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(71) Applicant (for all designated States except US): **INTER-DIGITAL TECHNOLOGY CORPORATION** [US/US];
300 Delaware Avenue, Suite 527, Wilmington, DE 19801 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DICK, Stephen, G.**

[US/US]; 61 Bobann Drive, Nesconset, NY 11767 (US). **TERRY, Stephen, E.** [US/US]; 15 Summit Avenue, Northport, NY 11768 (US). **ZHANG, Guodong** [CN/US]; 41 La Bonne Vie Drive, Patchogue, NY 11772 (US). **MILLER, James, M.** [US/US]; 18 Louisburg Square, Verona, NJ 07044 (US). **SHIN, Sung-Hyuk** [US/US]; 104 Eidner Way, Northvale, NJ 07647 (US).

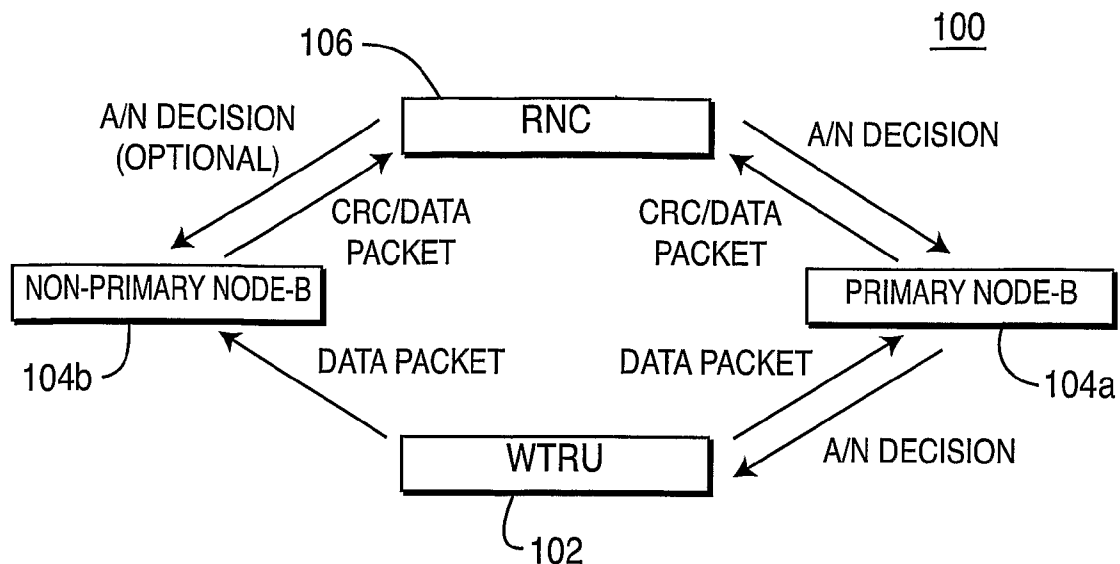
(74) Agent: **BALLARINI, Robert, J.**; Volpe and Koenig, P.C., United Plaza, Suite 1600, 30 South 17th Street, Philadelphia, PA 19103 (US).

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(54) Title: ENHANCED UPLINK OPERATION IN SOFT HANDOVER



(57) Abstract: A method and system for an enhanced uplink (EU) operation in a wireless communication system during soft handover. The system comprises a wireless transmit/receive unit (WTRU), at least two Node-Bs, and a radio network controller (RNC). One Node-B may be designated as a primary Node-B, and the primary Node-B may control EU operation during soft handover including uplink scheduling and hybrid automatic repeat request (H-ARQ). Soft buffer corruption is avoided during soft handover by controlling H-ARQ by the primary Node-B. Alternatively, an RNC may control EU operation during soft handover including H-ARQ. In this case, an RNC generates final acknowledge/non-acknowledge (ACK/NACK) decision based on the error check results of the Node-Bs.

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