

Project EAST: Maui High School Safe Campus Map

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Abstract

EAST is a high school elective class that uses sophisticated technology in service projects designed to improve student's critical thinking and problem solving skills. It is a project-based class that integrates technology into the traditional high school curriculum. EAST students work in teams to solve real-world problems in their schools and communities.

EAST students from Maui High School are creating an interactive GIS map of the campus for their school website utilizing ArcMap and ArcCatalog. This new map will provide key information for students, parents, teachers, and administrators. Students gathered data utilizing the GPS technology to gather point, line, and polygon data for their GIS map. The GIS map will highlight classroom locations, fire/emergency escape routes, bathrooms, safety zones, and all relevant aspects to create a safe campus environment.

The paper will profile this student driven project as a model to be replicated by other schools.

Project MHS

The Maui High School campus encompasses 60 acres and the placement of buildings and portables on the campus cause confusion for students and visitors unfamiliar with Maui High School. In hopes of bringing clarity to this confusion, our 3-member team decided that creating an extensive GIS map of our school utilizing ArcView and highlighting buildings, individual classrooms, and important aspects would be a solution. We gathered point, line, and polygon data with our GPS unit to map such locations. Important aspects that contribute to the overall safety of our campus include fire and emergency escape routes, bathrooms, alarms, extinguishers, lights, payphones, and fire hydrants.

We believe that by creating this map, it will benefit many people. The administration will use it as a basis for safety and technology issues. Having such vital information benefits the administration in furthering their plans to make our school as safe as it could possibly be, especially since our school is a Natural Disaster Shelter. Through ArcView, we entered data to our map so that each individual class is provided with information on the name of the teacher who teaches the class, the subject, number of sinks, fire alarm, extinguishers, and number of computers found in the class.

Collaborating within our three-member team and with other EAST students working on 3D school buildings in SketchUp, we successfully produced a map using the guidelines and skills obtained from the EAST program. With technology as our catalyst in learning and our visions clear in our minds, we worked hard and diligently through the problems to produce a final map. Our biggest challenge came when we were stumped as to how to put this final map on a website linked to our school's homepage. Reading

tutorials, online forums, and searching for outside help, we were able to locate a solution through a group of Professionals. EAST has taught us to search for answers within others and ourselves and really dig deep into our knowledge and build a strong foundation in the ability to be self-directed learners. EAST has not only taught us about amazing programs such as GPS and GIS but has opened our eyes to the things we can learn within our community and our world.

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VANESSA VILORIA: A recent graduate of Maui High School in Kahului, Hawaii, Miss Vanessa Viloría will be continuing her education at the University of Notre Dame in Notre Dame, Indiana where she will study Pre-Medicine and minor in business. Yes, she will be leaving the sunny skies and beautiful beaches to pursue her dreams. In high school, Vanessa was involved with the Environmental and Spatial Technology (EAST) program for four years. This year she has worked with her two team members to complete a mapping project for Maui High School that is entitled "Project MHS."

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MICHELLE MAKII: Miss Michelle Makii is a 2007 graduate of Maui High School in Kahului, Maui. At Maui High School, she took Environmental and Spatial Technology (EAST) for 2 years. Through EAST she was fortunate enough to learn different programs, meet a wide spectrum of individuals and also help her school and community. She was part of a team of three students which created Project MHS. They used GPS and GIS to map their school for the use of the administration, teachers, students and also the community. She was also involved in many clubs and organizations in and out of school including sports. Michelle will be attending Loyola Marymount University in Los Angeles, California in the fall of 2007 where she will major in Business Administration.

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LESLIE WILKINS: Ms. Wilkins is Vice President of the Maui Economic Development Board and is Program Director of its Women Technology Project. An experienced advocate for workplace equity, served as National President of the Business & Professional Women's organization in 2001. Appointed by the Hawaii governor to two terms on the Hawaii State Commission on the Status of Women, she was Commission Chair from 1996 - 2003. Email: leslie@medb.org.

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