

## Progress Report #1

Our progress on the invention has been culminating since we sent in our grant proposal. We began our work if we had already received the acceptance. We started a course in Microprocessor construction and machine code and we are still working on this subject to enhance our knowledge. We expect this to play a vital role in the outcome to our invention. Our class has been using BASIC-Stamps to learn the code that will be used later on in our invention. In this process we found that a BASIC-Stamp has more than enough power to run our sensors and collection unit. It also requires less power than stand-alone single board computers.

In the midst of our studies of Microprocessors, each person in our group wrote a research paper on certain aspects of our invention. These included base-station (for receiving), Tx / Rx, emplacement, data acquisition at the local level (on the unit), power supplies, the affects of polluted water and the indicators of polluted water (from which we chose what sensors would be the most effective in our area). The choice of our sensors at that time was Ph, temperature, heavy metal detectors and turbidity. These choices are still in place at this point. Yet, if there ever arises a situation where one or more of these options must be ruled out in favor of a more important sensor/pollutant indicator, then the better option will be chosen.

Our team was very graciously bestowed with a very active and helpful water quality agency in our area, Althouse and Meade. We have been in contact with A&M for some time, exploring what areas of water quality data collection need, and could possibly be improved. We also came in contact with various individuals who can facilitate our process in manufacturing our invention. Dr. James Hetherington, an alumnus of MIT, has aided us in the design process as well as keeping us focused on our goal. Another information resource of whom we have contacted is LynnDee Althouse a relative of a student on the inventeam. She has given us the much-needed information to grasp a better understanding in the field of water quality.

All of the previously mentioned progress was completed before we got the acceptance letter. Once we received the conformation letter, we proceeded to assign new people to new jobs, such as a Webmaster, Chairman or group leader, and others who would be in charge of the compiling of the reports, such as the progress report, budget report, and the expense report. We also completed the entire "things to do" section of the 2004 Lamelson-MIT Inventeam Notification Packet.

So far we have not spent any money, although we plan to jump right in and get the electronics required for us to prototype our data collection and transmission systems. Once we have completed this, we plan on starting small and then working our way into bigger and far more complex subsystems and data-types.