

# General Info on Delta Data Systems

131 Third St.  
Picayune, MS 39466



# Who is Delta Data Systems?

- ❑ A privately held Mississippi corporation founded in 1982.
- ❑ A small business enterprise with a 20+ year focus on geo-spatial data processing and applications development.
- ❑ A developer of commercial products: ATLAS, Map-X, SEA/SEM, GeoRef, The Vision System, AGIS, Pocket DLog, Pocket Spreader, TilePro and Topo.
- ❑ A participant in various applications research programs through Phase I and Phase II SBIR programs with NASA MSFC, NOAA CGS.
- ❑ An early developer of applications integrating GPS and mapping.
- ❑ A pioneer in the Precision Agriculture movement.
- ❑ A 1992 inductee into NASA's Space Technology Hall of Fame.



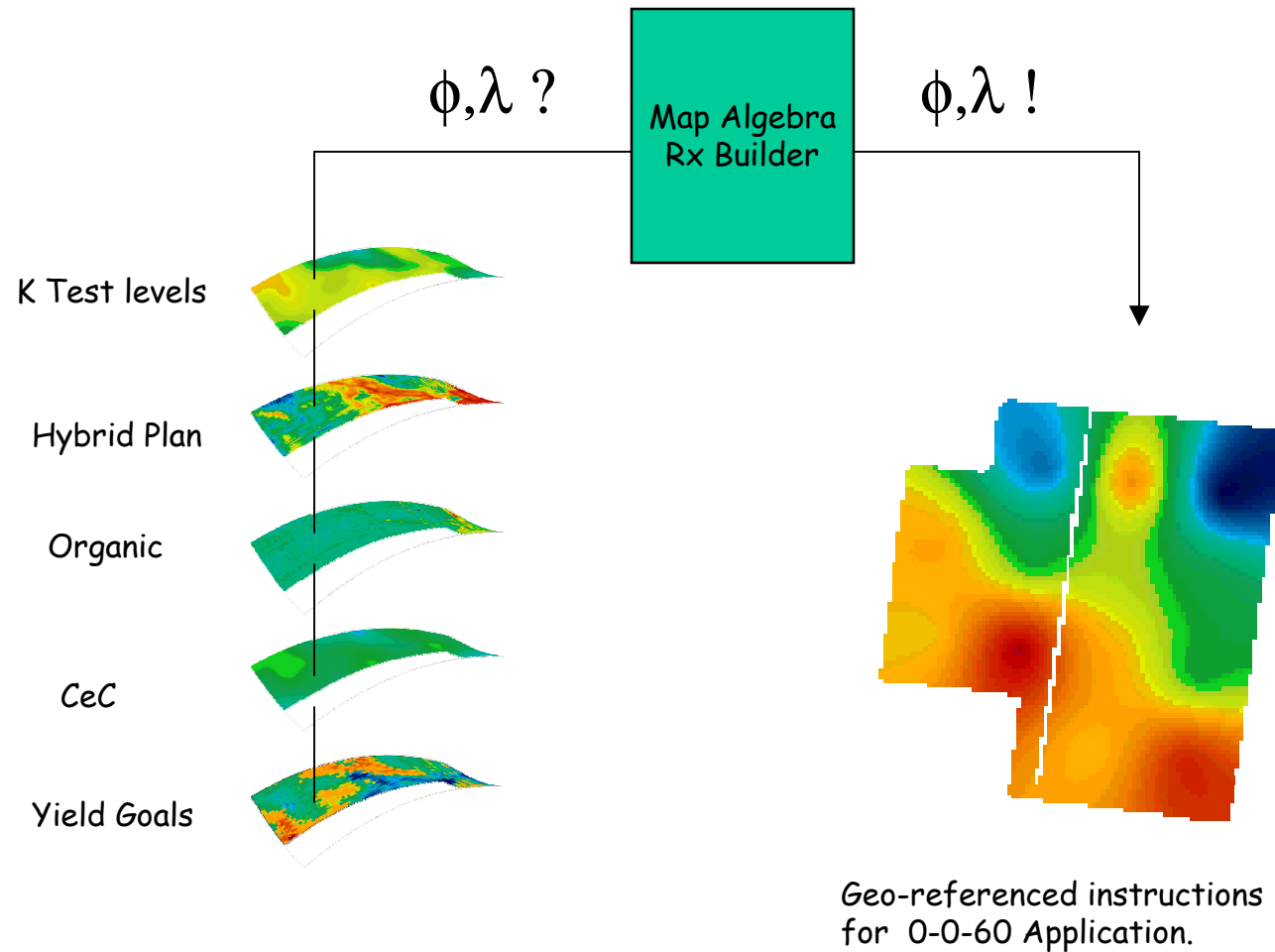
## Who have we worked with?

- ❑ Government- FAA, Florida DOT, Florida DNR, Mississippi DOT, NASA (MSFC, GSFC), NOAA (NMFS, NGS), USACE (Vicksburg, New Orleans), U.S. Biological Survey, USDA (Sydney, MT Stoneville, MS Salina, KS New Iberia, LA), U.S. Navy/NOARL .
- ❑ Private- Aurora Coop, Cargill/Mosaic, Central Valley Coop, Champlin Petroleum, Coca Cola Foods, DMJM+Harris Engineers, Exxon, Neel-Schaffer Engineers, ProSource One, Royster Clark, Simplot, Spectra Precision, Syngenta, Terra Industries, Trimble Navigation, Tennessee Farmers Coop, Twynam Agricultural Pty, Wesfarmers Landmark Pty.
- ❑ NGO and Academic- ABTEMA [Bolivia], ESPOL [Ecuador], HydroMet Institute [Russia], MTSU, U. of Mississippi, U. of Texas, Texas A&M, UNO and others.



# What is our focus?

Simply stated, to create more productive and elegant ways to ask “vertical questions” of a volume of geo-spatial data and to apply the answers in real world applications.



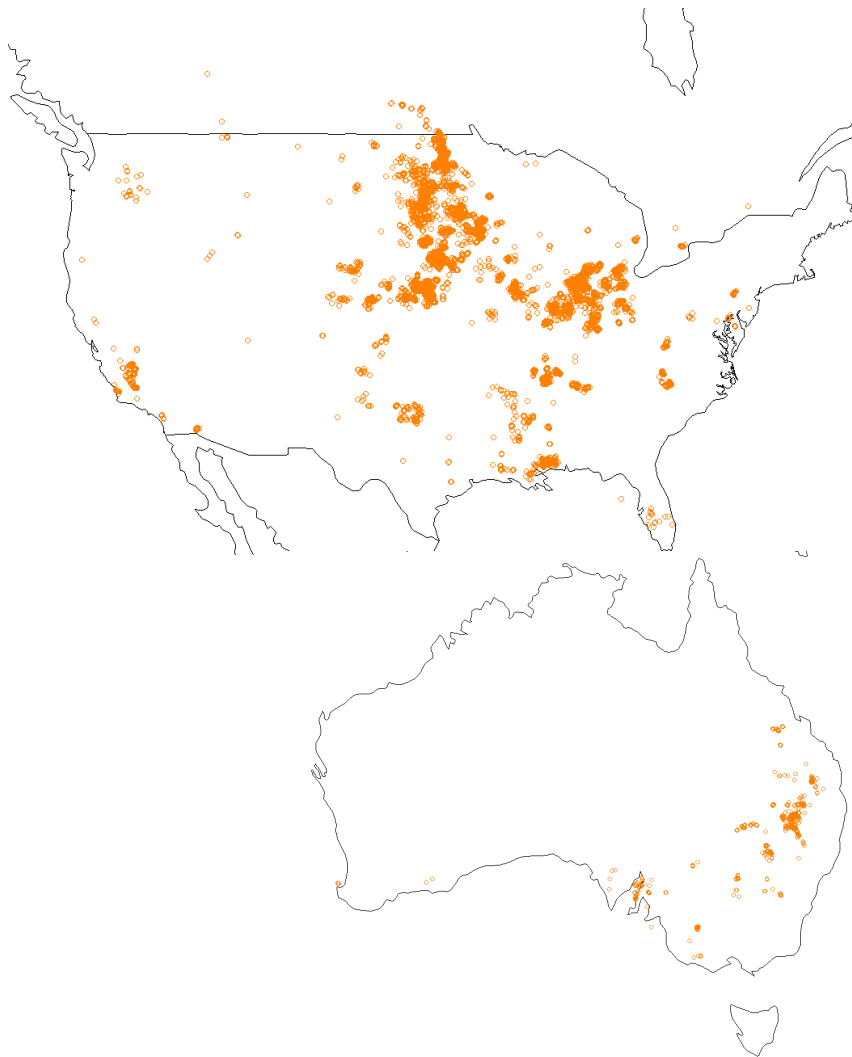


# Client Base

It is a diverse crowd united by an interest in what happens on an agricultural landscape.

- Progressive Growers
- Input Suppliers (Commercial and Co-op)
- Custom Application contractors
- Crop Consultants
- Crop Insurers
- Drainage and Land forming contractors

# What is our footprint?



Dots indicate user activity in the Corn/Soybean belts, in cotton areas, in citrus and veggies and viticulture

Historic focus on VRT and Harvest processing.

EC/EM mapping has expanded rapidly in recent years.

Exploitation of Topo has been extended by drainage contractors and is now figuring In yield analysis and VRT Irrigation.

Use of remote sensing in cotton, orchard and vineyard country.

Application of statistical modeling is has extended beyond cotton plant height estimation to include experiments with estimating soil water content from probe telemetry

# Capability Overview

1. We are software designers/developers. Virtually every line of code in our products was conceived and programmed in house by a team having, collectively, 80+ man-years of experience with geo-spatial data and associated applications. Much of that experience has been developed in the context of “Remote Sensing”.
2. We have demonstrated expertise related to integration of GPS + Sensor + Mobile systems. We have mature products in this area.
3. We are trainers. We have spent significant time “educating” users in university, government and industry settings on the application of GIS and Remote Sensing to “results-oriented” programs.
4. We are facilitators. We have spent significant time helping industry and government partners with the incorporation of geo-spatial data and processes into projects of resource management and environmental assessment.



# Where are we going?



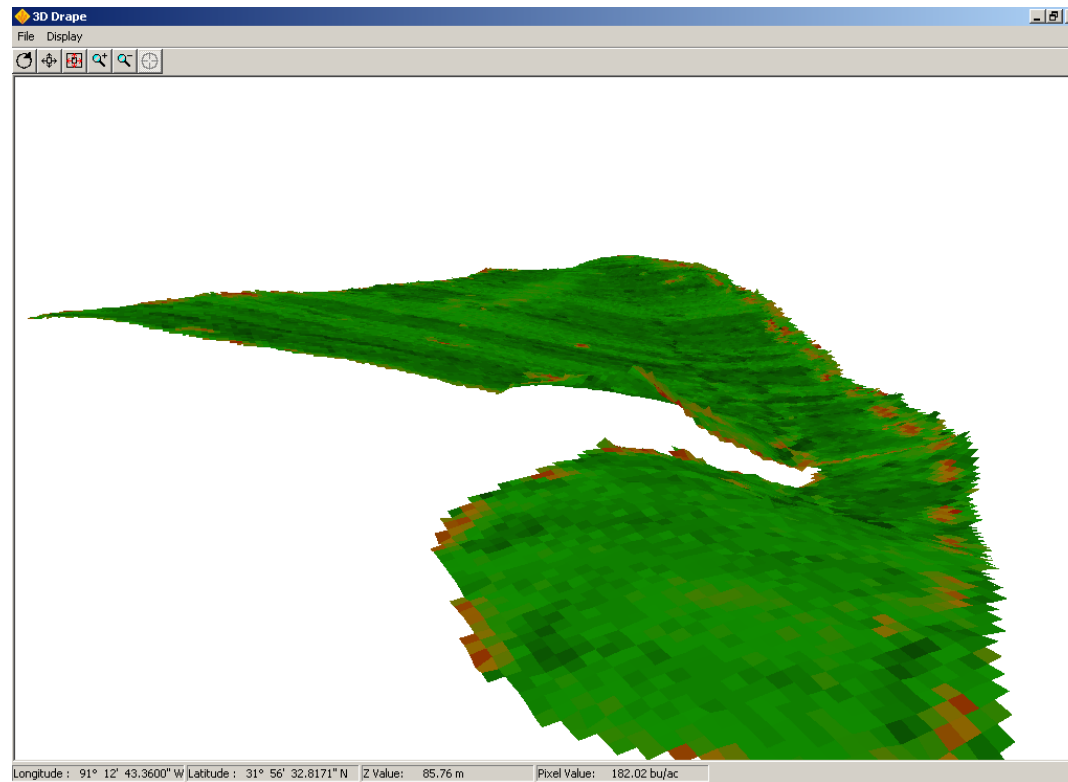
We will continue to build on a basic idea:

- ❑ PAg is essentially an “XYZ”proposition. X,Y are location and Z is “event”.
- ❑ PAg is about directing an ability to integrate, visualize and analyze events (at a location) toward:
- ❑ insights, decisions and instructions relating to the management of field variability.

Trends effecting this expansion:

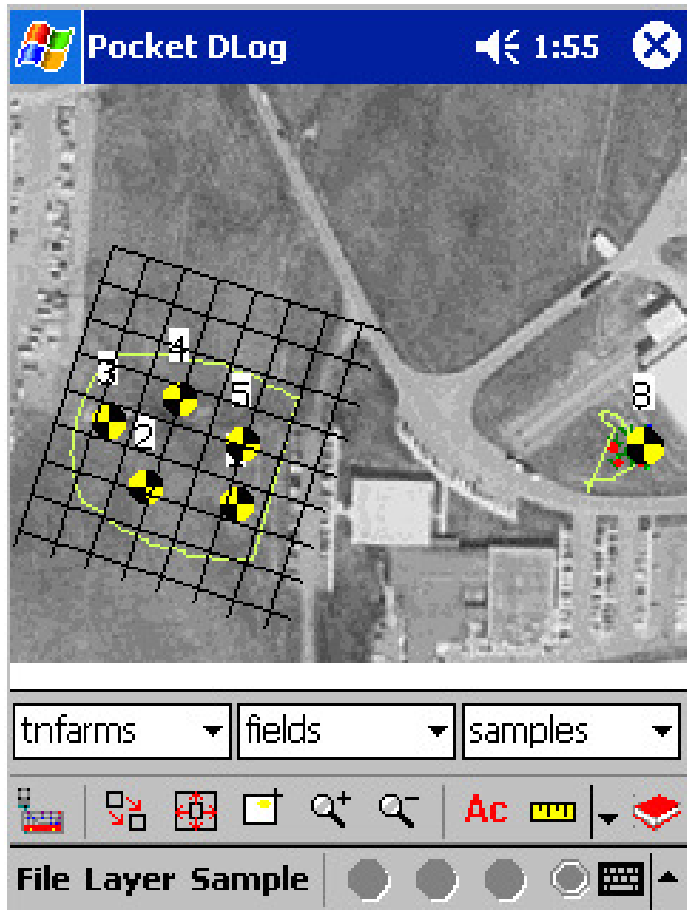
- ❑ Continued development of better X's , Y's and more and better Z's. The drivers will be RTK GPS and advances in “data collection technologies and systems”. (e.g. yield monitoring, remote sensing, geo-chemical sensors, etc.)
- ❑ More useful, elegant and productive ways to turn X, Y and Z into information, decisions and instructions.
- ❑ Innovations and Improvements in the systems that express decisions and instructions in practices- tillage, planting, fertilization, crop protection, harvesting...

## Examples: Bringing detailed topography into production focus



Saying field topography influences production proposes no great insight. However, PAg systems have not had much focus on integrating topography and its derivatives (e.g. slope, regional magnitudes of convexity/concavity) in analyses. Tools have been relatively expensive or under-powered and data collection has been difficult, too sparse, too expensive. That is changing rapidly. We have devoted a lot of energy to (geographic, not 'gamer') 3D visualization and topographic tools for analysis and land-forming applications.

## Examples: Extending GPS mapping and data collection capabilities with Pocket DLog.



We will continue to extend the capabilities of Pocket DLog in:

- directed sampling using high resolution remote sensing and EC backgrounds.
- additional sensor collection (e.g. Dual EM)
- RTK survey

Agriculture is an outdoor sport. Mobile computing is a key.

# “Give me something simple.”



**Simple** *causing little difficulty* : EASY, STRAIGHTFORWARD

**Simplistic** *reduction to a false simplicity by ignoring complicating factors*



In our years of building PAg software we have worked to compress the ‘red’ and ‘green’ portions of the ‘user spectrum’ while avoiding a slide into blue.

Would you really be productive with a spreadsheet program that only added columns? Or, is the better solution a function- and feature-rich system that you can grow into as your needs, skills and curiosity increase? The question is the same in PAg as in other application areas.