

# CWSF 2013 - Lethbridge, Alberta



## Roman Kozak

### Sign Language Translator: A Human Interface Device

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Niagara

**City:** Grimsby, ON

**School:** Grimsby S.S.

**Abstract:** Using the latest electronic components, I have designed, programmed and built a fully functional prototype of a device that can translate hand gestures into actions. The innovation with the help of a smartphone app that I have programmed can translate sign language into text and speech. Future applications for this versatile innovation are only limited to one's imagination.

#### Biography

Roman Kozak is a grade 9 student at Grimsby Secondary School in Grimsby, ON. Roman's love for designing and building electronics started when he was 7. He took apart everything at home including the family computer. At the age of 11 Roman started tinkering with micro controllers. Over the years he taught himself how to programming and design by reading books and watching online tutorials from other "makers" across the globe. The inspiration for this years innovation came from Jeremy Blum, a Electrical Engineer and a recent graduate of Cornell university. Jeremy created a "glove" that could control a car via gestures. Roman can program in 5 different languages ranging from C++ to HTML. He is the CO-Founder of Tech Climax, a technology blog that covers everything new in gadgets, consumer electronics and science. Outside of school Roman rows, referees hockey and bikes. Later this year he will be at the University of Michigan on a summer internship working in the Aerospace Engineering department. He hopes to study electrical and software engineering in university.

#### Awards

#### Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	\$300
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$2 300</b>