

# CWSF 2012 - Charlottetown, Prince Edward Island



## Shane Hickman

### Plug & Play Multi-Sensor Platform For Emergency Assist Robot

**Challenge:** Innovation

**Category:** Junior

**Region:** Niagara

**City:** Fenwick, ON

**School:** Pelham Centre

**Abstract:** The innovation was a 'plug and play' platform for multi-sensor capability, designed for ease of use by emergency robot operators. Problems addressed were the creation of multiple sensor modules, a sensor reading circuit, sending sensor information wirelessly, programming microcontrollers to read sensor information accurately and displaying data to the user. Overall results were successful and suggestions were made to improve future innovations of this type.

#### Biography

Shane is a grade 8 student at Pelham Centre School. He has been designing and building robots for three years now and this is his second appearance at the Canada Wide Science Fair. At this year's Niagara Regional Fair he was awarded the Lincoln & Welland Regiment Award, The United States Army Certificate, The Consulting Engineering of Ontario Award and was the Junior Division Gold Medal winner. After reading a 9/11 tenth anniversary news story about emergency robots, he was inspired to create an innovation that would prove useful in this field of robotics. When Shane is not building robots, he enjoys designing 3D computer games and playing the flute in the Niagara Elementary Instrumental Music Band. Shane hopes to study robotic engineering at university.

#### Awards

#### Value

Challenge Award - Innovation - Junior Sponsor: Research In Motion	\$500
Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada	\$1 500
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
<b>Total</b>	<b>\$6 000</b>