

**Entrepreneurial Faculty Working Group:
Comment and Recommendation Paper (Spring 2010)
Entrepreneurial Cultural and Intellectual Property Policy Issues at Cornell University**

Summary:

In this paper the Entrepreneurial Faculty Working Group (EFWG), an informal group of Cornell faculty, identifies an urgent need for action in order to improve Cornell's support of entrepreneurial activities. This assessment is based on (i) Cornell's special and relatively strong position within a weak Upstate New York economy, (ii) associated faculty hiring and retention issues, (iii) the global shift in science and engineering landscapes from large, industrial R&D centers to academia as essential drivers of innovation and the associated modified metrics for the ranking of top universities and (iv) a growing student body that is interested to learn about and engage in entrepreneurial activities. An introduction and statement of need follows this summary and then the EFWG identifies existing cultural and intellectual property policy issues associated with entrepreneurial activities at Cornell. This paper ends with a list of recommendations, which the EFWG hopes will result in discussion and positive action.

Introduction:

The EFWG is an informal group of faculty at Cornell who are specifically interested in being involved in the commercialization of their "Cornell-developed" technologies. Thus, members of this faculty group might want to start a company to commercialize such technology or, alternatively, formally advise a startup commercializing such technology. Such faculty are interested in addressing licensing issues, building a team and making startups prosper.

The EFWG has over the past two years discussed various issues and concerns related to faculty startup creation at Cornell. This paper articulates the resulting conclusions in the form of comment and recommendations.

Increasing the economic impact of Federal investment in university R&D is an important stated priority and goal of many key high level constituents, including the National Economic Council in the White House and key research funding agencies, such as the NSF and NIH (with many of the government funding agencies requiring the research to be translational and transformational). The EFWG would like to contribute to an environment and policies that would support this laudable goal at Cornell.

The EFWG has presented below its thoughts on how Cornell University can best position itself to be a part of the overall initiative of increasing the movement of R&D to commercialization and the resulting goal of increasing economic impact of that process on the Upstate NY and national economies. We welcome further dialog with any interested parties. The Entrepreneurship@Cornell and Entrepreneurship@Johnson program offices have helped facilitate the EFWG efforts.

Why there is a Need for Action at Cornell: Our Culture of Commercialization Needs Attention and Improvement:

We consider it important to position Cornell as an exemplary and leading institution of technology transfer and startup creation, and we are keen to participate in this effort.

Strengthening the transfer of knowledge from the University to the world requires champions.

We believe that the best champions are faculty, post-docs, and grad students involved in the research and knowledge creation. Furthermore, undergraduates in increasing numbers voice interest and are getting involved in research and entrepreneurship. Thus, University policies and culture should encourage, not discourage, such champions. University administration should advocate for such champions and Trustees should also be involved, informed and consulted on these issues on a regular basis.

The following numbered points expand on our views as to the importance of commercialization. In our view, effective technology commercialization and the resulting startups:

1. Enhance our intellectual environment. The intellectually vibrant community created by startups helps to stimulate intellectual discussion at the University.
2. Are essential to remaining a top-ranked institution. Our students (grad and undergrad) are demanding entrepreneurship and “company start” opportunities. We believe that our University and its units will only remain top-ranked if a vibrant startup culture is created and sustained.
3. Create visibility for the University. Commercialization activity creates a spotlight that attracts additional research dollars and leads to two types of collaboration: 1) among different groups within the University (for example, Weill and Ithaca faculty) and 2) among our faculty and faculty/staff at other universities.
4. Helps fill the gap left by the decline of R&D by corporations. University-industry collaboration and startup creation are vital for innovation and economic development in our state and nationally. The Governor’s Task Force on University/Industry Collaboration, headed by President Skorton, produced a thorough report (December 2009) that speaks directly to these points.
5. Contribute to economic development. Successful, entrepreneurial companies, particularly those that remain in the region, lead to a more vibrant economy, including more local jobs and economic activity. There are many studies, the most prevalent by the Kauffman Foundation, that correlate job creation directly to startup abundance.
6. Enhance faculty attraction and retention. Talented faculty members and their trailing spouses find a favorable commercialization environment highly attractive. Ithaca is of course a great place to live, but add to that a vibrant startup community and the level of excitement is multiplied.
7. Lead to employment for our students. A positive environment for startups benefits our students (PhD, grads, undergrads) directly by providing a local job base. This may be particularly true for international students. A growing startup community helps alleviate “brain drain” by keeping a core number of graduates local.
8. Are aligned with the shift in federal agencies’ policy. NIH, NSF, USDA and other agencies are requiring grant applicants to show their research is both innovative and translational; one way of demonstrating these aspects is commercialization.

9. Are aligned with the shift in research and development to universities. Corporations are shifting to university research for two primary reasons, namely (i) impact of nationally or internationally recognized opinion leaders at universities and (ii) faculty member advisory roles in product development and enhancements.
10. Generate research support and revenues. Translation of basic scientific discoveries into commercial applications can make extramural funding mechanisms aimed at the commercial sector (e.g. STTR, SBIR) available to faculty and their research. Technology transfer can also lead to returns to the University (and the research groups) from royalty payments and equity positions.

Cultural and Intellectual Property Issues:

We have spent considerable effort discussing why our University's tech transfer and startup creation systems don't function, in our view, at full potential. Importantly, we have identified both cultural and intellectual property policy issues that we think the University administration should welcome addressing.

A. Cultural Issues:

1. Unfortunately, there often appears to be a hostile (or not so welcoming) environment for faculty inventor-entrepreneurs. We are thankful and aware that at the highest level of University administration there is a stated goal of encouraging commercialization. Yet, based on our experiences, this goal is seriously undermined by the discouraging environment and culture of distrust that faculty inventors and entrepreneurs face. Often (and unfortunately), inventor-faculty are tolerated at best and at worst are treated with an air of nuanced suspicion. To advance the stated goal of encouraging commercialization, faculty inventors need instead to be respected across the University spectrum.
2. Unclear messages, unclear policies and inconsistent application of policies are of significant concern. There appears to be considerable variability in the ways that conflict of interest policies are enforced from college to college and sometimes from department to department within a college. We concluded that this variability and unpredictability of the process creates risks and difficulties for all. For example, recent conflict of interest/commitment issues faced by faculty inventors are very discouraging. On paper, our policies may emulate our best peer institutions (such as Stanford). Yet, the "tone" of the policy implementation is radically different from other "startup-successful" institutions. In general faculty feel they are operating in a mine field, uncertain about what hidden issues will appear. The tone of the policy implementation is chilling for all and of particular concern to non-tenured faculty who receive a direct or implied message that commercialization activity will taint their careers. We are concerned that emerging University policies will further undermine the possibility of faculty involvement with startups.
3. We should emulate the "we do what it takes to get it done" attitude in emerging successful commercialization programs. The tone/attitude from the "top" needs to create an "entrepreneur-friendly" environment and filter down. We need a startup champion at a senior level (for example, a VP of Entrepreneurship).
4. University tends to be reactive (and not proactive). In terms of setting a "tone" and climate of supporting faculty startups, we need a coherent strategy to address the conflict of interest issues that always arise. The current default seems to be to simply ban faculty

involvement, which indeed addresses the conflicts issue, but with tremendous lost opportunity. It would be instead be helpful to implement policies that consistently support startup creation.

5. Faculty promotion process does not value commercialization. Little (or even negative) value is given to patents or external startup efforts in promotion and tenure process. Instead, we feel that positive value should be given to these efforts.
6. Conditions disfavor inventor-involved startups as opposed to outside licensing. Faculty inventors are highly motivated to see the results of their creativity impact society through commercialization. This motivation and energy can be harnessed to increase the chance of success of startup companies. It is our belief that the long term economic value of startup creation will, in aggregate, outweigh straight licensing to existing companies. Inventors should be encouraged rather than discouraged from becoming involved in startup activity. Some of the IP policy issues described in Section B address this point.

B. Intellectual Property Policy Issues:

1. CCTEC's Mission. Generally speaking, CCTEC has been handling IP ownership issues quite well. However, faculty member need a clearer understanding of CCTEC's mission and how its policies are implemented. What are CCTEC's metrics of success (for example, job creation, revenue generation, company starts, etc.)? Knowing this would better manage faculty entrepreneur expectations.
2. Licensing should allow the startup to preserve cash. It would be beneficial if startups were able to preserve cash. Thus, reducing upfront costs would be ideal. CCTEC actually does some of this already (like sometimes deferring patent cost reimbursement), but it does not appear to be standard practice.
3. Licensing process takes a long time. Markets move fast, and delays in tech transfer lead to lost opportunities.
4. Licensing terms are mysterious and there appears to be a bias against faculty-involved startups . There could be standard bench-mark terms for faculty-involved startups, with possible versions for different types of companies. This would manage expectations and streamline the negotiation process. There is a perceived recent change toward a bias against faculty-involved startups and a lack of flexibility that hinders startup creation.
5. "Reach through" creates a disincentive for companies to work with Cornell faculty. This is perhaps one of the most difficult and sensitive areas. CCTEC often tries to reach through and own IP generated by the startup simply because a faculty member is involved; rather, a more startup friendly mindset would be to default to company ownership unless the faculty is clearly inventing on "Cornell time". It would be beneficial if new "Cornell" technology created jointly by the startup and faculty member after the initial technology is licensed from CCTEC fell under that existing license (subject to recognition of additional inventors, if applicable). This would resolve the "who owns what" issue and give the company freedom to operate and raise funds going forward. Likewise, startups need assurance that new "non-Cornell" technology (i.e., new IP generated by the startup with faculty member input wearing his/her startup hat) does not fall under Cornell's ownership. In many cases this will lead to some return to the University instead of no return, and the University would therefore benefit considerably in the long term if this were the case.

6. Consulting time. A related issue occurs when faculty consult on their allotted consulting time. Who owns the ideas that the faculty member creates for the company for which he/she is consulting? If an idea stems from external consulting, then Cornell should have no claim and the faculty member should be able to assign the idea to company clients. We realize that gray areas exist here, but faculty should be encouraged to consult and client companies should not feel reluctant to hire them because of IP issues.

Recommendations Offered:

Based on the above enumerated issues and ongoing discussions, which are not intended to be exhaustive, we offer possible recommendations for debate and perhaps adoption. Please note that some recommendations are stated above in the discussion of the issues. The items below are in addition to those.

A. Cultural Recommendations:

1. Support potential inventors/entrepreneurs. Create an advisory committee that can help inventors navigate the waters, especially at the beginning of the process. Committee members would be able to meet with faculty entrepreneurs to tell the steps of pursuing a startup. Even a “startup committee” to handle conflicts would be beneficial provided that such committee valued the benefit to the University that startup creation bestows. For example, a startup committee could adequately address conflicts such as the faculty member (in his/her faculty capacity) receiving research funding from a startup that he/she helped launch.
2. Create separate policies for Cornell Weill. The business and academic cultures are very different at the two campuses and policies and practices should be tailored to the different environments. It appears that events at the Medical School have led to some actions not appropriate for the Ithaca campus.
3. Evaluate conflict, measure faculty performance of duties. As long as faculty are fulfilling their duties to their respective University departments, then they should have maximum flexibility in working with startups in the way that is appropriate for the nature of the company (for example, being CSO of the startup). Duties to Cornell are paramount, but ability to work with startups should be a “default” yes. Again, a “startup committee” may have a role in this regard.
4. Include inventor-faculty in the discussion. Entrepreneurial faculty should be on the decision-making body that reviews conflicts of interest and conflicts of interest policies.
5. Acknowledge the financial realities of a startup. The standard CCTEC model should be “back loaded” for startups. This would stimulate company starts.
6. IP and conflicts of interest policies. There is deep concern with the new IP and conflicts of interest forms (some faculty have already signed). The policies are perceived to be overbearing and overreaching and a step backward from a startup cultural view point. Will the new conflict of interest and IP policies enter a draft phase for public comment? The University should seek broader faculty input and debate prior to adoption. The benefits to the University of having faculty involved with startups (recruiting, jobs for grads, prosperity, etc.) outweigh the potential conflicts, which can be appropriately managed.
7. Consider if the Vice Provost for Research is the appropriate office to oversee and promote commercialization activity. Discussions have included consideration of a VP for

Entrepreneurship to oversee the University's overall startup commercialization support/efforts.

B. IP Policy Recommendations:

1. Isolate the building of businesses from functional tech transfer. This could be achieved by formalizing the 2 existing roles of CCTEC, namely tech transfer and economic development. The tech transfer side should hopefully understand the economic development benefits that startups bring.
2. Treat IP more fairly as a scholarly output. Treat IP for inventions in a manner similar to the way books, publications, consulting, and other forms of extending knowledge are treated.
3. CCTEC-inventor relations should be less adversarial. The CCTEC mission should include assisting and advising faculty entrepreneur inventors. For example, don't exclude faculty inventors who want to deal directly with CCTEC on commercialization (including licensing) and company development. We would like to note that this recommendation is not intended to impugn any CCTEC staff, many of whom have been very pleasant and professional in their dealings with us.
4. CCTEC licensing bias should be in favor of the faculty inventor. It would be ideal to have a simplified licensing process in order to reach a deal quickly. For example, CCTEC can accelerate the deals and still be easily protected by having the license revert if no commercialization is happening within a certain time period.
5. Realign tech transfer incentives. CCTEC's metrics of success should feature "number of startups, local jobs, etc." prominently and value the long term payoffs.

Thanks for your consideration and we look forward to additional dialog on this and related subject matter.

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The following members of the EFWG (in alphabetical order) have endorsed this Comment and Recommendation Paper:

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