Innovation In Higher Education Award

Shenandoah University Conservatory

The Conservatory at Shenandoah University is Virginia's - and one of the country's - premier conservatories with a faculty of more than a hundred professionals in music, theatre and dance and an alumni family that takes center stage from Broadway to the concert halls of Europe. Golder O'Neill, Associate Professor and Director of Music Production and Recording Technology, and Adam Olson, a certified instructor and engineer specializing in digital audio workstations, have championed the integration of mobile devices (Apple MacBooks and iPads) into the curriculum with their music production and recording initiative. Mobile devices allow students to record their private music lessons and review their performance while walking to class. They can easily collaborate on projects and share ideas and research. Additionally, mobile devices enable faculty to direct students in the instruction of software tools such as Logic, Garage Band, Pro Tools, Cubase and Nuendo.

Music Production and Recording Technology courses, such as the Remote Recording Practicum, encourage students using laptops (Apple MacBook) to record performances in different venues on Shenandoah University's campus. The student's experience is enhanced by being able to record on location and edit the performance immediately afterward, while the performance is fresh in their minds. O'Neill and Olson have found that the integration of mobile devices into the curriculum puts students in charge of their learning and facilitates a richer learning experience.

LUMOS NETWORKS

Tech Nite 12

WELCOME TO THE TWELFTH ANNUAL SHENANDOAH VALLEY TECHNOLOGY COUNCIL

AWARDS GALA

MAY 2, 2012

SHENANDOAH VALLEY TECHNOLOGY COUNCIL

The 12th Annual
Shenandoah Valley Technology Council

AWARDS GALA

May 2, 2012
James Madison University
Festival Conference & Student Center

RECEPTION
5:30 P.M. - 6:45 P.M.
DINNER AND AWARDS PRESENTATION
7:00 P.M. - 9:30 P.M.

Amy Michtich
Brewery Vice President
MillerCoors – Shenandoah Brewery

SHENANDOAH VALLEY
TECHNOLOGY COUNCIL
For technology users and creators

Speaker
&
Award Nominees

Tech Nite 12
May 2, 2012

James Madison University
Festival Conference and Student Center

Key Note

Amy Michtich, Brewery Vice President MillerCoors — Shenandoah Brewery

They say that the best car "is built around the driver."

Amy Michtich is the Brewery Vice President of the MillerCoors — Shenandoah Brewery located in Elkton, VA. There she oversees the strategic operations of an 8.2 million barrel capacity facility, anchored by the most modern and highly automated large-scale brewery in North America.

Amy joined MillerCoors in 2007 as an operations manager in the Milwaukee, WI brewery before coming to lead a site of more than 500 employees in the Shenandoah Valley. Prior to MillerCoors, Amy held executive and operations leadership positions across various consumer packaged goods companies such as Pepsi Bottling Group, Clorox and Lipton.

Ms. Michtich holds a bachelor's of science degree from Purdue University's School of Technology located in West Lafayette, IN. She also remains active in select technology-based, sharing organizations such as the Association for Manufacturing Excellence (AME), Competitive Capabilities International (CCI) and the Master Brewers Association of America (MBAA).

Also, as a working mother of two sons, Amy values education and cooperative work experience development, along with community volunteerism. As such, Amy serves on the United Way of Harrisonburg-Rockingham and Rockingham Educational Foundation, Inc. (REFI) board of directors.

They say that the best car is "built around the driver." In Ms. Michtich's key-note address, she will share how the MillerCoors organization applied that approach when designing and constructing their highly automated brewery – all with the future state and desired work of the operator in mind. She would also like to discuss how defining your technology strategy around your business' vision, mission and values is essential to delivering a successful and efficient organization that works for business owners and employees alike.

JMU College of Business & JMU College of Integrated Science and Technology's

High Tech Entrepreneur Award

Presented by: Dr. Bud Clarke, Interim Dean, JMU CoB; Dr. Sharon Lovell, Interim Dean, JMU CISAT

Scott Davidson, Campus Cookies

Focusing on communication, customer service and consistency, Campus Cookies has become the top gift and late night delivery service for both the Harrisonburg and Blacksburg communities.

Campus Cookies was founded by Scott Davidson five years ago from a college townhome close to the JMU campus. Davidson successfully balanced his academic work with the numerous efforts required to start a new company. While he was still developing the brand's system, roles/responsibilities, processes, people and other fronts over the same time-frame, he moved into a storefront in his second year and opened a second storefront in Blacksburg during his fourth year, which led him to describe these years as the most difficult ones of his career.

With over fourteen different developers from around the world adding value to the Campus Cookies network, Davidson's vision and the evolution of the e-commerce system (the check-out process, loyalty programs, and e-mail/texting and tracking features) has created tremendous value for customers and business operations. Stores compete against each other every night on performance variables, and staff are incentivized and empowered to remain customer-focused. Technology is also used to create a virtual supportive team member, customer care, whose role is to remotely monitor and support business operations virtually during peak hours.

Campus Cookies now has twenty-four employees, thousands of customers a year, two storefronts and a third to open next fall. As Campus Cookies becomes more successful, Davidson's vision remains the same: further success will have nothing to do with cookies and everything to do with the people, system, and service.

The High Tech Entrepreneur Award honors an individual who has demonstrated outstanding entrepreneurial success in the development of a technology-based, commercial enterprise. The individual shall have been instrumental in the key technology development, commercialization, and subsequent demonstration of marketing success of related products and services.

2001 Recipient
Daniel M. Beam,
NTC Communications
2002 Recipient
Susan K. Kubany and
Robert Heinmiller, Omnet, Inc.
2003 Recipient
Chuck Tomney,
Status One Designs, Inc.
2004 Recipient
Walter Curt,
PMI & SEI Technology
2005 Recipient
Mark Bayliss, Visual Link
2006 Recipient
Ben Cash,
Blue Key, Inc.
2007 Recipient
Jase Clamp,
Extreme Exposure Media
2008 Recipient
Franklin J. Marks, Jr.,
Marks Products, Inc.
2009 Recipient
Gary K. Summers,
Capture Energy
2010 Recipient
Pennie Zinn Garber,
Lineage Architects
2011 Recipient
Scott Rogers

COLLEGE OF BUSINESS
JAMES MADISON UNIVERSITY

COLLEGE OF INTEGRATED SCIENCE AND TECHNOLOGY
JAMES MADISON UNIVERSITY

High Tech Entrepreneur Award

Hiram Tackett & Bill Tolbert

Vision Technology Group

Hiram Tackett and Bill Tolbert have a combined sixty years' experience in the delivery of telecommunications and Information Technology (IT) service. In late 2003, they identified inadequacies in traditional time and materials service delivery and shared a goal to deliver high-value IT services to education and businesses throughout the Shenandoah Valley. Addressing the coming convergence of traditional voice and data infrastructure, Vision Technology Group (VTG) was formed as a single entity to manage the converging IT continuum, while serving as the first technology services provider in the region to deliver true managed services to the business community via a Technology Services Agreement.

Headquartered in Harrisonburg, VA, VTG's unique business model rapidly spawned interest throughout the region as the local business community discovered the local availability of a company capable of providing enterprise-grade services at a reasonable and fixed recurring cost.

VTG delivers cost and energy-saving advanced virtualization technologies that were previously available only to large organizations, providing the small and medium business market with solutions from market-leading vendors such as VMWare and Microsoft. This results in "green" operational technology enhancements at a lower cost. They are also actively engaged in Wide-Area-Network implementation and support services for converged high-speed Metro-Ethernet Data and IP-Centrex voice solutions via a strategic partnership with regional technology provider Lumos Networks.

VTG has experienced phenomenal growth during tough economic times, constantly innovating as technology and market conditions change. VTG doubled in size in 2011 alone, bringing new products to market including the VTGuardian platform. This platform provides datacenter-grade 24/7 infrastructure monitoring and remediation capabilities. They also expanded their physical service area footprint by opening an office in Winchester, VA in 2011.

Tackett and Tolbert are also dedicated to giving back to the community through a program known as "VTG Cares," which has donated nearly $250,000 over the last seven years to area non-profit and community organizations.

COLLEGE OF BUSINESS
JAMES MADISON UNIVERSITY.

COLLEGE OF INTEGRATED SCIENCE AND TECHNOLOGY
JAMES MADISON UNIVERSITY.

Augusta Free Press, LLC

Augusta Free Press LLC was one of the first online-only newspapers in the U.S. Augusta Free Press provides clients with marketing and PR solutions including web design, magazine/brochure, TV/radio, social media and overall marketing campaign design and implementation.

Over the last decade, they have built websites for clients optimizing visual design, layout design and content development. They have also provided graphic layout and design for customers in Augusta County, Staunton, and Waynesboro, including projects for the Waynesboro Generals, the Wayne Theatre Alliance, the Waynesboro Family YMCA and the Valley Program for Aging Services. Augusta Free Press Publishing has been producing books in-house and assisting author clients with publishing and production services since 2004.

In 2011, August Free Press launched their Building the Machine 101 Marketing Series offering businesses a way to sort their way through the maze of new media marketplace. The series of classes starts with the basics of building a business website and ways to combine social media and traditional advertising to integrate web marketing into an effective marketing campaign. The next class provides an overview of the top social media platforms and how to use them to add customers, clients, donors and sponsors. More recent classes have included effective press releases, viral messaging, and print, television, radio and web advertising.

Their cutting edge integration of social media into local business marketing and public relations has gained them clients through the Valley, Hollywood, and Washington, D.C. Augusta Free Press served as the marketing and media relations arm of Awesome Wrestling Entertainment, which culminated in a live PPV event in Fishersville and gained a Facebook following of over 129,000 people in just under three months.

In March 2012, Augusta Free Press launched their second online publication serving Luray and the rest of Page County, the Luray-Page Free Press.

The High Tech Company Award
recognizes outstanding commercial growth and achievement by an established company that produces and markets predominantly high tech products or services.

2001 Recipient
Specialty Blades, Inc.
2002 Recipient
ComSonics, Inc.
2003 Recipient
Terralogic, Inc.
2004 Recipient
Fairfield Language Technologies
2005 Recipient
Shickel Corporation
2006 Recipient
First Witness Video
2007 Recipient
Premier Technical Services
2008 Recipient
SusQtech
2009 Recipient
Rosetta Stone Ltd.
2010 Recipient
nTelos
2011 Recipient
Serco, PG Pubs Classification Service

WHARTON ALDHIZER & WEAVER PLC
ATTORNEYS & COUNSELLORS AT LAW

High Tech Company Award

Cadence, Inc.

Based in Staunton, VA, Cadence, Inc. is a top life science company providing outsourced design and manufacturing solutions for surgical devices and scientific applications. Their innovation is rooted in their mission to improve patient outcomes. To ensure that they achieve this mission, Cadence utilizes a process for new product development called Outcome-based Manufacturing™. Simply stated, they put the patient first and work hand-in-hand with the most sophisticated device and equipment manufacturers to define what is required to help patients get better faster, then they build new manufacturing processes to produce these innovative products.

Most contract manufacturers sell what they can do and make future products fit their capabilities. Cadence helps to determine what the patient needs to recover more quickly and then builds the necessary optimized processes. Their products enable surgeons around the world to use new technologies to help patients recover and get back to their families, jobs and lives.

Cadence's reputation as the market expert for improving product performance comes from a commitment to using innovative metals fabrication technologies. Their proprietary "sharps" processing technologies enable Cadence to supply the most critical components and sub-assemblies for medical devices, scientific and industrial applications.

Their strong community support helps local organizations benefit from their success. Cadence is committed to giving back to the community and supports a number of causes such as company blood drives, canned food drives for area food banks and holiday drives like Santa for Seniors and Toys for Tots. They participate in many local events such as Diversity Day at Blue Ridge Community College and Career Preparation Day at Wilson High School. They have presented at local events with the Virginia Employment Commission and have donated to BRCC's Career Counseling Program to promote employment in manufacturing and high tech industries.

Dynamic Aviation

High Tech Company Award

Dynamic Aviation: Dynamic Aviation got its start in 1936 as a family-owned business specializing in aerial spraying and other agricultural tasks. Since then, the company has been transformed into a high-tech marvel led by the efforts of President and CEO Michael Stoltzfus.

Dynamic Aviation now modifies airplanes for specific payloads and provides flight services for intelligence, surveillance, and reconnaissance missions; airborne data acquisition; fire management; aerial applications and Sterile Insect Technique.

Their clientele includes national defense, military intelligence, other federal agencies, state and local governments, nonprofit research organizations, and private entities. Their fleet of aircraft include Beechcraft King Airs and Bombardier Dash 8s. The company prides itself in responding quickly to client requests while providing service and value that are not replicated by any other aviation company in the world.

Dynamic Aviation's headquarters are located in the Bridgewater Air Park in Rockingham County. This locale is comprised of a privately owned airport, a heavy maintenance and modification center, and an engine shop protected by multiple layers of security. In its 140,000 square-foot production space, Dynamic Aviation technicians employ their skills in modern welding, machining, sheet metal design, and high-tech avionics to modify and repair aircraft. They also manage one of the world's largest inventories of Beechcraft King Air parts.

While Dynamic Aviation's operations in Rockingham County are impressive, the company's expansion into other countries attests to its international success. The company has twenty-eight locations in ten countries on four continents.

Dynamic Aviation's technical and flight expertise has led to phenomenal growth. Over the past few years, it has expanded from 150 to more than 760 employees and contract workers, and it is poised to continue this growth well into the future.

WHARTON ALDHIZER & WEAVER PLC
ATTORNEYS & COUNSELLORS AT LAW

LeClairRyan's

Dr. John Noftsinger Leadership Award

Presenter: Mike Drzal, Partner LeClairRyan / Chairman, Venture Capital Practice Area Team

Dr. Noftsinger Leadership Award
honors an individual in a high tech organization whose personal leadership and efforts in the community have resulted in outstanding benefits to the region, or an individual outside a high tech organization whose personal leadership and example have resulted in outstanding, positive technology-related activity in the region.

2001 Recipient
Warren French, Shentel
2002 Recipient
Dr. Ronald Carrier, James Madison University
2003 Recipient
Dr. Nicholas DesChamps, DesChamps Technologies
2004 Recipient
Dr. Linwood Rose, James Madison University
2005 Recipient
Dr. John Noftsinger, James Madison University
2006 Recipient
Dennis Zimmerman, ComSonics
2007 Recipient
Willy Pirtle, Shentel
2008 Recipient
Robin Sullenberger, Shenandoah Valley Partnership
2009 Recipient
Michael Steadman, SusQtech
2010 Recipient
Dave Segars, Segars Engineering
2011 Recipient
Chaz Evans-Haywood, Rockingham / Harrisonburg Circuit Court

LECLAIRRYAN

Joseph S. Paxton

Rockingham County

County Administrator Joseph S. Paxton has been leading a team effort to transform Rockingham County into a high tech and biotech powerhouse. His hard work and vision are demonstrated by the County's success in retaining and attracting businesses, creating high-paying jobs, and aiding business expansion.

Serving as the county's chief economic development official, he led and participated in teams that have introduced new technology companies to the Valley, and recommended to the Board of Supervisors policies encouraging technology and business expansion to add to the county's tax base.

Paxton was part of the team that encouraged SRI to establish a hub for biotechnology research and innovation in Virginia. He recommended to the Board of Supervisors the County create several technology zones - (1) The South Fork Technology Zone to stimulate investment in state-of-the-art advanced manufacturing equipment at MillerCoors and Merck, currently expected to net nearly $17 million in county tax revenues over ten years; (2) The Bridgewater Aviation Technology Zone providing the framework for Dynamic Aviation's rapid growth and overall success, with an on-going grant program in return for meeting certain performance metrics. Dynamic was able to acquire more aircraft, relocate them to Virginia, increase their highly trained workforce, and expand its avionics services; and (3) The Digital Print Technology Zone to attract investment by R.R. Donnelley in digital laser print equipment.

Paxton's success can be attributed to his collaborative and cooperative approach in implementing the county's technology and biotechnology business development and expansion strategy. Working closely with the Board of Supervisors, the county's economic development team partners with city and state officials, educational leaders, economic development proponents, and members of the local business community to develop strategies that will result in long-term benefits for the Harrisonburg Metro area.

Kurt Plowman
City of Staunton

Dr. Noftsinger Leadership Award

Kurt Plowman, Chief Technology Officer for the City of Staunton, has worked for the city for the past thirteen years. Over the years, he has worked to ensure Staunton's network integrates IT into every city department, enabling the city to be more efficient in delivery of services. From mobile data terminals and license plate recognition systems in the police department to hosting a regional card catalog system for area libraries, Staunton's IT impacts services to every citizen. He won the Governor's Technology Award at COVITS 2010 for Innovative Use of Technology in Local Government for implementing virtual desktops for public access workstations in the Staunton City Library.

Since 2003, Plowman has served on the Board of the Wildlife Center of Virginia (WCV) and as the volunteer supporting WCV's technology needs. In April 2011, WCV received a call that three baby eaglets were being transported from the Norfolk Botanical Gardens. Within two days, he had a streaming webcam running to share the daily experiences of three baby eaglets with the world. As many as 16,000 simultaneous viewers followed the eaglets on the webcam until their release. The webcam feed enabled WCV to extend their educational programs around the world and helped double the number of donors and raise hundreds of thousands of dollars, making 2011 one of WCV's best years.

In 2011, Plowman was named the Staunton Police Department Reserve Officer of the Year. His primary role as a reserve and certified forensic examiner is processing digital evidence, including mobile devices and computers, in over a hundred criminal cases. He is also a technical advisor to the Police Department and participates in online operations.

Plowman has also served on the Board of the Shenandoah Valley Tech Council since 2002, serving as the Vice-Chairman and Chairman. He currently serves on the Events Committee.

LECLAIRRYAN

Lumos Networks

Innovation in Higher Education Award

Presenter: Dave Keller, Senior Vice President of Sales and Marketing

The Innovation in Higher Education Award honors the innovative use and/or development of technology with the region's educational system or other technology-training program.

2001 Recipient
Community Applied Information Technology, LFCC
2002 Recipient
Linda Cautey, Shenandoah Valley Governor's School
2003 Recipient
Project TRAIN IT/SVWIB
2004 Recipient
EMHS—"Lewis and Clark 2003: Re-tracing the Trail" & Richard Ingram, JMU College of Education
2005 Recipient
CISAT Bio-Manufacturing Groups: Drs. Raab, McKown, Coffman
2006 Recipient
JMU's Center for Energy and Environmental Sustainability (CEES)
2007 Recipient
Dr. Ralph Grove, JMU Dept. of Computer Science & Dr. Bob Kolvoord, JMU CISAT
2008 Recipient
Nick Swayne, JMU College of Education
2009 Recipient
CyberCity: Drs. Dillon, Font, Reif & Thomas, JMU
2010 Recipient
Dr. Richard R. Teaff, Dabney S. Lancaster Community College
2011 Recipient
Madison Digital Image Database, JMU's Center for Instructional Technology

LUMOS NETWORKS

Students in Free Enterprise Team

Rebecca Evans, Blue Ridge Community College

Rebecca Evans, a Professor at Blue Ridge Community College and the Students In Free Enterprise (SIFE) Advisor, was leading the BRCC SIFE team in Haiti on January 12, 2010, during the earthquake that devastated an already economically-challenged country. At that time, the team was there to provide educational support and supplies to a school in Riverie Friode. They are now working to help rebuild that same school that was destroyed during the earthquake and have developed an innovative approach to alternative energy.

Haiti only offers its residents electricity in its main cities, and even in these areas power is limited to a few hours a day. Alternative energy sources are greatly needed in this small impoverished island nation. To address this need, BRCC SIFE students researched the process of using biomass as an alternative energy source. Biomass briquettes are produced using waste that is found locally, including manure, paper, cardboard, and leaves. Waste products are compressed into briquettes with a biomass press, which compresses the waste into solid cubes used to burn for cooking and to produce light.

BRCC SIFE students have used a biomass plan provided by Engineers Without Borders. Under Evans' leadership, the team has tweaked the plan to incorporate a greater capacity for savings of water run-off from the production process. Water is precious and scarce in Haiti, so recapturing the water for reuse is essential. The biomass press has since been completed and is successful in its pilot runs of producing the briquettes.

The BRCC SIFE students will return to Haiti in June to train villagers in Mon L'opital Haiti on how to produce the biomass machines and briquettes. Not only will this project offer an alternative energy source, it will also help protect the environment from further damage and create revenue-generating opportunities for the villagers through the sale of biopress machines and briquettes.

Veterinary Technology Distance Education Program

Dr. Stuart Porter, Blue Ridge Community College

Innovation In Higher Education Award

Blue Ridge Community College has been educating veterinary technicians in the Shenandoah Valley for four decades, and the program has expanded and diversified to meet the increasing demand for technicians across the Commonwealth. Using a unique distance education platform in conjunction with extensive partnerships with community colleges and veterinary practices throughout Virginia, the resultant Distance Education program allows students from across the Commonwealth to obtain training and licensure.

The BRCC Veterinary Technology Distance Education program's innovation lies in the fact that students in all locations:

- Benefit from a cohort learning experience
- Engage in extensive classroom discussion
- Learn through extensive hands-on experience.

The cohort model is integral to the success of this very challenging program. As members of a defined cohort, students rely on strong peer support as well as the commitment of a dedicated distance education facilitator who is present at the distance site. Engaging classroom discussion is essential to students entering the demanding field of veterinary technology. Synchronous, compressed video technology allows students to benefit from rigorous discussion and form a relationship with the faculty. Blackboard is also used as an Internet platform to support classroom instruction, communicate content, and facilitate interaction. Each class is recorded and posted to allow students to review lectures. Finally, extensive hands-on experience is provided by collaboration between the BRCC program and many veterinarians in the Commonwealth, as each student is required to be employed at a veterinary clinic.

The BRCC Distance Education Veterinary Technology program continues to expand its outreach, and to date, 100% of graduates have passed the National Veterinary Technician exam. This highly successful program was accredited by the American Veterinary Medical Association in 1999 and received both a Technology in Education award and a Governor's Innovation in Technology award for its innovative design and benefit to the veterinary profession in Virginia.

LUMOS NETWORKS

Innovation In Higher Education Award

Dr. Florian Buchholz

James Madison University, College of Integrated Science and Technology

James Madison University's Computer Science Digital Forensics Master's program combines core computer science concepts with an in-depth, technical study of digital forensics. The curriculum is also highly system-oriented, providing insight into how operating systems, networks, and computer programs function and how those systems relate to forensics and security in general. Coupled with these technical computer science topics, a core digital forensics component addresses the forensic process, relevant laws, and analysis techniques as well as report-writing.

The graduate program is unique when compared to other academic programs across the country because it takes a computer science perspective, rather than the "usual" focus on law enforcement training through an approach in criminology. This means that graduates from the JMU program possess very high technical, forensics-related skills that are not commonly found in graduates of traditional computer forensics or computer science programs. The curriculum is therefore a mix between a system-oriented computer science core coupled with important technical areas and challenges from the digital forensics world.

The program will have an immediate impact on the Information Assurance and Computer Security capabilities of the federal, state, and local workforce as well as industry. Graduates from the Digital Forensics concentration will be valuable assets for law enforcement and intelligence agencies as well as corporate incident response teams, bringing with them the skills needed to investigate complex incidents and attacks to cyber infrastructure.

This newly created program will be an important contributor in Digital Forensics education -- an area with high projected demand and insufficient expert workforce to satisfy demand. The establishment of this program will strengthen the workforce of high-quality employees for both government and industry for the long term.

LUMOS NETWORKS

Dr. Louise Temple

James Madison University, College of Integrated Science and Technology

Innovation In Higher Education Award

Imagine being a college freshman, right out of high school, and being invited into a microbiology lab where you will successfully discover and characterize a new virus during your first semester of college! Louise Temple, Professor of Integrated Science and Technology at James Madison University, wants to tempt students to become scientists or technologists by showing them how interesting this work can be. She believes that if more students can be exposed to interesting and intellectually-stimulating discovery very early in their academic careers, the likelihood that they'll stick with the daunting educational process grows dramatically.

Temple believes that any STEM field can offer meaningful discovery experiences to students with no more than the usual high school math and science background. To prove this, she has organized a course at JMU called Viral Discovery in which freshman students collect soil samples and identify a virus from this sample. They learn the lab protocols for isolating a virus and then manage the process of analyzing the sequenced genome to determine the character of the virus. Because the viruses found in soil are extraordinarily diverse, the viruses discovered will be new and, in some cases, can represent a previously unknown family of viruses. This experience can get students excited about the potential of a career in STEM fields and motivate them to take the science and math classes needed on their way towards this career.

Temple's work was initially supported by a grant from the Howard Hughes Medical Institute with the intent to examine whether such an experience might be a game changer for students who are interested in science but skeptical that science could actually be interesting. She hopes that the model demonstrated by the Viral Discovery course will lead to the emergence of similar experiences in other sciences and engineering, hooking new students into STEM fields through this novel and inspiring approach.

LUMOS NETWORKS

Innovation In Higher Education Award

Shenandoah University Conservatory

The Conservatory at Shenandoah University is Virginia's - and one of the country's - premier conservatories with a faculty of more than a hundred professionals in music, theatre and dance and an alumni family that takes center stage from Broadway to the concert halls of Europe. Golder O'Neill, Associate Professor and Director of Music Production and Recording Technology, and Adam Olson, a certified instructor and engineer specializing in digital audio workstations, have championed the integration of mobile devices (Apple MacBooks and iPads) into the curriculum with their music production and recording initiative. Mobile devices allow students to record their private music lessons and review their performance while walking to class. They can easily collaborate on projects and share ideas and research. Additionally, mobile devices enable faculty to direct students in the instruction of software tools such as Logic, Garage Band, Pro Tools, Cubase and Nuendo.

Music Production and Recording Technology courses, such as the Remote Recording Practicum, encourage students using laptops (Apple MacBook) to record performances in different venues on Shenandoah University's campus. The student's experience is enhanced by being able to record on location and edit the performance immediately afterward, while the performance is fresh in their minds. O'Neill and Olson have found that the integration of mobile devices into the curriculum puts students in charge of their learning and facilitates a richer learning experience.

LUMOS NETWORKS

Center For Innovative Technology's

Innovative Technology Application Award

Presenter: Robert Stolle, Vice President, Regional Growth Programs

Biochar System at Avalon Acres Farm

James Madison University

Wayne Teel, Associate Professor of Integrated Science and Technology at James Madison University, supervised four ISAT students throughout the construction and implementation of a biochar pyrolysis unit at Avalon Acres Farm. Biochar is charcoal made for the purpose of providing an agricultural amendment. It is made at higher temperatures than the commercial charcoal found in stores and, as a result, is far more porous and lightweight. The origins of biochar lie in the Amazon, where native peoples made biochar to improve the typically nutrient-poor, highly-leached soils. The resultant nutrient-rich mix enabled continuous agriculture because the biochar reduced nutrient and moisture loss in the soils. Even today, five hundred years after many of these peoples disappeared, these soils are among the most fertile in the Amazon.

Biochar is now being made around the world. The process, called pyrolysis, is simple: dried wood is placed in an airtight container with a small outlet to relieve pressure, then heated using more wood burned beneath the container, with full access to air. After some time, usually with the temperature in the container reaching over 500°C, the gases being released by the wood will cease, indicating that the pyrolysis process is complete. After the container has cooled, it can be opened and the biochar retrieved. This process releases a great deal of heat, which is where this team's innovations come into play.

On cloudy or wintry days, the owners of Avalon Acres Farm can use the biochar system's captured energy to provide heat for their greenhouse. The top of the pyrolysis system is a 125 liter rectangular water tank that is heated during the pyrolysis process. The heat is transferred from the outside tank to an internal storage tank using a small electric pump, which moves water through heat exchange pipes in the internal tank. When the temperature in the outside tank becomes higher than the temperature in the interior tank, the pump is switched on using thermostatic controls, transferring the heat. Avalon Acres uses this as their backup system for heating a greenhouse in the winter, and uses ground up biochar composted with sheep and chicken manure as an agricultural amendment on the farm.

The Innovative Technology Application Award
honors the innovative use of technology in more traditional Shenandoah Valley based industries such as agriculture and manufacturing.

2001 Recipient
Sayre Enterprises, Inc.
2002 Recipient
Rockingham Memorial Hospital-Picture Archive and Communication System (PACS)
2003 Recipient
WVPT-Virginia Public Television
2004 Recipient
Wildlife Center of Virginia
2005 Recipient
Coldwell Banker Funkhouser Realtors
2006 Recipient
Valley Blox
2007 Recipient
Perdue Farms, Inc.
2008 Recipient
Chris Beard, Staunton News Leader
2009 Recipient
Dr. Mike Mitri, (JMU), Legacy Forward, Inc.
2010 Recipient
Rockingham Memorial Hospital
2011 Recipient
MillerCoors Shenandoah Brewery

CIT
CENTER FOR INNOVATIVE TECHNOLOGY

Innovative Technology Application Award

Copper T Fitting Team

NIBCO of Virginia

NIBCO manufactures flow-control products which are used in residential, commercial, industrial, fire protection and irrigation applications worldwide and include plastic and metal fittings, valves and actuators, and industrial plastics. NIBCO of Virginia, located in Stuarts Draft, specifically focuses on copper fittings for all plumbing applications.

Although the way to make a standard copper "T" fitting may have changed over the years, the design has remained the same. However, the NIBCO of Virginia "Copper T Fitting Team," comprised of John Schlabach, David Persinger, Timmy Buzzard, and Rick Taylor, has created a new patent-pending process and tool design that has actually changed the standard design of this common fitting.

The normal process/design permits the build-up of copper in the body of the "T" fitting, which has always been assumed to be inherent to the process. The new design includes forming punches that extend and taper to "plow" or "shovel" the material up and out of the outlet of the "T" fitting during the hydroforming process. This means that less initial "blank" material is used and, thus, less material is used overall. With the price of copper ranging from $3.50-$4.00 per pound, this innovative design has led to substantial savings in material costs while also improving water flow and reducing corrosion points. It has also had a major impact on the copper fitting industry as well as the 128 different types of "T" fittings stocked at the NIBCO of Virginia facility.

The NIBCO of Virginia "Copper T Fitting Team" has a combined 110 years of experience and has won a NIBCO Corporate Associate Recognition Award for Innovative Technology.

CIT
CENTER FOR INNOVATIVE TECHNOLOGY

RR Donnelley

Innovative Technology Application Award

RR Donnelley is a global provider of content creation, management, production, and distribution services. They operate their print-on-demand book production lines in Harrisonburg by utilizing the company's unique ProteusJet digital ink jet presses.

In the bookselling market, RR Donnelley's publishing customers have always faced the unpredictable challenge of producing the right number of books. Print too many, and the extras will be wasted and turned back into paper pulp. Print too few, and a title goes out of print while demand still exists. The RR Donnelley team discovered that the missing link in the supply chain was an efficient and high quality means of producing books on demand that also complemented conventional printing and binding methods.

Although RR Donnelley has traditionally been recognized more for using presses than designing them, the ProteusJet digital ink jet press was developed and deployed by RR Donnelley's in-house Research & Development operation. After the R&D team surveyed all of the commercially available units, they concluded that there were no digital printing units available that would provide the right combination of speed and quality. ProteusJet fills that gap, with paper moving through the press at speeds of up to 800 feet per minute.

These presses, linked in-line with binding units, provide a fully-automated book production system. The ProteusJet lines manufacture precise, shorter-run quantities of consumer trade books such as nonfiction, literary fiction, school workbooks, use and care guides for automotive repair, and other volumes.

The ProteusJet presses enable a more precise and sustainable supply chain. Books that were out of print can now be manufactured in smaller, more exact quantities, thus reducing waste in the supply chain and limiting the number of units that have to be recycled.

CIT
CENTER FOR INNOVATIVE TECHNOLOGY

Verizon's

Innovation in K-12 Education Award

Presenter: Steven Cronemeyer, Manager, Government Affairs

The Innovation in K-12 Education Award honors the innovative use and/or development of technology within the region's K-12 educational system or other K-12 technology-training program

2005 Recipient
John Matherly, Shenandoah Valley Governor's School

2006 Recipient
Learning Can Be Fun, BRCC's Youth Program

2007 Recipient
Laura Evy, Ottobine Elementary School

2008 Recipient
Wilson Middle School, Bully Broadcast Thursday

2009 Recipient
Kimberly Elshafie, Daniel Morgan Middle School

2010 Recipient
Leonard Klein, Shenandoah Valley Governor's School

2011 Recipients
Alexandra Johnston, North Fork Middle School
Kevin Lipscomb, Wilbur Pence Middle School

verizon

Margaret Cameron

John Handley High School, Winchester Public Schools

As an eleventh grade English teacher at John Handley High School, Meg Cameron works to incorporate writing with technology. She strives to make her assignments authentic and applicable to the vast majority of media influence on today's teenagers, while maintaining a focus on creativity and composition.

This year Cameron has worked to incorporate blogging into her classroom within the safe and confidential confines of Blackboard. Her students blog every day and write entries related to themselves and a letter of the alphabet (for instance, "A is for Apple Picking"); that student will then reminisce in blog format the memory of this occasion. Because students are able to collaborate and comment on each other's blogs, they learn to provide respectful feedback and thoughts on improving their writing. Her students have also learned how to attach video and pictures to make these blogs feel more like an electronic portfolio showcasing their lives. Also, because Virginia is moving the Standards of Learning tests toward a primarily online platform, blogging encourages her students to practice with editing tools and feel comfortable composing on a computer screen.

She also uses technology with her Advanced Placement students by requiring them to deliver comprehensive and professional PowerPoint presentations. Her students practice by giving two large presentations each year in order to highlight personal research and also literary criticism. Several of her students have also been published in various periodicals including local newspapers, on-line journals, and even The New York Times.

Cameron continues to find experiences that could engage students with technology. She is looking forward to working with "Glogster" in order to elaborate on her students' blogs, displaying their entries in a more interactive format, and perhaps serving as a portfolio for students to showcase as part of their college applications.

Dr. Cam Carte

Massanutten Technical Center, serving HCPS and RCPS

Innovation In K-12 Education Award

Dr. Cam Carte teaches Engineering Technology at Massanutten Technical Center in Harrisonburg. At MTC, he has developed an innovative engineering curriculum that teaches students to solve real-world problems through the practical application of math and science. As part of this innovative approach to teaching applied physics and engineering principles, MTC students have installed a series of fully functional solar panels, installed a working wind turbine, and converted a diesel generator to run on vegetable oil to generate electricity that would partially power their classroom. Additionally, students are currently installing forty square feet of solar panels on the roof of their classroom and are making plans to install an electric car charging station for public use.

Under Carte's direction, MTC Engineering Technology students are well-versed in basic applied physics as well as basic applications of the four major engineering disciplines – chemical, civil, electrical and mechanical. In addition, students focus on three emerging green technology areas – wind energy, solar energy and environmental engineering. The program encourages students to consider environmentally sensitive and socially responsible solutions to engineering and manufacturing challenges. Students don't just talk about these challenges, they get their hands dirty solving them.

As part of this endeavor, Carte and his students won a highly competitive "Dream It. Do It" Virginia - Shenandoah Valley - mini-grant for the 2010-2011 school year. The $4,800 award was used to design, develop and implement the two panel solar photovoltaic system that creates a source of off-grid renewable energy to power their classroom. For the 2012-2013 school year, the program has also been awarded a grant through a cooperative agreement with James Madison University to install a public Plug-in Electric Vehicle charging station and to promote the project and the use of this innovative technology throughout the Shenandoah Valley.

verizon

Innovation In K-12 Education Award

Deborah Cross

Peter Muhlenberg Middle School, Shenandoah County Public Schools

Deb Cross, a seventh grade U.S. History II teacher at Peter Muhlenberg Middle School, is one of a handful of teachers within Shenandoah County who has successfully and fully integrated Web 2.0 learning into her students' daily classroom experience. Each student has a computer which serves as his textbook, workbook, test paper, and project platform. Here, students use a myriad of technology applications to individualize and accelerate their learning of new content.

Cross recognizes her role as a facilitator and her students' need to be active in and have ownership of their learning. Her students share their individualized products with their peers as an authentic audience. During both the sharing as well as the group projects, students discuss content, build consensus, and collaborate. Students use Glogster to create interactive posters at the beginning of the year to introduce themselves to Cross and their classmates. Throughout the year, they create "glogs" by using images, videos, and graphics to illustrate a subject area, idea, event or concept. They collaborate with their peers to re-enact historical events which they film to create mini-movies.

During instruction, students use Back Channel to live stream comments and to answer and ask questions during instruction. Students are able to reflect upon and assimilate the new content during class, and Cross uses this data to tailor her instruction, sharpen key points, and address student needs.

Cross acts as a role model to other teachers and has presented her ideas to teachers across the division at the annual Share Fair. She contributes to the development of others' teaching skills by modeling how to use technology to adapt to the learning needs of the students and the rigors of the content.

verizon

Tawnya Doss

Spotswood Elementary School, Harrisonburg City Public Schools

Innovation In K-12 Education Award

Tawnya Doss, an Enrichment Specialist from Spotswood Elementary School, is an innovative teacher who has effectively used technology to enhance her educational curriculum. Doss received an M. Ed. in Curriculum and Instruction and works part-time as the enrichment specialist with students in kindergarten through fourth grade. In this capacity, she has continually searched for ways to make instruction come alive for her students.

Her first graders learned vocabulary and spelling by using iPods. They particularly enjoyed learning how to spell and construct words using the "Words With Friends" application, which is very similar to the board game Scrabble. Doss also used the "Word Shaker" application to introduce basic dictionary skills to her students.

In second grade, the children produced individual magazine covers based on the novel they had read. They also used iPods to write postcards from the perspective of a famous American. After reading the Clementine novels, her second graders created GLOGS (similar to blogs) to compare and contrast each book.

Third graders created an online museum box to share what they had learned about ancient civilizations. Her fourth graders researched a person from the Civil War and then created a FAKEBOOK profile of that person. That profile was then posted to other FAKEBOOK walls. Using these applications to mirror the uses of social media networks have helped capture the attention of these students and create excitement about future projects.

Under Doss's guidance, students find that using technology is now second nature. Her efforts have made them excited about learning and have taught them how to apply what they have learned in new and more creative ways.

verizon

Innovation In K-12 Education Award

Sheila Fielding

Harrisonburg High School, Harrisonburg City Public Schools

Sheila Fielding, an English teacher at Harrisonburg High School, has been teaching English for over thirty years and continues to challenge and motivate her students year after year. She accomplishes this by using the latest technology available to engage her students in meaningful and innovative projects.

Recently, while teaching a unit on poetry, she asked the students to take a contemporary poet and poem and illustrate the poem with moving text, sound, and images. After each student chose a poem, the student had to gather images to represent the poem, use iMovie, iPhoto, PowerPoint, or another approved software, and create a project that included their voice and moving text.

Several of the completed projects went beyond expectations. For example, one group of students captured over 1,800 pictures to create a video of images, text, and sound that would rival a professional project. The students used the same type of skills that would be necessary to create an animated video, one frame at a time.

Fielding was also able to fully engage her students in a book talk by getting them to sign up for a social media network called My Big Campus. The students were required to participate in threaded discussions where they commented on teacher-led as well as student-led discussion. Students even continued the discussions after the required assignment ended.

She continues to explore available technology and ways to use it in her classroom, and her students continue to benefit from her desire to keep improving how she teaches.

verizon

Jacqueline Gulino

Keister Elementary School, Harrisonburg City Public Schools

Innovation In K-12 Education Award

Jackie Gulino, Enrichment Specialist at W.H. Keister Elementary School in Harrisonburg, teaches students from kindergarten to fourth grade how to use technology to research, solve problems, and produce creative projects that demonstrate their understanding of the subject being taught. Her endeavors fall into two broad categories: I-STEM and Gifted/Advanced Learner Education.

I-STEM, a pilot program in its first year at Keister, prepares students for the 21st century through design challenges which encourage students to solve problems collaboratively. Gulino has also introduced the use of iPads to students and teachers across all grade levels and uses iPads to help teach topics like rocket propulsion, space, animals, and cycles.

She created an I-STEM "portaportal" as another way to acquaint teachers with technology that they could in turn use in their lesson plans. The I-STEM portaportal contains video clips, SMARTboard activities, and interactive websites for each I-STEM lesson.

Gulino also works with students who are identified as gifted or advanced learners. These students use iPads and computers to research subject matter ranging from worms to famous Americans to wilderness survival. The students then used the results of their research to create products that ranged from Kidspiration documents to pictographs in Excel.

In particular, her "careers" project illustrates the multi-stage process typical of her lessons. This project required students to research several top rated careers. Based on this research, the students chose a career that interested them and that required a college degree. The students learned about the career through online research, completed graphic organizers, and typed and e-mailed interview questions to a professional in their chosen career. Finally, they created a presentation about their career.

Gulino demonstrates innovative uses of technology to students and to fellow teachers alike. Her skills as a teacher benefit society in that she truly enables children to become technologically savvy, problem solvers, and global thinkers.

verizon

Innovation In K-12 Education Award

Anna Hoover

Virginia School for the Deaf and Blind

Many of the students at the Virginia School for the Deaf and Blind (VSDB) face unique challenges related to communication, accessibility, and workplace readiness skills. As they work to improve their independent living skills or participate in the Work-Based Learning program, they learn a variety of support skills to be successful. Anna Hoover, VSDB Transition Specialist, has been working with others at VSDB searching for innovative ways for students to manage and be in control of these supports without having to constantly rely on their teachers, teaching assistants, dormitory staff, job coaches, interpreters, related service providers, or coworkers in order to reach their postsecondary goals. With the goal of helping each student reach maximum independence as they prepare for postsecondary education, and most importantly, employment, VSDB wanted to teach them to make use of a variety of applications designed for use on iPads.

For high school students with a significant need for support, the iPad was used to develop and maintain visual schedules, for both school and work settings. The iPads were used so that the student would be responsible for managing his or her time without having to rely on school staff.

VSDB had eight students in grades ten through twelve participate in a partner's Carded Graphics Design project this year. Students used their iPads to complete and submit their projects to Carded Graphics for judging. Carded Graphics then offered an internship to the winner of the competition. VSDB is attempting to expose more students to careers in manufacturing with this activity while integrating technology skills as part of the educational process. VSDB plans to make this a yearly project through the art and commercial photography courses that are offered. For more general transition-related skills, approximately thirty-five additional students in eighth through twelfth grades have benefited or will benefit for the remainder of this school year.

verizon

Obe Hostetter

Rockingham County Schools

Innovation In K-12 Education Award

Obe Hostetter, Instructional Technology Resource Teacher for Rockingham County Public Schools, supplies a variety of resources to teachers through websites he maintains on the RCPS "Grade Level Ideas" shared network folder, through e-mail, and in person, as he collaborates with well over 800 teachers in the county system. His work benefits all of RCPS as he continues to make a positive impact on the use of technology for students, teachers, and instructional assistants. Beyond his normal duties, he also conducts a wide variety of workshops during school division in-services, visits classrooms to assist with technology issues, and maintains many aspects of the technology portal on the RCPS website.

Hostetter consistently e-mails technology tips and information to encourage the creative use of equipment, external websites, and new software packages. He creates Notebook lessons that correlate with SOL's, searches the web to provide links to websites and other Notebook lessons, and then organizes these resources for teachers, which saves them valuable time. Not only does Hostetter provide this service for RCPS teachers, but he also shares this information with educators throughout Virginia. His strong work ethic and enjoyment of technology in education is directly passed onto others. He is highly-skilled and a respected technology integrator, especially with SMART technologies including SMARTBoards, airliners, and Senteo.

The technology resources are organized by Virginia Standards of Learning to help teachers integrate technology into the classroom. He actively shares tips, files and troubleshooting hints with SMARTboard users from around the world. Hostetter also served as the Conference Chairman of the 2009 SMART Users Conference sponsored by SMART and the Shenandoah Valley Technology Consortium.

verizon

Innovation In K-12 Education Award

Instructional Technology Resource Teachers

Harrisonburg City Public Schools

Kim Brantley, Diana Flick, Stacey Penrod, Alan Quimby, Cherie Roadcap, and Toni Sheets make up a dynamic team of Instructional Technology Resource Teachers (ITRTs) from Harrisonburg City Public Schools. They work to help teachers and students enhance their learning through the effective and innovative use of technology.

Brantley collaborated with the music teacher at Smithland Elementary School to create stations for students in PreK through fourth grade to use the iPad while creating, reading, and playing music. Roadcap co-teaches a GPS unit with the technology education teacher. Students learn how the GPS works by using Google Earth to follow/mark waypoints as they go on treasure hunts and nature walks.

Penrod collaborated with the art teacher at Stone Spring Elementary School to create an Interactive Art Museum where students scanned QR codes to learn more about various works of art. Quimby worked with a middle school language arts teacher on a language arts project. Students read books that include the death of a character, then researched the stages of grief and wrote about each stage. They then created bookmarks with a QR code linked to their writing to let other students who were also reading the book understand the characters better.

In preparation for online SOL tests, Sheets developed a program that used a portable word-processing keyboard and then worked with fourth grade teachers and students to provide opportunities to practice keyboarding skills. Flick recognized a need at the high school level to provide a better option for students who needed to have tests read to them. She recorded the tests on iPods, which students could then use to hear the tests as they answered the questions.

The ITRTs embrace the influx of new technologies and spend time learning the technology so they can support teachers. They have become the key component of the strong technology program boasted by HCPS.

verizon

Dr. Scott Kizner

Harrisonburg City Public Schools

Innovation In K-12 Education Award

Dr. Scott Kizner, Superintendent of Harrisonburg City Public Schools (HCPS), has been the driving force behind bringing technology to the forefront of the HCPS learning experience. In doing so, he has ensured a brighter future with greater opportunities for HCPS students and laid the groundwork for a tech-savvy workforce to support the Shenandoah Valley in the years to come.

Kizner believes that technology can be used to facilitate communications for students, families and teachers. HCPS now has a user-friendly website that includes web pages for each school and for every teacher. Parents and students routinely access these web pages to download homework, verify schedules and monitor student progress. "Parent Portal" is another recently implemented technology tool that improves the lines of communication between parents and teachers by allowing parental access to their student's grades, classroom participation and homework assignments.

Kizner has supported the infusion of technology in the administration of the school system through the implementation of Board Docs, a paperless, cloud-based system for School Board meetings and communications. This system has archival and research capabilities that make the School Board more efficient and more connected to school systems nationwide.

With Kizner's support, technology has been integrated into all aspects of learning. Policies have been modified to encourage students to utilize personal electronic devices to support their educational experiences in the classroom. For example, iPads and iPods are now used in every discipline, from art and music, to math and science, reinforcing curriculum concepts through the use of technology.

Any successful high-tech community has its roots in its education system. Kizner's vision and leadership mean that Harrisonburg and the Shenandoah Valley can be assured of strong, vibrant technology roots for many years to come.

verizon

Innovation In K-12 Education Award

Caroline L. Nesmith

Stone Spring Elementary School, Harrisonburg City Public Schools

Kate Nesmith, an art teacher for Stone Spring Elementary School, developed an "Interactive Art Museum" for her students. The closest art museum for students in Harrisonburg City Public Schools is two hours away, so many students never actually had the chance to visit one in person. Nesmith saw the Interactive Art Museum as a chance to bring the museum experience directly to the students. The project was funded by a grant from the Harrisonburg Education Foundation. Nesmith's mission was to ensure the museum fused art, technology, and core subject Standards of Learning into an interactive adventure that would be educational as well as fun for all students.

During the week of March 12 – 16, 2012, reproductions of well-known artworks from around the world hung in the hallways around the school. Each student then visited the "museum" during their regularly-scheduled art class. Approximately twenty-five works of art had QR codes hanging next to them. Working with a partner, each student used an iPod Touch to scan the QR codes, which linked the students to videos that would teach the students about the artwork. Each grade level had a "must see" work of art whose activity reviewed a core subject Standard of Learning. Other activities included using iPads and interactive websites, as well as small art projects the students could take home with them.

Every student at Stone Spring visited the museum, including students in the Pre-K program and those in classes for students with autism. The museum was then presented to the community at the HCPS Technology Playground.

verizon

Amy E. Sabarre

Harrisonburg City Public Schools

Innovation In K-12 Education Award

Amy Sabarre, Coordinator of Advanced Learning and Innovative Programs with Harrisonburg City Public Schools, has been a science, technology, engineering and math (STEM) educator for seven years. She believes that all children deserve advanced learning programs and that technology education through STEM provides this meaningful pathway for students to achieve and succeed. Over this past year, she has developed several programs for HCPS that integrate technology education and standards through innovative lessons and curriculum.

Integrative STEM (I-STEM) education specifically looks at the technological and engineering design process through real-world problems. Fourth grade students designed and created working elevators from LEGOs using electricity and simple machines, first grade students created protection from harmful UV rays for UV sensitive beads, and kindergarten students even made roads out of recycled materials. Educational technology is also a large part of I-STEM programs, as students and teachers are exposed to a variety of new technologies such as iPads, computer programs, and applications.

This program has seen great success. Many struggling learners have shown great strength in spatial and problem solving abilities. Students now see themselves as successful and are becoming more creative and innovative with their designs. Teachers also see new talents and abilities in students that they may not have seen otherwise.

Currently, three of Harrisonburg's five elementary schools are piloting I-STEM programs, and this program will be expanded to all five elementary schools in the 2012-2013 school year. In addition to the program for elementary schools, Sabarre has helped create a continuous pipeline of technology education though STEM education in the middle schools, and the 2012-2013 school year will see a STEM Academy at Harrisonburg High School as well as a STEM Explorations Academy at each middle school.

verizon

Innovation In K-12 Education Award

Dr. David Slykhuis

James Madison University, College of Education

David Slykhuis, Associate Professor of Science Education at James Madison University, has created and implemented a Transmedia book (or T-book) into his curriculum. A T-book is a standard print book that serves as a nexus for all of the physical objects and digital resources necessary for telling its story. It exists in both a physical and digital space to facilitate seamless transitions; for example, the print version of a T-book can include Quick Response (QR) codes that link to videos and online simulations that extend the printed content in the book. Similarly, the electronic version of the T-book can contains links that allow students to fabricate physical objects depicted in the book.

The T-book Slykhuis and his team created focuses on the upcoming NASA Magnetospheric MultiScale Mission which will use four identical spacecraft, variably spaced in Earth orbit, to make three-dimensional measurements of magnetospheric boundary regions and examine the process of magnetic reconnection. Slykhuis' project has a significant focus on authentic problem solving, as it challenges middle school students to design the spacecraft.

Slykhuis piloted his T-Book in January and February 2012 at Thomas Harrisonburg Middle School and Skyline Middle School, where he taught all of the eighth-grade students (and modeled for their teachers) how to implement the T-Book in the Introductory Physical Science classroom. Slykhuis' project incorporates all areas of STEM education, which is an important focus of school programming nationwide.

In early April 2012, NASA plans to officially endorse the T-book and it will be distributed through NASA's educational outreach programs. Teachers who rely on NASA's educational resources will be free to download this T-book, and it is expected to be used by teachers around the world once it becomes available.

verizon

JMU Institute for Infrastructure and Information Assurance's **Green Award**

Presenter: Ben Delp, Associate Director of Research Development, James Madison University

Green Impact Campaign

The Green Impact Campaign was created one year ago by Daniel Hill and David Hussey while completing their MBA degrees at James Madison University. They shared a belief that every business should have access to resources to help organizations "green" their operations, regardless of size or budget. Last year, they were awarded the 2011 Force for Change Award presented by Net Impact for their community-level grassroots impact efforts. The Green Impact Campaign may have started in the Shenandoah Valley, but it has since spread around the world.

In an effort to reduce the impact of businesses on the environment, the Green Impact Campaign has developed a self-training mobile application that university students are using to conduct no-cost energy audits for local businesses. Students walk through the facility using the self-training application and survey energy systems in the building through a series of questions focusing on lighting, HVAC, plug load, building envelope (i.e., interior enclosed space), water usage and behavior patterns. Once the audit is completed, the application instantly generates a report for the business and provides a list of specific opportunities to reduce energy consumption, energy costs, and carbon footprint. The report also provides background information for the recommendations and detailed calculations for payback periods, estimated savings, and carbon offset calculations. This technology provides green job experience to university students, easy-to-understand recommendations for businesses, and an innovative take on energy and sustainability solution technology.

Over the past year, the Green Impact Campaign has already helped more than forty local businesses discover energy savings equivalent to nearly half-a-million pounds of CO2 emissions abated, and the cumulative impact of Green Impact Campaign has resulted in over $50,000 in annual energy cost-saving opportunities discovered.

The Green Award
honors an area technology company, university, individual or organization, who is making an impact on our region through top-notch green practices.

2011 Recipient
Virginia Eagle Distributing

Institute
for Infrastructure
and Information Assurance
at James Madison University

Green Award

Jim Hartman

Truck Enterprises, Inc.

Jim Hartman, CEO of Truck Enterprises, Inc., is leading the way for change in the trucking industry by emphasizing environmentally-friendly business practices. He has implemented several eco-conscience projects at each of TEI's locations. For example, he coordinated the installation of Waste Oil Furnaces in TEI's eight service shops and two body shops. These heaters take the oil removed from the trucks and convert it into heat. This effort reduces cost and also puts the waste oil to use, instead of letting the oil go to "waste."

He also replaced the existing opaque bay doors in TEI's service departments with translucent doors, which allowed more natural light to enter the shops and reduced energy costs. He encouraged the use of mapping software to plan the most cost-effective driving routes for their delivery trucks, which reduced fuel costs as well as wear and tear on their vehicles.

More recently, Hartman has established the TEI Cares program, which shares weekly tips with employees about making environmentally-friendly corporate and personal choices. The purpose of the weekly tip is to reinforce a company culture that cares about making "green" decisions. In addition to weekly tips, the TEI Cares program has scheduled quarterly events that promote the three R's (reduce, reuse, and recycle). Events for 2012 include Plastic Bag Collection Day, Tree Planting Day, Water Reduction Day, and Coat Collection Day.

Through his commitment to sustainable practices, Hartman plans to take what he learns through the TEI Cares program and incorporate those tips with environmentally-friendly building processes and the latest energy-saving technologies, recycling methods, and resource conservation when designing TEI's next facility. He believes that, by making decisions that consider the environment, TEI will ultimately have a positive impact on their employees, customers, and the communities where they live.

Charles B. Hendricks
The Gaines Group

Green Award

Charles Hendricks, an architect with The Gaines Group, practices and promotes environmental awareness and sustainable design through his leadership in the construction industry, volunteer activities, and through his public outreach efforts.

Hendricks has served on the Blue Ridge Home Builders Association Green Building Committee since 2003 and was actively involved in the Home Builders Association's adoption of the EarthCraft Homes statewide green rating system. He has also encouraged his employer and his clients to incorporate green design principles into their projects.

He has been a LEED (Leadership in Energy and Environmental Design) accredited professional since 2005, a registered architect and partner with The Gaines Group since 2008, and an active member of many other industry organizations in Virginia.

Hendricks often provides pro-bono green design and LEED consulting services to Habitat for Humanity organizations throughout the region. He is also a regular speaker at events focused on green buildings, including programs for the Department of Energy, the Shenandoah Valley Partnership, Harrisonburg Earth Week, the University of Virginia, Blue Ridge Community College, and Piedmont Virginia Community College.

He designed one of the first EarthCraft homes for the 2005 BRHBA House tours, the first LEED NC Certified industrial projects in Central Virginia, the first LEED registered home built by high school students in the country, the first LEED Certified home in the southeast, the first LEED Registered home built by Charlottesville Habitat for Humanity, the first EarthCraft light commercial certified projects outside the state of Georgia, and the first LEED registered home built by Greene County Habitat for Humanity.

In 2009, Hendricks was named as the chairman of the Shenandoah Valley Green Building Committee and is currently a charter member of the Harrisonburg Rockingham Green Network.

Green Award

Wayland Hall Renovation

James Madison University

In the fall of 2011, James Madison University's Wayland Hall had its 41,000 square feet of residence transformed into an innovative new living/learning community dedicated to the visual and performing arts. The renovated building includes a gallery, music practice rooms, an art studio, and a performance and exhibition room. All aspects of the renovation were designed to encourage interaction, promote sustainable living, and expose students to the discipline and joy of the arts as well as concepts of environmental impact and sustainability.

This project was realized through a true collaborative effort between Maggie Evans, JMU's Director of Residence Life, members of JMU's Facilities Planning staff, the College of Visual and Performing Arts, VMDO Architects of Charlottesville, VA, and Donley's Construction of Cleveland, Ohio. Representatives from each of these areas worked as a single team to accomplish the ambitious project goals.

Through carefully selected systems, finishes, and design strategies, the project earned LEED Platinum status. Wayland Hall is one of only four full-scale LEED Platinum residence halls in the U.S., and it is the first completely renovated residence hall to achieve Platinum status under the USGBC's New Construction and Major Renovation guidelines.

A variety of rigorous design strategies, including a ground source heating and cooling system, rainwater/condensate collection, and water efficient fixtures, contribute to an expected 38% reduction in energy consumption and savings of over 1.3 million gallons of water each year.

Site improvements along and behind the residence hall replaced a parking lot with a series of landscaped terraces. The new design reduces impervious site cover, improves pedestrian connectivity, and provides new opportunities for residence life to extend outside. In all, the site design created a storm water management strategy that is equally environmentally friendly and beautiful.

With innovative materials and thoughtful design strategies, the renovated Wayland Hall demonstrates that a residence hall renovation can re-define an existing building in powerful and lasting ways.

The Newlon Carson Residence

Green Award

Polly Newlon and Keith Carson are both very interested in conserving energy resources. As they developed plans for building their home in Highland County, they spent years researching the science behind "going green." They wanted to reduce their carbon footprint and "take steps to reduce energy consumption." They have been successful – so successful that their house has become a demonstration project for others with similar objectives.

Newlon and Carson built a home that uses a hybrid system of renewable wind and solar energy and is completely "off the grid." Wind energy is derived from a wind turbine mounted on a one-hundred-foot tower, with wind supplying the majority of electric power during the winter. Solar panels provide the bulk of their power during summer months. Furthermore, the home was designed with passive solar energy in mind: the windows face south to get maximum heat, the height of the structure reduces the loss of heat on windy days, windows have double-panes, and the home has both foam and fiberglass insulation.

Water is supplied by a spring located several hundred feet below the house. A solar-powered water pump sends water up two hundred feet to a large reservoir above the house. Water is heated by a solar system at the residence and is used as supplemental heat for the home as well as domestic hot water for laundry, bathing, and other needs.

As a result of this successful endeavor, they have become regional resources for people who have similar objectives. Contractors who worked on the project have become knowledgeable about alternative energy systems and are involved in such construction for others. Because Newlon and Carson have generously shared their knowledge and time, the word is spreading about what everyone can do to reduce carbon footprints and increase the use of non-renewable energy sources.

SVTC Membership Structure

Membership defined by level of benefits, not number of employees.

All members:
Electronic newsletter, priority invitations and reminders, statewide VTA TechEvents newsletter, invitation to participate on SVTC committees, use of the SVTC membership directory listing to their advantage (150 words). Post open jobs as well as publicity in newsletter and website. Any member may buy into a higher category at any time to get the higher benefits. Active participation by each member is what makes the difference for all.

- **Student: $25** - Individual enrolled in high school or college

- **Individual:** $100 - Any one person. SVTC membership directory description focuses on person, includes company/organization name, but not company/organization's address or phone.

- **Level 1** membership: $200 - SVTC membership directory includes company/organization description, address, phone number and web address.

- **Level 2** membership: $500 - Includes Level 1 benefits PLUS inclusion of member-supplied marketing materials at 2 SVTC events , 5 mins. of floor time at same event(s), mention of event sponsorship in SVTC newsletter & SVTC online calendar. (*)

- **Level 3** membership: $1,200 - Includes Level 2 benefits PLUS: logo on SVTC website entry page, logo on SVTC newsletter, logo on SVTC event banners at ALL council events. Level 3 member's logo etc. will be included in other opportunities as they present themselves (e.g. logo on t-shirts). (*)

(*) excludes Tech Nite

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Award Nominees 2012

High Tech Entrepreneur

Sponsored by ***JMU's College of Business and JMU's College of Integrated Science and Technology***

Recipient has successfully organized, developed or managed a technology concept into a commercial product or service.

- Scott Davidson, Campus Cookies
- Hiram Tackett & Bill Tolbert, VTG

High Tech Company

Sponsored by ***Wharton Aldhizer & Weaver PLC***

Honors the company whose growth, accomplishments, or prospects represent a significant technological contribution to the Valley.

- Augusta Free Press, LLC
- Cadence, Inc.
- Dynamic Aviation

Dr. John Noftsinger Leadership

Sponsored by ***LeClairRyan***

Recipient's leadership has served as a catalyst for positive technology-related activity.

- Joseph S. Paxton, Rockingham County
- Kurt Plowman, City of Staunton

Innovation In Higher Education

Sponsored by ***Lumos Networks***

Honors the innovative use and/or development of technology within the region's higher educational system or other technology-training program.

- BRCC, Students in Free Enterprise Team, Rebecca Evans
- BRCC, Veterinary Technology Distance Education Program, Dr. Stuart Porter
- JMU, Digital Forensics, Dr. Florian Buchholz
- JMU, Integrated Science & Technology, Dr. Louise Temple
- Shenandoah University Conservatory, Golder O'Neill & Adam Olson

Innovation in K - 12 Education

Sponsored by ***Verizon***

Honors the innovative use and/or development of technology within the region's K - 12 educational system or other technology-training program.

- Margaret Cameron, John Handley High School
- Dr. Cam Carte, Massanutten Technical Center
- Deborah Cross, Peter Muhlenberg Middle School
- Tawnya Doss, Spotswood Elementary School
- Sheila Fielding, Harrisonburg High School
- Jackie Gulino, Keister Elementary School
- Anna Hoover, Virginia School for the Deaf & Blind
- Obe Hostetter, Rockingham County Schools
- Instructional Technology Resource Teachers, HCPS
- Dr. Scott Kizner, Harrisonburg City Public Schools
- Caroline L. Nesmith, Stone Spring ES
- Amy E. Sabarre, Harrisonburg City Schools
- Dr. David Slykhuis, JMU, College of Education

Green Award

Sponsored by ***JMU's Institute for Infrastructure and Information Assurance***

Honors an area technology company, university, individual or organization who is making an impact on our region through top-notch green practices.

- Green Impact Campaign
- Jim Hartman, Truck Enterprises, Inc.
- Charles B. Hendricks, The Gaines Group
- JMU's Wayland Hall Renovation
- Newlon Carson Residence

Innovative Technology Application

Sponsored by ***Center for Innovative Technology***

Honors the innovative use of technology in more traditional Shenandoah Valley based industries such as agriculture and manufacturing.

- JMU's Biochar System at Avalon Acres Farm
- NIBCO of Virginia, Copper T Fitting Team
- RR Donnelley

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