

First Sponsor Interview

Interviewers: Andrew Sullivan, Sarah Brownell, Gerald Garavuso

Sponsor: Bob Bechtold, Kate Pilletteri

Date: December 20th 2010, Harbec Conference Room

Interviewer: Hi, my name is Andrew Sullivan and I am here representing the RIT senior design Team that will be working on the Better Water Maker. (Sarah and Gerry Introduce themselves)

Would you please introduce yourself as well?

Sponsor: My name is Bob Bechtold. I am the CEO of Harbec industries and the president of the nonprofit organization b9 Plastics. This is my associate Kate (she introduced herself).

Interviewer: Question 1: What are you looking to accomplish?

Sponsor: Response 1: We would like to make a manual powered device that is better and cheaper than the current model. Any new ideas such as a merry-go-round or scooter that could capture the infinite energy of children would be a great accomplishment.

Interviewer: Question 2: What is the Cost?

Sponsor: Response 2: The cost would ideally be \$50/unit in a 1000 unit lot for the power generator.

Interviewer: Question 3: What UV bulb is currently being used?

Sponsor: Response 3: Currently the GE bulb G15T8 is being used which is a universal bulb and overall the cheapest.

Interviewer: Question 4: What kind of bulb cover are you using, Quartz or Teflon?

Sponsor: Response 4: Quartz because its cheaper.

Interviewer: Question 5: Is this a patent pending system?

Sponsor: Response 5: No, its an open source.

Interviewer: Question 6: What kind of adaptor is used to connect the power to the bulb?

Sponsor: Response 6: A 12V adaptor is used because its used worldwide and is the cheapest.

Interviewer: Question 7: How many watts are required to run the system?

Sponsor: Response 7: 17 watts are needed to run the pump and bulb.

Interviewer: Question 8: Can the current hand crank produce more than that?

Sponsor: Response 8: Yes but not by much and all extra power created is lost as there is no power storage device associated with this system.

Interviewer: Question 9: What are some cultural limitations we should be aware of when designing this device?

Sponsor: Response 9: Women in African countries are not allowed to have things between their legs, such as a bicycle. Since the primary user of this device will be women and children, it would be wise to build with them in mind.

Interviewer: Question 10: What is the major issue with the current system?

Sponsor: Response 10: The current system requires too much energy to maintain for long periods of time. Hopefully by making an easier manual power generator, the user could clean water for much longer periods, thus providing more overall clean water.

Interviewer: Question 11: How does the current system clean the water?

Sponsor: Response 11: The current manual system must be turned so it is generating 17watts (required to power the UV bulb) for 20 seconds. When a person is at 17watts of power a green light is on. After 20 secs water begins to flow at .5 gallons per minute and the 17watts must be maintained throughout this process. If at any point the green light goes off, the water flow is stopped and the user must do the preliminary 20 startup before water will start flowing. This process can be very tiring over time, especially when the hand crank is fairly difficult to turn for the average women/child.

Interviewer: Question 12: Do you have any ideas how to fix that problem?

Sponsor: Response 12: Currently we have used an adaptor that allows two hand cranks to be connected together and the 2 users work together to achieve the 17 watts, this would greatly reduce the strain on an individual user as well as make the process a social event.

Interviewer: Question 13: Has there been any issues with theft of the system?

Sponsor: Response 13: Yes, it there was a way to reduce this, that would be great. Also this system lifespan water production versus its cost to buy makes the water cost on average .004 cents/gallon. This would be a great business venture for a local person who could sell the water to pay off the system and then use it as a business. This could also reduce theft.

Interviewer: Question 14: How can we contact you in the future?

Sponsor: Response 14: You can set up a meeting with my associate Kate. I would be interested in hearing you final proposals when you get to that point so please keep in touch.