authorized officer:</p> <p>Blaine R. Copenheaver</p> <p>PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</p>																		