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— *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))*

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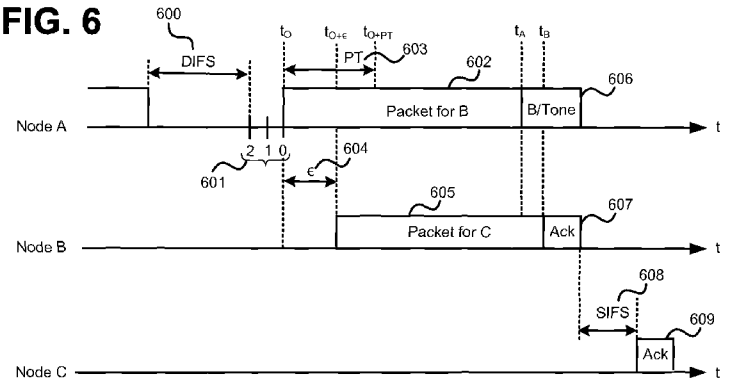
(54) **Title**: FULL-DUPLEX WIRELESS COMMUNICATIONS

FIG. 6



(57) **Abstract**: Full-duplex wireless communication is described. In an embodiment, a transceiver device having a transmitter circuit and a receiver circuit receives a data packet sent over a shared communication medium. In the embodiment, the transceiver reads the header of the data packet and starts transmitting an output signal on the same shared communication medium. Embodiments are described in which, whilst the transmission of the output signal is ongoing, the transceiver receives an impaired data signal which is made up of the payload of the data packet and interference from the output signal. In the embodiment, a cancellation signal is derived from the output signal, and this is combined with the impaired data signal to remove the interference and recover the payload of the data packet.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

H04L 5/14(2006.01)i, H04L 1/00(2006.01)i

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)

H04L 5/14; H04B 17/00; H04Q 7/20; H04B 15/00; H04B 7/005

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: interference, cancel, shared channel, concurrent, receive, transmit, transmit window

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	B. RADUNOVIC et al. "Efficiency and Fairness in Distributed Wireless Networks Through Self-interference Cancellation and Scheduling", Microsoft Research Technical Report, MSR-TR-2009-27, 12 March 2009 See Sections 1,2.2,2.3.1,3,4, Figs. 1-3,6-9.	1-15
X	US 2008-0107046 A1 (S. KANGASMAA et al.) 08 May 2008 See abstract, paragraphs [0054]-[0056],[0059],[0070], Figs. 5-6, Claims 1,4-	1,7
A	6.	2-6,8-15
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A	See abstract, paragraphs [0026],[0034], Figs. 1,5, Claim 1.	2-6,8-15
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A	US 2006-0142033 A1 (A. WOLMAN et al.) 29 June 2006 See abstract, paragraphs [0011]-[0014],[0031],[0032], Fig. 1.	1-15

☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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"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
22 OCTOBER 2010 (22.10.2010)	**25 OCTOBER 2010 (25.10.2010)**
Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer Jung Eun Sun Telephone No. 82-42-481-5708

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Z. HASS et al. "Dual Busy Tone Multiple Access (DBTMA) - A Multiple Access Control Scheme for Ad Hoc Networks", IEEE Transactions on Communications, Vol. 6, pp. 975 - 985 June 2002 See Sections I,III, Figs. 3-4.	1-15

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