

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2023/0232071 A1 LiVoti et al.

Jul. 20, 2023 (43) **Pub. Date:**

(54) METHODS AND APPARATUS TO DETERMINE AN AUDIENCE COMPOSITION BASED ON VOICE RECOGNITION

(71) Applicant: The Nielsen Company (US), LLC,

New York, NY (US)

(72) Inventors: John T. LiVoti, Clearwater, FL (US); Stanley Wellington Woodruff, Palm

Harbor, FL (US); Rajakumar Madhanganesh, Tampa, FL (US); Khushboo Agarwal, Oldsmar, FL (US)

(21) Appl. No.: 18/154,379

Jan. 13, 2023 (22) Filed:

Related U.S. Application Data

Continuation of application No. 16/998,811, filed on Aug. 20, 2020, now Pat. No. 11,595,723.

Publication Classification

Int. Cl. (51)H04N 21/442 (2006.01)H04N 21/422 (2006.01)G10L 15/32 (2006.01)(2006.01) G10L 15/20

(52) U.S. Cl.

CPC . H04N 21/44218 (2013.01); H04N 21/42203 (2013.01); G10L 15/32 (2013.01); G10L 15/20 (2013.01)

(57)ABSTRACT

Methods, apparatus, systems and articles of manufacture are disclosed. An example apparatus includes a controller to cause a people meter to emit a prompt for input of audience identification information at a first time and determine a first audience count based on the input, an audio detector to determine a second audience count based on signatures generated from audio data captured in the media environment, and a comparator to cause the people meter to not emit the prompt for at least a first time period after the first time when the first audience count is equal to the second audience

