ABSTRACT. In 2007, most of the accelerometer chips sold in the US were installed in cars. Today, accelerometers are in every phone, every computer, every video game controller and in fitness watches and smart bands. They have also been used in countless movement-based artworks and installations. This paper describes how the accelerometer moved from automotive safety to video games, why it's installed in our laptops and phones, and how it enables the direct and immediate measurement of human motion. We continue with a discussion of the use of accelerometers to measure human motion in a wide variety of industries, from healthcare to sport, from music to augmented dance. A detailed discussion of the opportunities and limitations of the measurement of acceleration is presented, followed by an exploration into a possible future where all electronic devices know where they are how they are moving, and by extension, the movements of the people they are connected to.

To appear in the special issue on Augmentation, Release date: 11 Dec. 2013