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Gray, Richard

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From Legal Pad to iPad: Mobile Content Delivery and the Law

Richard Gray
Services Team Leader (Science, Engineering & Medicine)
UNSW Library, University of New South Wales
r.gray@unsw.edu.au

Abstract

The prevalence of handheld devices is changing the way people access and use information. Given the strong history of legal content available electronically in Australia, this paper examines the current state of play in providing content via mobile devices. Although there are proven applications for other practitioner based disciplines, such as medicine, can the same be said of law?

This paper seeks to discover whether there is a desire, and indeed a possibility, for mobile content delivery in this discipline. By surveying academics and students, this paper seeks to assess the options of mobile legal scholars and where their access points, or 'content spaces', might be. Further, by examining existing standards and applications, the paper seeks to determine how useful current and future mobile applications are to the legal discipline.

With the sheer amount of information and text involved in legal issues, what role will mobiles play in charting the future of legal content? Are current publisher models conducive to the mobile world, and will this result in a new generation of vendors selling applications as content?

Introduction

With the proliferation of smartphones and tablet computers on the Australian and global market, accessing electronic content is no longer tethered to a fixed time and place. Yet while the devices have already made breakthroughs for medical scholars and practitioners, this paper begins with the question of what is available for the legal scholar? While this paper has restricted its scope to a survey to academic institutions, and the applications from the major publishers and information providers for such institutions, much of this examination could readily apply to legal practitioners. However, this paper recognises from the outset that there are a multitude of issues for practitioners in the field that are worthy of their own examination.

This paper is not intended to be a comprehensive overview of the development of the mobile market in Australia, nor does it cover every potential application and use

for mobile devices by legal scholars and practitioners. Instead, it is designed to give a snapshot of some of the options available to legal scholars in Australia, as compared with other practitioner-based disciplines such as medicine. As this paper follows a device agnostic approach to mobile content delivery, this paper will not dwell for too long on the technological aspects of mobile applications, although it is the rapid growth in technology that has led to the widespread usage of these applications. Instead, this paper examines mobile content delivery in terms of content space and what may need to occur to make that space part of a scholar's working life.

This paper is divided into seven main sections. Part I is a literature review designed to state the importance, penetration and growth rates of the mobile content market. Given how much of that literature concerns applications available in the medical discipline, Part II concerns the uptake of mobile devices in the similarly practitioner-based discipline of medicine. Part III dissects the results of a survey of academic staff and higher degree research (HDR) students conducted at the University of New South Wales (UNSW) Faculty of Law to determine if mobile content is being used, and indeed if there is a desire to use mobile content in the legal discipline. Part IV gives a snapshot of some of the mobile applications and interfaces available for the legal discipline from the major publishers, and analyses them according to current mobile web standards and best practices. Similarly, Part V looks at some of the barriers that may prohibit Australian legal scholars from having access and complete usability of these same applications. Part VI considers how mobile applications have changed the "content spaces" in which information is retrieved, and finally Part VII projects some of the future uses mobile applications may have for the legal discipline and the study of law.

I. Literature review

What is the mobile web? Defining the future mobile landscape

In order to state the importance, penetration and growth rates of the mobile content market, a literature review has been conducted. This review has been based on a number of specific library information science (LIS) databases - namely Library and Information Science Abstracts (LISA), Library, Information Science & Technology Abstracts (LISTA), Australian Library and Information Science Abstracts (ALISA) and Library Literature & Information Science – along with Web of Science, Scopus and PubMed were used for medical literature and IEEE Computer Society Digital Library, along with Education and Information Technology Digital library (EdITLib), for articles from a computer engineering/educational perspective. Given the nature and immediacy of the subject matter, web resources were also incorporated into this review. Articles and websites discovered via Google and Google Scholar were paramount, as several law and technology blogs had far more recent information

than the academic literature in most cases. Needham and Ally's ((Needham & Ally, 2008) & (Ally & Needham, 2010)) two excellent edited volumes from the proceedings of the biennial M-Libraries Conference also provided primary starting points for additional reference searches.

The *mobile web* and *mobile devices* can be defined in a number of ways. Prior to the development of mobile technology, content delivery had been defined by users being in a fixed place and time. The mobile phone, and similar technologies, has changed this as it "represents a transition from a world in which telephones were tethered, like goats, to a wall, to a world where communication is always possible" (Naughton, 2008). As such, the "mobile web" may be defined as "the World Wide Web which [is] accessed through a mobile device ranging from a cellular phone to an iPod Touch. It constitutes the entirety of the Internet and is not limited to websites which have been specifically designed for mobile viewing" (Kroski, 2008). While the mobile device itself can theoretically be anything from a phone to a laptop computer with wireless Internet connectivity, for the purposes of this article the definition of a mobile device can be considered to be any handheld or pocket-sized computer device with a display screen and an input device, capable of web-connectivity. Primarily, this will mean smartphones (such as the iPhone or BlackBerry) or other portable multi-function device such as the Apple iPad. "For a user, a mobile device can never be too small, too light or have too long a battery life" (Satyanarayanan, 2010, p. 5).

The majority of the literature tends to agree that mobile devices will be the primary method for accessing online content within the next decade. The Pew Research Centre interviewed a panel of experts to "assess scenarios about the future social, political, and economic impact of the Internet" (Anderson, 2008). Overwhelmingly, they identified mobile technologies as the primary factor impacting on Internet usage. Indeed, 77% of the 578 experts panelled (Anderson, 2008) agreed that the mobile phone will be the primary connection tool to the Internet by 2020. The *Horizon Report 2009* goes one step further and identifies mobile technology as being adopted by a majority in one-year or less (Johnson, Levine, & Smith, 2009, p. 5). The *Horizon Report 2010* continues with this trend, adding that: "The mobile market today has nearly 4 billion subscribers, more than two-thirds of whom live in developing countries. Well over a billion new phones are produced each year, a flow of continuous enhancement and innovation that is unprecedented in modern times" (Johnson, Levine, Smith, & Stone, 2010, p. 9). It was also predicted that the current number of touchscreen handsets sold is set to double in 2010, with a projected worldwide sales of 362.7 million. This represents a 96.8 per cent increase over the 2009 figures (Petty, 2010). However, by early 2010, Gartner was already reporting that 314.7 million mobile phone units had been sold worldwide (Tudor & Petty, 2010), pushing the total number of phones worldwide to over 5 billion in 2010. Whatever the time-frame, there appears to be an accelerated rate of mobile phone adoption globally and an agreement in the literature that mobile devices are becoming the means by which the majority of users will access online content.

Scholars in the area of mobile technology do not necessarily equate an increasing technological presence with corresponding increase in levels of learning skills. Although mobile technology has been around for decades, recent advances in technology has made engagement with mobile content increasingly routine (Saravani, 2010, p. 2). Consequently, this represents a larger number of people accessing their information in mobile environment. Yet mobile access and mobile learning is not the same thing. O'Malley et al (2003, p. 6) states that "Any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies". Mobile technology has simply made it easier for this content to be communicated. As is discussed in the remainder of the paper, some of the challenges for libraries will be in striking a balance between catering for new forms of mobile technologies and a consistent teaching and learning regime across all of its users.

II. Mobile medical and Educational e-content

Before turning to specific examples from the legal discipline, it is worth examining how far the medical scholars and practitioners have already come with their usage of mobile devices. Indeed, the need for mobility has long been recognised in the world of medicine. A case study from a health service in a less-developed country showed that increased access to medical information had a corresponding increase in confidence to request support for their technical needs, along with a better understanding of their work processes and specifications (Iluyemi, 2008). Like the library information science literature, the medical literature shows trends towards practical application. It sees training and educational prospects for regional medical students via mobile videoconferencing (Harris, Smith, & Armfield, 2007), point of care information delivery systems (Hauser, Demner-Fushman, Ford, & Thoma, 2004) and even the cessation of smoking (Whittaker et al., 2008).

Similar to the legal discipline, medicine is a practitioner-based discipline that often relies on point-of-need content delivery. For example, the BMJ Group provides a mobile interface for their *Best Practice*, a diagnosis and clinical treatment tool targeted for practitioners who have patient contact. Yet the application of the law is not as universal as the application of medical treatment. Put simply, the guidelines for the practice of medicine may differ from country to country, the human body does not differ significantly based on location. The law, on the other hand, will differ from one jurisdiction to the next, which may partly explain why there are limited mobile applications for legal scholars in Australia. However, there is yet to be a study as to how legal practitioners use information in the field, and specifically those practitioners who are in frequent transit. As this paper is chiefly concerned with applications for the legal scholar, and not necessarily solicitors, barristers or officers of the court, this will not be explored in depth here. However, it is worth drawing a

parallel between the medical and legal disciplines for two reasons. Firstly, there has already been some progress in the exploration of how medical practitioners may use mobile devices. Secondly, and perhaps more importantly for the purposes of this paper, there are already a large number of mobile applications for the medical market.

A number of medical publishers and academic institutes have already begun to take part in the delivery of their content to the mobile scholar. Apart from the aforementioned BMJ, Medline has developed MedlinePlus, PubSearch offers a third-party mobile interface to the PubMed database and Elsevier's Scopus database has recently developed a Scopus Alerts application for the iPhone. The mobile device also has a number of other field applications. The Duke Global Health Institute, part of the Duke University in North Carolina, has recently introduced iPads to conduct field research "with the goal of preparing them for the limitations they'll encounter when working in a remote, low-resource setting as part of their global health research project" (Schaffhauser, 2010). The study adds that it enables the kind of analysis previously conducted after the fieldwork to be done while still in the field. This changes the very nature of research, and alters the notions that analysis, interpretation and evaluation must be done in a tethered environment. The potential applications for law are also numerous, and these will be discussed further in Part VII along with the current applications and interfaces discussed in Part IV.

III. Survey of UNSW Faculty of Law

A survey was made available to full-time academics, sessional staff and HDR students on the topic of 'Mobile Content and the Law' from 23 August to 17 September 2010. Questions pertained to current ownership of a smartphone or similar device, current and intended usage of devices, types of content used and the types of mobile legal content that the respondents would ideally like to access from a mobile device. Of the 60 full time academics, 27% of the cohort responded to the survey, representing a significant cross-section of the academy. Of the total respondent pool, 69.9% were full time academics, 21.7% sessional/casual staff and 8.7% HDR students. It is likely that some of the sessional/casual staff and HDRs were also practitioners, but this was not determined in the survey.

The current ownership of a smartphone or "other similar device" was surprisingly low, with only 65% of respondents stating that they owned such a device. This is perhaps due to a large number of people (65.2%) identifying cost as a prohibitive factor. As one respondent put it: "[U]nless work provided the hardware and internet connection, I'm not likely to be able to afford this technology (even though I think it would be useful and I'd probably use it frequently as I usually spend around 12hr/week working while travelling on public transport)".

Usage was largely, and unsurprisingly, around email (94.4%), mobile calling/SMS (77.8%) and internet browsing (77.8%). The types of content accessed were largely news/RSS feeds (56.5%), social networking (39.1%), business (34.8%) and entertainment (21.7%) being identified as activities engaged in while using a mobile device. However, a large majority of people (82.6%) indicated that they *would* access academic content on a mobile device. “In my 30 year career we have moved from mobile access via CD being 'nice' to mobile access to up to date material being critically important”, noted one respondent.

The majority of respondents were not aware of any specific legal applications for mobile devices. The most revealing aspect of that section of the survey was the type of legal content that people would be interested in using were it available on their mobile device. Almost all respondents found (95.7%) News/Alerts either Useful, Important or Essential, which is consistent with the large number of people already using these types of applications. None found them 'Not Useful'. Even stronger were the results for Legislation (Offline) (95.4)% and Case Law (95.4%).

Most perceived iPhones and similarly sized devices as potentially insufficient for traditional legal content. “[The] small size of iPhone means that [it is] only really useful in those instances when unable to access laptop conveniently and need a quick answer (or stuck in transit)”. iPads and tablet computers were identified as (82.6%) as an incentive towards using legal content on a mobile device.

The original survey can be found at: <http://www.surveymonkey.com/s/mobilelaw>

IV. Legal landscape

An e-Legal tradition

Australia has had a long tradition of providing legal information and resources online. While much of the focus in a post-iPhone/iPad world has been on paid applications, or 'apps', it is difficult to avoid speaking about one of the major free legal resources online: AustLII. The Australasian Legal Information Institute (AustLII) has existed since 1995 (Greenleaf, 2010), prior to many Australians having access to the Internet. Indeed, at the time Richard Susskind penned *The Future of Law* in 1996, there were less than 40 million users of the web globally (Susskind, 2010b). Compare this figure to some 1.8 billion users by the end of 2009 (Miniwatts Marketing Group, 2010). AustLII is at the core of a global movement aimed at providing free online access to legal information. With its largely text-based format and strict adherence to accessibility requirements, it is already in a good position to be adaptable to the mobile environment. As discussed below, this repackaging of free legal content is an essential element of mobile content delivery and the law.

The aim of the remainder of this section is to give a snapshot of what is currently available to Australian legal scholars, including those major applications and platforms available to scholars in the US and UK, and determine to what extent there is a level of support for the growing number of users who access their e-content primarily from a mobile device.

Mobile law applications

In order to assess the available mobile content for the legal discipline, one must first establish a methodology for the assessment. User experience and relevance is the primary grounds for measurement, as technological standards are not covered by the scope of this paper. As a basic starting point, the *W3C Mobile Web Application Best Practices (W3C Candidate Recommendation)* have been used (W3C, 2010). This organisation served as the referral point for the recent Australian Flexible Learning Framework on m-learning, and the W3C recommendations in the earlier *Mobile Web Best Practices 1.0* (W3C, 2008) were considered “as a necessary adjunct to working the recommendations contained within the reports” (Saravani, 2010, p.7). From this we can summarise the following factors as fundamental elements to be considered in examining our mobile applications:

- user control, including navigation
- data size, including the size of the application and data retrieved
- text size/control
- load times
- web connectivity/redirects
- web standards, including the use of pop-ups and nested tables
- purpose is for users “on the go” (W3C, 2007)

In our legal scholar context, it is appropriate to add the **cost** of an application and ongoing subscriptions. Kajewski (2010, p. 61) notes that in relation to medical applications, “some apps are just not in an affordable price range for students” . As mentioned, (65.2%) of UNSW legal scholars surveyed identified cost as a factor in accessing legal content on their mobile device. As mobile applications and devices are largely about personal mobility, often the burden of the cost will be borne by the individual.

In this section of the paper, some of the currently available apps and mobile websites from major publishers have been considered in light of the above standards. It is not designed to be an exhaustive examination of every app available, but rather a snapshot of the types of apps currently on the market. Table 1 represents the costs, size and platforms on which the applications discussed are available.

- **Black’s Law Dictionary 8th Edition** (West/Thomson Reuters): A US legal dictionary that is also available in print and electronic (CD-ROM) versions. With the print version weighing in at over 1900 pages, the mobile application customises the tome for the mobile environment. Although the initial download of this version (1.4.2) is large at 63MB, users can search for terms offline, with hyperlinks to related terms in the dictionary. Search occurs progressively as the user types, meaning words are suggested for the user. Certain content, signified with a double underline hyperlink, connects to Westlaw content (including case law and US Code), but this requires a Westlaw subscription or ID making cost an issue for individuals. The Westlaw content requires that a browser opens on the device, and the user is directed to the regular Westlaw.com site after login by default, but there is also a choice of Westlaw Wireless (see below) and a text-only site that is particularly mobile friendly. This latter is optimised for the mobile web. The app itself has three scalable font sizes. Hard to pronounce words have an audio option available. There is also a version of the application customised specifically for Apple’s iPad. It has a clear and specific purpose in both formats, and while the added Westlaw content requires a mobile-web connection and a subscription, it is most useful as a quick search tool for mobile users.

- **LexisNexis Butterworths Concise Australian Legal Dictionary, Third Edition** (LexisNexisAU): Similar to the Black’s Law Dictionary for the US market, the app contains over 7600 legal words and phrases. The initial download for this version (1.01) is minimal at 6.0 MB. Users search exclusively offline, and this results in incredibly fast searches. Like the *Black’s* app, search occurs progressively as the user types, and results appear instantaneously. Related terms are suggested. It requires no additional subscriptions beyond the initial cost of the purchase at a comparatively cheaper \$19.99. However, this also means that it is useful purely as an offline reference tool, with no connectivity to the LexisNexisAU database. It is available for the iPhone/iPad Touch.

- **Get Cases & Shepardize** (Lexis Nexis (US)): Although the application is free to download, it also requires a subscription to LexisNexis US to access content. The application does not attempt to be all of LexisNexis in app form, but rather (as the name implies) provide a mobile citation service based on Shepard’s. The search screen requires a US citation, and gives users the option to “Get Document” or “Shepardise”, the latter of which is also available from the document view. Retrieving documents requires a LexisNexis subscription and web connectivity, while load times can be lengthy depending on connection and the size of the document. Provides case briefs, signal

indicators for subsequent treatment of cases and case summaries. Navigation is limited when viewing records, as manual scrolling is required to get through sections rather than providing a table of contents. However, users can interact through bookmarks, three font text sizes and emailing documents.

- **iLegal** (Engraved Ltd): Developed by a law student, iLegal is available for both the iPhone/iTouch and the iPad. iLegal represents a significantly large download (213 MB on the iPhone/iPad). The application offers offline access to 5000 items of legislation from the UK, Scotland, Ireland and Wales and the Acts of the Parliament of Great Britain and English Parliament. Tables of contents are given for ease of navigation, and users can browse by year and title. Search terms are highlighted, and interaction is made available via an email option. There has been some question as to the currency and completeness of the legislation (Nearly Legal, 2010), although Engraved states: “New legislation will be added by software updates in the future” (Engraved Ltd, 2010). While replicating online material or large amounts of text offline is not the most ideal use of the mobile environment, it does serve as a useful quick reference tool. However, the price may prohibit this from being in every scholar’s or student’s device. Based on freely available information, possible from sources such as the UK’s Office of Public Sector Information (OPSI), iLegal Legislation is an example of smaller publishers using the mobile medium to enable them to charge for otherwise freely available legal information in the same way that larger publishers do. The benefits to the consumer are convenience and a mobile-friendly interface.

- **LexisNexis Australia Unreported Judgments (Beta)** (LexisNexis AU): This is not an app, but rather a tailored version of a website for iPhones and BlackBerry devices. “Unreported Judgments contains over 170,000 full text decisions from the High Court, Federal Court, Supreme Courts of all Australian States and Territories, Family Court of Australia, Land & Environment (NSW), Takeovers Panel, Federal Magistrates Court, Administrative Appeals Tribunal, District Court NSW (selected cases) and District Court WA (selected cases)” (LexisNexis Australia, 2010).Text does not automatically resize and adapt to the phone screen, at least in the case of the iPhone. As it is web-based, it requires an Internet connection at all times to use.

- **Westlaw Wireless** (West/Thomson Reuters): Westlaw Wireless is another web-based mobile interface for the existing Westlaw database designed for multiple platforms. Westlaw has commented that their mobile strategy is to be device agnostic: “It’s all about enabling access to Thomson Reuters’ content ‘anytime, anyplace, and anyway.” (Hane, 2009) Users with a valid Westlaw

login and subscription are given a custom search screen with the following options: Find a Document (requires names of parties or citation), Find & Print, KeyCite a Citation (citation service) and Search Westlaw. The latter also features a custom search screen allowing one to use natural language and or Terms and connectors to search the Westlaw database. All features require a valid Westlaw account and password, so again cost is an issue for individuals. The display and text are optimised for the mobile environment, and the dynamic text adjusts to the orientation of the screen. Load times are dependent on the speed of the connection. Email sent from the interface is also optimised for mobile viewing.

- **Westlaw Next** (West/Thomson Reuters): Similarly, Westlaw Next is a mobile-tailored version of the Westlaw Next platform that can operate on the iPhone, BlackBerry and Android-based mobile devices. Westlaw Next is an enhanced search platform aimed at researchers. “So users come to Westlaw for legal research for two primary types of tasks: 1) known document retrieval and 2) exploratory issue-based research. The first needs to be made as simple as possible. The second is the real heart of the matter. Westlaw researchers did a masterful job of breaking down the process of online research” (McKenzie, 2010). At the time of writing, Westlaw Next was not available for the Australian market.

Table 1 (below) is a summary of some of the larger publisher applications and interfaces available for mobile devices currently, along with some of the independent and targeted applications available at the time of writing.

Product	Publisher	Price	Size	Access via
AustLII	AustLII	N/A	N/A	Web. No dedicated app. XML reads on mobile devices.
Black’s Law Dictionary 8 th Edition	West/Thomson Reuters (US)	\$59.99 (connection to Westlaw materials requires subscription)	63.0 MB	Dedicated app (iPhone/iPod Touch).
Constitution (The Consitution of the Commonwealth of Australia)	Ken Bremmer	Free	0.1 MB	Dedicated app (iPhone/iPod Touch).
The Constitution of the United States (with audio)	West/Thomson Reuters/US	\$1.19	23.5 MB	Dedicated app (iPhone/iPod Touch).
Get Cases and Shepardize	LexisNexis (US)	Free to download, access requires subscription	0.4 MB	Dedicated app (iPhone/iPod Touch)
iLegal Legislation	Engraved Ltd	\$89.99	213 MB	iPhone/iPod

			(iPhone)/ 222 MB (iPad)	Touch/iPad
Lawstack	Tekk Innovations (US)	Free		Dedicated app
LexisNexis Australia Unreported Judgments (Beta)	LexisNexisAU	Free	N/A	Web based, formatted for mobile (incl. iPhone and BlackBerry)
LexisNexis Butterworths Concise Australian Legal Dictionary (3rd Edition)	LexisNexisAU	\$19.99	6.0MB	Dedicated app (iPhone/iPod Touch).
Sum and Substance	West/Thomson Reuters	\$59.99 - \$74.99	130 – 167 MB	Dedicated app (iPhone/iPod Touch).
Westlaw Wireless/Westlaw Next	Thomson Reuters (US)	Access requires subscription	N/A	Web based, formatted for mobile. Westlaw Next has iPad version

Table 1. Prices of popular law iPhone/mobile apps. All prices are in Australian Dollars unless specified otherwise, and were current at the time of submission. Paid apps are available from the Australian App Store on iPhone or iTunes.

From this brief examination of some of the available applications and interfaces for legal scholars, the following can be gathered:

- There is significantly more US content available than Australian content. Indeed, with the exception of the LexisNexis Australia Unreported Judgments interface, none of the larger publishers have dedicated mobile applications in Australia at the time of writing.
- Amongst the available legal applications for the US market, only a selected number of those are available to Australian consumers.
- Many legal popular applications require an investment for full functionality, both in terms of subscriptions as well as download time, digital storage space and associated bandwidth costs.
- The most effective applications are those that serve specific purposes, such as a legal dictionary or a case citator. Indeed, there are a number of other applications designed specifically for law students –such as the BARBRI Challenge bar-preparation test from Thomson Reuters and the continuing legal education app called CLE Mobile From West LegalEdCentre, both for the US market.

- The largely text-based content in the legal discipline requires user-friendly navigation and specific mobile-based applications and interfaces to work in a mobile environment.
- Freely available legal information can be repackaged and sold to consumers in the form of a “time-saving” application.

Where organisations such as AustLII recognised a clear need to have a free presence in a space that was to become the ‘norm’ for information access for the majority of people, a similar trend has not yet occurred in the realm of mobile content provision in Australia. Despite the rate of mobile adoption being much more rapid than the uptake of web access, a corresponding uptake has not occurred in the provision of mobile legal and scholarly legal content.

V. Increasing access to legal mobility

Many of the current limits to legal content mobility are related to the way the legal information industry has been structured both domestically and globally. The legal discipline differs from other practitioner based areas in a number of fundamental ways, but principally due to the law being a jurisdictionally-based area of study. Despite the free availability of legal information in Australia via Austlii, ComLaw and the various state and federal government web resources, it is also an industry that is dominated largely by the duopoly of two key players: LexisNexis and West/Thomson Reuters. Due to the growing complexity of the law, the legal scholar is increasingly reliant on the secondary sources from those two players that interpret the law at a subscription rate. It is unsurprising then that those mobile applications already available, including *Black’s Law Dictionary* (West/Thomson Reuters) and *Get Cases and Shepardize* (LexisNexis) appear to be aimed purely at this practitioner-scholar market.

In the desktop platform environment, there is already a divide between the content available in various jurisdictions. The content available on LexisNexis US is not available on LexisNexisAU and vice versa. Similarly, Westlaw content is not found on Thomson Reuter’s Australian platform, LegalOnline. The companies have packaged these as separate platforms with separate content, giving the user multiple entry points to the same company’s content. As such, one of the primary hurdles that Australia must face in the global mobile arena is requiring specific mobile applications for its content. That is, in the same way that there is both a US and Australian version of a branded database, present arrangements would require both Australian and US versions of a mobile application.

The issue is not simply one of proprietary arrangements, but one of content demand as well. As law is a jurisdictionally based discipline, the market for Australian legal

content is largely restricted to Australia and those studying comparative legal systems. Adding further complications is that some of these US-specific applications are not actually available to Australian scholars. Applications such as FastCase, another case finder and citation tool, are not available from the Australian version of iTunes. In this particular case, this is due to the closed-world environment of the Apple iTunes store. 'Apps' for the iPhone, iPod touch and iPad can only be purchased through the online Apple iTunes stores and used (officially, that is) with an Apple product such as an iPhone or iPad (Buis, 2010, p. 399). These purchases cannot be used on another device, such as a BlackBerry, and vice versa. Critics have expressed concern over the closed world that Apple is creating for users, suggesting it will lead to a "Wal-Martization" of software channels and ultimately fewer choices for the consumer (Doctorow, 2010). In the legal context, this is compounded by the aforementioned jurisdictionally-based strategies of the major legal publishers.

Yet the mobile market also represents a unique opportunity to expand the electronic enterprises of the legal content market, and erode some of the monopolies that have developed. As the UK iLegal Legislation application so aptly demonstrates, there is a potential market for packaging freely available content in a mobile specific format and charging for the convenience. In Australia, AustLII – along with the free access to law via government and parliamentary websites – provides legislation, bills, judgments and even entire journal series online free of charge. In the Australian context, the creators of the primary content are making this freely available. International legal publishers, such as LexisNexis and Thomson Reuters, 'value-add' this content by contextualising it within commentaries and other secondary resources. This additional value makes them valuable resources to the academic and practitioner alike, and explains why universities and other institutions are willing to meet their subscription costs on an annual basis (Arewa, 2006, p. 802). While LexisNexis and West/Thomson Reuters have recognised this trend in *Get Cases and Shepardize* and *Black's Law Dictionary* in particular, it seems that it is only a matter of time before smaller publishers and individuals create practice-specific or other purpose-built applications for the legal scholar, student or practitioner that completely circumvents the publisher model that has thus far survived the print to electronic transition. The mobile model, on the other hand, is not simply one of replication and repackaging of content in a mobile environment: it is one where the format should be seen as important, if not more so, than the content itself. If users are willing to pay for free content in a convenient application, are they paying for the content itself or the package it is delivered in? In this sense, the applications become the product, and not the content itself.

VI. Content spaces

While much of this paper has concentrated on assessing the applications and the publisher models that create them, it is important to acknowledge that increasing

mobility occurs in synchronicity with increased 'nomadicity'. In much the same way that cloud computing and mobile technology means content is accessible at any time and any place, it also means that scholars and students are increasingly nomadic in their learning practices. Indeed, mobile learning has challenged the way that educators think about delivering content to students (Sarviani, 2010, p. 1). Mobile learning, like the mobile web itself, can be defined in a number of ways. A broad definition that fits with much of the other literature can be taken to be "learning using mobile and wireless computing technologies in a way to promote learners' mobility and nomadicity nature" (Lee, 2007). It can also be seen as learning that takes place on the move, taking advantage of ubiquitous learning technologies (Aubusson, Schuck & Burden, 2009). The Survey of UNSW legal scholars also identified 69.9% of people accessing content in transit to work, 87% from home and a significantly large 91.3% who accessed content electronically at any other times, such as conferences or other times away from office. The recognition of mobile content users as nomadic and transient subjects is fundamental in understanding the kind of information that may be used by universities and colleges, an environment where the undergraduate student body is almost entirely a transient one.

Mobile devices, and indeed cloud computing, have heightened a need for a shift from thinking about physical spaces to virtual ones, as the retrieval of content can be from as many places as there are users. As people move, the content goes with them too creating new spaces. This place may be called their *Content Space*. Coyne (2010, p. 113) speaks of SIM (Subscribed Identity Module) cards as surrogate or avatar for the phone user, much the same way as an avatar acts in online virtual environments such as *World of Warcraft* or *Second Life*. The SIM itself, notes Coyne, can be detached from the device and inserted elsewhere, making the device itself a mere portal to the content rather than the delivery system in and of itself. Saravani argues that the learner is influenced by the marketplace as much as their course information, and comments that these users may be disappointed if institutional support for their newly acquired devices does not exist. "If this happens, the mobile user's dissatisfaction may not be directed at their newly-acquired device but rather at the institution that has failed to meet their changing needs" (Saravani, 2010). As such, content providers must be aware that the provision of content has to meet the changing needs of the user, and this includes recognising the need to program across multiple platforms such as the iPhone, BlackBerry, Google Android-based devices and Symbian OS, found on most Nokia SmartPhones.

A number of applications have already begun to think about this changing nature of space and the nomadic student experience. West/Thomson Reuters, for example, have a suite of applications called Sum and Substance. These applications cover a number of subject areas in US law, including contracts, criminal procedure and constitutional law. Each application is well over 100 MB, but contains module-based audio lectures on a number of key topics for law students. Another prohibitive factor is the price. The Australian iTunes has these listed at various prices, starting from

\$59.99 and peaking at \$74.99. This may be prohibitively expensive for law students, and given their US focus, are unlikely to be of any use outside of their relevant jurisdiction. These apps go beyond mere podcasting, with integrated reviews for test, and quick referencing and indexing for casual use. They represent an acknowledgement of the nomadic nature of the contemporary student experience, with the lectures now also being available at any time or place. However, to take the next step, publishers may need to start thinking about the changing locations of their users to optimise the usage of their content in a mobile environment.

As the concepts of space shift, so does the concept of jurisdictionally based information. As this paper has already established, many of the publishers in the legal discipline create content for a specific jurisdiction within one platform that is not easily transferable to another jurisdiction's platform. This is partly due to jurisdictional requirements and partly about publisher arrangements. The mobile environment offers the ability to provide a single outlet for multi-jurisdictional content through the geographic location services inherent to 3G networks. Reichenbacher (2009) speaks of the need to rethink the role of location in relevance searches, suggesting location-based services in a mobile environment can treat the notion of location as an index, a query parameter and as places with meaning attached to them (Reichenbacher, 2009). "Certain places or regions afford or enable certain activities. Reciprocally and even more important for the relevance of information is the fact that mobile activities constrain certain places or regions" (Reichenbacher, 2009). While this may be a perfectly fitting description for the compartmentalisation of legal databases, it can also be viewed as a solution rather than a problem. The adoption of cloud computing into common parlance, that is any virtual servers available on the Internet (Knorr & Gruman, 2008), gives mobile users the ability to access any information from any time or place. By extension, it is feasible that a jurisdictionally based discipline such as law could find a benefit for geographically relevant content delivered through an application that uses geographic location as a variable in mobile activities. In this way, many of the current constraints around the need to develop mobile applications for different territories could be circumvented by using a single application or mobile site to make a variety of legal material available to interested users.

VII. Point of Need & the Future of Mobile Law

The law is a heavily text-based discipline, and as with the medicine discipline, is used on a point of need basis. As we have seen from our exploration of existing mobile applications for legal scholars/students in Part III above, those applications that offer the most for the legal scholar are those that have a particular purpose (e.g. citator, dictionary, news delivery). What follows for medicine may also be true of law, in that the medical literature shows a trend towards current content made for practical applications such as clinical treatment. However, while this paper does not attempt to investigate the mobile usage patterns of legal practitioners, many of the

existing applications are clearly aimed at this market. LexisNexis Australia could replicate the example of the *Black's Law Dictionary* app, expanding on the recently available *LexisNexis Butterworths Concise Australian Legal Dictionary* with additional online functionality. By comparison, the *Australian Law Dictionary* from Oxford University Press already has a visual and topical keyword structure that lends itself to the electronic/mobile environment, and would be ideal for tablet-based platforms such as the iPhone. For those with existing subscriptions to the platforms, the LexisNexis US *Get Cases and Shepardize* is a perfect model for the obvious applications of the Australian equivalent *CaseBase*, or Thomson Reuter's competing *FirstPoint*. Indeed, subscriptions to these key point-of-need and high-demand services potentially have a market as standalone applications/ products in a mobile environment. Similarly, news applications and RSS feeds will also be directly relevant to the mobile scholar or practitioner.

The Apple iPad and tablet computing also represents a significant leap forward for the future of mobile content in the legal environment. This paper has already identified that law is a unique area that is still very much bound to the paper world. Devices like the iPad, with back-lit screens and custom applications for reading a variety of file formats, represents a way to make that large amount of paper manageable and portable for academics. As such they offer an opportunity where academics can read exactly the articles they want on demand. "Individuals, not institutions, could purchase content — exactly the content they're like, regardless of whether their library subscribes to it or not" (Golub, 2010). In this sense, mobile devices have the potential to not only change the way that legal scholars view and manage their content, but the way in which they access and pay for their content (Golub, 2010). Here we begin to see the potential for the creators of content directly marketing their wares to individuals in a new form. While publishers have always offered individual subscriptions as an alternative to their institutional subscriptions, for the first time the mobile environment offers the ability to provide that content to individuals at those places where the institutional subscription may not be apparent: away from the home or office. On the flip side, one of the challenges for libraries and publishers will be how to effectively use and market stand-alone apps to individuals within the typically IP authenticated/EZProxy environment of institutional subscriptions. Presently the mobile app market is aimed at the individual, but is an 'institutional app' a possibility for the future?

Mobile technology offers the makers of the law a chance to package their content directly. The makers of the law, including courts, parliament and other legislative bodies, make the law freely available via a variety of web-based resources. However, as discussed above, much of the Australian legal content that academic libraries subscribe to is otherwise free material repackaged by international corporations and sold back to us for the 'value added' secondary content, along with being the 'authorised' version of the reports in some cases. In a mobile environment, where the mobile application is the package being sold, as is the case with the UK's

iLegal Legislation, perhaps it is now possible for the creators of that content to circumvent the publishers and directly provide content via their own applications. Indeed, AustLII has begun this process to some extent with the automated citator service LawCite, challenging the dominance of the subscription only CaseBase or FirstPoint. The courts, parliament and other government bodies are in a perfect position to directly provide legal scholars and practitioners with free legal information at their point of need, and a mobile interface is an ideal way to do this, providing what Ally (2010, p. xxxiv) refers to this empowering possibility as “government in the citizen’s pocket”. Speaking of the situation in the UK, Susskind (2010a) commented that “imaginative, entrepreneurial and market-driven alternative providers of legal services...will find ways of making state funding go farther...and of delivering service in ways that consumers find convenient”. He adds that “richer online legal resources are needed...We must learn from other jurisdictions and professions” (Susskind, 2010a). As we have already demonstrated above, if providers of medical content are able to provide point of need services for medical practitioners, then surely the role of legal professionals and the creators of those laws can extend this lesson to the provision of legal content in the mobile environment.

Finally, any applications created for the mobile scholar or practitioner would necessarily be device agnostic. That is, the ability to use the same application or interface on a variety of devices. Much of this paper has looked at applications available specifically for the iPhone/iPod Touch, iPad or Blackberry, but this is simply due to those applications currently available being made almost exclusively for this platform. The market-driven economy of mobile devices means that the content spaces people create will be born of a multitude of devices that suit the needs of the individual at a given time or place. Content creators and facilitators will need to be flexible enough to meet the needs of these various devices.

Future research

This paper has attempted to survey the current options for legal scholars, and will certainly be worth visiting again in 12 months or so. Additionally, while the survey of the UNSW Faculty of Law researchers has provided some valuable insights into the behaviour of legal scholars at one institution, it would of course be useful to expand that survey to other academic institutions, as well as practitioners, courts, law-making bodies and other institutions. As the research indicated, some of the most highly valued tools are those that are useful as point-of-need applications, and it is anticipated that practitioner groups would have the most to gain from the use of these tools. Much of the literature to date has also concentrated on mobile services, while the types of content being delivered – especially in the context of content delivered by libraries to the end-user - remains largely unexplored. Naturally, there is a tremendous scope for the role of libraries in the provision of content to mobile

devices, especially as publishers come to grips with how to market mobile apps in an academic context.

Conclusion

Legal scholars stand at a crossroads in much the same way that they did 15 years ago at the launch of major free e-content for law, with a new technology that also asks us to rethink where we are accessing content or our 'content space'. Academics appear to be willing to access academic content via their mobile devices, although cost and a lack of awareness/availability of legal-specific content is currently a prohibitive factor in the wider adoption of mobile applications for the legal discipline. Accessing legal content is no longer tied to a fixed time or place, and nor is legal publishing reliant on a handful of vendors. Publishers are slowly responding to the mobile market, with a number of tailored applications and mobile websites, but this is only part of the movement. Instead, imaginative individuals responding directly to the market's demands can create content to fill these spaces at their point of need.

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