DIVISION
OF
INFORMATION TECHNOLOGY
NEWSLETTER

Gatherings

SPRING 2020

In this Issue:

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Division of Information Technology

In the Spotlight:

Creighton Software Developer Creates Low-Cost Ventilator

Max McCoy, a senior software developer in the Division, has been highlighted campus wide this spring for developing a cheap but efficient ventilator made from commonly available components.

Following all specifications outlined in a contest sponsored by McGill University, Max developed a ventilator costing a few hundred dollars that he believes has the potential to function as well as its high-end $30,000 competitors.

"Most ventilators are based on the bag-type emergency resuscitator that you see emergency personnel using when somebody can't breathe for themselves," he says. "The issue with these bag-type resuscitators is that they force air into the person and cause what's called the 'mandatory breath,' which means patients are being forced to breathe whether they want to, or need to."

Such unnecessary pressure can damage fragile alveoli air sacs and result in fluid retention. "That's one of the things that my ventilator is meant to solve," he says, "monitoring the air pressure that is being forced into the lungs, which is something high-end ventilators do."

The second requirement of the McGill contest is a Positive End-Expirator Pressure (PEEP) function, which maintains airway pressure above atmospheric pressure so that the alveoli sacs remain functional even when the patient exhales. This, too, McCoy said, is a function usually restricted to high-end respirators, but which he believes his ventilator achieves.

The third McGill requirement demands that parts be easily accessible and plentiful, and here Max is especially pleased with his invention. "There are really only three required components to make this work," he says. "Those are a simple motor controller, a microcontroller and a barometric pressure sensor, all of which cost under $50."

After that, he says, his ventilator requires only a blower, and just about any blower will work. His prototype, for example, uses a 12-volt air-mattress blower, and although he acknowledges that such a device would never pass FDA muster, he says many inexpensive blowers would.

If his ventilator proves practical, Max says, he plans to make the blueprint open source. "I want the design to be open and free for people to use," he says. "If this is a good solution, and it can get the approvals that it needs, I want it to be available for anybody to use. If I kept it to myself, that would defeat the purpose." *(Edited portions from Creighton Today)*

History Will Remember When the World Stopped

History will remember when the world
stopped
And the flights stayed on the ground.
And the cars parked in the street.
And the trains didn't run.
History will remember when the schools
closed
And the children stayed indoors
And the medical staff walked towards the
fire
And they didn't run.
History will remember when the people
sang
On their balconies, in isolation
But so very much together
In courage and song.
History will remember when the people
fought
For their old and their weak
Protected the vulnerable
By doing nothing at all.
History will remember when the virus left
And the houses opened
And the people came out
And hugged and kissed
And started again
Kinder than before.

by Donna Ashworth

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RadLab in an Other World

Implementing virtual worlds into course curricula provides one innovative way for students and faculty to communicate and share learning experiences. When the RadLab was contacted by Rodney Verhoeff, faculty in the College of Business, to help with an activity that he would have otherwise conducted in class, they jumped at the chance to explore the options.

To be a viable VR solution for online student engagement, the product needs to be reliable, easy to use, look awesome, cost effective, and work in virtual reality. One solution extensively researched in the Radlab is Sansar, a 3D virtual, social environment where faculty and students can meet in real time. Sansar provides an immersive environment for self-expression, exploration, and live events where participants can shape the narrative as it unfolds.

After testing multiple solutions, it is clear that Sansar covers all requirements. Although this is still in the trial stage, Chad Brocker, RadLab developer, has worked with Dr. Verhoeff to create three virtual worlds to replace his in-person class activity. During this activity he breaks the class into three teams with the goal of the teams working together to solve a problem.

Medieval World

Future World

Jurassic World

Blue jays have "gathered" in this issue of our newsletter. Can you spot them all? Here's your first one. Email your answers to ITCommunications@Creighton.edu. The first correct answer wins a prize.

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The New Birds

Please welcome these new division employees. Send them a virtual "Welcome" and let them know what you do in the Division. 🐦

Heather Franz
Sr. Project Mgr

John Rokes
Sr. Project Mgr

Denny Lane
Sr. Project Mgr

Josh Minarick
Web Developer

Ravi Rajagopal
ETL Developer

Creighton Service Milestones

Please congratulate your colleagues for reaching major service anniversary milestones this year!

45 Years:	Debby Halstrom
40 Years:	Denise Handrock
35 Years:	Mike Poma
	Lisa Yates
30 Years:	Shawn Ammon
25 Years:	Greg Bauer
20 Years:	Tom Thibodeau
15 Years:	Cherlyn Wilson
10 Years:	Glen Cochennet
5 Years:	Brian Bautista

"When I was a boy and I would see scary things in the news, my mother would say to me, "Look for the helpers. You will always find people who are helping." - Mr. Rogers

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Helping Others is the Creighton Way

The Jesuit values of Creighton shine brightly during this pandemic. Whether it's delivering 3D-Printed face shields for front line health care workers or sewing face masks for family, friends, and colleagues, Creighton staff are being "women & men for and with others."

David Buffington has spent his time making the face shields, working at hours all around the clock to get them done. On Monday, April 20th, David provided 30 face shields to CHI Health Immanual Hospital. He said: "It goes with Creighton's mission of helping others. We want to be there for everybody. And it's a teaching moment for us so it feels good."
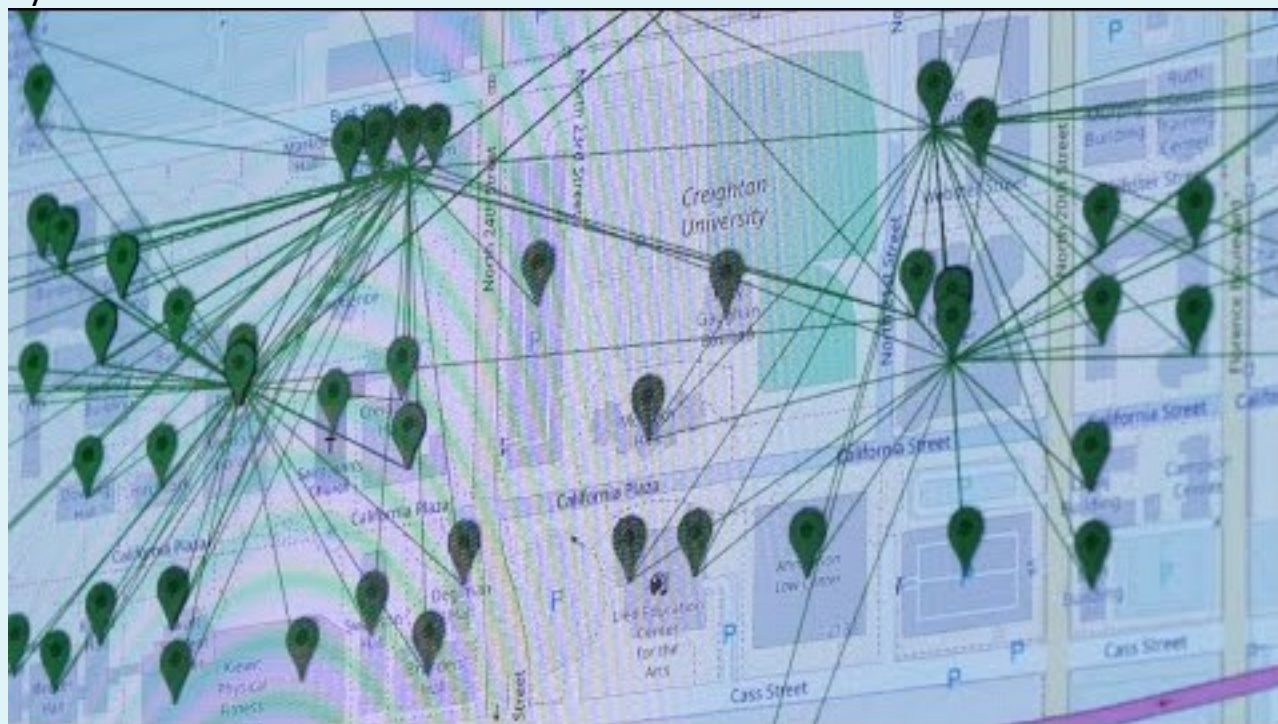
Marian Brown has spent hours of her time using her sewing skills to create masks for family, friends, and colleagues; while other Creighton friends have donated blood, volunteered their service to help elderly neighbors and donated to the local foodbank.

(Information taken in part from KETV.)

Recognition for Smooth Tech Transition

Following the move to online classes and staff working remotely, Father addressed the outstanding job of the Division of Information Technology. Thanks to all of you for making things look easy!

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Release Management and Testing Training

 ITIL®™

The third cohort of IT staff attended a week-long Release Management and Testing Training in January focused on a deep level of understanding of ITIL processes and roles, how they are implemented and how they interact. The modular approach of the Intermediate Level modules allowed attendees to develop an ITIL specialism in release, control and validation methods. Attendees also sat for a 90-minute certification exam and passed. Congratulations everyone!

Attendees included: Robert Aki, Christian Burk, Mark Ramet, Susmita Pal, Brian Tuttle, and Tom Thibodeau.

The IT Infrastructure Library (ITIL) is a library of volumes describing a framework of best practices for delivering IT services and our Division requires all staff to be certified in the ITIL foundations. The latest cohort was held in March, and although there was a last minute switch to an online class due to the pandemic, all completed the training. Congratulations to all of you!

Attendees included: Max McCoy, Apoorva Chaturvedi, Harry Slaughter, **Logan Bell**, **Catherine Nakayenga**, Bud Hilario, **Kathie McCann**, Dustin Jones, **Isaac Inkabi**, Alex Baker, Abraham Coleman (Those names in bold have also passed their certification exam.)

Personal and Professional Development:

Division staff have been very busy this spring! Congratulations for all your achievements! Just a reminder: Take advantage of the personal development that your manager offers.

- Scrum Master Certification - Tabitha Weyer, Apoorva Chaturvedi, Jim Madden, Alex Baker
- Scrum Product Manager Certification - Tabitha Weyer, Jim Madden
- Q-SYS Level 1 Training – Logan Bell
- SDVoE Design Partners Certification – Dustin Jones
- STC TechCom Bootcamp – Cherlyn Wilson

Promotions:

Congratulations to a group of superstars! Please join in a round of virtual applause for our teammates who have been promoted.

- Max McCoy on his promotion to Senior Software Developer
- Brian Leahy to Senior Application Administrator
- Tom Thibodeau on his promotion to Lead Technologist, Service Desk

Congratulations Dr. Cameron

I'm sure there were cheers heard in the Cameron household on March 24th as Dr. Ryan Cameron received notification that his dissertation was accepted. His dissertation, "How Students Perceive Artificial Intelligence in Higher Education: A Grounded Theory Investigation," will be in print soon.

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Comedy Crack Ups

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Security Corner:

Information Technology implemented Duo two-factor authentication for all Creighton Staff in April. Currently 1405 of the 1660 staff have completed the Duo enrollment. Due to the campus closure, more people have chosen to use their phone for 2FA; however, Information Security has distributed nearly 50 tokens. Most token requests were made because the individual either does not have a phone or their phone is too old to support the Duo app.

Creighton Faculty are scheduled to move to Duo beginning July 21st. For more information on Duo and our projected timelines, visit. http://doit.Creighton.edu/duo .

Kudos!

After a last minute request for assistance, Division of IT staff came together to help Father in his efforts to stay connected with the students during the pandemic. The book, the result of staff efforts, was caught in this video that Father is using to call the students. Way to go Alex, Dennis, and Josh! Thanks for making a difference!
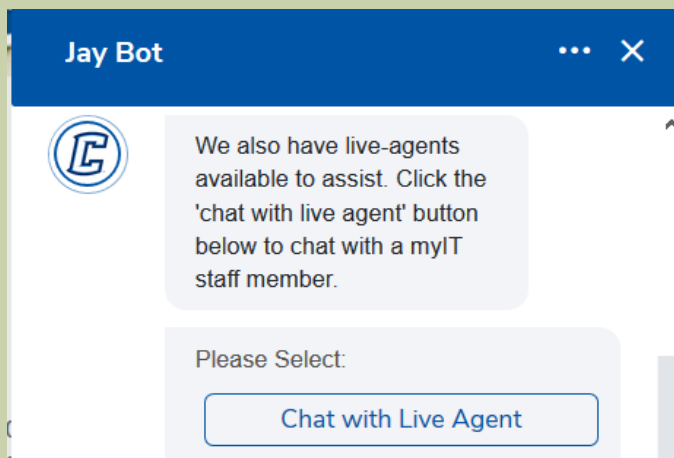
"We are what we repeatedly do. Excellence, then, is not an act, but a habit."
– Aristotle

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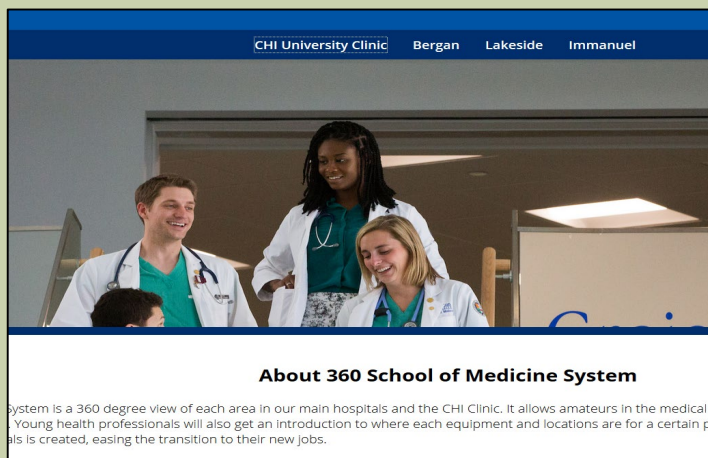Division of Information Technology
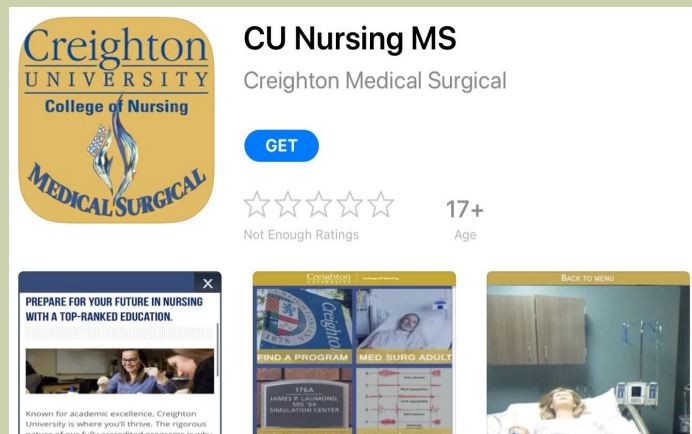
Student Interns: Working Remotely

Although the number of student interns in the Division of Information Technology has been significantly reduced over the past academic year, the students who remain are highly skilled and dedicated to working remotely to help our campus community.
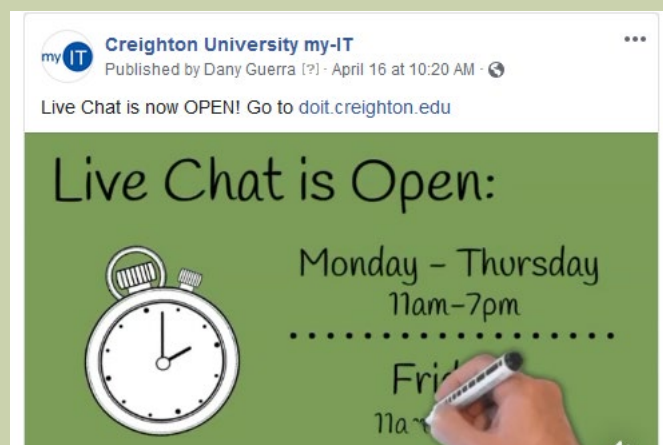

myIT Service Desk: Six student interns work with the myIT Service Desk to answer calls from home. They are also staffing the new "live chat" function of our AI Jay Bot to help answer questions until 7pm.

RadLab: Erik Wilson continues his work with the School of Medicine by using the Unity Game engine software development tool to create a Hospital 360 photosphere. These photospheres allow students to orient themselves to the hospital they are assigned to for their medical residency.

RadLab: Xuemei is helping create AR used in apps for the College of Nursing. These mobile apps, created in the RadLab and available in the App stores, bring posters to life as students interact with the camera on their mobile device. Instead of traveling to a clinic or hospital setting, students can view patient simulations, review EEG readings, radiological images, or brush up on different heartbeat or breathing sounds.

IT Communications: Dany Guerra is using her marketing expertise to create and manage the Division's social media presence as well as review and update web page content. Using the app Doodly, she has created more engaging content for the web.

Editors Corner: Reflections from a Pandemic

I recently reread Everything I Need to Know I Learned in Kindergarten by Richard Fulgum. It reminds me that universal truths are usually simple. I decided to craft "Everything I need to Know I Discovered in a Pandemic."

- Practice empathy – Remember that you don't know someone else's story. The student who is upset with you because they can't access a BlueLine course may be struggling with an ill parent in the hospital. Or the staff member who is frustrated with Zoom may be concerned about keeping their job during the crisis. Provide others with the grace that you hope they would show you.
- Stay connected - As Richard Fulgum's book points out, "It's impossible to go through life alone," but in a pandemic staying connected is harder. Make a conscious effort to check in with your team and colleagues.
- Ask for help – If you're struggling with a problem from work or fighting off the gray cloud of loneliness, reach out. Ask for the support you need. We all need help sometimes.
- Forgive yourself – Understand that we're all human. During this time, we can become easily frustrated with both work and family and act out. Don't beat yourself up over it. Apologize and move on.
- Wash your hands! – Stay as safe as possible.
- Toilet paper is essential, but there's no need to hoard it! (Yes, I had to go there.)

As I reflect on the past six weeks, I'm struck by the strength, resilience and compassion of our team. While our students, faculty, and staff were scurrying to work online, you kept your cool. You reacted with kindness as they became frustrated and worked to find solutions that would allow our mission to move forward. Our IT staff exemplified the Creighton values. For the campus, I say "Thank you!"

The pandemic will change us, our lives, in ways that we haven't even considered yet, but not the values that make us a good team. Keep up the great work and remember to celebrate the success!

Shelley Schafer

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