## The Acorn Wand, key to a magical puzzle hunt

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Puzzle hunts are a popular pastime at Microsoft. For the Microsoft Intern Puzzleday 2007, the puzzle design team decided upon a Harry Potter theme. Competitors ("students") formed teams ("study groups") as they attended classes at the Hogwarts campus at Microsoft. Of course, since this is Harry Potter, you need a magic wand, so the puzzle design team made a bunch of functional magic wands. Some members of the puzzle design team had attended Hogwarts and the Draconian Prophecy and came back raving about these amazing magic wands. The wand designer (who goes by the name Acorn) advised the puzzle design team on how to build their own wands, and they ordered custom circuit boards, soldered the components, assembled the plastic enclosures, and programmed the wands to recognize the puzzle spells. Solving each puzzle revealed a spell in the form of a series of wand motions. The wand itself contained an accelererometer and supporting firmware to recognize the motions and determine which (if any) spell was cast. After performing a spell, you shook the wand back and forth, and the persistence of vision effect permitted the wand to display a short message. (As an added bonus, the puzzle design team added a lumos spell which lit the tip of the wand for 30 seconds.)

Pretty neat if you ask me.

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