Robo Hawk from page A1

robot-driving skills for a regional school-engineering competition set for March 19-21 at Eastern Michigan University. Shwayder and there wasn't enough time last year to have adequate practice for the courney. "It everything set last year to have adequate practice for the courney. "It everything set last year to have a planned it, well with get last year and a lot of practice time, and distributed the set of the se

Not like school

Not like school

The project, Shwayder said, provides students a change to not only work with professionals, but a stay with a project from rough draft to reality.

In school, owe learn a formula, you do a worksheet, you find out how much torque something would take, he explained during would take, he explained during a recent work session at TRW. But hore, you have to regaleut the word, you have to realieut and then, if you figured it out wrong, you have to refaleut late the whole thing.

Engineers are also benefiting.

Engineers are also benefiting.

Engineers are also benefiting the properties are also benefiting the properties and Mary Labor, TRW director of engineering operations.

neering operations.

"From TRW's perspective,"
Raber said, "it's a wonderful pro-



talizes our engineering staff.

"The comments I the project with Harrison students Carrie Cox, Alan Yee and Jason Link."

Town talk: Engineer Dave Purola works on the project with Harrison students Carrie Cox, Alan Yee and Jason Link. 'er will move the arms, with the help of a joyatick. Much like a basketball game, robots will have to work their way past ball-blocking opponents in order to reach the cylinder.

Visionaries

"The comments I the project with hear from engineers is this project rominds them of why they got into engineering in the first place." She wouldn't get any argument from veteran engineer Ed Van Elslander, conching students Jared Ankawi, Tim Kennedy and Seth Stollman in assembling the robot's elevator arms.

Dirty work

"You got to work with young people," Van Elslander said.
"People say disparaging things about them, but these kids are

reach the cylinder.

Visionaries

"You wind up with 200 completely different looking robots,"
Raber said. "They have no no instructions, no pictures. All they are told is what the robot is supposed to do."

Students, teachers and engineers are divided into four squads — electrical design, mechanical design, animation (to create a 90-second computerized "commercial" about the robot) and public relations. Robo Hawk must be ready to ship to the regional competition as of Feb. 24; the animation team has an additional week to complete its portion of the project.

In a different building from where Van Elslander and students were working on the actual robot, the animation team huddled at computer screens to continue sharpening its visual presentation — complete with pictures of Robo Hawk and the arena where the FIRST competition will take place.
"It's exciting to build something in 3-D" on the computer, said senior Trever Roth. "It's almost like building it in real life." People say disparaging things about them, but these kids are great.

Van Elslander said he hopes the students come away from the Robe Hawk endeavor "with a realization of how products are created and produced. A lot of kids don't know ... how do you got a toaster or a TV?"

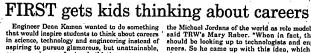
And, they learn engineering isn't just math and science.

"It's also getting your hands dirty and building things," he said. "If they have a hankering to be tinkers and old-time inventors, this is how it comes about."

For the FIRST competition, it all starts with 5 to you farts and a final objective. How they use the former to attain the latter is completely up to the teams.

Each team takes those parts and build a robot that can pick up balls that are 2 feet in diameter and drop them through an opening 8 feet off the ground and 3 feet in diameter. Points also can be scored by successfully placing balls on a ramp that adjoins the cylinder.

One student will use remote control to steer the robot, anoth-



nology.

Secondly, he came up with the idea for annual competitions that would pit student-engineer teams against each other.

"He (Kamen) thought the students of today view

Engineer Dean Kamen wanted to do something that would inspire students to think about careers in science, technology and engineering instead of sapiring to pursue glamerous, but unattoinable, careers such as professional athletics.

So in 1992, Kamen spearheaded FIRST ... For Inspiration and Recognition of Science and Technology.

Secondly, he came up with the idea for annual compotitions that would pit student-engineer teams against each other.

The (Kamen) thought the students of today view "Its Kamen) thought the students of today view "Tim Smith"





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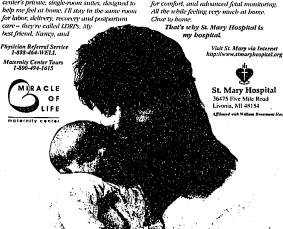
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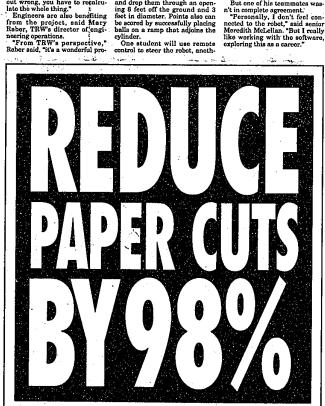
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