US 20230232257A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2023/0232257 A1**

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

(54) **MOTION-BASED BEAM MANAGEMENT TECHNIQUES IN WIRELESS COMMUNICATIONS**

(71) Applicant: **QUALCOMM Incorporated**, San Diego, CA (US)

(72) Inventors: **Jun Zhu**, San Diego, CA (US); **Mihir Vijay Laghate**, San Diego, CA (US); **Raghu Narayan Challa**, San Diego, CA (US)

(21) Appl. No.: **17/579,747**

(22) Filed: **Jan. 20, 2022**

Publication Classification

(51) **Int. Cl.**

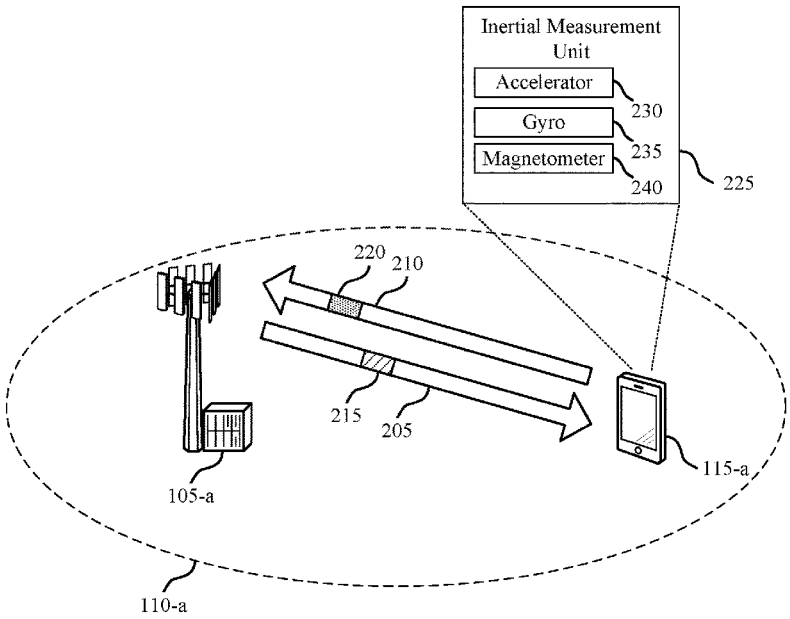
H04W 24/08	(2006.01)
H04W 4/02	(2006.01)
H04B 7/06	(2006.01)
H04W 36/08	(2006.01)

(52) **U.S. Cl.**

CPC ***H04W 24/08*** (2013.01); ***H04W 4/025*** (2013.01); ***H04B 7/0695*** (2013.01); ***H04W 36/08*** (2013.01)

(57) **ABSTRACT**

Methods, systems, and devices for wireless communications are described that provide for a user equipment (UE) to detect motion of the UE based on a motion sensor, such as an inertial measurement unit (IMU). The UE, based on the detected motion, may trigger a measurement procedure in which measurements of different beams or cells are performed at a greater periodicity than if the motion were not detected. The indication from the motion sensor may indicate that UE acceleration, rotation, orientation, or any combinations thereof, exceeds a threshold and results in the UE switching to a fastest available measurement periodicity. After triggering the fastest available measurement periodicity, the UE may adjust the measurement periodicity based on newly obtained beam measurements and converge to a measurement periodicity based on observed metrics.



200