Woodie Flowers Nomination Essay: Clem McKown

Chesapeake Regional 2009

By Siri Maley

Even out of all the terrific mentors this team's had, it's easy to pick the one that deserves this recognition. Clem McKown has been a dedicated mentor on our team for five years. Two years ago, however, he and another mentor had to step up and take the lead when our founder and head mentor had to leave for spinal surgeries. His consummate dedication has guided us ever since. He's the mentor who comes early, stays late, take numerous vacation days during build sessions, and schedules business trips around robotics season. He's the one who's always there with a smile and an explanation, in sickness, exhaustion, and otherwise frustrating situations.

Though he is a chemical engineer by training, Clem has independently expanded his knowledge of robotics and mechanical engineering far beyond his career in order to teach us these concepts. In fact, after a teacher's strike last year that ended in a rather low-performing robot, Clem took the initiative to schedule our team's first off-season meetings. Starting last summer, Clem spearheaded our first pre-season prototyping—a project that inspired some of us to see robotics not just as a year-round learning experience, but a very real career choice. Under his guidance, we spent the summer prototyping, testing, and systematically analyzing several different drive train systems. On top of supervising and encouraging our build sessions, Clem taught us the physics and mathematical concepts we used to analyze the systems. After this success, Clem helped start pre-season classes to continue teaching drive train, pneumatic, and CAD skills and helped other student leaders formulate lesson plans for tool use and safety instruction and basic physics concepts. Aside from these technical concepts, Clem has introduced, taught, and exemplified many strong business and organizational skills to our team.

Drawing on his professional engineering experience, Clem has incorporated many of his industry skills to help us learn and initiate solid operating processes. Under his lead, we brainstormed, prototyped, designed, built, and tested (in that order!) our most thought-out and complex robot in the team's history. Simultaneously, he restructured our team's communication procedures, rectifying a chronic collaboration problem between our mechanical, electrical and programming divisions. He even managed to dissuade us from the tendency to jump into a build with a hacksaw, a half-backed plan, and no measuring tape. Now, we print our part templates directly from CAD and discuss and prototype new fabrication methods beforehand. Though these contributions alone have been invaluable, the lessons and reforms Clem has taught us through his tireless efforts have been immeasurable. He's explained and exemplified innumerable techniques to help us learn and develop an excitement for forward planning, open communication, out-of-the-box imagination, accurate fabrication, scientific reasoning, and a perennial positive thinking. Of course, we have no doubt that these skills will prove extremely important to us in the corporate world, but we have also already incorporated these many of these practices into our everyday lives.

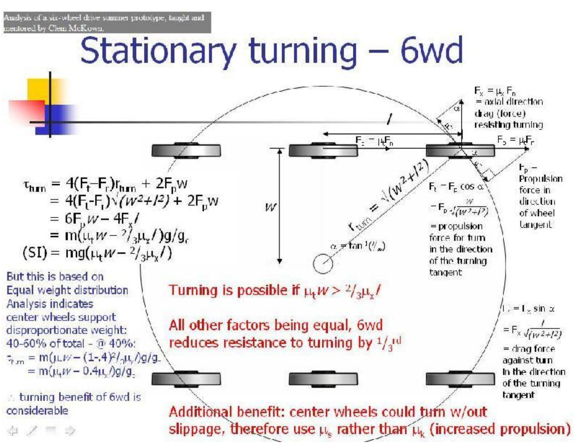
Though these are just a few examples of all Clem has done for us over the years, we're confident that they exemplify the fantastic mentor that he is. There is no doubt in our minds that without Clem, we would not be here as a team today. Thanks to him, we've learned that there's no such thing as a stupid question, that everything looks better through a smile, and that nothing is worth giving up on your dreams.

Supervising off-season prototyping.

Teaching Autodesk Inventor

Coaching the 2008 drive team.

Cutting a from a CAD template (an improved-accuracy method created by Clem McKown)



Example of off-season prototyping and analysis lesson

Celebrating a completed Lunacy bot with 1640.