

SIG-Blocks: Sensor-Integrated Geometric Blocks

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Technology description

Sensor-Integrated Geometric Blocks (SIG-Blocks) have been developed for monitoring cognitive and functional behavior. Through sensors, a wireless communications module, and a graphical user interface (GUI), SIG-Blocks enable real-time and remote monitoring of an individual. As a play-based assessment tool, SIG-Blocks may be used to identify and monitor developmental disabilities in children. Assessments are contemplated for motor skills, hand-eye coordination, working memory and problem-solving capabilities. The blocks have been prototyped and tested and additional, more extensive experiments are being designed and refined for both children and adult populations. Additionally, unlike most tests/devices, which are meant to collect data for a typical "bell curve" distribution of people/subjects, this technology enables continuous, custom tuning to identify and adapt to traits exhibited by people at the margins of the curve and adjust accordingly. The blocks also provide data via remote monitoring, so testing can be managed non-invasively, as well as minimize or eliminate travel time to a "testing center", for instance.

Institution

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