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# EXPERIMENT ALLOWS CALCULATORS TO WORK AS COMPUTERS WOULD

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By VANEE VINES, STAFF WRITER May 23, 1997 Publication: Virginian-Pilot, The (Norfolk, VA) Page: B3 Word Count: 356

At last year's Tidewater regional Science Fair, Je'aime Powell linked four scientific calculators and showed how they could exchange information through his network of manual, on-off switches and 50 feet of telephone wire. Most folks have been comfortable connecting only two of the calculators - so a teacher could download a program from her calculator to a student's, for example.

Powell wanted to go beyond that. His original goal was to connect 30 calculators, enough for an entire classroom.

``Everybody's aiming for the classroom of the 21st century, and everyone's talking about a computer on every desk," he said. ``. . . But schools really don't have money for that.

``. . . So I figure, well, we have these expensive calculators that have all these multi-functions, so why don't we use them in a better way? More like computers."

Powell's project last year landed him a first-place award in the senior-level computer-science category.

And his recent achievements suggest that the I.C. Norcom High senior may someday show old hands like Microsoft Corp. executive Bill Gates a thing or two.

For this year's regional fair, the 18-year-old took his previous work to another level - and received more honors.

He entered lines and lines of computer code into the calculators. From that sprung an operating system that allows the four calculators to exchange information by relying on a personal computer as a pipeline.

Through the system, he said, a teacher could monitor a class working on a problem by having students send their calculations to her PC linked to the calculators.

Powell's operating system brings up a computer-like menu of options on the calculators' screens.

Among other things, his system allows for the exchange of electronic mail among calculators.

Using the system is as easy as pointing with arrow keys on a calculator's keypad and pushing

some buttons.

At this year's regional Science Fair, Powell won another first prize in the senior-level computer-science category as well as an Award of Excellence, for producing good work overall.

His latest project also earned a third-place award at the state science fair last month and a first-place prize for senior-level computer science at Portsmouth's fair.

He'll study computer science at Elizabeth City State University this fall.

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