

# **Delivering the Best: How Cavalier Computers Enhances Computing for U.Va. Students**

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## **Abstract**

*A division of the University of Virginia Bookstore owned and operated by the University, Cavalier Computers is dedicated to supporting information technology at the University by providing students, faculty, departments and staff with high quality, educationally priced computer hardware and software and excellent customer support and service. Recognizing the needs associated with increased usage of and dependency on computers, Cavalier Computers worked cooperatively with the University's Information Technology and Communication department on the design and implementation of a self-supporting, cost effective computer purchase program for students that would help standardize software and hardware, and provide a level of support and service that is unavailable from manufacturers and other computer re-sellers.*

## **Introduction of The University of Virginia**

The University of Virginia, founded by Thomas Jefferson in 1819, is located in Charlottesville, Virginia. A public institution of higher education, the University is charged with teaching, research, public service and patient care. The University has a student enrollment of approximately 19,000. U.S. News and World Report has consistently ranked the University as one of the top public institutions among the nation's top 25 research universities.

Students are exposed to a wide spectrum of disciplines – from arts and athletics to humanities and technology. Our students also enjoy a unique connection to the world beyond college through the University's outstanding professional training, exemplified by its nationally ranked schools of Law, Business and Medicine.

The University of Virginia is noted for the architectural beauty of the historic Rotunda and Lawn, the heart of the "academical village" designed by Thomas Jefferson, and for a tradition of academic excellence. Many of the University's programs such as Law,

Business, Medicine, Architecture, and English have ranked among the top ten in the country over the past decade or so.

### **Statement of the Problem**

Cavalier Computers along with the University's information technology group (ITC) identified the need to implement changes in their student computing purchase program to improve customer service and to facilitate student ownership while reducing the strain on costly computer labs and the Computing Help Desk. Management believed that these changes would result in increased participation and would improve the computing experience for students and support staff alike.

Prior to implementing this program, students were entering U.Va. with an array of computers, operating systems and application software. As a result, the University's Computing Help Desk was overtaxed and customer service and support suffered.

Computer repair was problematic as many of the systems were under different warranties and each computer manufacturer had its own procedures for the handling of hardware related problems. With all of these different systems, configuring computers to log into the University network challenged the outside firm that the University hired to perform this task. The numbers of students needing assistance at the beginning of the school year and the importance they attached to having their computers network-capable as soon as they moved into their dorms heightened frustrations and added more pressure at an already stressful time of the year.

Cavalier Computers sold systems that they were authorized to service and support and that met or exceeded standards set by ITC. In order to add value to the computers we were offering, Cavalier manually installed a CD produced free of charge for all students by ITC that contained all of the software, site-licensed and otherwise, and virus protection available through the University. When CDs were not produced until late in the summer, we would have to download the programs from ITC's website. Given the limited number of available internet hook-ups, that process was very slow. Since installations required opening the boxes of every system to install the software, it was both labor intensive and physically exhausting. The staff regularly worked past midnight during the four weeks leading up to the beginning of school and the store paid out an average of \$5,000 in overtime. During each install, the staff also pre-configured all of the computers that were sold to make login to the University network effortless (Plug and Play).

All computers purchased through Cavalier Computers were distributed at the Student Activities Building (SAB) located in the vicinity of most first year dorms. While Cavalier was able to lend out hand trucks, the responsibility for hoisting the computer systems up multiple flights of dormitory stairs rested with the customer. After years of growth in its business -- and in the lines that formed around the SAB building for pick-up-- it became clear that this kind of distribution needed serious reconsideration.

## **Design**

The University does not require students to own their own computer. ITC sets hardware and software standards but these also are not mandated. Because of this, the chief

challenge that Cavalier and ITC faced was devising and implementing a cost effective program that would remedy all of the deficiencies cited above and would demonstrate to our prospective customers the advantages of standardization and computer ownership. The simple solution was to add even more value to computers being offered for sale and to provide services that could not be matched by any other computer reseller. Even though participation in this program is entirely voluntary, we wanted to make the decision to purchase a computer from Cavalier a “no-brainer.”

As an auxiliary service, Cavalier Computers is expected to recover all of its operating expenses. Cavalier was also expected to generate enough revenue to compensate ITC for the services that it would provide for this program. As the program was being designed, Cavalier estimated all of its costs as well as the return on investment that would be required. Our break-even point was determined to be 700 systems, excluding printers and accessories. Given an already healthy back-to-school computer program that had generated sales of 736 systems the previous year, we felt reasonably confident -- particularly with printer sales and accessories as a cushion – that we would be able to cover all of our expenses.

The program would be financially viable if aggressive pricing from its vendors could be negotiated and if Cavalier packaged other products with higher margins as add-ons to the computer system. To enhance its buying power and leverage, Cavalier Computers and ITC in association with UVa’s Procurement Services developed an RFP that awarded its chosen vendors, Apple and Dell, the bulk of their computer purchases. It also made

Cavalier the sales and service provider for all equipment purchased on this contract and established a rate of compensation for all warranty service that Cavalier would perform. While that contract stipulates discount percentages, the University selects the models and configurations for equipment offered to departments and students.

Each computer comes with an 8-outlet surge suppressor with a 12' cable, security cable, an Ethernet cable, and a computer briefcase. 55% of students who purchase a computer from this program also purchase a printer. Given the large volume generated by this program, Cavalier is able to negotiate very favorable pricing on these printers and accessories, which has given us room to build additional margin.

The aggressive discounting from the contracted vendors, compensation for warranty repair and the bundling of higher margined accessories and printers offset the cost of services included in the program. The computers were still less expensive, between \$200 and \$300, than the same systems purchased directly from the manufacturer's own websites.

The design of the program included the following elements:

#### *Selection of Systems and Configurations*

Cavalier's annual selection of computer configurations is made in consultation with ITC and representatives from the Student Information Technology Advisory Committee. The

recommended configurations are then proposed to Apple and Dell to ensure that they will be readily available during the selling season and will meet the desired selling prices.

Once the configurations have been finalized, each vendor ships one each of the selected configurations to the University for custom software creation. ITC and Cavalier Computers determine software to be installed (typically a productivity suite), along with custom features (anti-virus, e-mail clients, anti spy-ware, back-up and supported browsers) that should be enabled when the computer is first used. Custom documentation is written and added to the computer. The University creates and tests the customized version locally and then provides the vendors with the necessary hard drive image. The vendor then re-creates one each of the custom image models and ships them to the university for testing. After this has been completed, ordering can begin.

### *Service and Support*

Performing customization at the manufacturing level not only achieves standardization and makes computer installation easy, it also obviates the need for Cavalier to install and configure its computers manually which in turn saves man hours and money.

Standardization also reduces software support costs incurred by ITC.

While these new processes increased efficiency for Cavalier and ITC, we believed that they would not provide adequate incentive for students to purchase from us. After discussing computing issues with students and parents, it became evident that service and support were considered as important as purchasing the “right” computer. The price of a

computer, though a consideration, did not compare with the peace of mind that comes with excellent and timely hardware repair and support.

For this reason, we included a service and support component in the contract and developed a system to track each computer sold through Cavalier. Each computer in this program has a unique sticker provided by the manufacturer that includes the following information: date computer is built, purchase date, warranty expiration date, the serial number, the phone number to the University's help desk, and the URL for local and vendor support. The sticker is affixed prominently on all program equipment making it easy for students who are in need of computing assistance to find and utilize it. The vendors also supply restoration CDs that return the computer to its initial out of the box state. In addition, both Apple and Dell provide Cavalier with a full complement of spare parts for those computers selected for sale to students.

When an issue with their system arises, students call the ITC's Computing Help Desk where it is determined whether the problem is hardware or software related. All employees of the Help Desk are conversant with these student machines and in most instances can resolve the problem expeditiously over the phone. If the problem is with the hardware, the Help Desk dispatches a technician from Cavalier via electronic notification (Remedy) with the customer information and the nature of the problem. Cavalier's techs contact students within one business day to establish appointment times for on-site service so that classes are not missed. We provide on-site service to U.Va.'s residence halls as well as off-campus housing in the greater Charlottesville area. Because

of our inventory of spare parts, most repairs can be completed on-site. If a system cannot be repaired in a timely fashion, loaner computers are made available. In order to provide this level of service, Cavalier employs two service technicians and a part time project manager. Additional service techs, hired to repair departmental machines, are also available should the need arise.

### *Delivery*

One final service, Cavalier's three delivery options, had a pronounced impact on sales. Customers now have the following options: home shipment, pick-up during new student orientation, or dorm delivery. Dorm room delivery, coordinated with the university's Housing Division, takes place three weeks before move-in weekend. The Housing Dept. provides a list of students' dorm room assignments and the dates when we can make the deliveries. From this, the employee in charge of delivery compiles a list by dorm of who has ordered a computer from us. Our truck is loaded with the computers to be delivered to one specific dorm at a time. A crew of seven employees handles the delivery; because only two dorms have elevators, we use a scissors lift to gain access to upper floors. Computer equipment is delivered to each dorm room a floor at a time; our on-site supervisor confirms correct delivery to each room then locks all doors and windows upon exit. The Housing Division cross-checks delivery upon completion. It should be noted that delivery takes place only after all maintenance to the dorms rooms has been completed. Those few customers who purchase computers after the delivery deadline can still pick them up at the SAB.

### **Implementation**

The entire RFP process, from conception to implementation of the contract, took eighteen months. This could have been shortened considerably if the student part of the contract were negotiated separately from the departmental piece. Many of the delays were political in nature and involved departmental buy-in of their part of the program. Absent this, the RFP could have been completed in six to twelve months.

Prior to selection of computer configurations for the back to school buying season, a delegation from ITC and Cavalier Computers meets with vendor representatives in Austin and Cupertino where production roadmaps of new equipment are presented and vendor related problems are addressed. Both Dell's and Apple's area sales and support representatives are fully conversant with our program and serve as our first line of problem solvers. Those issues that cannot be resolved in the field can be elevated to other designated personnel who Dell and Apple believe are best able to address our issues. After the first year of the program, Cavalier Computers, ITC and each vendor decided to conduct monthly conference calls to enhance communication and resolve problems that can arise between on-site visits. The kinds of problems that we have faced have been delivery and manufacturing delays, product availability and performance. None of these problems have been significant enough to impact the program.

The annual selection of computer configurations takes place in the February preceding Fall semester. Initially it took three months, the result of coordination issues between ITC, Cavalier and their vendors. A year after the program was in place, the selection process was narrowed to less than a month. The first hardware image took twelve weeks

to produce, again a result of coordination issues and a steep initial learning curve. The image creation process now takes an average of six weeks; the vendors' role in this endeavor is provided at no additional charge, as part of the contract.

Finding ways to create and maintain effective, unified and efficient collaboration between Cavalier, ITC and other stakeholders evolved over time through trial and error. A number of personnel changes were made to match the strengths of our employees with the tasks they were to perform. As the program became more refined, manpower from ITC was actually reduced by 1 ½ FTEs with no additional employees needed by Cavalier.

Initially, the program offered only a three-year warranty. To give students and their parents added peace of mind, Cavalier negotiated four-year warranties with each of its vendors. By purchasing a computer from Cavalier, undergraduates can enjoy the benefits of an extended warranty that remains active throughout their matriculation at the University. Our Dell computers also come with CompleteCare that covers additional accidental damage protection in the event the computer is dropped or has something spilled on it. The four-year warranty has been another strong selling point for this program.

Installation and implementation of Remedy software and support protocols and procedures were completed during the RFP process. Development of a dorm delivery service was accomplished after two meetings with Housing. The steps taken to ensure accountability and security satisfied the University's Risk Management Department.

In order to promote this program to in-coming students, Cavalier produced an expanded back-to-school catalog that featured all of the models and configurations offered that year and an FAQ section that explained in layman's terms the advantages of taking part in this program. That catalog, which was completed during the RFP process and took Cavalier management one month to write, has been included in a mailing from ITC to in-coming students that discusses computing requirements and recommends Cavalier's program. A letter of endorsement from the Student Information Technology Advisory Committee completes the mailing. (Subsequent year catalogs have required minimal changes other than the computers offerings, themselves.) The catalog was printed and mailed by the University's Printing and Copying Service. The back-to-school program has been endorsed further at computing sessions conducted by ITC during new student orientation.

Ordering was simplified through the expansion of Cavalier's e-commerce website, featuring pages devoted exclusively to the student back-to-school program. Vendors provide Cavalier with a web site to expedite ordering. UVa Bookstore and Cavalier Computers employs a full time web master who along with our Marketing Manager creates all web content. The Bookstore and Cavalier also accepts phone orders on its toll free number, as well as faxed and mail orders.

### **Benefits**

As stated previously, prior to implementation of this program, Cavalier Computers sold 736 computers to students. The first year of implementation that number rose to 1084. In addition Cavalier Computers implemented a similar program with the Law School and

received endorsements from the Engineering, Nursing and Medical Schools. The CIO of our area's community college has recently approached us to explore ways to operate a similar program for them.

The benefits of the program including enhanced service, support and delivery of computers, the streamlining of numerous internal processes that have controlled program and support costs, and the competitive pricing of systems have been discussed above in detail. We believe that a program of this kind can work at schools of all sizes that own and operate a computer store.

Growth in computer sales is one index of its value and of student satisfaction. Letters of appreciation that we have received from parents reinforce this conclusion. At the risk of jinxing ourselves, we have yet to receive any complaints about the program and have kept our mistakes to a minimum. Needless to say, a great staff, effective coordination, communication and organization have been critical to its success. Finally, the program does pay for itself and has actually produced surplus revenue, this year totaling \$130,000 on sales of \$4.3 million.