ABOUT THE COMPANY
Adapx, Inc.
Founded 1999 -
CEO, Ken Schneider.
Adapx is a natural interface software company whose Capturx™ products improve field data collection, decision making, and collaboration. The company is transforming the way mobile teams collect and use data.

PRODUCTS
Products used by over 500 organizations worldwide

VALUE PROPOSITION
Adapx's software and digital pens speed up field data collection and sharing by automatically digitizing handwritten text, symbols, and sketches on forms, maps, and other documents; incorporating voice; and integrating these into standard enterprise and federal applications.

TECHNICAL CHALLENGE ADDRESSED
Military teams collect large amounts of field data on paper, and much of it is processed and shared through computer systems for better collaboration and faster decisions. However, the time gap between data collection and sharing can lead to slower, less informed decisions because mobile computers do not fit the workflow, and they require excessive cognitive operations and training that distract from job performance. Also, some operators trust their paper-based systems more than the computers.

Adapx overcame this challenge under the DARPA SBIR program by developing software that integrates handwriting with standard digital paper and pen technology into commercial software packages used in the field. The multimodal technology enables soldiers and others to create, analyze, process, and share handwritten and voice data through commercial software packages for geospatial, technical drawing, design, and spreadsheet/form applications.
TECHNOLOGY DESCRIPTION

DARPA Phase II project integrated Adapx’s digital pen/paper, sketch recognition, and multimodal technologies, with several military applications, such as the Command Post of the Future and Maneuver Control System. Users were able to speak and sketch on tablet PCs and touch-sensitive surfaces in order to rapidly create courses of action or to enter MIL-STD-2525B symbols onto maps. This multimodal system demonstrated more than an order of magnitude speed advantage over existing graphical user interface methods for military command and control (C2) data entry. Users were also able to sketch symbols on paper maps in the field, with the “digital ink” being entered into C2 systems automatically.

DARPA then provided Phase III funding from its Advanced Soldier Sensor Information Systems and Technology (ASSIST) and Personalized Assistant that Learns (PAL) programs, and recently, the Deep Green program, to develop recognition methods for the full set of MIL-STD-2525B sketch symbols through sketch alone or multimodal input.

Adapx has further evolved the digital pen/paper technology in its Capturx™ products used to speed data collection for forms, maps, and building plans. Users can:

- Annotate digital paper maps in the field with digital pens that automatically record the data and integrate it into ArcGIS.
- Integrate data collected on paper into Microsoft Office
- Automatically integrate markups on building plans, maps, and other documents in PDF format back into the original PDF files.

LESSONS LEARNED & BEST PRACTICES

- Develop a hybrid business model that addresses both commercial and federal markets.
- Use SBIR funds to develop intellectual property and early product, to support further fund raising and commercial product development.
- Identify and understand all the players in the procurement of new technology.
- Align with prime contractors in order to be included in programs of record.
- Anticipate the challenge of scaling up to market, sell, and distribute multiple products to enterprises in many geographic locations.
- Be sure to align incentives among partners and their employees.

ECONOMIC IMPACT

SBIR funding from DARPA in Phases I, II, and III enabled Adapx to develop and patent software technology and adapt it for initial military applications, thus providing the necessary beginning ingredients for commercialization. With the proven software, Adapx was able to obtain $20 million in venture capital backing from several firms and additional support from strategic partners, such as ESRI, In-Q-Tel, Lockheed Martin, Microsoft, and Trimble. The company now has a robust, growing volume of business, with 45 employees as of November, 2009.

APPLICATIONS

The Capturx™ platform is used in numerous applications by more than 500 military; federal, state, and local government; and commercial organizations. Current application areas are defense, intelligence, public safety, retail, energy and mining, healthcare, transportation, utilities and pipelines, and engineering and construction. Examples include in-processing of soldiers; triage, diagnosis, and treatment of injuries; capture of geographic information system (GIS) features automatically into ArcGIS; and completion of forms in Microsoft Excel.

The U.S. Army’s Network Enterprise Technology Command (NETCOM) issued a Certificate of Networthiness for medical applications of Capturx™ technology, signifying that the software is secure, supportable, sustainable, and compatible with the Army Enterprise Infrastructure.

PARTNERING & COLLABORATION

Recently, in the Deep Green program, Adapx worked with Science Applications International Corporation (SAIC) to develop advanced course-of-action generation methods that improve command and control planning and execution. Adapx is now on the BAE team for Deep Green.

Adapx has established important strategic partnerships with a number of large companies. For example, the company is a Gold Certified Partner of Microsoft; ESRI awarded Adapx its New Partner of the Year award in 2007; and Adapx is an Original Equipment Manufacturer (OEM) provider of digital pen/paper technology to Trimble Navigation. Other partners include In-Q-Tel, which also provided Phase III funding for intelligence applications; Lockheed Martin for military applications; ESRI for ArcGIS; Anoto Group AB for digital pen and paper technology; Oki Data for workflow printing; J.L. Darling for its use of Rite in the Rain all-weather writing paper; and VisionObjects for accurate handwriting recognition technology.