

Corporate Profile



Advanced Data Research, Inc.

Provider of

Advanced Computing Technology Solutions For Mobile Data Collection

About **Advanced Data Research**

ADR is a privately held multi-million dollar company based in Rochester Hills, Michigan along the I-75 high-tech corridor. Our 21,700 square foot facility houses many full-time professionals, specializing in varied disciplines. Our facility contains the software, hardware, avionics, business development and support personnel that make our company a great place to work and do business with.

Throughout the history of ADR, we have been driven to find innovative solutions for many industries. We are always pushing the leading edge of technology to help bring state of the art solutions to our customers.

ADR has been committed to pen-based and touch screen portable computer products since the company's start in 1990. Our experience with mobile data collection has enabled our company to expand into new markets with innovative products and software.

From manufacturing to aviation,

*ADR can help YOU
achieve your goals!*



We have provided specialized services to many industries. Please see the case studies as examples of our effectiveness and adaptability.

Product Offerings

Programming

ADR has a capable staff of programmers and analysts with over 70 years of combined experience. Our main competencies are in the following languages and environments:

- C ++
- PenRight!
- C builder
- Visual Basic
- SQL Server 7.0
- Java
- HTML
- A Base (ADR, U.S. Patent)

Hardware

ADR utilizes the latest pen-based, mobile computers and handheld scanners. The hardware product line includes, but is not limited to:



- Fujitsu
- Motion Computing
- Hewlett Packard
- Intermec
- Symbol
- WelchAllyn/Hand Held Products



Market Research Survey Case Study

DaimlerChrysler Corporation, Ford Motor Company, General Motors

ADR has provided DaimlerChrysler, Ford Motor Company, and General Motors with advanced product survey development and technology for more than 12 years. We assemble graphic representations of the subject vehicle. The graphic is used to guide the respondent along in the survey process. ADR's survey expertise helps garner information for DaimlerChrysler indicating the acceptance of styling cues and function.

Manufacturers understand that form is almost as important as function. The survey results provide important feedback on the design, ergonomics, demographic acceptance and overall excitement for a new product.

Not only do we supply custom applications for the survey, we also lease the hardware. We can provide a total survey solution including:

- Custom applications
- Hardware prep and leasing
- Training
- On site survey support
- Conjoint analysis (Sawtooth, ACA, CBC)
- MPEG 1 & 2 video capabilities

DaimlerChrysler has harnessed survey information to provide important design feedback. The same principles can be applied to your product. ADR can develop a custom survey tailored to your unique requirements.



Engineering Data Acquisition & Analysis Case Study

DaimlerChrysler Corporation

ADR has provided DaimlerChrysler engineering groups with advanced field survey development and technology for more than 5 years. We work with engineers in many areas of the vehicle's finish, providing custom software field surveys. Engineers are able to quickly and efficiently record part data in the field on the desired vehicle platforms. In 1999, one of the Engineering groups contracted ADR to design a completely customizable Engineering Data Acquisition & Analysis system. The goal was to reduce the amount of accelerated testing required to determine if the design met its requirements, thereby reducing design time and costs.

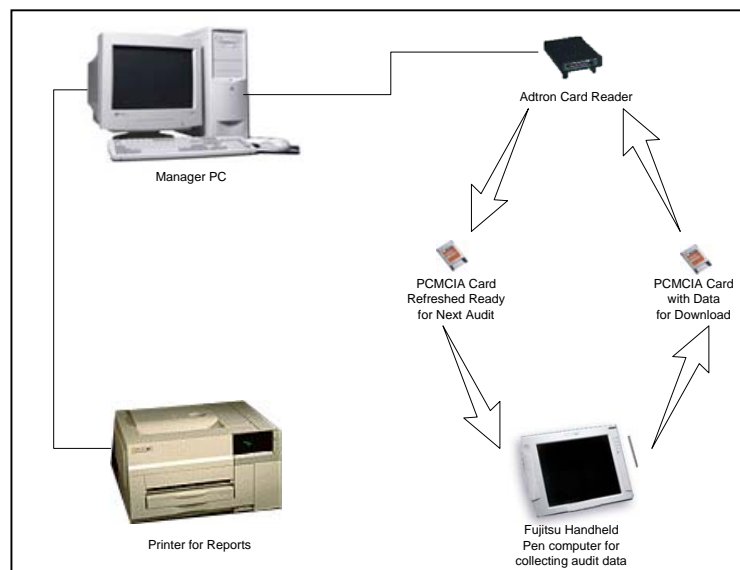
The result was a state of the art system allowing engineers to compare Field data to Accelerated Testing data. By comparing the actual field data to the accelerated testing data, engineers are able to reduce their accelerated test cycle and determine sooner if their design met their real life goals.

There are 4 main areas to the Engineering Data Acquisition & Analysis system; the **PC Manager**, the **Handheld**, the **Text Reports** and the **Graphics Reports**.

The **PC Manager** runs on a desktop or laptop, where you can manage pick lists for handheld, perform data transfers between hardware, edit/browse existing data and much, much, more...

The **Handheld** is the primary data collection device for the system. It runs on a portable pen-based computer and communicates with the other system components via a RAM card. The **Text Reports** allow reporting on both Field and Accelerated Testing data, as well as at the single vehicle level or multiple vehicle/platform level. The **Graphics Reports** capability includes custom selection of vehicle events, platforms, models, vehicles, etc., on both the Field and Accelerated testing data. The graphical representation of the result provides the engineer with a mathematically calculated line curve for the Field data and the Accelerated Testing data side by side for analysis. It also provides the value for the number of weeks of accelerated testing it took to reveal the field data test result.

Other major automotive manufacturers have praised ADR's Engineering Data Acquisition & Analysis system capabilities. Let ADR provide our expertise to your engineering organization today!



Manufacturing Error Proofing Case Study

Delphi Automotive

Delphi Automotive ships millions of parts per year. Accuracy is, and always will be the focus for companies dedicated to quality and cost containment. In 1995, Delphi contracted ADR to develop a shipping label error proofing system for one of their assembly plants. The results were solutions that would eventually be utilized throughout the Delphi Enterprise. Thanks to the EPSS (Error Proofing Smart System) and QCS (Quality Check System), millions of parts have been shipped from Delphi Steering Plant 7 with no shipping or labeling errors.

EPSS Error Proofing Smart System

The first module developed was **EPSS (Error Proofing Smart System)**. This is a PC based application with 2 input options, handled scanners and scales.

The system is located at the end of the assembly line near the final audit station. As completed parts come off the line, the input devices provide part number and count verification. Part number information is read from the existing manufacturer's barcode label. After verification of the part number and quantity in each container, the EPSS system automatically transmits the information to the Delphi SAP AS 400 ERP and a move order/shipping label is automatically generated.

QCS Quality Check System

Delphi wanted to upgrade the capabilities of the EPSS system and once again turned to ADR. Delphi wanted a system to reconcile the manufacturing part number barcode against the EPSS generated shipping label barcode, and the **QCS (Quality Check System)** was developed.

This system utilizes a handheld scanner to custom configure the control parameters for second party verification. The part number barcode and shipping label barcode are reconciled, which generates a shipping approval label. This shipping approval label is required on all containers prior to shipment to the customer.

ADR's EPSS and QCS is so successful that Delphi Steering Plant 7 received Delphi's "Best Practice Award" for error proofing. An even stronger endorsement is the worldwide software license Delphi purchased from ADR for the QCS system.

ADR has now integrated the QCS capabilities within EPSS, creating a Class 'A' error-proofing system with **automated move order (shipping label) generation, printing of part labels on demand** without going through a batch process, **traceability** of final part serial numbers in each shipping bin tied to each move order (shipping label), **parking ticket capability** for partial bins, and **second party verification** for quality assurance that correct parts are being shipped to correct locations.

Let us show you how to make accuracy commonplace in your business!

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Aviation Case Study

Flight Options/Raytheon Travel Air

Since the inception of the airport, there have been airport charts. The charts are specific to each runway and must be updated every time a modification is made to the runway or surrounding area. With more and more runways being built, the “paper load” is growing and growing.

Flight Options, which owns and flies corporate jets, wanted a solution to the paper charts. ADR was brought in to assist with the task of not only supplying hardware, but also designing a custom application for the cockpit. The combination of pen-based technology and the availability of electronic charts gave life to a new method of charts for the cockpit, the Electronic Flight Bag.

FG-Series Electronic Flight Bag

ADR worked with Flight Options and Fujitsu to develop the initial concept and fulfill the requirements of the customer. ADR did not stop there. We further developed the Electronic Flight Bag concept into a total cockpit solution. ADR invested in technology enhancements for the hardware to meet the demanding needs of the professional pilot. Certified accessories were also added to offer a turnkey product enabling “paper to digital conversion”.

ADR brought the product to the marketplace, and a new cutting edge technology was born. Our software program allows for enhanced program interface and reduced ‘heads down’ for the pilots.

More Than Chart Replacements

As the cockpit becomes more and more laden with paper, the opportunity for digitization and automation becomes more important. ADR has been working with Flight Options and other flight departments to provide custom interfaces and applications that facilitate a more organized and productive cockpit. Accounting and flight operations can now begin to integrate information, making an even better return on investment with their charting solution.

In just a few short years, the ADR FG-EFB has become the Electronic Flight Bag of choice for hundreds of flight departments and private pilots.

Let us show you how we can provide a solution to even the most technical challenges.

Mobile Service Case Study

Dow AgroSciences

In support of the *Sentricon** Colony Elimination System, ADR created, facilitated and maintained a complete data collection and reporting system. The Prolinx* Data Management System seeks to track the activity of subterranean termite colonies by continual monitoring of bait stations, eventually leading to the elimination of the colony. The Sentricon system is the largest project of its kind in the world.

When customer service is tantamount to perceived performance, record keeping becomes vitally important. Not only does the Prolinx system need to assure that monitoring schedules are maintained, but also that homeowners can see the value for their dollar by reporting on progress of the elimination process.

ADR was involved in every aspect of the creation of the Prolinx Data Management System, including:

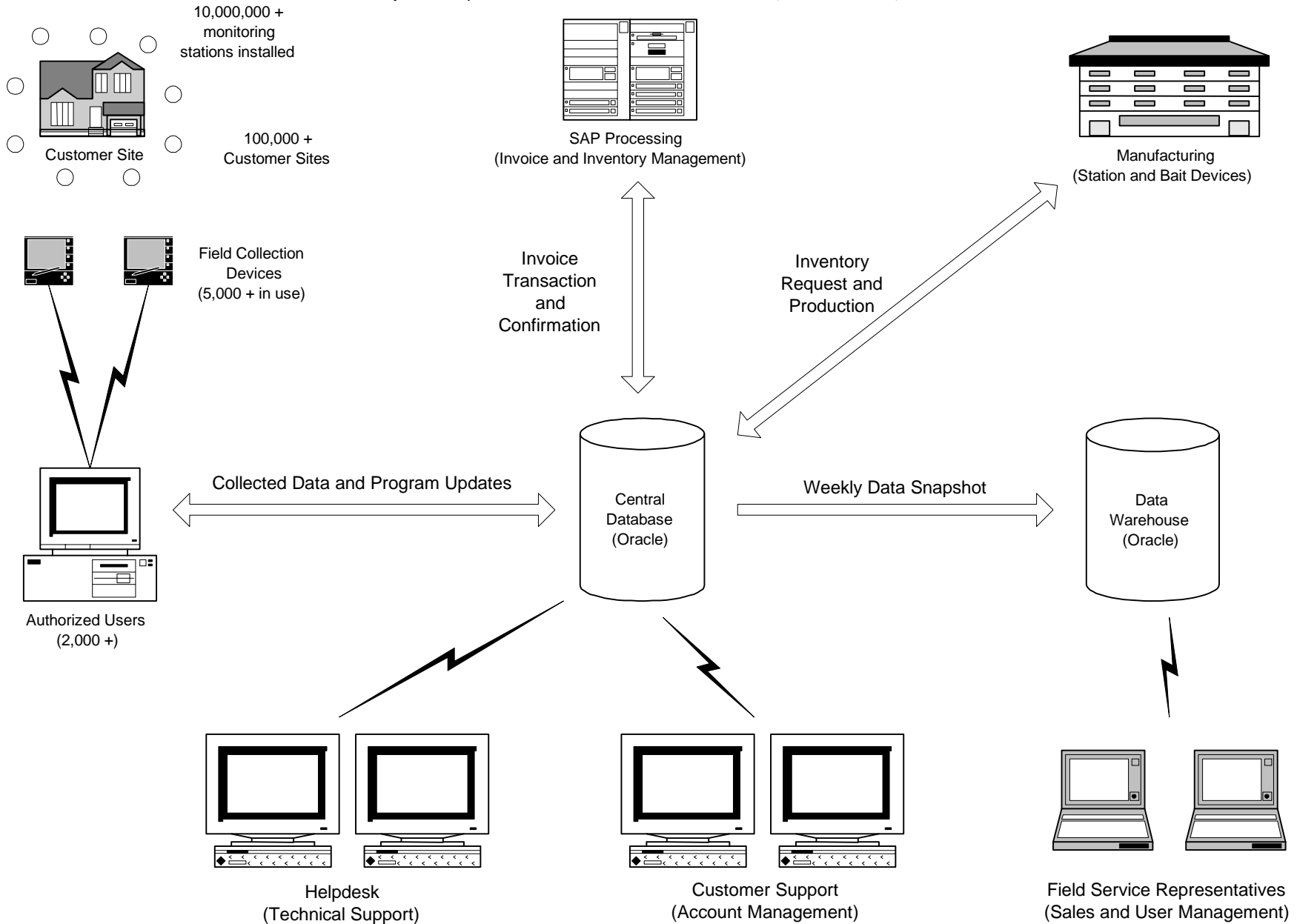
- Authorized Operator desktop computer programs, including GUI and local database creation
- Field data collection hardware and software, including dial-up or serial connection to the Authorized Operator desktop computer
- Centralized database modeling, creation, facilitation and maintenance
- Batch communication of customer data to the central database
- Manufacturing facility station and bait device inventory management and customer auto-replenishment
- Invoice creation procedures for automatic insertion into the SAP process
- Helpdesk support for all technical and user related issues of the Prolinx system
- Data mining of the central database for historical customer information
- Backup and Recovery of customer information to the Authorized Operator

Dow AgroSciences has used the data provided by its Authorized Operators through the systems developed by ADR, to maintain a database that now approaches a terabyte in size. A visual representation of the Prolinx system data model follows.

The Prolinx project is another example of **ADR**'s expertise in Mobile Data Collection and Database Management. Let **ADR** design a solution to meet tomorrows needs, today.

*Trademark of Dow AgroSciences

ADR's System Implementation for the *Sentricon** Colony Elimination System



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