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CUSP (CU I&E) Submission: Using Zello App Communications Technology [1]

Description

The department of the Office of Laboratory Animal Resources (OLAR) is responsible for care and well-being of the research animal models for the principle investigators of the University of Colorado Denver Anschutz campus, Downtown Denver campus and Denver Health facility. OLAR runs 4 facilities and provides veterinary support to 7 other facilities. The facilities that OLAR runs encompass approximately 98,000 sq. ft. and we have around 70 staff members who consist of veterinarians, facility managers, supervisors, animal care technicians, veterinary technicians and administrative staff. Due to the large footprint of our program and the fact that our facilities are located primarily in basements, the ability to communicate efficiently across our staff is extremely important in order to ensure appropriate animal care, compliance, and customer service. We were using Verizon push to talk cell phones (PTT) and Blackberries but this equipment has been problematic over the last few years with such issues as:

• Dropped calls
• Call quality degradation
• Inability to track devices
• High cost of replacement
• Inability to limit personal additions to cell phones
• Low security measures
• Inability for equipment to be used with current University operating systems

Due to the advancement of various applications made for Wi-Fi enabled devices, OLAR explored utilizing iPods and iPhones in conjunction with an app called Zello, which is a walkie-talki app. The iPod/iPhone touch would give the staff the ability to communicate instantly with a reliable device over University Wi-Fi, rather than paying for cell service to use the Verizon version. In addition, because Wi-Fi is available in all UC Denver buildings, the Zello app would provide a service that would not degrade the call quality. Features provided by the iPod/iPhone could also be limited, as there is a password function (i.e. a parental control function) included in these devices that allow them to be set up for staff to only have access to only work email, Zello (walkie-talkie app), and limited websites, as well as encrypting communications via 256-bit AES encryption. This password function also prevents additional apps from being loaded onto the device without the proper permission from a single point administrator.

Another added feature that we have been able to use is the “Find My iPod/iPhone” app that is also a free service provided by Apple. Once the Pass Code is set it cannot be turned off unless a designated administrator does so. By having a central location of administration it it has allowed us to know where each device is located, making it easier to track missing

devices if “lost” or stolen.

The benefit of the Zello app technology in conjunction with the iPods/iPhones has allowed OLAR staff to access instant click-talk to a wider range of phones and devices in the facility, at a lower price, on any network throughout campus and in the case of those that have cell service, where ever data service is available either through Wi-Fi or via a 4G connection. In addition, Zello has a call connection speed of less than 1 second using Wi-Fi or a 4G network so the sound quality is superior to that of the PTT devices from Verizon that were used, as they degraded the quality of the call because they relied on Verizon’s CDMA 1x EV-DO network. Which basically means it spreads the signal over a greater bandwidth than the original signal, because it does not have a limit on how many users are on at any one time causing the signal to degrade resulting in poor call quality. This causes call connection to be roughly up to 3 seconds or triple the amount of the time for Zello.

Zello also provides secure authorization, increased security with digital signature and voice encryption, and a dedicated private secure network for each business. The dedicated hub can control group and user permissions as well as automatic software updates and 24/7 technical support. OLAR is a secure facility and these devices, along with the Zello app security level, have also given us that ability to communicate directly to the police department, as we supplied them with an iPod as part of setting up this system.

We have also begun to utilize the iPod/iPhones for communicating with investigators more efficiently. With the old PTT system, OLAR staff were not able to easily communicate with research staff if they were out in the facility at their work stations. If they needed to call or email an individual, they would have to leave the clean area of the facility, place on protective equipment over their scrubs, and enter the office area. With the iPods they are able to access their email from the facility at their work station directly by the animals they are caring for, thereby increasing the timeliness of their communication and also reducing valuable staff time accessing their email.

How does this impact the University?

Beyond the increased ability and quality of communication in our department, this idea has decreased cost to our department. The PTT system required ongoing monthly costs for the cellular service for about 50 devices. We were able to make a one-time purchase of iPods and utilize the campus Wi-Fi system to decrease communication costs in the department. In the first year, even with the purchase of the hardware, we are expecting to see a savings of approximately $8,000. After this fiscal year, our predicted savings is about $16,000 per year. Please see the attached file that was used to justify the program when it was originally proposed for specific numbers related to the program.

Implementation Status

Yes, this has been implemented. It was implemented in September of 2014 and we are realizing the positive impact in our budget as predicted in our model during this fiscal year and we anticipate continued positive impact to our budget in FY15-16 of about $16,000 per year. The iPods have proven to have additional functions and we are developing web-based forms for staff to more efficiently perform their work, including a web-based cage card order program

so that we can reduce paper use in the facility.

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