Information Technology Services

Riverpoint · Spokane

Annual Report · 2012

From the desk of the

EXECUTIVE DIRECTOR

Today's IT challenges are unique. Long ago, simply having a sophisticated network gave your organization an enormous competitive advantage. With the mass proliferation of available technologies, this is no longer the case. Now, the focus has shifted from the network itself to its use within the organization; how an organization uses the IT tools at its disposal dictates its success. To flourish, an IT department must always employ existing tools – and investigate new ones – with the customer in mind. If an information technology department loses focus of its customers' needs, it loses its sense of purpose.

Riverpoint ITS keeps this emphasis on purpose in the forefront of our minds as we move into 2013. While this past year has seen our team change and re-organize to better suit our campus, we have significant opportunities to further our development going forward. To this end, with our customers' participation and help, we've developed our five main ITS goals: Connect, Cultivate, Care, Conserve, and Collaborate. When we consider any new service solutions we will use these five principles to establish the value to our customers.

While this report will summarize the ITS team's accomplishments over this past year, it is also a cumulative history of our ITS team to date. Our accomplishments and our advancements are important, but what can be read in between the lines – between the numbers and the figures – is the dedication of our ITS team to the students, faculty, staff, and all constituents of the Riverpoint campus. This report is truly their story.

As you review our report, please do not hesitate to share your questions or comments with me and the ITS team as we continue to provide world-class IT service to our campus and our community.

Saleh Elgiadi
Executive Director
Information Technology Services
Washington State University Spokane

In this Report:

our

MISSION

Riverpoint IT, through collaborative and progressive leadership, uses its information technology resources to support the strategic mission of the campus by facilitating excellence in teaching and learning, ensuring excellence in service delivery, and supporting state-of-the-art research and discovery.

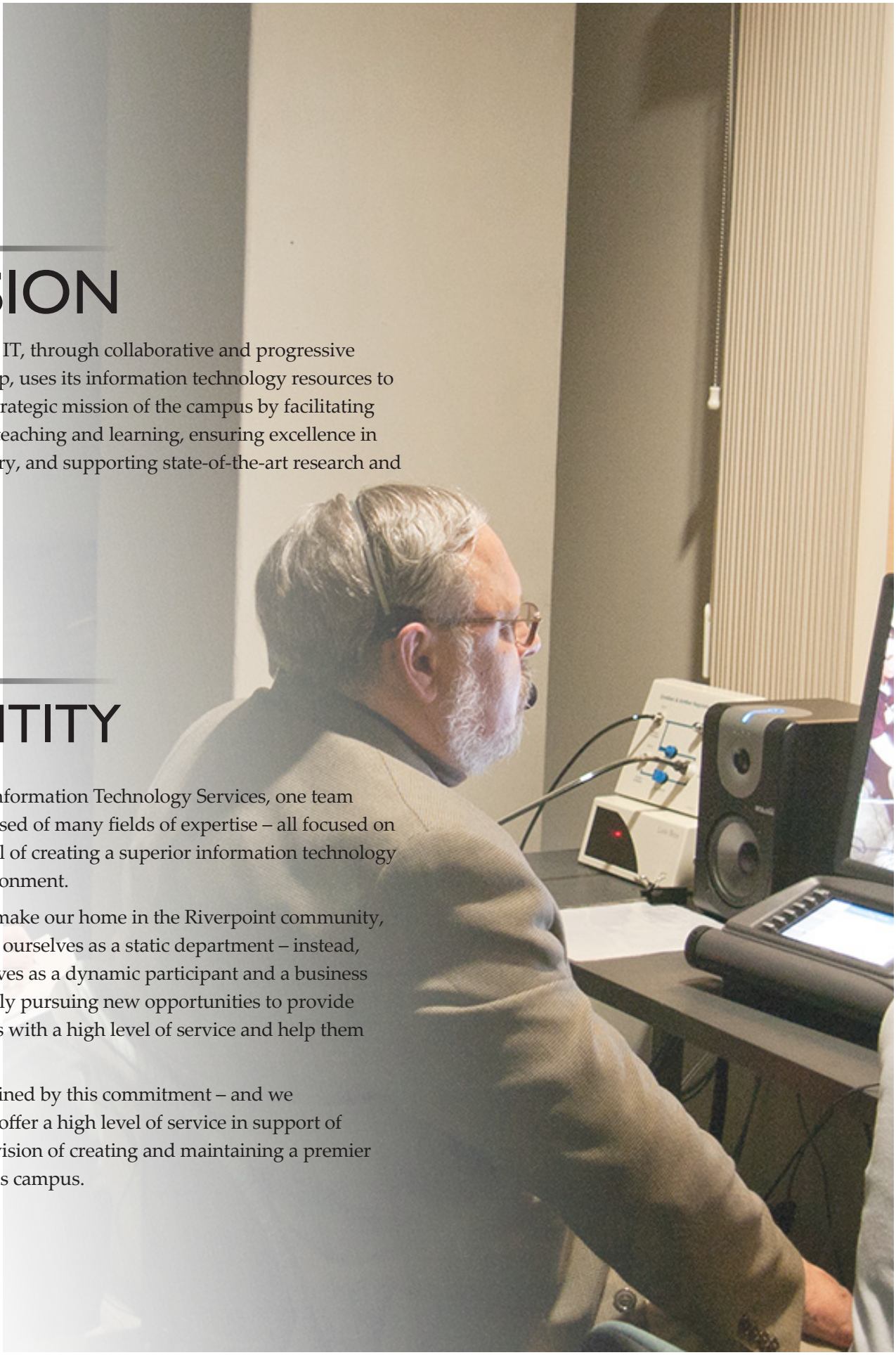
our

IDENTITY

We are Information Technology Services, one team composed of many fields of expertise – all focused on the single goal of creating a superior information technology services environment.

While we make our home in the Riverpoint community, we do not see ourselves as a static department – instead, we see ourselves as a dynamic participant and a business partner actively pursuing new opportunities to provide our customers with a high level of service and help them succeed.

We are defined by this commitment – and we continuously offer a high level of service in support of Riverpoint's vision of creating and maintaining a premier health sciences campus.



CONNECT

Ensuring network viability

The network is ITS' most powerful tool. Whether connected by a data cable or wirelessly, nearly every electronic device on campus uses the network – from a smartphone to the Sim-Man. Maintaining the network during its normal operating workload is challenging in its own, but how do we ensure the network can function outside of the normal everyday routine? When disaster strikes, our network must remain an important connection for the entire Riverpoint community, and ITS must take steps to safeguard it.

To help achieve this goal, ITS is beginning work on the network redundancy plan. This plan is designed to decentralize some vital network resources; the network would then be able to cope with a partial loss and still remain viable. In addition, important fiber optic cables will be added between buildings as redundant connections, which will enable this redistributed model.

ITS' ultimate goal is to shift our data center from its current location in the basement level of the Phase I Building to a new location in the South Campus Facility. However, before that move can be made, there are several other steps that will further the goal of protecting the network.

Right now, the data center holds two major network switches. These switches are the heart of the network; they are responsible for routing and distributing information throughout the campus and to the outside world. ITS plans to temporarily move one of these switches to another building on campus – to immediately create a redundant network. Once this immediate redundancy need is addressed, ITS will then begin taking steps to move the switch permanently to the South Campus Facility.

Following the move, the switches would then be reconnected remotely by the redundant fiber optic cables. While the physical move would not change how the switches function – or how they interact with each other– it would greatly reduce the risk of both of them being affected by an unforeseen emergency.

This type of distribution is already in effect in each of Riverpoint's buildings. Each floor is divided into a Virtual Local Area Network (VLAN); their main purpose is to allow information to travel more quickly over the network by removing bottlenecks. They also, however, help ITS resolve issues quickly. If there were no distribution strategy, a single outage would have the potential to affect many users; the VLANs minimize this risk and allow ITS to troubleshoot and repair these VLANs in isolation – while reducing risk to the entire network.

ITS also uses software designed to protect the network from vulnerabilities and malicious attacks. This software proactively searches for weaknesses in our network defenses – before an attack can exploit it. And, by constantly monitoring patterns, this software can flag unusual spikes

in usage. These alerts can then be categorized and responded to by ITS.

While many may be false alarms, being on guard and acting swiftly in response to a possible threat is the only sure way to safeguard our network and protect our data. And, because of its importance to everything we do – and everything the Riverpoint community does – we make ensuring our network's uptime a top priority.

Enhancing our wireless coverage

With the amount of wireless technology available to us in the last few years, Brady Ratsch, our wireless expert, has been faced with the challenge of keeping Riverpoint's wireless network up to the task. Smartphone use has been rising, and the new tablets may have many students switching from their old laptops. This increased convenience and portability has increased the total number of mobile devices on the network and the demand for this service.

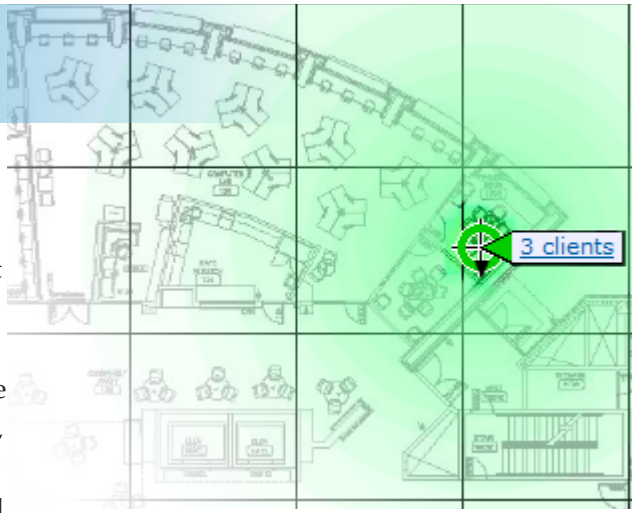
For instance, it's conceivable that each student attending a class may have two wireless devices active, such as a smartphone and a laptop or tablet. That means that a large lecture hall could have about 180 mobile devices connected at any one time – a true test of the wireless network's capacity and flexibility.

Riverpoint's wireless network features about 85 wireless access points to provide service to our students, faculty, and staff. There are plans to increase that number substantially in the next few years, with the ultimate goal of having campus coverage supplied by about 150 access points. A large portion of this expansion is necessitated by the addition of the Biomedical and Health Sciences Building. In additional to having internal access points, this building's location on campus makes it possible to add and contain Riverpoint's first outdoor access points – designed to give continuous outdoor wireless coverage between buildings.

Plans are also in the works to change the types of access points Riverpoint uses. Right now, our network is composed of three different generations of access points, with some needing upgrading as soon as the Biomedical and Health Sciences Building is brought on-line due to incompatibilities with the newer technologies that will be utilized in the building. During the upgrade process, ITS will use two main styles of access points. The broadcast and receive radios in these will take advantage of the 5Ghz frequency – as opposed to the 2.4Ghz frequency – in order to cope with interference.

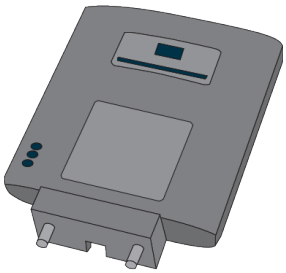
Enhancing our wireless coverage helps keep our campus mobile and engaged – helping to create a world-class mobile learning environment and enabling our students, staff, and faculty to stay connected while staying on the move.

A MOBILE CAMPUS



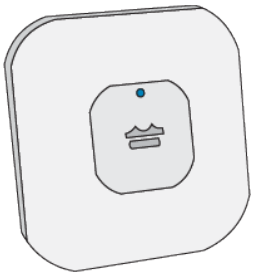
Riverpoint's current wireless network

Connecting to the Riverpoint wireless network has never been simpler and easier. The wireless network – while so important to keeping our campus connected – can be overlooked. However, to find out how we ensure our students, faculty, and staff can all stay connected on the go, all you have to do is look up. Chances are that you'll find one of these wireless access points (APs) above you, broadcasting the network to your mobile device. Maintaining and upgrading these devices is critical to keeping up with the increased wireless demand.



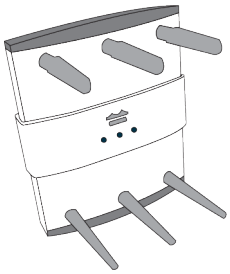
Cisco 1232

These models make up the majority of the access points, with 42 on campus. They are the most prevalent, and most likely to be upgraded in the first round of AP replacements. These support 802.11a and 802.11g



Cisco 1142

These access points are nearly identical to the 3502 model in appearance. Like the 3502 they are also relatively few in number, with only 12 on campus. These units support 802.11n.



Cisco 1252

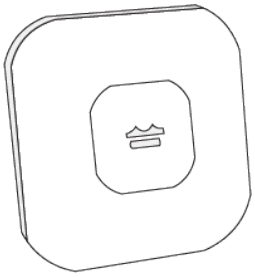
These units are the largest and most conspicuous, with their distinctive external antennae. There are 22 placed around campus; they support the 802.11a and 802.11g standard.

Cisco 3502

These are the newest and most versatile of the current access points on the Riverpoint campus; they offer the 802.11b, 802.11g and 802.11n standards. However, there are only 9 currently in use at Riverpoint.

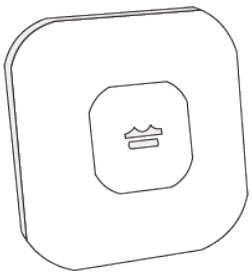
Riverpoint's future wireless network

The emphasis of Riverpoint's wireless network in the future will be on simplicity and availability. We intend to offer the widest range of coverage for new and legacy mobile devices as well as indoor and outdoor coverage. Combined with the new Riverpoint SSID login and EduRoam, students, staff, and faculty should be able to log in quickly and stay connected – no matter where they are on campus.



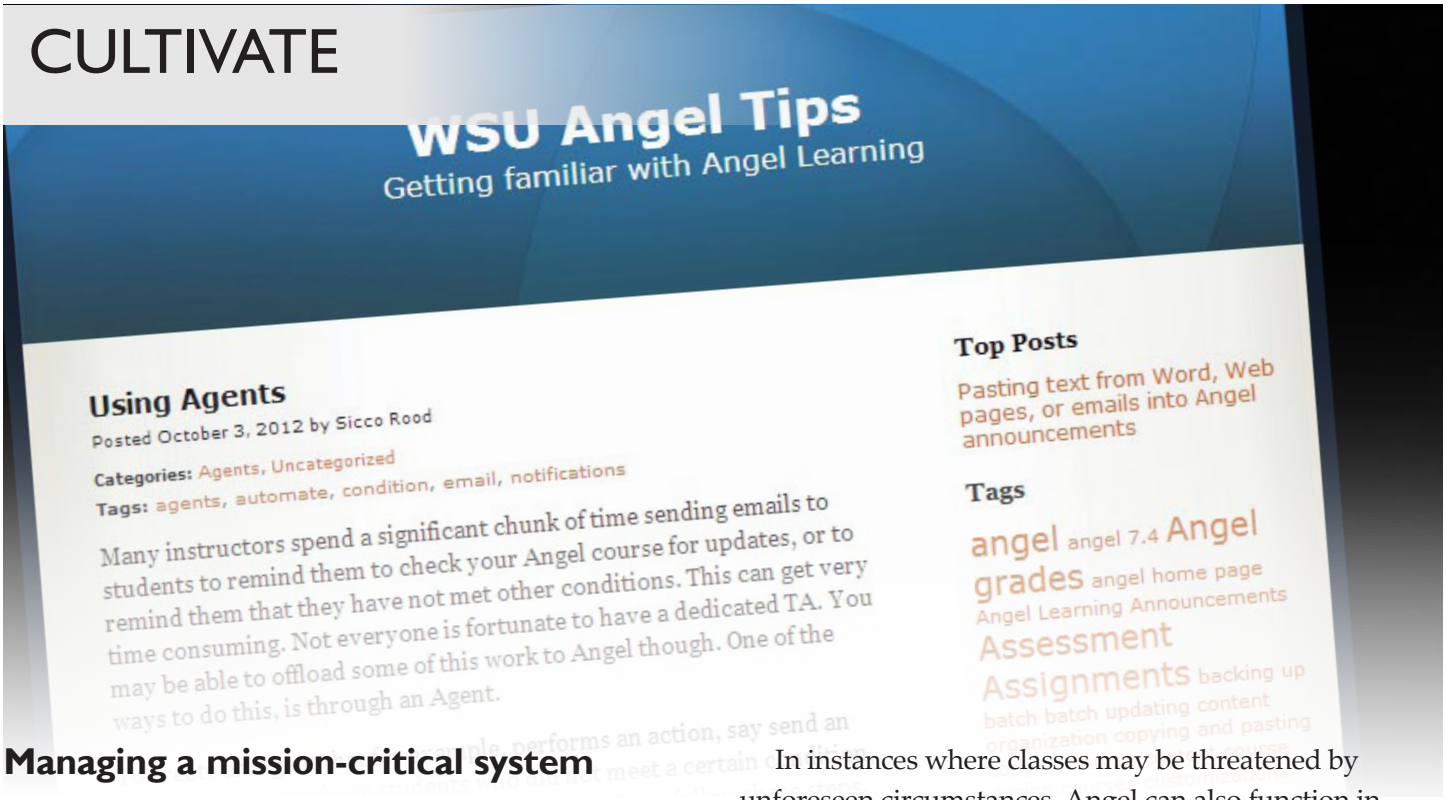
Cisco 2600

Versatile and capable, these units are well-suited for placement in small or medium sized classrooms or offices suites.



Cisco 3600

These flagship models are agile and powerful, able to support the wireless demands of large lecture halls or student gathering areas.



Managing a mission-critical system

Many Riverpoint students and faculty are familiar with Angel, Washington State University's Learning Management System software. However, what many may not know is how heavily Angel is used as a resource by students and faculty and how it relates as a core piece of ITS' overall service.

Sicco Rood, the ITS administrator for Angel, is responsible for the 1,230 WSU Spokane students on Riverpoint's campus that use Angel as a day-to-day platform for class activities. He is also the WSU technical liaison to Angel Learning's technical support, and, along with two other WSU colleagues, responsible for the entirety of administering the Angel system – for all of WSU. Additionally, Sicco's expertise with this system, and LMS in general,is an important resource for his peers in supporting the Learning Management System.

The overall numbers for Angel use are staggering. If you look at the entirety of WSU, over 4,000 courses are typically viewed in a given 30 day period during the school year, of which, over 2,000 are active and live courses. Overall, Angel has approximately 34,000 active users and receives about 12 million page views per month.

Because Riverpoint's campus is so diverse, Sicco solves issues that other campuses may not encounter. For instance, some students attending WSU or joint courses from other institutions may need to use the Angel system. Sicco can grant access to these users manually.

In instances where classes may be threatened by unforeseen circumstances, Angel can also function in a "scholastic continuity" role. During the snowstorms of 2007 and 2008, Angel enabled collaboration online, which allowed classes to continue uninterrupted despite other closures of other services.

Sicco is as the primary support for Angel on the Riverpoint campus; he receives escalations from the TSC for service and requests that cannot be readily resolved by the TSC technicians. In 2013, he will continue this role of supporting the TSC. Additionally, he also provides support for Riverpoint users of SkyLight, the WSU end-of-course evaluation system. For instructor education, he provides workshops and downloadable videos for faculty interested in maximizing Angel for their course, and in the future, Sicco foresees an opportunity for Angel to act as a source of valuable feedback for professors concerning student performance and assessment.

Looking for Angel help on the web?

Find Angel tips, hints and answers to all of your learning management questions at:

http://angeltips.wordpress.com

Information Technology provides solutions & develops new tools for faculty

(*As first appeared in The Beat — by Sarah Campo*)

From the days of analog recording to today's high definition video with illustration and animation Washington State University Spokane Information Technology Services (ITS) has kept pace with changing technology. Today, the Media Production team behind ITS offers advanced design and multimedia services to faculty, students, and staff.

Over the years, professional quality videos have been produced for education, research, conferences, and communication. For a technologically-savvy generation of nursing students, video has proven to be an effective tool. Many videos produced by ITS have been purchased by other higher ed institutions and organizations, benefiting the college.

"When faculty utilize our services, it is a win-win situation," said Jerry Reynolds, Multimedia Services Coordinator. "Students appreciate the technology, the College gains credibility, and our department gets to work with the latest technology to produce a better educational experience for everyone."

Jean Schlittenhart, an instructor here at the college, has worked closely with ITS to complete a number of multimedia projects. Her most recent work was an educational poster titled "Nursing Care of Childbearing Families: Identification of Vulnerable Populations and Nursing Care," which was presented at the 2012 National League for Nursing 7th Annual Technology Conference held at WSU Spokane.

While Jean wanted to share the research findings on the poster, she felt it lacked a main component: the videos themselves. Susan Lyons, Graphic Designer/Illustrator, and Jerry worked together to revisit a solution they had been dreaming about for years – a poster that could play video too. With lightweight and compact technology available to ITS now, Susan and Jerry were on a mission.

The final poster featured six evidence-based practice videos on nursing care of infants and families after childbirth, scripted by WSU nursing faculty and produced for the nursing curriculum by the Multimedia Services Team of ITS, for students, as well as new parents, and health care professionals. Short previews of the videos were incorporated into the poster using an iPad mounted on the back of the poster. A space cut to the size of the iPad's screen was carefully removed from the poster, showing the videos. The final presentation allowed viewers to read the research poster and watch the previews simultaneously. And Susan and Jerry have now added Interactive Multimedia Display to the media production team's repertoire.

"Faculty can gain national exposure when they use our services," said Matthew Blythe, electronic media producer. "Anything that is research focused or that is for our students, we can help make it better."

CULTIVATE

"Sometimes, an illustration is the only tool we have to visually display something, and in most cases, it requires extensive research to provide the most visually accurate information available," Susan added.

Video and illustration can set the stage for a presentation, making it more than a PowerPoint, or it can help to deliver course materials in a new way.

"We're a visually-driven society, and the technology that's available to us makes it easier to share information. Research—or any data—most likely could be better communicated using illustration or video," said Matthew.

Do you have a multimedia project?

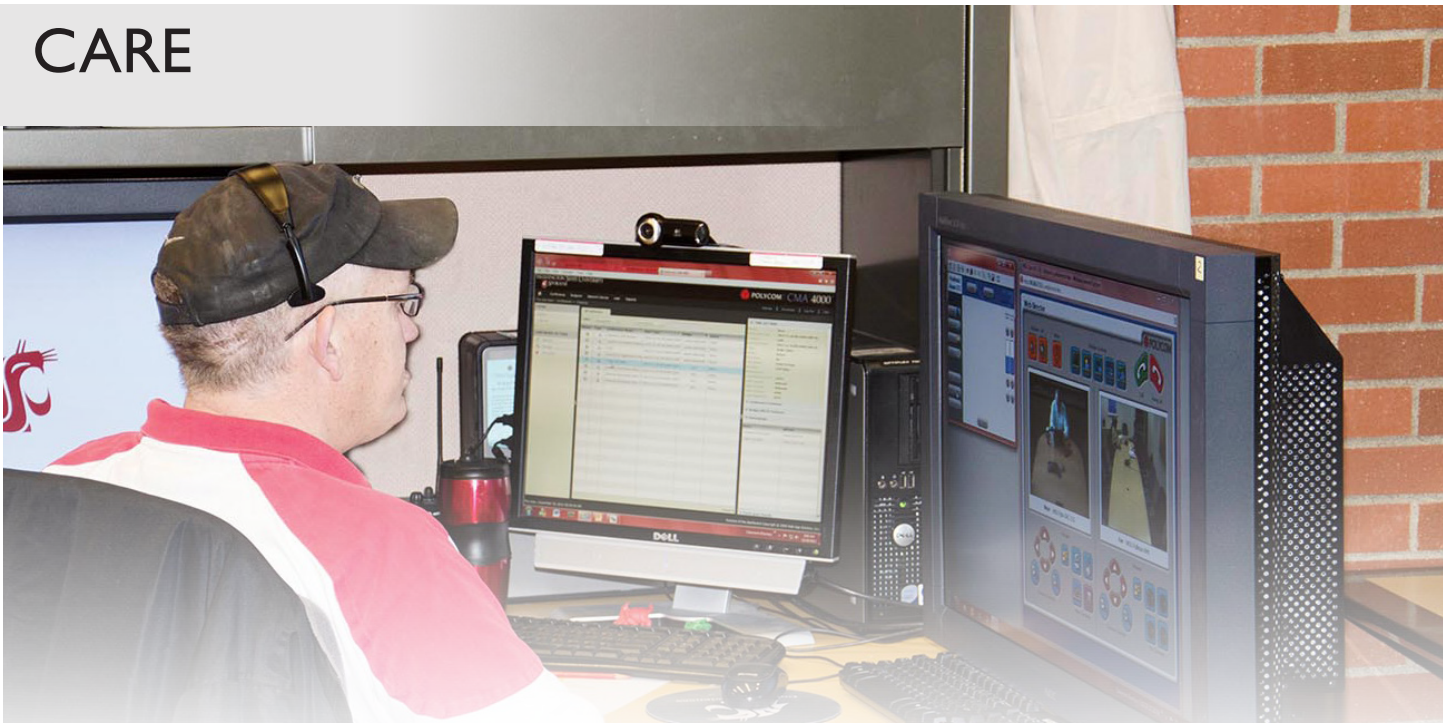
Find creative solutions that will make your project stand out. Contact our Jerry Reynolds of our Media Production Team at:

reynolds@wsu.edu

Illustration and video are just two examples of the many services offered by the Media Production team.

Since 2008, the department has expanded its services to include:

- Video Production
  (includes DVD authoring and video streaming)
- Poster Design
- PowerPoint Presentation Design
- Photography (includes photo ID for CON)
- Graphic Design
- Illustration and Animation
- DVD Duplication and Label Design
- Media File Conversion
- Wide format printing for posters, signage
- Lamination



Our customer service culture

In an organization as diverse as the Riverpoint campus, where students, staff, and faculty hail from different universities, colleges, and departments, how do you create an all-inclusive support environment for technology? Do you create a help desk or do you set up a service center?

The answer is to create both…and merge them together. Enter the Technical Support Center (TSC). The fundamentals aren't anything new – great customer service paired with technical expertise – but the approach is. When Angela Earley was tasked with leading the TSC this last March, her first priority was to create a "one-call model." Too often she had seen calls transferred around various team members in an effort to help; even if the request was resolved successfully, the transferring often left a poor impression on the customer.

Her immediate goal became to develop a support center that would have many areas of expertise to be able to cope with service requests from multiple sources for multiple problems. She pooled the resources of the Student Help Desk, the support technicians and the distance learning specialists.

The result of this effort is the new TSC. It's a group with the heart of a customer support team and the technical background of a true service center. Even the floor plan echoes this new philosophy. If you visit the TSC on the first floor of the Academic Center Building (SAC), the first thing you'll notice is the lack of walls dividing the technicians' workstations. Angela finds this open forum to be more conducive to discussion and collaboration between the technicians than the typical divided office – it is the most effective way to fight departmental division, what's often referred to as silo-ing. She adds, "If you work in an open environment, things are shared more."

In addition, the technicians are trained to handle a wide variety of support issues for faculty, students, or staff. Angela says, "IT is a service – any way you look at it."

Angela's upcoming projects include compiling a list of easy-to-use "how-to" documents for all campus users as well as standardizing many common tasks associated with the TSC. These are in an effort to not just support the campus constituents, but to empower them – as a more technologically-savvy staff and faculty will only further the overall campus goal of providing a world-class education experience for our students.

The Student Help Desk

Students today are faced with technical questions and problems that previous students – even those graduating just a few years earlier – never faced. The increased reliance on wireless technology to connect mobile devices to complete schoolwork outside of the classroom has overwhelmed many students. And prior to the creation of the Technical Support Center, there was no student-focused resource to counter these growing needs.

Riverpoint's faculty wanted students to be focused on meeting the challenge of their curriculum, not distracted by the challenge of technology. To meet this demand, Washington State University and Eastern Washington University's student governments participated in a collaborative funding program proposed and facilitated by ITS to launch the Student Help Desk – with the goal in mind of providing students with a convenient and accessible technical resource.

And as a part of the Technical Support Center, Riverpoint's Student Help Desk enjoys the best of both worlds: a friendly, student-to-student help desk backed with the expertise of an experienced technical support staff.

Located in SAC 120, the Student Help Desk assists students with common questions to enable them to quickly connect and interact with the Riverpoint campus. They can answer basic computing questions – like how to connect to the wireless network and how to print using the UniPrint system; however, they are also capable of handling more in depth technology issues – like virus scans and basic damaged or deleted file recovery.

The Student Help Desk hours are Monday through Thursday, 1pm to 7pm. During periods outside these hours, students are encouraged to ask the technicians in the Technical Support Center for assistance. From incoming freshmen to accomplished graduate students, the Student Help Desk is there to offer technical support and assistance to help all of our Riverpoint students meet their academic goals.

*Tech*Support starts *here*!

- ✔ Assistance with **connection to the wireless network**
- ✔ Help with **Operating System updates** and **patch installation**
- ✔ Scanning for and removing **viruses**
- ✔ Scanning for and removing **Ad-ware** and **Spy-ware**
- ✔ Assistance with **accounts** and **passwords**
- ✔ Help with **installation** and **troubleshooting** of **supported software**
- ✔ Basic damaged or deleted **file recovery**
- ✔ Support with **configuration** and **setup** of **mobile devices for campus networked services**

...and that's just the easy stuff.

(509) 358-7748 | spok.it.help@wsu.edu

The Technical Service Center

A one stop resource for all of your technical support needs

Student Academic Center, Room 120

Monday-Thursday 8am-7pm
Friday 8am-5pm

358-7748

spok.it.help@wsu.edu

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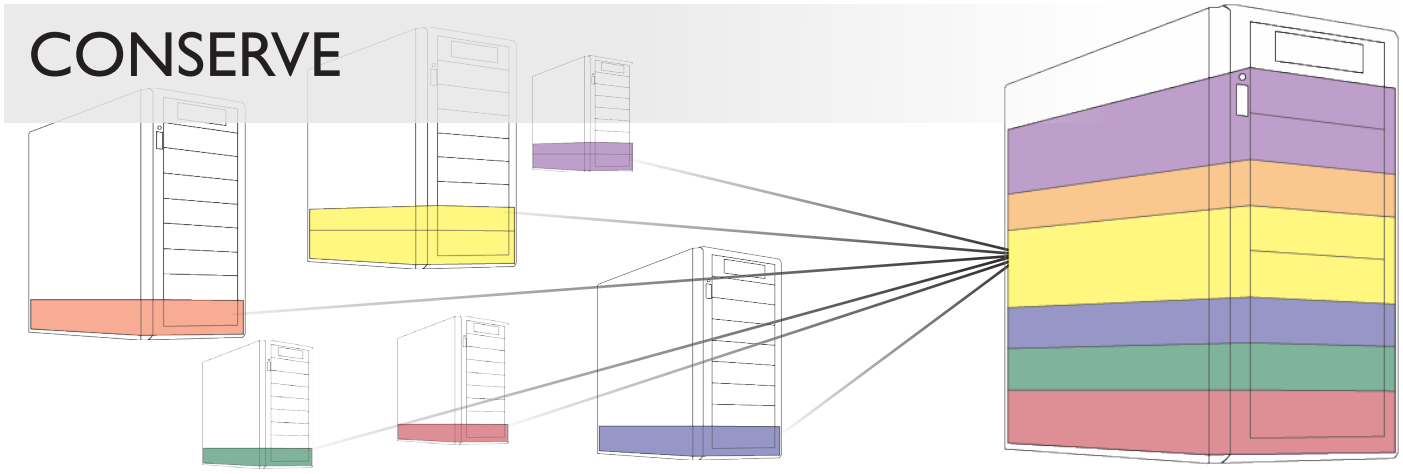
CONSERVE



Virtual computing

As part of Riverpoint ITS' commitment to conservation, we're interested in technologies that help us to maximize the use of our computing resources while at the same time improve the overall IT environment. While Riverpoint's servers and desktop computers are essential parts of the IT infrastructure, they are also major factors in the campus' resource consumption. Any change applied to servers or desktop machines has the potential to improve both our conservation efforts and the effectiveness of the network.

To achieve these goals, we've introduced server virtualization to the data center and virtual desktops to end user computing. Server virtualization has dramatically increased the flexibility of the physical servers and enabled ITS to adapt to customer needs while virtual desktops offer that same level of computing flexibility to our customers.

In the past, servers were relatively rigid structures; a single server would be limited to a single operating system only. This made transferring or restoring a server difficult, as the hardware for the replacement machine would often need to be identical. It also forced some servers to be specialists since some software must be run on an isolated system to prevent slow-downs or conflicts.

Over time, adding specialist servers to meet customer needs can lead to artificially inflated amounts of servers in a data center. While the server count may rise, the overall demand may simply remain unchanged. This addition of servers without increasing service levels is called "server sprawl" and can exact a significant toll on an organization's budget, in terms of hardware, energy, and space costs.

The inflexibility caused by high and low-use servers also creates bottlenecks and wastes resources by unevenly distributing the flow of data. Typically, most users would access a few high-demand servers – leaving lesser-demanded servers to idle during most of their operating time. Simply installing more inflexible servers to compensate for this demand can lead to "server sprawl" in which a data center's server population can expand quickly, even if the overall demand does not.

To compound this problem, adding servers doesn't just factor the cost of the hardware itself. Larger data centers require more space, more cooling, more extensive power backup, and potentially larger maintenance costs, all of which factor into the organization's bottom line.

Server virtualization solves these problems by creating a layer of virtualization between the server hardware and the server operating system. By running multiple separate operating systems on one server, ITS can distribute the demand more evenly across hardware while at the same time ensuring that conflicts between operating environments will not occur. And by creating and managing multiple virtual servers, ITS can realize large gains in portability, manageability, and disaster recovery.

As of 2012, Riverpoint ITS has created 24 virtual servers with more expected as older "real" servers are replaced or require upgrades. What's the cost effect of replacing these servers with the virtual model? Well, considering power costs alone, a typical server will cost about $780 in power consumption over the course of a year. Multiply that number by the number of servers we're not installing because of virtualization and the revenue saved becomes extremely significant.

While virtual servers increase ITS' management ability,

virtual desktops increase our customer's ability to manage their resources. Virtual desktops operate in the place of traditional desktop computers; they use the same operating systems and same programs – in effect they do everything a standard "real" desktop computer can do. However, they have the added bonus of being user-specific instead of machine-specific. For instance, a user can log in and perform work on a virtual desktop, then leave that workstation and log onto another virtual desktop across campus – and their same desktop will reappear just as they'd left it. They are also much less expensive to purchase, replace or upgrade and require less energy to operate, all of which result in significant savings.

"More than half of the resources in our virtual environment are also devoted to desktops," says Bart Brazier, our data center expert, "…we're poised to really take advantage of this concept. We hope to ultimately convert all classroom, lab, library patron computers, and many office computers to virtual desktops."

From the end user viewpoint, nothing changes. They log in as normal, but have the added flexibility of being able to resume their work in progress at any virtual desktop location. However, from the ITS perspective, the strength of a relatively small number of servers can be magnified several times and virtual desktops can take advantage of this increased flexibility and cost savings.

Verdiem Power Management

For most of us, IT power management involves typing on a keyboard or moving a mouse to "wake up" a computer in standby mode – or failing that, simply pressing the power button. While this type of user-by-user power management can be useful on an individual level, it's inadequate to truly address power consumption concerns for a large organization.

Computers are often thought of as having three distinct power states. They are either active, off, or in a standby or sleeping state. The power-use difference between the off state and sleep state is very slight and often negligible because computers that are powered off actually reserve small amounts of power; in these states, a computer may draw from 2 to 6 watts. However, the difference between sleep state and power on state is very large, as a powered on computer will often consume 60 to 200 watts depending on demand placed on the system. With so much energy being consumed by computers that are active, it is important for an organization to make sure that energy is being used wisely.

Knowing when end-users are likely to activate their computers is important; however, it's also beneficial to actively manage power states. When important updates or maintenance must be applied during non-working hours, those computers must be powered up and active in order for that maintenance to take place. If left on continuously, they waste valuable energy. If they are turned off or remain sleeping during scheduled service, they may miss a maintenance update.

Riverpoint ITS needed a better and smarter way to manage power consumption. The desktops that drive our classrooms, computer labs, and support our staff draw much of our campus' overall power; without any plan in place to manage this energy consumption, the cost could have a severe impact on the overall budget.

To take advantage of this savings opportunity, Riverpoint ITS teamed with Verdiem, a Seattle-based power management company. Verdiem's client software, called Surveyor, manages the power as a centralized system which serves both the end-user's power requirements as well as ITS' need to conserve energy. Users who wish to remotely connect to their desktops are able to wake up their machines in the office using a pre-installed web-based software agent that will wake the system on when it detects a request for a network connection - wake-on-LAN (WAN) service.

And what are the savings? In 2009, Riverpoint's approximately 700 unmanaged PCs consumed 296,832 kWh. In 2010, when Riverpoint began using Verdiem to manage power, this consumption dropped to 181,618 kWh – a 38% energy reduction. That brings the annual cost of powering a PC from $26.02 to $15.92. If you multiply that savings across the entire PC inventory, we reduced the power cost from $20,110.37 to $12,304.61 which saved the campus $7,805.76 over the course of the year. Additionally, when Riverpoint employed the Verdiem software, we received a $10 per PC rebate from Avista as an energy efficient incentive.

In 2012, we continued using the software to manage different groups' demands for power. Some of our researcher groups require that their machines do not suspend or power down at all because they are continuously updating or processing important data. However, most of our standard office or lab computers will follow an aggressive power management routine. Being able to exempt and maintain distinct groups has been a key ability for ITS to manage power while not interfering with our customer's needs.

COLLABORATE

A complete security system

When Safety & Security needed additional cameras – for increased surveillance– ITS was ready to collaborate. Security cameras needed to be added and upgraded to address a growing campus, and more importantly, they needed to be fully integrated into a true enterprise-level security system.

ITS' Larry Hoffman coordinated the project along with Lieutenant Al Pignatero and Officer Michael Norman of the Safety & Security department. Larry also brought in the expertise of ITS' Bryan Valley. After a three month search for an integrated security solution, they worked together to start implementing the campus-wide upgrade to its first enterprise-grade system.

ITS and Safety & Security decided on a three module system to address this need – a solution that will encompass adding additional cameras, implementing security door access, and installing specially designed license plate reading cameras in our parking lots. With an integrated system, Safety & Security can address security issues more efficiently, helping to ensure the safety of our entire campus.

The new cameras will meet or exceed current WSU megapixel standards and provide a more clear and reliable image, with about 25 outdoor locations and 50 indoor locations being upgraded. Some cameras, due to their remote location, will be linked wirelessly.

In 2013 and beyond, ITS expects that more cameras will be added to this system as the campus grows and its needs increase. The total camera count will then exceed 100. The Biomedical and Health Sciences Building will receive internal and external cameras as well, with about 25 cameras specific to that building. As Larry Hoffman notes, there is always an effort of ITS to "collaborate and assist," no matter what project is being employed and especially when the safety of our campus is concerned.

Working together with EWU

In 2009, Riverpoint ITS had an opportunity to upgrade classroom technology for students and faculty. Fourteen classrooms in the Phase I Building had only a simple overhead project and screen – instead of the more modern projector and podium arrangement – and had a pressing need to be updated. These classrooms were General University Classrooms managed and supported by WSU, but mostly used by EWU classes; the two institutions would need to find a way to work together to improve the campus as a whole.

Our Executive Director, Saleh Elgiadi, worked with Eastern's Chief Information Officer, Gary Pratt, and reached an agreement to upgrade the classrooms. EWU purchased the necessary equipment, and Riverpoint ITS updated the infrastructure and installed the state-of-the-art classroom audiovisual equipment. After the classrooms were completed, Riverpoint ITS continues to support the classrooms and ensure that users receive consistent ongoing technical support regardless of the customer's home institution.

One year later, four more classrooms were outfitted with the same technology under a similar agreement – this time in the Health Sciences Building (HSB). In 2012,

another classroom in HSB received similar audiovisual upgrades with two more classrooms scheduled in the near future.

This collaboration among the two IT organizations, as well as others, changed Riverpoint ITS' philosophy and helped pave the way for our department to develop into a true all-encompassing IT group, instead of restricting itself to only focusing on any one single institution. Riverpoint ITS is also proud to have worked in partnership with WSU's campuses in Vancouver and Yakima, as well as Innovate Washington, and the University of Washington School of Medicine.

In this way, the diversity of Riverpoint – with different academic institutions offering a wide variety of programs to students – has become the campus' true strength and has ultimately enabled faculty and students to benefit from the same IT environment regardless of their organizational affiliation. And going forward, Riverpoint ITS will continue to actively seek collaborative projects to further ensure that our campus – and our partnered institutions and programs – will remain a world-class learning institution.

Creating personal relationships

We, as a department, have a commitment to the entire Riverpoint campus, not only to provide a superior IT environment, but also to maintain and develop good working relationships. As part of that commitment, we've established an IT Liaison for each of the departments we work with.

The IT Liaison is ambassador between Riverpoint ITS and their respective department, acting as a personal point of contact. Instead of directing questions to different ITS staff members, the IT Liaison can make addressing questions and concerns an easy one-step process. Also, if a department wishes to track the progress of a service request, the IT Liaison has the "inside-track" in terms of following up and can navigate the problem resolution process more efficiently on behalf of the customer.

Our director, Saleh Elgiadi, describes the program: "Currently we have five highly skilled and capable IT staff serving, in addition to their day-to-day role, as IT Liaisons to our customers. They meet regularly and advocate for their customers; I am very pleased with the outcome as well as the customer focused-culture we are creating in ITS."

Our IT Liaison team

Below is our list of IT Liaisons showing which Riverpoint departments or groups they are affiliated with. If you have questions about our IT Liaison program, or are interested in dedicating an IT Liaison for your department, please contact our director, Saleh Elgiadi at elgiadi@wsu.edu or (509) 324-7316.

Angela Earley
earley@wsu.edu

- Administration
- Capital Planning & Development
- Facilities Operations
- Finance & Budget
- Human Resource Services
- Office of Research

Daren Noe
dnoe@wsu.edu

- Medical Sciences (WWAMI)

Brady Ratsch
ratschb@wsu.edu

- Criminal Justice
- Education
- Riverpoint Library
- Student Affairs
- Speech & Hearing Sciences

Bryan Valley
valley@wsu.edu

- Area Health Education Center (AHEC) Extension / Child & Family Research Unit (CAFRU
- Innovate Washington (IWA)
- Institute for Shock Physics / Applied Science Lab
- Nursing

Bart Brazier
brazier@wsu.edu

- Communication & Public Affairs
- Engineering & Technology Management
- Health Policy & Administration
- MESA
- Nutrition & Exercise Physiology
- Pharmacotherapy
- Sleep & Performance Research Center
- Small Business Development Center
- WSU Office of Development
- WSU Athletics

Changing the videoconferencing model

In the days of analog video, recording a lecture meant a classroom tied to an old-fashioned television control room. Even in the recent digital age, that lineage continues. Often, lectures are captured by audiovisual operators who aim cameras and monitor audio recordings – all behind the scenes. While this method produces a polished product, it was also an outmoded – and expensive – way of capturing a lecture.

When it came time to evaluate this way of providing lectures to distance-learning students, ITS had to take complete stock of alternatives. While the cost of buying new dedicated audiovisual equipment was high, the upkeep cost of all that equipment was also concerning. Bryan Valley, one of our audiovisual design gurus, wondered what would happen down the road should those costs grow.

Bryan was faced with the question, "Why don't we solve this problem with our existing software instead of buying more stuff?"

He began exhaustive research and brainstorming with his colleague, Daren Noe, which ultimately led to the investigation of a network solution as a viable alternative to the old control-room model. Modern technologies, such as the MCU (Multi-Point Control Unit), and the CMA (Converge Management Application) offer the ability to use Riverpoint's existing IP network to connect distance learners.

What are the benefits? To upgrade a classroom to become audiovisual capable used to be an extensive and expensive affair, requiring new audiovisual equipment to be installed in the control room and the classroom, and cabling to be connected.

The new model is not as limiting or demanding. As Bryan states, "[It involves] taking a very simple concept to a very robust and distributed system. All you need is Ethernet and power." To complete the new model, equipment is added to the classroom and plugged in to the network.

This upgrade is significantly less expensive than the control room model installation cost; additionally, it lowers the overall cost of ownership to Riverpoint.

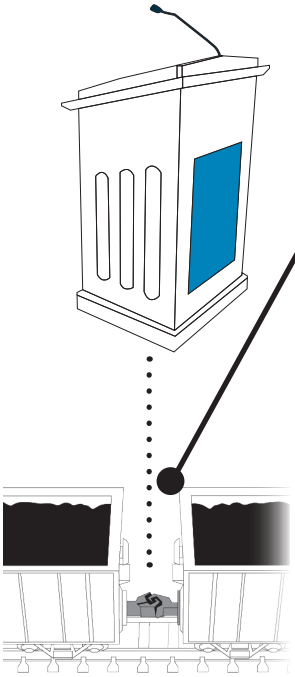
When the Nursing Building was built in 2008, it contained one control room monitoring four classrooms. When the new Biomedical and Health Sciences Building is completed it will not have control rooms – all distance-learning classrooms will use the new model.

This represents the ITS conservation commitment, not only in regards to researching new ideas, but also our ability to effectively implement changes. Going forward, ITS will continue to evaluate existing resources and systems in our effort to continuously progress toward a more efficient and effective standard of service.

AUDIOVISUAL 101

The basics

Riverpoint is a campus rooted in distance-learning. Every day of the semester, students from remote campuses connect to learn from our instructors here in Spokane; it has become part of our academic daily life. However, while videoconferencing and distance-learning seem routine on the surface, there is a carefully co-ordinated system in place behind the scenes. Software and hardware come together in an orchestrated link that allows ITS to offer Riverpoint this highly sophisticated learning network.

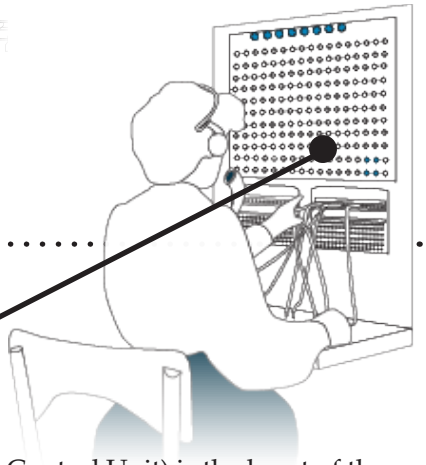


The codec

The codec is hardware that gathers audio and video signals from microphones and cameras in the room and then transmits this data. It acts like a train coupler – connecting audiovisual information to our existing network infrastructure.

The CMA

The CMA (Converge Management Application) is a powerful software tool that manages the MCU. Like an airtraffic controller, this software oversees the entire audiovisual process. It is flexible and robust – allowing an ITS technician to remotely support a videoconference or distance-learning class while in progress or oversee the scheduling of distance-learning classes over the course of an entire semester.



The MCU

The MCU (Multi-Point Control Unit) is the heart of the audiovisual system. It is digital hardware that essentially behaves like a modern version of the telephone switchboard – making the connection between the two conference or classrooms to allow them to transmit and recieve each other's corresponding audio and visual information.

The destination

We can connect local classrooms and conference rooms to nearly any audiovisual-capable location within WSU's network, or stream saved lectures and demonstrations wherever you can connect to our network– regardless if that destination is just down the hall, on the Vancouver campus, or any point a student has access to the web.

SPECIAL FOCUS

Instructional Media Studio

Tegrity has become an essential part of ITS' continued support of the Learning Management System. Its flexibility and ease-of-use allows both students and faculty to create video presentations either on or off-campus. However, while the software created unique opportunities for recording, it was often the hardware involved that created anomalies in recording quality.

Because many faculty members recorded on different systems, quality could not be assured. On some occasions, a lower quality microphone hindered the audio or a lower definition camera recorded a pixelated image. Since faculty had access to different types of equipment at home and on campus, ITS had no way to assure recording quality across all platforms.

Out of the faculty's concerns, ITS created the Instructional Media Studio. This studio is a state-of-the art Tegrity recording studio and is able to record high quality video and audio for faculty, students, and staff. By using the studio, faculty and students that might not otherwise have access to high quality recording equipment can produce consistent and professional lectures and presentations.

The studio is outfitted with a SMART Podium interactive pen display. This device allows users to display information and then write over it with digital ink, creating opportunities for annotating slides and detailing images with notes or captions through handwriting. Supplementing the SMART Podium is an additional display monitor, a digital microphone and a high definition web camera. ITS is also planning on adding customizable video backdrops as well as integrated lighting.

While the studio's initial intent was to help faculty capture lectures, the studio is also available to students who wish to create superior presentations. Demand for this type of service has been high, with about ten groups of students already choosing to use the studio for this purpose during the last semester. While this was an unanticipated demand for the studio, it represents an excellent opportunity for ITS to continue to meet student's technology needs.

Looking to use the Instructional Media Studio for your next presentation?

If you are interested in reserving the IMS (temporarily located in SNRS 322B) please contact the Technical Support Center at:

spok.it.help@wsu.edu or

(509)358-7748.

Information Technology Services

Riverpoint · Spokane

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