



Using GPS, Guidance, and Variable Rate for Increased Profits

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Trimble Agriculture

■ Designing Solutions to Improve Efficiency

- Autopilot - Automated Tractor Steering <1”
- TrueTracker - Automated Implement Steering <1”
- Field Level - Automated GPS “3-D” Leveling
- True Application Control
 - Variable Rate Fertilizer, Seed Drives, Etc
 - Rate Control
 - Automated Boom Switching

Trimble AgGPS Autopilot







Issues with Tractor Steering Alone











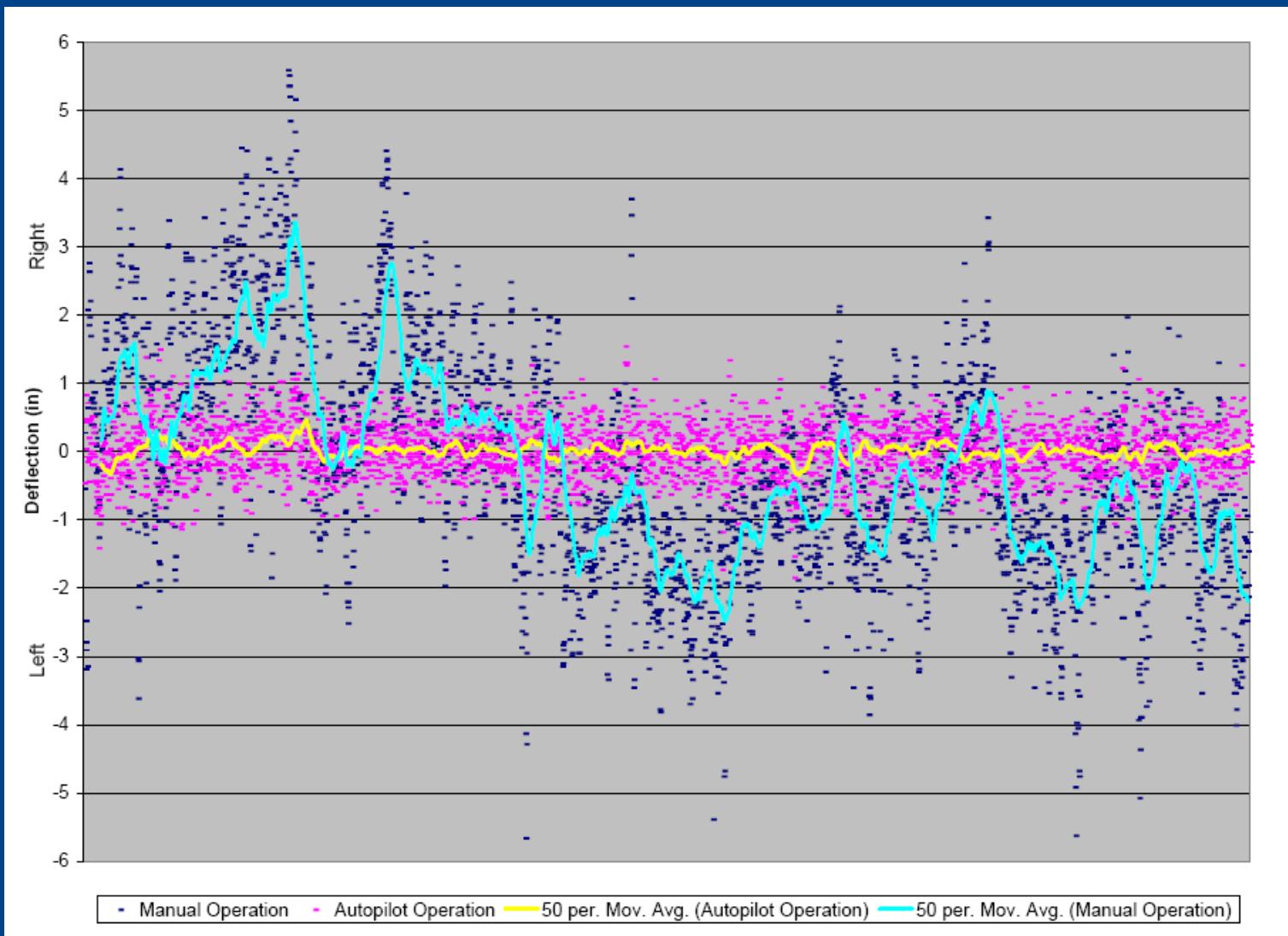
AgGPS TrueTracker

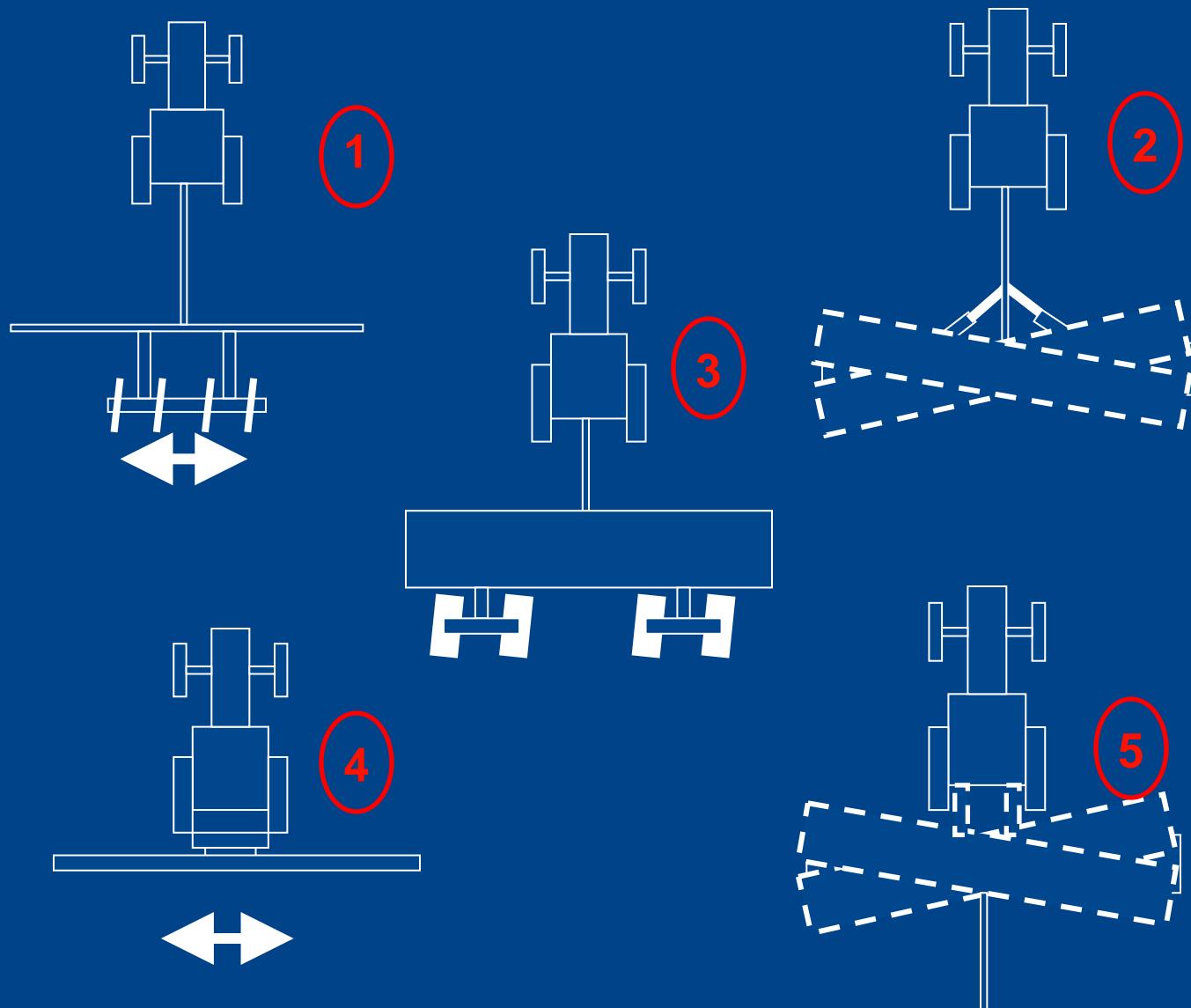


Vegetable Farm: Southern CA
Onions, Garlic, Carrots, Potatoes
Autopilot JD 9520/7530, Harvesters
TrueTracker planter/shaper, cultivator



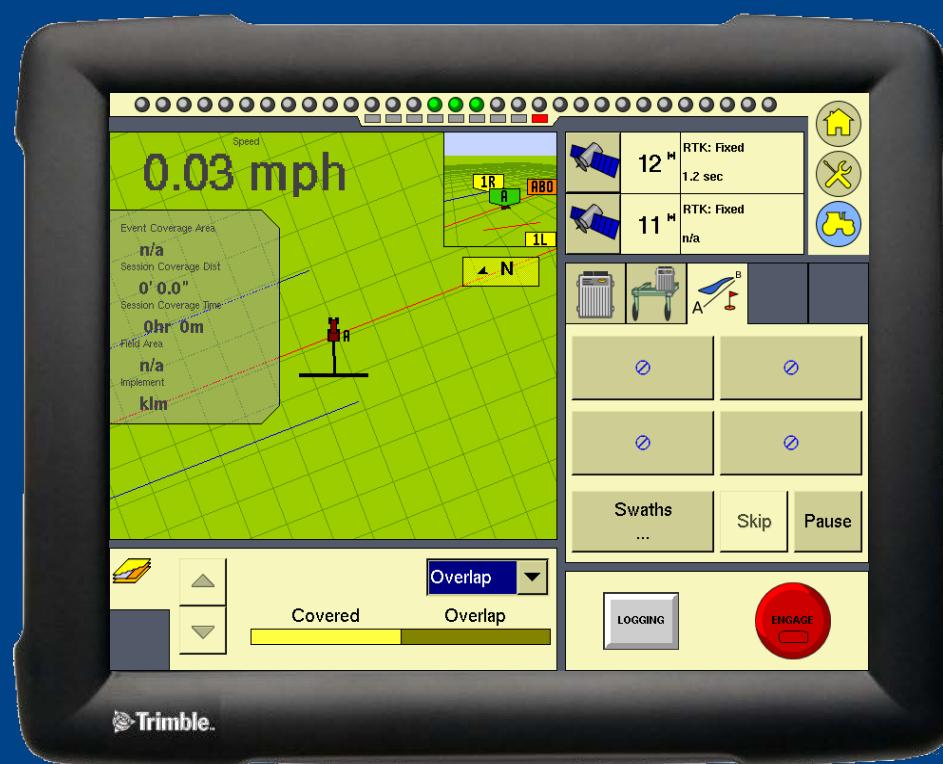
Harvesting - Autopilot vs. Manual





AgGPS® *Fm*™

Integrated Display





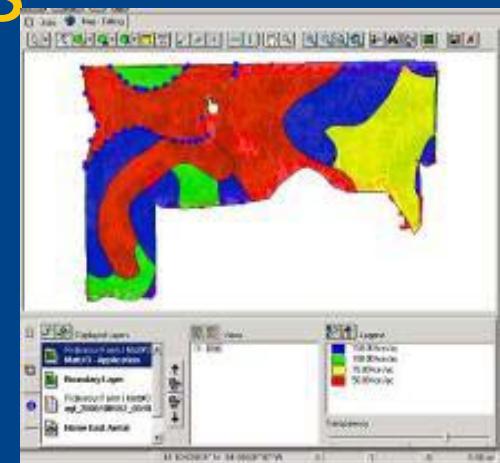
- **Autopilot (automated steering <1")**
 - simultaneous implement steering
 - simultaneous 3-D (GPS) Land Leveling
- **Two integrated GPS + GNSS Receivers**
- **integrated radio**
- **True Application Control**
 - variable rate, rate control, boom switching, monitoring

Trimble Field Level II



Variable Rate Available in all Trimble Autopilot Displays

- **VRA Variable Rate Application**
 - Prescription import via SHP file
 - Single product control
 - Boom section control



Display capabilities

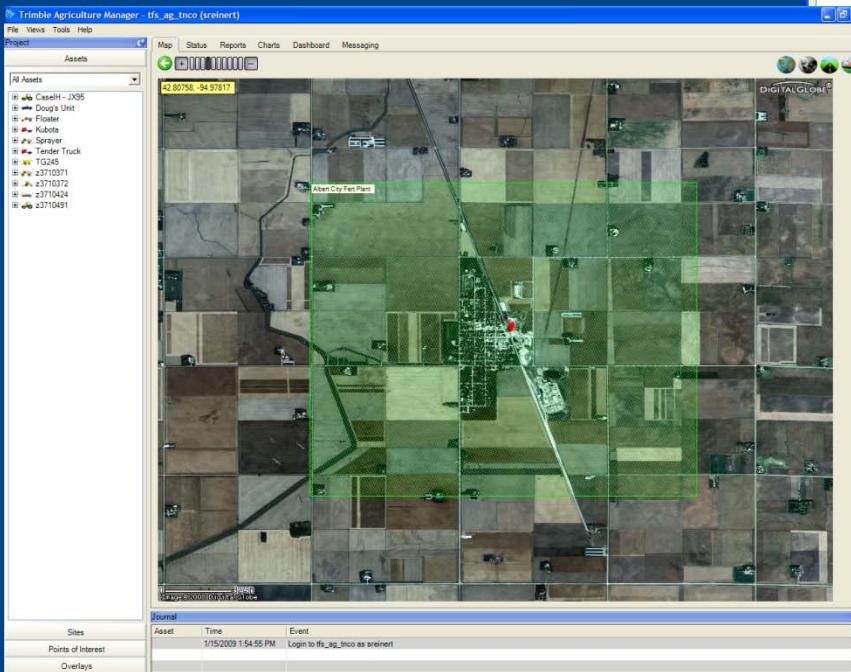


Feature	EZ-Guide 250	EZ-Guide 500	FmX
EZ-Steer	✓	✓	May '09
Autopilot		✓	✓
TrueTracker Implement Steering			✓
Implement monitoring			✓
TrueGuide Implement Guidance			May '09
Application Control			
EZ-Boom		✓	✓
3rd Party rate controllers		✓	✓
Boom switching		✓	✓
Variable rate serial output		✓	✓
Planter monitoring and control			✓
Aircart/Seeding and NH3 control			✓
Liquid sprayer control			✓
Granular spreader control			✓
TruCount row control		✓	✓
Water Management			
Field Level II single scraper			✓
Field Level II single scrapers with Autopilot			✓
Field Level II tandem or dual scrapers			✓
Information Management			
EZ-Office / EZ-Office Pro	✓	✓	✓
Ag Manager / Cross Check	✓	✓	✓

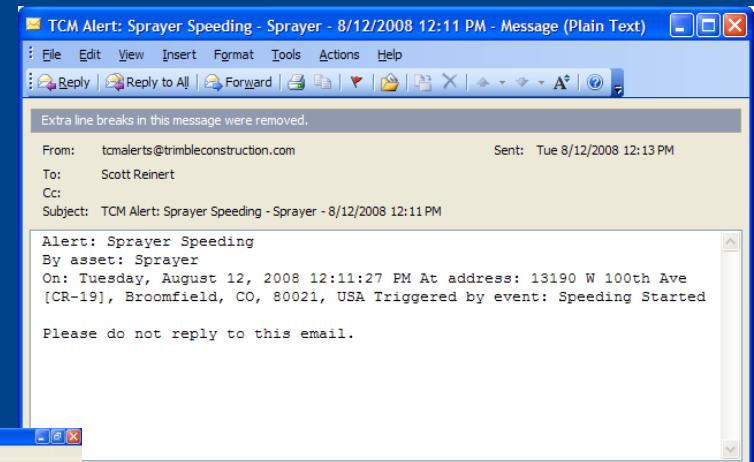
Trimble AgManager

AgManager Functions

- Locate vehicles/assets
- Mobile Alerts to Phone/Blackberry
- Vehicle History (where was it?)
- Site entry/exit alerts
- Moving/not moving alerts



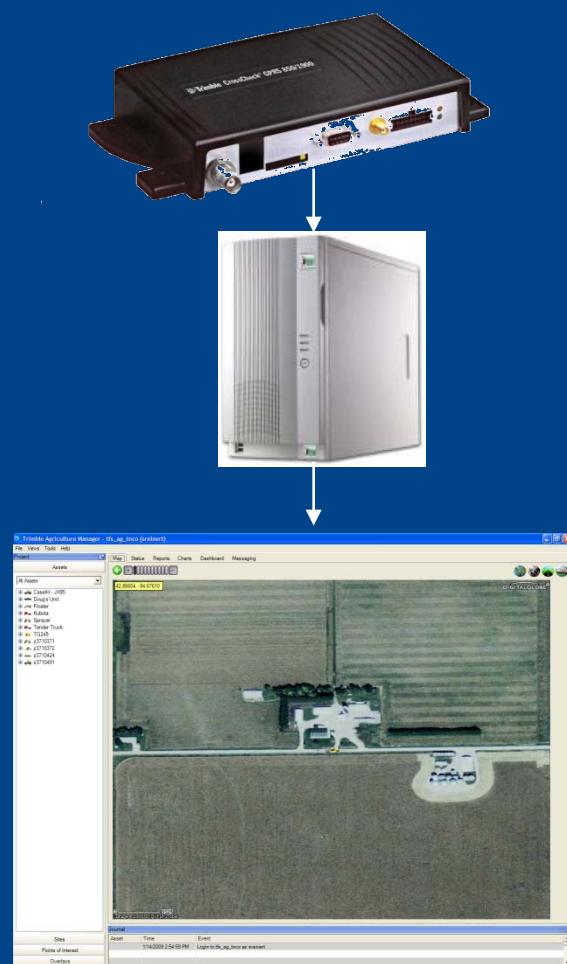
The software interface includes a top menu bar with File, View, Tools, Help, and a toolbar with icons for Map, Status, Reports, Charts, Dashboard, and Messaging. The left sidebar lists 'All Assets' with items like CaseIH - JX55, Doug's Unit, Plotter, Auto, Sprayer, Tender Truck, TG4, 4210371, 23710372, 23710424, and 23710491. The main map view shows agricultural fields with a green polygon drawn around a specific area. A legend in the top right corner identifies symbols for CaseIH, Doug's Unit, Plotter, Auto, Sprayer, Tender Truck, TG4, and 4210371. A bottom status bar shows the date and time: 1/15/2009 1:54:55 PM.



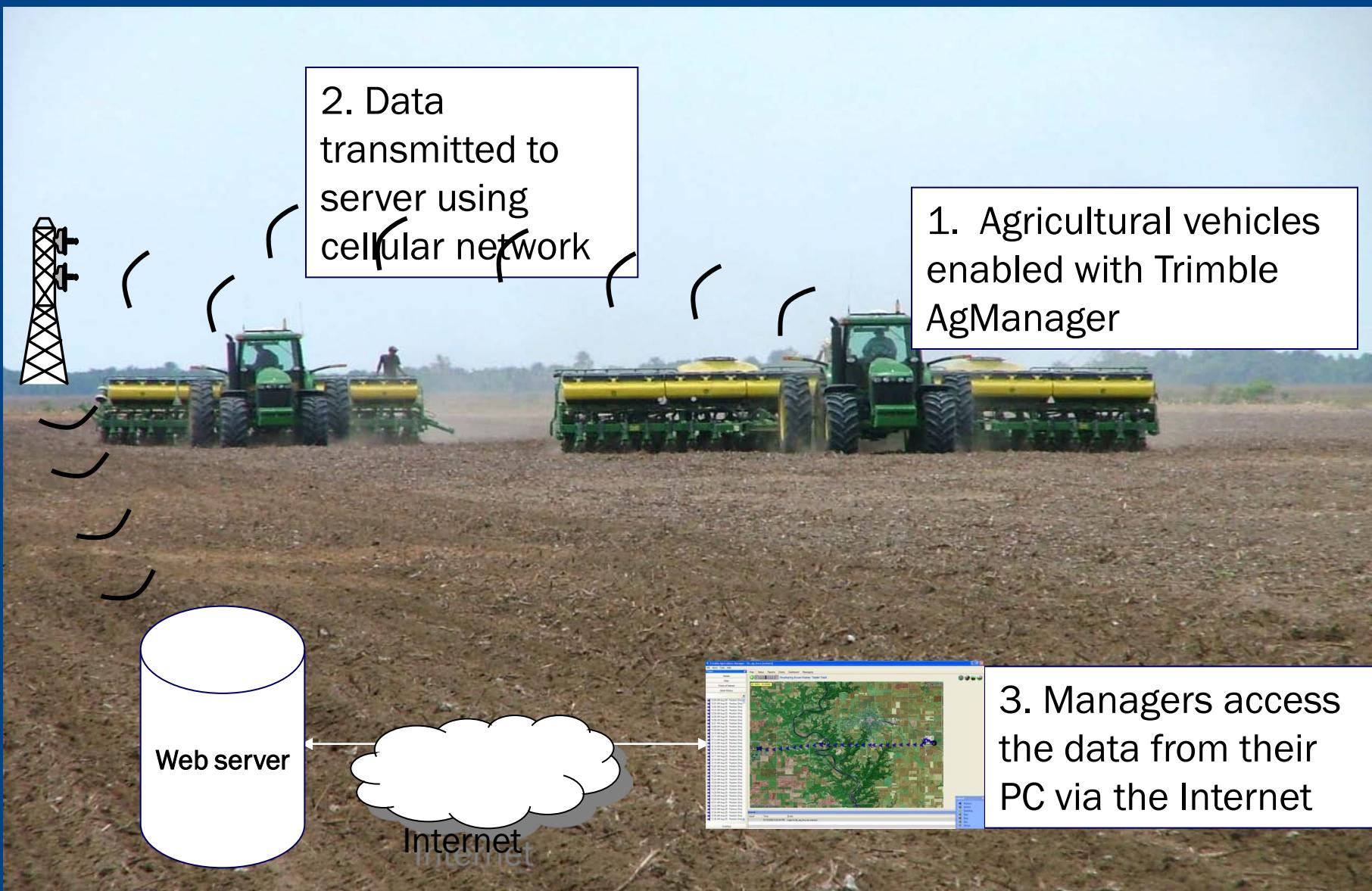
Type	Last Update	Status	Site	Address	RT Hrs	Actions
CaseIH Tractor	1:55 PM Jan-15	Stopped	20882 County Road 71 [CR-71] Bedford, CO 80513	20882 County Road 71 [CR-71] Bedford, CO 80513	355	Update
	1:55 PM Jan-15	Ignition is On		921 Stewart Dr Sunvalley, CO 80605	23	Update
FLX 4520	11:00 AM Dec-26	Not Reporting	22257 450th St Hazelton, IA 50546	22257 450th St Hazelton, IA 50546	-	Update
ATV	5:50 PM Dec-11	Not Reporting	4300 Highway 71 [CR-71] Woodrow, CO 80557	4300 Highway 71 [CR-71] Woodrow, CO 80557	-	Update
MFN Tractor		Not Reporting			-	Update
4 ton Tender	3:05 PM Dec-04	Not Reporting	1st St Albert City, IA 50610	1st St Albert City, IA 50610	-	Update
N H. Tractor	3:01 PM May-13	Not Reporting	Trimble Sunnyvale		-	Update
		Not Reporting			-	Update
		Not Reporting			-	Update
		Not Reporting			-	Update

Trimble AgManager

- **Three components**
 - **CrossCheck hardware**
 - Cellular Modem + GPS
 - Analog inputs
 - Mobile Data Terminal
 - **Back-end server and communications that manages the data**
 - Hosted in a highly secure environment
 - **Trimble AgManager software**



How it Works



Trimble Nomad

- Ruggedized Handheld with internal GPS
- Data collection
- Feature mapping
- Soil Sampling
- 3D Map View
- Shape file export
- Sync data between PC or EZ-Office Mobile
- Sync data to other Trimble displays



Trimble Connected Farm Community

Trimble Connected Farm Community



Login

 Trimble

CONNECTED FARM COMMUNITY

Member ID

Organization

Password

Remember?

[Forgot password?](#)

Safe mode?

Login

What does the Future Hold for GPS in Agriculture?





Questions?