

# **InTact Technology**<sup>™</sup>: Cutting the Last Tie Holding the Wireless Office to the Desktop

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# Executive Summary

Handheld mobile devices have gone a long way to liberate workers from trips back to the office to use their desktop computers, or from carrying laptop computers to every appointment and presentation on their calendars. A new generation of powerful handhelds running specialized mobile communications software enables mobile professionals to perform a growing number of tasks once limited to computers. Foremost among them is the fundamentally important task of editing documents in their native formats. Software developed for handhelds over the last few years enables them to display Microsoft Office documents with the same basic attributes – font types and sizes, paragraph breaks, row and table structure, etc. – that computers display. That makes mobile document editing faster and more accurate than earlier methods employing conversion files of plain text.

One stubborn tie to the desktop endures, however. Handheld users must still synchronize their devices by placing them in a cradle or docking station hard-wired to a desktop computer. This ensures the changes made on the handheld are merged back into the original document on the desktop or laptop.

That dependence on synchronizing erodes handheld devices' value by forcing users to rely on their computers for a basic, important business task. This white paper describes the need for mobile document editing tools that maintain original document integrity throughout the editing process. It includes a user case study and a technical explanation of how this process works between a desktop and a mobile device.

## I. Current State of Mobile Document Review Solutions

The current generation of handheld devices enables mobile business to live up to its name. Laptop computers were supposed to fulfill that role of liberating workers from their desktops, but in most cases they just gave workers a way to bring their desktops with them. For all their portability and power, laptops can't be considered truly mobile devices. They're too big, their power consumption curves are too high, and their setup time too long to be considered "mobile" if the definition of mobile means easy, instant access to text, data, images and messages.

Smartphones and PDAs give mobile employees access to files, e-mail and data via pocket-sized devices that can run for a whole day without a battery charge and require no boot-up time. Mobile office software enables mobile professionals to use handhelds to view and edit documents in their native Microsoft formats instead of as simple ASCII text. That was a huge stride toward leveling the playing field between mobile computing and desktop computing. For example, a salesperson going into a pitch can now use a handheld to review a page of pricing information as a Microsoft Excel spreadsheet. The same applies for Word documents and PowerPoint slides. All of these tasks once required a laptop.

However, laptops and desktops retain one key capability that keeps them on a higher plane than handhelds; they can display fully formatted documents. Handhelds cannot display complex document formatting such as animations and macros. Users can see the text and even embedded graphics in a Microsoft Word document, but not revision marks. They can see a Microsoft Excel spreadsheet in its original row and column structure, but not accompanying macros. They can see a Microsoft PowerPoint presentation as slides, but not animations embedded in the slides. Users can edit files on their handhelds, but then must synchronize their handhelds with their desktops so changes can be intelligently merged with the original files while maintaining their rich formatting.

This dependence on synchronization is a serious hindrance to mobile professionals. For example, consider a communications manager circulating a press release written in Microsoft Word for approval. This document may contain rich formatting such as paragraph styles, embedded graphics, stylized text, bullets or numbers, and even a watermark. The manager must send the

press release for approval to the director of marketing, who only has access to his smartphone. He makes several edits to the document on his smartphone and e-mails the release back to the communication manager. With today's technology, some or all of the original document's rich formatting could be changed or, even worse, lost from the document. This makes editing files on a handheld or smartphone unrealistic in today's mobile world.

## II. A Case in Point

Grassia Network Solutions (GrassNet) is a Connecticut-based mobile solutions provider serving small and mid-sized businesses. One of the company's largest customer segments is one- and two-person companies in industries such as insurance, corporate training, graphic design and Web development. These small companies rely heavily on mobile handheld solutions to reduce their operating costs, especially unnecessary trips back to the office.

Professionals at these small companies usually start using handhelds for the convenience of utilities such as electronic address books, according to GrassNet President Alan Grassia. Then they quickly discover how valuable handhelds are for keeping up with e-mail and editing documents while they're on the road. It doesn't take long before handhelds are these professionals' most important business tool.

"These people can't be in the office all the time. The ability to use one device to stay in phone contact, check e-mail and edit documents without going back to the office is an incredible help," Grassia said. "Handhelds are the ideal device to bring to client meetings. They're easy to carry and they boot up quickly – much faster than laptops. Add a lightweight fold-up keyboard and the handheld is a perfect substitute for a laptop. Professionals can take notes on their handheld and modify documents while they're sitting in front of the client. It's a great time saver. "

In one sense, Grassia said, handhelds have become a victim of their own success. Users expect much more from their handhelds because handhelds can now do so much. But in one fundamental business task – editing documents – handhelds still lag behind laptops and desktops because to date there has not been any mobile document editing solution that allowed mobile professionals to edit richly formatted documents, and send them as e-mail attachments while retaining all of that formatting.

"When I finish talking to a client and modifying a proposal to fit his needs, I should be able to save the changes, then e-mail it to him while I'm sitting right there in his office. But most importantly, I want to retain the rich formatting I have in the proposal. When he opens it, I want it to look like the same professional proposal I created on the desktop, and not a stripped down version of that document," Grassia said. "Instead, I have to take it back to my office, reformat it on a desktop and send it back to the client from there. Currently, my handheld can edit basic documents, but not the fully formatted documents I have to leave with my clients."

Mobile solution providers haven't yet produced tools that can retain formatting on handheld devices because it's an inherently complicated task. Providers have to understand all of the different formats, their specific intricacies and how they assemble data together as documents. Until recently, there hasn't been a large enough need to justify developing such tools. As professionals see handhelds' potential to make their work easier, however, they're looking to IT to make handhelds standalone devices.

Solution providers are catching up to market needs. Grassia is one of the first users of a new software solution that preserves document formatting on handhelds and eliminates wired synchronization with desktop computers.

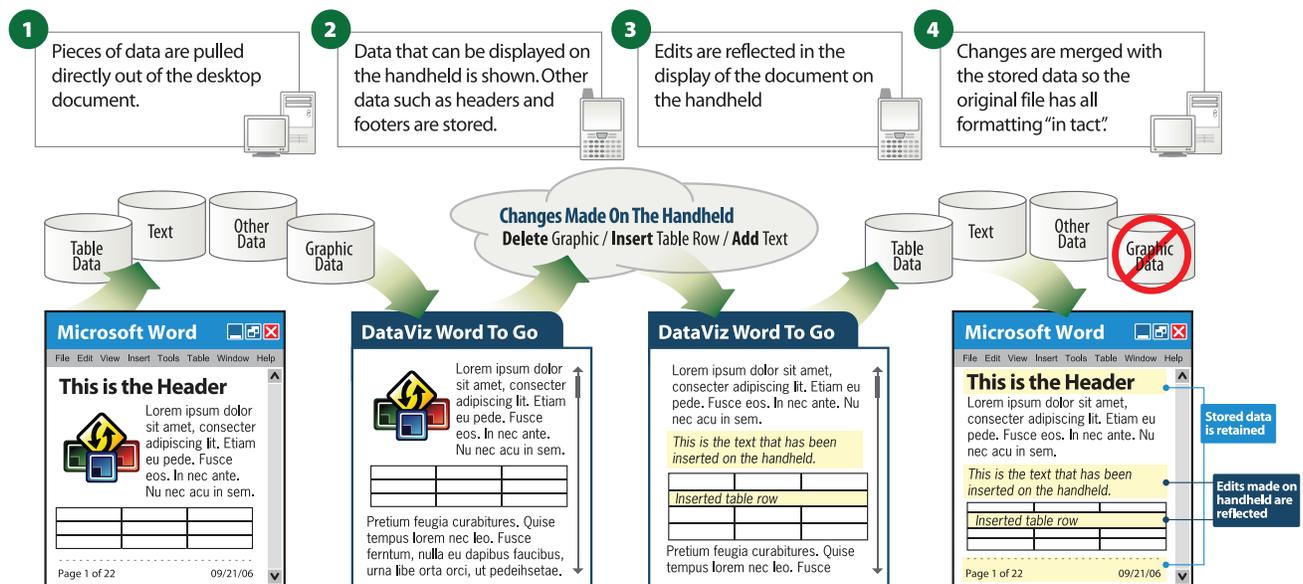
“For my clients, this is a big development. Now they’ll be able to produce an invoice or contract right in front of their customers then mail it to the customer’s inbox ready to print with all the original formatting in place. It’s the last obstacle keeping mobile devices from doing everything a laptop or desktop can do,” Grassia said.

### III. DataViz’ Documents To Go with New InTact Technology, Freeing Mobile Workers

DataViz has developed a new technology to make document editing as accurate on mobile devices as it is on desktops and laptops. DataViz InTact Technology™, embedded in its established Documents To Go® software suite, preserves original document formatting on handhelds by intelligently disassembling and reassembling them to fit on handheld devices. InTact Technology “remembers” ALL the original formatting of a given document, and maintains the document’s fidelity until it reaches its destination.

To illustrate how InTact Technology works, consider the example of a Word document with embedded graphics, headers and footers, and a table. A mobile user needs the document for a client meeting. He retrieves it from his e-mail, where it is stored as an attachment, and launches it on his handheld. InTact Technology breaks the file down into its essential structure and content, and modifies it to fit on the handheld’s screen. Formatting such as the embedded graphic and the table are displayed, while other formatting such as headers, footers and other data are not displayed. More importantly, even though the header and footer are not displayed, InTact Technology keeps track of this information so it is never lost or deleted.

The user decides the graphic isn’t appropriate for this document and deletes it. He adds a row of pricing information to the table and adds several lines of text into the body. When he saves the document, InTact Technology intelligently writes his changes directly into the original document while keeping the rest of the document’s formatting “intact”. When the edited version goes back to the desktop, he sees the document in its original form with the changes made. Formatting that was not displayed on the handheld, such as the header and footer was not deleted from the original document.



DataViz InTact Technology enables users to start with a Microsoft Word document (1), edit it on their handheld device (2 and 3), save it and send it to another user (4) without losing any of the original formatting.

With this technology, mobile professionals are now able to work on files and attachments right on their handheld or smartphone with complete confidence. This is because they are working on the original file and not a converted version of that file. Converted files leave room for error because they don't keep track of all the original's formatting.

InTact Technology has obvious benefits for mobile professionals, but it also has cost reduction potential for their companies. Consolidating fully featured data and voice communications in a single device like a smartphone means companies do not have to issue expensive, high-maintenance laptops to their mobile professionals. A smartphone equipped with Documents To Go and InTact Technology can perform all of the laptop's essential functions without the laptop's cost and complexity. On the IT side, InTact Technology has a very light footprint. Embedded in Documents To Go, it is invisible to end users and requires no custom configuration.

## IV. Fully Mobile Computing

Document integrity is an essential component in mobile computing. The ability to review and edit documents on a convenient handheld device is no great gain if users cannot trust the document's accuracy. Richly formatted documents with embedded graphics, tables, animations, annotations, headers and footnotes are the standard in corporate communications today. Mobile professionals must be able to work with them remotely to keep pace with their competition.

InTact Technology allows mobile workers to have complete confidence when editing files on a mobile device. They no longer have to rely on a laptop or desktop to edit and send richly formatted documents to colleagues or customers. When it comes to editing documents, InTact Technology puts mobile devices on a level playing field with laptops and desktops. In an InTact-enabled environment, the documents that users receive, review and revise on their handhelds are the real versions and that makes mobile computing a real business tool.

**For pricing, licensing, free trials and pilot programs please contact DataViz Enterprise Sales at:**

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