The future is now

January: LawnNibbler acquires taste for turf
By FRED WRIGHT
GAINESVILLE, Fla. — A robot lawn mower called LawnNibbler, created at the University of Florida, may soon be pruning the tees and greens of the neighborhood golf course.

Designed by the university's Machine Intelligence Laboratory, the prototype can cut grass intelligently — avoiding dogs, kids, trees and golfers. It uses a radio wire buried at the perimeter of its work area and a navigation beacon system using solar and infrared emitters and detectors that tell it where it is in its environment.

The LawnNibbler has four wheels, a chain drive, electric motor and lead acid battery and it works on the principals of a tank: It can turn on a dime — or a divert.

"We've done no engineering to date in terms of endurance," explains Keith Doty, director of the lab that designed the original model two years ago, but he has seen great progress in this area.

"The only product that I see anyone's using is a commercial lawn care service," says Doty. "I think we're the future of maintenance for Fairway, "now it's a miracle."

Rider. In development for four years, the Fairway single-rider is the golf course's answer to the personal golf car offerings put on the market. The Ortho-Kinetics new Fairway single-rider."

Cars, a division of Ortho-Kinetics, Inc., is entering the single-rider golf-car market in a big way
By JOHN FARRELL

WAUKESHA, Wis. — Fairway Golf Cars, a division of Ortho-Kinetics, Inc., is introducing the Fairway 8000 Single-Rider. In development for four years, the Single-Rider features a dual motor drive, a 48-volt power system with transaxle, maintenance-free AGM batteries, and a dynamic braking system which offers smooth deceleration as well as continuous regeneration.

"Twenty years ago, getting on and off a cart took a long time, said John Perez, director of sales and marketing for Fairway, "now it's a miracle."
Deere/Player
Continued from page 25
plan because it’s getting bigger and bigger,” said Phillips. “Due to all the possible applications, we really can’t get our arms around it.”

At the heart of the Player Systems deal are two components: Precision Turf Care and Sky Links. Precision Turf Care controls the precise spraying of water, fertilizer and pesticides and is being marketed as a tool for general turf care management.

SkyLinks is mounted on golf cars and acts as an electronic caddie, giving the player distance measurements, tips and graphical representations of greens and fairways. It can also be used to send messages from clubhouse to cart and vice versa while allowing the course operator the chance to monitor speed of play. “The founders of the company realized that the potential of GPS within golf is much more than yardage,” said Richard Beckmann, director of sales and marketing for Player Systems. “It’s truly information technology.”

Where will this all lead? “Anything is possible,” said Beckmann. “You’re going to see this technology on every course in some shape or form very soon.”

LawnNibbler
Continued from page 25
estimates the LawnNibbler can run several hours before needing a recharge.

A graduate student, Kevin Hakala, added sensors and a guidance system last year.

The buried wire acts as an obstacle that the LawnNibbler cannot cross. Just 24 inches high, the LawnNibbler is just under 24 inches long and just over 12 inches wide. It weighs 35 pounds.

The microprocessor control allows it to spin on itself, left, right, back, forward,” Doty said. The navigation system uses a trilateration process, like a Global Positioning System, using a satellite, from three poles placed to define the LawnNibbler’s territory.

“The game plan is to have a robot dog house — the LawnNibbler would go to the dog house and recharge itself whenever it needs to,” explains Doty.

The prototype has been tested in conditions ideal for golf course care — wet grass up to six inches high, on a 12-degree slope, even over tree roots. No problems. The LawnNibbler uses a weed trimmer-like nylon cord to cut a six-inch swath with, not a blade.

Doty projects that the initial cost of producing working models of LawnNibbler would place the price at about $2,000 per unit.

The market originally conceived for the LawnNibbler was as a machine to prune the grass around Florida’s orange groves.

Textron
Continued from page 1
American arm of Textron Turf Care and Specialty Products is based in Racine, Wisconsin, with Jacobsen’s Phil Tralies as president. Tralies will report to Wilson.

Peter Wilson is naturally excited with the developments at what is now a very well placed market competitor.

“It creates a very strong company from both a financial and technical viewpoint,” said Wilson. “It gives us a wonderful range of products and we obviously have a leading range of brands.”

Crisis in Canada
Continued from page 25
“At this time it appears that U.S. products will increase in cost more than those from Europe. As a result, many golf clubs may choose to lease equipment manufactured in the U.S. rather than buy new equipment outright. As for the rest of the products, we will have to budget an extra 15 percent for our next budgetary year. Some courses will delay purchases until the spring in the hope that the Canadian dollar rebounds. However they choose to deal with the situation, the low dollar is sure to negatively impact profits in the coming year.”

The effects of Canada’s struggling dollar may be somewhat offset by this year’s increased play at Canadian courses, according to Nolan Duke of G.C. Duke Equipment Ltd. of Burlington, Ont. “The exchange rate,” Duke said, “has caused our prices to go up 7 to 8 percent, which really would have screwed up budgets.”

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