

Why I Love My Livescribe 3 Smartpen (Part 2)

By Matthew Yospin

In last month's issue of the *Bar Journal*, I wrote about testing the waters with the Livescribe 3 Smartpen.¹ This month, I address data security, caveats for using the pen, and my suggestions for improvements.

Security concerns

I've shown the pen and my use cases to friends and colleagues, and other attorneys have asked me if I have any security concerns with the Livescribe pen and app. I do, though a relatively recent change by Livescribe has addressed one concern. Here are a few things to keep in mind.

Can the camera take pictures of people?

I haven't asked Livescribe about this, but I'm not concerned. The camera is focused for the page, about an inch away, and it must resolve the lines of ink and the paper's dot pattern—and they're small—so I don't think it would be able to pick up anything other than a very blurry picture unless you held the pen an inch or so from the subject (it's not Google Glass!). It's also an infrared camera, so it won't yield a typical visible-light picture.

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Can the pen be used to record sound?

Yes. Anyone using this pen should be aware of wiretap laws in their jurisdiction, which often include any recording of sound made without express consent. The pen itself doesn't record sound—it uses the microphone on your phone or tablet, which is likely better quality than a mic inside a small pen. You can place your phone or tablet close to the audio source so the mic doesn't pick up the sound of your hand dragging along a table. But be very clear that you are recording sound, and get permission to do so.

Data security

In my opinion, this is the pen's biggest vulnerability. It is convenient to have all my notes digitally accessible, but the data is also vulnerable. The data is not encrypted, and I don't know of a way to erase it remotely. I believe that archiving a notebook removes its data from the pen, but this also means you couldn't continue writing in that particular notebook. The pen can pair with multiple devices. It requires a tap on a control with the pen and actions by the app user, so I don't see a realistic risk of someone on the other side of the room hacking into my pen.

Risk

The real risk is that a lost or stolen pen contains your unarchived notebook data. To address this risk, around January of this year—not long after my December 2014 suggestion on Livescribe's support site to implement a PIN code on the pens through a firmware update—Livescribe implemented a security feature in a firmware update that you install on the pen through the app. This means that anyone who has your pen cannot easily pair it to a device and download your data. For lawyers using the pen for

client notes or other work purposes, this significantly reduces the risk of access to confidential information. You choose a four-digit code that will be required to pair the smartpen with another device. You can easily pair the pen with other devices, but anyone who finds or steals your pen will have to decipher your four-digit code.

Of course, any physical notebooks you carry could be lost or stolen—this is the case for any type of paper. The difference with the pen is that you are effectively carrying all the notebooks you've been working in, but now they are protected with a PIN. I'd like to see this improved with the ability to encrypt the pen data. Ideally, the user would have the ability to remotely erase the pen, but that would require more connectivity than the pen's current Bluetooth technology.

Workaround

As a workaround, you can print your own dot paper (the website has four downloadable and printable notebooks of 25 pages each), take notes on pages from a notebook you printed, and then archive the notebook using the app on your phone. The archiving feature allows you to indicate that you've finished using that instance of a notebook (all notebooks in all sizes are numbered, typically 1–4 or 1–8) and use a new "notebook #1" in a particular size. For the security conscious, it would be beneficial to purge the data from the pen. Note that doing so also purges the data from the app, so you should export your data (as text, PDFs, reminders, etc.) before archiving it. Depending on your risk tolerance, you may want to make this part of your weekly or daily workflow so that you're quickly cycling through your own printed notebooks. Doing so removes some of the convenience of the smartpen system; your notes wouldn't be in the phone app at all times and you'd

have to work with looseleaf paper or bind each printing, but the idea is to regularly extract your notes and move them into your practice management system.

Better solutions

Here are ways to make the smartpen more secure:

- **Password protection** of the pen is a no-brainer and, happily, Livescribe listened and implemented this. When you first sync a pen, the password can be set through the app so anyone who finds or steals the pen can't pair it to another device without your password. The password could be required for every sync, though it is not at present, and a password on the app would add even greater in-device security. Ideally, it could be integrated with a phone's fingerprint scanner. I asked Livescribe for this addition through its support site² before this review was originally published in December 2014 and they appear to have listened! This added security makes the pen much more usable. The Bluetooth communication between smartpen and mobile device is also encrypted, which is a good security improvement.
- **Hardware encryption** is possible and wouldn't raise the cost prohibitively. It wouldn't affect smartpens already sold, but it could be an attractive premium model offering in the future. (Livescribe, are you listening?)
- **Remote deletion** would require adding cellular equipment and a larger battery to the pen. This might be feasible and affordable someday, but at present it seems unlikely.
- **A fingerprint sensor** would add more protection, but it might be tricky to fit a sensor onto a round pen barrel—and probably unnecessary.

Caveats for using the Livescribe 3 pen

No system is going to be perfect. First, there are the security concerns I previously mentioned. I think the biggest risk is data vulnerability, but the changes allowing a

PIN code and encrypted communication between the smartpen and a mobile device are a great improvement. The best way to secure your data is to set a PIN (don't make it easy to guess), safeguard your pen and notebooks, and be vigilant about archiving notebooks.

Other caveats I have with using the pen are:

- As of May 2015, the app is currently available only for iOS and Android, so Microsoft and Blackberry users are out of luck for the time being.
- I have to write more neatly than usual to make the transcription work well. Although this slows me down, it's not a terrible thing to make my writing more legible, as sometimes I have trouble reading it myself.
- The pen isn't cheap. I paid approximately \$150 for the pen and a starter notebook, plus more for different ink cartridges (as many users suggested) and additional notebooks. My total investment was close to \$200—not cheap for a pen and paper! But the Livescribe 3 does more than a pen and paper and it saves me time.

Improvements I'd like to see

I'd like to see the following improvements to the pen and app:

- The app should have an option for password protection. Sure, responsible lawyers (and nonlawyers) secure their phones and tablets, and savvy readers may have complex passwords or a fingerprint scanner (if you don't, take a moment and add one). Even so, it would be beneficial to have a separate passcode to open the app, given that attorneys will likely use the pen to record confidential client information. Although the pen is marketed to students more than lawyers, wouldn't every competitive pre-med undergrad want his or her Orgo notes password protected? I imagine the same goes for every competitive 1L.
- Provide the ability to create tasks, reminders, and calendar events in more than just Apple's default apps. Livescribe has recently announced integration with Noteshelf³ for iPad users, but I think

users of OmniFocus,⁴ Things,⁵ Fantastical,⁶ and other popular cloud-based law-practice management platforms⁷ would be interested.

- Allow integration with Launch Center Pro⁸ and Workflow and support for x-callback-urls,⁹ so other apps (e.g., practice management software) could create items using text from the Livescribe+ app.

In short, I love using the Livescribe 3 smartpen and appreciate the time it saves. The data vulnerability is a risk, but so is carrying any type of paper, and the risk has been reduced. Please contact me if you have questions or comments. ■

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ENDNOTES

1. Yospin, *Why I Love My Livescribe 3 Smartpen (Part 1)*, 94 Mich B J 52 (June 2015), available at <<http://www.michbar.org/file/barjournal/article/documents/pdf4article2632.pdf>>. All websites cited in this article were accessed June 22, 2015.
2. See Matthew Yospin, Livescribe, *Encryption and password protection please!* <https://getsatisfaction.com/livescribe/topics/encryption-and-password-protection-please?utm_source=notification&utm_medium=email&utm_campaign=me_too&utm_content=topic_link>.
3. Noteshelf <<http://www.noteshelf.net/>>.
4. The Omni Group <<https://www.omnigroup.com/omnifocus>>.
5. Cultured Code <<https://culturedcode.com/things/iphone/>>.
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7. See, e.g., American Bar Association, *Practice and Case Management Software* <http://www.americanbar.org/groups/departments_offices/legal_technology_resources/resources/charts_fyis/casemanagementcomparison.html>.
8. Contrast <<http://contrast.co/launch-center-pro/>>.
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