

Jan 27, 2010

William Edwards, a Bonney Lake High School senior, receives a \$1,000 check from Rick Meader, a corporate affairs manager from Intel.

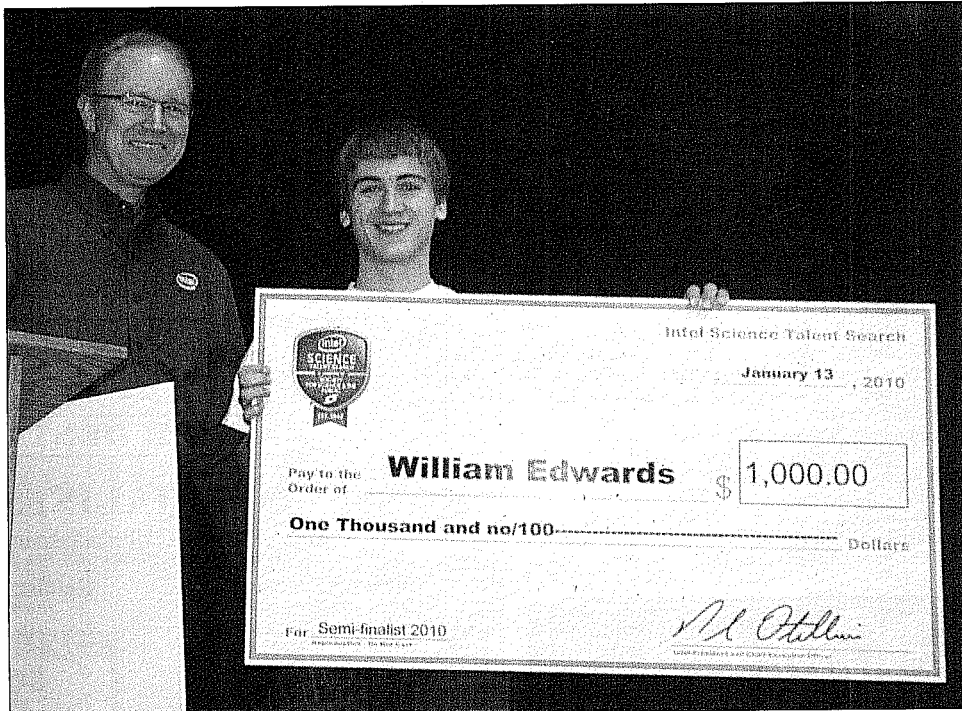


Photo by Daniel Nash

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Bonney Lake High student's muscles earn semifinalist spot in Intel Science Talent Search

BY DANIEL NASH
The Courier-Herald

It may seem strange that someone could earn science honors for their muscles, but one local young scientist has done exactly that.

Senior William Edwards of Bonney Lake High School has earned a semifinalist spot in the Intel Science Talent Search for his project.

Later today, Wednesday, it will be announced whether he has earned a finalist spot for his research on myoelectric control.

That's the technical term for his research in the electrical signals sent through the muscles. Edwards used himself and classmates to measure electrical signals being transmitted through the muscles in relaxed and tensed states.

The data was recorded using software and equipment available in the school laboratory. Such data has potential applications in research technology areas like virtual reality and robotic prostheses for amputees.

An interesting finding in his research was that a larger electrical charge tended to come from the bicep than from the muscles of the

shoulder and the back, the latter being the typical mounting point for modern robotic prostheses. If this principle were applied to prosthetic construction for below-the-shoulder amputees, it could mean more energy-efficient devices.

Edwards' research project previously won him a first overall placing in the South Sound Science Fair at Pacific Lutheran University in Parkland and a finalist spot in May's Intel International Science and Engineering Fair in Reno, Nev.

"I've been participating in science fairs since third grade," he said. "The first one I did with my sister Theresa. We tried to determine which kind of potato would make the best battery, which was an unusual experiment at the time. In years after that, every other student would do that experiment to the point that the school doesn't allow the potato experiment anymore. Elementary school kids tended to copy our projects in the following years after we had done them."

Edwards was informed of his semifinalist placing, which includes \$1,000 checks for himself and his school, in a surprise lunchtime

announcement Jan. 13.

Cheers and clapping burst from his classmates as his name was announced and he walked onstage to accept a novelty check from Rick Meader, a corporate affairs manager from Intel.

Edwards is one of four semifinalists in Washington state, and one of 300 semifinalists nationwide. Semifinalists were selected from a pool of 1,736 entrants.

Edwards was the first student from the Sumner School District to achieve a semifinalist slot in the competition.

He noted that his senior year would be the first year that he would be unable to enter a new experiment in a science fair, due to his academic schedule.

But if his name is on the list of 40 finalists today, he will travel to Washington, D.C. in March to compete for a \$100,000 grand prize.

That money would likely go to tuition as Edwards pursues a degree in mechanical engineering.

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