



- (51) **International Patent Classification:**
G06T 13/80 (2011.01) *G06T 11/20* (2006.01)
- (21) **International Application Number:**
PCT/US2014/023107
- (22) **International Filing Date:**
11 March 2014 (11.03.2014)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
13/827,265 14 March 2013 (14.03.2013) US
- (71) **Applicant:** MICROSOFT TECHNOLOGY LICENSING, LLC [US/US]; One Microsoft Way, Redmond, WA 98052 (US).
- (72) **Inventors:** GREALISH, Kevin David James; c/o Microsoft Corporation, LCA - International Patents (8/1172), Redmond, Washington 98052-6399 (US). DODGEN, Randy Joe; c/o Microsoft Corporation, LCA - International Patents (8/1172), Redmond, Washington 98052-6399

(US). KOZLOWSKI, Oscar P.; c/o Microsoft Corporation, LCA - International Patents (8/1172), Redmond, Washington 98052-6399 (US).

(74) **Agent:** NYDEGGER, Rick D.; Workman Nydegger, Microsoft Technology Licensing, LLC, LCA - International Patents (8/1172), Redmond, Washington 98052-6399 (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, BN, 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, IR, IS, JP, KE, KG, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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,

[Continued on next page]

(54) **Title:** STAGED ANIMATION OF CHARTS FOR DATA UPDATES

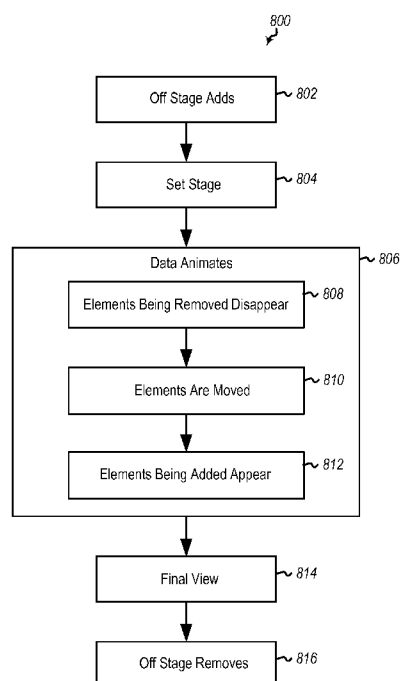


Figure 8

(57) **Abstract:** Updating graphical user interface elements. A method includes accessing a graphical user interface which includes an initial view including graphical elements. Each of the following are performed (in order) if determined to be applicable: (1) updating in the graphical user interface any pan elements that are outside of the initial view; (2) animating any changes in axes of the graphical user interface to set the stage for data modifications; (3) performing any data element animations in the graphical user interface, including any moves, any additions, any removals and any changes for all updates except those already added in when updating any pan elements that are outside of the initial view and pan element removals that will not be visible in a final view; (4) animating any changes in the axes to the final view; and (5) updating any remaining elements that are now out of view.



GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, KM, 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))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:

3 September 2015

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2014/023107

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06T13/80 G06T11/20
ADD.

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)
G06T

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EP0-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"Create a Motion Bubble Chart", 30 April 2011 (2011-04-30), XP054975965, Retrieved from the Internet: URL:https://www.youtube.com/watch?v=pt6-Kp9LrbM [retrieved on 2015-07-10] 10'00''-10'13''	1-7
A	----- US 2009/096812 A1 (BOIXEL RODOLPHE [FR] ET AL) 16 April 2009 (2009-04-16) abstract ----- -/--	1-7

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"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)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

13 July 2015

Date of mailing of the international search report

22/07/2015

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Gao, Miao

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2014/023107

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	"Excel 2013 PowerView Animated Scatterplot/Bubble Chart Business Intelligence Tutorial", 23 March 2013 (2013-03-23), XP054975966, Retrieved from the Internet: URL:https://www.youtube.com/watch?v=V001vE1q0N0 [retrieved on 2015-07-10] 6'30''-6'50'' -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2014/023107

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009096812	A1	16-04-2009	NONE
