Welcome to our first newsletter of FY17! FY16 was another year of growth and expansion for UNHInnovation (UNHI). Licensing revenues continue to rise annually and we are working hard to create new opportunities for university/industry collaboration. We’ve also added several new faces to our team, including two new licensing managers to help manage the university’s intellectual assets.

January will mark a year in our new space in the Madbury Commons development and so far it has exceeded our expectations. If you didn’t make it to the open house in April, please stop by for a tour.

In other news, the Peter T. Paul Entrepreneurship Center (ECenter) hit the ground running in FY16 and is really making its mark on campus with the launch of the Makerspace, the Summer Seed Grant program, bootcamps, speaker series, faculty fellows, and more. We are excited to see the continued growth over the coming year.

We already have a lot of exciting projects and events planned for FY17 as we continue managing and promoting UNH’s innovative research outputs and increasing university collaborations with the business community.

Cheers!
Marc Sedam
Associate Vice Provost of Innovation and New Ventures
and Managing Director, UNHInnovation
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Makerspace at the UNH ECenter
The first half of 2016 brought the early stage implementation and soft opening of the new Makerspace at the Peter T. Paul Entrepreneurship Center (ECenter). For those not familiar with the concept, a makerspace is both a community center outfitted with fabrication tools and equipment, and a community of “makers.” The maker movement represents the democratization of engineering, design, fabrication, and education.

The Makerspace at the ECenter is a student-run organization that operates by three core directives. First, to be as inclusive and interdisciplinary as possible by encouraging students from all colleges and programs to come together in making things that are meaningful to them. Second, to ensure that the maker community establishes all decisions regarding the development of resources. Third, to engage with the global “Fab Lab” network of state-of-the-art prototyping facilities by meeting the equipment band operational requirements set forth by the Fab Foundation (a prototyping facility benchmark).

A student-circulated petition in the fall of 2015 catalyzed the support of the UNH community and resulted in securing dedicated space in the ECenter and an initial round of funds generously donated by the UNH Wildcatalysts Network, UNHInnovation, and the ECenter. These funds provided retrofits to the space and an initial phase of equipment, tools, and materials. The Makerspace tools currently include a 40W Epilog laser cutter/engraver, 3D printers, a vinyl cutter, sewing machine, electronics tools, and more.

The Makerspace is run by a group of student volunteers who hold open hours and help “Makerspace newbies” learn about what can be done and how. The Makerspace also continues to actively pursue additional equipment, monetary donations, grant funding, and new volunteers.

There are several ways for students, staff, or faculty to get involved and volunteer. Students sit on an executive board of directors elected by the maker community, or volunteer as mentors. Mentors are present during open hours to provide assistance to users, or volunteer as process/machine masters who are responsible for developing an in-depth understanding of one specific machine. Process/machine masters create training documentation and procedures, conduct maintenance and repairs, propose operational
budgets to the board each semester, and serve as a point of contact in case of questions related to their processes.

Given the mounting body of scientific evidence establishing the connection between creative expression and overall wellbeing, life satisfaction, and performance in fostering entrepreneurial thinking, the Makerspace student leadership is honored to bring this opportunity to the UNH community. We hope to see it encourage not only entrepreneurial activity, but also inter-disciplinary collaboration and peer-to-peer learning. For example, artists can learn fabrication skills from engineers who in turn learn valuable design skills from the artists. Ultimately, we hope that the Makerspace will stimulate the innovation ecosystem around the University and across New Hampshire, and infuse a broad variety of new ventures and skilled workers into the state’s workforce.

Matt Griswold, ’19

For more information, contact Heather MacNeill, Program Manager, ECenter

UNH Receives First Licenses for the HuTT® Curriculum

UNHIInnovation has partnered with UNH Kinesiology Professor Erik Swartz for the commercial launch of a ground-breaking, evidence-based helmetless tackling program. Professor Swartz developed HuTT® to decrease head impacts in football and increase the safety of one of America’s favorite pastimes.

HuTT aims to lower the number of head injuries in football by changing how players tackle. Football athletes sustain a majority of head impacts to the top and front of the helmet, which pose the greatest risk of injury. Proper execution of the HuTT tackling program trains players to avoid initiating contact with the head and reduce head impacts.
Swartz conducted the first scientific study to demonstrate this claim.

Swartz's two-year study at UNH concluded at the end of the 2014 football season. Working with Swartz, UNH football coaches implemented the specific techniques of HuTT, and the study found a nearly 30% decrease in head impacts among the group of players who participated in helmetless drills as compared to the control group. His findings were published in the December 2015 Journal of Athletic Training and his story was reported by news outlets across the country, including the Washington Post, New York Times, and Sports Illustrated. Coaches at UNH have also found the HuTT techniques improved tackling performance overall.

Since the completion of the study, UNHInnovation has been working with Swartz to commercialize the HuTT curriculum so that youth, high school, and collegiate football programs around the country can integrate HuTT drills and exercises into their training. The HuTT website (huttprogram.com) went live this past spring and UNH has recently received its first two HuTT curriculum licenses from high schools in Delaware and Connecticut. Coaches from these high schools are currently incorporating the HuTT exercises and drills into their weekly practices.

In an effort to improve the user experience, HuTT has teamed up with Retrieve Technologies out of Manchester, New Hampshire to create a customized app that offers video instructions for each drill. Coaches can access videos of UNH football players performing drills to illustrate and improve drill performance as well as record and send video back to the HuTT team for review and further instruction.

Chris Harris
Licensing Manager, Creative Works

Meet the Newest Additions to the UNHInnovation Team!

Chris Harris
Chris Harris is our new licensing manager for creative works. Chris primarily covers innovations coming out of the College of Health and Human Services, the College of Liberal Arts, and Cooperative Extension. He develops copyright and trademark protection strategies for university assets, while evaluating and expanding program, trademark, and image licensing opportunities. He also serves as the primary contact for university trademark licensing.
Prior to UNH, Chris worked for nine years in the K-12 and higher education publishing markets. Most recently, Chris was intellectual property and contracts manager for Pearson, Inc., a global education company. At Pearson, Chris negotiated, drafted and managed licensing agreements for text, image and rich media assets. Chris also served as an editor for K-12 history and geography textbooks.

Chris earned his J.D. from New England Law, Boston (formerly New England School of Law), is admitted to the Bar in Massachusetts, and received a B.A. in English from the University of Maine.

Matt Simon
Matt Simon is our new licensing manager for the physical sciences, and manages UNH's intellectual property assets with the goal of protecting, promoting, and commercializing UNH's innovations. He is responsible for the intellectual property originating from the College of Engineering and Physical Sciences; the School of Marine Science and Ocean Engineering; the Institute for Earth, Oceans, and Space; the Research Computing Center; and the InterOperability Laboratory.

Prior to joining UNHInnovation, Matt was a Machine Vision Engineer with OSRAM. Most recently, he worked in OSRAM's Specialty Products business group and was responsible for the design and development of automotive SSL manufacturing equipment. Matt also worked as an Engineer for Deep Information Sciences, where he developed mesh-network sensor arrays, and as a Counselor for at-risk and under-privileged boys with the Mayhew Program.

Matt earned his B.S. in Electrical Engineering from the University of New Hampshire and his B.A. in the Administration of Justice from the University of Pittsburgh.
Heather MacNeill
Heather MacNeill is program manager of the Peter T. Paul Entrepreneurship Center (ECenter) and manages the fiscal, operational, and administrative aspects of the ECenter, while implementing co-curricular entrepreneurship programs. On a part time basis, Heather also provides program support to the Center for Social Innovation and Enterprise (CSIE). She joins UNH with ten years of program planning and delivery experience, including five years at Harvard Business School. Heather graduated from UNH with a B.A. in English in 2007.

Geri Denton
Geri Denton is assistant to the senior director of strategic partnerships at UNHInnovation. She comes to the University of New Hampshire after taking time off to raise her children. Prior to that, Geri enjoyed a successful 12 year career in higher education, where she served as a leader in enrollment management and admissions, recruitment, event planning, and marketing. She earned a B.A. in English and a master’s degree in Mass Communication from Boston University.

Promoting University/Industry Collaboration and Innovation

Following on the heels of last fall’s highly successful Aerospace and Defense Technology Day, UNHInnovation has since hosted two other industry specific events focused on
promoting innovation and industry/university collaboration with external entities.

UNH Data Day, held on April 6th, brought representatives from data-related businesses to meet and network with UNH faculty whose research could be of interest to the data field, and UNH Bioscience Day, held on September 21st, showcased UNH’s biology, genomics, and biomedical science research. At each industry event, faculty and attendee companies were given the opportunity to introduce themselves to the room and describe their needs, interests, or activities. All attendees then participated in a research “sandpit” – a highly interactive networking session where they could seek out other attendees with similar interests. UNH researchers and industry representatives met and mingled, then moved on every five minutes, speed-dating style, for maximum interaction and networking. The activity is designed to help companies and researchers identify and develop potential projects and partnerships, solve business challenges, and accelerate scientific innovation in industry-specific tools and technology. The research sandpits are part of a larger initiative to foster entrepreneurship on campus and support the maturation of innovations developed at UNH, which is being funded through a recently awarded $300,000 I-Corps Site Grant from the National Science Foundation.

Following the networking activity at each event, attendees were invited to take tours of UNH’s world-class facilities and centers. During Data Day, guests were encouraged to visit and learn more about UNH’s InterOperability Lab and the Connectivity Research Center in their new facility in downtown Durham. Bioscience Day attendees were invited to tour UNH’s Hubbard Center for Genome Studies and the new Veterinary Diagnostic Lab. Each event was concluded with a networking cocktail hour in the Alpha Loft at the UNH ECenter, which shares our Madbury Commons space.

UNH has serious expertise in a wide range of fields and many local companies could benefit from that expertise in their pursuits to innovate and commercialize new ideas. UNH Industry Days provide great opportunities for UNH to showcase its resources and work, and provide companies and researchers the chance to meet face-to-face to learn and collaborate. UNHInnovation has received wonderful feedback from both faculty and industry attendees about connections they made throughout these events that will hopefully lead to new partnerships.

UNHInnovation plans to host UNH Industry Days at least twice a year. For more information about upcoming events, please feel free to contact me at ellen.chisto@unh.edu or 603-862-5446.

Ellen Christo
Sr. Director, Strategic Partnerships

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UNH Issues First Non-Academic UNHCEMS® Licenses

In 2001, the University of New Hampshire (UNH) developed an innovative approach to inventory management by creating a web-based application called UNHCEMS®. The program, designed by UNH’s Office of Environmental Health and Safety (OEHS) and Research Computing Center (RCC), enables an institution to manage its chemical inventory and provide the necessary training needed to help ensure safety. Using a barcode-based system, UNHCEMS can record and manage information about the quantity, location, and properties of chemical stock, biological agents, radioactive materials, and hazardous waste. UNHCEMS automates record-keeping and waste removal requests, allows faculty to safely and efficiently track and share chemicals between lab rooms, and gives fire departments the ability to view the location of dangerous chemicals and other hazardous materials to increase their safety during emergencies.

Following the successful deployment of the system at UNH in 2001, it was clear that UNHCEMS had great potential to help other colleges and universities improve inventory organization and safety on their campuses. To date, UNHInnovation has helped facilitate UNHCEMS licenses to almost 30 higher-education institutions and generated close to $1M in royalties for the university.

We are excited to share that UNH issued its first non-academic UNHCEMS licenses to two New England-based companies in the Spring of 2016. This entrance into the corporate market represents new commercialization opportunities and a chance to increase growth and development of UNHCEMS. In October 2016, UNH’s OEHS and RCC will be hosting its 2nd annual User Group conference, which provides users an opportunity to obtain in-depth training and to collaborate on future UNHCEMS development.

UNHInnovation continues to work with the UNHCEMS team to facilitate licensing...
agreements and seek out new opportunities to promote the innovative tool.

Matt Simon
Licensing Manager, Physical Sciences

UNH ECenter Summer Seed Grant Wrap-Up

At the end of the spring 2016 semester, the Peter T. Paul Entrepreneurship Center (ECenter), along with a team of academic and industry judges, selected two teams to be awarded the 2016 Summer Seed Grant. Thanks to the generosity of the Wildcatalysts Network, Kennebunk Savings, and Raka Creative, the ECenter awarded $10,500 to four people (two teams) to work on their early-stage ideas or startups over the summer, instead of having to find summer jobs.

The teams selected for the grant were Project OASIS and RAIDX. Project OASIS team members Siddharth (Sid) Nigam (’16), Paige Balcom (’16), and Ethan Pirie (’17), all mechanical engineering students, developed energy efficient, small-scale aquaponic systems that have the potential to grow food in any geographical location, year-round, in any climate, with zero chemicals, and 90% less water than conventional agriculture. RAIDX, started by Ph.D. student András Fekete, is the development of an expandable storage device for home and business use that automatically manages redundancy of data, so that a single hardware failure does not cause loss of data.

Over the course of the summer, the teams worked with mentors Mark Kaplan, Joshua Cyr, and Joseph Ferraro of Alpha Loft and John Kealey of Decision Lens to develop their ideas and business plans. The teams presented the results of all their hard work on August 11th at the ECenter. Video clips of the final representations can be found on the ECenter’s YouTube page.
UNH-IP-Based Company Itaconix Acquired for $7 Million

We are excited to share that British chemical company Revolymer PLC recently acquired Itaconix Corporation, a local company whose products are based on licensed UNH intellectual property, for $7 million.

Dr. Yvon Durant, a former UNH faculty member in Materials Science, and John Shaw, co-founded Itaconix in 2008. Initially the pair licensed bio-based polymer technology out of UNH and have continued to expand its technology base, producing novel polymer products through itaconic acid polymerization. The company is located in Stratham, NH, and maintains relationships with UNH, including employment of UNH graduates. In the last few years, Itaconix experienced significant growth, which got the company thinking about scaling into more international markets. After discussions with several potential companies, Revolymer emerged as the best partner. Products that Itaconix specializes in are used in home, personal care, and industry and Revolymer works closely with polymer products involved in those markets. Interestingly, Revolymer also has academic roots, as it is a spinout company from the University of Bristol.

Shaw and Durant will become part of the Revolymer management team. Leaders of both companies hope the acquisition will increase sales worldwide as well as help Revolymer to better reach North American markets.

The acquisition of Itaconix is the first such event for any of UNH’s startup companies, and UNHInnovation is thrilled to see a startup originating at UNH advanced to this level. We
The University of New Hampshire InterOperability Laboratory (UNH-IOL) recently introduced the industry’s first 25 Gigabit (25G) Ethernet Testing Services as its newest commercially available testing solution in an effort to help customers prepare for market deployment of 25G Ethernet technologies.

While 10G is still a dominant network speed, Ethernet technology is migrating to 25G per lane to take on current silicon and system design. What makes 25G compelling is that it is available at a lower cost than existing 40G Ethernet technologies. These increased speeds that leverage this infrastructure must be validated and tested to ensure continued market acceptance of Ethernet as the best technology for data networking. 25G Ethernet technology is starting to enter the marketplace, and issues with untested and non-compatible devices are already appearing. The UNH-IOL’s new 25G Ethernet Testing Services are the best and most comprehensive way to demonstrate product interoperability and conformance to industry standards, showing customers that devices are ready for deployment into the market.

The new testing service is just one of the many solutions the UNH-IOL offers to help foster multi-vendor interoperability, conformance to standards, and improvement of data networking. As is the case with all of the UNH-IOL’s technology, students played a big part in its development. The UNH-IOL has grown to have over 100 student employees who

Maria Emanuel
Associate Director
participate in every facet of new product development. From new features and user experience to customer support inquiries, students who work at the UNH-IOL get real-world experience that often translates to a smooth transition from college into the workforce.

Since its founding in 1988, the UNH-IOL has become one of the premier data networking resources by providing a neutral environment for standards-based testing, commercializing test solutions, and enabling the next generation of technology and engineers. As new technologies emerge, the UNH-IOL continues to be a neutral, unbiased resource for the data communications industry, and a hands-on lab to give students real-world experience.

Mara Bernazzani
Communications Coordinator, UNH-IOL

UNH Entrepreneurship Center Announces Faculty Fellows

The Peter T. Paul Entrepreneurship Center (ECenter) has announced its first ECenter faculty fellows. Because the ECenter is intentionally independent under UNHInnovation and not associated directly with any one college, the fellows program was created to engage faculty and students in all things idea, innovation, and entrepreneurship at UNH.

Matt Davis, College of Engineering and Physical Sciences; Dev Dutta, Paul College of Business and Economics; Kiernan Gordon, College of Health and Human Services; Meg Heckman, College of Liberal Arts; and Jen Purrenhage, College of Life Sciences and Agriculture are the first fellows.

We are really excited to have the fellows as part of the team. Like all good startups, we
also need expertise from those who engage daily with the “customers,” in this case students and faculty, to help us provide valuable and desired tools and resources.

The ECenter’s goal is to continue building the positive and supportive idea, innovation, and entrepreneurial culture at UNH, for all students, faculty, staff, researchers, and alumni. The ECenter has already established itself as the hub in its area on campus. Programs include a startup speaker series, three bootcamps centered around networking, marketing, and sales; a hackathon; 1:1 coaching; the $10,500 summer seed grant; and the paid internship at startups program. Physical resources include co-working zones at Alpha Loft and the Caffeinator Coffee Bar, both at the ECenter.

The ECenter is located in the UNHInovation wing of Madbury Commons. It is for all students, faculty, staff, researchers, and alumni. It creates opportunities for engagement through new co-curricular programming, as well as supporting existing academic, student, university, and independent initiatives.

Ian Grant
Director, ECenter

UNHInovation
Comings and Goings

UNHI Presentations

Corporate Engagement Committee Meeting
July 21, 2016
**Presenter:** Maria Emanuel  
**Presentation Title:** Inaugural Meeting

CIE 900/901
September 12, 2106
**Presenter:** Maria Emanuel  
**Presentation Title:** Intellectual Assets

ECenter Speaker Series
September 14, 2016
**Presenter:** Ian Grant  
**Presentation Title:** “Cool-Start-ups: Cutting Edge and Breaking Boundaries”
APEC TCTC Regional Program on Licensing and Basic Startup  
September 21, 2016  
**Presenter:** Marc Sedam  
**Presentation Title:** Licensing Infrastructure – Policies and Procedures

APEC TCTC Regional Program on Licensing and Basic Startup  
September 21, 2016  
**Presenter:** Marc Sedam  
**Presentation Title:** Disruptive Innovation and Startups

APEC TCTC Regional Program on Licensing and Basic Startup  
September 21, 2016  
**Presenter:** Marc Sedam  
**Presentation Title:** Startup Policies and Best Practices – Building Your Foundation for Long-Term Activities

Data Analytics graduate program  
September 23, 2016  
**Presenters:** Maria Emanuel, Victor Sosa  
**Presentation:** Confidentiality Agreements

UNH Foundation Board Meeting  
September 30, 2016  
**Presenter:** Marc Sedam  
**Presentation Title:** Research and Innovation Updates

**UNHI Committee Participation**

Live Free and Start Advisory Council  
**Marc Sedam**

Placement Employer Development Working committee  
**Ellen Christo**

CRM Guiding Principals Group  
**Ellen Christo**

UNH Corporate Advisory Group  
**Ellen Christo**

UNH Corporate Engagement Committee  
**Ellen Christo**
UNHI Attended Conferences and Events

Academic Impressions
July 11-14, 2016
Attendee: Ellen Christo

APLU CICEP-CEO Joint Summer Meeting
July 11 – 13, 2016
Attendee: Maria Emanuel

University-Industry Contracts Series with Sponsored Programs Admin.
August 17, 2016
Attendees: Maria Emanuel, Chris Harris, Matt Simon

Entrepreneur Forum, Cookson Strategies
August 18, 2016
Attendee: Marc Sedam
APEC Bio-Medical Technology Commercialization Training Center (TCTC)
September 21 – 22, 2016
Attendee: Marc Sedam

Meeting/Webinar at UNH Law: Legal Clinic for University Start-Ups
September 28, 2016
Attendee: Chris Harris

AUTM Eastern Regional Meeting
September 29, 2016
Attendee: Marc Sedam

Global Consortium of Entrepreneurship Centers (GCEC) Annual Meeting
September 29 - October 2, 2016
Attendee: Ian Grant

UNHI Sponsored Seminars and Events

Event: Catalyst Seminar
September 22, 2016
Presenters: Charlie French, Elizabeth Dragon, George Dzujna
Presentation Title: A Conversation About...Entrepreneurship, Economic Revitalization, and Community Redesign

Event: UNH Bioscience Day
September 21, 2016
Presenter: Ellen Christo