# Gestural hand-tracking interface being developed by MIT researchers (w/ video)

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(PhysOrg.com) -- Researchers at MIT have developed software that can track a Lycra fabric glove with a special color pattern. Using only a cheap web camera equipped with a wide angle lens, the software can track hand gestures.

Wang and MIT associate professor Jovan Popavic have developed gesture-recognition algorithms that are more efficient by reducing gestures to 40 by 40 pixels. Unique patterns are then generated from the layout of the Lycra glove with specially placed color splotches.

The colors are printed on a Lycra fabric glove that contains no sensors. The unique color pattern is designed to help robust tracking of the hand.

The tracking system detects 3D orientation and 3D position of the hands and finger configuration. The system is currently being tested privately but would be available for more widespread use in a few months, according to Wang.

Gesture tracking gloves have been around since 1987, however the high cost has prevented this technology from becoming popular. VPL Data glove was introduced in 1987 and used fiber-optic sensors for tracking finger movements. A pair of these gloves ranges from about $1,300 all the way up to $40,000 for a high end system with force feedback. The high costs have limited the hand-gesture tracking to high-end applications in the computer animation, engineering and science.

Wang also stated that the gesture tracking system isn't up to the same accuracy as a mouse or touch screen however it could enhance gaming systems, such as Microsoft Kinect, to support hand gestures. Gaming is only the beginning and we can expect gesture-driven computing to thrive in the long run.

**More information:** Real-time Hand-tracking

Via: Computing Now