iPad means business

How Apple's Tablet Computer is Changing the Work World

Julio Ojeda-Zapata
“iPad Means Business” Book Excerpt
How Apple’s Tablet Computer Is Changing the Work World

By Julio Ojeda-Zapata
Forewords by Patrick Rhone and Scott Bourne
Afterword by Mike Evangelist

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20660 Stevens Creek Blvd., Suite 210
Cupertino, CA 95014
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Soon after a big gas explosion in Minneapolis, Minnesota, on March 17, 2011, a news story in video form appeared on the Internet.

The rushed but reasonably polished production had footage of the huge fireball rising from a city street, along with narration, titles, and a map showing where the natural gas explosion occurred.191

The video news sequence was not prepared by a TV station or any other professional newsgathering organization. It was the work of Robert Stephens, a technology executive who edited the footage on his iPad 2 in a drugstore parking lot.

and uploaded it to YouTube and CNN.com's iReport. Soon it was being shown on CNN and MSNBC as well as on lots of websites. A still-image capture of the fireball appeared on the front page of the *St. Paul Pioneer Press* newspaper the next day.  

It was a major moment for the iPad 2, which had been released in the United States just six days earlier. An improvement over the original iPad, the second generation tablet is much thinner and somewhat lighter, with new features such as cameras on the front and the back, and more horsepower under the hood.

Of equal note were the iPad apps Apple released to showcase its new capabilities.

There was Photo Booth, which let users take comically distorted or wildly colorized pictures of themselves or their friends using the iPad 2's cameras; FaceTime, a videochat app; GarageBand, a music-authoring app with virtual instruments for use by the musically proficient and inexperienced alike; and iMovie, a video-editing application.

It was iMovie that Stephens used to create his news report with raw footage he’d shot with his iPhone minutes earlier.

And who better than Stephens to do it? He is the founder of the Geek Squad, a famed tech-help company that is now a part of the Best Buy big-box retailer, where Stephens is chief technology officer. Stephens is also a gadget geek who embraces the latest consumer technologies and regularly goes on Minnesota Public Radio to discuss them.

Stephens later told me that his shiny new iPad 2 was one of the first things that popped into his head when he saw the fireball about four blocks away as he was driving to work and felt the heat through his rolled-up window. As he drove closer to the cataclysm while filming with his iPhone 4 (neither of which was safe, he now acknowledges), he was plotting how he’d use his iPad as his mobile video terminal for online news distribution.

192. [http://j.mp/lueFiH](http://j.mp/lueFiH)
193. [http://j.mp/kal60Q](http://j.mp/kal60Q)
"Being a geek, I have to do the newest thing," he later said in a television news interview with the Twin Cities-area Fox affiliate, KMSP-TV Fox 9 News.194

This turned out to be easy, he told me in a separate interview. His iPhone 4 plugged into his iPad via a Universal Serial Bus (USB) adapter that Apple includes as part of a Camera Connection Kit. Transfer of the footage to the tablet was straightforward.

And then he was ready to work his iMovie magic. The iMovie app for iPad is designed to be used with touch gestures, unlike the Macintosh version. For Stephens, placing the tablet in his lap and assembling his news report with finger taps and swipes was a cinch, as was uploading the report to CNN.com and YouTube via the tablet's 3G wireless data connection.

"Screw the explosion," Stephens later wrote in an e-mail interview with the iPad Insight blog. "The REAL story is how easy it is to transfer video onto the iPad and edit it with iMovie."195

Content Creation Recreated

Aside from the cool factor, Stephen's iPad-based video-editing experience was notable because it helped reframe a year-old debate about the Apple tablet's role as a productivity device.

Some have argued that the iPad is a decent device for content creation, in the sense that it can be a reasonable stand-in for a laptop to get serious work done. Earlier chapters of this book have many examples of people who are highly productive on their iPads.

Others have scoffed at this notion, insisting that the iPad is primarily a content-consumption device and a poor substitute for computers with keyboards in the productivity sense.

194. [http://j.mp/eVLmld](http://j.mp/eVLmld)
195. [http://j.mp/mPIESk](http://j.mp/mPIESk)
In a sense, both camps are correct. While the iPad can feel hopelessly restrictive for some who need to create content on a daily basis, others find the device liberating. This is a personal choice (many people use both devices interchangeably for productivity in a variety of settings).

This debate has largely centered on business uses for the iPad—such as creating a text document, spreadsheet, or presentation. That is primarily how I used the iPad on a work-related trip that became fodder for Chapter 6.

With the release of the iPad 2, however, this debate has morphed into something a bit different. Apple helped trigger this change with the release of its iPad versions of iMovie and GarageBand (which have existed in Macintosh form for a while).

Without blatantly saying so, it was clearly trying to settle the consumption versus creation debate once and for all. In its show-not-tell fashion, it demonstrated the ease with which raw video footage could be edited on the iPad using finger gestures, and how on-screen or virtual musical instruments could be serviceable stand-ins for physical instruments.

This was clearly information creation. This was clearly productivity—though of a different sort. While Apple's introduction of iWork apps for writing, number crunching, and presentation making a year ago was intended to position the iPad as a new kind of business tool, GarageBand and iMovie broadened the definition of tablet-centric productivity to include creative work.

Third party app developers have responded to this new trend with their own software for turbocharging the iPad as a tool for creative work.

In May, Adobe released the Adobe Color Lava color-mixing program, the Adobe Eazel finger-painting program, and Adobe Nav, which turns the iPad into a controller for Adobe's popular Photoshop program.196 What's more, Adobe is making it possible for others to create their own apps to extend Photoshop capabilities into the touch realm via the iPad and other touch devices (including Android tablets and Research In Motion's BlackBerry PlayBook tablet).

A full version of Photoshop for iPad was rumored to be in the offing, prompting the Gizmodo tech website to publish a post titled, "Why Photoshop for iPad Marks the End of the Desktop Computing Era."\(^{197}\)

These Adobe announcements generated excitement among creative types. So did the release of Comic Life for iPad, a touch-based version of the wildly popular Mac- and PC-based program for creating customized comics.\(^ {198}\)

The iPad 2 and a new breed of apps to spur visual, auditory, and tactile creativity are already triggering an explosion of new content.

In March, a music video for the song "Need" by pop singer Eddy was released with footage shot entirely with iPads.\(^ {199}\) Remedy Films, which created the "Need" music video, mounted a couple of its tablets on rigs of various sorts, while a third was used for handheld shooting. Eddy held up a fourth tablet during various music video sequences to jazz up the production.

"Need" was shot but not edited on the iPad. Another video production, a web series called "Goldilocks," took the opposite tack with its ninth episode; footage was shot using the iPhone, and then edited in iMovie on the iPad. The makers trumpet this fact in a trailer.\(^ {200}\)

For pure iPad creativity, though, it is hard to top *Underwear Party*, the inaugural album of a Minneapolis band called the Ultramods.\(^ {201}\) Max "Bunny" Sparber and Coco Mault used no physical instruments when recording the album's pop-punk songs, most of which had been previously composed. Everything was done in the iPad's GarageBand app, with touch gestures to strum virtual guitars, bang on drum sets, and so on, along with the tablet's microphone to add vocals.

\(^{197}\) [http://j.mp/hDjzH5](http://j.mp/hDjzH5)

\(^{198}\) [http://plasq.com/products/comiclife/ipad](http://plasq.com/products/comiclife/ipad)

\(^{199}\) [http://j.mp/kMCzsr](http://j.mp/kMCzsr)

\(^{200}\) [http://vimeo.com/20953766](http://vimeo.com/20953766)

\(^{201}\) [http://j.mp/fc3ZWx](http://j.mp/fc3ZWx)
Sparber said he became fascinated with GarageBand when he bought an iPad 2 shortly after the device’s debut. It occurred to him that creating his band’s debut album with the app would make sense since the band’s lyrics often deal to a large extent with technology.

"It is also the cheapest and easiest way to make music," Sparber told me. "You pay $500 for the tablet, a few dollars for GarageBand, and you have all the instruments you need. This is really appealing from a DIY (do it yourself) perspective."

In GarageBand, the Ultramods were able to put together a standard instrument set of two guitars, a bass, and drums. For the latter, they sometimes availed themselves of automated or "smart" drums capable of generating an infinite variety of loops. Though GarageBand’s smart instruments are aimed at music novices who need a helping hand, Sparber and Mault found them a useful addition to the repertoire.

They even created the album cover on the iPad, snapping photos with the tablet’s rear camera and the popular Hipstamatic app, and then adding text to their chosen shot right on the tablet screen.

They did cheat a little during the album-uploading phase, which had to be done on their regular computer. Their tracks also had to be exported in WAV format, which GarageBand on the iPad cannot do. But Sparber told me *Underwear Party* is otherwise a pure iPad creation.

Albums like this can’t succeed on their tech novelty alone, and some reviews of *Underwear Party* weren’t kind. Sparber took this in stride.

"Music created by an iPad will not sound like music created in a multi-million-dollar studio," he said. "It will always be rougher, it will sound cheaper, but that is absolutely perfect for the punk aesthetic."

Once someone purchases an iPad, Sparber said, "making music from that point on is free. That's just astonishing. Creating culture has long been undergoing an increased democratization, but that never happened to music until recently.

"All of a sudden, musicians can find audiences without spending thousands of dollars," he said. "It's liberating, in a way."
The Ultramods go into detail about this in an essay called, "Fast, Cheap and Out-of-Control: How to Make Your Own Goddamn Music and Why Nobody Can Stop You."\(^{202}\)

**A Killer Presentation Tool**

Apple has hardly lost sight of the iPad's value as a business-centric device given its broad adoption in the corporate sphere. In fact, it emphasizes this in a series of company profiles on its site.\(^{203}\)

It has also improved the tablet in ways that make it more useful in work-related scenarios.

Perhaps the most important of these are High-Definition Multimedia Interface (HDMI) compatibility and video "mirroring."

The HDMI part means an iPad 2 can be connected to a high-definition television (HDTV) or recent model projector using a regular HDMI cable. One end of the cable plugs directly into the TV or projector, and the other connects to a special Apple adapter that is plugged into the iPad 2.

Once this is accomplished, the mirroring becomes possible. This means anything appearing on the tablet screen is duplicated on the television or projection screen (only larger).

In the past, iPad hookups to projectors were accomplished only via Video Graphics Array (VGA), and full mirroring was not a possibility. Options were more limited: the iPad could play a video, or run through a presentation deck, but little else.

Mirroring means a business presenter, K-12 educator, or university instructor can share anything—*anything*—that is on his or her tablet screen. Even the iPad's front- and rear-facing cameras can be harnessed to share a FaceTime videocall with a classroom or boardroom.

\(^{202}\) [http://j.mp/gKOQa1](http://j.mp/gKOQa1)

That is precisely what I did during a presentation at a Twin Cities technology conference not long after the iPad 2 was released. I had my tablet linked to a projector (not via Apple’s HDMI adapter but via its older VGA adapter, which also supports mirroring if used with the iPad 2).

I had two guests, the famed Apple-related writers Jeff Carlson and Christopher Breen, queued up to join me from their remote locations. The idea was to engage with each tech celebrity in an iPad- and FaceTime-based conversation that all in the room could see and hear.

Setup was a breeze. I was at Best Buy headquarters, in one of several presentation rooms with a projector hanging from the ceiling and a VGA cable at the lectern for hooking up a laptop or tablet.

I jacked in my iPad via the Apple VGA dongle, and my tablet home screen promptly appeared on the projection screen. An audio cable went into the iPad's headphone port to pipe sound through the room's speakers.

The video chats with Jeff and Chris went well. I called them on FaceTime and they popped right up (on the small screen and the large one). They could see me via the iPad's front-facing camera, and hear me via a mike built into the tablet. The audience could see and hear the guys perfectly.

This experiment was a nearly complete success, though in hindsight I would have done it just a bit differently.

I should have permitted Jeff and Chris to see the audience using the tablet's rear-facing camera. Instead, because the tablet was angled backward, they had a boring view of the lectern. At the very least, I should have switched to the back camera as I finished each of the chats and panned the room with the iPad so my guests could see as well as hear the audience's applause.

Still, I was pleased with how this worked out, and I intend to use a tablet instead of a laptop when I deliver future presentations.

204. [http://j.mp/hGJZW9](http://j.mp/hGJZW9)
The iPad 2 isn't the only tablet to allow such mirroring. In fact, some tablets do it a bit better than the iPad.

Devices like Motorola's Xoom and Research in Motion's BlackBerry PlayBook don't require an Apple-style adapter because they have Micro HDMI ports. Users connect the tablets to a TV or projector using an HDMI-to-micro-HDMI cable, which is simpler and more elegant.

**Bedlam in a School Gym**

The students at Heritage Middle School in West St. Paul knew they'd all be getting Apple iPad 2 tablets to use for schoolwork. They just didn't know when.

School staffers were maddeningly evasive when asked about this, even though they held a series of iPad orientation sessions for the kids and parents, and assured them the tablets would likely see the light of day before the end of the school year.

Then, one day, Principal Chris Hiti began to boogie.

The students, assembled in their school's gym for what they thought was a standard pep rally, were agog when the tall, burly administrator bobbed his hips and doffed his sweatshirt to reveal a black T-shirt imprinted with "iHeritage" (it said "iStaff" on the back).

Teachers joined him in a frenetic line dance or "flash mob."

And then the kids saw the unfurled banner and the answer to their prayers: "Heritage iPads are here!"

Heritage has become the latest in a growing number of K-12 schools around the world outfitting their students with iPads to modernize teaching and to energize the students.

It is not the first school in Minnesota to do this, and it will not be the last.

205. [http://j.mp/f9wSo1](http://j.mp/f9wSo1)
Gibbon Fairfax Winthrop Schools has deployed tablets in its Winthrop, Minn., high school. The Little Falls, Minn., school district is to give a tablet to every student in grades five through twelve in late 2011.

But Heritage is busting with pride to be a Twin Cities trendsetter, Hiti told me. "When we are the only school around here to do this, it makes this pretty special for the kids and the teachers."

As for the energy at the school the afternoon the iPads were unveiled, Hiti explained, "We have been whoopin' this up for a while, and the excitement has built up."

Sixth-grader Kara Osborne, getting a look at her tablet in a classroom session after the pep rally, explained the fuss about the iPad another way: "It's an iPad." Duh.

Alex Radack, 11, said he welcomes the chance to cut down on paper—including some of the textbooks and notebooks he customarily has carried around. "You only get one chance to save the environment," Radack said.

Joseph Dill, 12, added, "We will not have as many excuses to lose schoolwork" because it will be stored electronically on the tablet and school servers. "Turning in an assignment will be easier."

Besides, said 12-year-old Dalia Lopez, writing with pen and paper is lame.

Heritage distributed 685 iPads to students in the spring of 2011, with plans to boost that figure to 730 by the following fall. It installed more than one hundred educational apps on the iPads, and tied the devices to facility-wide Wi-Fi and Google-branded Internet services such as Gmail.

The tablet deployment was made possible by a federal grant that pumped more than $7 million into Independent School District 197 in West St. Paul, Mendota Heights, and Eagan. The cash transformed Heritage into a magnet school emphasizing science, technology, engineering, the environment, and mathematics. (In fact, its official name is
now Heritage Environmental-STEM Middle School, with "STEM" as an abbreviation of science, technology, engineering, and mathematics.) The iPad program figures into this new educational emphasis.

Two of the district's elementary schools, Pilot Knob and Moreland, also received some of the federal cash and would get iPads, though on a lesser scale, with tablets mostly used on-site.

Shortly after the gym event, the moment the Heritage students had dreamed about finally came: queuing up outside their classrooms, they were handed iPads still in their boxes, along with Apple Smart Cover protectors. They began a series of training sessions that would culminate in the ultimate privilege: being allowed to take the tablets home through the end of the school term (they'd get them back in the fall).

Of particular interest to the students as well as the teachers was one feature that set the iPad 2 apart from its predecessor: the cameras on the front and the back. Within minutes of claiming their tablets, the students were gleefully taking pictures of each other, morphing their own faces in FaceTime, and planning how they would communicate with each other from their homes using FaceTime videoconferencing. A picture of one such FaceTime chat later popped up on the Instagram site. 206

Teachers, meanwhile, were seeing educational potential in the cameras, which they said would allow their students to communicate easily with schoolchildren elsewhere in the country and the world.

District Superintendent Jay Haugen described the Heritage iPads as "digital backpacks" that allow schoolchildren to consolidate the bulk of their learning material into a single device. The ultimate goal is to abandon physical textbooks, though Heritage is not close to doing that yet. The iPads also are intended to help bridge a "digital divide" between students from well-to-do households and those that can't afford fancy computers or broadband Internet, Haugen told me. Heritage's tablets have cellular data capabilities that are built in but deactivated. The district will look at selectively turning on the data

service for Internet access, based on student need, said Marilynn
Smith, the district staffer who is coordinating the federal-grant
implementation.

Heritage staffers relished the secrecy surrounding the iPads' arrival
and how they went to extraordinary lengths to keep the students in
the dark.

The tablets were whisked into the building through a side door and
locked in an out-of-the-way storeroom.

"This was very covert, very sneaky," said Sarah Shanley, who is
Smith's counterpart on the Heritage staff.

With the secret finally spilled, "Parents are very excited to have the
tablets coming home with their kids," Shanley said. "Everyone is very
excited to see what kids will be doing with them."

**iPads On the Anchor Desk**

Most who watch news anchor Vineeta Sawkar on KSTP-TV in Minne-
apolis-St. Paul will most likely miss what is resting before her on the
desk.\(^{207}\)

While most anchors shuffle stacks of printed-out scripts, Sawkar pulls
up the information on an iPad. The Apple tablet is hard to spot,
sheathed in its black case and angled toward Sawkar so that the
glowing screen isn't visible to viewers. What's more, Sawkar doesn't
make a fuss about her tablet, which is just an everyday tool for her.

Yet this is another indication of how the iPad has infiltrated the work-
place. In fact, the tablet has become the darling of TV anchors around
the nation because it's so easy for them to use on-set for access to in-
formation and input from their viewers.

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\(^{207}\) [http://j.mp/hHsSoa](http://j.mp/hHsSoa)
During the recent royal wedding of Britain's Prince William to Kate Middleton, for instance, an iPad was one of the tools used by ABC news anchors sitting at one of the news desks overlooking Buckingham Palace.208

This takes me back to the debate about whether the iPad is a good device for productivity. Many have equated productivity with the creation—instead of the consumption—of information. But while TV journalists like Sawkar create virtually no new information on iPads, only consume it, to say they aren't productive on their tablets would be absurd. Sawkar and her iPad are rarely apart during her early-morning and late-morning anchor duties.

One of several iPads made available to KSTP-TV anchors, the device has been configured by tech staffers to access newscast scripts via a Web app. Since those scripts are always being updated, Sawkar can get the latest by tapping an on-screen refresh button instead of making fresh paper printouts as her colleagues typically do.

The irony: Sawkar is hardly a gadget geek. She once expressed wonderment when told her device's Apple protective sheath was capable of positioning her tablet upright on a desk as well as at a slight angle.

Yet Sawkar is among an adventurous new breed of television journalists who are eager to push the tech envelope and try fresh approaches. It's all part of the fun, even if the attempts are sometimes failures, they argue.

"I'm determined that this is the way to go," said Sawkar about her iPad use, even though she has had crises when her script stream was abruptly cut off. "I've been burned a few times ... but I love to learn this technology. I wanted to try it even though I'm one of the older ones here."

The KSTP-TV newsroom's four anchorpads are aimed at cutting down on the paper printouts that cost the station a fortune every year, as well as putting the company on the cutting edge, Chris Meltvedt, KSTP-TV's news-operation manager, told me.

"I think we've only scratched the surface," Meltvedt said.

KSTP-TV's sister station, WDIO-TV in Duluth, Minn., has tried other iPad approaches. During a recent hockey game, a producer at the arena used an iPad to queue up commercials during the broadcast instead of asking tech staffers at the station to do so.

And when WDIO records commercials in the field, tablets are used as Teleprompters while fitted into a special casing with an internal mirror. Scrolling text on the tablet screen is visible to the talent as he or she looks straight at the camera.

This approach has not been attempted with news coverage yet, since reporters can typically reel off their scripts without help, said technology coordinator Hartley Schilling of WDIO's engineering department. But it is only a matter of time before tablets are used to cover news stories, he said.

"We're dreaming up new stuff every day," Schilling said.

Some Twin Cities TV anchors are not waiting for their employers to give them tablets. They are packin' their own.

Mike Binkley of WCCO-TV in Minneapolis loves his iPad. "I was one of those geeks standing in line for the first ones," he told me. "I guess I was lured in by all the hype."

Yet the tablet has had a substantive impact on how he does his job. He keeps it handy when anchoring morning and midday newscasts, and depends on it for late-breaking information he can weave into scripts on the fly. Such facts include snowfall totals during storms, he noted. And with thousands of viewers monitoring Binkley's morning-show Facebook page, the iPad is vital for monitoring the audience's mood and answering their questions.

"Facebook is up at all times," Binkley said.

Similarly, morning-news anchor Jason Matheson of Fox 9 in the Twin Cities uses an iPad on a show called the Buzz to get Twitter and Facebook feedback from his viewers.
There are many, many more examples like his around the country.

The iPad as a Cash Register

The “swag sale” is newsroom tradition at the St. Paul Pioneer Press, where I work.

Newspapers like mine are flooded with swag, which refers to books, movies, music, food, tech products and other stuff sent in by their creators in the hope of scoring coverage. The swag piles up quickly, so a sale is held every year or so to get rid of it. Pioneer Press staffers get to buy the swag at a discount, and all proceeds go to various local charities.

I’ve been in charge of the swag sale for the past few years, which is like operating a business. I manage an inventory, plan how to display it, interact with clientele, and accept their payments. The latter always meant cash or checks—I hadn't found a simple, streamlined way to process credit-card payments, so I never bothered.

This changed in a big way late last year.209

Square, a company created by Twitter co-founder Jack Dorsey, has made it a cinch for anyone to take plastic.

The service, which is free once you give Square certain bank-account particulars, turns an iPad (or iPhone, iPod Touch, or Android phone) into a credit-card terminal. Square sends a free card swiper that plugs into a headphone jack, but the plastic widget is not required to use the service.

A card payment can be accepted simply by firing up the Square app and tapping in a credit card number, expiration date, security code and the buyer’s ZIP code. The buyer signs on the screen with his or her fingertip once the card is authorized. Optionally, he or she can provide an e-mail address in order to receive an electronic receipt.

This proved to be a sensation at my swag sale.

209. http://j.mp/m69arP
I had the iPad sitting upright in a stand on an office desk as I took one charge card after another, tapped in the buyer's information (I couldn't get the reader to work, for some reason), and gestured towards the touch screen each time I wanted someone to finger-sign. My customers couldn't get over that, and marveled at how an Average Joe could take card payments with such ease and elegance.

Square, as you'd expect, takes a cut of each transaction—2.75 percent. That's about the only "gotcha" I could see (along with the bad swiper, which Square later replaced with a modified model that works flawlessly).

Proceeds from my swag sale took a little while to land in my credit union account but that wasn't a big deal. I then withdrew the money via cashier's checks made out to the swag sale's charity recipients.

Square in 2011 became a tech hit. Early in the year, the San Francisco company shipped nearly 342,000 swipers and logged about 332,000 activated users. One day in April, it processed about $2 million in payments, up from $1 million on March 2. By May, it had shipped about 500,000 readers and was processing about $3 million in payments a day.

Square got a boost from Apple, which began to sell Square readers in its retail and online stores, and from Visa, which invested in the company.

Square was also in for a bit of controversy. Competitor Veriphone, which offers a similar service, lambasted Square for not integrating encryption into its readers in order to shield users' sensitive financial information. Square fought back, saying its transactions were no different from handing a card to a waiter in a restaurant. Yet, in late April, Square announced it would be shipping a new reader with encryption built in.

In Chapter 2, I profile small-business owners who have integrated Square into their operations. I was impressed with that, but didn't fully grasp the implications of a service like Square until I had used it myself. Now I'm a true believer.
So is Scott Nedrelow, a Minneapolis maker of cases and sleeves for iPads and MacBook Air laptops. He uses Square to process payments from customers who wander into his studio.

Dorsey once bought one of Nedrelow's products online and, upon finding out he uses Square for his studio transactions, sent the man a bunch of extra card readers.

Square also is part of a Location Books niche imprint Nedrelow runs with partner Ruben Nusz. Nedrelow said the payment technology has proven essential when he's hawking his handsome art-world volumes at book shows.

He didn't have credit-card processing before Square came along, he noted, and he did not want to go through the hassle and expense of getting a traditional merchant account.

"Square is very convenient for me," he said. "It's very portable."

Minneapolis-based Midway Contemporary Art also uses Square. The nonprofit organization, which operates a contemporary art library and sponsors a variety of art exhibitions, has a need to process payments at its periodic fundraising events. Square has been a salvation in this regard, said Alice Dodge, the nonprofit's library and grants manager, who learned about the technology from Nedrelow.

"People are amazed when I hand them a device to sign [with a finger-tip]," Dodge said. "They ask, 'Don't you have a pen?' I say, 'No, just use your finger.' That's kind of fun and it definitely makes the checkout go quicker."

When Minneapolis cartoonist Ursula Murray Husted goes on the road to comic book shows, her fiancé Bryan Bornmueller typically comes along with their Square gear. The artist sells more of her handiwork that way.

"People only have so much cash, but if they can pay with a credit card, that's one more book we wouldn't have sold otherwise," Bornmueller noted. "That pays for all the 2.75 percent processing fees and then some."
In fact, "We've sold some product just because people wanted to try Square," he said. "They do not understand how it's possible to sign with a finger. They say, 'Show me.' The process is very fun for people."

Bornmueller said he has been involved in setting up traditional, fee-laden merchant accounts for credit-card transactions at local companies, and "the expense and complexity is mind-boggling. The impressive thing about Square is how transparent the whole process has been." Bornmueller likes Square so much that he even uses it in his personal life, to settle personal debts.

"I'll go out to dinner with friends and, if nobody has cash, I will pay for everything with my credit card and then charge all of their cards with Square," he said. "We're all twenty-somethings. Who carries cash?"

As spring gave way to summer, Square continued to evolve. Late in May, it announced major iPad-specific upgrades that would let merchants of all sorts make better use of their tablets as a newfangled kind of cash register.  

A new Square Register app allows such businesses to manage the items they sell, check daily transactions, update pricing, automate checkout, generate digital receipts, and maintain virtual storefronts so potential customers in the vicinity can easily become aware of them.

iPad Versus Laptop, Take Two

Writing this book update inspired me to repeat an iPad experiment: using the tablet in place of a laptop for all my work-related computing over the course of about one week.

That is exactly what I did during a work-related trip last year, as detailed in Chapter 6 of iPad Means Business.

A number of things have changed since then. New productivity-related apps have come on the scene, and old ones have improved, to the point where performing certain crucial tasks isn't as painful on a tablet as compared to a laptop.

The iPad has become more powerful.

So it was time to repeat my one-week-with-an-iPad experiment. I wasn't traveling this time, just working in my cubicle at the Pioneer Press as well as in my home office and, on occasion, in a coffeeshop or restaurant.

The experience was otherwise essentially identical. My experiment went well, for the most part, but I did run into problems that highlighted where there's room for improvement.

I've already detailed how I used the iPad as a presentation tool. Here's how I harnessed it for two other critical tasks: writing and blogging.

**Writing.** For much or all of my workdays, I am flailing away on a keyboard as I take notes during phone interviews, compose blog posts, whip out social-media dispatches, and write tech articles and columns for print publication.

The iPad 2 is great for this, but it required me to make adjustments. I've never adapted to the tablet's on-screen keyboard, and it's a bit of a pain to pair up an external keyboard via Bluetooth wireless. I use Apple's Wireless keyboard with Incase's Origami Workstation, an accessory that protects the keyboard when it's not in use, and morphs into a tablet stand when I need to become more productive in a business sense.211

My larger problem is Google Docs, which is my preferred way to write via the Web-based suite's word processor. This works well on a traditional PC or Mac but disastrously on the iPad.

Accessing it within the iPad's Safari browser drops me into a basic mobile version of the service with limited editing options and alarmingly buggy performance. The alternative to browser-based access is a Microsoft Office-like app, such as QuickOffice or Documents to Go, but neither of these has nailed the Google Docs experience, either. There are performance and syncing issues.

211. [http://j.mp/iLmftj](http://j.mp/iLmftj)
I gave up on the Google Docs strategy and tried something different. Elements,212 a popular writing app for the iPad and iPhone, syncs with the famed Dropbox online-backup service.213 This means any document I create on an iOS device is available for editing, in a plain-text format, on any of my PCs or Macs with Dropbox installed. This is killer.

Elements has other nice touches, such as an email-file option, a scratchpad for notes and bits of text, and a running tally of character, word, and line counts. It has proved essential for all kinds of writing.

In fact, my patience with Google Docs may wear thin and I may decide to embrace the Dropbox system permanently since it plays nicely with portable devices, such as the iPad, as well as traditional computers. Elements is hardly the only iOS app for writers to include Dropbox support. Others include PlainText, Droptext and iA Writer.

**Blogging.** Here’s where productivity on an iPad can really bog down. Blogging on a traditional computer is a breeze via powerful blog-posting tools, ranging from sophisticated Web-based interfaces to desktop editors. Two of my faves in the latter category are Windows Live Writer and MarsEdit, a popular Mac-based program.

I’ve craved similarly capable blog-post editors for the iPad, but they’ve been slow in coming. Blogging on a tablet for me, therefore, has involved workarounds.

Posterous, one of the three blogging services I used most heavily, allows posting by email—meaning text, pictures, and videos sent to a special address get magically organized into an attractive-looking post.

Bookmarklets have also been lifesavers when blogging on an iPad (they work on a PC or a Mac, too). This is a special kind of Web bookmark that, when selected, reformats the page I currently have up for reposting on one of my blogs. So if I want to share a photo, a video, or a snippet of text with readers on Posterous or Tumblr (another blogging service I use a lot), firing up the relevant bookmarklet will semi-automate the process.

213. [http://j.mp/bCPY5R](http://j.mp/bCPY5R)
Traditional long-form blogging remains a problem for me, though. My work-related Your Tech Weblog is hosted on Movable Type, which is sorely lacking in iPad compatibility and support from third party tablet-app developers.

Posting to my work blog is an ordeal. The service's standard Web-based posting interface is flexible but more difficult to manipulate on a touch screen than on a mouse-driven computer. An alternative, via a stripped-down posting interface for mobile devices, deprives me of key features.

I have been experimenting with Markdown, a kind of plain-text writing that makes coding up a blog post easier. This involves formatting text in a certain way so it's ready to be dropped into posting windows on services that understand Markdown. Such Markdown-friendly services include Posterous, Tumblr, and Movable Type.

Elements comes in handy here because I can compose in Markdown using the text-edit app, then hit a "Markdown Preview" option to see if I did the Web formatting correctly. But dealing with images in blog posts is still a hassle.

That's why I am excited about Blogsy. This is the first decent iPad-based blogging app I have seen, because it lets users drag pictures and videos into posts using touch gestures. But Blogsy works only with the WordPress and Blogger blogging platforms, and not the Movable Type, Posterous, and Tumblr platforms I use. (As I wrote this, my employer was weighing a switch to WordPress, which made me happy.)

The Squarespace blogging platform has a not-bad iPad-based posting app—not on par with Blogsy, yet decent—but I don't use that service, either. WordPress updated its own iPad app in late May. Jared Newman of the Technologizer site was not impressed. "WordPress'
latest app update is still missing major features that no blogging tool should be without," he wrote. "That means I can't use it for anything but rough drafts."²₁⁸

**Flood of iPad Rivals**

For all its faults and its shortcomings as a productivity device, the iPad 2 is vastly superior as a work-related device to the flood of rival tablets that were flooding onto the market as I wrote this.

Many such competitors are using the Google-spawned Android operating system, which has been a megahit on smartphones but was hardly taking the tablet market by storm in the first half of 2011.

One such Android tablet is Motorola's Xoom, which I tested in April and May in a version with Verizon's 3G data service (it had not been updated to the wireless carrier's higher-speed LTE 4G network at that time).²¹⁹

I also got to play with Acer's Iconia Tab A500, which like the Xoom has a roughly ten-inch screen but cost much less upon its release in May.²²⁰ The Xoom and Iconia Tab were among the first Android tablets to run a tablet-specific version of the operating system nicknamed "Honeycomb." Though not as elegant and streamlined as the iOS on the iPad, and with often-buggy behavior, Honeycomb impressed me with its logical and thoughtful design.

A third tablet I tested, the HTC Flyer, fit midway between a smartphone and iPad- or Xoom-like tablet with a seven-inch display and a customized version of Android more akin to that on HTC's excellent smartphones. The Flyer's smaller size suited me since I found the device easier to carry around, and to use for thumb typing.²²¹

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²¹⁸. [http://j.mp/mjqBCs](http://j.mp/mjqBCs)  
²¹⁹. [http://j.mp/m7bcNI](http://j.mp/m7bcNI)  
²²⁰. [http://j.mp/g4sF6f](http://j.mp/g4sF6f)  
²²¹. [http://htc.com/Flyer](http://htc.com/Flyer)
As a bonus, the Flyer includes a "Smart Pen" for more easily making annotations, highlighting text and creating drawings and diagrams. But it's easily to lose the pen; I lost mine and had to beg HTC for a replacement.

Other iPad rivals in the first half of 2011 included Hewlett-Packard's sexy TouchPad, a byproduct of HP's acquisition of Palm and its WebOS; and Research in Motion's BlackBerry PlayBook, which I tested in May.

I never was much of BlackBerry user, yet I became fond of the PlayBook in my few weeks with it. It is a gorgeous tablet.

Smaller than the iPad, with a seven-inch screen instead a 9.7-inch one, it's exquisitely portable in the stylish, stretchy Neoprene sleeve bundled with the device. I carried a PlayBook around for weeks in my backpack, and scarcely knew it was there.

The PlayBook is a joy to use, too. Research In Motion did a nice job with the unique operating system on this device. The software has polish and flair, along with logic in how it is designed.

The PlayBook is a pretty good multimedia device, as well. One of my big complaints with Android tablets is my difficulty in getting videos on my Mac onto the tablets in a viewable form. This is alarmingly inconsistent.

The PlayBook is much less of a hassle in this regard—it was able to play most of the video files in a variety of formats that I transferred over to it via a Universal Serial Bus connection.

So, for entertainment, the PlayBook was a nice-enough device. But as a work tool, I found it seriously wanting.

App selection, for instance, was abysmal as of late May. RIM had said it would provide a way to run Android apps on the device, but that hadn't happened as I wrote this. Aside from basic word-processing, spreadsheet, and presentation apps bundled with the tablet, there was little to draw me in as someone needing to get real work done.

The PlayBook also was missing key capabilities, such as built-in e-mail, contact, calendar, and task functions. RIM's solution was to have users pair BlackBerry phones with the PlayBook, which then runs e-mail and the other functions off the handset. I tried to be open-minded about this bizarre arrangement, but it did not work well in my case. Keeping the two devices connected proved to be a nightmare.

The PlayBook has some other useful touches, such as superb video-record quality with the rear camera, a Micro-HDMI port for full mirroring when hooked up to an HDTV or a projector, and an Apple-elegant appearance.

It is just not compelling as a business tool when compared to the iPad 2.

Android tablets were a bit farther along in this regard as of late May. On the models I tested, I could install Office-like suites such as Documents To Go and QuickOffice, remotely log in to my office and home computers using an app called LogMeIn Ignition, and engage in a number of other work-related activities.

But tablet-customized apps in the Android Market numbered only in the hundreds at best during the first half of 2011, compared to the thousands in Apple's App Store.

Apps are everything on tablets—as they are on smartphones—so the shocking scarcity of tablet-specific apps in Google's Android Market and RIM's App World compared to Apple's App Store left me doubtful about the future of non-Apple tablets in the business and productivity spheres.

Only the iPad, it seems, means business—for now.
The iPad Is Back in Business

On June 6, 2011, at Apple's Worldwide Developer Conference (WWDC) in San Francisco, the iPad was again emphasized as a business-style productivity device.

I described at the beginning of this chapter how Apple unveiled the iPad 2 with an emphasis on creativity apps, such as GarageBand and iMovie. Business-type productivity—via Apple's older iWork apps for document editing, presentation creating, and number crunching—took a bit of a back seat.

At WWDC, iWork was back—and then some. In fact, a week earlier, Apple released versions of its iWork apps for the iPhone to complement the versions for the iPad and the Mac. Why this happened was entirely clear since Apple hadn't typically positioned the iPhone as a device for intensive business-style productivity (such as word processing).

Then, on the WWDC stage, Steve Jobs and his Apple lieutenants made it apparent why they had created an iWork trinity. This could be summarized with one word: iCloud.

Apple was making a play for Internet- or "cloud"-based tools for productivity and entertainment, the arena long dominated by the likes of Google. Apple had aimed for the cloud before, with its MobileMe suite for Web-based mail, scheduling, contact management, and more, but stumbled spectacularly.

With iCloud, it was determined to get it right. Along with classic MobileMe components, it added cloud-based components for music, e-books, apps, photos, and more. The idea with each of the components is the same: a user's content is centralized in the cloud, and can be pushed to any of his or her computers or Apple mobile devices as needed.

These features are to be rolled out in autumn of 2011.


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So what about office-style productivity? For that, Apple added another iCloud component called Documents—and here’s where the iPad, the iPhone and Mac begin to interact harmoniously in a business sense.

Say you create a document in Apple’s Pages app on your Mac, and realize later that you need to make some tweaks. Your Mac is not available, but your iPad is. So you fire up Pages on the tablet, and there’s all your work, ready to be modified. You can make more changes via Pages on your iPhone, or back on your Mac, and all edits are logged in the cloud so they are reflected on all devices with Pages installed. Syncing occurs automatically and transparently.

You'll recall my love for Google Docs on standard computers but my difficulty in using the Web tools on mobile devices like the iPad. Without effortless functionality on all sorts of devices, the Google productivity suite isn't living up to its full potential.

In fact, I had to ditch Google Docs when working on an iPad, as I have said, and use alternatives such as the terrific (but limited) Elements app with Dropbox syncing for my writing.

That is why the iWork and iCloud alternative is so exciting—especially on the iPad. The tablet hadn’t lived up to its full productivity potential for document authoring, presentation creating and the like because the office-style tools for it weren't (to use Apple’s terminology) "insanely great."

Now iWork with its cloud syncing is showing flashes of brilliance—and it's showing other app developers the way since Apple is allowing anyone to build the same iCloud-sync features into their own apps.

As I wrote this, I hadn't decided if I'd ditch Google Docs permanently and embrace iWork and iCloud for all my document-related work; boy, was I tempted. But since I long ago defaulted to Apple’s Keynote app on Mac for creating presentations, I was already in the iCloud where my decks were concerned. (I'm not much of a spreadsheet jockey, but Apple's Numbers for Mac, iPhone and iPad looks hot, too.)

226. http://j.mp/11jsQg
These were not the only WWDC announcements to affect how the iPad will be used for work. Apple also announced a new version 5 of its iOS, the operating system that powers the iPad along with the iPhone and the iPod Touch. It is due to be released in the autumn alongside iCloud. And iOS is crammed with new features to help those who use their iPads as primary computing devices.227

Here are some of the new features:

**Less reliance on Macs and PCs.** Traditionally, iOS devices had to be hooked to computers in order to be activated, updated, synchronized, and backed up. Now Apple is making this a thing of the past.

iPad users will now activate the tablets with a simple log-in, no computer required. They'll update the iOS and back up their data to the iCloud over Wi-Fi. They'll get access to a complete listing of their purchased apps (along with music and e-books) for download from Apple's servers as many times as they want.

An iPad need never be connected to a computer, in fact. This elevates the tablet in importance for business users since they can take that single device on work trips without worrying about any major restrictions or limitations. The iPad becomes their primary computing device in every sense of the word.

And if they lose their iPads, they need only log in to their Apple accounts on a replacement tablet to get all their stuff back. This brings peace of mind.

**Reminders.** For the first time iOS includes a to-do capability, with the option to sync tasks with iCal on a Mac and Outlook on a PC.

**Improved notifications.** Instead of popping up as windows that interrupt whatever an iPad user is doing, notifications now appear subtly at the top of the screen. And with a finger swipe, a Notification Center with a list of recent notifications is magically revealed.

**Upgraded mail.** The e-mail app on the iPad and other iOS devices gets badly needed features such as rich-text formatting and indenting, message flagging, full-message searching, the ability to create folders, and more. The iOS calendar app has been upgraded, as well.

**Free texting.** BlackBerry users have the BlackBerry Messenger service for augmented texting capability among RIM devices. Now iPad users have a similar service called iMessage for free texting and Multimedia Messaging Service (or MMS)-style messaging among iOS devices.

**Split-in-two thumb keyboard.** Have you ever tried to thumb-type, phone-style, on an iPad’s big screen? It isn’t easy, believe me. Now Apple is making this easier with a split keyboard that puts one half on the left edge of the screen and the other half on the right for more comfortable typing.

**Twitter integration.** Don’t think this is a business feature? Think again. Twitter has become a major business tool in recent years. In fact, I wrote a Happy About® book, *Twitter Means Business*, on that very topic.

In iOS 5, a single Twitter log-in will provide access to the short-messaging service throughout the device so users can tweet from within the browser, camera app, maps app, video and photo apps, and so on.

**AirPlay mirroring.** I told you earlier how anything on the iPad 2 screen can be mirrored on an HDTV screen via a physical VGA or HDMI connection. With iOS 5, Apple is adding a wireless option.

"AirPlay" refers to a technology built into Apple hardware and software for sharing video, music, photos, and other content among devices over a Wi-Fi network.
Now, Apple is harnessing AirPlay for mirroring, which means no cords and adapters are required to throw up an iPad's Keynote deck, webpage, video, or other content on big screen TV. You do require one of Apple's Apple TV devices hooked up to the TV for this to work, but the device is so tiny that it can be easily slipped into a briefcase.

When I consider all of these upgrades as a whole, I realize the iPad means business more than ever.
About the Author

Julio Ojeda-Zapata covers consumer technology for the St. Paul, Minn.-based newspaper, Pioneer Press, where he writes a weekly Tech Test Drive column and blogs about the latest tech trends. During a lifelong career in journalism, he has worked as an editor and earned multiple awards for his writing. He is the author of another Happy About book, Twitter Means Business, which documents the rise of Twitter as an essential business tool. He is a gadget junkie, an Apple addict, a social media maven and a nerd. A native of Quito, Ecuador, he spent the bulk of his childhood in San Juan, Puerto Rico and considers himself a "boricua." He lives in St. Paul with his wife and son. Learn more about Julio at http://ojezap.com.
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“The most common question asked by potential iPad buyers: ‘Other than playing Angry Birds, what the hell can I do with this thing?’ Citing example after productive example, Julio Ojeda-Zapata capably makes the case for the iPad as business tool.”

Christopher Breen, Macworld Columnist and Podcast Host

“Trying to get your boss to buy you an iPad? Show him or her this book. It’s jam-packed with case studies that prove the iPad is much more than a tablet o’ fun (it’s that, too).”

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