



Post Fellowship Reporting - Project Summary

Report Title: Switched-On Physics: My Odyssey in the Philippines
Name: Alexander S Graham

Other Team Members:

Program: Greater Houston Area Program
Trip Dates: 11/30/-0001 - 11/30/-0001
Location Visited: Las Pinas Bamboo Organ

Post Fellowship Reporting Template: PFR Template 02

Project Summary: My expedition to Las Pinas to explore the Bamboo Organ and its dynamic and rich heritage exceeded my greatest expectations by far. I arrived in Manila, having never been to Philippines, not quite certain of what to expect. I have vivid memories of the traffic and mad scramble on the highways. I began my journey with a tour of the countryside that took me to Mt. Pinatubo, as I plan to include my studies of volcanoes as a facet of my science focus from the trip, to accompany the engineering aspects. I was completely overwhelmed by the positive reception I received and the generosity and kindness of the locals I encountered. I visited the Chinatown in Manila, several of the beaches and Taal volcano. I learned of Lapu Lapu and his revenge, and I overcame the tremendous anxiety that I had when I heard from the locals, "A typhoon is coming tomorrow." My next leg of the trip took me to Las Pinas, where I was one of three westerners I encountered in the week I was there. I shared my magic with nearly everyone I met, and I made many friends. I visited St. Joseph's Church, where Father Diego Cera completed the famous Bamboo Organ, a national treasure and operational relic and anachronism from another century. I was invited to attend a performance by an all star youth choir from several Asian countries, and this is one of the most impressive and moving experiences of my entire life. I was given several detailed tours of the organ and its mechanics. I was most amazed by the remarkable sounds produced by the bamboo pipes, and I was afforded a far greater respect for the determination and vision of Father Diego Cera and his dream of building a fully functional pipe organ, in spite of his shortage of available materials. He had little metal for pipes, which prompted him to employ centuries-old techniques of bamboo preservation, which entailed his burying the bamboo pipes in the beach sand for a year, thereby giving them resistance to termites. I then toured the organ factory that maintains the organ, and I learned of the technology used to do so. I was able to meet the local physics teacher at the St. Joseph's Academy, and share my mission, vision and magic with her and her colleagues. I plan to exchange culture between our students through the internet. I will return next summer, and, I hope every summer thereafter to the faces and locations I came to love during my all too brief stay. As they say in Las Pinas - Until Tomorrow... Until Tomorrow...

Career Impact: My personal and professional growth took many unexpected turns, and the most important and relevant aspect of what I learned was the humanitarian part of my physics project. I plan to share my experiences and how they so powerfully impacted my thinking and broadened my horizons with as many students, colleagues and members of the community as will listen. My expedition allowed me to make dramatic connections with visionary figures from the past, such as Father Diego Cera, who designed, engineered and built the bamboo organ. I plan to present the project, and I have opportunities to do so during presentations to Texas State science teachers in November at CAST, then again at NSTA next spring. I am sharing my documentation through my project blog site, and I plan to add many features and highlight my students' other projects and achievements on this website. I am invigorated and inspired to expand my projects and teaching to include the things I learned, which include unique engineering and implementation of technology, as well as old Spanish organ construction. I am much edified by my expedition, and I live in a much larger universe than I did when I began my journey.

Classroom/Community Impact: The adventure itself is captivating and romantic, with exotic scenes and locations half a globe away from my students and colleagues. Our project stimulates the creativity and imagination of those who encounter it, and the Las Pinas Organ casts its magic spell by allowing those who participate in the projects to dream and to share the vision of Father Diego Cera. By making them aware of his ideas and extraordinary achievement, we can share a bond with the people of the Philippines and learn to expand our goals and the possibilities that are out there for us to exploit if we dare to do so. Through my classroom presentations and the internet communication we will conduct with the St. Joseph's Academy students and teachers, we will allow students in the Philippines and in the United States to learn about each others worlds, dreams and ideas, and take away the vast geographical distances that separate our two nations. We will raise awareness in engineering, physics, and the transcendent organ music of the past, thereby saving it from its otherwise inevitable decline into obscurity if we do not act for its preservation. The benefits of the project are innumerable and powerful.

Open Response: * Switched-On Physics
* Spin off ancillary physics projects inspired by Las Pinas Expedition

- * Literary contributions to the Physics Teacher Magazine about expedition
- * Will present projects to Texas science teachers in three sessions at CAST in November
- * Will present projects and Fund for Teachers Expedition at National Science Teachers convention in spring
- * Inspired students to create an electric car operated exclusively from alternative energy sources
- * We will build a digital pipe organ for performance
- * We hope to sample the Las Pinas Bamboo Organ for use in our digital pipe organ
- * Scholarship fund to be created for engineering students
- * Our project will raise fund for a team of students, colleagues and sponsors and community members to visit Bamboo Organ Festival in February, 2011
- * We plan to set up internet exchange with Las Pinas students about our projects and our cultures - the differences and similarities
- * We hope to help the Bamboo Organ Foundation to raise \$20,000 for restoration of the Bamboo Organ to keep its beautiful voice alive for future generations to appreciate
- * We intend to share the vision of our projects with as many people as will listen!

Quote: Pioneering the Humanitarian Side of Physics!

Photos:



Bamboo Pipe Organ in all of its majesty



Me playing the Bamboo Organ!



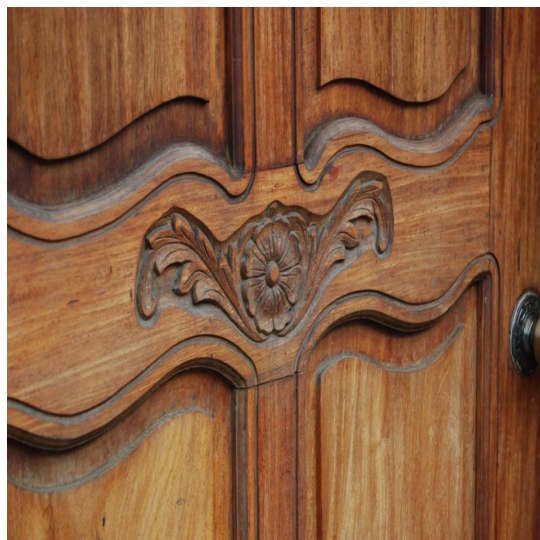
Las Pinas Bamboo Organ Church



The friends I made and the magic I shared touched me deeply!



The ancient construction of the church!



Hand crafted wood work on the door of the organ factory



More intricate wood work on the organ



More beautiful scenes from the church of the Bamboo Organ