

### Digital Pen Solution ADAPX

#### **What the innovation is and why it is innovative?**

Adpax has created software that enables construction teams to instantly digitize handwritten redlines markups and data collected on forms using digital pens. In the case of design markups, teams can print CAD designs that originate out of leading CAD applications like Autodesk. When the designs are printed on ordinary paper of any size, Capturx software creates an imperceptible watermark that enables the prints to be read by a digital pen. The construction worker takes the prints into the field and marks them up with the digital pen as they ordinarily do – for inspections, dealing with design issues, finalizing as-builts, etc.

They make the normal markups on paper – but they are also digitized and stored on the pen. When the pen is docked to a PC, the mark-ups are automatically integrated into the original design files. This allows construction teams to have immediate access to field mark-ups without scanning or sending paper or transcribing data from paper. The teams can speed design iterations – helping them complete projects faster. They also get automatic copies of important construction notes – improving documentation and reducing litigation and safety risk. Capturx software also works with any construction form – such as change orders, punch list items, safety forms and inspection forms. Teams simply print the forms from Excel using Capturx software on ordinary paper. The data is instantly and automatically digitized on the pen – available for immediate integration into Excel. In Excel they can see the original handwriting, data converted through OCR, and data tables that they can analyze within Excel or provide to IT for integration into other back-end systems. In addition to getting automatic back-up copies of all forms and instant digital access – all the handwriting is searchable – enabling teams to more quickly access important construction documents.

#### **What it changed or replaced?**

The basic field workflows for collecting important construction haven't changed – teams can easily, reliably and naturally collect information anywhere on a site without having to fiddle with mobile computers. The challenge usually begins when teams have to act on the data written on paper. With Capturx, instead of having that information trapped on paper – teams get immediate access to the digital data and automatic back-ups. It is truly the best of both worlds – helping teams speed projects, get paid sooner, and reduce risk due to poor documentation.

#### **Where and when it originated, has been used, and it's expected to be used in the future?**

Capturx software originated out of research by Phil Cohen, PhD, and David McGee, PhD, the founders of Natural Interact in 1999 which became Adapx. Capturx is used in Construction projects around the world: various firms in North America, KPFF Engineering in the Middle East, and Thiess Construction in Australia, among others. We expect growth of current Capturx products to continue in the future around the world, in addition to new products, which help construction teams collect this important information and transmit it directly to servers and project management software, for example, using cell phones and other new devices.

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