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(54) **SYSTEM AND METHODS FOR AUTOMATED AIRPORT AIR TRAFFIC CONTROL SERVICES**

(57) A system and methods for automated airport air traffic control, which envisage: receiving one or more parameters associated with an aircraft, an airside object, an airfield or an airport; calculating one or more routes associated with the aircraft, with the airside object, with the airfield or with the airport, in accordance with the parameters received and in accordance with at least one routing criteria such as environment of the airport, performance of the airside object or the airport, preference

of an operator of the aircraft or the airside object, air regulation, airport or airfield related restrictions, time to push-back, fuel saving, optimize use of runway or taxiway or junction in the airport or the airfield, and safety of the aircraft or the airside object; and transmitting the routes to the airside object, to the aircraft, or to a CWP (Controller Working Position), in order to present the routes on a dynamic map (DAM) or on the CWP.

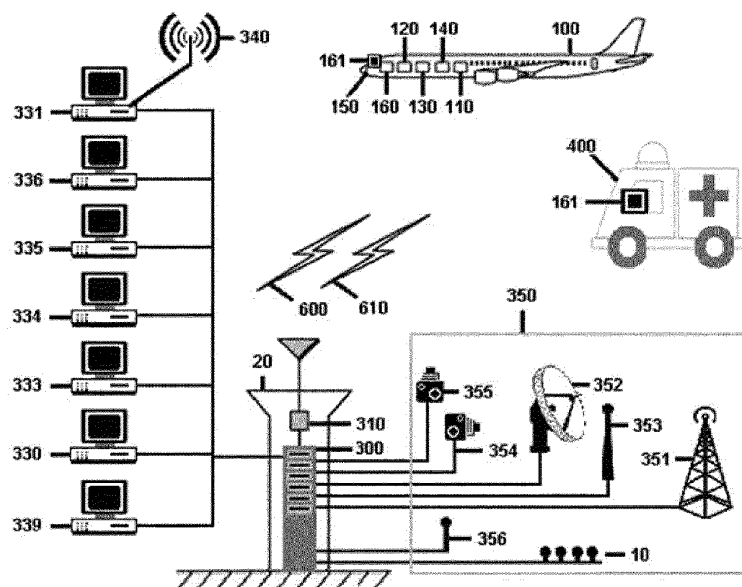


FIG. 1



EUROPEAN SEARCH REPORT

 Application Number
 EP 18 18 8769

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2014/115139 A1 (IATAS AUTOMATIC AIR TRAFFIC CONTROL LTD) 31 July 2014 (2014-07-31) * paragraphs [0063] - [0236]; figures 1-103 *	1-4	INV. G08G1/00
X	EP 1 947 624 A1 (HONEYWELL INT INC [US]) 23 July 2008 (2008-07-23) * paragraphs [0009] - [0053]; figures 1-8 *	1-4	
X	US 2002/077743 A1 (SCHMIDT HARRY P [US]) 20 June 2002 (2002-06-20) * paragraphs [0002], [0010] - [0065]; claims 1-43; figures 1-10 *	14	
			TECHNICAL FIELDS SEARCHED (IPC)
			G08G
3 Place of search Munich Date of completion of the search 19 March 2019 Examiner Quesson, Christophe CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☒ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

1-4, 14

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-4

Method for automated airport air traffic control comprising : receiving parameters of aircraft or airport; calculating routes of aircraft or airport, resp. to parameters received and criteria; transmitting routes to aircraft or CWP (Controller Working Position); and presenting them on dynamic map (DAM) or on CWP

2. claims: 5-10

Method for automated airport air traffic control comprising, by a server : receiving sensor or database data, transmitting data for presenting selection menu or for alerting

3. claims: 11-13

Method for automated airport air traffic control comprising : receiving message or alert, respect. executing operation or presenting alert to aircraft or Controller Working Position

4. claim: 14

Method for automated airport air traffic control comprising : receiving wind sensor data, calculating and sending wake dissipation result to aircraft or Controller Working Position

5. claims: 15, 16

Method for automated airport air traffic control comprising : receiving parameters from first and second aircraft or airport; calculating and transmitting to at least one aircraft a next position or a time to pushback for said first or second aircraft

6. claim: 17

Method for automated airport air traffic control comprising : receiving first, second of third event of airport; recalculating an aircraft route or determining and transmitting a missed-approach or go-around message to an aircraft



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

7. claim: 18

Method for automated airport air traffic control comprising
: receiving selection of a route among displayed routes at
CWP, transmit it to aircraft

8. claim: 19

System comprising a landing gear reporting camera, for
imaging aircraft and transmitting alert of potential
unlocked gear

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

19-03-2019

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2014115139 A1	31-07-2014	US 2018061243 A1 WO 2014115139 A1	01-03-2018 31-07-2014
EP 1947624 A1	23-07-2008	CA 2617521 A1 EP 1947624 A1 EP 3159870 A1 US 2008167885 A1 US 2011257874 A1 US 2012277986 A1	10-07-2008 23-07-2008 26-04-2017 10-07-2008 20-10-2011 01-11-2012
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