I2P SLU Competition Guidelines
2013-2014 Academic Year

Application & Two page Submission - Due 9/26/13
Five Page Submission - Due 10/25/13
SLU Competition Held November 8-9, 2013

Idea To Product® is a unique academic competition looking at ideas at their earliest stage. I2P only requires a 1-2 page submission (an example is included below), done according to a strict format, outlining an idea for a product or service and its market. This approach makes it possible for people across the campus to develop and present ideas, obtain feedback, and start the process of invention commercialization and venture creation.

Submissions (due on or before Thursday, September 26, 2013) are screened, and the teams with the best proposals are invited to expand their submissions (5 pages in total) which are due on or before October 25, 2013. Presentations are made to a blue-ribbon panel on November 8-9, 2013, where teams receive feedback on their idea, and winning ideas are selected.

Although winners receive cash prizes, the greater benefit is the opportunity for participants to receive substantial feedback on their early stage ideas. I2P offers the larger technology and financial communities the opportunity to get an early view of new ideas, thereby jump-starting the development process.

I2P is open to all graduate and undergraduate students, and multidisciplinary teams are encouraged. I2P is an international competition, with branches in Asia and Europe as well as several campuses in the United States. The program is based at the University of Texas at Austin.

Saint Louis University will hold the Regional Competition on April 4-5, 2014 for the states of Missouri and Illinois and KEEN participants. One or more winners of the regional competition may be invited to the 2014 Global I2P Competition.

Each university and college in the bi-state region is entitled to submit a total of five ideas for screening. For the latest information on the Missouri-Illinois I2P, check the I2P link at SLU’s entrepreneurship education site - eWeb, http://eweb.slu.edu.

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I2P ROUND ONE SUBMISSION GUIDELINES

All teams will submit a two-page (10 point or larger type, one-inch margins – like this page) summary answering the following 9 questions about their technology, product or service. An example is included at the end of this packet.

1. What is your product or service?
2. What is the technology that underlies your product/service?
3. How is your underlying technology unique?
4. Is your product or service innovative? How?
5. How would you define the best initial set of customers? (Who will buy it?)
6. What marketplace need does your product or service address better than any other option? (Why will they buy it?)
7. Describe how you create value for your customers.
8. What is the market and its size?
9. How do you anticipate developing IP protection/strategy for your technology?

Round One Submissions will not be considered if:
- The submission is over two pages.
- The student or team describes in detail how their technology works instead of explaining what it does and how it fulfills customers’ needs. Do not tell us any technical details on how it works. [Part of the reason to not tell us how it works is to preserve your patent rights. Publicly telling how it works may limit your ability to patent it later.]
- Although winners receive cash prizes, the greater benefit is the opportunity for participants to receive substantial feedback on their early stage ideas. I2P offers the larger technology and financial communities the opportunity to get an early view of new ideas, thereby jump-starting the development process. To assure that only early stage ideas are competing at I2P, ideas submitted to I2P cannot have been previously submitted to, presented at, or currently under consideration at a business plan competition.

I2P SEMI-FINAL PRESENTATION GUIDELINES

Once an idea is accepted to present at the Semi-finals, students expand their idea from a two-page to a five-page submission. A Powerpoint presentation is developed and should be 10 minutes in length.

I2P Questions for Ideas: Address the following questions regarding your technology idea in five pages or less.
- What is the envisioned product/service and what does it do? (Emphasize benefits to targeted customers.)
- How is the envisioned product/service unique and/or innovative?
- Who are the first customers that you have targeted for the product/service and what are they like?
- What pain (real and strong customer need(s)) does the product/service address?
- What is the estimated total size (market potential) of the initial customer group (market segment)? Will this market segment be adequate to support the business associated with the product/service idea?
- What is the underlying technology for the envisioned product/service idea?
- How is the technology unique and/or innovative? How have you contributed to the innovation?
- What is the likely intellectual Property (IP) protection for the product/service idea?
- Who owns the current IP associated with your product/service idea?
- What is the current state of the technology? What are the steps needed to get to a prototype? How much will this cost?
- If this is an early stage idea, what assurances can you offer that it is feasible to create the product/service being proposed?
- Is there a clear window of opportunity for the product/service idea?
- What are the barriers to entry associated with this market?
- What is the competitive advantage of the product/service idea?

Semi-final and Final Presentation Guidelines: In the semi-final and final rounds, the teams present a ten-minute presentation, followed by 10-15 minutes of questions from the judging panel. The presentations expand on the information provided in the written submissions. The teams are asked to address the current state of the technology and the feasibility of developing it for the suggested application, potential market barriers, competitive advantage, and whether there is a window of opportunity in the market for success of the idea.
**I2P Presentation Pointers:** The opening of the presentation should capture the audience’s attention and clearly convey the opportunity underlying the product or service idea while previewing the presentation for the listeners. Visuals should be simple, clear, and effective with good use of tables and charts. The presentation should be delivered with enthusiasm, confidence, and focus and should be closed strongly. Lastly, the question and answer session is important. The team should attempt to clearly address the evaluation panel’s questions in a concise and information manner.

**I2P® SUBMISSION ADVICE**
*(Adapted from Entrepreneurial Small Business, published by McGraw-Hill)*

1. **What is your product or idea?** This is a nontechnical description of the concept simple enough for everyone to understand.

2. **What is the technology that underlies your product/idea?** This is where you describe the concept *in a general sort of way* using the appropriate technical, scientific, or professional jargon. **Do NOT tell about anything you consider proprietary, doing so may prevent you from patenting your product or service, and get your proposal rejected.**

3. **Is your underlying technology unique?** This is where you explain how the technology you are using is different from other approaches to the problem. Note that not all technologies solving problems are unique. Think of the different forms of MP3 players. They may be different, but one may not be unique. When you can claim a unique approach, you have a better chance of getting intellectual property protection for it, like a patent.

4. **Is your product or idea innovative?** This is where you explain how your technological approach is better than other approaches. Why might a cell phone that can play music MP3s be a better approach than a dedicated MP3 player?

5. **How would you define the best initial set of customers? (Who will buy it?)** This question looks at the specific individuals, groups, or organizations you would approach first to buy your product or service.

6. **What marketplace need does your product or service address better than any other option? (Why will they buy it?)** The question in parentheses might better be phrased “Why would they buy yours?” Ideally if there are competing products or services, you want to explain why the customer would buy your product or service instead of the competition’s.

7. **Describe how you create value for your customers.** Good products or services meet the customer’s basic need. Great products or services create additional value for a customer, helping them get more out of work or life, or making life easier, or helping them meet other goals (e.g. saving money, living greener, help others). For example, the value of a cell phone is far greater than a landline phone. It permits mobility, access to the Internet, taking photos, and even keeping your contact list. All of those add value over the use of the phone to call and receive calls.

8. **What is the market and its size?** This looks like the simplest question but is actually the hardest one. “Everyone” is not acceptable as an answer. While precise numbers are not expected, you need to have some idea if we are talking about a market of hundreds, thousands or millions. Where there are competing products, you can get an idea of the market size. For new products or services, you have to look at the type of customer and then look for demographic, census, or marketing information which can give you a sense of the size of a market.

9. **How do you anticipate developing IP protection for your technology?** This question asks you to think of your strategy for protecting your idea from competitors. Examples include patents, trademarks, or trade secrets, licensing, and strategic partnerships or distribution agreements.
I2P® EXAMPLE SUBMISSION
(Adapted from a 2003 I2P® UT-Austin entry)

Silicon Carbide Evolution
What is your product or idea? Silicon carbide is one of the world's hardest and most chemically resistant substances. In fact, silicon carbide is used to cut and grind the toughest steels. Unfortunately this also makes it extremely difficult to manufacture or mold into component parts. These factors have limited silicon carbide’s acceptance to high cost structure, high precision production processes. Silicon Carbide Evolution has a novel technology to rapidly manufacture silicon carbide parts.

What is the technology that underlies your product/idea? Silicon Carbide Evolution's manufacturing process occurs in three basic processing stages. A 3-dimensional direct printing of the finished product shape (left) allows virtually unlimited design freedom as well as limiting setup and transition times. Following this, a furnace operation (right) allows for the synthesis of the silicon carbide composite material. Finally, critical dimensions or special surface finishes are machined into the part. The total build cycle for a single part, including setups and finishing, requires less than three days.

Is your underlying technology unique? Competing silicon carbide manufacturing processes require longer process times and more extensive operations. Quartz, the competing product for silicon carbide in the semiconductor fabrication (fab) industry, often requires unique fixtures for each product and complex build operations. Additionally, all current manufacturers of silicon carbide and quartz products are limited to a small set of possible product shapes. Silicon Carbide Evolution's process is not.

Is your product or idea innovative? Silicon Carbide Evolution's launch strategy relies upon the ability of our technology to provide a superior manufacturing service to our customers. By uniting a patented 3-dimensional direct manufacturing operation with a novel material processing method, we can support the design and validation of new products with a speed and ease not yet seen in the industry.

How would you define the best initial set of customers? (Who will buy it?) Silicon carbide's characteristics of high stability, excellent temperature tolerance, and good chemical resistance have many applications within the semiconductor, chemical processing, and automotive industries. Semiconductor "fabs", in particular, utilize high temperature furnaces and a formidable array of processing chemicals. Very specialized fixtures for wafer handling must meet exacting specifications while eliminating almost every other material. The silicon base in silicon carbide alleviates many of these concerns with silicon wafers. Other industries, such as petroleum and chemical production, pollution control, and automotive industries all have problematic applications for which silicon carbide would be ideal.

What marketplace need does your product or service address better than any other option? (Why will they buy it?) The vast majority of semiconductor capital equipment purchases during 2002 were driven by the desire to upgrade technology, not to increase production capacity [Reed Electronics Group]. Our manufacturing technology not only provides superior products but also has many significant advantages over the competition. Our "just-in-time" supply to customers allows semiconductor equipment manufacturers to significantly reduce inventory. In addition to the speed at which we can manufacture products, Silicon Carbide Evolution requires only a CAD file from the customer for our process to immediately adjust production. Superior material qualities, flexibility in design, and speed of delivery contribute to make our product superior to existing processes.
Describe how you create value for your customers. Designs which could never before be made using silicon carbide can be fabricated using our unique process. Our process also produces designs (even conventional ones) much faster than competing processes. Our process makes design and fabrication of silicon carbide based products easier for the end user.

What is the size of the market? The semiconductor capital equipment industry had total sales of $28.1 billion dollars in 2001. Wafer fabrication accounted for almost 75% of this. The wafer manufacturing equipment segment is fairly consolidated, with ten companies holding more than 70% share. Focusing purely on the initial launch market of quartz replacement represents $147 million annually. From this point, Silicon Carbide Evolution can expand into additional material applications.

How do you anticipate developing IP protection for your technology? The University of Texas at Austin has a patent application pending with international options on the manufacturing process. Furthermore, the intellectual property position of the process is greatly enhanced by The University's ownership of a large portfolio of patents protecting the underlying processes from which the silicon carbide manufacturing technology was developed.

[Note to I2P Submitters: You can use photos, drawings or graphics in your submission, but you are not required to do so. Note also that this submission reflects the nine-questions, two-page, ten-point-type, one-inch margin standard you need to follow.]