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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))*

(54) Title: IMAGE-BASED PROPERTY CONDITION DETERMINATION SYSTEMS, METHODS, AND DEVICES

(57) Abstract: A computer-implemented image-based property condition determination system and method are provided. The method includes determining one or more element condition ratings from individual images of the property; and determining an overall property condition based on available element condition ratings of the property. An overall condition rating of a portfolio comprising a plurality of properties is determined using the condition ratings of properties in the portfolio.

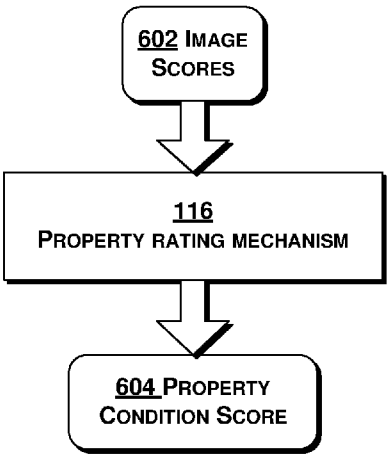


FIG. 6A

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A. CLASSIFICATION OF SUBJECT MATTER

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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)
G06Q 50/16; G06F 17/30; G06K 9/00; G06Q 40/06; G06Q 99/00; G06Q 10/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords:property, condition, rating, images, portfolio

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2015-0213315 A1 (JOHN NICHOLAS AND KRISTIN GROSS TRUST U/A/D APRIL 13, 2010) 30 July 2015	1-13,30-31
Y	See paragraphs [0043],[0046],[0069],[0079]-[0080],[0107],[0115],[0132]-[0133],[0139], claims 1-2 and figures 11-12.	14-29
Y	US 2014-0365400 A1 (WILLIAM ELLIOTT FIALA et al.) 11 December 2014 See paragraph [0026], claims 12,32 and figure 1.	14-29
A	WO 2018-084216 A1 (ZWEISPACE JAPAN CORP. et al.) 11 May 2018 See claims 1,7 and figures 1-5.	1-31
A	US 2014-0074733 A1 (NATHAN PIETER DEN HERDER et al.) 13 March 2014 See claims 1,8 and figure 1.	1-31
A	US 2012-0254156 A1 (BINDU RAMA RAO) 04 October 2012 See claims 1-8,15,21 and figures 1-2.	1-31

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

☒ See patent family annex.

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"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	Date of mailing of the international search report
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2015-0213315 A1	30/07/2015	US 2015-0186953 A1	02/07/2015
		US 2016-0027051 A1	28/01/2016
		US 2016-0048934 A1	18/02/2016
		US 2016-0092959 A1	31/03/2016
		US 9536148 B2	03/01/2017
US 2014-0365400 A1	11/12/2014	CA 2750426 A1	26/02/2012
		CA 2765820 A1	28/07/2012
		US 2012-0054121 A1	01/03/2012
		US 2014-0304192 A1	09/10/2014
		US 8732059 B2	20/05/2014
		US 8930250 B1	06/01/2015
WO 2018-084216 A1	11/05/2018	JP 2019-207718 A	05/12/2019
		JP 6562408 B2	21/08/2019
		JP WO2018-084216 A1	01/11/2018
US 2014-0074733 A1	13/03/2014	None	
US 2012-0254156 A1	04/10/2012	US 2005-0114400 A1	26/05/2005
		US 2008-0085675 A1	10/04/2008
		US 2008-0085682 A1	10/04/2008
		US 2008-0119131 A1	22/05/2008
		US 2008-0119132 A1	22/05/2008
		US 2008-0119133 A1	22/05/2008
		US 2008-0119134 A1	22/05/2008
		US 2008-0119167 A1	22/05/2008
		US 2008-0119169 A1	22/05/2008
		US 2008-0119228 A1	22/05/2008
		US 2008-0299953 A1	04/12/2008
		US 2008-0305813 A1	11/12/2008
		US 2011-0125838 A1	26/05/2011
		US 2011-0130172 A1	02/06/2011
		US 2011-0177773 A1	21/07/2011
		US 2011-0197236 A1	11/08/2011
		US 2011-0202383 A1	18/08/2011
		US 2011-0224182 A1	15/09/2011
		US 2012-0122434 A1	17/05/2012
		US 2012-0159526 A1	21/06/2012
		US 2012-0164937 A1	28/06/2012
		US 2012-0166312 A1	28/06/2012
		US 2012-0233644 A1	13/09/2012
		US 2012-0238243 A1	20/09/2012
		US 2012-0252352 A1	04/10/2012
		US 2012-0282582 A1	08/11/2012
		US 2012-0290391 A1	15/11/2012
		US 2013-0231082 A9	05/09/2013
		US 2013-0238445 A1	12/09/2013
		US 2013-0254018 A1	26/09/2013

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/IB2019/057837

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		US 2013-0263007 A1	03/10/2013
		US 2013-0325658 A1	05/12/2013
		US 2014-0038159 A1	06/02/2014
		US 2014-0045469 A1	13/02/2014
		US 2014-0120868 A1	01/05/2014
		US 2014-0129456 A1	08/05/2014
		US 2015-0381759 A1	31/12/2015
		US 2016-0110741 A1	21/04/2016
		US 2016-0110742 A1	21/04/2016
		US 2016-0110743 A1	21/04/2016
		US 2016-0110756 A1	21/04/2016
		US 2016-0117064 A1	28/04/2016
		US 2016-0117700 A1	28/04/2016
		US 2016-0117701 A1	28/04/2016
		US 2016-0117943 A1	28/04/2016
		US 2016-0119439 A1	28/04/2016
		US 2016-0119765 A1	28/04/2016
		US 2018-0337973 A1	22/11/2018
		US 2018-0375917 A1	27/12/2018
		US 7941092 B2	10/05/2011
		US 7983611 B2	19/07/2011
		US 8078096 B2	13/12/2011
		US 8131270 B2	06/03/2012
		US 8135331 B2	13/03/2012
		US 8180276 B2	15/05/2012
		US 8270893 B2	18/09/2012
		US 8285196 B2	09/10/2012
		US 8380175 B2	19/02/2013
		US 8385813 B2	26/02/2013
		US 8428645 B2	23/04/2013
		US 8433299 B2	30/04/2013
		US 8478250 B2	02/07/2013
		US 8532636 B2	10/09/2013
		US 8532713 B2	10/09/2013
		US 8565719 B2	22/10/2013
		US 8583030 B2	12/11/2013
		US 8615275 B1	24/12/2013
		US 8630991 B2	14/01/2014
		US 8700014 B2	15/04/2014
		US 8700015 B2	15/04/2014
		US 8898708 B2	25/11/2014
		US 8983927 B2	17/03/2015
		US 9092794 B2	28/07/2015
		US 9100800 B2	04/08/2015
		US 9158437 B2	13/10/2015
		US 9392429 B2	12/07/2016
		US 9754313 B2	05/09/2017
		WO 2008-091532 A1	31/07/2008