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Circle No. 117 on Reader Inquiry Card

Turf goes 'Space Age'

GPS isn't just for golf courses anymore. Find out how it will streamline your operations

BY GREGG BRENINGMEYER

Remember when all you had was a citizen band radio to communicate with crews and a hand calculator to price out jobs? All that is changing as the Space Age comes down to Earth. Advances in technology have made cell phones commonplace, while personal computers store business data and calculate job specs at the speed of light. The next phase of change will unfold in navigation technology, mapping from space and machine diagnostics.

Relics of Cold War thinking

Research on satellite navigation began in the 1960s, dreamed up by Cold Warriors. For the commander of a Polaris submarine to launch a nuclear-tipped missile accurately, he had to know his sub's precise location. In 1968, the United States launched 23 Navy Transit satellites — the first navigation satellites — to pinpoint submarine positions anywhere on or under the seas.

The U.S. Air Force pursued a similar idea with the Global Positioning System (GPS). The idea was to place 24 satellites in orbit, which is what the United States did in 1995 at a cost of $10 billion. These Navstar satellites weigh 210 lbs., look down from a height of 12,000 miles and circle the world every 12 hours. To determine an exact location, readings are needed from four satellites: three for triangulation and one to fix altitude above sea level.

Down to turf

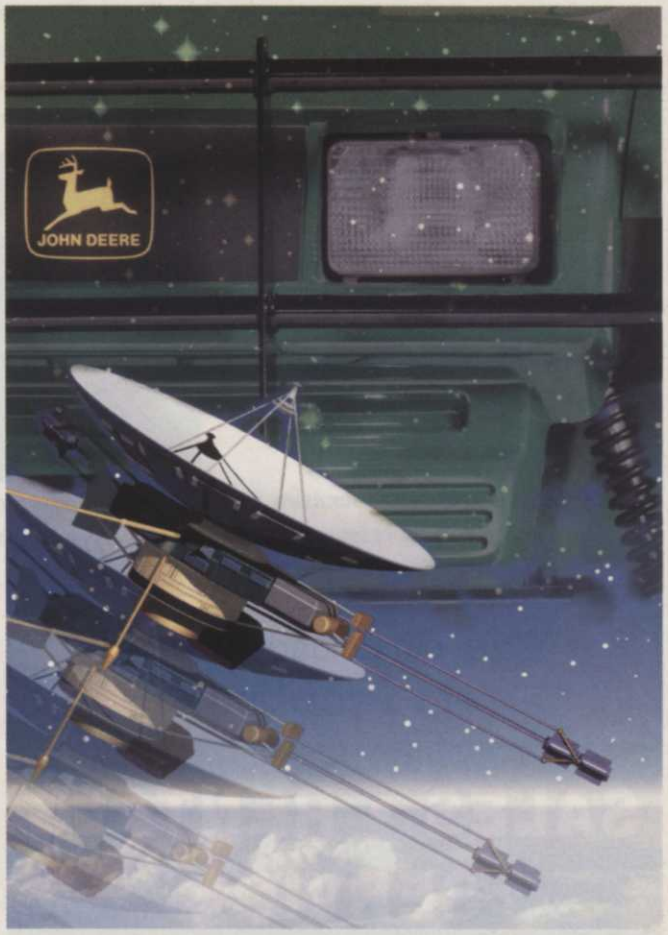
Now that civilians have access to Navstar satellites and GPS, all kinds of interesting projects that can solve chronic problems in the lawn care industry are under development. Here are just a few of the ideas on the drawing board at places like John Deere Special Technologies, a subsidiary of Deere and Company:

1 *You know the exact location of your large mowing machines.* The key word is "embedded." A GPS terminal can be embedded in the engine area of a machine so it can't be removed or disabled easily. The terminal can read coded signals from four Navstar satellites and determine its precise location. A computer screen will show the exact location of every major piece of equipment overlaid on a map of your community so you, as manager, know where every crew is working. You have the "big picture" right in front of you.

2 *You know if something is missing and how to find it.* If a wide-area front mower disappears from your inventory, you can track it down without using bloodhounds. Just snap on your "big picture" screen to locate machines. In the evening, all your machines except one are shown clustered around the shop. And there, on your screen, will be the missing machine at the corner of Main St. and Elm Ave. Send the cops to retrieve your stolen mower.

3 *You can collect important data about crew routes and mowing times.* Connect the GPS to your personal computer, log in and find out all kinds of information about routes that crews take to job sites, time it takes to mow and trim each job and the use of trailers. All this knowledge stored in your computer can be evaluated by smart software, or expert programs that can give you tips on how to load trailers more efficiently and create routes that help crews cover more jobs in a day. The result is increased productivity and improved profitability. Someday, a system such as this will help you price jobs more effectively to counter competition and increase your income.

4 *You can eliminate downtime.* In the not-too-distant future, on-board sensors will monitor key components and high-wear parts to detect telltale signs of fatigue. Engineers currently use stress gauges when testing components for durability, so the next step is logical — build sensors into a machine so that it can diagnose its own problems.



GPS will change the way you allow monitor operations. Better data will help you increase productivity and limit equipment downtime.

But don't stop there — design the machine so it even orders its own parts. For example, when a sensor notices wear on a belt, it can send a message to a dealer who can then deliver the part to you with information about how to install it. Better yet, the dealer can send a mobile service unit to your machine and make the preventative maintenance repair on the spot. The dealer can find the machine through GPS.

5 *You can map jobs from the sky to price more accurately.* It's said that the CIA has spy satellites that can read a newspaper headline from space. Landsat satellites have been mapping the surface of the world for years. Someday, you'll have access to that kind of technology and be able to use satellites to map each job

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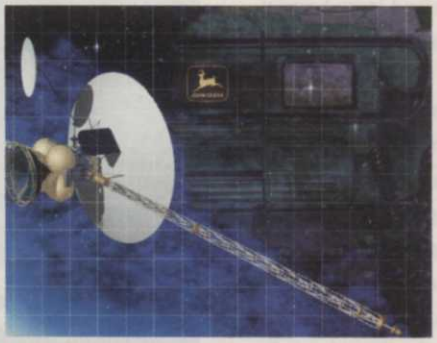
site and determine mowing areas and trimming work precisely. This kind of information will help you price jobs more profitably and determine time-at-job more precisely for higher-volume scheduling.

6 *You can spray material with the precision of an eyedropper.* Spray units guided by GPS and mapping satellites that monitor soil and plant conditions can help you meet government regulations and document every job.

7 *You can make full use of your assets with a total management system.* With satellites tracking movement from space and software keeping track of your costs and revenues, you can sit in front of your "big picture" computer screen and make key decisions with more facts at your fingertips. You can ask the right questions about equipment inventory, parts storage, preventative maintenance and equipment replacement, profitability of each job, overall profitability, cash flow, wages, taxes and insurance. Plus, you can make the important decisions with a sense of confidence.



Portable GPS units communicate with satellites, giving you constant data for managing.

That's the promise of satellites integrated with computers. The Space Age comes down to turf by giving you more information to help you make tough business decisions with confidence.

— The author is manager of commercial mowing for John Deere, Raleigh, NC.

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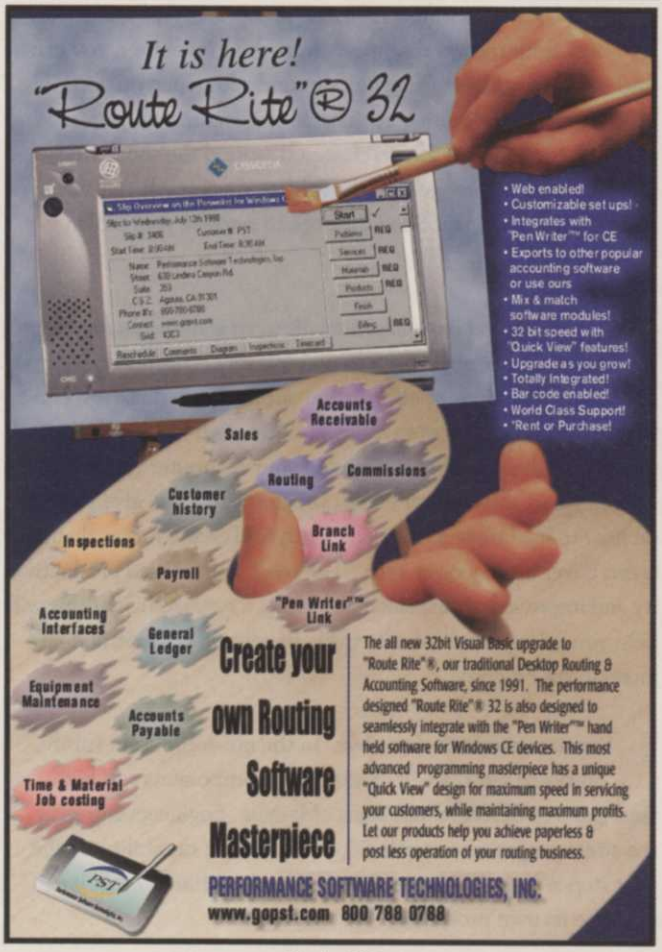

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Circle No. 120 on Reader Inquiry Card

ASPs: Outsource services on the 'Net

Application service providers can simplify your operations. Their on-line services let you concentrate on what you do best — service your customers

BY DAVID WEINSTOCK

If your operation has grown quickly, you may discover that keeping your budget on Excel just doesn't cut it any more. Perhaps you're located in an area that doesn't attract many computer professionals, but you need one.

Maybe you have several computer applications already, and the headache of keeping up with new products, as well as product updates, is more than you or your staff can handle. Or maybe your IT operation is just too expensive.

Where can you get the expertise or business management software you need? There's help, and it comes in the form of a new kind of company called an application service provider, or "ASP."

Just ASP for help

ASPs buy network-based business software packages and some combine general computer applications such as accounting, payroll and benefits. Others are more industry-specific and tailored, for example, to equipment maintenance or irrigation scheduling.

An ASP puts those programs on a server (a large computer with techno-gurus managing it) located on the Internet The ASP then rents the programs to firms like yours that want to be spared the expense of buying, maintaining and upgrading them.

As a subscriber, you provide your ASP with data, which it stores in very secure "data centers" interconnected on a network running 24 hours a day, seven days a week. Your authorized employees can access whatever reports the software generates at any time on any day via the Internet.

What ASPs sell is their expertise in choosing and running computer applications. Managers in landscape and lawn care firms or

grounds organizations who contract with an ASP wouldn't have to worry about maintaining computers and software they don't want to purchase, or going through the process of constant upgrading.

ASP for small businesses

One current ASPs offering services suited for smaller businesses such as yours is Interliant. The list will most certainly grow as this system catches on in popularity.

Interliant (*http://www.interliant.com*) of Purchase, NY, may be one of the oldest of these firms. It was started in 1995 and has more than 1,000 employees worldwide. For the most part, it services larger companies, but its division, AppsOnline (www.AppsOnline.com), focuses on small business customers.

"AppsOnline targets companies of 50 employees or less," says Brad Nickel, vice president. "Sixty percent of our customers are either retail or mom-and-pop firms."

Once customers surf into the Web site, pick a computer application they want to use and provide Interliant with their credit card information, the application instantly becomes accessible.

All applications at AppsOnline are Web-based, meaning the only equipment you need is be a computer, a modem, Internet access and Web-browsing software.

Users are billed on a per-use or per-user monthly fee basis. "Individual packages cost from $9.95 to $24.95 per month; we have some software bundles whose costs range from $49.95 to $99.95 per month," Nickel says.

The division is constantly looking for new software to add to its current listing of 10 packages. One of its hot sellers is a small business accounting program that handles invoicing, general ledger and payroll functions. It also has a business-based service package that covers human resources, benefits and payroll.

Juggling projects

If you juggle several projects at once, you might be interested in "collaboration" or project management applications.

AppsOnline rents access to a Lotus program called QuickPlace, which handles elementary project scheduling, tracking and oversight functions. For more detailed reports, consider using project management software with several functions.

The auction option

Thinking about setting up an industry auction site? AppsOnline will rent access to a program called AuctionPool that does everything from displaying goods and setting minimum bids to notifying bidders of when the auction begins. It even has a Web-based, cooperative buying service.

"We'll even host your Web site," Nickel says. "That's the business we were in before we became an ASP."

— David Weinstock is an assistant professor of new media technology at Central Michigan University, Mt. Pleasant, MI.

Are ASPs right for you?

There are a number of things to consider before engaging the services of an ASP.

Security Any ASP worth doing business with should have a security officer, written security policies, regular security audits and audit reports. Above all, they should take steps to assure that only the ASP, you and your firms' employees have access to your data.

Access Be sure the firm you engage offers 24/7 access to your data via Internet. Anything less is unacceptable. Odds are you'll want to access payroll, personnel or scheduling information at strange hours and you can't be bound by someone else's schedule. Look for firms with applications used by the Green Industry.

Focus The operation profiled above caters to small business, but it has purposely chosen its applications to appeal to a broad business audience. As this industry continues to grow, other firms will offer programs used more frequently in the Green Industry.

Definition of responsibility When your rented application crashes or doesn't work for some reason, be sure the contract defines whose responsibility it is to seek technical support. Some firms take full responsibility for this function, while others only troubleshoot as long as it is believed that the problem is software-based and not a problem with your hardware or network.

— David Weinstock

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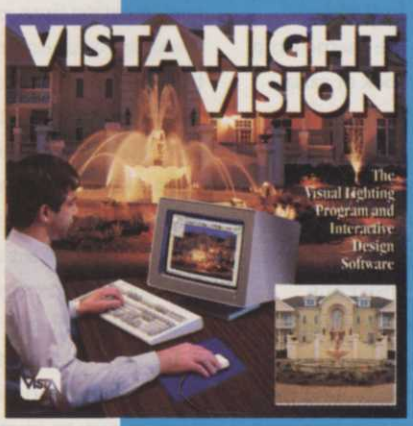

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13 ideas to ignite training

Training doesn't have to be a drag. Spice it up with these ideas

BY PHIL FOGARTY

Training is an ongoing effort, and it's easy to get in a slump. Keep your sessions creative, energetic and focused on improving by using any of these ideas.

1. **Play music.** Get a boom box and use some energizing sounds – the theme from the Lone Ranger, country rock or salsa – whatever appeals to people.

2. **Get hands-on.** Develop training sessions around something employees do, like pruning, planting or loading a truck.

3. **Get feedback from everyone.** Challenge everyone to fill out a card answering, "What is the best thing you have learned from the sessions?" Next week, everyone makes a one-minute presentation on their answers. Applaud every presentation, and award the most energetic.

4. **Check posture.** Check how everyone sits and ask them to sit as if they were bored. Ask them to sit as if it was the most exciting thing they have ever heard. Now challenge them to stay that way for the entire session. Discuss how we can apply posture to control our attitude at the job site.

5. **Videotape it.** Allow the presenter to take the session home to study how well they did or how they can improve.

6. **Role play.** This is great for customer service and team-building. Have a scene written out with the setting and specific roles. Don't be afraid of role playing — it is the number-one training technique and the best way to build leadership skills. (For a role-play sample, e-mail us at jpaluch@jphorizons.com)

7. **Grab some charts.** If you chart what you have spent on training to date (program cost, meeting time, etc.), employees will see your commitment to training. If possible, show comparisons from last year, like turnover, equipment repair costs or other facts that show training makes a difference.

8. **Do a conference call.** Arrange with another "training challenge" company to have a speaker phone set up so both companies can talk to each other while a training session is taking place.

9. **Develop in-house certification.** Give certificates for attendance, teaching, spirit, etc. They're easy to create on the computer.

10. **Get some good press.** The Skills Development Series orientation package has a sample news release, or try your own. Send out several until you get a call from a paper. Then invite them out to see how your company is approaching the problem of providing consistent training. When they come, make it a great show.

11. **Develop competition.** Have a 'field day' atmosphere. Put several teams together to identify plants, change oil, plant a plant, edge a bed, etc. Use your creativity and create five-minute, educational competitions in a fun atmosphere. Award a traveling trophy that the team keeps for a week.

12. **Do a planning session.** Use a training session to plan. If you are covering bulb planting or irrigation troubleshooting, use some time to brainstorm how your organization can become more efficient or improve on the topic. Take good notes and then as a management team, work to implement those ideas. The team will be more likely to participate when they see results coming from the sessions.

13. **Make a mission statement.** Have competitions on who can say your company's mission statement the quickest. Have groups of six say it, with each person saying a word and going to the next person. This is an excellent team building session. Have a serious discussion on "How are we doing in pursuit of this mission?" Be open to the negative as well as the positive. The mission must be discussed in each meeting.

—The author leads the Skills Development Series, a year-long training program co-sponsored by American Cyanamid and Landscape Management. For more information about applying the SDS system to your organization, call him at JP Horizons, 440/254-8211 or email: pfogarty@stratos.net.