Hot Spots
New & noteworthy

New DGIT Website

We are excited to announce our new web presence on [dgit.healthsciences.ucla.edu](http://dgit.healthsciences.ucla.edu). We hope it will serve as a valuable resource for information on currently available, new, and upcoming services within DGIT. This is only the beginning, and we are working on more detailed descriptions of services, team pages and pictures, fun videos, and more to make it more robust, so please check back soon!

Read a message from our CIO >>
Next-Level Learning in Geffen Hall

The beautiful new medical education facility, Geffen Hall, opened in January and offers state-of-the-art educational technologies. The Teaching Lab (pictured above) was designed through a collaboration between curriculum designers, teaching faculty and Neil Bornn-Gilman, manager of DGIT Audiovisual Services. In addition to problem-based learning, lectures and labs, team-based learning, and other small group-based teaching modalities are being used in curriculum delivery. The Teaching Lab was designed with these needs in mind, and the final product represents a significant leap forward for digital collaboration capabilities available to DGSOM faculty and trainees.

The room consists of 26 individual tables, which can each accommodate up to seven learners. Every table features a touch panel control system, a desktop PC, two high-definition displays, seven laptop inputs, directional speakers, and discussion microphones. When there is no facilitated session taking place, tables may be used as individual learning pods. Learners at each pod may select what they would like to view on their screens. When a facilitated session begins, one of the displays at each table remains under control of the learners at each table, while the second display shows content selected by the speaker.
The content from any of the individual tables may also be selected as the main source for the room, allowing any group to share their content with the larger audience.

The audio capabilities of the lab are impressive, as well. Each table is equipped with seven highly directional speakers integrated directly into the edges of the tables. The manufacturer of the speakers developed the product specifically for the teaching lab, and the installation at Geffen Hall was the very first time these speakers were installed anywhere in the world. The directional nature of the speakers allows each of the 26 tables to playback separate audio simultaneously, while still allowing a learner seated at a given table to hear their local audio source clearly. In addition, each table has multiple push-to-talk microphones that enable any individual learner at a table to converse with the room at large. The Teaching Lab has been getting heavy usage since opening, as depicted in the photo above of a Synapse lab from Block 5.

In addition to the audiovisual capabilities, the Teaching Lab and other spaces, such as the Lecture Hall and Learning Studio, are equipped with an audience response system called Poll Everywhere – software which allows faculty to create live, real-time audience polling. Through Poll Everywhere, faculty can increase learner engagement and promote active learning.

Photo credit: Laura Schreiber

View an interactive 360° photo of the lab in action >>
(Click the box in the bottom right-hand corner of webpage to view in full screen mode.)
New Educational Technology Team in DGIT

The Office of Instructional Design and Technology Unit (IDTU) and Student Information System (SIS) group have officially joined DGIT to form the new Educational Technology Services (ETS) team. Led by Bill Holloway, they will continue to provide services for undergraduate education in DGSOM, while also expanding to meet the school’s needs in graduate and continuing medical education, and the biomedical graduate programs.

Some of the current offerings of ETS include support and development of Gryphon, a learning management system platform built in collaboration with Queen’s University School of Medicine and ten other Medical School consortium members. They also support the Gryphon online examination system, the new lecture capture system integrated in Geffen Hall classrooms, and many others. Additionally, they are creating a curriculum dashboard for easy access to learner analytics, such as test scores, clerkship patient encounters, evaluation data, and more.

The ETS team is constantly seeking new ideas and innovative technologies to benefit the education group they support. They are currently working with a vendor to
implement a new admissions system called AMP with an expected go-live date of June 1, 2017.

The current team consists of three developers, Nandini Dutta, Daniel Noji, and Sam Payne; a technical lead, Zhen Gu; a trainer/multimedia expert, Jason Rock, and a program manager, Katherine Wigan. Katherine and Daniel split their time between DGIT and the UCLA Simulation Center, a training center where students and healthcare professionals can practice certain procedures in a safe learning environment using high-fidelity manikins. We are delighted to welcome all of them to DGIT, and are eager for all of the technical advancements to come for the DGSOM educational community!

New IT Connect Services

Our walk-up computer service help desk, IT Connect (located west of Café Med in CHS), is now offering the following services:

- **E-waste Disposal**
  Continue your spring cleaning by dropping off your e-waste for safe disposal. Small tangible items accepted, including: hard drives, RAM, laptop batteries, small batteries, CDs / DVDs, tape drives, cell phones, tablets.

- **Loaner Device Program**
  Now employees traveling internationally can check out loaner devices approved for usage in other countries. Visit IT Connect for more details.
Infrastructure as a Service

A major DGIT initiative to build a new data center is in full swing. The Infrastructure team has been hard at work installing, configuring and readying the systems. Located at the San Diego Supercomputer Center (SDSC) at UC San Diego, the new data center will enable DGIT to broadly deliver, for the first time, centralized server, storage, and backup services to DGSOM clients. Transitioning department systems and services to the new structure will not only enable economies of scale, but will help DGIT achieve security and management objectives. The data center is expected to be ready for operation in July 2017.

Amazon Web Services Are Coming!

While primarily known as a bookseller, online marketplace, and media company – all of which are true – Amazon is also involved in a growing assemblage of additional industries. One of which, Amazon Web Services (AWS), comprises a series of more than seventy distinct, on-demand, cloud-based computing systems. While the sheer size of AWS – a $14 billion business on its own, around since 2007 – is less revelatory than it was given the rising prevalence of cloud-computing, it perhaps remains
surprising that AWS is so critical for Amazon’s profitability, accounting for only 7% of their revenue, but **71% of Amazon’s operating income**.

Widespread migrations to cloud services, particularly in healthcare, are accelerating. Upending traditional high-volume procurement approaches once-required to manage uneven demand, cloud business models allow IT organizations to right-size and scale on-demand. Services are used when needed, and disabled when not. As customers, we pay only for what we use. In an oversimplified example, a typical server, traditionally-procured and managed, costs UCLA $15,000 over 5 years. A similar server in AWS costs DGIT less than $2,000 over the same period, assuming the costs are fixed. In a highly competitive market, **AWS costs have dropped every year** of its existence.

DGIT has big plans for AWS, starting with research computing. Today’s bioinformatics research requires secure, cost-effective, scalable technologies that enable prevailing big-data, machine learning, and artificial intelligence capabilities. The designation of the Institute for Precision Health (IPH), the launch of the Depression Grand Challenge (DPC), efforts to rapidly advance drug discovery and create new avenues of intellectual property development, deep integration of genetic testing and analysis into clinical care, and many other significant and potentially transformational efforts in UCLA Health, demand instant access to computational toolsets. These tools are readily available, but for security concerns, cost apprehension, or general lack of awareness, are not widely used by DGSOM. Developed in concert with expert UCLA faculty, DGIT will provide
secure, cost-optimized, scalable services that enable new insights, augment discovery, and accelerate the next generation of breakthrough innovations.

Initial efforts include developing the underlying security required to achieve HIPAA compliance within AWS. Once those are complete (expected by June 2017), creation of high-performance computing capabilities, used for genomic sequence analysis and other computationally-intensive workloads, will begin. In conjunction, DGIT is creating a hub for cohort discovery within AWS. Made up of a genomics database allowing for fast querying of millions of gene sequences, a complete copy of the UCLA electronic medical record, purpose-built for research, and query tools starting with an updated version of i2b2, this hub will provide researchers with on-demand access to patient-based data sets correlated with genomic data, and facilitate searches for research cohorts and related data sets (e.g., display a de-identified list of all patients with specific genotypic and phenotypic qualities and output de-identified EMR notes from each patient record).

Through this platform, researchers will access de-identified data on-demand, and identified data based on institutional review board (IRB) approval. As cohort data is collected, researchers can apply AWS-based computational toolsets, including high-performance computing, machine learning, artificial intelligence, and natural language processing, to aid in discovery efforts. Custom or workload-specific applications (e.g., MATLAB and R) can be launched via DGIT-managed systems or implemented directly by researchers within the secure platform.

DGIT is working on cost models and usage options with the goals of keeping the platform costs under-market and available to as broad a swatch of the UCLA community as possible. Please contact us if you have interest or questions in these or other research computing services. We look forward to partnering with you.

**Box Cloud Storage**

We are happy to announce that DGSOM will soon have a secure, HIPAA compliant solution for all your secure file sharing, storage, and collaboration needs! Box, dubbed the “hard drive in the cloud,” allows you to save your files securely online to easily access and share from anywhere with a web connection. DGIT has been hard at work with Box to ensure that all UCLA Health Sciences users have a way to securely store and access data, and we are diligently working to make sure we do so as quickly as possible, in a way that suits the needs of both compliance, and the DGSOM community at large.
Key features include:
- Unlimited storage
- HIPAA compliance
- File viewing and editing integration with Microsoft Office Applications, online and on devices
- File syncing limitation to encrypted devices (with the ability to view on unencrypted devices online)
- Mac, PC, iOS (iPhone, iPad), and Android compatible
- Collaboration capabilities with main campus and others

Tentative deployment dates
- October 2017 – Department pilot(s)
- January 2018 – Deployment in DGSOM

Learn more about Box >>

Zoom Web Conferencing

We are currently piloting software for web and video conferencing called Zoom. In our initial testing, we have found it to be a leaner, cleaner, and meaner than competitive offerings, with a higher-resolution, cleaner picture. Zoom is platform independent, which means it's able to run on Mac OS, Windows, Linux, and pretty much any device you may have, with multiple plugins available.

We are doing proof-of-concept tests on the Zoom Room feature, a collaboration space that's Zoom capable in any conference room setting, as we strive to bring multiple modality connection capabilities to existing video conferences.

Learn more about Zoom >>

In the next issue…
- New Research Computing Team Spotlight