The PolyPonics project conceived with two goals in mind: first to provide a way to insure the success of a water quality monitoring system for aquaculture / aquaponics and second to provide a vehicle to introduce the students to a real world systems engineering project.

The system now referred to as **PolyPonics** provides monitoring in real time of the water quality and working environment of the many fish tanks and plant tanks that make op the PolyPonics system.

The idea for the aquaponics program came from Mr. Wolfe and Mr.Reeser.

Mr.Reeser was working with the Maryland Sea Grant College a University System of Maryland College.

Mr. Adam Frederick the Assistant Director for Education would provide Poly with material that was not being used at other schools most notably the schools of Carroll County.

While developing the first porotype, Mr. Frederick was at Poly to bring fish and demonstrated the working prototype. He was hooked.

As he explained, students take water quality measurements one at a time; but there are no visible trends unless a large number of data points taken then plotted by hand.

PolyPonics with the real time 24 hr. graphics plots present to the student a clear picture of what is happening.

This he said will reduce or eliminate the need to use chemicals in the classroom and

“the system solved a stumbling block for us and has been picked up by many other schools”.

The Sea Grant program provides a workshop each summer for Maryland biology teachers.

For the past four years, the PolyPonics system has been the center point of the workshop.

Each attendee receives a complete package of material to build a system from the ground up.

That amounts to about $2,000 worth of hardware.

Now, the system is operational in 18 Maryland schools.

The system software developed on a Linux platform using open source development tools and software.

The software is Poly copyrighted under the Source License, GNU General Public License.

The summer workshop starts on the first day with a tour of IMED then Poly. On day, two moves to Manchester HS in Carroll Country for the next four days. The school has air conditioning.

Each year we have added to the systems capabilities we started with the Mark I version then Mark II

version then Mark III version and now the Mark III Plus version.

Each system proudly displays the Poly Logo.

This year the National Oceanic and Atmospheric Administration, NOAA will be sponsoring the workshop.

Not sure how they became involved; but it is to our advantage.

On Friday, received a confirmation that this year we will be presenting to 30 teachers/administrators from across the United States. In addition, we will be adding from 12-14 additional systems.

Added several screen displays that show the parameters monitored and a link to an article.

Ctrl-click to follow link.

*[https://www.baltimoresun.com/bs-hs-aquaculture-students-20171206-story.html](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=2ahUKEwiWjq-FroTiAhUNVN8KHWMQCEMQFjADegQIABAB&url=https%3A%2F%2Fwww.baltimoresun.com%2Fbs-hs-aquaculture-students-20171206-story.html&usg=AOvVaw1et9EdMISVjPmqZO3JBgRf)*



