



(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2005/0047360 A1**

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(43) **Pub. Date: Mar. 3, 2005**

(54) **METHOD AND APPARATUS FOR SCHEDULING ASYNCHRONOUS TRANSMISSIONS**

(52) **U.S. Cl. 370/324; 370/335**

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(57) **ABSTRACT**

The present invention provides a method of scheduling asynchronous transmissions for a plurality of subscriber units. The method includes receiving information associated with a plurality of subscriber units that have uplink data to transmit, the information including uplink timing offset information associated with each of the subscriber units. Two or more subscriber units are then selected from a set of subscriber units having a timing offset differential, that is below a predetermined threshold, where the timing offset differential is the difference between the timing offset of a first subscriber unit and the timing offset of a second subscriber unit further selectively offset by a multiple of the transmission segment size, which minimizes the difference. The transmission segments, which are available for the uplink of data, are then allocated between the selected two or more subscriber units, which limits the number of transmission segments that have at least one of an overlap or a gap, and the amount of any overlap or gap, in order to minimize wasted scheduling opportunities.

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(21) **Appl. No.: 10/966,811**

(22) **Filed: Oct. 15, 2004**

Related U.S. Application Data

(62) **Division of application No. 10/406,179, filed on Apr. 3, 2003, now Pat. No. 6,822,969.**

Publication Classification

(51) **Int. Cl.⁷ H04B 7/216**

