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(54) **Wireless networks for highly dependable applications**

(57) A wireless communication system comprises one or more control units operable to transmit control signals, a plurality of actuators responsive to the control signals, and a plurality of sensors operable to transmit sensor data used by the one or more control units in generating the control signals. Each of the sensors, actuators, and one or more control units are located at a fixed position in the system relative to one another. Each of the plurality of sensors and each of the plurality of actuators are coupled to at least one of the one or more

control units via a plurality of wireless paths. Each of the plurality of sensors are operable to transmit the sensor data in an assigned time slot to at least one of the one or more control units over a plurality of wireless channels in each of the plurality of wireless paths. The number of channels in each of the plurality of wireless paths is determined based, at least in part, on a worst-case estimate of potential interference, and each of the plurality of sensors is operable to pseudo-randomly switch the plurality of channels over which the sensor data is transmitted.

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## EUROPEAN SEARCH REPORT

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EP 08 16 5992

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			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 9 March 2016	Examiner Pham, Phong
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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 &amp; : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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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  
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