Achieve RTK Level Accuracy with CORS

What is CORS?
CORS, which stands for Continuously Operating Reference Stations, allows access to an RTK level GPS correction through cellular connection. This service is provided by some states throughout the United States, and many times for free or at a low cost. CORS technology offers statewide RTK coverage allowing growers to use the signal over larger distances than traditional base stations. For example, CORS can cover farms that may be spread out over 20 miles. A traditional RTK setup would require moving the base station or using repeaters to get this area of coverage. As this technology continues to be adopted and used, more states are planning to add CORS if they have not already.

How CORS Works
CORS is a network of base stations that are strategically located so that the entire state is covered and no location within the state is more than 30 miles from a base station. Position information is fed back to a central server where it is then broadcast over the internet for anyone with a login to use. A login account can be created within your state. Using an internet-capable device, data can stream to an operator’s compatible RTK GPS receiver. Signal reception is dependant on cellular coverage and limited by the cellular data plan.

A cell phone with a data plan can configure the login information and begin streaming data. Most smartphones are capable of doing this, but it is important to check with cell phone providers for compatibility. Typical CORS users have a cell phone or air card specifically dedicated to streaming the data. This is because voice calls take priority over streaming data, so if you use a personal cell phone to stream data, disconnects can occur when receiving an incoming call.

To use CORS, your GPS receiver must be RTK capable. If you are currently using OmniSTAR as your differential signal, you can upgrade to an RTK capable receiver. If connected to the CORS network, you should not have to keep your OmniStar subscription as a backup.

How the Ag Leader ParaDyme Uses CORS
Ag Leader’s new ParaDyme automated steering system uses a built-in cellular modem to connect to the CORS network to stream data. ParaDyme allows access to the CORS network with one piece of hardware, no additional cell phones, laptops or other hardware in the cab. A grower is able to use the ParaDyme user interface to configure login information and select which of the CORS network data streams they want to use.

ParaDyme uses a CDMA (Code Division Multiple Access) modem that allows the system access to any CDMA cellular tower. CDMA is a digital signal that is up to 15 times faster than analog technology. The CDMA model allows access to more cellular towers and better cellular coverage.

With ParaDyme, if the CORS signal is dropped briefly, the system will continue to steer the vehicle and provide GPS until the connection is recovered. ParaDyme drops to the next most available signal until the CORS connection is regained, so the system will keep steering accurately. The user does not see any position jumps in the field because this transition happens gradually.

Available Data Plan
Ag Leader provides an unlimited data plan; this allows users to not worry about going over a monthly limit and facing addition fees. The month-to-month plan is designed for user flexibility. Priced at $300 per month, users can pay for only the months they want service since not everyone will use the network 365 days a year. There are also discounted plans including three months for $750 and ten months for $1500. This option gives more flexibility to get the work done within an individual grower’s timeframe.

Steps to Get Started Using CORS
1. Contact your Ag Leader Dealer to discuss product compatibility for your precision farming operation goals.
2. Contact the DOT in your state and see if they have a CORS network or are planning one for the future. As CORS technology advances, changes do take place. Be sure to check with your state DOT before making technology investments.
3. Create an account to get access to the network. With many states that have CORS, this can be done online.
4. Configure your hardware, such as ParaDyme, using the account information you receive from your state DOT.
5. Connect to CORS and receive RTK level accuracy, without base stations and distance limits.

For more information regarding ParaDyme, contact your Ag Leader Dealer, call 515-232-5363 or visit www.agleader.com.

SureVac Planter Controls
out the doors on the seed meter and put on the cables and it was done,” Lauritsen adds.

SureVac will provide growers with a tangible return on investment with reduced seed costs and increased yield potential in areas that are typically double-planted.

SureVac availability will be limited through select dealers for the 2010 growing season. Full production is expected to begin the second half of 2010. For more information and to see an online demonstration of how SureVac works, visit www.agleader.com. See your Ag Leader Dealer for more information on specific planter setup.

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