# Legal Technology Manual

A quick guide to a law firm's technology needs
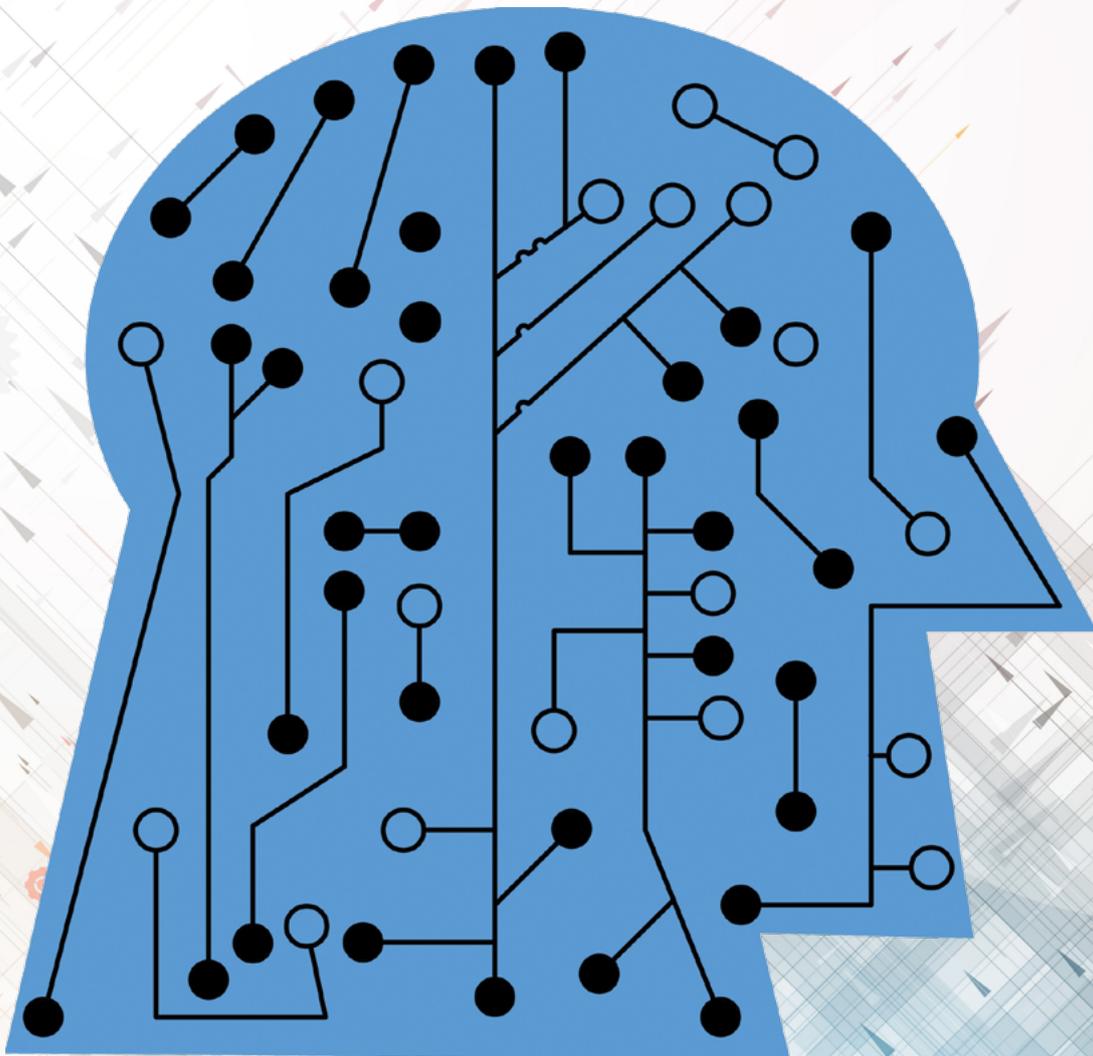
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Introduction

This Legal Technology Manual is made up of a series of articles explaining technology choices, from the perspective of a law firm in Singapore. The articles are meant to be a starting point for lawyers to understand baseline legal technology.

Contributors to the Legal Technology Manual are tech-savvy players in the legal industry who have had years of experience with computers and technology and who wish to share some of their ideas and knowledge. They make all their recommendations impartially and have not been paid or given other incentives to endorse specific products.

This Legal Technology Manual serves to provide readers with information only, and not professional advice. While we try to make our information accurate and useful, you may wish to consult IT professionals or discuss with colleagues and friends on your own specific needs, and to also seek out other sources of information.

For quality control purposes, public suggestion for edits will be reviewed before they are published.

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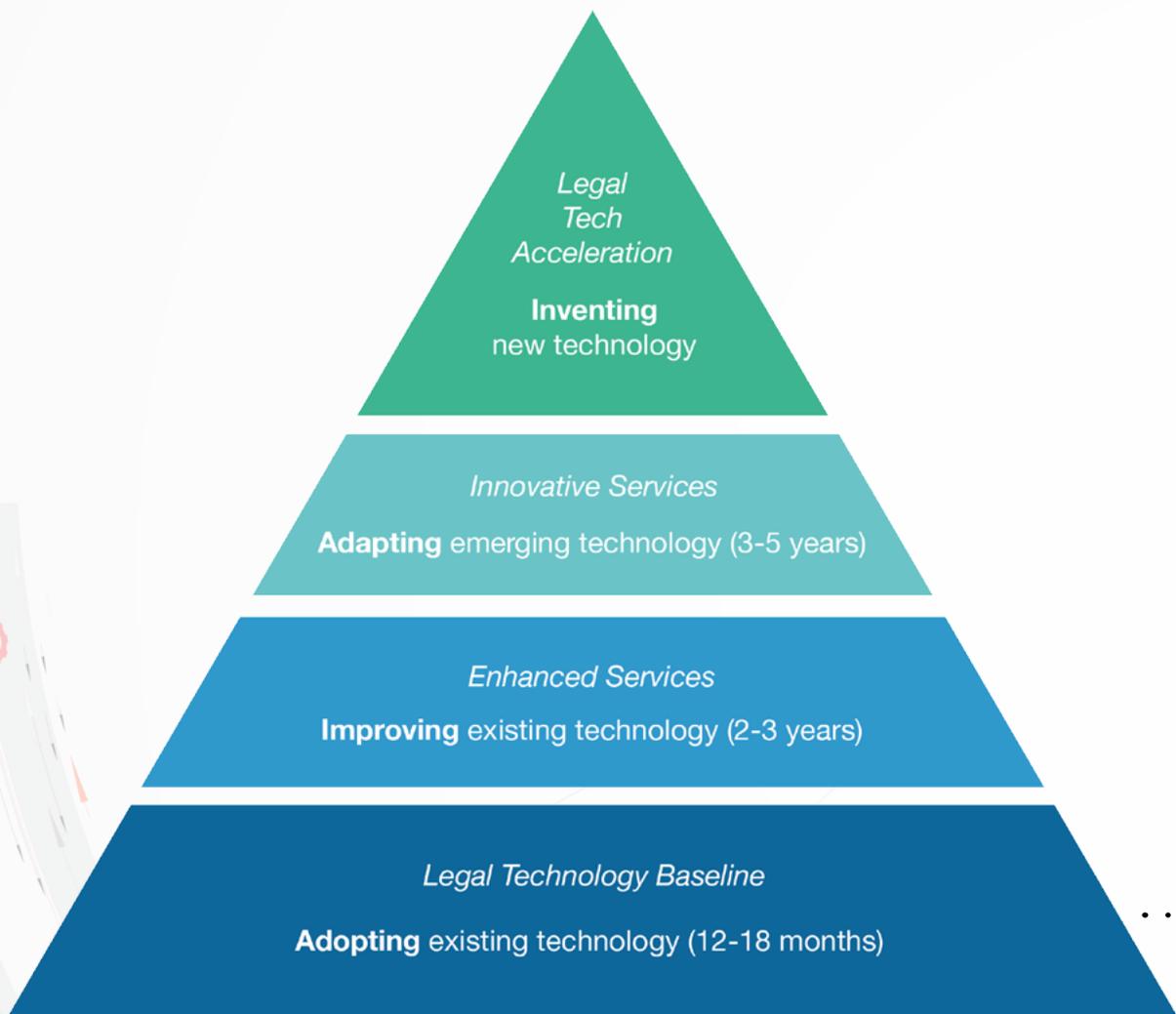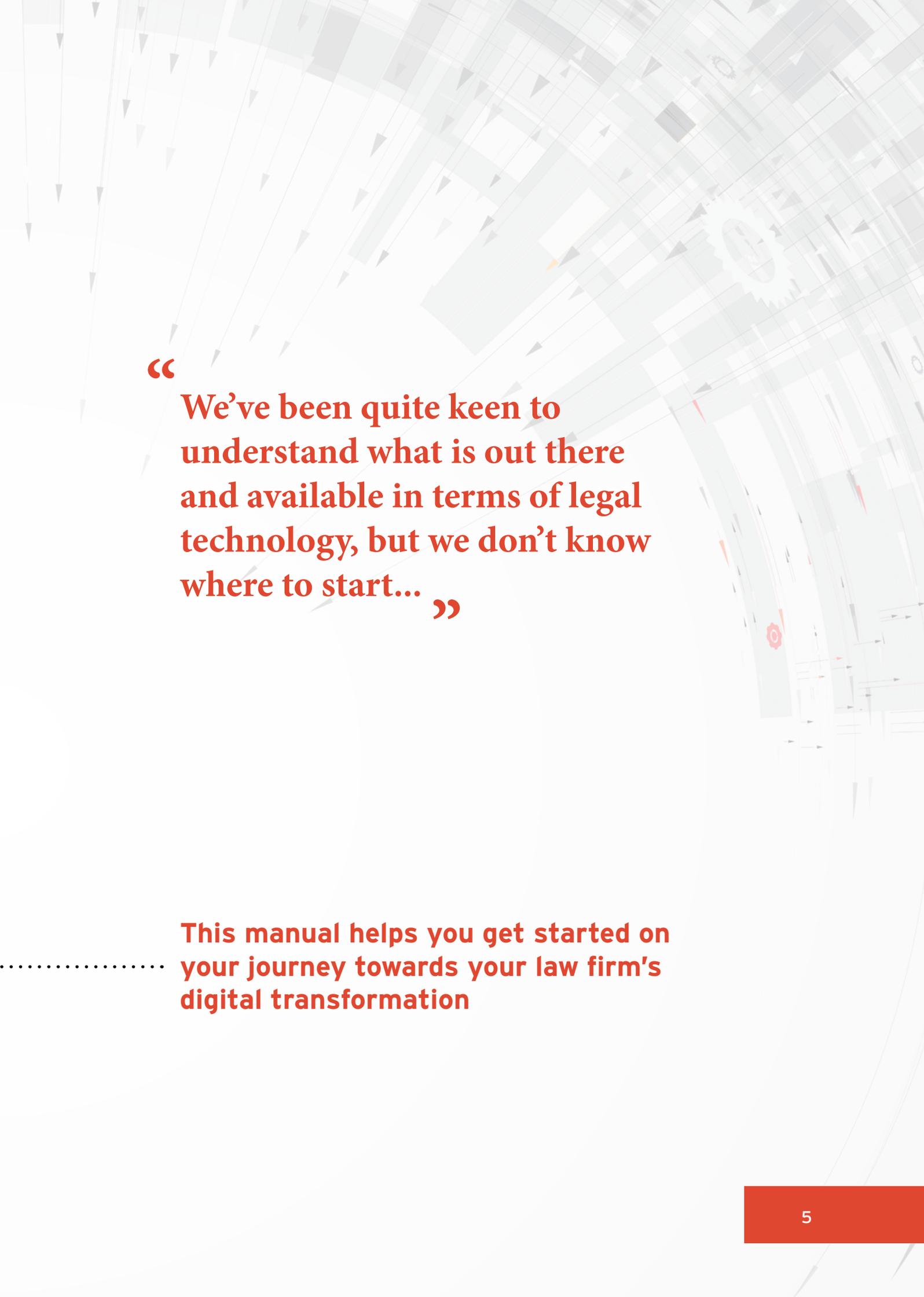
Legal
Tech
Acceleration

Inventing
new technology

Innovative Services

Adapting emerging technology (3-5 years)

Enhanced Services

Improving existing technology (2-3 years)

Legal Technology Baseline

Adopting existing technology (12-18 months)

"We've been quite keen to understand what is out there and available in terms of legal technology, but we don't know where to start..."

This manual helps you get started on your journey towards your law firm's digital transformation

Computing Devices

A comparison between desktops, notebooks, and convertibles

Written By:

Benjamin Cheong | Amanda Kimberly Tan Hui Ting

A. INTRODUCTION

Work today has become increasingly convenient with the use of mobile devices such as notebooks, laptops, tablets and convertibles. As law firms consider whether to jump on the bandwagon of working on the go, it would be useful for them to weigh the benefits of notebooks against that of desktops. Tablets and convertibles could be other devices that law firms may want to explore in coming up with their mobile working strategy for the present digital age.

B. BENEFITS OF USING NOTEBOOKS

Notebooks are a viable option for law firms to consider as they can bring great convenience to lawyers. Being portable, notebooks save lawyers valuable time as they can work while on the move. Working on

the move means being able to respond to clients anytime, anywhere, thus allowing lawyers to be more accessible to their clients. Moreover, notebooks facilitate a seamless transition between office and home, allowing lawyers to go home and continue their work on their notebooks right where they left off in the office.

Separately, this portability makes notebooks very useful for client meetings, as lawyers can use notebooks to take contemporaneous notes of these meetings and immediately access softcopies of documents or even websites during these meetings to show clients whenever necessary.

C. BENEFITS OF USING DESKTOPS

Desktops, however, do have certain advantages over notebooks for law firms. Compared to notebooks, desktops have higher computing power and capacity, allowing easy handling of large volumes of documents, such as for due diligence exercises. Desktops are also built to be able to accommodate more Random Access Memory ("RAM") than most notebooks. More RAM allows lawyers to access more applications on the desktop at one go and thus work more efficiently.

Another advantage that desktops have over notebooks is in terms of pricing. Desktops are often significantly cheaper than notebooks of similar specifications.

"...mobile devices can bring great convenience to lawyers, allowing lawyers to become more accessible to clients and raise their efficiency leading to costs savings that they can pass onto their clients."

Desktops may also be more suitable for law firms for their ease of upgrading, customising, repairing and maintaining. Desktops may be upgraded and customised by simply replacing its individual components for one of the user's choice. This would allow law firms to add or remove specific components according to their lawyers' needs. Such ease in changing of components enables easy and convenient repair and maintenance of desktops as the faulty components may simply be replaced when necessary.

In contrast, due to the complex and integrated design of notebooks, some of its components cannot be easily accessed, making these components difficult to replace. Moreover, most notebooks, unlike

desktops, often consist of components which are specific to its model. This makes customisation tricky and maintenance costly as the specific components for replacement have to be specially sourced. In addition, due to their complicated design, repairing notebooks require some expertise and requires professional to be hired for the repair. All the above factors will result in added costs for the law firm.

D. RECOMMENDED BASELINE SPECIFICATIONS FOR NOTEBOOKS

If law firms decide to introduce notebooks into their offices, there are certain baseline specifications that they should look out for.

Firstly, law firms should choose notebooks with a screen size of 14 inches as this screen size allows for documents to be viewed easily when opened side-by-side without compromising on the portability of the device.

Secondly, law firms should choose notebooks with a Core i5 CPU, 8 GB of RAM and an SSD as these specifications would ensure that the notebook has high responsiveness and sufficient processing capabilities for the high computing performance necessary for lawyers to carry out their work effectively.

E. TABLETS AND CONVERTIBLES

Other than notebooks, law firms may wish to consider tablets and convertibles as these mobile devices also offer the same portability and convenience as notebooks.

While tablets are mainly devices with a touch-screen interface, convertibles can function both as a tablet and when attached with a slim keyboard, function as a notebook.

The touch-screen interface is one of the major benefits of these devices. Such an interface allows lawyers to efficiently peruse their work by scrolling through their documents even while they are on the move. A convertible adds to the touch screen function of a tablet by allowing lawyers to move from scrolling through documents to typing notes with the use of the attached keyboard.

The touch-screen interface also makes these devices ideal for presentations as it allows lawyers to move through presentation slides with a flick of their finger or scroll through their presentation notes as they present. The screen on these tablets and convertibles can be rotated as well, allowing lawyers to quickly show their clients what is on their devices' screen even from across the meeting table.

The compatibility of these devices with styluses is another advantage of these devices. Styluses can be used to write on the device's touch-screen surface. This allows the lawyer to annotate on documents or quickly sketch diagrams to aid in the visualisation and explanation of certain issues to clients eg, in construction matters.

Being equipped with network capabilities for network connectivity is yet another benefit of these devices. Network connectivity facilitates lawyers in storing their documents in the cloud, allowing the lawyers to access the most updated copy of their work anytime, anywhere. Such network connectivity also makes it easy for lawyers to carry out research online immediately if an idea strikes them while on the go. Network connectivity is usually offered as part of the package deal when these devices are purchased from a local network service provider.

F. CONCLUSION

In conclusion, mobile devices can bring great convenience to lawyers, allowing lawyers to become more accessible to clients and raise their efficiency leading to costs savings that they can pass onto their clients. Thus, law firms should definitely look to integrating these mobile devices into their office infrastructure. In doing so, law firms should ideally choose devices with the same operating systems, eg, iOS or Android to avoid any potential compatibility issues between the different operating systems across the devices.

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Monitors

Choosing the ideal monitor set-up for you and your firm

Written By:

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A. INTRODUCTION

A good monitor set-up is one of the most important things to consider for your firm.

If that sentence struck you by surprise, you would not be alone. Anecdotally, monitors do not rank high in a Singaporean lawyer's equipment needs. Most lawyers (or their firm's IT departments) would rather focus on the PC processor clock speed and the operating system, while opting for the monitor bundled in by the PC company.

This should no longer be the case. Monitors are a lawyer's workstation and window to the world. Like it or not, it is the one piece of technology that you will face the most in a day. This is why choosing a good computer monitor is so important.

The following are the key factors that you should consider when choosing your ideal monitor set-up:

(a) Factors that make a good monitor;

(b) The case (or not) for multiple monitors; and

(c) Other considerations to be borne in mind when purchasing multiple monitors.

B. WHAT ARE THE CONSIDERATIONS THAT WE SHOULD BEAR IN MIND WHEN CHOOSING A COMPUTER MONITOR?

It is not difficult to decide whether a monitor is worth one's money. The three main factors that distinguish a good monitor from a bad one are (i) size; (ii) pixel density; and (iii) adaptability[1].

Size

Having a large enough monitor allows you to view the content you need, while providing space for sliders, windows, buttons and taskbars, as well as margin space so that your content becomes centre-stage. This makes content much easier to read and digest.

In general, a screen of about 22 inches diagonally across allows your computer to display two full-width pages, side-by-side, with space for windows and taskbars. Given that preferences differ, you should also consider allowing flexibility (and space) for your lawyers to bring in their preferred monitors.

Pixel density

Your monitor's pixel density measures how much detail your screen can display. Staring at blurry screens for extended lengths can cause fatigue, eye strain, and loss of concentration. In technical parlance, pixel density is measured by "PPI", or "pixels per inch". This is a measure of the size of the pixels. A monitor with higher PPI is clearer and can show more detail. Generally, however, a PPI of 95 is sufficient to make everything on your screen look sharp – as though reading from a printed page.

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1. Sam Glover, "The Best Computer Monitor Setup for Lawyers" <https://lawyerist.com/best-computer-monitor-setup-lawyers/> (accessed 4 February 2018).

Adaptability

A good monitor should allow you to adjust the tilt and height such that when your screen is about an arm's length away from you, the top should be at or slightly below your eye level[2]. If you are unable to change the monitor's height, attach your monitor to a swivel arm, or stack something bulky under your monitor to adjust its height.

Some monitors can also be rotated 90 degrees, to allow you to look at documents in the right orientation. If this appeals to you, it would be prudent to learn how to toggle your computer to display your documents vertically.

C. THE CASE FOR MULTIPLE MONITORS

An effective way to increase screen space (without shelling out extra money for a giant monitor) is to have multiple monitors. This increases efficiency by allowing you to look at multiple documents simultaneously, without having to switch back and forth between various programmes.

A common productivity trap is to use the extra monitors as a "dashboard" for email, or another programme you wish to glance at occasionally. However, a dedicated screen for constant updates can be a source of constant distraction[3]. Nevertheless, if multiple monitors allow you to reach optimum efficiency, this option should be strongly encouraged.

D. CONSIDERATIONS TO BEAR IN MIND WHEN HAVING MULTIPLE MONITORS

Support for multiple monitors

Space is a key consideration for whether you can utilise multiple monitors. If more flexibility is desired, adjustable monitor arms facilitate having more monitors within a limited space in creative and flexible ways.

In addition, ensure that your PC is designed to support multiple monitors. While most contemporary desktop computers will have this capability built in to the video card, those using laptops plugged into

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2. Ergotron, "The Ergonomic Equation" <https://www.ergotron.com/ergonomics/ergonomic-equation> (accessed 4 February 2018).

3. Yardena Arar, PC World, "When Two Monitors Aren't Enough" <https://www.pcworld.com/article/251521/when_two_monitors_arent_enough.html> (accessed 4 February 2018).

a docking station may find that their systems do not support multiple monitors. In this case, you may require a docking station and external USB-to-Monitor adaptors in order to connect to a monitor.

Getting multiple identical monitors

Using different monitors will result in you looking at different displays. This may impact productivity, as your eyes will take time to re-focus every time you look from one screen to another. This may increase eye strain resulting in a loss in concentration. While matching monitors are not essential, it is useful to purchase identical monitors across all workstations.

Improving your experience of using multiple screens

There are two ways to improve your experience of using multiple screens. First, set your operating system to a mode optimised for multiple monitors. On PCs running Windows, this is easily managed through the "Display Settings" menu when one right-clicks on an empty space on the desktop.

Second, optimise your mouse settings for multi-screen use. By enabling "mouse acceleration", you can significantly increase the speed of your cursor when you use fast mouse swipes and move the cursor from one screen to another more quickly. Also, enabling the option that shows the location of your cursor when you press the CTRL key (on PCs) will also allow you to track your cursor faster.

E. CONCLUSION

To conclude, it is important to be aware of the multitude of options available in the sphere of computer monitors. Instead of relying on bundled monitors, choose monitors that maximise your effectiveness. Paying closer attention to details such as the pixel density, adjustability of the monitors and whether your PC supports multiple displays may sound tedious, but will be rewarding in the long run. In the end, your associates – and more importantly, your clients – will thank you for it.

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Mobile Phones

Mobile operating system, Specifications and Applications (Apps)

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A. INTRODUCTION

A desktop computer or laptop aside, the most important device that a lawyer owns would likely be a mobile phone. Choosing the right mobile phone is important, as a lot can be accomplished on these devices so long as the screen is sufficiently large.

When choosing a mobile phone, it is crucial to consider the following factors:

(a) Mobile operating system – iOS vs Android

(b) Specifications

(c) Applications (or apps)

B. MOBILE OPERATING SYSTEM – IOS VS ANDROID

The mobile operating system is the software that runs on smartphones. The most commonly used mobile phone operating systems are iOS and Android. iOS is the operating system used for mobile devices manufactured by Apple and is available exclusively on iPhones, while Android is a mobile operating system maintained by Google and is used on a wide range of smartphones, including those manufactured by Samsung, LG, Sony, Huawei and more.

While there are other mobile operating systems available, such as Windows 10 Mobile developed by Microsoft, these will not be covered in this article as they are less commonly used. The following sections will provide more information about the differences between the iOS and Android operating systems.

C. SPECIFICATIONS

Key factors to take into consideration in terms of the specifications of a mobile phone include:

(a) Screen size: A large enough screen will allow you to accomplish more tasks on your mobile phone, such as reading email and e-signing documents conveniently.

(b) Storage space: If you are intending to read and store documents on your mobile phone, ensure that you purchase enough storage space. In general, 3GB RAM and 64GB of additional memory space is recommended. iPhones do not have expandable storage space, so you will have to decide at the time of purchase, the maximum storage capacity for that phone. For Android phones, there is typically a micro-SD card slot to allow extra storage capacity if you eventually require more space for the mobile phone.

(c) Dual SIM: If you travel frequently for work or use separate numbers for personal and business purposes, it would be useful to get a dual SIM mobile phone which provides you with a slot to insert an additional SIM card. At present, iPhones only have a single SIM card slot, so you should consider Android phone models if you are looking for dual SIM capabilities.

D. APPLICATIONS

A key component of mobile phones that enables maximising your productivity is the range of apps offered on Google Play Store (Android) and Apple App Store (iOS). These apps frequently come in desktop or web versions as well, so that you can access your documents and communications across all your devices. In order to maximise ease of use across all devices, it is useful to activate the auto-sync function if the app does not already have this feature by default.

While most apps are available for both Android and iOS these days, some apps are only available exclusively on one operating system and not the other. As such, if you have any must-have apps, make sure to check that the operating system you are opting for has these apps available. Some commonly-used categories of mobile phone apps are set out in the following table.

Category	Description	Commonly used apps
Communication	Apart from an email app that are usually pre-installed on most phones, to allow you to check and reply to emails on the go, you are likely to want a messaging app. Which messaging app you choose would of course depend on which is most commonly used among your clients and the lawyers in your firm.	- WhatsApp - Telegram - WeChat
Office	In order to be able to open, read and edit documents on your phone, you would need to download word processing apps that allow you to access documents, spreadsheets, PDF files and more.	- Microsoft Office Mobile - WPS Office
Cloud storage	If cloud storage options are used to store your documents on your desktop, there would likely be corresponding applications for your mobile phones as well that will automatically sync across your various devices to allow you to access all your documents while on the move.	- Dropbox - Google Drive - OneDrive

Category	Description	Commonly used apps
Scanning	Nowadays, scanning does not require bulky hardware that can only be connected to your desktop or laptop. Through the use of mobile phone scanning apps, your phone can now easily be converted into a scanner and allows for storing hardcopy documents as softcopy versions in common formats such as .jpg and PDF.	- CamScanner - Genius Scan
Scheduling	A good way to ensure that an updated version of your calendar is available wherever you go is to use a scheduling app.	- Google Calendar
Notetaking	For note-taking during meetings or recording thoughts to be accessed later, you can use note-taking apps. These apps typically allow you to upload images and audio notes, with added features such as tagging, search function and reminders to enable you to easily retrieve your notes. If recording your notes hands-free is preferred, you can install voice-to-text software on your mobile phone. This app allows you to dictate and edit documents by voice on your mobile device quickly and accurately.	- Evernote - Google Keep - Dragon Anywhere (mobile dictation)
Task management and time tracking	In order to conveniently keep track of your tasks and even log task times and clock your billable hours, you can use task management and/or time tracking apps.	- Todoist (task manager) - Toggl (time tracker)
Project collaboration	For managing team projects and tasks, project management platforms can help to facilitate that. These apps allow you to organise your projects into clear workflows with each responsibility for each task assigned to a specific team member. This allows for easy tracking of the progress of any project.	- Trello - Asana

Category	Description	Commonly used apps
News	To keep up-to-date with local and international news, it is worthwhile to install news apps.	- The Straits Times - BBC News
Legal	Some desktop software and resources that are essential to your lawyering are now available as mobile app versions.	- Clio - Black's Law Dictionary

As with any other device, when choosing a mobile phone, it is important to select an option that meets both your personal preferences and work requirements. If you require more insights into the pros and cons of any mobile phone model or app, a simple Google search should produce product reviews on sites such as CNET which would provide more information to help you make your decision.

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"A desktop computer or laptop aside, the most important device that a lawyer owns would likely be a mobile phone."

Printers

Factors to Consider When Choosing a Multifunction Printer (MFP)

Written By:

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A. INTRODUCTION

Despite the trend of going paperless and storing documents in the cloud, printers remain an indispensable part of the law firm office today. Lawyers often have to print documents for the court and their clients. When choosing a suitable printer for your office, the decision boils down to what and how much you print, as well as what other non-printing functions is needed for your practice. This article will cover the following topics:

(a) Rental vs purchase

(b) Printing specifications

(c) Additional functions

B. RENTAL VS PURCHASE

There are several options for acquiring a printer: purchase, rental, or a hire purchase scheme.

Renting typically involves contractually paying for the printer on a monthly or per page basis for a minimum duration. The rental may include cost for toner and other consumables. This can be a good option for firms who do not wish to purchase a printer upfront but still wish to record their printing expenditure.

An alternative to renting or purchasing would be a hire purchase scheme. In the scheme, the vendor remains the legal owner of the goods until the hirer exercises the option to purchase the printer or pays the last instalment. This would also reduce the upfront payment required of the hirer.

Regardless of whether you rent or purchase your printer, it is crucial to consider whether the vendor provides reliable technical support services. Having access to a hotline whenever you run into malfunctions or other technical issues will ensure that your printer run smoothly.

C. PRINTING SPECIFICATIONS

These days, the printers available are typically multifunction printers (MFPs). These are essentially printers with incorporated additional functions, such as photocopying, scanning and faxing. In terms of the printing-related features of MFPs, common features include duplex printing, which allows for the printing of a sheet of paper on both sides automatically, and colour printing.

A key decision you would have to make is whether to opt for a laser or inkjet printer. A laser printer uses a toner cartridge filled with fine powder and a heated fuser while an inkjet printer uses liquid ink sprayed through microscopic nozzles onto the paper. Laser printers typically offer faster print speed and better print quality if you are printing black and white documents in large quantities.

Inkjet printers may be more suitable when high quality colour prints are required. This is because as inkjet printers typically use pigment-based ink that is more fade-resistant and work with a variety of paper types. Do note that inkjet prints may sometimes smudge when highlighter pens are used.

A possible arrangement would be to have a laser printer for printing in large quantities and a smaller inkjet printer for the occasion where you have more specific needs.

D. ADDITIONAL FUNCTIONS

As mentioned, MFPs typically offer additional functions:

Fax

Most MFPs come with a built-in fax option. However, online fax services, which allow you to send and receive faxes from your computer using either your own fax number or the one the service provides for you with the payment of a monthly subscription fee, are increasingly common. An online fax service allows you to receive faxes as PDF files that are easy to save or print. Thus, the fax function is no longer must-have feature to have in a printer.
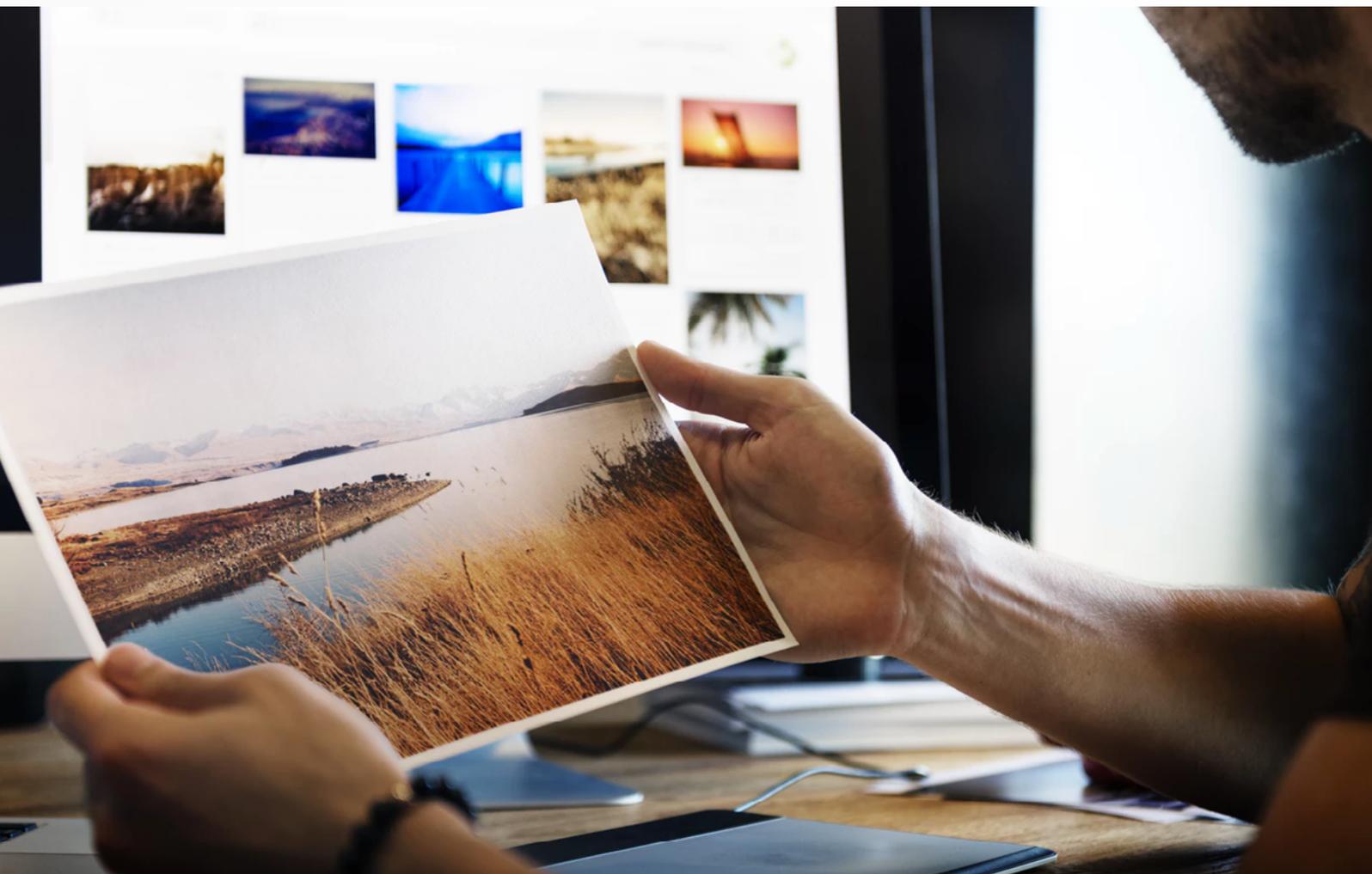
Scanning

Apart from a copier function that most printers come equipped with, it is useful to have a function that digitises your print documents and sends the files to your computer. A useful feature for the scan function is an automatic document feeder, which allows multiple sheets of paper to be input without manually placing each piece of paper on the scanner.

Tracking and accounting

For law firms that charge printing costs to their clients, it is useful to have a cost accounting and tracking function. Such a function typically requires you to type in a client account ID or a billing code whenever you send a document for printing, so that each printing job is tagged to a particular client. This allows you to accurately charge the printing costs to the relevant client account.

As with any other device, when choosing a printer, it is important to select an option that meets both your personal preferences and work requirements. If you require more insights into the pros and cons of any printer model or function, a simple Google search should produce product reviews which would provide more information to help you decide.

First published on 7 May 2018

Mac, Windows (PC) or Others?

Written By:

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A. OVERVIEW

When deciding which operating system (OS)/computer to buy, the following factors (though non-exhaustive) have to be taken into consideration:

Operating system

This was once the key determinant of the present debate.

Many would choose Apple Mac because the MacOS is superior in many ways, and more user-friendly. However, Microsoft has made significant improvements with Windows 10 OS, which has now become very user-friendly. For instance, Windows 10 comes bundled with the extremely intuitive and useful Timeline feature – something that is not available on the MacOS.

In the past, most law firms would choose Windows due to their heavy reliance on certain software applications which are only available on the Windows platform. For example, Microsoft Office used to operate more efficiently on Windows than on the Mac platform. This is no longer so as Microsoft now operates well on both operating systems.

The choice of OS is also less important these days because most small firm lawyers rely on software that are interoperable, i.e. the same software can be found on both Mac or Windows. Many of these softwares are also cloud-based and/or browser-based, which means you can use them regardless of the OS you are using. This includes other less widely used OS such as Chromium, Linux, and even the mobile OSes: iOS and Android.

Reliable models

Choose models, not brands. Most established business laptop brands have a particular series/model that is well known for reliability (e.g. ThinkPad series for Lenovo, Portege series for Toshiba etc.). Even within the same series, there are some models which are more well-built than the others (e.g. the ThinkPad X series will most likely last longer than the ThinkPad E series due to the way the former model is built). The same applies for the Mac series.

Technical support

Purchase one with same-business-day on-site service, if possible (e.g. if you travel a lot, ThinkPad's worldwide warranty can come in very handy).

Important factors when choosing a laptop

Ports – If more ports are required (VGA, Smart Card readers – although you might want to decide whether these ports are still necessary), Windows would be a better option due to the wider choices available in the market. Apple Mac on the other hand are not equipped with ports, and dongles have to be purchased in place of ports.

Keyboards – Keyboards are often overlooked. As lawyers spend a lot of time typing, keyboards have to be ergonomical for comfort and efficiency. For instance, users may not like the MacBook's "Butterfly keyboard" as typing on the keyboard may seem similar to tapping on a flat surface. Another option would be to purchase a separate keyboard to replace the "Butterfly keyboard".

Battery – MacBooks generally have decent battery life for the first few years, but the batteries are non-removable and hence irreplaceable. Therefore, the better choice would be Windows which allow batteries to be replaced. This is of paramount importance if lawyers often work remotely.

Now that we have covered the general factors, we take a deeper look into what a lawyer should consider for the different operating systems.

B. WHY MAC?

The resolution of the perennial debate on the use of the quintessential windows computer versus the Mac for work ultimately boils down to this: individual user experience.

What has not been typically covered is how the Mac can be used to suit your legal needs.

For example, Mac's native PDF reader, presents a host of advantages that not many know of.

Bundle of Authorities/Documents

Litigation lawyers know and understand the pain of putting together the different bundles of documents and authorities. Preview offers an easy solution. In your Finder window, simply number off your files that are to be added to the bundle in order of appearance, sort the files by name, and right click for them to be opened in Preview. The files will automatically be opened in order on Preview. Simply select all pages in the side pane on Preview, and print all as a PDF from there.
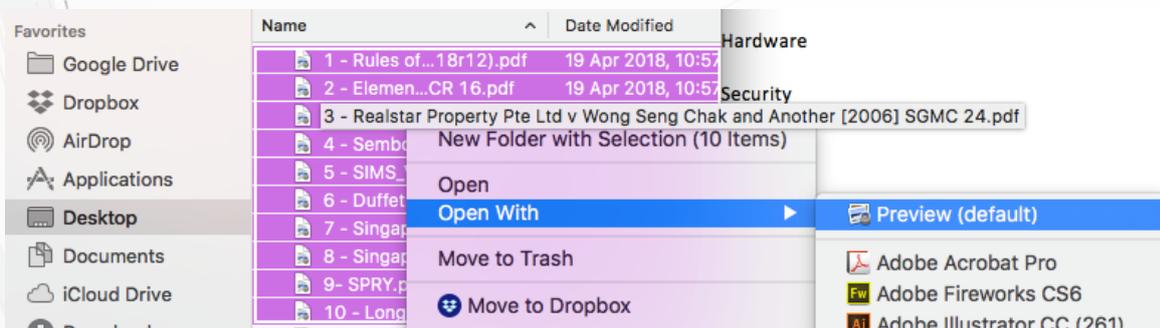
Creating Extracts of Documents/Articles/e-Books

Sometimes, we require only certain extracts of documents/scans to be included in a research piece. Simply open the sidebar navigation pane in preview, and drag out the relevant pages into a new extract.

In-App Image Enhancing Software

Sometimes when photographs of documents such as receipts are scanned, they are difficult to read. Preview has an in-built function allowing for image-editing such as increasing brightness etc. which would help document readability. Simply open the image file in Preview, and select Tools -> Adjust colour.

Workspace Organisation

The Mac OS also allows you to organise your workspace by categorising and organising them at the following levels:

(a) Mac OS allows users to create multiple screens (known as "desktops"). This allows the user to categorise information and work projects in each desktop screen. For instance, you could drag the email, document, and relevant web browsers containing research relating to that topic into a desktop screen. This allows you to concurrently work on different matters at the same time without cluttering your screen.

(b) While using each desktop, you can also view and access your active windows via two modes:

   (i) Mission Control (keyboard shortcut: F3): displays all your active windows in a single desktop screen.

   (ii) App Expose: displays all your active windows of the same application (e.g. this view would display all your active Microsoft word documents, but not the browser tabs open in the same desktop.)

(c) In the dashboard view, you can create Stickies notes to plan e.g. the structure of your submissions or jot down quick notes, which you can easily refer back to from time to time using hot keys.

(d) Under system preferences, you can assign hot keys on your track pad to create shortcuts to access each of the above.

Security

MacOS have always been well-known for its security systems. While Windows computers often suffer from virus attacks and ransomware, Mac computers rarely have this problem. Perhaps due to the fact that there are many more Windows computers in the world, hackers have more incentives to create viruses for Windows computers (as compared to viruses for the other OSes).

For lawyers, this means your documents and sensitive information will be more secure as compared to a normal Windows computer. This would be especially important for lawyers who receive many emails from different parties. Sometimes all it takes is one rogue email containing a link to a malicious website to cause the damage.

C. WHY WINDOWS?

(Note: This analysis focuses on Windows 10, and not the previous versions of Windows.)

In the past, Mac had many features which Windows did not have but this is no longer so. Today, most of the features are either already incorporated within the Windows OS, or can be easily installed with affordable third-party software.

Just take a look at the features that were highlighted in the Mac section:

Bundle Of Authorities And Creating Extracts Of Documents

Both features can be easily found in a third-party software like Adobe PDF or Nuance PDF (which have many more features, such that both Mac and Windows users should probably still buy them).

In-App Image Enhancing Software

Same as above. Typically, this is a feature under "Accessibility" for most PDF apps.

Workspace Organization

Dashboard view is the only feature that Windows does not have. Aside from that, Windows allow you to create multiple desktops, apps expose etc.

Windows 10 also provides some very intuitive features which would be useful for lawyers:

(a) Timeline: With Windows 10, click Windows + Tab, and you will be able to access the Timeline view. This feature is not available on MacOS.

  (i) In brief, Timeline captures your activity as sessions, and you can resume your previous sessions easily. For instance, you were looking at a particular case or website 10 days ago. All you need to do is scroll back and click to resume that session.

  (ii) For lawyers, this can be extremely useful if you are trying to access an affidavit that you have been working on, but you cannot locate your file (perhaps you saved in the wrong location). You just need to scroll back in time to find the file.

  (iii) It is also a good way to track what you have been doing, which goes towards billing. If there is a need to prove that you were working on that matter on a particular day, you can easily prove it by using Timeline.

(b) Dictation: Lawyers have often relied on stenographers in the past. Nowadays, the cost of labour is too high for most law firms to get a stenographer. On Windows, you just need

to click "Windows key + H" and you can start dictating on any app. (Note: Before that, if you have not already done so, you might need to setup "Dictation" through settings.)

In terms of security, Windows has also gotten a lot more secure in recent years. If you constantly update your computers (important because security patches/fixes get released all the time), and take note of the general warning signs, you should be safe from viruses or malware. However, if you are still using older versions of Windows, e.g. Windows Vista, you risk being hacked.

D. HOW ABOUT OTHERS?

The reality of the current consumer market is that it is dominated by MacOS and Windows devices. Other alternative operating systems would be the mobile OS, e.g. iOS or Android. In this regard, iOS would win hands down as Android is not sufficiently developed for a lawyer to use for the day-to-day work.

With the higher portability of iOS devices, document editing can easily be done on an iPad (e.g. Microsoft Office on iOS is quite complete). However, the iOS is not be ideal for most lawyers who need to perform several tasks.

E. CONCLUSION

From the above analysis, it would be preferable to use Windows 10. This is the best Windows for lawyers, with features that can compete with MacOS and with better security features.

Due to the competitive Windows market, manufacturers are forced to sell their products at a more competitive price. This means a higher possibility to purchase a workhorse that is cheaper and better customised to the user's needs, choosing the most ideal from the wide range of PC or laptop models available.

First published on 16 October 2018

"Choose models, not brands. Most established business laptop brands have a particular series/ model that is well known for reliability."

Firm and Case Management

Collecting and organizing client interactions into one easy place, allowing for convenient access and a comprehensive view of each case.

Written By:

Renaro Daniel Ezra Bunyamin

A. INTRODUCTION

Time is of the essence. This is especially so for legal practitioners who needs to juggle between managing clients, file management, billing, tracking disbursements, staff management, task management etc.

Having a Case Management Software ("CMS") enables you to capture your vast working information in one location thereby increasing the productivity and efficiency of your firm.

B. WHAT DOES A FIRM AND CASE MANAGEMENT SOFTWARE DO?

A CMS basically enables you to, amongst others, create, track and store the following information:

(a) Clients and related parties' details (eg contact/address/type of party);

(b) Store and/or create matter/case in separate folders with customizable file referencing;

(c) Store and/or share documents with staffs and/or clients (eg clients' documents/draft letters/cause papers/research etc.);

(d) Time spent on a matter; and

(e) Setting timeline and/or tracking progress of tasks.

Some CMS providers also provide value added services and/or enable third-party software integration such as:

(a) Billing and/or disbursements;

(b) QuickBooks integration;

(c) Skype integration;

(d) Gmail email and/or calendar integration;

(e) Virtual/Cloud-based data storage;

(f) Android/IOS compatibility for accessing CMS on mobile phones or tablets; and

(g) Additional security features.

CMS streamline all the above information in one application allowing easy access to everyone in your firm. Most of the CMS available today are cloud-based (virtual storage of data online) which enables you to access all the said information anywhere be it at work, at the comfort of your home or whilst travelling (subject to your devices having Wi-Fi and/or mobile data access).

CMS also allows new staff members to easily access, quickly adapt and get up to speed with your firm's current matters/cases.

C. CLOUD-BASED SERVERS VS ON-PREMISE SERVERS

Cloud-based servers allow you to save on physical space whereas on-premise servers require you to house the servers on-site, occupying much needed space in your firm.

Cloud-based servers also enable you to have easy access via your mobile devices and/or laptops, wherever you may be, with Wi-Fi and/or mobile data access. By simply logging your login details to the cloud-based server, you will have access to all your data previously saved online and/or upload data online via your mobile devices.

There is little or no installation costs for cloud-based servers as minimum hardware is required to set-up. Compared to requiring on-site technical assistance for maintenance of on-premise servers, maintenance is done by the providers via online for cloud-based servers.

However, it is prudent to have a small on-premise server or network attached storage (NAS) in the office to serve as a back-up of the information stored on cloud.

Things to consider before opting for a cloud-based CMS

(a) Size of firm: Most CMS costs are based on per user on a monthly/ yearly basis. It will be more cost- effective to choose the yearly renewal options as CMS providers usually give substantial discounts for yearly subscriptions;

(b) Clients size and clients' aptitude for the application: Some CMS allow you to share documents online with clients. Depending on the type of clients you work with, it is worth considering if you require this function;

(c) Compatibility of the CMS with your iOS or Android platform mobile phones (this is useful especially when you are out of the office). Most mobile phones these days operate on either Android or iOS platforms. It is important to ensure that your phone is up-to-date to ensure compatibility with the CMS;

(d) Good internet speed to download files or upload files seamlessly onto the CMS and/or sufficient mobile data for mobile phones, to access the software application online; and

(e) Reputation of CMS providers and length of time since it offered its service. It is prudent to validate the reliability of these providers and how long they have been in the market to ensure that the service you acquired from them is consistent and will still be available for years to come.

"Having a Case Management Software... enables you to capture your vast working information in one location thereby increasing the productivity and efficiency of your firm."

D. OVERVIEW

Advantages of having cloud-based CMS:

(a) Easier client management;

(b) Easier conflict search;

(c) Keep track of tasks;

(d) Keep track of time spent;

(e) Keep track of billing and/or disbursements;

(f) Help new staffs get up to speed with current matters/cases;

(g) Access stored data anywhere; and

(h) Sharing information/documents with your clients online.

Disadvantages of having cloud-based CMS:

CMS may be costly if value-added services are included or there is third-party software integration. In addition, it may be also costly since subscription is based on per user and on monthly or yearly basis. This will pose to be costly if your firm has a high headcount.

As CMS is complex, a budget should also be allocated towards engaging a consultant to properly set up the system. This way the firm will be able to take full advantage of the CMS.

E. CONCLUSION

In conclusion, before deciding to purchase a CMS, it will be worth checking which CMS vendors offer online trials of their products. Most CMS vendors offer an online preview whereby their product consultant will demonstrate the available features of their products, with offers of free trials of their CMS for a limited time. Doing this will assist you to make a more informed decision on the best CMS that suits your firm's needs.

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Portable Document Format and Optical Character Recognition

Written By:

Foo Juyuan

A. INTRODUCTION

What is Portable Document Format ("PDF")?

Portable Document Format (PDF) is a file format used to present and exchange documents reliably, independent of software, hardware, or operating system. Invented by Adobe, PDF is now an open standard maintained by the International Organization for Standardization (ISO). PDFs can contain links and buttons, form fields, audio, video, and business logic. They can also be signed electronically and are easily viewed using free Acrobat Reader DC software[1] or other third party PDF viewers.

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1. https://acrobat.adobe.com/us/en/acrobat/about-adobe-pdf.html

For a lawyer, being able to convert files into PDF format is a necessity, especially as it is the only acceptable file format for eLitigation online upload of documents. This can usually be done via the standard "Save as PDF" option on your word processing software. PDF files are more than images of documents. Files can embed type fonts so that they are available at any viewing location, and this is useful in situations where you want to preserve the document's printed appearance. This way, you need not be concerned that the intended recipient receives a document with formatting errors due to potential software compatibility issues.

What is Optical Character Recognition ("OCR")?

OCR is the process of converting the image of a scanned document into actual text that can be selected, copied, pasted and most importantly, indexed and searched.

By default, scanned and faxed documents such as PDF files are not stored as text, but rather stored as images. Documents scanned in the office or received from external parties by email are often image-based and not text-based. This means that the PDF file or scanned file is an image of the document. As a result, the PDF file cannot be indexed by the computer's operating system or by any document management system ("DMS"). A search will never be able to find this document, nor be edited by any word processing software.

"The best way to achieve a paperless law office is to implement OCR in a way that ensures every scanned document: PDF, image or otherwise, is OCR'ed, every time, without any user intervention, and without having to install extra software."

OCR technology will effectively convert an image-based document, such as a scanned PDF, to a text-enabled document. With a good OCR software, it is possible to identify all the text in the document. The end result is that searching for information becomes far easier, faster and more efficient. It is even possible to insert text from a document directly into a word processing document such as Microsoft Word, thus adding a whole new level of functionality. The user will easily be allowed to cut and paste the text that has been converted.

Some might argue that OCR is no longer a "nice to have" in a law firm. When the reading, understanding, and interpretation of words is the bread and butter for a law firm, even a character error can lead to a

loss of meaning or misinterpreted context. Accordingly, the question has now shifted from "whether OCR software is needed" to "how accurate is the OCR software I am getting".

B. SCANNERS' BUILT-IN OCR

Some scanners come with pre-installed OCR software. The benefit of this is that the OCR process will happen immediately when a document is scanned without the need for any action by the end-user. The drawback is that this method will only OCR documents that you scan and not scanned documents that you receive from other parties, for example clients, clerks, opposing council, etc.

C. STAND-ALONE OCR SOFTWARE

You may wish to purchase and install OCR software on all the computers in your firm and instruct them to always be sure to OCR every document. Adobe Acrobat (not Adobe Reader) is one of the most commonly used software that has the ability to OCR PDF files, without creating a new file in the process. Nuance's Power PDF is such a solution provider.

However, this method relies too heavily on the discretion of every person in your firm, and it also means you will have to install and maintain an OCR software on every single computer your firm uses – a costly decision. Some solution providers, such as Nuance's Power PDF, provide additional features (at a cost) where PDF and OCR creation can be automated simply by dragging and dropping files into a dedicated folder.

While there are many free OCR software available on the internet, these freewares will require that you create and save a new word file in the process of its text-identification.

D. INTEGRATED, AUTOMATIC OCR

It is possible that the DMS that you use to store, organize and manage your matter documents does the OCR for you automatically. The best way to achieve a paperless law office is to implement OCR in a way that ensures every scanned document: PDF, image or otherwise, is OCR'ed, every time, without any user intervention, and without having to install extra software. This way, it will not matter how the document reaches your firm.

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Document Management Systems

Written By:

Jerrold Soh (Mr), *Co-founder, Lex Quanta Pte Ltd*

A. INTRODUCTION

Those who have played ball games will know that, initially, it feels more like the ball is dribbling you than the other way around. Managing legal documents is similar. Whether the documents in question are submissions, affidavits, client briefs, contracts, or corporate announcements, managing your documents well (and not letting your documents manage you) will help you score points for clients.

B. THE IMPORTANCE OF DOCUMENT MANAGEMENT

Two benefits arise from good document management. First, good document management avoids unnecessary costs. Every lawyer's worst nightmares: filing the wrong version of the document in court,

accidentally disclosing commercially-sensitive information by emailing the wrong document to the wrong party, bringing an outdated contract to the negotiation table, etc. This is akin to losing the ball in your own penalty area. Usually a price will be paid for sub-par defence.

Second, good document management facilitates quality work. Every lawyer, seasoned or new, should have access to and use the firm's best and latest templates. Teams should be able to collaborate on large files without worrying about losing time to merge conflicts and formatting inconsistencies. A well-structured document and precedent base allows quicker drafting and sharper analysis. Imagine if the Halsbury's were organised randomly and not organised topically and alphabetically. Looking something up would be tedious and severely interrupt one's research and thought processes.

There are firms taking this further by enriching their knowledge base into weapons-grade documents that can be packaged as a client-facing product in itself. Keeping possession is nine-tenths of a good soccer offence while good document management nine-tenths of a strong legal team.

C. IS SPECIALISED DOCUMENT MANAGEMENT SOFTWARE ("DMS") NECESSARY?

The key to all this is a good document management system ("DMS"). Plainly, a DMS is a system for managing documents. A system is just an organised and principled way of managing tasks. In theory, software is neither necessary nor sufficient. A determined practitioner who enforces strict document management practices on his associates can achieve this. He may dictate that every file is to be named, filed, and stored according to certain conventions. Deviators could be punished by the usual means of censure, or exclusion from happy hour privileges.

In practice, document discipline is a rare commodity that tends to diminish as documents pile up and client or court deadlines loom. After some time, the determined practitioner may find that filing practices have not been followed. The database has become disorganised and unhelpful. Multiple versions of seemingly identical documents are filed in various folders boasting subtly differing names. Where and who is Waldo?

Not every firm can afford to outsource document discipline to dedicated knowledge managers. Even amongst those who do, there is

scope for software to further reduce document discipline overheads on its lawyers. At the time of this writing, computers do what they are programmed to do, deadlines or otherwise, and will unquestioningly take on any number of documents they are told to file.

Furthermore, DMSs allow one to enforce strict document compliance rules. One could lock a document to allow only selected users from editing it. More important documents could be immobilised by the software to prevent exfiltration or data theft.

D. WHAT DMS CAN DO FOR THE FIRM

Common features of DMSs include the following:

(a) document security allows the user to specify who may do what with which documents. Some versions are equipped with encryption functions.

(b) version control allows tracking changes in a document and prevents or resolves merge conflicts.

(c) shared access allows files to be accessed across devices and users.

(d) organisation which helps catalogue and storage of documents neatly.

(e) search which helps the user find what is needed quickly and intelligently.

(f) customised workflows enables routing of documents to certain users for specified purposes.

(g) document automation helps in quick generation of new documents based on the user's own templates.

Even more cutting-edge solutions are being developed that widens the range of inconveniences that DMSs can relieve lawyers of. DMS provider iManage recently purchased RAVN Systems, a UK-based startup which developed an artificial intelligence engine for extracting information from and classifying legal documents. Local startup Intelllex has also created an "AI-powered knowledge bank" that categorises 120 legal concepts and document types. This is an area of fertile research and one may expect further developments soon.

E. CHOOSING THE RIGHT DMS

As with any software, there is no one-size-fits-all solution. Specific requirements of your practice should dictate which DMS you choose. A firm specialising in high-volume, standard-form contracting may prefer a DMS that facilitates quick document generation and distribution over one which enforces tight version control – Clio's document automation capabilities as well as Worldox's automated document workflows may be of interest here. Tight version control and tracing, however, may well appeal to a firm that drafts long investment prospectuses and contracts that run into hundreds of pages. Netdocs' document lifecycle and audit trail features could then prove useful. Meanwhile, litigation departments may prioritise how accurately their DMS can catalogue legal concepts and document types as well as how intelligent its search function is, so AI-powered search tools from iManage RAVN or Intelllex may be preferable.

Personal preferences matter too. Some may prefer having one comprehensive software that takes care of everything, beyond just document management. A comprehensive practice management software like Clio that also takes care of billing and matter management may be more suitable for this group. Others may prefer having specialized software for each aspect, and dedicated DMSs would be more suitable here.

F. CONCLUSION

Good document management empowers lawyers to complete tasks quicker and more efficiently. DMSs can greatly catalyse the need to enforce document discipline. Document management solutions are evolving alongside the changing requirements of legal practice. If you have not procured a DMS, now is a good time to consider one. Firms not bound by legacy software will find it easier to jump straight to the latest technologies, provided these technologies fit their practice requirements. If your firm already has a DMS, now is a good time to explore if any new features have been or are being developed, as well as consider alternatives.

The ball is in your court.

(Disclosure: The author has no financial interest, direct or indirect, in any of the above-mentioned software providers.)

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Office Suite

Written By:

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A. INTRODUCTION

The modern day law firm does not only have computer terminals for its employees, but the relevant software to allow them to do their work effectively. The use of an "Office Suite", which usually refers to an all-in-one software package comprising of at least a word processing, spreadsheet and presentation software, is indispensable in today's law firms. In the market, there are several office suites available in the market. Microsoft Office, which is the most commonly used office suite in the market place, can be purchased on a subscription basis or a one-time-use license. Some other office suites include Apple's iWork Suite, which comes pre-installed on every Mac, Google Docs, LibreOffice and OpenOffice.

B. WHICH SUITE SUITS YOU BEST?

In deciding which suite is best, one must consider if a web-based or desktop suite is more suitable. Free word processing software can be categorised into two categories: web-based and desktop-based.

Web-based software are accessible via internet. The pros of web-based software are that they are accessible even if they are not installed on your computer, and thus need not take up disk space. However, most of these software do not have free offline access and require paid subscriptions. Examples of these include Microsoft Word's web office and Google Docs.

C. MICROSOFT SUITE

The pros of Microsoft Word's web suite is that it syncs with Microsoft OneDrive and has almost the full-functionality that its desktop version has, just that it might lag more often. Note that this is available to all Outlook/Hotmail users, even if you do not purchase a Microsoft Suite license for your business. If you do purchase an Microsoft Suite license for your business, the benefit is that edits to the documents can be directly integrated into your firm's existing documents that have been shared internally and stored on your firm's OneDrive.

Desktop-based suites, on the other hand, are programmes that are directly installed on your computer. Some of them, such as Microsoft suite, include options to install add-ons and plugins such as a reference citatory, or offer integrated cloud-sharing and syncing functionalities.

Desktop suites are generally more sustainable for long-term use on a permanent computer. However, the web-based apps are useful solutions when travelling but access to one's documents or work or personal

"Despite the seemingly availability of different choices of office suites, the Microsoft Office Suite however is the de facto choice for professionals and businesses."

computer is not so readily available. These apps are accessible as long as you can access a browser, and can still sync with the cloud drive.

Cloud Integration

The other benefit of Microsoft Suite's cloud integration is that it syncs across all devices a user is signed-in on. Nonetheless, this aspect of cloud integration should not be a primary concern, as this can be outsourced to other cloud software such as Google Drive and Dropbox or even Microsoft OneDrive. These solutions support the syncing of various file types, including files not native to those solutions. For instance, Microsoft word documents or Apple's Pages would sync on both Google Drive and Dropbox. The exception to this is iCloud, which only supports the syncing of Apple's iWorkSuite across Apple devices.

The key distinction between the Microsoft Suite and other cloud software as it supports real-time collaboration, allowing users to edit the same document at the same time. While freeware such as Google Docs also supports such real-time collaboration, the problem is that Google Docs does not provide the full range of formatting that the Microsoft Suite does.

Despite the seemingly availability of different choices of office suites, the Microsoft Office Suite however is the de facto choice for professionals and businesses. Choosing whether to use the Microsoft Office Suite depends on several factors, which includes the cost of the office suite, the operating system used and compatibility with the software in the clients' firms or other law firms.

Some word processing software, such as OpenOffice, LibreOffice and Google Docs are free and available for all to use. Furthermore, if the law firm has decided to use Mac computers, Pages, Numbers and Keynote are already pre-installed and freely available for Mac users to use. If a law firm, however, expects to exchange word documents with clients or other law firms with changes tracked, then compatibility of Office Suites may be a relevant consideration. A law firm also ought to consider whether the office suite applications are available on smartphones (especially if their employees travel often and regularly use their smartphones to reply and edit documents) and whether it is easily integrated with cloud storage software.

Subscription vs Licence

If Microsoft Office Suite is the choice, then law firms should consider whether to purchase the suite on a subscription basis or a single-payment licence. A subscription-based purchase allows law firms to

make monthly or annual payment for the use of the Microsoft Office Suite, which includes Word, Excel, Powerpoint, OneNote, Outlook, Publisher and Access. The subscription also includes Cloud services such as OneDrive and Skype. Other perks of purchase by subscription include the use of Microsoft Office Suite on more than one device and monthly updates.

On the other hand, law firms can also purchase a one-time use for only one computer but with less software available (Outlook, Publisher and Access are not included), and without Cloud services.

D. CONCLUSION

To conclude, when deciding which payment mode to use, a law firm should consider if it is essential to acquire the additional software that is packaged with paid subscription. The firm should also determine if more than one device will utilising the software, choosing to use either Microsoft One Drive's cloud computing or Skype services. Finally, in addition to the above, the firm has to decide the cost benefit of subscription costs compared to a one-time licence payment.

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Accounting and Time Management

Written By:

Renaro Daniel Ezra Bunyamin

A. INTRODUCTION

Having to deal with numerous invoices, following-up with payments from clients or to vendors and keeping receipts to account for disbursements are always a nightmare for practitioners.

There are times when you may even have forgotten to add/track time on work done to bill clients.

B. ACCOUNTING AND TIME MANAGEMENT SOFTWARE" TO "ACCOUNTING AND TIME MANAGEMENT ("ATM") SOFTWARE

Features of Accounting and Time Management Software

Income or Billables

(a) Create invoices and organize invoices in chronological order/file reference number/clients.

(b) Create estimates for your work and storing this data in the system and converting it later into invoices.

(c) Automatic recurring invoices for retainer billing.

(d) Send automatic reminders (less cold calls by you or your staff).

(e) Create general clients' statement or create statement of accounts for each client.

Purchases or Bills from others

(a) Track and store expenses/bills/receipts due to others, filed according to vendors.

(b) Track your assets.

Generating Reports

Create customizable reports such as the following:

(a) Balance Sheet: A preview of what your business owns or is due to receive from others (assets), what it owes to others (liabilities), and what you have invested or retained in your company (equity).

(b) Profit & Loss (income statement): Summary of your revenue and expenses that determines the profit you made.

(c) Cash flow report:

  (i) Cash coming in and going out of your business including items not included in Profit & Loss such as repayment of loan principal and owner drawings.

  (ii) Paid or unpaid invoices broken down by clients.

(d) Aged Receivables: Unpaid and overdue bills for the last 30, 60 and up to 90+ days.

(e) Purchases by Vendor: Business purchases/expenses, categorized according to who you purchased from or vendor.

(f) Aged Payables: Unpaid and overdue bills for the last 30, 60, and up to 90+ days.

(g) Balance of all your accounts on a specified date.

(h) Trial Balances.

(i) Account Transactions (General Ledger).

(j) Accounts organized by categories: Assets, Income, Equity, Expenses, Liabilities.

(k) Detailed list of all transactions and their total broken down by accounts.

Others

(a) Reconciliate different accounts.

(b) Set budget customizable for the month/year.

(c) Track time spent on work done (researching the law, drafting cause papers etc.) and reconciliating this data with/to specific file reference no./client in the ATM, and converting this data into invoices or add into specific invoices.

(d) Some ATM providers also provides value added services and/ or enable third-party software integration such as the following (usually available on cloud-based ATM Only):

(e) Allows integration of your bank account with the ATM enabling you to monitor balance/transaction in real time.

(f) Accept credit cards payment.

(g) Automatically charge clients credit card on record for recurring billings.

(h) Allows PayPal integration (you can receive payments or make payments using PayPal accounts).

(i) Scan copies of receipts automatically into the system (ie, ie taxi fares, stationery etc) from your mobile.

C. CLOUD BASED ATM VS COMPUTER BASED ATM

For general comparison, refer to the section on Cloud-Based Servers vs On-Premise Servers in the Legal Technology Manual [here](#).

D. OVERVIEW

Advantages of an Accounting and Time Management Software

(a) Avoid double billing/paying;

(b) Avoid accounting errors;

(c) Allows you to better plan your budget;

(d) Less time spent dealing with accounts; and

(e) Track time for work done without missing out.

Disadvantages of an Accounting and Time Management Software

(a) The software is generally costly in relation to paper-based system;

(b) You may have difficulty adapting to the system as manual accounting can be more flexible than computerized accounting;

(c) You may need to add on cost to get a specialist to refine the software to use the software more effectively to suit your business needs;

(d) You may need to use the application generally downloadable from the software provider to track time spent on work. This means you need to ensure that your phone:

   (i)   is compatible with the application;

   (ii) has extended battery life (as some application may not run in the background and thus consuming battery life); and

   (iii) has good data package needed to run the application whilst you work to track time.

E. CONCLUSION

There are some neat features which are helpful to practitioners (i.e scan receipts directly to the ATM). However, you may need some time to adapt to the new process which may require getting a specialist to refine the software. You may choose to opt for an ATM that provides just the basic features of making accounting and time tracking easier to deal with, thus saving costs with unnecessary features. Also note that as you deal with client's monies, be sure that you adhere to the Legal Profession (Solicitors' Accounts) Rules.

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Audio and Video Conferencing

Communication is the key to ensuring that instructions are properly understood.

Written By:

Benjamin Cheong | Ko Cheng De | Cho Qing Jin

A. BENEFITS OF ADOPTING AUDIO/VIDEO CONFERENCING SOFTWARE

In recent years, businesses have been relying heavily on information and digital technology to enhance work productivity. Yet, many lawyers do not utilise modern technology when deciding to hold a discussion with co-workers, clients, or counterparties. Often, the first mode of conducting the discussion is either setting a physical meeting or a conference call through the telephone.

However, such "traditional" modes have their drawbacks. Arranging a physical meeting requires detailed planning to suit the attendees' schedules. Furthermore, a telephone conference call does not allow for the perception of the other party's thoughts and emotions

through observing their facial expressions and body language. Audio/video conferencing software eliminates the two drawbacks of the "traditional" modes stated above. First, such software allows parties to communicate online without the need to travel to the same meeting venue. In addition, the video capabilities of the software allow participants to feel as though they are physically present in the same room. This is beneficial when all participants are located in different countries or time zones.

Moreover, popular enterprise solutions have also developed other features that are essential to a law firm's case management. Given the prevalence of smartphones and tablets, lawyers should also consider using other simpler (or free) applications available on these platforms.

"The usage of audio/video conferencing software allows law firms to reduce costs, whilst increasing productivity and efficiency at the same time."

B. USEFUL FEATURES IN AVAILABLE SOFTWARE

The key to any law firm's work is effective case management. This requires an effective collaboration of all involved parties, an effective scheduling of meetings, and timekeeping. Many enterprise conferencing solutions have developed various features that assist case management. Law firms may wish to consider adopting conferencing software with such features, alongside their existing case management solutions.

Effective collaboration amongst participants of a conference

Popular audio/video conferencing software often have features allowing for screen sharing and real-time document review and editing. Screen sharing features allow other parties in the conference to view, but not control the screen of the party (host) who shares it. As the audio/video conference proceeds, participants can view the changes being made to a document while the host is editing the document.

Real-time document review and editing features allow participants to virtually "meet and collaborate" as if they were working in the same room. Participants may communicate, view, annotate and edit documents at the same time. The documents incorporate changes

based on all participants' edits. There is thus avoidance of multiple redrafting and repeated sending of these documents to all parties involved.

Assisting in the scheduling of meetings and timekeeping

Many enterprise conferencing solutions have various timekeeping functions that are important for case management. Scheduling capabilities allow for the effective arrangement of meetings. Automatic reminder functions assist in reminding clients and lawyers of the scheduled conference.

Specifically, the scheduling capabilities allow the sending of electronic conference invitations to all participants. The invitations are usually compatible with common calendar applications found in both smartphones and tablets. This means that participants can review the conference invitations easily. Free websites such as www.timeanddate.com/worldclock/meeting.html allow users to schedule meetings or conference calls across different time zones.

Upon receipt of such invitations, the participant's electronic calendar will be updated with the scheduled meeting. A conference host may utilise reminder functions to prompt all participants, lawyers or clients, of an upcoming meeting. A conference host may usually schedule an automatic reminder to notify a participant through the settings of an invitation.

Finally, popular enterprise conferencing solutions may also have call duration logs. These call duration logs are useful sources of reference where timekeeping is concerned. By using these logs, lawyers may bill a client the exact amount of time based on the length of the conference call.

A law firm intending to adopt these enterprise conferencing solutions should also consider acquiring additional hardware such as an all-in-one video camera, speaker and microphone. This is especially so when the firm's workstations/laptops are not fitted with such hardware.

C. USE OF SIMPLER (AND FREE) APPLICATIONS

Simpler (and even free) applications (apps) on smartphones and tablets may also be utilised for audio/video conferencing. Examples of smart phone and tables applications with video call function is the popular instant messaging app "WhatsApp", "Facebook Messenger" and "Line".

While these applications do not have the functions of the enterprise conferencing solutions for multiple parties, these applications are still useful for quick one-one discussions with a client. In the case of a firm that does not have the resources (nor need) to maintain an enterprise conference solution, the firm may still utilise these free applications for instant communication with its clients. Finally, some of these applications may also be popular with users from certain countries. For example, the application "Line" is popular in Indonesia and "WeChat" is popular in China. Where a law firm has numerous clients from these countries and there is a need to consult the clients on certain matters, the firm may save on international dialling charges if these free applications are used. This would help to lower the costs of a matter and translates to overall cost savings for the client and lower overheads for the firm.

D. CONCLUSION

The usage of audio/video conferencing software allows law firms to reduce costs, whilst increasing productivity and efficiency at the same time. In this increasingly globalising legal landscape, the ability to transgress previous limitations through hosting of collaborative conferences world is a particularly defining reason for such reliance, given that parties may be in different parts of the world.

First published on 8 February 2018

Cloud-based Storage

Written By:

Foo Juyuan

A. BENEFITS OF USING CLOUD-BASED STORAGE – AN INTRODUCTION

A lawyer works from the office, and he works from home. He goes to Court, and he makes site visits. A lawyer is never confined to just being in the offices of his firm. At these locations, a lawyer should be able to access all his law firm's documents at any time, from anywhere, and on any device.

With a cloud-based storage system, the lawyers of a law firm will have the potential to view and edit documents conveniently. It helps provide the lawyer with seamless access to his client's important data in the form of Word documents, PDFs, spreadsheets, photos, and any other digital assets from wherever the lawyer is. The lawyer no longer needs to be at his work PC to access his work files.

Cloud-based systems, including cloud-based document storage systems, are what some would argue more reliable than the software installed on the business's own servers. Major cloud service providers invest a lot of resources in building and maintaining robust infrastructures. They promote their own servers as not only being secure, but reliable as well[1]. Accordingly, downtime and problems are usually far less than managing one's own in-house server. Furthermore, cloud-based software is usually protected by state-of-the-art information security systems, with some services even advertising their security as "military grade".

B. RECOVERABILITY OF DATA

Having your data stored both "in the cloud" and off-site serves to enhance data recoverability. Cloud-based document storage solutions tend to have the feature to automatically back-up and sync your locally-stored data on the cloud system, increasing the convenience of recovering data should the user's physical computer or hard-drive be damaged due to fire, flood, or theft. The recovery of data when a computer hard-drive crashes is either impossible or costly, not to mention valuable time wasted. Do note however that not all cloud-based storage solutions have their own back-up features, and those who do, are charged a premium.

"While there is no expressed prohibition of the use of cloud computing in a law firm's operations, law firms should take note of the Law Society of Singapore's Council Guidance Note 3.4.1 on Cloud Computing."

C. SCALABILITY

Cloud-based systems and storage services are also inherently more scalable, in that there is potentially no limit to its storage capacity. For on-site servers and data storage facilities, a business will have to buy the server and the necessary software, and ensuring it is properly maintained by hiring an I.T. consultant. When the business reaches the limit of the storage capacity of its on-site server, the business has to pay again for an upgrade, which usually requires a change to the actual physical product. This in turn will require the migration of existing data, costing the business even more money and wasted time.

Cloud-based solutions, on the other hand, are theoretically infinitely scalable. The physical servers for these cloud-based solutions are

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1. Major cloud-providers provide a service level agreement of 99.9% availability
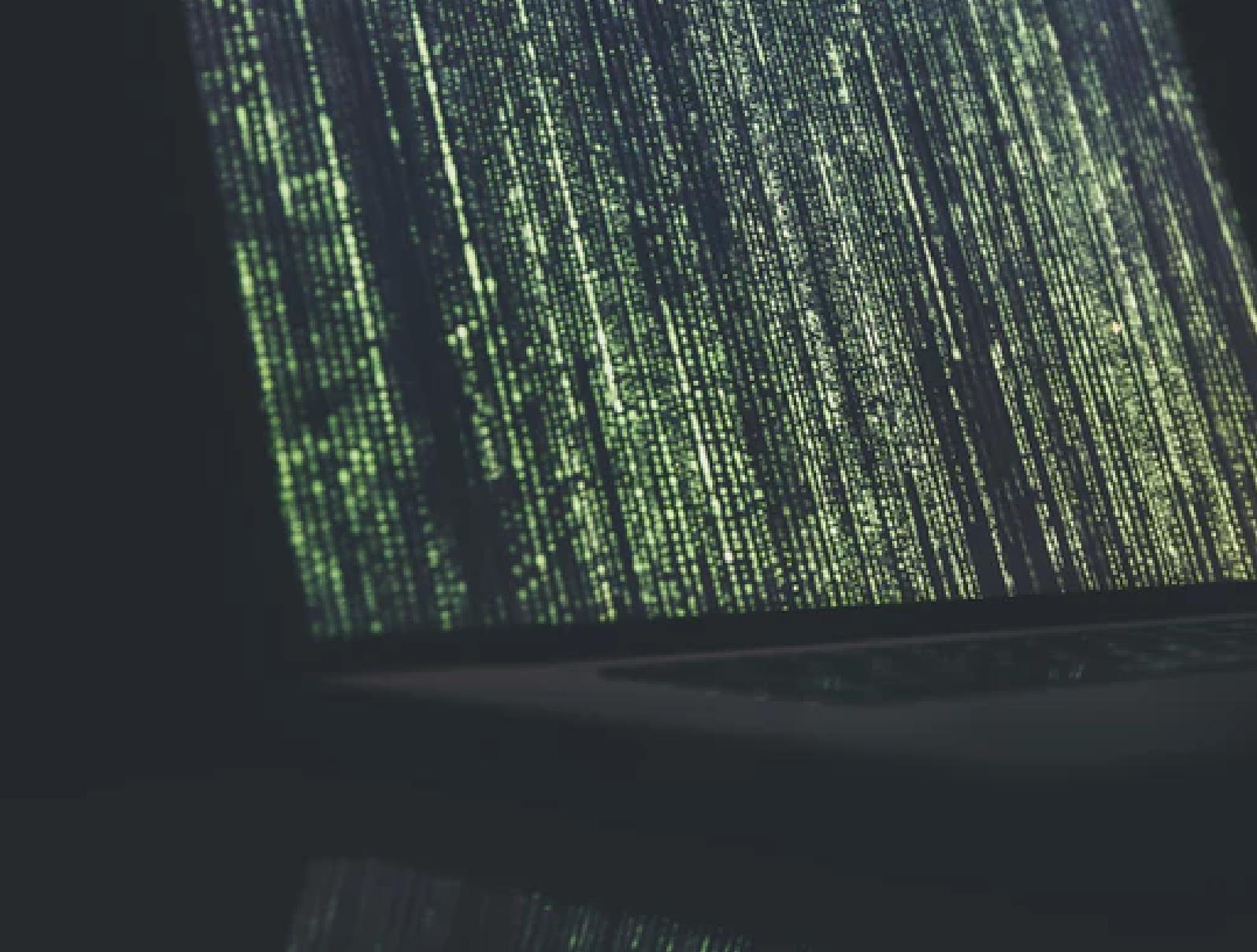
maintained and improved by the service providers themselves. At present, most cloud-based storage providers charge a monthly flat fee per-user, and a law firm can easily add (or remove) users at any time, with costs adjusted incrementally. Instead of having multiple user accounts, some law firms may choose to share a single high-capacity account to save costs.

Commonly used or available cloud storage services include: Microsoft OneDrive, Microsoft Sharepoint, Dropbox, Box.com, Google Drive/Google Backup & Sync.

However, handing data off to a public cloud provider poses security and privacy concerns. While there is no expressed prohibition of the

use of cloud computing in a law firm's operations, law firms should take note of the Law Society of Singapore's Council Guidance Note 3.4.1 on Cloud Computing dated 10 March 2017, available for download [here](#).

Finally, it is important to note that cloud-based document storage systems are different from cloud-based document management systems. The main difference is that the former functions largely as a "warehouse" for documents and do not provide any document management functionality, for example version tracking, content-tagging and categorization, etc.

First published on 22 February 2018

News Services

Written By:

Josh Lee Kok Thong, *LawTech.Asia* | Amelia Chew, *LawTech.Asia*
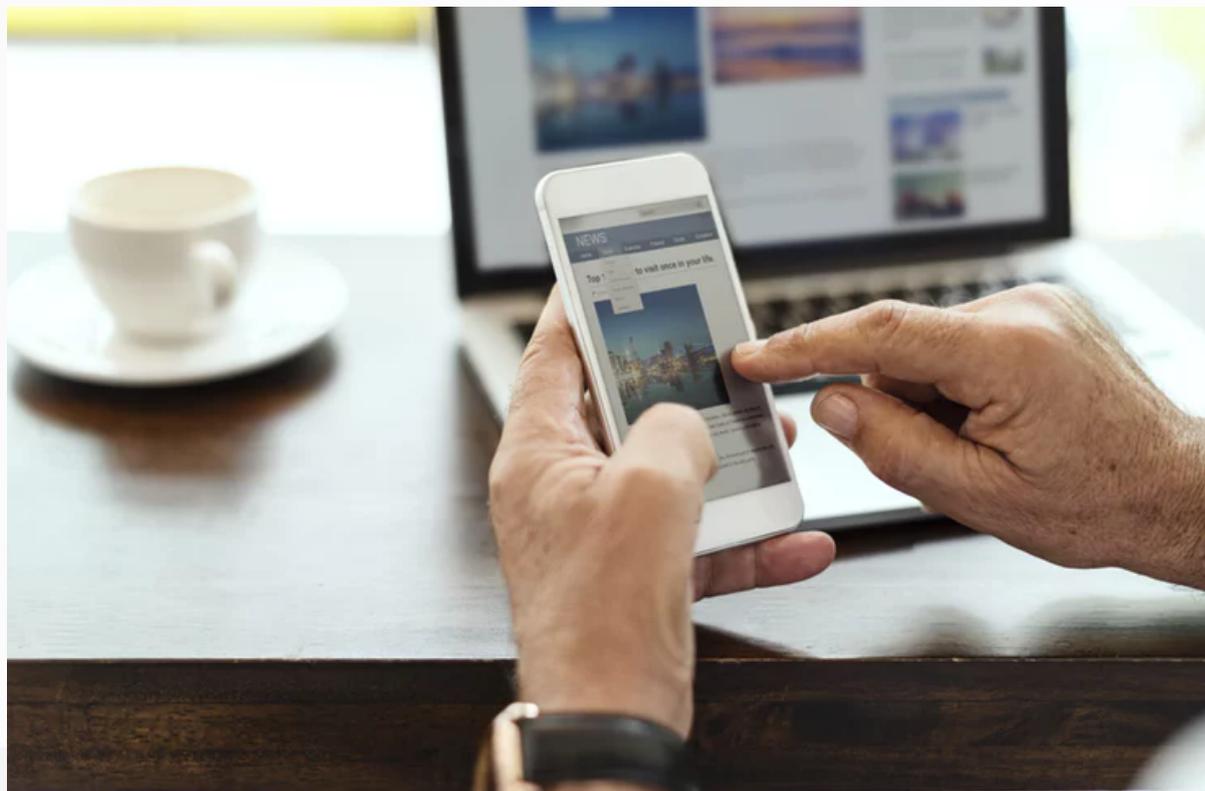
A. INTRODUCTION

News services are important for three reasons. First, it provides lawyers with commercial awareness, an essential but often unspoken attribute of a successful lawyer. Second, it broadens your horizons and may allow you to chance upon relevant cases or deals that you can follow up on. Third, it provides you timely updates about developments within the legal profession.

News services provide commercial awareness

Put simply, commercial awareness is an understanding of the business or industry that you and your clients operate in[1]. It is about understanding the latest major events in that industry, recognising

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1. Paul Harris, AllAboutLaw, "What is commercial awareness?" <https://www.allaboutlaw.co.uk/law-careers/commercial-awareness/what-is-commercial-awareness> (accessed 16 February 2018).

the biggest players (and your client's competitors) and understanding how the industry works and the major changes and trends that will affect the industry.

Having strong commercial awareness enables you to provide better, more bespoke services to your client. It is built-up by always being in the know. This requires lawyers to invest their time in keeping up-to-date, and to finding the services that give them the right information, at the right time, at the right (or no) cost.

News services are a source of secondary legal research

News services may also be an unexpected source of research. For example, in many industries, while watershed events are far and few between, a single blockbuster case in an area could be a harbinger of more similar cases to come.

News services can therefore be a useful source of secondary information for such cases. Another example is where you are looking at esoteric cases where Boolean searches on online law reports do not provide anything useful – a quick search on news services can provide helpful clues that help you refine your search.

News services provide updates about the legal profession

News services can also provide updates that affect how you practice directly. For example, news about the accreditation schemes launched by the Singapore Academy of Law and the Law Society's young lawyer mentoring scheme – among many other changes and trends in the legal profession in the past few years was widely spread by local news platforms[2]. Following the right news services will allow you and your lawyers to stay abreast of these changes, and plan ahead on how they might affect your practice.

This article seeks to provide you with various local resources and news services (from free to professional sources) that will be useful for you and your lawyers.

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2. For instance, see Kamini Devadass, "New mentorship scheme for lawyers to be launched", Channel NewsAsia (29 August 2017) <https://www.channelnewsasia.com/news/singapore/new-mentorship-scheme-for-younger-lawyers-to-be-launched-9166762#cxrecs_s> (accessed on 17 February 2018). See also Ng Huiwen, "New accreditation scheme for lawyers", Straits Times (10 January 2017) <http://www.straitstimes.com/singapore/new-accreditation-scheme-for-lawyers> (accessed 17 February 2018).

B. NEWS SOURCES

The following are some local news sources available online that focus on news in Singapore and Asia and major news from around the world:

(a) Straits Times. The Courts & Crime section is particularly relevant for reading about unreported cases.

(b) Business Times. This source focuses on business and financial news, including analysis and opinion on top business stories, as well as local and global stock markets.

(c) TODAY and Channel NewsAsia ("CNA"). Both these sources do not impose a limit on the number of articles you can read (unlike other news services, which allows you to open only 15 free articles a month).

Should you wish to stay updated on news with more international coverage, CNN and BBC News may be useful news sources. CNN and BBC News focus on US and international news, categorised not only according to region (eg US, UK, Asia) but also by topics (eg business, technology and science).

If reading the news on your mobile phone while on the go is more your cup of tea, these news sources also have available mobile apps. Some of these mobile apps come with a function that enables personalisation of in-app news feed with topics and industries that interest you, accompanied with a push notifications function that pushes the latest news to your device's lock-screen.

C. FREE NEWS SERVICES

It may also be more efficient to use news aggregators that bring together the latest news from a variety of sources. Free news aggregators that can be saved to your internet browser's bookmark list include Google News and Singapore Law Watch ("SLW").

Google News aggregates not just news from local and international outlets. By tracking your regular searches and visited websites, Google News is able to surface news articles that are most likely to be relevant to you.

On the other hand, SLW is hosted by the Singapore Academy of Law, and specifically curates news relating to the local legal profession

and industry. In order to make the process of staying updated more seamless, you can subscribe to free email updates by SLW to receive the day's latest legal news in your email inbox.

SLW also aggregates the latest judgments from the Singapore High Court and Singapore Court of Appeal, commentaries of legal cases, updates from various law firms, and the latest legislation that has been passed in Parliament.

D. NEWS DATABASES

Finally, should you need to search for news based on specific parameters, it would be useful to use news databases that bring together news from a variety of sources. Factiva and SPH Newslink available on LawNet Premium are databases that focus on global and local news respectively. While subscribing to such news databases may be costly, the search function available can facilitate finding news from a specific time period or region.

First published on 29 March 2018

Email Accounts

Written By:

Irene Ng, *LawTech.Asia*

A. INTRODUCTION

Having your own firm's e-mail account ie,yourname@yourfirm. com, is one of the stepping stones towards running a professional law firm. Possessing your own firm's e-mail gives clients a sense of professionalism, promotes your firm's branding, and gives you control over which e-mail interface you would like to use for your daily work. Setting up your e-mail account is intricately linked to owning your own domain name.

B. DOMAIN NAME AND HOSTING

A domain name is basically your website address, for example, http:// www.yourwebsite.com. To set up your own e-mail, you would first need to purchase your own domain name. Purchasing a domain name can be done online at GoDaddy.com or Oryon Networks, a local option.

You may however be prompted to purchase domain hosting as well on these websites. For the purposes of setting up your firm's e-mail account, you can skip purchasing hosting services from these websites for now.

The next step involves hosting your own yourname@yourfirm.com e-mail account. This can be done in various ways. One way would be to have your self-hosted exchange server, although this is generally not recommended especially for small or medium-sized law firms as they tend to cost more and can pose security risks. A dedicated IT team to fix problems arising from your self-hosted exchange server may also be necessary, thereby adding costs. The other alternative to a self-hosted exchange server would be to go to the cloud. Microsoft's Office 365 and Google's G-Suite are two popular services that cater to businesses, in particular for small and medium-sized firms. Pricing is usually a monthly or annual subscription and is dependent on the number of e-mail accounts created and the ancillary services that go with the e-mail hosting service.

C. CLOUD-BASED HOSTING

Microsoft Office 365 Packages

Taking Microsoft's Office 365 as an example, Office 365 has three kinds of packages, two of which provide e-mail hosting services. The most basic package that Office 365 offers is the "Office 365 Business Essentials", which offers e-mail hosting with 50GB of storage, and web-based word, spreadsheet and presentation software. The other package that has e-mail hosting is the "Office 365 Business Premium Package", which includes not only the services that "Office 365 Business Essentials" has, but also includes the Microsoft Office Suite, which contains dedicated word processing, spreadsheet, presentation, and e-mail software that can be installed on your computer. More information on office suites can be found in "Office Suite" of this Legal Tech Manual.

Google's G-Suite

For Google's G-Suite, firms can choose between three plans: Basic, Business and Enterprise, that provides different services, such as Google Docs, in addition to the basic e-mail hosting. G-Suite is also subscription-based and based on the plan type and the number of subscribed users.

D. CHOOSING A HOST

Choosing which e-mail host depends on several factors such as preference for dedicated software, user interface, need for specific ancillary services, e-mail storage space, and the cost. Firms that require dedicated word processing software may find Microsoft Office 365 attractive as the e-mail hosting is bundled with word processing software. Yet, firms that have employees that work on the go with their smartphones may find it useful to have cloud services such as Google Docs.

E. CONCLUSION

The choice ultimately depends on the needs of your firm. If you are constantly on the go and working on your smartphone is a reality, then you might want to consider downloading the MS Outlook app or Gmail app to try the interface before deciding which e-mail host to sign-up with. If you use the smartphone often, you may want to ensure that e-mails are consistently synced between your phone and your computer so that you do not miss on any client or e-litigation updates.

For smartphone users who are undecided on which e-mail hosting service to use and are particular with the layout and design of the platform, try their e-mail apps (i.e. MS Outlook and Gmail for Microsoft and Google respectively). Computer users should consider their web-based e-mail platforms.

You can sign up for a free e-mail account at Gmail (yourname@gmail.com) and Outlook (yourname@outlook.com), and test the user interface with your personal e-mail address. The user interface such as creating and sending new e-mails, managing spam e-mails, etc, for these free e-mail accounts will be rather similar to what you will experience when you host your e-mail with the same e-mail companies. For instance, the e-mail user interface for yourname@gmail.com and yourname@yourwebsite.com, if the latter is hosted with Google's G-Suite, is close to identical.

For those who are well-acquainted with Gmail or Outlook because of their personal e-mails, you may find one or the other user interface more comfortable to use. Finally, for those who have not used either interface, this article would have given you a better idea on which platform and which service you feel most at ease using.

First published on 13 April 2018
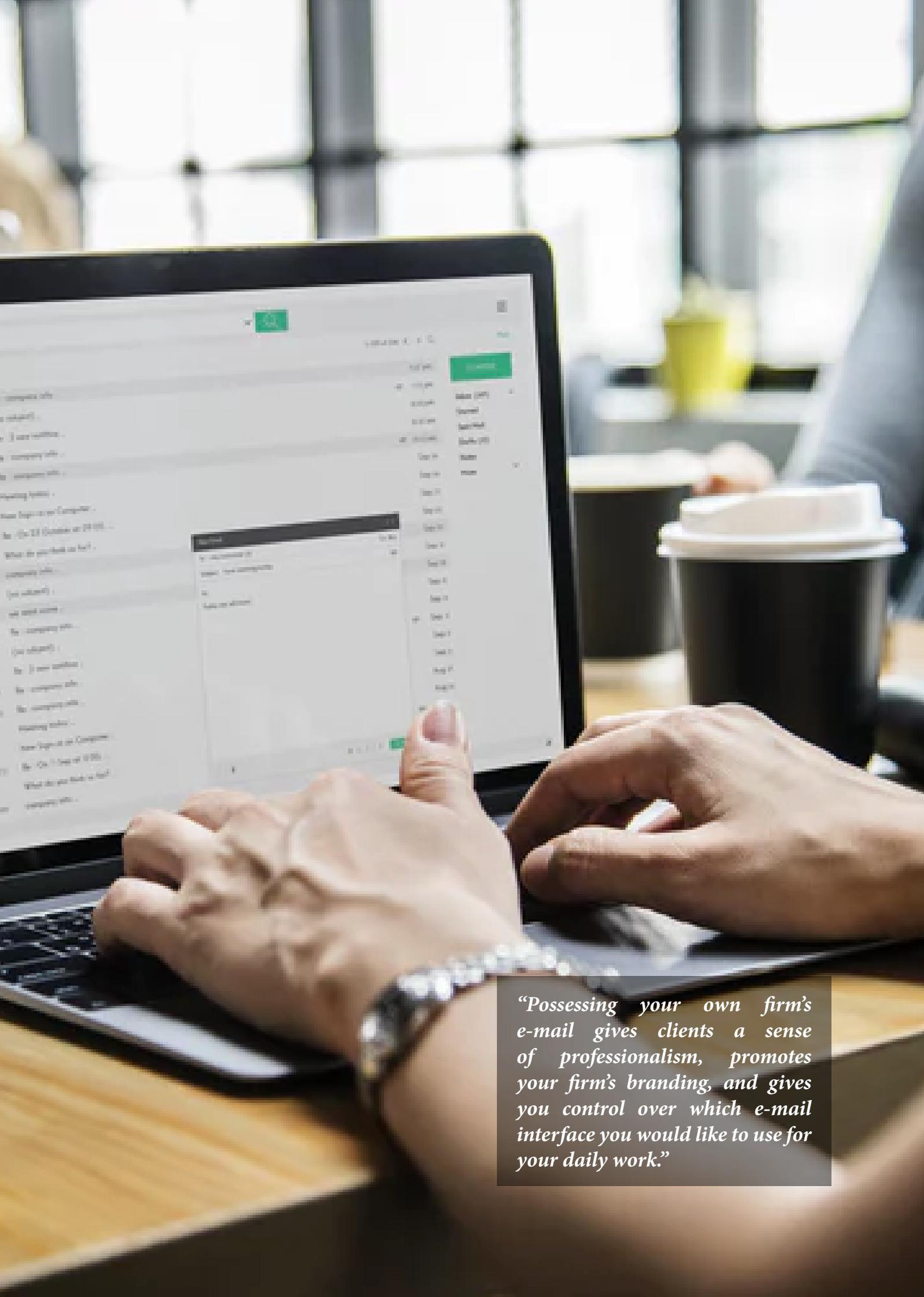
"Possessing your own firm's e-mail gives clients a sense of professionalism, promotes your firm's branding, and gives you control over which e-mail interface you would like to use for your daily work."

eDiscovery Solutions (Part I)

Written By:

Wan Ding Yao, *LawTech.Asia*
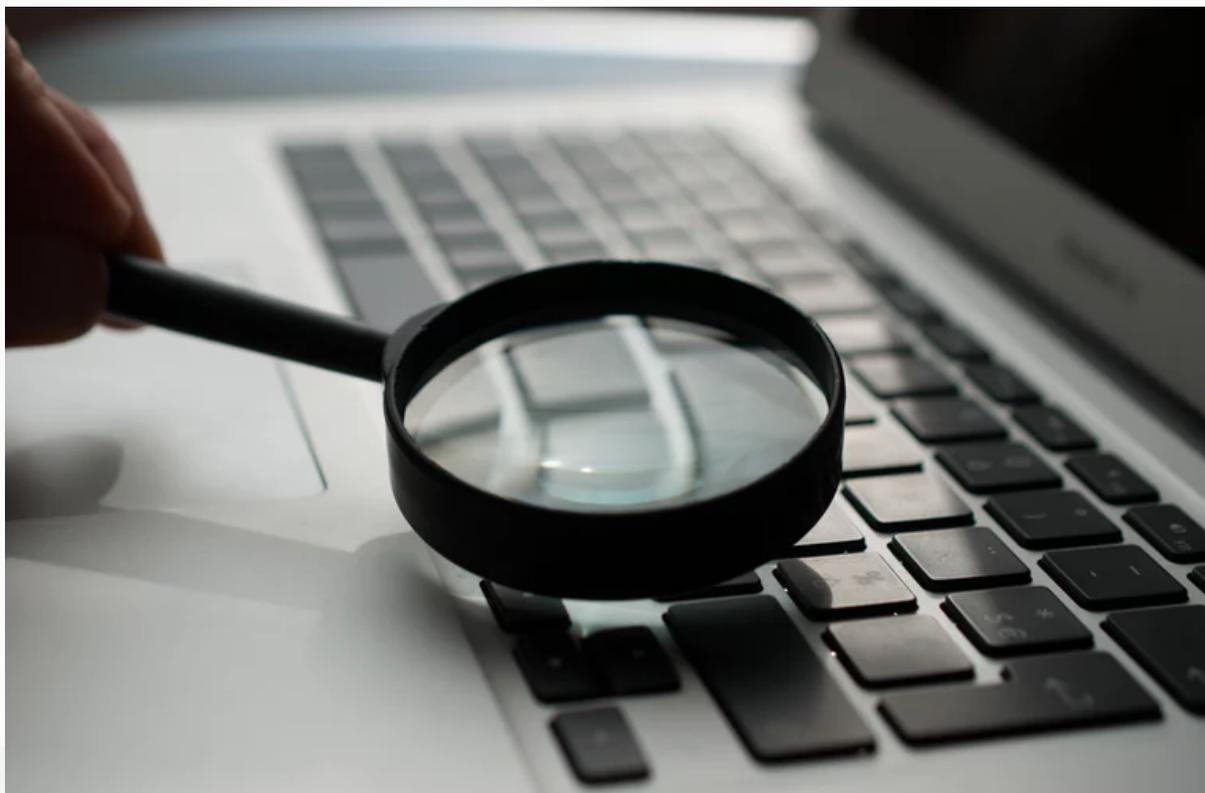
A. AN OVERVIEW OF E-DISCOVERY

E-discovery helps law firms to identify relevant content and provides information oversight in legal cases. E-discovery solutions automate the electronic discovery (e-discovery) process, which is outlined in the Electronic Discovery Reference Model (EDRM) diagram. They are essential to managing the ever-changing nature of e-discovery processes. E-discovery processes, triggered by a lawsuit or internal investigation, change as litigation progresses because the nature of the dispute and individuals involved are not constant. This article introduces the EDRM diagram, describes the e-discovery process, and describes available technologies that law firms can adopt.

B. ELECTRONIC DISCOVERY REFERENCE MODEL (EDRM) DIAGRAM

EDRM was founded by attorney George Socha and technologist Tom Gelbmann in May 2005 to address the lack of standards and guidelines in the e-discovery industry. Currently, EDRM is part of Duke Law School's Center for Judicial Studies. EDRM created the EDRM diagram (see Figure 1) to map the stages of e-discovery and as of 2018, is an industry-wide standard for managing the e-discovery process.

From the diagram, it is clear that e-discovery is an iterative process. This is due to the ever-changing nature of e-discovery, requiring law firms to constantly revisit information identified, preserved et cetera as litigation progresses.

According to Gartner, the first four processes ("left-hand side"), namely identification, preservation, collection and processing are IT-centric processes as they involve heavily technical data handling and analysis. Legal teams typically manage the last five processes ("right-hand side"). Successful e-discovery projects arise from all teams working in a collaborative and coordinated manner.
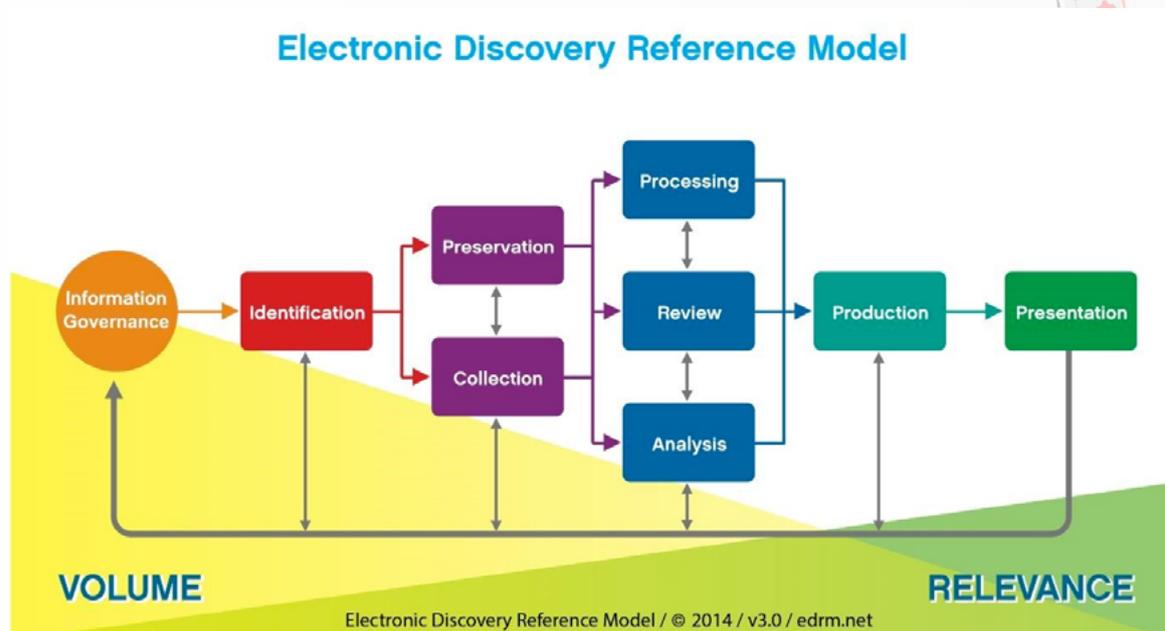

Figure 1: EDRM diagram (Source: edrm.net)

C. SUMMARY OF E-DISCOVERY PROCESS STAGES (AS DESCRIBED BY EDRM)

For Stakeholders

(a) Information Governance

Successful information governance involves conceiving interoperable processes. Law firm stakeholders must:

(i) Understand the value that business processes create;

(ii) Have basic knowledge of information technology that manages information;

(iii) Have oversight of legal, security, privacy and RIM risks; and

(iv) Be aware of the information lifecycle which lies at the centre of these processes.

For IT Teams

(a) Identification

Identification entails identifying potential sources of relevant electronic-stored information (ESI), which may include business units, people, IT systems and paper files. Key players should be interviewed to identify relevant information sources they possess. Additionally, IT and records management staff should be interviewed to establish how relevant data is retained, accessed and protected. In the litigation progresses, the relevance of information should be re-accessed and new relevant information identified.

(b) Collection

Relevant ESI should be collected and stored in a legally-defensible, auditable, efficient, and proportionate manner.

(c) Processing

ESI is collected in all forms and formats, ranging from e-mails to videos to compressed container files. Sometimes, they may even exist in physical storage devices such as tapes. Hence, ESI needs to be restored or processed before subsequent work can be done.

Processing comprises four sub-processes, namely, Assessment, Preparation, Selection and Output. Assessment filters out irrelevant data. Preparation involves converting the raw data into a format that allows for specific items to be searched and selected. Selection removes redundant and duplicate data, leaving behind only the most relevant of information to be output. Output finally prints the resultant data to be reviewed by attorneys or software and allows variances to be accounted for and if necessary, corrected.

For Legal Teams

(a) Review

Document review identifies responsive documents to produce and privilege documents to withhold. The review outcome is highly dependent on the legal strategy employed by litigators. It generally involves:

(i) Understanding the scope of the review;

(ii) Establishing procedures to manage reviewer; and

(iii) Identifying the right vendor, tools or platforms.

(b) Analysis

Analysis involves material fact-finding, identifying gaps in content, defining accurate search criteria amongst others. For effective analysis, legal teams should work with data analytics experts to best define search criteria that produces the most relevant results and materialise content loopholes for resolution.

(c) Production & Presentation

The large amount of ESI created and stored leads to increased research in how data that has been collected and reviewed is produced in civil litigation and regulatory investigations. Legal teams have to ensure the data produced is compliant with Singapore's Evidence Law and is presented in a manner compatible with Singapore court procedures.

D. E-DISCOVERY TECHNOLOGIES

E-discovery technology automates and supports e-discovery processes by targeting and automating various stages of the ERDM.

(a) Forensic Data Collection

As suggested earlier, data can be stored on a variety of platforms and formats. Forensic data collection technology automates the manual labour involved in gathering information that may be potentially relevant to an e-discovery matter, regardless of storage medium. Collected data should then be backup, tagged, and hashed to ensure data integrity before the information is subsequently used.

(b) Data Processing

As discussed above, processing converts raw data from the various storage mediums to structured data that can be selected, manipulated and eventually printed in a format friendly to review software. Processing technology automates this complicated task, duplicating and converting large amounts of data within minutes to days, depending on the size of the data.

(c) Legal Hold Management

Legal hold entails preserving all potential evidence after receiving information record request from a government entity or reasonably anticipating an audit, investigation or litigation. In such scenarios, law firms have a legal duty to preserve ESI. ESI is preserved by holding information in-place (content held in original respiratory) or collection (content copied into and encrypted in secondary storage). System audit logs further protect data integrity. Besides the system itself, legal hold management processes include questionnaires, workflow and personnel tracking.

(d) Predictive Coding / Technology-assisted Review and Early Case Assessment

Predictive coding or technology-assisted review involves using machine-learning algorithms to reduce the number of non-responsive or irrelevant documents that need to be reviewed manually. It forms an integral part of Early Case Assessment, which aims to surface relevant ESI that may form potential evidence early in a legal matter.

The use of predictive coding has been approved judicially. In *Da Silva Moore v Publicis Groupe & MSL Group*, a U.S. magistrate judge approved predictive coding to be used. This was similarly done across the Atlantic Ocean in the UK high court case of *Pyrrho Investments*

v MWB Property. With the increased adoption of predictive coding technology in the legal industry, it may only be a matter of time before Singapore courts follow suit.

(e) Review as Distinguished from Technology-assisted Review (TAR)

Review technology supports legal practitioners in evaluating processed ESI for relevance and contextual privilege. Through a series of user-defined and computer-assisted workflows, practitioners can rate the relevancy of data and output readable datasets with proper redaction for the requesting entity. It is different from technology-assisted review software in that the latter uses machine-learning to perform reviews semi-automatically.

E. CONCLUSION

E-discovery software might be lowering the workload of lawyers, but it certainly is not intended to replace them. For example, while technology advocates might argue that TAR is inherently superior to human review, ultimately, a balanced approach might be better as e-discovery technologies merely magnify human judgment. However, what is there to magnify if no humans are judging? As U.S. Magistrate Judge Andrew J. Peck of the Southern District of New York puts it, "It's a combination of the technology, the people involved and the workflow process."

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eDiscovery Solutions (Part II)

Written By:

Serena Lim, *Bizibody Technology Pte Ltd and Litigation Edge Pte Ltd*

A. INTRODUCTION

In this second part of the eDiscovery information, we further explore the practice of electronic evidence and discovery, within the framework of the Electronic Discovery Reference Model (EDRM).

Imagine this scenario:

You receive instructions from a new corporate client (the "Client"), who has discharged its previous lawyer and now wishes to appoint you in place. The dispute is a suit against the Client's ex-employee, who has set up a competing business, for stealing confidential and proprietary information belonging to the Client.

At the client interview, although the Client's representative provides incomplete information, she has provided you with a forensic image of the laptop used by the ex-employee, together with the emails and

documents ("**Electronically Stored Documents**" or "**ESD**"), extracted by the forensic imaging service provider from the forensic image. The ESD comprises 20GB of emails (and estimated 60,000 attachments) in .pst format ("Personal Storage Table"). The attachments comprise of electronic documents in MS Word, Excel, PowerPoint, PDF, Photoshop, and other native formats.

As timelines are very compressed with Discovery due in two weeks, you have amended the pleadings and managed to extend the deadline to five weeks. Within these five weeks, you will need to review the ESD, identify and collate the relevant evidence, and prepare a chronological list of the relevant documents ("**List of Documents**") for purposes of giving Discovery to the opposing counsel. In addition, you have to bear in mind that your client is very cost conscious and has requested that you keep the team small.

At this juncture, you will have to either:

(a) adopt the traditional paper discovery approach of printing all the ESD, and undertaking a chronological review of each document; or

(b) deploy evidence review and management tools, also known as an **eDiscovery Platform**, to review the ESD in native format.

The latter would be preferred, as this method provides not just the highest likelihood of meeting the 5-week timeline, but also the most effective and efficient way of undertaking a review of the large volume of electronic documents. Reviewing ESD in its native form yields huge cost and strategic dividends over traditional paper review and, with the increasing volume of electronic data being generated today, it would seem that the use of an eDiscovery Platform should be a baseline tool for all cases involving ESD.

The new reality faced by lawyers today is the colossal amount of evidence to be reviewed in litigation, due largely to the exponential growth in volume, velocity and variety (the "3Vs") of ESD and electronic data. Of all the documents and data existing today, around 90% was generated in the last two years, with most of the data originated in electronic format (more than 90%).

The hypothetical example provided above is not unusual. This has significantly increased legal costs, as much time is needed to manually review all this data. New skills are needed to manage this situation. Thus the ideal solution would be to use technology to solve a problem

created by technology. It is essential to consider a completely new working approach – new tools, skills, processes, sensibilities and vocabulary.

B. WHAT IS "ESD"?

Before we proceed further, it is good to understand what an electronically stored document ("**ESD**") is.

An electronically stored document is any document that resides in an electronic device. This includes documents, emails, or electronic files such as temporarily deleted files (for example, residing in the Recycle Bin or Trash folder) and even documents stored in unallocated file space or file slack on an electronic medium or recording device as deleted files or file fragments which may be recovered with the use of computer forensic tools or techniques.

Below are common examples of electronic evidence that lawyers come across in their daily work:

Emails	Word documents	Spreadsheets	Presentation Slides
SMS	Instant Messages	Websites	Images
Audio	Video	Recycle Bin	Deleted Data
Logs & Browser History	Metadata	Database	Hard Disk
Data on cloud	Data on social media platforms		

C. CHARACTERISTICS OF ESDS

Electronically stored documents offer:

(a) 3Vs

(b) Document Metadata

(c) Persistence

(d) Fragility

(a) The 3VS of electronic data

The 3Vs were touched on earlier – an ever-increasing amount of data, in terms of volume, variety and velocity, makes the evidence review process quite overwhelming.The volume and speed at which they are being generated, are exploding: from emails to blogs to social media posts, humans have never been more prolific in generating data. Combined with the ease of copying and the low cost of storing electronic data, the proliferation of data is further compounded. Data growth rates are expected to rise exponentially, as data analytics and the internet of things become commonplace in the business world.

(b) Document metadata

Metadata is data about data. Document metadata is information attached to a text-based file that may not be visible on the face of the document. Metadata provides additional information about the document, which can make locating and managing instances of that document easier. Having the ability to filter through the metadata makes it much easier for someone to locate a specific document or other data asset in a variety of different ways.

The types of document metadata that we encounter on a daily basis include:

- Emails: sender, author, send date and time, subject matter, attachments, number of attachments

- Documents: file name, author, date created, date modified, document type

- Application metadata: formulas used in spreadsheets, track changes and comments in word documents.

- Email metadata: requires special mention, being (probably) the single largest source of the huge increase in evidence being reviewed today. Email metadata (for example, recipient, sender, date, time) enables effective processing, review and analysis, and can also be strung together to programmatically produce an automated email listing, Hence, when collecting email evidence, it should be requested for in a .pst file, which can be fed into the eDiscovery Platform and reviewed with all metadata intact.

In short, metadata is evidence, and may have significant impact on the outcome of a case.

(c) Persistence

Deleted ESD remain on a computer system after a document has been deleted. Although Windows Explorer is unable to locate the deleted data, retrieval of such data is possible through the application of forensic software and expertise.

(d) Fragility

ESD metadata is fragile. For example, copying and moving documents from one folder or from one drive to another using Windows Explorer may result in an unintended change of the document metadata (for example, created/modified date).

D. NATIVE FORMAT

A native format is the format that was used to create the file. The following table lists some examples of native formats:

Ai	CDR	Doc	Docx
EPS	EXE	GIF	JPEG
MOV	MP3	PDF	PNG
PPT	PPTX	PSD	PUB
RAR	SIT	TIFF	WAV

It is always best to use documents in their native format, as this preserves all the metadata, rendering the evidence far easier to sort, organize and search. Contrast this to a PDF document which is usually created from an electronic document in its native format or from a printed document, does not retain the metadata from the original native document.

The diagram below, of the Electronic Discovery Reference Model ("**EDRM**"), provides a clearer understanding of the lawyer's role in electronic evidence review.

Electronic Discovery Reference Model

Electronic Discovery Reference Model / © 2014 / v3.0 / edrm.net
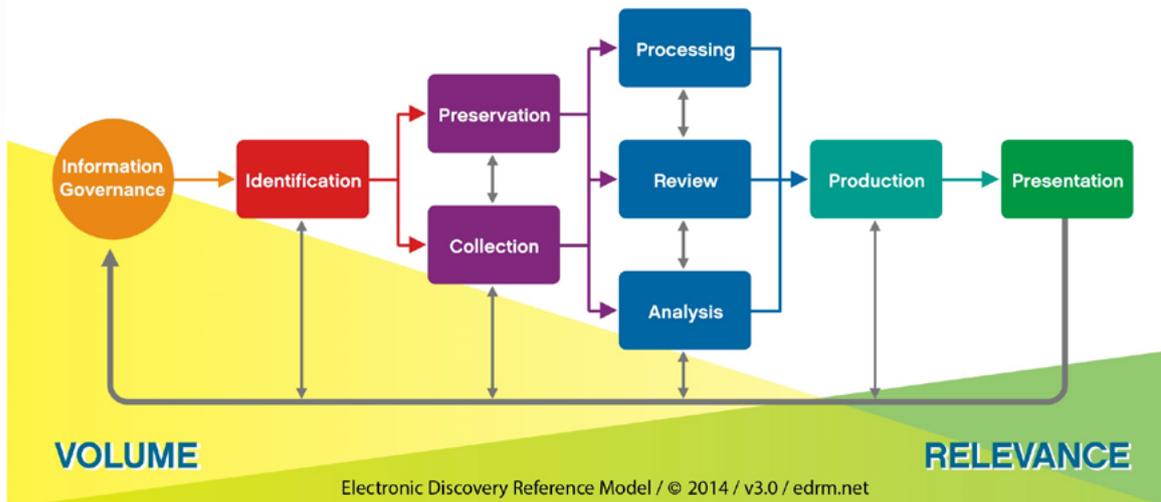
By the time you, the lawyer, receives the electronic evidence, it will usually be at the *processing, reviewing and analysing* the evidence stages. Prior to this, the process of preservation and collection of electronic evidence is carried out.

Preservation and collection of ESD is usually undertaken by the Client's IT Department or by forensic services providers. At the very least, the ESD should be preserved and collected in its native form, eg if the document is a word document, it should be preserved in its .doc format or .docx format. If it is in the form of an email, then the email should be preserved in .msg or .pst format.

As the metadata of the document can be critical to a case, it is crucial that the metadata of the ESD is preserved and that the ESD is collected in a forensically sound way, for example, when the date(s) and authorship(s) of a document(s) are in dispute or are critical. Where deleted data is likely to be critical to the case, it would be advisable to arrange for a forensic image to be undertaken, and for the deleted data to be preserved and collected.

Once the evidence is handed to you to process, review and analyse, it will be a race against time to complete the process.

You decide to use an eDiscovery Platform to process, review and produce the ESD. This is how it's going to go:

(a) The evidence is fed into an eDiscovery Platform for *processing*. There are several sub-processes here:

(i) All metadata will be extracted into separate fields so that documents may be organised chronologically or sorted in order of other selected metadata (Diagram 1).

(ii) The system creates an analytical view of the ESD, using the extracted metadata (Diagram 2).

(iii) All documents are made searchable via the application of OCR technology.

(iv) All text is indexed to enable search results to be produced instantaneously.

(v) The eDiscovery tool is configured to automatically cull irrelevant ESD (for example, by date, document type and other metadata filters, and/or keywords).

(vi) The eDiscovery tool is configured to automatically cull duplicate ESD.

(vii) The processing of 60,000 documents (estimated at 2GB) will take less than one day.

(b) The eDiscovery Platform facilitates the reviewer's *analysis* and *review* of the ESD by:

(i) enabling the reviewer to apply keyword and metadata search filters to instantaneously cull irrelevant ESD, locate smoking guns or privileged ESD; and

(ii) facilitating the creation of document notes, and the application of tags and redactions during the review process.

(c) The eDiscovery Platform facilitates the *production* of documents and document lists, as it:

(i) converts all documents to PDF; and

(ii) exports document lists with metadata fields.

The huge time and cost savings, in both evidence review and production, are derived from the following:

Services / **eDiscovery Solutions (Part II)**
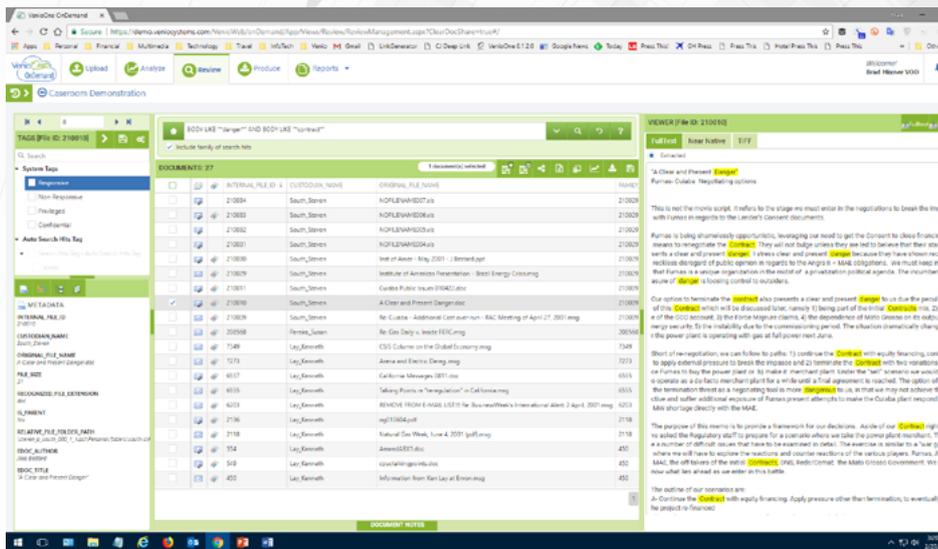
DIAGRAM 1: eDiscovery Platform Review Screen
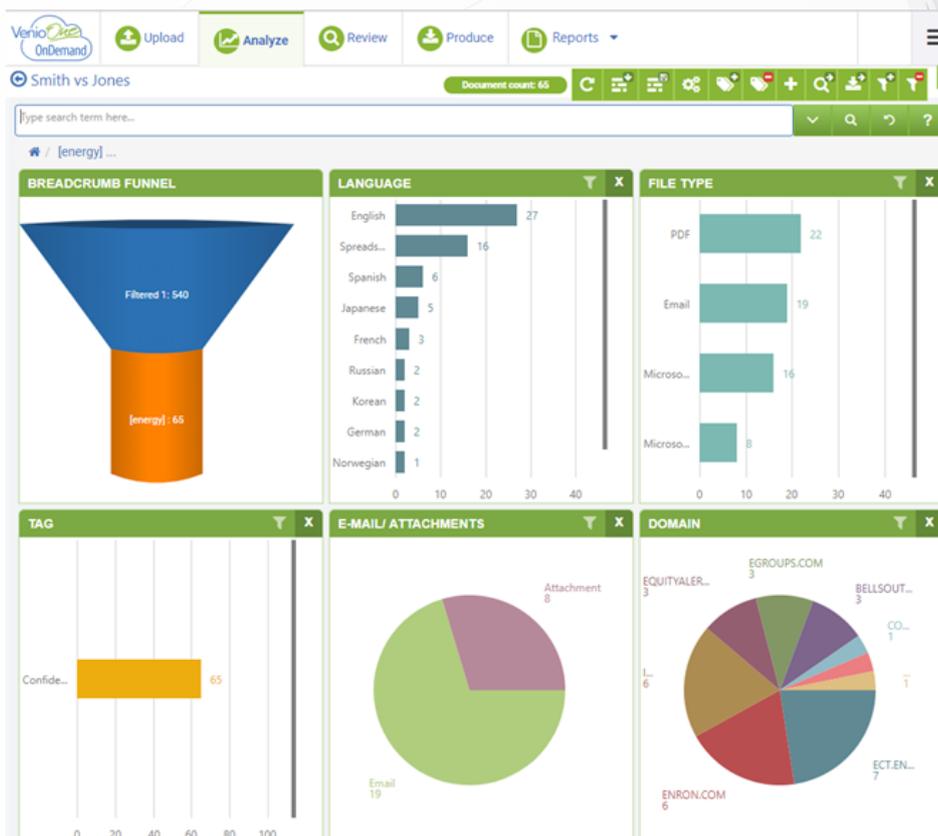
DIAGRAM 2: eDiscovery Platform Analytics Screen

Evidence Review

(a) Reduction of review time by between 30-50%, with greater accuracy, because:

    (i) you are reviewing better, with a wide range of digital tools - such as data analytics (for quick insights), tags (to classify), search (to retrieve) – at your disposal;

    (ii) you are eliminating the review of unnecessary documents, for example, duplicates and irrelevant documents, by using the de-duplication and/or bulk culling functions;

    (iii) the automated OCR and document indexing ensures that each email and attachment, including scanned image PDFs is instantaneously fully text searchable;

    (iv) you are augmenting your lawyering capabilities, finding your smoking guns using keyword and metadata searches, and categorising them using electronic tags (for example, tagging documents according to relevancy, privilege, legal or factual issue, inclusion in affidavits, LOD or Trial Bundles);

    (v) team members can work collaboratively, to review the evidence and to share comments and categorization with other members in the review team, in real time (this ability for the ESD to be reviewed, tagged and annotated by multiple users concurrently is a big plus point); and

    (vi) you have more time to analyse the evidence and devise your case theory and strategy.

(b) The time saving in the review process varies from case to case, but the analytics, keyword search and use of different metadata parameters to slice and dice the information allows rich variety of techniques to review the evidence versus the traditional linear review. See sample screenshots below of an eDiscovery platform's review and analytics screens.

(c) Compare this to manual review, where only 1 person can review the evidence at a time, using hardcopy printouts or Microsoft Outlook. Microsoft Outlook enables the reviewer to read the emails and the attachments, but does not provide the processing and production features, and comprehensive search, tagging and annotation functions that are a baseline feature found in all eDiscovery Platforms.

(d) You are likely to start enjoying your work a whole lot more, especially since you can work from anywhere, anytime, without having to lug any documents or laptops, or compromising security.

Production

(a) The traditional manual method of producing an enumerated listing of 60,000 emails is both laborious and time consuming.

(b) The traditional manual work entails junior lawyers or paralegals to:

(i) manually creating an itemised chronological listing of each email in Microsoft Word; and

(ii) converting each of the 60,000 emails and attachments into PDF, by painstakingly opening each email and attachment in Outlook, and using a PDF converter (such as Adobe Acrobat or Nuance PDF converter) to convert the email/attachment to PDF. Assuming that each conversion and listing takes an average of 5 minutes, we are looking at 200 working hours, ie 25 working days or 5 weeks.

(c) Using an eDiscovery platform to produce the LOD entails using the eDiscovery platform to:

(i) auto extract and merge the corresponding ESD's metadata into an LOD listing; and

(ii) auto convert the 60000 ESDs from its native format to PDF

Assuming that the eDiscovery platform or provider provides such LOD auto generation and PDF auto conversion functions, the use of the eDiscovery platform shortens the human effort from 25 working days (traditional manual production) to 3 working days (production using an eDiscovery platform).

(d) Furthermore, last minute changes can be easily catered for with LOD regeneration.

(e) Meeting the 5 weeks discovery timeline is not a challenge if you review the 60,000 documents in ESD, using an eDiscovery platform.

The benefits of managing evidence electronically, then, can be summarised as follows:
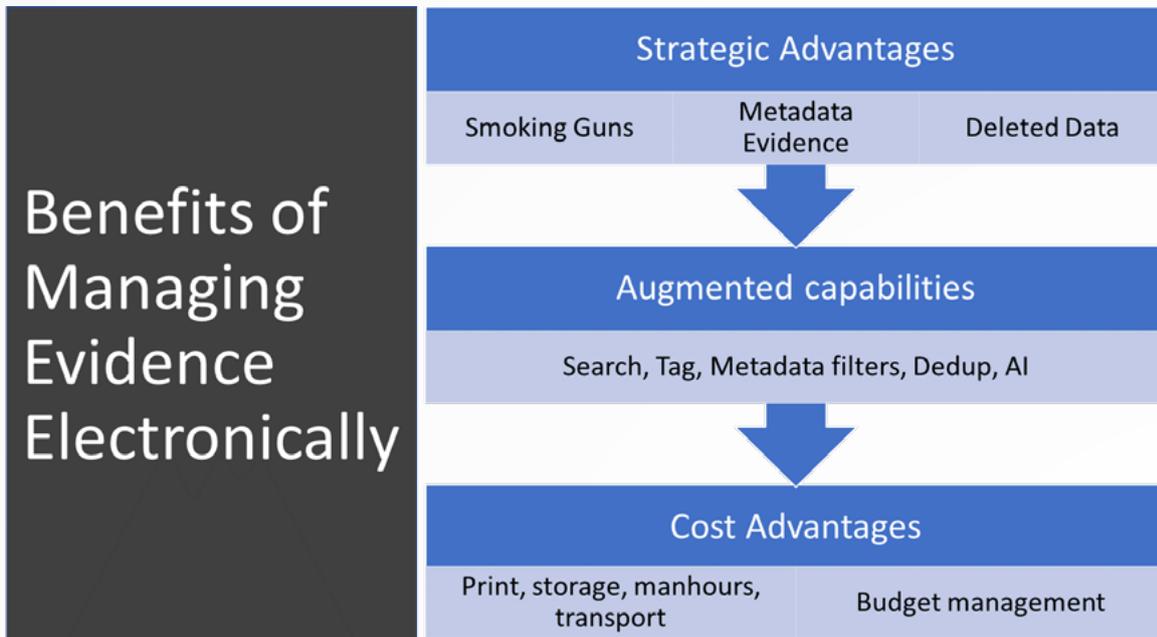
Reviewing evidence electronically, using the right tools, saves lawyers significant time, minimising "grunt", and reduces the risk of missing out key information for the case at hand. It enables lawyers to provide high quality work within a relatively short time and reduces the risk of missing out key pieces of evidence. At the same time, lawyers get to focus on lawyering and reduce risk of burnout. Most importantly, it makes justice affordable in scenarios involving large document sets.

There are various eDiscovery Platforms available, each with slightly different features and functionalities, for example, CaseRoom and Relativity, Therefore, it is important to review the various tools and identify the one best suited for your needs, in terms of user-friendliness, features, and cost.

About the Author: Serena Lim, a lawyer turned legal technologist, is the co-founder of Bizibody Technology Pte Ltd (legal technology consultants and solutions provider) and Litigation Edge Pte Ltd (litigation support provider).

First published on 17 December 2018

Payment and Banking

Written By:

Wan Ding Yao, *LawTech.Asia* | Irene Ng, *LawTech.Asia*

A. INTRODUCTION

With new technologies providing novel methods of payment and banking services to consumers and businesses, law firms may also consider adopting some of these services for various reasons. These reasons can include providing their clients with more convenient and faster payment methods, paperless traceable trail of funds or better efficiency in accounting for payments within the firm.

B. PAYMENTS RECEIVED BY CLIENTS

E-Payment Systems

In his National Day Rally speech 2017, Prime Minister Lee Hsien Loong spoke about how adopting e-payment systems are an integral part of the Smart Nation drive. E-payment systems are quickly replacing traditional cash facilities. For example, since September 2017, cash

top ups have ceased operations at passenger service counters in 11 MRT stations. The Land Transport Authority and TransitLink have since announced a fully cashless vision for public transport by 2020.

In the same light, law firms should join in the e-payment adoption drive – or risk not reaping the efficiency benefits that e-payment systems provide. This article explores categories, examples, and popularity of e-payment systems.

E-payment systems can be separated into card-based and smartphone e-wallet applications. For card-based systems, they can be further segregated into contactless and non-contactless cards. For smartphone e-wallet applications, they can be further categorised into credit/debit cards, bank accounts and bank-independent depending on where the e-wallets are tied to.

(a) Non-contactless Cards

(i) NETS' Electronic Funds Transfer at Point of Sale (EFTPOS)

EFTPOS, commonly known as NETS, is the oldest e-payment system in Singapore. Operated by Singapore's three biggest local banks, EFTPOS enables customers to use automated-teller machine (ATM) cards to debit directly from their bank accounts. Accepted at over 99,000 points island wide, EFTPOS forms the most extensive e-payment network in Singapore. Besides ATM cards, newer EFTPOS point-of-sale (POS) terminals also processes credit card and contactless mobile wallet payments. This reduces a clutter of terminals at payment points.

(ii) NETS' Cashcard

Launched in 1995, the Cashcard is mainly used for Electronic Road Pricing and car parking services payment. However, being accepted at EFTPOS terminals, Cashcards can also be used for retail payments. Without an automatic top-up feature, consumers have to accrue Cashcard value at ATMs or retailers with EFTPOS terminals when their stored value is depleted.

(b) Contactless Cards

(i) NETS' Flashpay

Introduced in 2009, Flashpay runs on near-field communication (NFC) technology. It is compatible with various point-of-sale (POS)

terminals and also work with NFC-enabled smartphones. Unlike its non-contactless counterpart, Flashpay has an automatic top-up feature, bringing its users increased convenience. Running on Singapore's Contactless e-Purse Application (CEPAS) specification, it has strong encryption and is relatively secure.

(ii) EZ-Link Card

Established in 2001, EZ-Link is the oldest contactless e-payment system in Singapore. While it supports retail payment, it is more commonly used for public transport services. When first introduced, it ran on cryptographically-weak Mifare Classic technology. However, in 2009, it was upgraded to more secure CEPAS, the same technology that its NETS rival uses.

What distinguishes EZ-Link from other contactless cards is its ability to be integrated in subscriber identity module (SIM) cards in NFC-enabled mobile phones. This brings increased convenience to users as they do not need to carry a separate card to use EZ-Link services.

(c) Smartphone E-wallet Applications

(i) Tied to Credit/Debit Cards: Samsung Pay, Apple Pay, Google Pay

These applications allow users to store encrypted tokenized versions of their credit or debit cards to their smartphones. They can then be used to make online or physical payments through NFC technology. Tokenization technology increases security because actual card details are not stored on the phone. Instead, each time a card is "added", a token unique to the phone is created. If the phone is lost, banks can delete the tokens on their end, preventing the now-invalid token from being used further.

Available at over 50,000 Visa payWave and Mastercard PayPass contactless payment terminals, and supported by major banks, these applications are widely accepted. Usage of Visa and Mastercard infrastructure is however, not free and a fee is imposed on merchants for each transaction.

As their names suggest, each e-wallet application is limited to their own manufacturer or operating system developer. For example,

Samsung Pay and Apple Pay can only be used on Samsung-manufactured phones and iPhones respectively. However, Google Pay may be used on all phones operating on the Android system, regardless of manufacturer. For this reason, supported Samsung-based devices have the privilege of using both Samsung Pay and Google Pay.

(ii) Tied to Bank Accounts: DBS PayLah, UOB Mighty and OCBC Pay Anyone

In July 2017, the Monetary Authority of Singapore (MAS) launched PayNow, an instant fund transfer system. It allows customers of most major banks to transfer funds, across or within supported banks, by referencing the recipient's mobile phone or NRIC number. Customers use PayNow through their bank's e-wallet application. These applications include, amongst others, DBS PayLah, UOB Mighty and OCBC Pay Anyone.

The Smart Nation and Digital Government Office has announced its intention to make QR codes available for PayNow, as well as for this e-payment method to be available at hawker centres.

(iii) Bank-independent: Singtel Dash ("Dash"), Alipay, PayPal

Launched in 2014 and supported at over 20,000 locations, Dash claims to be Singapore's first all-in-one payment solution. With Dash, consumers can pay for retail, transport services and send money to other Dash account holders. Deductions are performed by scanning a merchant's QR code or tapping on contactless payment terminals for supported NFC-enabled smartphones. Dash also comes with a Visa Virtual Account, enabling users to pay at 50,000 locations that accept Visa payWave. Topping up Dash is done through eNets or by charging to the user's Singtel bill.

Established in 2004 in China, Alipay established its presence locally in July 2017 through CC Financial Services, a local start-up. It is accepted in taxis and 600 merchants with over 20,000 points. CC Financial Services plans to grow the number of merchants to 6000. Similar to Dash, payment is made via scanning a merchant's QR code. Currently, Alipay targets Chinese tourists to Singapore; its users need to have either a China banking account or a China bank-issued credit card.

PayPal is one of the oldest e-payment solutions around. Launched in 1998, PayPal functions as a payment processor for merchants and handles online money transfers. It also offers its own dispute resolution service. These services are accessible via a smartphone application available for Android and iOS devices.

Internet Banking

Payment via Internet banking is a viable option for law firms that have clients who are acquainted with Internet banking processes. There are numerous benefits for Internet banking, at least between for clients making payments using Singaporean banks that are participating in the FAST scheme – immediate fund transfers and waived interbank transaction fees (this however depends on each bank; it is prudent to double check with each bank prior to using FAST). Such Internet banking services can also be accessed via smartphones, which makes payment of legal fees more convenient than ever.

One issue with the use of Internet banking is that fund transfers do not show who or which bank account do the funds originate from. This means that lawyers or their accountants will have to trace the origin of these funds, which can be a time consuming activity. Lawyers who intend to allow payment of legal fees using Internet banking should ensure that clients are aware that they must inform the law firm once payment via Internet banking has been made and to forward a copy of proof of funds indicating so. Such practices will help to prevent law firms from being unable to balance their client accounts at the end of the financial year and also watch out for any red flags that may be signs of potential money laundering.

Credit Card or NETS Payments

Using credit cards to make payments is not novel but remains as one of the viable methods of payment. Firms should however note that there may be additional merchant fees payable for payment by credit card or NETS. The fees chargeable are approximately 3% for credit cards and approximately 1% for NETS payments. Thus, law firms that are intending to provide credit card services should consider whether they will absorb such transaction fees or require the client to bear them. For one's consideration, 3% of $100,000 worth of legal fees comes up easily to $3,000. If the

law firm requires the client to bear such transactions fees, it would be good practice to inform the client that they are required to do so.

Anti-Money Laundering

Regardless of whichever payment system the firm decides to use eventually, it is important for the firm to ensure that lawyers and staff employed by the firm are aware and vigilant of potential money laundering schemes associated with the respective payment systems. Firms who are unable or unsure of how to keep records of transactions received from clients on specific payment systems should take time to understand such payment systems before implementing them as part of their firm's acceptable payment method. This may include having an initial "trial period" for a limited scope, whereby selected clients that have undergone satisfactory due diligence checks and are making payments of less than a certain amount are invited to make payments using new payments schemes that the law firm has decided to implement. Upon the successful "trial period", law firms may consider scaling up such e-payment methods to other clients, larger transaction amounts or both.

C. PAYMENTS MADE BY LAW FIRMS

Due to the Legal Profession (Solicitors' Accounts Rules) stating that outgoing payments above the sum of $5,000 must be made by cheque (or other instruction effecting the withdrawal) and signed by two solicitors. Thus, at the present moment, the use of the physical cheque remains the best method for such payments.

D. PAYMENTS TO EMPLOYEES

The prompt and proper payment of an employee's income and CPF is important. There are several payroll software available in the market, such as JustLogIn, Gpayroll, PayDay!, TIMES Software, amongst many other solutions. Greater automation of payroll processing can provide greater efficiency and ease in paying employees for the law firm, as such payroll software will handle both simple and complex calculations including monthly salary, CPF (for Singaporeans, Permanent Residents of certain years), no pay leave, transportation or other reimbursements, amongst others. However, some of these payroll software do not come cheap – therefore, depending on the firm's headcount, law firms may consider purchasing a payroll software that best meets its needs after considering the price of the payroll software in relation to the firm's needs.

The benefits of using an automated payroll system are large. Firstly, payroll software can generate the relevant files for automatic payment of employee's salaries and CPF – these files are usually generated in a .txt format and can be easily uploaded onto the online portal of the bank or CPF for automatic processing of income and CPF. Local banks that support such bulk payroll payment services include DBS, UOB and OCBC. Firms that decide to use a payroll software should however ensure that their payroll software are constantly and promptly updated to take into account any amendments in employment or CPF laws or income tax legislation, so that the right amount of salaries and CPF are paid correctly and promptly each month.

As participation in the Auto-Inclusion Scheme for Employment Income is compulsory from Year of Assessment 2018, law firms that have an employee headcount of more than 9 or above should consider purchasing payroll software that allows for the quick and easy generation of tax declaration files that can be easily ported into IRAS' Auto-Inclusion Scheme software.

Services / **Payment and Banking**

E. CONCLUSION

With the national push to grow a Smart Nation, e-payment systems are here to stay. Slowly, but surely, they would replace traditional cash payment facilities. With high internet literacy and mobile phone penetration rates, adoption of e-payment applications is expected to grow at an increasing pace. A third of the e-payment services mentioned in this article were launched in 2017 alone. Law firms should keep abreast of such trends and be prepared for the digital future ahead by offering a reasonable suite of e-payment methods.

First published on 21 May 2018

Online Content Marketing

Written By:

Roy Ang, *Withers KhattarWong*

A. INTRODUCTION

Content marketing is important for law firms in winning new clients, keeping in touch with existing ones, and generating a presence in the market. With increased competition from international and local lawyers and a growing pressure for law firms to differentiate themselves in this crowded space, content marketing will be critical in any business development strategies.

Producing more content (e.g. more articles, videos and editorial columns) is not the ideal solution. In the 2017 State of Digital & Content Marketing Survey, 96% of in-house counsel indicated that data overload was a problem in their efforts to consume information affecting their companies.

The answer to better content marketing is to produce quality content, package it appropriately and distribute it more effectively. Here are the Author's thoughts on some easy ways to achieve that:

B. PRODUCE QUALITY CONTENT

Focus on the Audience Not the Law

You may have heard this many times from your firm's marketing team – Do not write in legalese, as this will alienate your audience. This is a valuable reminder as it is always tempting to rely on industry speak, especially one which has had a long tradition. It is important to focus on your audience. A simple question to ask when you write your article is – Will my audience understand this and be engaged to read further? If the answer is no (or even maybe), rewrite the article and have this reviewed by a peer who is not from the legal industry. You should ideally be having a conversation with your audience and not talking at them.

Some have asked if this means "dumbing down" the content. The answer is no. It is about using relatable examples and language to convey your thoughts. The audience should not be made to struggle with the content due to the extensive reliance on legalese. It is far more challenging to write or present in a simple and precise manner, without industry speak.

Do Not Make a Sales Pitch

Content marketing and thought leadership are not sales pitches or advertisements, but a showcase of your firm's insights which can solve your audience's problems. Do some market research. Or if you are fortunate to have a knowledge and library team, have them conduct research to find out what topics are most important for your audience. Produce articles or posts that address these concerns with possible solutions, without giving away your winning move. Whilst you should not provide legal advice in a public piece, you should offer sensible next steps for someone who is looking for solutions. When the content offers meaningful, relevant and actionable insights, the selling will take care of itself through the expertise you share.

Less is More

Know that sometimes less is more – In a world where your target audience is suffering from information overload and reducing attention

span, writing a 30-page analysis of a change in the law might not be the most effective use of your time. Depending on the topic, a short analysis will suffice and interested clients will contact you for more.

C. PACKAGE THE CONTENT APPROPRIATELY

Have a Powerful Title

Use clear, actionable words which connect with your audience to explain what the article or blog is about. For instance, "What impact will the Personal Data Protection Act have on your business?" is more powerful than "A legal discussion on the Personal Data Protection Act". It should also answer the audience's question of, "Why should I care?" or "What's in it for me?"

Make it Beautiful

Make use of suitable images and branding to attract your audience to consume the content. In an article, a relevant image and white space between each subheading can help readers retain the information better and take a mental breather between the key points you are making.

At the same time, make it easy for clients to recall and share the content by using info-graphics. This graphical visualization image is a fast way of displaying information that can attract the attention and recall of your readers. Information compiled by MDG Advertising found that materials with compelling images can generate 94% more views than simple text. Furthermore, info-graphics can be easily shared across many platforms like emails, WhatsApp, LinkedIn, etc., making it easier to broaden your outreach.

Less is More

Avoid over-packaging the content. Use images only where relevant, minimise the use of fancy colours unless necessary (I have not found a compelling reason so far) and use only one font type throughout your content.

D. DISTRIBUTE THE CONTENT MORE EFFECTIVELY

Time Your Content Well

Link your content to the latest news. The most obvious ones include new laws or a proposed change in law that is under public consultation, but these are far from being the only chances to produce or refresh your content. Other opportunities include high profile business matters being reported by the media (e.g. fourfold increase in investments from China in ASEAN, increased counterfeiting in the region), use opportunities like these to highlight how an existing law could be applied or interpreted. Even better, work with your marketing or PR team to gain new publicity outlets.

Leverage External Media/Publications/Platforms

Publishing with external media, publication and social media platforms can increase your content outreach. If you are looking to only target lawyers and in-house counsel, specialist platforms like the Law Gazette and LexisNexis will work well. For a broader outreach, platforms like AsiaLawNetwork.com, Singapore Business Review or the local press are good options. To amplify the outreach, you can also share these published content on your firm or your digital media platforms (e.g. LinkedIn, Twitter and increasingly, WeChat).

All of these will reach audiences beyond your existing contacts.

Less is More

Finally, less is more. If you are distributing your content via emails or digital media, spacing out the time between each campaign is important as it demonstrates your respect for your audience's time and personal space. The worst outcome is one where your audience unsubscribes from your mailing list or "un-follows" your firm's digital media platforms out of annoyance.

When it comes to content marketing, we need a more calibrated and sophisticated approach to engage your audience. Less is more in the age of information overload.

Once your content is ready and successfully marketed, you can consider other more advanced areas in content marketing, including Search Engine Optimisation (SEO), tracking click-through and managing feedback.

First published in the Law Society of Singapore's Law Gazette in October 2017

**Republished in SAL's Legal Technology Manual with permission on 31 May 2018**

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Design

H1-Head

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Menu
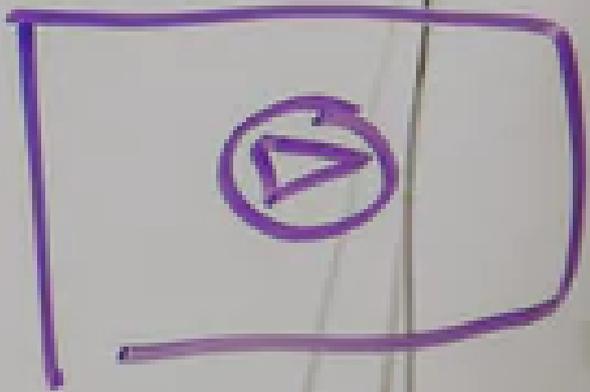
Video
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cription

Using Linkedin To Disrupt Your Business As Usual - Part I

Written By:

Roy Ang, *Withers KhattarWong*

Part I: The Rise and Rise of LinkedIn - How to Catch the Wave?

In this two-part series on using LinkedIn as a business development tool, we discuss the rise in popularity and the importance of LinkedIn, the basics in setting up an effective LinkedIn profile for business development and some tips which can help you reach out and engage clients as you grow your business.

What is LinkedIn?

LinkedIn is the world's largest professional network with over 540 million users focused on business networking. According to the Pew Research Centre, LinkedIn usage is especially high amongst those with tertiary education and annual salaries above US$75,000.

Is your firm already on LinkedIn?

Most large and medium sized law firms in Singapore have a presence on LinkedIn as part of its online identity, and these are often set up by the marketing teams. However, it is not uncommon to see that the platform is underutilised by the firm's most important stakeholder — its lawyers. This is a missed opportunity for business development. To effectively tap into the potential of LinkedIn, lawyers and their marketing team need to work closely together for both teams' efforts in business development to be amplified.

Why is it Important?

Digital disruption means it is no longer an option to stick to just using offline marketing techniques. A 2014 IDC study showed that 85% of C-suite and senior executives use social media when making purchasing decisions. Using platforms like LinkedIn, these potential clients take into consideration peer input, review profile information and knowledge-sharing activities when assessing potential counsel. Hence, there is a significant probability that your LinkedIn profile becomes the very first impression for a new prospect.

Traditional, in-person client engagement and marketing events remain extremely important, but they need not be the only tool in your business development toolkit. Online social marketing is fast becoming a strong complement to a lawyer's holistic business development strategy.

It is also useful to note that social marketing platforms like LinkedIn are low-cost and user-friendly tools. First and foremost, it is free-to-join. Some research have estimated that it costs 75% less to generate leads via online social marketing than any other channels[1].

There is no denying that it takes effort to incorporate online social marketing into your business strategy. However, it is always useful to get started early and in Part I of this article, the Author shares some quick steps to help you set up a new profile or improving your existing one. These steps are not meant to be exhaustive, but rather a starting point to help you build an effective profile.

A 2014 IDC study showed that 85% of C-suite and senior executives use social media when making purchasing decisions.

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1. " Social Selling Reduces the Cost per Lead, 2014. "

Getting Started - The Basics to Building a Great LinkedIn Profile

As the first impression for your prospects, your LinkedIn profile is a key component of your online brand and how you establish trust early on. So it is important for you to develop a robust and professional online profile.

Step 1: Upload a Professional Photo

According to statistics provided by LinkedIn, profiles with photos receive a 40% higher connection response rate. Most of us like to see who we are connecting with. Consider how you normally

Harvey Specter
Senior Partner at Pearson Hardman
Greater New York City Area | Law Practice

Previous   WilmerHale.
Education   Harvard University.

Send Harvey InMail

Suit up for linkedin

present yourself to your clients and upload a photo which is a good representation of that. Use photo editing in moderation.

Step 2: Provide a Useful Title

Your title is the first thing people see in your profile after your photo and is displayed along with your name in the Google search results, so ensure that it communicates who you are in a useful and


Lawyer at ▓▓▓▓ - Intellectual Property

Sydney, Australia • 322

Send InMail   ...
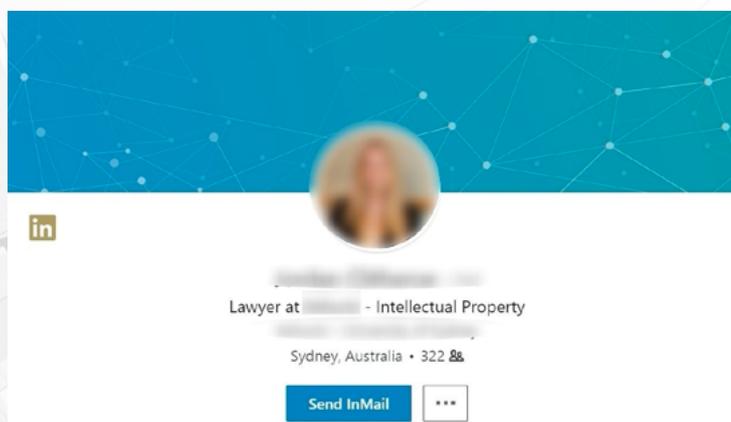
concise manner. For example, "Associate" is not as impactful or relevant as "Intellectual Property (IP) Lawyer". A well-articulated and differentiated title also helps to make you more searchable online and will increase profile views.

Step 3: Include Your Summary and Experience

After your photo and title, the most commonly read portion of your profile is the summary. Use this opportunity to tell your story and include keywords which a prospective client would focus on when they are looking for a lawyer like you. Think about it from the perspective of someone trying to determine if you are the right lawyer for them. For example, a General Counsel looking for an IP lawyer may search keywords like "patent", "copyright", "trademark infringement", "IP-related disputes", "negotiate licensing agreements" and "IP commercialisation strategy". Hence, it will be important to include these words in your summary.

Step 4: Personalise Your LinkedIn Web Address

An easy-to-read and personalised public profile web address is a great addition to signatures and business cards and will make you more easily found in search engine results. The default web address
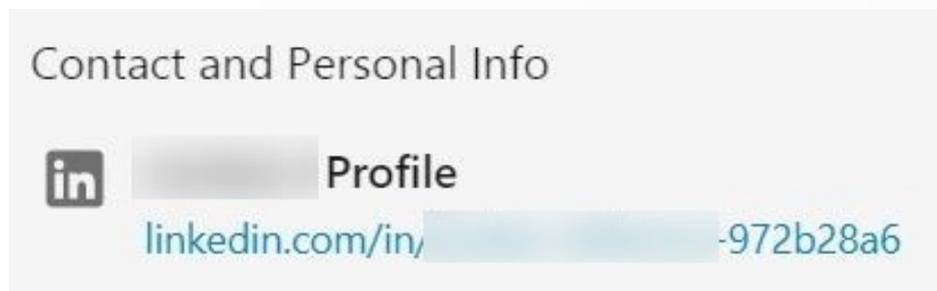

assigned to you by LinkedIn may be an unwieldy www.LinkedIn.com/in/roy-ang-982749y8.

Hence, you should consider creating a web address that is easy to remember and one that closely matches your name. For example, the Author's address is www.LinkedIn.com/in/royangcm. If you think that your name is common, then the Author suggests you get started on changing the URL sooner rather than later!

Step 5: Connect/ Follow Your Law Firm's, Client's and Competitor's LinkedIn Page

By following your law firm's page, you will see the latest news, developments and posts from your firm by your colleagues. This is
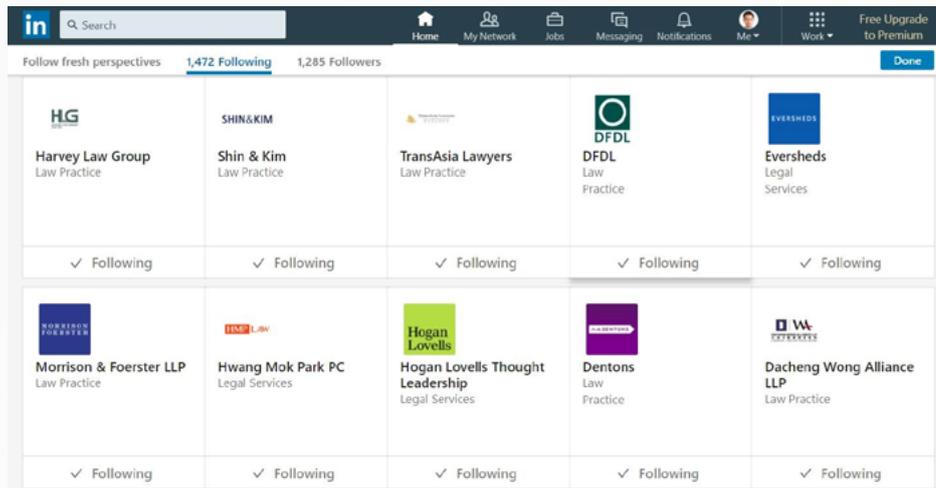
especially useful if you are part of a global or regional outfit which may have interesting initiatives and developments in offices that you are not familiar with. You will also see notifications when someone mentions your company, in a LinkedIn post or other media coverage.

By following your client's page, you can be kept up-to-date on their developments (eg new business ventures, C-suite executive appointments, financial announcements) and whenever they appear in the news. Similarly, it can be useful to keep up-to-date with your competitors' developments (e.g. new service, major transactions, senior partner moves) which can complement what you already know from your existing network of friends in the legal community.

The steps listed above are some of the best practices for setting up an effective LinkedIn profile for business development, but these are not intended to be exhaustive. As you set up or tweak your LinkedIn account, you will gradually uncover new ways to improve on it, and to develop one which suits your style and corporate personality.

In Part II of this LinkedIn series, we will discuss techniques to use LinkedIn to expand your business.

First published in the Law Society of Singapore's Law Gazette in October 2017

Republished in SAL's Legal Technology Manual with permission on 11 June 2018

Using Linkedin To Disrupt Your Business As Usual - Part II

Written By:

Roy Ang, *Withers KhattarWong*

In the previous article, the Author had discussed the rise in importance of LinkedIn for law firms and some key pointers to note when setting up your profile.

Part II: Find Your Sweet Spot – Using LinkedIn to Mine Your Own Business

In this second part, the Author will discuss business development strategies and techniques, using LinkedIn as a platform. Some of the strategies discussed here can be applied beyond LinkedIn and can apply to your personal business development plans as well.

Step 1: Define the Ideal Client

There are many academic and empirical studies on this topic, but without going too much into the details, below are three quick tips which the Author thinks are helpful and easy to execute:

(a) **Know who you are:** You cannot determine your ideal client if you do not have a strong understanding of who you are and the type of firm you are in. Even if you are in a mega full-service international law firm, you alone cannot serve every client type and matter. You will need to ask yourself, and it is key to be brutally honest with yourself here, who actually benefits the most from your expertise. It is not enough to determine who you want to benefit most; you need to identify who is actually finding value in your legal expertise.

(b) **Know your clients' needs:** Hypothesise and test what your clients' needs and objectives are. Find out their buying process and strategy through meetings with prospective clients and interviewing your best existing clients.

"You will need to dedicate time to not just build up your network, but also to engage and keep in touch with your connections."

(c) **Know who your clients are currently receiving their advice from:** Identifying your competitors will help you determine what you need to do to differentiate yourself from them. This can include your ability to provide cross-border legal advice, greater partner involvement, industry insights, alternative fee arrangements and so on.

Combining the insights from these three tips, you should be able to determine the profile of your ideal client and whether digital marketing or LinkedIn will be effective for you in reaching them. If digital marketing works for your ideal client profile, we will move on to the next step.

Step 2: Position Yourself as a Trusted Adviser to Your Client

With your insights from step 1, you can now curate your LinkedIn profile with the client in mind. Instead of moulding your profile based on your achievements, focus on showing prospective clients how you can serve their needs and be their trusted adviser.

Hence, instead of simply listing your professional accomplishments, it is important to ensure your profile relates more directly to helping the client understand what you can do for them.

Some techniques include:

(a) Listing a couple of significant track records or deals you have done which your clients can benefit from. This technique helps you to pass the "so what?" test by explaining what makes the deal you worked on important to a prospective client. This can include matters that set precedent for future regulations in an industry, or will be of widespread application across industries. This is an example of what you could write: "Successfully represented client in the Court of Appeal – Party A v Party B [2017] SGCA XXX. Resulted in a significant decision on Singapore's data protection and employment laws which impacts the duty of care of companies in revealing employee information to external service providers".

(b) Post content which your clients find relevant. For example, publishing a commentary on LinkedIn on an upcoming legal development is a useful way to engage your connections and to show your depth of knowledge on this issue.

(c) Like, share and comment on your client's (relevant) updates. This helps to keep your profile first-in-mind with your first-degree connections and their network.

Step 3: Find Your Ideal Prospects

There are two simple ways to do this:

(a) Build a list of possible leads or prospects with LinkedIn's Advanced Search to focus on those with whom you can make the strongest connections.

(b) Join LinkedIn Groups which provide opportunities to meet and engage in discussions with members of your industry, your alumni community or other professional interest areas. Demonstrate your expertise by starting discussions and participating thoughtfully. You are also able to contact fellow group members directly through LinkedIn.

Step 4: Build Your Connections

You can ask someone to join your professional network by sending them an invitation to connect. If they accept, they become your first-degree connections. To get started, below are some quick tips on what to include in an invitation:

(a) Include a salutation.

(b) Remind the recipient how you know them or why it would be great for both of you to connect.

(c) Request introductions through their extended networks. Send personalised mail as a follow-up to a warm introduction.

(d) Identify matters of concern in a prospect's organisation and share relevant content.

Step 5: Engaging Your Connections on LinkedIn

There are two things to remember in audience engagement:

(a) People are keener to connect with someone who can solve their problems rather than someone wanting to sell them something.

(b) Be authentic and personable. You can do so by concentrating less on the sales angle and more about sharing quality content and building relationships.
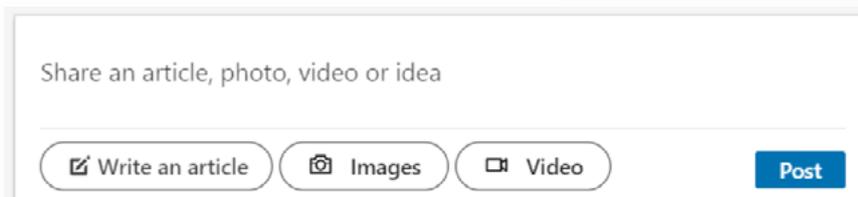
Another tool you could tap on is the "Share" function. Beside your photo on the top left hand corner of your LinkedIn home page is the "Share" function, an update box that allows you to share articles and blog entries. In addition to providing links to articles, you can comment on what you have shared. Avoid being too self-promotional and offer updates that prospects or customers will find insightful, useful or provocative.

It is also useful for you to publish thought leadership posts. The notifications tab also provides opportunities to engage with your connections. Congratulate them on a new job or work anniversary,

comment on a shared update or like a post. These engagement tactics take only a few seconds yet contribute to your overall visibility on LinkedIn.

Finally, monitor LinkedIn profiles to engage with clients when they change jobs, have work anniversaries, post updates, take part in discussions or make new connections.

Step 6: Build Your Personal (Professional) Brand Online

LinkedIn is not your resume; it is your online reputation. Here are some tips on how to build that reputation:

Get recommendations: Get colleagues, employers and, even better, customers who can speak credibly about your abilities and contributions to write a recommendation for you. Ask them to focus on a specific skill or personality trait. Conversely, make meaningful comments when you recommend others (i.e. how you describe others and your experience with them says as much about you as who you are recommending). Think quality, not quantity – and be authentic.

Featured Skills & Endorsements

Corporate Law · 24   Endorsed by ___, who is highly skilled at this

Mergers & Acquisi... · 23   Endorsed by ___ and 1 other who is highly skilled at this

Corporate Govern... · 16   ___ and 15 connections have given endorsements for this skill

___ is also good at...

Commercial Litiga... · 11	Dispute Resolution · 6	Business Strategy · 5
Due Diligence · 5	Corporate Finance · 4	Consumer Law · 3
Client Counseling · 2	Media Relations · 2	Mergers · 2

Give and receive endorsements: Skill endorsements are a great way to recognise your first-degree connections' skills and expertise with one click. They also let your connections validate the strengths on your own profile. Endorsements help keep strong connections with the people in your network.

Conclusion

Creating a profile is often the easiest part of your LinkedIn journey. The real work comes after that, and you will need to dedicate time to not just build up your network, but also to engage and keep in touch with your connections. After all, keeping yourself first-in-mind is crucial in business development.

The tips the Author has shared in parts I and II of this series are not exhaustive and you should feel free to explore and try your own ways of generating interest and see if it works.

But always be genuine, be humble and be communicative.

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Instant Messaging - Let's Chat

Written By:

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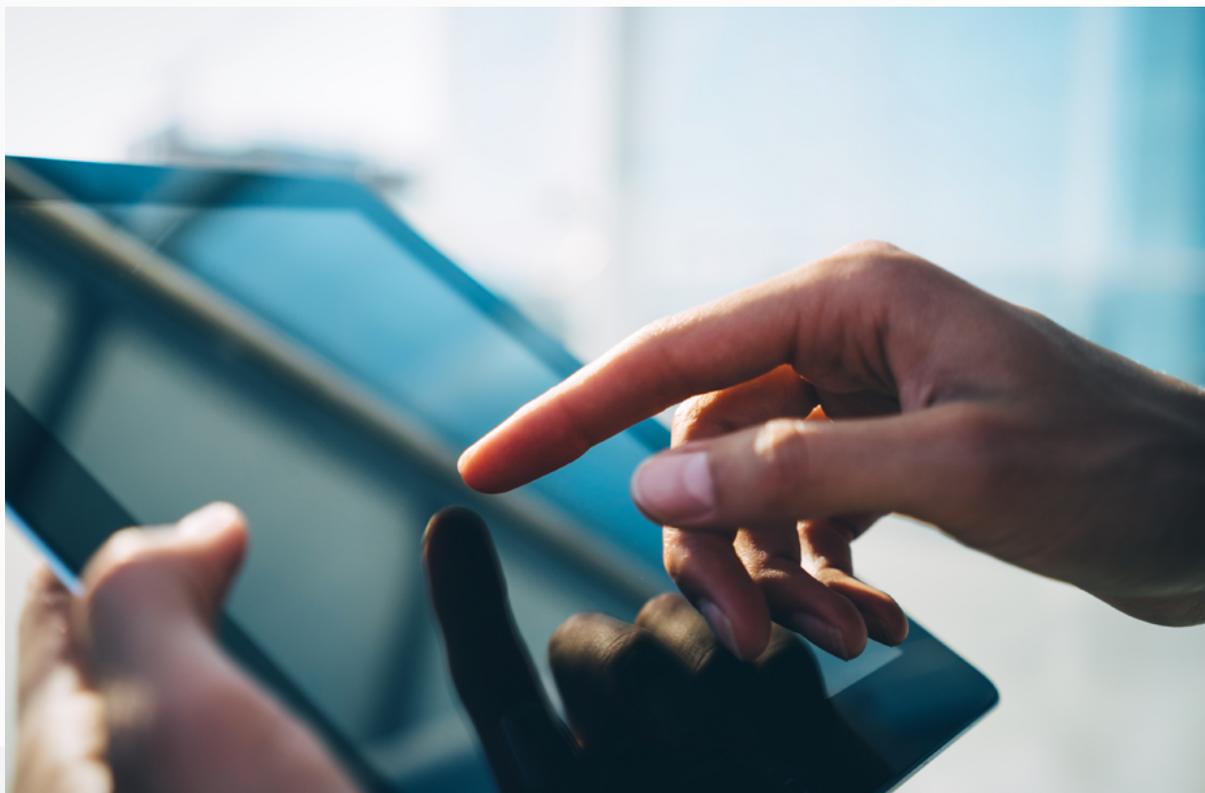
A. INTRODUCTION

In this article on instant messaging applications (a.k.a. chat apps), we discuss the the apps that a lawyer in a small law firm should consider using.

To tackle this issue, we need to first list out the most common categories of communication for a lawyer:

(a) Internal correspondence;

(b) External correspondence: with third parties, opposing counsels etc;

(c) Correspondence with client; and

(d) Correspondence with potential clients.

Except for external correspondence, I would generally recommend the use of chat apps for all other types of correspondence, especially internal correspondence.

This article will only focus on the use of chat apps on internal correspondence. This is because the factors for consideration in the selection of chat apps are relatively different for internal correspondence and client correspondence. Client communication deserves another article on its own.

B. LET'S CUT DOWN ON EMAIL

This is not just about being environmentally friendly.

There are many good reasons that internal correspondence should be exchanged via chat apps instead of via email:

(a) "The Tragic Reply-All": I have seen many firms suffer from this plight when someone in the email chain decides to reply all, without realising that some unintended recipients have been copied in the email. This is especially problematic on email apps on mobile phones, where the "CC" or "BCC" fields might not show all the email addresses. These mistakes are potentially fatal as you cannot recall the email (and you might not even want to send out a recall because it will only bring more attention to that email). Unfortunately, no one would delete the email even if your email footer said so. The simplest and most intuitive way to prevent such problems: chat apps for internal correspondence and email for external correspondence.

(b) (Dis)organization: Email platforms lack systems to organise content. We receive hundreds of emails from our colleagues daily. Unless you go through the painstaking way of starring or labelling all the emails that you receive, all the emails would just be left in the "Inbox", which would be a mess. Just think of the "Inbox" tray on your paralegal's table – can you imagine how chaotic things would be if the paralegal never files a document that gets on the inbox? The beauty of chat apps: channels or threads provide an intuitive way to organise your content.

(c) Continuity/institutional memory: Unless you have printed out and saved all the internal email correspondence (including all the "noted with thanks"), it would be painful to provide the correspondence

to anyone who needs to know what happened to the file (e.g. new member of the firm, new person on the file). If a person leaves the organisation, you might have to go through a "discovery" process to find out all the missing correspondence.

These are just the main reasons for today's law firms. For tomorrow's law firms, I would argue that chat apps can be much more powerful and useful than emails with the growth of integrations. For instance, you can have "AI-assistants" on your chat app, which could provide secretarial functions.

C. LET'S REVIEW THE APPS

The chat apps in the market can generally be split into the following two categories:

(a) Free apps: WhatsApp, Facebook Messenger, Wechat, etc.

(b) Paid (or Freemium) apps: Slack, Hangouts Chat, Microsoft Teams, etc.

The factors that a lawyer or law firm should consider before choosing to adopt a chat app include:

(a) Data privacy or security: We have an obligation to maintain confidentiality of our clients' information.

(b) Ease of use: For any platform to succeed, it must be fully adopted by every employee in the firm.

(c) Interoperability: Chat apps must at least be available on the Web (browser), iOS and Android.

(d) Integration with emails: There is often a need to discuss on an email that you have just received from an external party. To make it easy for the discussion to take place on the chat app, it ought to be easy to send your email over to the app.

(e) Cost

Based on these factors, I have narrowed down the chat apps to the following list, with a summary of their pricing method, key strengths and weaknesses:

WhatsApp (Free):

Strengths:

(a) End-to-end encryption (E2EE) by default.

(b) User friendly.

Weaknesses:

(a) Not integrated with emails.

(b) Does not provide the best way to organise content – only by contact persons or groups.

(c) Potential loss of institutional memory because all data for a user are stored and encrypted on a device.

Telegram (Free):

Strengths:

(a) Branded as a secure messaging app, it provides for E2EE via "secret chats". For normal chats, they provide encryption-in-transit.

(b) High interoperability and easy to use on all platforms.

(c) Bots can be helpful.

Weaknesses:

(a) No E2EE by default.

(b) Shares the same weaknesses as WhatsApp.

Facebook Messenger (Free):

Strengths:

(a) Same as Telegram. E2EE provided via "secret conversations".

Weaknesses:

(a) Same as Telegram.

(b) In addition, some people would not want their colleagues to know their Facebook account.

Slack

(Free version available, Paid version for full features at USD 6.67/user/month): Possibly the most popular chat app in the startup community.

Strengths:

(a) Integrations with email are available. For instance, you can set up a service that forwards all emails to a particular Slack channel every time the phrase "Case A" appears. Also integrated with many other tools that could be useful to the legal practice, e.g. scheduling, AI assistants, project management tools.

(b) Ability to organise content in the form of channels and threads (e.g. you can start a channel on "Client A" and a thread on "Filing a Writ of Summons")

(c) Good for institutional memory because all data is stored with the organisation, not with the individual users.

Weaknesses:

(a) No E2EE (encryption in-transit and at-rest available).

(b) Most lawyers would probably require some training and time to get used to the user interface and all the features that it provides as a collaboration tool.

Hangouts Chat

(Free with G Suite, which starts at US$5/user/month): Google's Slack competitor

Strengths:

(a) Integration with emails and the entire G Suite ecosystem, including your Google Drive files.

(b) The new Hangouts Chat also provides the ability to organise content in the form of channels and threads like Slack.

(c) Easy to use.

Weaknesses:

(a) No mention of E2EE. Having said that, G Suite users can generally feel safe with Google's enterprise-grade security systems. Also, for G Suite users, Google does not sell the user's data or scan it for advertisements.

(b) While it is easy to use, this app was just launched out of beta in 2018, so some bugs might still exist.

Microsoft Teams

(Free with Office 365, which starts at US$5/user/month): Microsoft's Slack competitor.

Strengths:

(a) Same as Slack.

(b) Integrated with email and the Office 365 ecosystem

(c) Skype for Business online capabilities would soon be incorporated into it, which provide some of the most advanced features for online meetings (e.g. you can record a video conference).

Weaknesses:

(a) Like Hangouts Chat, no mention of E2EE, but generally secured with enterprise-grade security systems.

(b) Like Slack, this is more of collaboration tool and it would take time and training for users to learn the interface.

💬 C. SPECIAL MENTION TO DATA SECURITY

The following is an illustration of the common forms of encryption:


Fig. 1a: Encryption in transit

Fig. 1b: End-to-end encryption
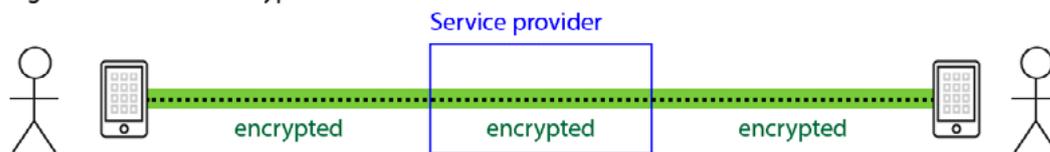
Fig. 1c: End-to-end encryption (no service provider)

Image Source: https://heimdalsecurity.com/blog/the-best-encrypted-messaging-apps/

E2EE is widely considered as the most secured form of encryption for instant messaging. If you are extremely concerned about data security, you should always opt for an app which provides for E2EE. Without E2EE, there is always a chance that someone else might obtain your data. For instance, the government might request for the service provider (e.g. Facebook) to turn over your chat data.

Amongst all the apps, only WhatsApp provide for E2EE by default.

The other apps which provide for E2EE, but which you need to specifically enable, are: Facebook Messenger (in the form of "Secret Conversations") and Telegram (in the form of "Secret Chats"). In both cases, the chats protected by E2EE will only be accessible through your mobile device, not via the Web browser, because these messages are not synced over the cloud.

E2EE is particularly important if you are using a free product. As the saying goes, "if you are not paying for it, you are the product". Chats in consumer chat apps are often scanned by companies in order to sell advertisements to you or to sell "insights" to third parties.

In contrast, the enterprise products (at least those mentioned above) generally do not scan your data for ads. For enterprise data, you own your data and you have more control over what is shared with the service provider. Thus, even without E2EE, most small law firms should feel comfortable as long as the service providers comply with enterprise-grade security standards, e.g. G Suite and Microsoft Office 365. These products would come with a strong encryption in-transit and at-rest.

First published on 25 June 2018

Legal Research (Foreign Sources)

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A. INTRODUCTION

In this article, we will discuss the following issues of how one might conduct legal research for foreign countries and if there is a need to subscribe to legal research databases such as Westlaw/Lexis Nexis in order to access foreign legal materials. The pros and cons of subscribing to such databases will be discussed as well.

It is worth noting that this article is not about legal research methodology. The focus is on the platforms or tools to use to find the answers that you are looking for. This article also focuses on legal research for other common law jurisdictions because it is the most common type of foreign legal research that most Singaporean lawyers do.

B. FACTORS TO CONSIDER

There are many platforms and tools available for legal research in foreign jurisdictions. To assess which tool/approach you should use, you need to consider these three key factors:

(a) Ease of use

(b) Completeness of the database

(c) Cost

C. EASE OF USE

What is the easiest and fastest way for you to obtain information? If you have access to a paid database such as Westlaw and Lexis Nexis, then all of you need to do is:

(a) Login to the database

(b) Key in your search query

(c) Select the relevant jurisdictions

(d) Click search

However, if you do not have access to such platforms, then you would have to consider the following:

(a) Google: This is probably the easiest and fastest way to find the general answer to your question. If you are a master of Google's search terms or Custom Search Engine, this could be the main tool to use because you can search through most of the publicly accessible legal databases on Google. For example, this is a sample Custom Search Engine: <https://tinyurl.com/ydx4l7sq>

(b) Go to a publicly accessible legal database for each of the jurisdictions to conduct the same search. Here are some of the websites that you should look into for the major common law jurisdictions:

   (i) For common law jurisdictions in general: From this site, you will then have the option of being directed to other sites, for example, BAILII.

   (ii) UK: BAILII

(iii) Australia:

    (1) AustLII

    (2) BarNet Jade: a good alternative to AustLII, for those who prefer a smarter, more modern and user-friendly interface.

(iv) US:

    (1) Google Scholar: Select "case law" and search

    (2) Casetext

(v) Canada: CanLII

(vi) India: Judgments Information System (Note: According to the Indian Courts website, this site "consists of the Judgments of the Supreme Court of India and several High Courts. In the case of the Supreme Court all reported Judgments which are published in SCR Journal, since its inception in 1950 till date are available.")

(vii) Hong Kong: HKLII

(viii) Malaysia

    (1) Judgments Malaysia (Note: Currently in beta phase. It currently carries the Federal Court and the Court of Appeal judgments released on or after 1 January 2018. Other cases will be uploaded at a later date.)

    (2) CommonLII for Malaysia

Note: NUS Law Library maintains a great list of resources for foreign jurisdictions and can be found at: https://tinyurl.com/yd9kexzp

D. COMPLETENESS

This is an important factor if you are trying to research on an obscure point of law. Otherwise, you might end up doing repetitive searches and wasting a lot of time sorting through results that you have already come across. In terms of completeness, it is recommended to access the authoritative platforms according to country. For instance, HKLII for Hong Kong, BAILII for UK, etc.

For some jurisdictions, the authoritative platforms require paid subscriptions (similar to Lawnet in Singapore). As such, if completeness is the key factor, then you have no choice but to pay for them. Most developed nations provide free and open access to case law. However, the more important foreign jurisdictions that require paid subscriptions are:

(a) Malaysia: It is still unclear when all the judgments will be uploaded to Judgments.my. Until then, CLJ Law is probably the most complete database for Malaysian case law.

(b) India: Manuputra claims to be the most complete database for Indian legal research. Westlaw and Lexis Nexis are strong competitors, with better user interface and relatively complete database.

E. COST

The paid subscriptions for databases like Westlaw and Lexis Nexis can be very costly. Small law firms should first consider the grant available under SmartLaw Assist, which is subsidy scheme for online knowledge databases. Under this scheme, an eligible law firm is entitled to a 60% subsidy for the first year subscription of the following online knowledge databases: Informa Law, Lexis Nexis, Westlaw Asia and/or Proview.

Pro Tip: If you want to subscribe to Indian caselaw database, it is most likely less costly to approach the Indian companies directly, instead of subscribing through Westlaw Asia.

Alternatively, you might also want to consider paying for Intelllex Enterprise which allows you to search through multiple foreign jurisdictions at the same time. Intelllex is like a supercharged Custom Search Engine, i.e. they aggregate all the freely available case law, reference materials etc from the key common law jurisdictions. This way, you do not have to spend a huge amount of time to build your own Custom Search Engine, which requires a lot of testing. In addition, it is smarter and easier to use than most of the national case law databases, for example, you can phrase your queries in a conversational format. It is also worth noting that Intelllex, aside from being a legal research tool, is also a legal knowledge management tool.

F. SUGGESTED APPROACH

In the ideal world, access to legal materials should be freely available and easily accessible. How amazing would it be, if we could have a smart search engine like Google, specialised in legal research.

Until then, taking into account the abovementioned factors, small law firms are encouraged to adopt this approach in considering which tools to use for foreign legal research:

(a) How often do you require legal research on foreign law? How detailed or specific are your queries? If you spend a lot of time doing such legal research, or if you need to find very specific points of law, it would probably be worth investing in a paid subscription for the few jurisdictions that you need. For most people, this is the fastest and easiest manner to obtain results. Going through Google and the respective national case law databases will be too time-consuming.

(b) What is your budget? All subscriptions (aside from those listed under SmartLaw Assist) require you to request for a quote. In order to determine which tool provides better value for money, it is best to approach the service providers and ask them for their best quote. Consider whether the increased efficiency through better search or legal knowledge management tools could lead to more profits.

(c) National case law databases. Free case law databases are improving and becoming more comprehensive. For example, Casetext or Jade.io has overtaken Westlaw or Lexis Nexis in their respective countries (US and Australia). Most of these national case law databases are also the complete and authoritative platform for legal research.

If uncertainty persists with regarding to paying for subscription, the next step would be to track the time you (and your firm) spend on conducting foreign legal research. From here, you will be able to assess whether the time spent (with or without paid subscriptions) justify a paid subscription.

If you do not have an existing subscription and you find yourself spending 20 hours per week doing foreign legal research, then you

should probably consider paying for a better tool. Most tools allow you to try them out first. If you continue to track your time while using these new tools, you would then be able to tell whether these subscriptions would increase your efficiency and profit margins.

Likewise, if you have an existing subscription and you find yourself spending only two hours monthly, you might not want to continue with the subscription because the same sources are freely available on the internet.

First published on 12 July 2018

Cybersecurity

Written By:

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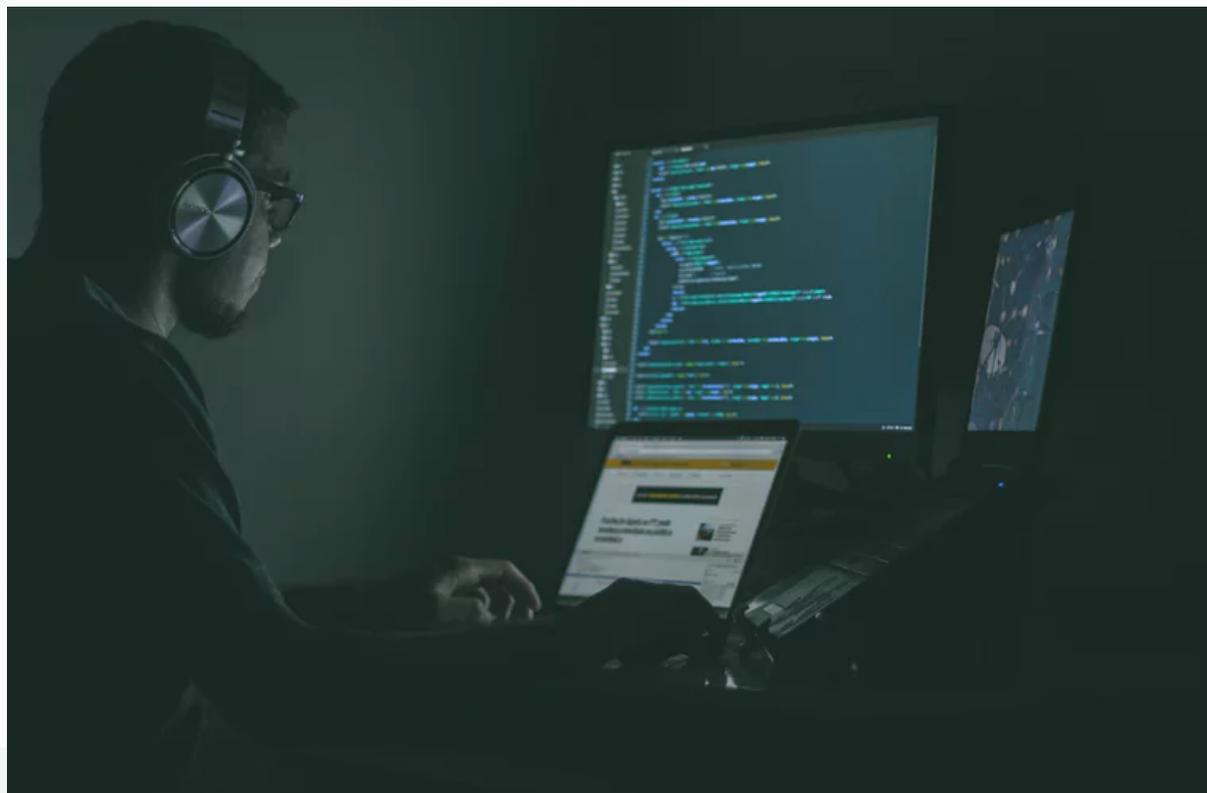
A. INTRODUCTION

As law firms gravitate to using digital solutions as part of their business operations or providing of legal services to their clients, an inevitable question looms above any form of digital solution – that of "cybersecurity". The issue of cybersecurity is not endemic only to the legal industry but has plagued other industries such as the healthcare and financial industries, with the latest cybersecurity breaches making the headlines on mainstream media every now and then.

While everyone will acknowledge that equipping the law firm with cybersecurity is a necessary expenditure: the question is what reasonable amount should each firm spend on cybersecurity. Providing judgment on what is reasonable, however, is a tricky issue as it very

much depends on the firm, its business operations and even the clientele. Considering the huge scope of and multiple issues relevant to cybersecurity and the intention of this article as a 'baseline' guide to lawyers, this article will discuss the issue on cybersecurity in the form of a FAQ format.

B. WHAT IS CYBERSECURITY?

Generally, cybersecurity comprises a myriad of approaches to prevent unwanted breaches of the firm's digital ecosystem. Such approaches include but are not limited to: (1) software cybersecurity; (2) hardware cybersecurity; (3) policies on use of IT equipment for employees; and (4) continuous education for employees.

C. WHY DO I HAVE TO PROTECT MY FIRM WITH CYBERSECURITY?

Most of us are connected to the Internet on a daily basis, or have part of our lives connected to the Internet through e-Government services such as SingPass, eLitigation, etc. Similar to our physical spaces, the digital space is prone to security breaches as well. Breaches such as viruses, worms and other malicious software can invade that digital space and cause massive disruptions to our work and lives. Some common and well-reported digital disruptions include theft of clientele information from companies, insertion of "ransomware" that prevents employees from using their computers unless a sum is paid to the ransomware distributor, amongst many others.

As long as you use a computer or a smartphone (or even a mobile phone with Internet accessing capabilities), your computer network system in the office is prone to such security vulnerabilities. To provide an example of the gravity of not having cybersecurity, under the Legal Profession Act, a lawyer is required to maintain client confidentiality as the theft of clientele information due to a lack of cybersecurity measures can call for a disciplinary hearing before the tribunal. Besides disciplinary measures, firms may also lose current and future clients over fears that their sensitive information may be leaked to competitors. There is thus a double penalty: sanctions pursuant to the Legal Profession Act and commercial costs in the loss of clients.

D. WHAT ARE THE KINDS OF CYBERSECURITY AVAILABLE?

As mentioned earlier, this article sets out four key approaches to cybersecurity: (1) software cybersecurity; (2) hardware cybersecurity; (3) policies on use of IT equipment for employees; and (4) continuous education for employees.

Software Cybersecurity

This refers to the use of software to prevent or remedy cybersecurity breaches. Familiar softwares such as antivirus software and firewalls may come preinstalled with the computer's operating system (with other softwares e.g. Windows Defender or MacOS' updates) or can be purchased from third party providers, such as McAfee Antivirus software or Norton Antivirus. One may even find antivirus software and firewalls bundled with products sold by telecommunications providers.

Some law firms also require employees to have their e-mails encrypted and attachments scanned before the e-mails can be sent out. As client confidentiality is an integral aspect of the legal profession, such practices should be adopted as best practices.

Hardware Cybersecurity

This refers to the use of hardware or physical (re)location of certain IT equipment to prevent cybersecurity breaches or help in restoring the network in the aftermath of a grave security breach that involves loss or inaccessibility of data. Hardware cybersecurity can involve the introduction of a hardware firewall, and for firms that maintains its own server, have their backup servers relocated in another physical location other than the office headquarters in the event of a security breach in their headquarters.

Policies on Use of IT Equipment for Employees

This refers to setting down on the use of IT equipment. Firms should make it a point to address the use of office IT equipment, e.g. desktops, laptops, smartphones and e-mail accounts that the firm provides to the employees, and the use of personal IT equipment in the office, e.g. use of personal USB keys on the office

desktop, use of personal smartphone or desktop to access company e-mails or data, etc. Policies on the use of office IT equipment usually include the following: use of Internet (including downloading and viewing of websites), prohibition of use of company-owned devices for personal matters, no forwarding of spam e-mails, amongst many other policies.

It is likewise important to have policies on the use of personal devices in the office, in particular for small law firms where the firm allows employees to work from home or in the office using their personal devices. For instance, firms may set out IT policies requiring employees to ensure that any personal devices used for work should not be allowed for other parties to use or view. This is especially so when they are viewing confidential work-related information or data. In the event of any loss of personal devices containing work-related data, a report should be made to the employee's superior.

Another common policy is the use of USB sticks or portable storage devices in the firm. Many firms and companies have implemented a ban on the use of USB thumb drives for security reasons, to ensure that there is no unwanted data transfers of confidential information and no introduction of external viruses via the USB stick. Implemented policies should nclude a general prohibition on the use of USB sticks or portable storage devices, followed by exceptions e.g. where permission is granted by a partner.

Continuous Education for Employees

As technology advances rapidly, the cybersecurity breaches evolve concurrently as well. While the average lawyer may not be able to resolve an actual cybersecurity attack, employee education can help prevent such attacks from happening or recurring. To prevent employees from stepping into a cybersecurity landmine, employees should be educated on the dangers behind retrieving or downloading suspicious emails or attachments, visiting suspicious websites, learning to identify spam e-mails (with potentially malicious attachments), the differences between a scam website and a real website, etc..

E. HOW MUCH CYBERSECURITY WILL BE DEEMED AS REASONABLE?

This is a tricky question. It will be onerous for a small firm to have all possible cybersecurity software and hardware (which can cost a handsome sum), while at the same time, a large firm that handles large volumes of confidential information with big retainer clients may be a target for hackers and thus should think twice when skimming on cybersecurity measures.

Regardless, law firms and lawyers should be aware of section 35(4) of the Legal Profession (Professional Conduct) Rules 2015, which states that the management of a law practice "must take reasonable steps to ensure that the law practice has in place adequate systems, policies and controls for ensuring that the law practice, and the legal practitioners working in the law practice, comply with the applicable written law, and any applicable practice directions, guidance notes and rulings issued under section 71(6) of the Act or by the Council or the Society relating to – (a) client's money; (b) conflicts of interests; and (c) client confidentiality". Section 35(6) of the same rules further states that lawyers in the management of a law practice must also assess the systems, polices and controls and make changes to ensure that such systems, policies and controls continue to comply with the law.

What is deemed to be a "reasonable step" depends on the facts. In the event of a dispute on whether adequate measures have been taken, some guidance can be sought from *Harsha Rajkumar Mirpuri (Mrs) née Subita Shewakram Samtani v Shanti Shewakram Samtani Mrs Shanti Haresh Chugani* [2018] SGHC 155 at [67]. The burden is on the law firm to produce "clear and convincing evidence that "effective" measures have been taken to ensure that no disclosure will occur", insofar where keeping a former client's confidential information is concerned. Furthermore, firms and lawyers should note at [68] of the same case that "whether the measures taken to protect against disclosure are effective or ineffective must depend, in each case, on a range of factors, including the nature of the work done for the former client, the timing of the creation of the information barrier, the size of the law firm, the physical locations of departments within the firm, the number and seniority of tainted lawyers, and so on".

To conclude, law firms that handle client confidential information using digital mediums should have cybersecurity system(s), polices and controls in place. As to whether a law firm has taken reasonable steps is a question of fact, it is thus good practice for the management to be constantly updated with circulars on practice guidance notes and cybersecurity related topic circulars from the Law Society of Singapore's Ethics'.

First published on 24 September 2018

Scan to download the Legal
Technology Vision Booklet

Contact us at
legaltechvision@sal.org.sg