



Henry Samueli School of Engineering

Irvine, California 92697

tel: (949) 824-4938

12/19/2013

To: Mr. Leng K. Sy
Eco-Systems Aquarium
34135 Moongate Court
Dana Point, CA 92629

Dear Mr. Sy

This letter is to confirm that, RapidTech, The National Center for Rapid Technologies, part of The Henry Samueli School of Engineering at the University of Irvine, intends to take up your offer for collaboration between our organizations in the development of "next generation" aquaponics, hydroponics and aquaculture technologies for use in STEM educational programs. This effort would involve university student participation in an interdisciplinary R&D program that involving many facets of design, rapid prototyping, mechanical and electrical engineering, biological and agricultural sciences, in the design, building, testing, and analysis of various aquaponic garden and farm system modules.

I was quite impressed with your company's aquaponics exhibit at Maker's Depot during the recent U.S. Department of Energy's Solar Decathlon. Your tropical fish and coral reef aquarium was equally compelling and professionally presented. I found the accompanying educational exhibit about sustainable closed-loop agriculture to be thoughtful and accessible in serving the interests of the diverse audience in attendance during exposition.

I understand that UCI Mechanical Engineering students, as their Senior Project, worked with you and Thomas Grimm, in collaboration with UCI faculty advisors, Dr. Vince McDonell and Dr. Farzad Ahmadkhanlou, in analyzing and designing a new aquaponics system for schools. The research of the engineering students focused on optimizing water circulation, configuration of the fish tank shape, plant growbeds, and growbed media. The ultimate goal of the project was to develop an educational aquaponics system for schools in which the students could gain greater knowledge on organic fruit and vegetable production, freshwater fish aquaculture, in a highly efficient agricultural ecosystem. The project was very well received, and will serve as an ideal model for future collaboration between UCI, Ecosystem Aquarium, Makers Depot, The Orange County Great Park and The City of Irvine.

RapidTech is the National Center for Rapid Technologies, and functions as an integral part of the University of California's School of Engineering in rapid prototyping and workforce training. RapidTech is funded by the National Science Foundation's Advanced Technological Education program and the U.S. Department of Labor. Our experience with business and academia extends to more than 130 companies, 70 colleges and universities and 15 high schools. Working with Ecosystem Aquarium and the Makers Depot fits very well into our core mission of RapidTech and UCI. We look forward to future collaborations with you and your associates.

Should you need additional information, please do not hesitate to contact us at the address above.

Sincerely,

A handwritten signature in black ink, appearing to read "Ed Tackett".

Edward C. Tackett, Director
The RapidTech Center
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