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(54) **METHOD AND APPARATUS FOR SENDING UPLINK CONTROL INFORMATION FOR MULTI-RADIO ACCESS TECHNOLOGY OPERATION**

(71) Applicants: **Paul Marinier**, Brossard (CA); **Diana Pani**, Montreal (CA); **Ghyslain Pelletier**, Montreal (CA); **Marian Rudolf**, Montreal (CA)

(72) Inventors: **Paul Marinier**, Brossard (CA); **Diana Pani**, Montreal (CA); **Ghyslain Pelletier**, Montreal (CA); **Marian Rudolf**, Montreal (CA)

(73) Assignee: **INTERDIGITAL PATENT HOLDINGS, INC.**, WILMINGTON, DE (US)

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(57)

ABSTRACT

A method and apparatus for sending uplink control information by a multi-mode wireless transmit/receive unit (WTRU) capable of operating on multiple component carriers of a plurality of radio access technologies (RATs) for multi-RAT operation are disclosed. The WTRU may generate uplink control information (UCI) pertaining to a first RAT and a second RAT, wherein the UCI may include a first plurality of hybrid automatic repeat request acknowledgements (HARQ-ACKs) pertaining to a plurality of downlink (DL) transmissions of the first RAT and a second plurality of HARQ-ACKs pertaining to a plurality of DL transmissions of the second RAT. The WTRU may multiplex at least part of the generated UCI pertaining to the first RAT and at least part of the generated UCI pertaining to the second RAT onto a physical channel on a component carrier of the second RAT.

