The University of Illinois Research Park
Research Park at the University of Illinois

• The Research Park at the University of Illinois provides an environment where technology-based businesses can work with the research faculty and students on collaborative research and access UI services.
  – 200 Acres adjacent to campus, developed with a private partner, 13 buildings
  – $81 Million annual payroll, 1400 employees including 375 students at a time
  – Year-round internships for students to work with companies

• The Research Park has 90 companies and employs people in high-tech jobs
  – Fortune 500 firms: Yahoo, Caterpillar, State Farm, ADM, Sony, Raytheon, Citrix, Abbott, Dow, Deere
  – 38 companies currently in the EnterpriseWorks startup incubator (145 startups since it opened)

• Named by the Association of University Research Parks as the 2011 Outstanding Research Park
UI Research Park Area
Research Park: A Vibrant Tech Community

entrepreneurship

corporate innovation

building community
CORPORATE INNOVATION CENTERS

Best practices have been shared by leading corporations with centers at the University of Illinois Research Park

- ADM Sustainable Bioenergy Modeling Center
- Caterpillar Simulation Center
- Citrix, Bytemobile operation
- John Deere Technology Innovation Center
- Dow Innovation Center
- Neustar Innovation Center
- Raytheon, Trusted Computer Solutions operation
- State Farm Research and Development Center
- Yahoo, Hadoop Center of Excellence
- Abbott Laboratories
- Neustar Innovation Center
- Littelfuse
- Riverbed
- Sony Biotechnology
- Anheuser-Busch InBev
- Pearson, NovaNet
Why do Corporations Locate in the Research Park?

- **Students**: Employ student Interns year-round as a low-cost workforce with a high potential for full-time recruitment after graduation
- **Tech Talent**: Recruit engineering talent from campus and community
- **Scout**: Early awareness of technology and research trends and innovations
- **UI Relationships**: Proximity to sponsored research and engagements
- **Startups**: Corporate venture groups engage and partner with UI startups
- **Intrapreneurship**: Entrepreneurial environment for open innovation
- **Sharing**: Peer-to-Peer Learning from other corporations located here
- **Skills**: Continuing professional and technical education for employees
- **Facilities**: Access to University labs, computing, and facilities
- **Ease**: UI staff dedicated to helping companies setup and run operations
# RESEARCH PARK OPPORTUNITIES FOR CORPORATIONS

<table>
<thead>
<tr>
<th>Early Awareness of Technology and Research Trends and Innovations</th>
<th>Innovate based on early emerging technologies, engage across campus and become exposed to non-obvious sources of innovation, work with faculty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employ Student Interns &amp; Recruit high quality candidates</td>
<td>Cost effective access to a high caliber workforce with flexible staffing by semester. Develop a skilled future recruiting pipeline. Retain IP.</td>
</tr>
<tr>
<td>Leverage Sponsored Research</td>
<td>Opportunity to become more engaged in corporate-sponsored research projects on campus and help monitor progress</td>
</tr>
<tr>
<td>Corporate venture groups engage and invest in startups</td>
<td>Corporate venture groups evaluate investment and partnership opportunities with startups that have further developed UI technology</td>
</tr>
<tr>
<td>Entrepreneurial Environment</td>
<td>Interactions with start-up companies in the Incubator &amp; Research Park encourages entrepreneurial thinking among research innovators</td>
</tr>
<tr>
<td>Peer-to-Peer Learning</td>
<td>Learn from other leading corporations that have established R&amp;D offices in the Research Park, non-industry specific best practices</td>
</tr>
<tr>
<td>Continuing Education</td>
<td>Employees of the company in the Research Park can pursue advanced degrees at the University of Illinois while working on campus</td>
</tr>
<tr>
<td>University Labs and Facilities Access</td>
<td>Facility Use Agreement (FUA) with university can provide companies access to research laboratories, facilities and other university resources.</td>
</tr>
</tbody>
</table>
Employing Students on Campus at UIRP

• 1/3 of total Research Park workforce are students
  - Approximately 350-400 students per semester
  - Supplement research staff with highly-skilled graduate and undergraduate students from top University of Illinois programs
  - Student employees and research assistants can work on projects year round (not just summer interns)

• Workforce cost efficiency:
  - Student wages are substantially lower than new graduates (~50% less)
  - Interns are prepared for full-time employment through pre-training and familiarization of business culture and structure

• Recruitment Pipeline:
  • Companies report up to 65% retention rates, cherry pick the best
  • Assistance recruiting companies:
    • RP Career Fair, externships, open house events, mentoring program, job boards for clients only
  • Intellectual property remains with company

• Optional Research Park Contractual Intern Hiring Program
  • HR administration services for companies with interns and GRA positions, including visa documentation through UI Corporate Relations
## STUDENT WAGES IN THE RESEARCH PARK

<table>
<thead>
<tr>
<th>Internship area</th>
<th>Lowest hourly salary reported</th>
<th>Average hourly salary reported</th>
<th>Highest hourly salary reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business planning/strategy/competitive intelligence/market research</td>
<td>$10.00</td>
<td>$17.00</td>
<td>$25.00</td>
</tr>
<tr>
<td>Chemistry/chemical engineering</td>
<td>$10.00</td>
<td>$13.90</td>
<td>$21.00</td>
</tr>
<tr>
<td>Computer applications/software development</td>
<td>$8.00</td>
<td>$16.39</td>
<td>$30.00</td>
</tr>
<tr>
<td>Computer networks/hardware</td>
<td>$10.00</td>
<td>$17.50</td>
<td>$25.00</td>
</tr>
<tr>
<td>Electrical engineering</td>
<td>$10.00</td>
<td>$18.20</td>
<td>$30.00</td>
</tr>
<tr>
<td>Finance/accounting</td>
<td>$8.00</td>
<td>$14.31</td>
<td>$20.00</td>
</tr>
<tr>
<td>Marketing/business development/sales</td>
<td>$9.00</td>
<td>$14.33</td>
<td>$20.00</td>
</tr>
<tr>
<td>Mechanical engineering</td>
<td>$8.00</td>
<td>$14.85</td>
<td>$25.00</td>
</tr>
<tr>
<td>Research &amp; development (scientific/technical)</td>
<td>$10.00</td>
<td>$19.00</td>
<td>$29.82</td>
</tr>
<tr>
<td><strong>Average Student Wage (not weighted):</strong></td>
<td></td>
<td></td>
<td><strong>$18.19</strong></td>
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### Class Levels Hired

<table>
<thead>
<tr>
<th>Class Level</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
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<tr>
<td>Freshman</td>
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<td>Sophomore</td>
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<td>Junior</td>
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<tr>
<td>Senior</td>
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<td>Master's student</td>
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<td>PhD student</td>
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<td>Post-doctoral</td>
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</table>

### Hours Worked During School Semesters

- **Typical schedule:** 10-20 hours during the school year and full time during the summer
BEST PRACTICES IN RECRUITING STUDENTS

• **Be on campus engaging with students at least once per week**

• **Leverage your Research Park advantage**
  – Host an open house for students at your Research Park office
  – Attend the Research Park career fair in the spring
  – Attend on-campus career fairs

• **Provide opportunities for students to experience your company**
  – Intern and co-op opportunities
  – Job shadow program ("Externship Day")
  – Mentoring program (currently, piloting a Research Park Mentorship Program)
  – Sponsor and/or present to student organization

• **Develop an easy, clear recruiting process with quick turnaround**
  – I-Link Employment Recruiting System for Students and Recent Alumni
  – Research Park Resume Pools

• **Utilize the latest technologies and forms of communication**
  – Online interaction
  – Facebook, Twitter, LinkedIn
Innovation Center Concept at the University of Illinois Research Park

Corporate Innovation Center

- Corporate data, business, software, projects & opportunities

Site Manager = Tech & Knowledge Scout
- Track emerging trends, start ups, peers
- Foster faculty/dept. contacts
- Student Senior design, IBC projects

Seed New Innovation Concepts with Student Teams
- Prototype
- Research, white papers
- Engineering work, projects

Filter For Faculty Projects, NCSA Efforts, Start Up Collaborations

Talent Pipeline: Best Students Are Offered Full Time Positions
- Learned corporate culture
- Trained in skill areas of interest

Some projects can be expedited straight from students to corporate implementation

Adopt New Technology or Innovations Into Corporation
- Project implementation can be aided by new talent pipeline hired into company teams

Conversion rates in the Research Park are as high as 65% for corporations

Campus locations allows recruiting from other departments to meet overall corporate student hiring
# Recruitment and Internship Timeline

## 2013-2014 Academic Calendar Year

### Fall Semester

<table>
<thead>
<tr>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
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<tr>
<td></td>
<td>9/2/2013</td>
<td>9/20/13 -</td>
<td>10/10/13 -</td>
<td>12/2/2013</td>
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<tr>
<td></td>
<td>Labor Day</td>
<td>9/25/13 -</td>
<td>10/13/13</td>
<td>12/11/2013</td>
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<tr>
<td></td>
<td>CS/ECE After</td>
<td>10/16/2013</td>
<td>11/23/2013</td>
<td>12/12/2013</td>
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<td>Hours</td>
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<td>Thanksgiving</td>
<td>12/20/2013</td>
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<td>Vacation</td>
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<td>Begins</td>
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<td>Graduate</td>
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<td>and Professional</td>
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<td>School Fair</td>
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<td>ACM Annual</td>
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<td>Conference</td>
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<td>Instruction</td>
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<td>Resumes</td>
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<td>Instruction</td>
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<td>Ends</td>
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<td>Reading Day</td>
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<td>Final</td>
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<td>Examinations</td>
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<td>Begin</td>
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<td>Final</td>
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<td>Examinations</td>
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<td>End</td>
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<td></td>
<td>Winter Break</td>
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</tr>
</tbody>
</table>

**Student Employees in Research Park**

- Commence Fall Internships
- Work 10 Hours per Week
- Fall Break
- Work 10 Hours per Week
- Reduced Hours for Finals
- Work Full Time

### Spring Semester

<table>
<thead>
<tr>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>Summer</th>
<th>Fall Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begins</td>
<td>Career Fair</td>
<td></td>
<td></td>
<td>5/9/2014</td>
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<td></td>
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<td></td>
<td>Spring Career</td>
<td>3/22/2014</td>
<td></td>
<td>5/16/2014</td>
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<td></td>
<td>Fair</td>
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<td></td>
<td>Engineering</td>
<td>All Campus</td>
<td>Final</td>
<td>Summer</td>
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<tr>
<td>Open House</td>
<td>Career Fair</td>
<td>Career Fair</td>
<td>Examinations</td>
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<tr>
<td></td>
<td>Spring</td>
<td>Research Park</td>
<td>Begin</td>
<td></td>
<td></td>
<td>Instruction</td>
</tr>
<tr>
<td>Vacation</td>
<td>Career Fair</td>
<td>Career Fair</td>
<td>Final</td>
<td>Commence</td>
<td></td>
<td>Begins</td>
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<tr>
<td>Begins</td>
<td></td>
<td></td>
<td>Examinations</td>
<td>Summer</td>
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<tr>
<td></td>
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<td></td>
<td>End</td>
<td>Internships</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Student Employees in Research Park**

- Commence Spring Internships
- Work 10 Hours per Week
- Optional Full Time
- Work 10 Hours per Week
- Reduced Hours for Finals
- Work Full Time
- Work 10 Hours per Week

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**Important Dates**

- Recruitment Instruction Begins on Labor Day for CS/ECE
- Resume Instruction Ends on Reading Day
- Fall Examinations Begin on Final Examinations End
- Spring Examinations Begin on Final Examinations End
- Spring Break
- Thanksgiving Vacation Begins
- Spring Vacation Begins

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**Note:** This schedule is subject to change and should be confirmed with the relevant authorities.
NEW EXPERTS TO HELP CORPORATIONS

Site Director-in-Residence: John Quarton
- Former Site Director of the State Farm Research Center has been hired on a contractual basis to help corporate clients with best practices and initial operation setup
- Work with companies on student engagement opportunities, university interactions, operational performance

Big Data Executive-in-Residence: Michael Welge
- Recently retired from NCSA as Director, Data Intensive Technologies and Applications (DITA), ran the data mining and applied projects team on many corporate projects
- Formerly had two startups in the Research Park related to data analytics that had acquisitions: Riverglass and One Llama
NEW RESEARCH OPPORTUNITIES

• Applied Research Institute: College of Engineering
  – Contractual research
  – Defense research, work without publication or access to foreign nationals is feasible
  – New facility opened in July 2013 in the Research Park

• The Security Management Office operates the Specialized Research Facility in the Research Park
  – Facility to be contracted through the University by partners to handle sensitive and secure information
  – Opportunities for corporate access on a contractual basis
  – Former large defense contractor space managed for federal secure facility standards
  – Mike Rudzinski, Facility Security Officer, mrudzins@uillinois.edu
EnterpriseWorks Incubator

- EnterpriseWorks (EW) is a 43,000 sq ft startup business incubator in the Research Park for early stage tech firms. It is owned and operated by the University of Illinois to help launch successful start-up companies.
- Named by Inc Magazine in June 2013 issue as a top 3 College Town incubator

Company Founders: 89% of EnterpriseWorks clients are founded by University of Illinois Entrepreneurs. The majority are started by faculty/professors from UIUC.

Current Clients: Founder College, 63%

EnterpriseWorks clients have raised $546 Million in venture capital and angel funding.
Entrepreneurs-in-Residence (EIR)

EIRs are local-experienced tech entrepreneurs that have commercialized technology, hired by the Research Park to consult startups

Chad Stiening  
Mentor  
Management & CEO of Kypha medical diagnostics firm

Tim Hoerr  
Serra Ventures & Cbana, Immuven, Gameday Sports, CPA, Valuation expert

Dennis Beard  
Serra Ventures & Open Prairie Ventures, UI Business Adj. Faculty - Finance

Jed Taylor  
TEC, JLT Consulting and Pattern Insight, Siebel Scholar

Alan Singleton  
Singleton Law Firm, specializes in tech startups and IP

Lori Patterson  
Pixo founder and CEO, former Accenture consultant

Designer-in-Residence

The Vice President for Research has engaged Dr. Deana McDonagh, Chair of the Industrial Design Program in the School of Art + Design as a Designer-in-Residence.

In this role, she assists University of Illinois inventors and entrepreneurs to incorporate product design in their technology development to help improve user experiences and performance of products to meet customer needs.
SHARED SERVICES PROGRAM

• EnterpriseWorks has a University of Illinois student service team program to help entrepreneurs in the Research Park with project needs.

• We hired a diverse team of student specialists to help work on projects for startups that are short term in length.

• Projects examples include: Market research, presentation development, business plan assistance, beginning a website presence, logo development, public relations assistance, user interface design, lab setup service and training on equipment.

• Startups submit a short online request for services and a team will be assigned to help your startup.
The Enterpriseworks I-Start program helps support and launch new companies from the University with professional services and assistance. I-Start competitively awards 50-90% of the cost of startup professional service costs in the first year of a business.

24 Clients in the Program since October 2011, raised $7 million in outside funding

<table>
<thead>
<tr>
<th>I-Start Entrepreneur Services</th>
<th>Legal Services</th>
<th>Business Planning</th>
<th>SBIR Assistance</th>
<th>Financial and Payroll Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Types</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Scope of Services</strong></td>
<td>Initial Company Formation, bylaws, application for FEIN (filing fees paid by entrepreneur)</td>
<td>Write Business Plan with inventor input</td>
<td>Finding solicitation and agency fit</td>
<td>Payroll admin</td>
</tr>
<tr>
<td></td>
<td>Stockholder agreements and certificates</td>
<td>Market Research</td>
<td>SBIR process guidance</td>
<td>Quarterly Financial Statements</td>
</tr>
<tr>
<td></td>
<td>Stock option plan</td>
<td>Financial Projections</td>
<td>Draft budget</td>
<td>Assistance with Quickbooks setup for the business</td>
</tr>
<tr>
<td></td>
<td>Employment Agreement</td>
<td>Recommendation on sources of capital</td>
<td>Writing assistance</td>
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<tr>
<td></td>
<td>Non disclosure agreements</td>
<td>Assistance with hiring and incorporation decisions</td>
<td>Help with letters of support</td>
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<td></td>
<td>Project Management</td>
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<td></td>
<td>Registrations and Submission</td>
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</tr>
</tbody>
</table>
Events and Programs for Tech Firms

The Research Park hosts weekly events for the employees and firms in the community. In FY12, the Research Park hosted more than 100 events for companies to attend, network, learn about business, and have fun.

- Software User Group Meetings
- Tech CEO Roundtables with speakers
- Startup Café with successful entrepreneurs
- Monthly entrepreneur educational seminars
- Monthly social events, Fire @ Five, Golf outing, Ping Pong, soccer, swing dancing
- Women in Technology Forum
- Summer concert series with Krannert
- Charitable events organized for employees
- VIP speakers and business introductions
- TechCocktail tech demonstrations
- Annual Career Fair, student awards
Yahoo! has 110+ full time employees in the Research Park office, highly skilled software development engineers

Hadoop Center of Excellence for Yahoo

Despite not being a research center, the Yahoo Research Park team filed 60 patents since opening for Yahoo on audience targeting, mobile applications, social networks, advertisement placement.

Yahoo added interns doing PhD level research on cloud computing at the Research Park site to compliment the research done on campus at the Illinois Cloud Computing Testbed.

97% retention rate of employees annually, vs. high turnover experience in Sunnyvale.

- Led Yahoo to place more critical projects in Champaign because of the stable and highly skilled workforce.
- Continue to move data pipeline, cloud computing, and high revenue projects to Champaign from California, which has increased the size of the operation locally.
The work at the Research Center supports three State Farm departments:
- Property & Casualty Actuarial: pricing and financial analyses
- Systems: mobile application development, information systems
- Strategic Resources: research, competitor analysis, knowledge management

Modeling and Analytic Graduate Network (MAGNet) is a graduate program in applied statistics with 50% graduate assistantships
- Created MS degree to fit skill needs, State Farm sponsors students if they work for State Farm for 3 years following graduation

The Research Center has 70-80 interns and 28 full time employees
- Innovation Ready projects each summer allow students to work in interdisciplinary teams to create enterprise level innovations across departments. These are presented to State Farm leadership each summer. Recruit against project needs.
- Each intern works 10 hours per week during school and full time in the summer
- 700+ students have gone through the internship program since 2005
- Hiring students full time after completing internships, “cherry pick” the best

State Farm expanded for the 4th time in 2012
Students in computer science and related fields are working part-time to help develop data management solutions throughout Dow:
- 16 students launched center for Spring Semester, adding user interface designer
- Office opened in January 2012

NCSA Private Sector Program partner
DEERE TECHNOLOGY INNOVATION CENTER

• Network of Technology Innovation Centers in Moline, IL; Champaign, IL; Pune, India; and Kaiserslautern, Germany
• Act as hubs for Deere’s external linkage to technology innovation. It's responsibilities are:
  – Track key technology trends that have significant impact to John Deere: research, startups, faculty outreach
  – Build an Open Innovation strategy that fills the innovation pipeline with technologies of potential commercial value
  – Recruit talent for Deere
• Employ students from across multiple departments
  – Agriculture, Mechanical, and Electrical Engineering – systems, sensors, equipment design, electronics, robotics
  – Farm of the Future design, simulation and modeling
  – GSLIS students: M&A and business partnership research
• Screen potential sponsored research projects with grad students doing initial research at the Deere RP center
• Work with student groups on campus, senior design, IBC
• Expanded to include a lab operations, for equipment testing
CATERPILLAR SIMULATION CENTER

The demand from Caterpillar’s various business units for virtual product development and simulation has grown. To meet the need Caterpillar opened its Champaign Simulation Center in cooperation to cost effectively provide advanced analysis, design, and simulation services.

- Caterpillar hires UI students, putting them to work on teams led by experienced Caterpillar engineers, who served as mentors. Consider students to be in an apprenticeship program.
- Highly Skilled University Interns
  - Identify the top students from campus, highly coveted positions
  - Hire both Engineering graduate and undergraduate students
  - Over 300 interns have worked at the Caterpillar Simulation Center
  - Retention of Interns After Graduation
    - Successfully hired 65% of students offered positions
- Added electronics and information technology in 2012
Neustar (NYSE: NSR) opened the Neustar Innovation Center as part of its mission to foster open and secure technology innovation.

The Innovation Center develops technologies to solve customer problems ranging from fraud prevention to security to large scale networking.

The goal is bringing University of Illinois students together with leading technology innovators in a vibrant environment designed to stimulate questions that have the potential to change the way people engage using technology, data and information.

Watch a video from the opening event with the executives explaining their reason for choosing the UI Research Park: http://youtu.be/_6-xmd4bp-s
• The Abbott Research Park office opened in July 2009, beginning with Abbott Nutrition research projects
  – Expanded in 2012 to double the size of the center
• The center is associated with the Center for Nutrition, Learning, and Memory (CNLM), which was established as a partnership between Abbott and the University of Illinois. The center is multi-million dollar Grand Challenge research competition for interdisciplinary, team-based scientific research on the impact of nutrition on learning and memory in the human brain.
• The Research Park office employs graduate students to work on a wide range of research projects, focusing largely on pediatric nutrition product development
  o Developing educational materials about nutritional ingredients like prebiotics, which are ingredients that aid in the healthy development of the immune system
  o Students work on regulatory filing preparation including manuscripts and GRAS dossiers for new ingredients, replacing work previously outsourced
  o Global Pharmaceutical Operations is employing students for trend monitoring of product release testing and stability data
  o Employs primarily Nutritional Sciences PhD students
ADM BIOENERGY MODELING CENTER

- ADM’s Research Park center employs chemical engineering, agricultural sciences, and chemical engineering students.
- Students at the ADM facility in Research Park perform computational work, conceptual engineering, and modeling.
- Students model the use of glycerin to be made into glycol.
  - Glycerin: a by-product of bio-diesel
  - Glycol: a specialty chemical with high margins
- Students evaluate the feasibility of manufacturing specialty chemicals, such as those proposed by ADM customers.
- The ADM center in Research Park is used on a part-time basis for some ADM employees that work in the feed, IT, and fermentation groups.
- ADM has published papers with students working in the center to provide validation and exposure to ADM technology.
  - Example: Chemical Engineering student worked for ADM to review and model the most relevant open source cases in literature for second generation biofuels production. He evaluated the differences in operating conditions and performance that can be obtained when employing real feed compositions after using in-house data. His work helped determine the most relevant design features for a large scale reactor at an early stage of development.
Bytemobile is a leader in optimized Internet protocol (IP) services for mobile data networks. Bytemobile’s network services and optimization solutions unify, simplify, and accelerate the deployment of advanced wireless data services to mobile handsets, laptops, and PDAs.

- Their clients include 130 mobile network operators in 60 countries — serving more than a billion total subscribers.
- Bytemobile was first to market with commercial video optimization solutions that address the largest contributing factor to the “mobile data tsunami.” Now they lead the global mobile video market with more than 30 deployments worldwide.
- Raised over $50 Million in VC funding from Benchmark Capital, UI Prof was founder

- Acquired by Citrix in 2012 for $438 million
- Founded by ECE professor Constantine Polychronopoulos in 2000
Riverbed (NASDAQ: RVBD), is an IT company specializing in networking, applications, and storage. It provides the only comprehensive WAN optimization solutions for problems which prevent enterprises from sharing applications and data across wide-area networks around the world.

- Founded: 2002
- World Headquarters: San Francisco, California
- Revenues: $728.5 M (2011)
- Customers: More than 19,000 (1,005 of Forbes Global 2000)

- Opened a Research Park office in Champaign primarily for QA software engineers, doubled the size of the staff from 20 to 40 employees
  - Supplement full time staff with student interns
  - Full time workforce is reported by Riverbed to be 50% the cost of California locations
  - Added a software engineering team to work on new product development
Raytheon

• Raytheon Trusted Computer Solutions is part of Raytheon’s Intelligence and Information Systems business.
• Trusted Computer Solutions became part of Raytheon in November 2010 to support the Company’s objective of delivering world class, end-to-end cyber security solutions.
• Provides software and services that enable government agencies and high risk industries the ability to share and access information securely across multiple networks (including the most sensitive and classified networks).
• Linux development team is located in Champaign in the Research Park
  – Enterprise class systems and network security expertise
  – Recruit full time software engineers from the University of Illinois College of Engineering
  – Primary team in Champaign has links to Argus Systems Group, a local startup company that was based on IT security
  – Team has expanded since the Raytheon acquisition
LITTELFUSE

• Littelfuse is a multinational electronics manufacturing company based in Chicago, IL. Littelfuse provides circuit protection products to companies in the areas of over-voltage, over-current and integrated technologies in the automotive, electronics, electrical and silicon segments.

• The Littelfuse building is a 14,500 SF custom facility. Littelfuse is the sole occupant of the new building, which has a high-power lab and research staff for the POWR-GARD™ Products Division.
  • The lab test circuits for customers and employ electrical engineers
  • Littelfuse is also working on research with the UIUC Department of Materials Science

• Littelfuse opened in March 2010 and it is staffed with 20 full-time employees and 3 students

• The new Littelfuse “tech center is where theory and practice intersect” it is a “conduit for new solutions for emerging technology,” said Dal Ferbert, Vice President, General Manager - Electrical Business Unit of Littelfuse Inc.
ICYT, A SONY GROUP COMPANY

- Sony announced acquired iCyt in 2010
- iCyt is an example of how technology moves from the laboratory to the marketplace
- iCyt Mission Technology manufactures the Reflection cell sorting instrument, a sophisticated droplet cell sorting instrument using Highly Automated Parallel Sorting (HAPS) modules; now being used by major research institutions and hospitals.
- The new Eclipse instrument is an affordable solution for most flow cytometry, cell counting, and particle sizing applications.
- Customers include: Monsanto, St. Jude’s Children’s Research Hospital, Yale, Washington University School of Medicine, UNC Chapel Hill, etc...
Startup Examples at The Research Park
PERSONIFY INC.

- Personify is based on technology from the University, which was developed by Electrical and Computer Engineering faculty Sanjay Patel and Minh Do.
  - Sanjay Patel previously on the management team of AGEIA Technologies, a startup that was acquired in 2008 by Nvidia.
- Personify (previously Nuvixa) is revolutionizing the way people communicate with video for:
  - on-line meetings
  - video calling
  - desktop telepresence
- Radically improving video experience through an immersive, compelling, and intuitive video technology.
- Personify makes use of new sensor technologies (such as the Microsoft Kinect), to create new video experiences
- $4.15 Million in funding
MulticoreWare Inc is a Software and Systems Integration solutions company which provides heterogeneous multicore (h-multicore solutions) for high performance computing applications using multicore and many core processors.

Multicore computing offers performance-hungry application domains the potential of tremendous speedups by taking advantage of parallelism.

- Using advanced multi-core architectures from Intel and AMD, their clients have scaled their single-threaded applications to running on hundreds of multi-core nodes in a data center.
- Using advanced GPU architectures from Nvidia, their clients have observed speedups of over 100x even when running on a single node.

UI Professor Wen-mei Hwu, is CTO. He is an expert in compiler design, computer architecture, and parallel processing.
ADRENALINE MOBILITY

• Adrenaline is building mobile web browsers and operating systems
  • Adrenaline Web Browser for smartphones is able to increase the efficiency of mobile hardware
    – Easier user interface for navigating between webpages, tabs
    – Adrenaline makes sharing easier. No switching between other social networks and the site you are viewing. Highlighting feature lets you share just parts of a web page.
    – Loads websites faster and provides quick navigation bar
    – More screen space during browsing
  • Operating system has mathematical security proofs, which offer security features that surpass all other similar commercial operating systems.
XERION ADVANCED BATTERY CORP.

• Xerion is developing advanced battery cells for use in military and consumer electronic applications that increase the speed of charging.

• The technology has been developed by Prof. Paul Braun in the UI Materials Science department, which is a new architecture for battery electrodes, enabling extremely rapid charge and discharge of batteries.
  – The new company is being lead by Xerion executives along with Dr. Braun as Chief Scientific Advisor.

• StructurePore technology gives batteries greater electrical capacity than is currently available, plus ultrafast charging capabilities. Xerion has an exclusive license for the technology from the University of Illinois.
GLUCOSENTIENT

• Founded by Professor Yi Lu, Chemistry Department, GlucoSentient detects (drug molecules, contaminates, adulterants, etc) using personal glucose meters.

• Glucosentient has developed a powerful technology that is transforming the PGM into a device that is capable of quantitatively and conveniently detecting other non-glucose targets.
  – This is made possible by their patent pending technology that translates the amount of non-glucose target to glucose.

• NSF I-Corps participant

• Convertible equity financing from Serra Capital and IllinoisVentures

• Winner of Cozad New Venture competition personalized healthcare prize from Burrill and Company
THE HDF GROUP

• THG is a not for profit corporation spin-out of NCSA, which now has 35+ employees. They make data storage technology using open source software that is being used by large government agencies and large Fortune 100 corporations including Boeing.

• The purpose of The HDF Group is to ensure the sustainable development of hierarchal data format (HDF) technologies, developed at the University of Illinois, and the ongoing accessibility of HDF-stored data. This is important because of the government and public organizations that have mission-critical systems relying on HDF technologies.

• The HDF Group is lessening the burdens of its government users and advancing science in research communities by developing, maintaining and servicing technologies that:
  – Reduce the costs of maintaining mission-critical archival data;
  – Enhance the reliability of archived data;
  – Enhance interaction and cross-fertilization across research disciplines;
  – Promote the use of standardized data formats.
  – Ensure uniform access to data, regardless of resources or ability-to-pay.
PRAIRIEFIRE CONSULTING

- Prairiefire Consulting assists companies in designing products that perform correctly and consistently, despite variation within the internal components.

- **Sensitivity-Based Design**
  - Minimize scrap, rework, and fit-up problems by quantitatively understanding and controlling risk before and during production.
  - Guarantee performance and sustainably reduce warranty costs.
  - Understand design concept quality during the selection stage.
  - Capture functional requirements clearly and accurately. Tolerances are correlated to physical requirements.
  - Prevent the scramble to control warranty problems. Spend your time on engineering instead of reactionary firefighting.

- **Training courses and intern management for other firms**
Starfire Industries specializes in innovative plasma engineering across a range of markets, including aerospace/defense, nuclear/homeland security and manufacturing/semiconductors

- Bridge the gap from the applied research stage to industrial prototype stage suitable for beta-level commercial insertion and field testing.
- Plasma-based neutron generation for on-line materials analysis, NDE/NDT and homeland security.
- Damage-free plasma sources for semiconductor processing and thin-film materials treatment.
- Revenue: +20% revenue growth from last year
  - Split: 40% commercial, 60% federal in 2009
  - Corporate Partnerships include: GE, Thermo Scientific, Aerojet, SAIC, Novellus, Sematech, Intel
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