Strawberry Production Automation

John Lin, Ph.D.
Production Automation Manager
Role In Automation

Fund
RFP / Internal Research

Facilitate
Targets / End-user Feedback / Validation Studies

Coordinate
Seminars / Field Days / Introductory Meetings
AgroBot 2009 – 2016
Hayashi 2003 – 2013
Octinion 2013 – 2016
DogTooth 2013 – 2016
Strawberry Packing
Automated Decapper

Development Time

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Strawberries de-calyx machine
Strawberry Decapper

Principle Investigator
Dr. Yang Tao, P.E. of University of Maryland
Automated Transplanter

- Plantel Plug Transplanter – 2 years
- Posi-Flow Plug Transplanter – 2 years
Plantel Plug 2014 – 2016
Faulring Plug 1986 – 1988
RFP

Vetting

Seminar

ATF

Investor Involvement

Coordinate

Strawberry Transplanter

Principle Investigator
Frank W. Faulring of Faulring Mechanical Devices, Inc.
Cal Poly Strawberry Center

**Faculty Research**
8 Professors – Salinity / Forecasting / Runner Cutting / Decapper Economics / Telerobotics / Robotics / GIS

**Student Research**
50 Students – Alumni / Research Associates / Master Students / Capstone Groups

**Internships**
4 Interns – Runner Cutting / Lygus Bug Vacuum / Spray Rig Design / Bare Root Transplanter
Numerical Modeling

- Computer simulations
- Allows for rapid design modifications and testing
- Ensures that physical prototyping is cheaper and faster
Lygus Bug Vacuum – CFD
Spray Rig Design Approach

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1. Analytical
2. Numerical
3. Empirical
3D Scan
Multiphysics Simulations
Potential Developers