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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/032990

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

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.: 1-26(partially)
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:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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

see additional sheet

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 an 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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/032990

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01N29/04
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)
G01N G01B G01C G01S

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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7 256 899 B1 (FAUL IVAN [US] ET AL) 14 August 2007 (2007-08-14)	1,3,4,7, 8,10,12, 17,23-26
Y	the whole document	1-26
X	US 2006/145703 A1 (STEINBICHLER MARCUS [DE] ET AL) 6 July 2006 (2006-07-06)	1,3,4,7, 8,10-12, 14-16, 23,24,26
Y	the whole document	2,20-22
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☒ 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

26 November 2012

Date of mailing of the international search report

04/12/2012

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2012/032990

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/247615 A1 (BRIDGES ROBERT E [US]) 25 October 2007 (2007-10-25)	1,3, 7-10,12, 14,18, 19,23, 24,26 1-26
Y	abstract; figures 3,6 paragraphs [0027], [0034] - [0036], [0056] - paragraph [0059] -----	
X	WO 01/77613 A1 (BAE SYSTEMS PLC [GB]; GOOCH RICHARD MICHAEL [GB]) 18 October 2001 (2001-10-18)	1,3, 5-10, 12-14, 18,19, 23,24,26 2,20-22
Y	abstract; figures 1,2 pages 2,3,7 - page 16 -----	
Y	US 7 800 758 B1 (BRIDGES ROBERT E [US] ET AL) 21 September 2010 (2010-09-21) cited in the application the whole document -----	1-16
Y	EP 2 177 868 A2 (HEXAGON METROLOGY INC [US]) 21 April 2010 (2010-04-21) paragraph [0047] - paragraph [0048]; figure 2 -----	20,21
X	US 2005/147477 A1 (CLARK GREGORY L [US]) 7 July 2005 (2005-07-07)	1,3-6,8, 9,11-18, 23-26 2,7,19, 22
Y	the whole document -----	
Y	US 7 480 037 B2 (PALMATEER JOHN W [US] ET AL) 20 January 2009 (2009-01-20) abstract; figures 1-3 column 3 - column 8 -----	1-12, 14-19, 21-26
Y	US 2006/103853 A1 (PALMATEER JOHN W [US]) 18 May 2006 (2006-05-18) abstract; figure 1 paragraph [0017] - paragraph [0025] -----	1-26
Y	US 2006/132803 A1 (CLAIR JONATHAN M S [US] ET AL SAINT CLAIR JONATHAN M [US] ET AL) 22 June 2006 (2006-06-22) abstract; figure 1A paragraphs [0010], [0026], [0040], [0046], [0047] ----- -/--	1-26

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2012/032990

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 416 321 A (SEBASTIAN RICHARD L [US] ET AL) 16 May 1995 (1995-05-16) abstract; figures 1, 2 column 4 - column 8 -----	1-4,7, 11,14, 18,19
X	US 2010/277747 A1 (RUEB KURT D [CA] ET AL) 4 November 2010 (2010-11-04) abstract; figure 1 paragraphs [0008], [0012], [0034] - paragraph [0037] -----	1,3-6,8, 12, 15-19, 23,24,26 2,12,18, 19,22, 23,25,26
Y	US 7 372 558 B2 (KAUFMAN STEVEN P [US] ET AL) 13 May 2008 (2008-05-13) abstract; figure 1 column 1 - column 7 -----	1-26

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/032990

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7256899	B1	14-08-2007	US 7256899 B1 14-08-2007
			US 7336375 B1 26-02-2008
US 2006145703	A1	06-07-2006	DE 102004061338 A1 06-07-2006
			EP 1672313 A1 21-06-2006
			EP 1906138 A2 02-04-2008
			US 2006145703 A1 06-07-2006
US 2007247615	A1	25-10-2007	CN 101427155 A 06-05-2009
			EP 2010941 A2 07-01-2009
			JP 2009534657 A 24-09-2009
			US 2007247615 A1 25-10-2007
			WO 2007124009 A2 01-11-2007
WO 0177613	A1	18-10-2001	AU 4669601 A 23-10-2001
			JP 2003530561 A 14-10-2003
			US 2003048459 A1 13-03-2003
			WO 0177613 A1 18-10-2001
US 7800758	B1	21-09-2010	US 7800758 B1 21-09-2010
			US 2011001958 A1 06-01-2011
			US 2011007305 A1 13-01-2011
			US 2011007327 A1 13-01-2011
			US 2011170113 A1 14-07-2011
			US 2012050712 A1 01-03-2012
			US 2012099096 A1 26-04-2012
			US 2012099119 A1 26-04-2012
EP 2177868	A2	21-04-2010	EP 2177868 A2 21-04-2010
			JP 2010122209 A 03-06-2010
			US 2010095542 A1 22-04-2010
			US 2011192043 A1 11-08-2011
			US 2012262729 A1 18-10-2012
US 2005147477	A1	07-07-2005	EP 1701819 A1 20-09-2006
			JP 4836801 B2 14-12-2011
			JP 2007517676 A 05-07-2007
			US 2005147477 A1 07-07-2005
			US 2009022556 A1 22-01-2009
			WO 2005068131 A1 28-07-2005
US 7480037	B2	20-01-2009	CN 101322071 A 10-12-2008
			EP 1955108 A1 13-08-2008
			JP 2009518625 A 07-05-2009
			KR 20080075506 A 18-08-2008
			US 2007127015 A1 07-06-2007
			WO 2007064798 A1 07-06-2007
US 2006103853	A1	18-05-2006	GB 2420241 A 17-05-2006
			US 2006103853 A1 18-05-2006
			US 2007271053 A1 22-11-2007
US 2006132803	A1	22-06-2006	US 2006132803 A1 22-06-2006
			US 2010141932 A1 10-06-2010
US 5416321	A	16-05-1995	NONE
US 2010277747	A1	04-11-2010	CA 2536232 A1 17-03-2005

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/032990

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
		EP 1682936 A2	26-07-2006	
		EP 1719580 A2	08-11-2006	
		JP 4732347 B2	27-07-2011	
		JP 2007505310 A	08-03-2007	
		JP 2011013230 A	20-01-2011	
		US 2005082262 A1	21-04-2005	
		US 2009257069 A1	15-10-2009	
		US 2010277747 A1	04-11-2010	
		WO 2005025199 A2	17-03-2005	

US 7372558	B2	13-05-2008	AU 2002362669 A1	22-04-2003
			CA 2463570 A1	17-04-2003
			EP 1476797 A2	17-11-2004
			US 2004189944 A1	30-09-2004
			WO 03032129 A2	17-04-2003

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-26(partially)

A method of conveying information to a user of a coordinate measurement device by projecting a first pattern with a target projector having a retroreflector that is tracked by the coordinate measurement device, whereby the information is either a position on the object, a plurality of positions on the object, a hidden feature or a magnified representation of surface characteristics.

2. claims: 1-26(partially)

A method of conveying information to a user of a coordinate measurement device by projecting a first pattern with a target projector having a retroreflector that is tracked by the coordinate measurement device, whereby the information is a direction indicated by a moving pattern.

3. claims: 1-26(partially)

A method of conveying information to a user of a coordinate measurement device by projecting a first pattern with a target projector having a retroreflector that is tracked by the coordinate measurement device, whereby the information is a message that includes one or more symbols or alphanumeric characters or a pattern having meaning according to a rule.

4. claims: 1-26(partially)

A method of conveying information to a user of a coordinate measurement device by projecting a first pattern with a target projector having a retroreflector that is tracked by the coordinate measurement device, whereby the information is a measured object characteristic.

5. claims: 1-26(partially)

A method of conveying information to a user of a coordinate measurement device by projecting a first pattern with a target projector having a retroreflector that is tracked by the coordinate measurement device, whereby the information is a modeled characteristic.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 1-26(partially)

Claim 1 recites a method of conveying information to a user, the type of information being selected from a number of nine different alternatives ,and combinations thereof . The different alternatives effectively represent different independent claims. The combinations of the basic nine alternatives issue, by simple known rules of combinatorics,511 different alternatives for the information to be conveyed and accordingly511 different independent claims , a number that goes far beyond the specifications of Rule 6.1 (a) PCT, requiring that the number of claims shall be reasonable in consideration of the nature of the invention claimed. Furthermore, the combinations of these different alternatives are not disclosed in the description in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art, contrary to the requirements of Art. 5 PCT. According to Rule 33.3 (b) PCT together with Art. 5 PCT, this International Search and the Written Opinion of the International Search Authority are limited to the embodiments where the information to be conveyed consists of one the basic alternatives, without considering any further combinations.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2) declaration be overcome.