Australians have adopted wireless broadband with fervor. People can be seen sitting over their morning coffee reading the screen on their mobile phone, or hunched over their laptop in cafes all around the country. This paper explores from a social perspective the behaviours of a particular group of end users who through their use of wireless broadband and mobile devices continue to work anytime and anywhere.

In contrast to the telecommuters of the early 1990s who worked from home, this group of end users known as Mobile Knowledge Workers or more generically as mobile workers continue to work away from the workplace but not necessarily in a fixed location such as home. Mobile Knowledge Workers continue to conduct work across a range of locations and rely on their wireless broadband to perform tasks and to keep connected with the office. The results of an online questionnaire demonstrated that through the use of wireless broadband and a range of mobile devices such as laptops, smart-phones, and tablets, Mobile Knowledge Workers continue to productively perform a range of tasks across a number of different locations.

**INTRODUCTION**

In June 2011, Australian subscriptions to wireless broadband (excluding mobile handsets) surpassed those of DSL subscriptions for the first time (ABS. 2011). The increasing popularity of wireless broadband has provided the possibility of constant communication with the office when working away from the workplace. Mobile devices such as laptops, tablets and smart-phones combined with wireless broadband have hastened the transition to a new phase in working life for office workers. Office employees are now able to conduct work independently through their mobile devices, regardless of spatial and temporal constraints. Coffee shops, always the preferred location for subtle business networking and discussion (Treneman 2001), are now sites for proactive computer assisted work. There is an emerging culture of undertaking work in another location away from the workplace. The other location is often informal such as a café or airport lounge. In these locations people can be seen doing work with their heads bent over a computer screen, alone or together with a colleague. The additional benefit of wireless broadband is that it enables connection between the worker and their workplace and yet the worker can remain remote from the physical location of it. Work tools accessible through the cloud, or simply online, enable colleagues to collaborate and connect regardless of their individual physical locations.

This paper draws on data compiled from a larger study, Discovering Connectors: A Guide to the Australian Wireless End User, which investigates the ways in which Australian end users are adopting wireless broadband for individual use. The study is based on end-user perspectives and explores the possibility that Australians are moving towards a sense of multimodal connectedness (Schroeder 2010) by using multiple devices and multiple forms of Internet connectivity – in particular wireless – in order to do so. A Telstra study conducted in 2010 reported that more than half of all Melbourne homes have more than four Internet-enabled devices (Thom 2010). Australians are consumers of an increasing number of Internet-enabled devices ranging from laptops, tablets, eReaders, smart-phones, and in the home to...
net-connected big screen TVs, and videogame consoles (Thom 2010, para. 3). In Australia our uptake of wireless broadband and Internet-enabled smart phones is increasing every year. In 2010 our uptake of wireless broadband (excluding smart-phone handsets) increased 21.7% over the previous year (ABS 2011), and our uptake of smart phones increased by 67% from 2009 to 2010 (Mackay 2010), highlighting the increasing importance of understanding how Australians are moving towards multimodal connectedness.

Wireless broadband for many Australian end users takes the form of Mobile Broadband, Mobile Internet and WiFi. In the study, Mobile Broadband was defined as using a USB ‘dongle’ or datacard in computers to connect to the Internet; Mobile Internet as using a mobile phone or iPad/tablet to connect to the Internet (3G); and WiFi a wireless form of broadband provided from a fixed local area service and usually available in public spaces like cafés, airports, libraries, and places of study. Technically there is little difference between Mobile Broadband and Mobile Internet as they both use 3G SIM cards, while WiFi generally relies on a fixed connection. However, to a non-technically savvy end-user, these three forms of broadband are ‘wireless’, simply because there is no cable connection between the device and the connection outlet as for a fixed service, and the end-user is not ‘fixed’ to a location but able to move around freely to continue their everyday activities. In this paper the term ‘wireless broadband’ is used to generically represent the three forms of connectivity.

Investigated in this paper are the work-related location results selected by a specific group of questionnaire respondents, the ‘Triple Connectors’. As 25.6% or 44 of all the respondents, the Triple Connectors make up the largest single group of end-users identified by the study. These Connectors connect to the Internet using the three types of wireless broadband: Mobile Broadband, Mobile Internet, and public Wi-Fi. The other two groups, ‘Single Connectors’ use one type of wireless broadband, and ‘Twin Connectors’ a combination of two.

Triple Connectors epitomise a form of ‘mobile worker’, as they are reliant on their devices and wireless connections in order to conduct work regardless of location. This paper contends that Triple Connectors may be more advanced users of broadband services than other connector groups. This is demonstrated by their high use of wireless broadband in their everyday life, and by their above average adoption of wireless technologies and leading edge services such as Voice over Internet Protocol (VoIP). As wireless broadband enables connection in any place at any time, the context for this article is to examine the study data in relation to task and location to investigate if there are any linkages between task, location, device and the form of connectivity. While wireless broadband enables mobility, what is not known is how end-users are creating an informal structure of work, if any, within that mobility. Do Triple Connectors prefer to undertake particular work tasks using their laptop, phone or iPad, and is this dependent on the location, or the form of connectivity? Or do they perform the tasks irrespective of location and device? The analysis is limited but provides valuable indications for further research. A typology of mobile workers, and work ‘tools’, especially communication and collaborative cloud based ones, will form part of follow-up investigations.

ABOUT THE STUDY

The data for the study was collected using an online questionnaire circulated in 2010. Participation in the online questionnaire was voluntary, and no incentives were offered for participation. Participants needed to be Australian residents of at least 18 years of age. The questionnaire took approximately 15 minutes to complete; however times varied depending on the number of different forms of Internet connectivity and devices used by respondents.

ABOUT THE RESPONDENTS

174 participants aged between 18 and 69 answered the online questionnaire. As a result of the small number of respondents, the conclusions drawn in this paper can only be indicative of
adoption and usage practice in Australia. The respondent group comprised 82 males aged between 22 and 69 years of age, and 92 females aged between 18 and 63. Respondents were residents of New South Wales (38.8%), Victoria (35.9%), Queensland (14.7%), Western Australia (4.1%), Australian Capital Territory (3.5%), South Australia (2.4%) and Tasmania (0.6%). Over half of the participants in the study were employed on a full time basis (54.7%), while part-time/casual employment and full-time study made up the majority of the rest of the participants at 22.7% and 27.9% respectively. Only 12 participants were stay-at-home parents (4.7%), retired (1.2%) or not currently employed (1.2%).

PROFILING THE TRIPLE CONNECTORS

The Triple Connectors are the respondents who connect to the Internet using all three forms of wireless broadband: Mobile Broadband, Mobile Internet and WiFi. The other two connector groups identified were the ‘Single Connectors’ who adopted a single form of wireless broadband: Mobile Broadband, Mobile Internet or Wi-Fi, and ‘Twin Connectors’ who adopted two forms: Mobile Broadband + Wi-Fi, or Mobile Internet + Wi-Fi, or Mobile Broadband + Mobile Internet. This paper focuses on discussing the Triple Connectors and the way they use wireless broadband in relation to work.

The Triple Connectors are the largest single group identified by the study, and make-up 25.6% or 44 of all the respondents. One third of the group is female, and two-thirds male. Male respondents were between 27 and 66 years of age, and the female respondents between 18 and 50 years of age. Most Triple Connectors are married and living with children (34.1%), however a high percentage is also single (25%). More than half of the Triple Connectors work full-time (65.9%). The next largest group is full-time students (22.7%), followed by those employed part-time or casually (15.9%).

A key result of the questionnaire was the recognition that the different connector groups had unique characteristics. A unique characteristic of the Triple Connectors is that they are the connector group most likely to use VoIP at home (86.3%). This suggests that Triple Connectors are more likely to be early adopters than the other connector groups, as VoIP, while becoming increasingly popular among Australians, is yet to be embraced by all. The Australian Communications and Media Authority (ACMA) reports that VoIP is experiencing rapid uptake in Australia; however the 16% adoption rate recorded in June 2010 falls significantly short of the 86.3% adoption rate of the Triple Connectors (ACMA 2010b). The high adoption rate of VoIP by Triple Connectors suggests that Triple Connectors are early adopters and possibly more advanced users of broadband services than the other connector groups. Some 29.5% of Triple Connectors have ISP subscriptions to VoIP, and 56.8% access it through an ISP-independent web-based branded service site such as Skype.

Figure 1 - Combined VoIP take up
ISP independent web-based services are often a lesser quality telephony service because of the variation in transmission, but it is at low cost to the end user. An ISP managed VoIP service is generally a higher quality service but comes at a cost that is often bundled into the fixed Internet service within the home (ACMA 2008, 8).

Triple Connectors are also more likely to be technologically savvy and to be more comfortable and knowledgeable about new products and services such as VoIP. In general statements completed by all respondents, Triple Connectors were people to whom their family and friends look for help with information and advice about technical things (77.3%), and they were also likely to buy the latest gadgets (65.9%).

TRIPLE CONNECTORS AS ‘MOBILE WORKERS’

The impetus for the original research was to profile the different connector groups emerging as a result of adopting wireless broadband, and focused on Schroeder’s contention that society is moving towards a sense of multimodal connectedness (Schroeder 2010). Multimodal connectedness includes a sense of location independence. People remain connected through their mobile devices such as laptops, smart-phones, and tablets, essentially remaining location-independent, now that devices are no longer fixed to a particular location. In the analysis, the Triple Connectors indicated that they use their devices for work-related tasks in locations that they associate with work, but outside the physical premises of work. Triple Connectors can be considered as part of group of employees who can be loosely defined as ‘mobile workers’ (Aguilera 2008; Drake et al 2010; O’Neill 2011; Venezia 2007; Yuan and Zheng 2009). The number of mobile workers within the Asia Pacific Region is expected to reach around 1.19 billion in 2013 (Drake et al 2010). As a result it is important that we begin to consider how mobile work impacts on Australian employees and businesses.

Mobile workers may comprise employees occupying professional, managerial and executive positions (Aguilera 2008; Venezia 2007), also known as ‘knowledge workers’ (Yuan and Zheng 2009). In early studies of knowledge workers working away from the office the focus was on work conducted from home. This particular group of mobile workers may in some instances have been referred to as telecommuters (Drake et al 2010) or ‘home-workers’ (Ward 2006).

Unlike knowledge workers who could be office-based, other mobile workers may also be identified as such simply because being geographically mobile is a function of their job (Cohen 2010; Yuan and Zheng 2009). This specific group of mobile workers may also be referred to as ‘Non-Office Based Mobile Workers’ (Drake et al 2010) or ‘Mobile Field Workers’ (Drake et al 2010; Yuan and Zheng 2009). It is expected that the Triple Connectors were all Mobile Knowledge Workers, as their responses indicated that they continued to ‘work while mobile’ rather than ‘mobility for work’ which is more typical of Mobile Field Workers (Cohen 2010). It is most likely that Triple Connectors span the group of office-based mobile workers comprising ‘Mobile Professionals’, ‘Occasionally Mobile’ and ‘Mobile Nontravelers’ (Drake et al 2010). When defined in terms of mobility, Mobile Professionals are office-based employees who are away from their workplace 20% or more of the time, Occasionally Mobile are obviously less so, perhaps venturing from the office a few times a year, or more frequently but less than Mobile Professionals (Drake et al 2010, 3). The last category Mobile Nontravelers are employees who are required to be mobile within their workplace in order to complete their duties. They may travel between individual offices or buildings that comprise their physical workplace (Drake et al 2010, 4).

TASKS

In the analysis, tasks were correlated with the devices used by Triple Connectors and the type of wireless broadband to see if specific tasks were undertaken on particular devices. In this paper the results of generic work-related tasks are analysed. Table 1 below shows the results of correlations between devices and generic work related tasks.2
<table>
<thead>
<tr>
<th>Task</th>
<th>Device</th>
<th>MBB</th>
<th>Mobile Internet (3G)</th>
<th>WiFi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking emails</td>
<td>Laptop</td>
<td>90.9%</td>
<td>75%</td>
<td>22.7%</td>
</tr>
<tr>
<td>Making travel arrangements</td>
<td>Mobile Internet (3G)</td>
<td>63.6%</td>
<td>27.3%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Checking traffic/transport updates</td>
<td>WiFi</td>
<td>45.5%</td>
<td>38.6%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Reading online newspapers and magazines</td>
<td>Laptop</td>
<td>65.9%</td>
<td>36.4%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Reading blogs</td>
<td>Mobile Internet (3G)</td>
<td>45.5%</td>
<td>18.2%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Posting to my work blog</td>
<td>WiFi</td>
<td>11.4%</td>
<td>2.3%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Just surfing the web</td>
<td>Laptop</td>
<td>61.4%</td>
<td>31.8%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Instant messaging or chat</td>
<td>Mobile Internet (3G)</td>
<td>52.3%</td>
<td>27.3%</td>
<td>11.4%</td>
</tr>
</tbody>
</table>

Table 1 – Triple Connectors correlations between devices and generic work related tasks

Triple Connectors perform the same tasks across all devices and all forms of wireless broadband. The tasks most often performed by Triple Connectors across all the Internet connections and device combinations were: ‘checking emails’, ‘checking weather updates’, ‘online banking’, and ‘reading local news’. This differs from the other Connector groups. (See Tables 2 and 3 below). In Table 2 and 3 are listed the top three tasks undertaken by the Connector group. It is interesting to note that while the group of iPad users among the respondents was very small, their preferred tasks were minimal. This may have been more a reflection of the limited iPad apps available around launch time. At this early stage in the adoption process this user group still preferred their phone for reading the news.

The Single Connectors performed different tasks depending on the type of wireless broadband connection.
Table 2 – Single Connectors tasks

The Twin Connectors perform completely different tasks depending on the form of connection and device.

Table 3 – Twin Connectors tasks

In the workplace, an efficient worker may be one who uses multiple Internet-enabled devices. The different results from Connector groups suggest that there is room for further differentiation among Mobile Knowledge Workers based upon different access levels of wireless broadband connectivity. Task differentiation according to Internet connection and device may impede productivity for Single and Twin Connectors, whereas these results indicate that Triple Connectors may prove to be more flexible and productive mobile workers as they consistently perform a full range of tasks irrespective of device or connection type.
Encouraging Single and Twin Connector mobile workers to use multiple forms of Internet connectivity may improve productivity.

Tasks completed by most Triple Connectors were in relation to communication, such as ‘checking emails’, whereas those in relation to content creation such as ‘posting to my work blog’ were rated lowly, suggesting that Triple Connectors are great communicators but are less likely to be creating content. This was echoed in the general statements made by all respondents. Triple Connectors responded highly to having a social networking site (81.8%) but were less likely to post content such as videos online (54.4%). ACMA reports that communication-related activities – that is email, instant messaging and VoIP – are the dominant activities conducted by Australian end-users on their mobile phones and computers (ACMA 2010a, 15).

LOCATIONS

Mobile Knowledge Workers such as the Triple Connectors are likely to conduct work in a range of locations. Respondents were asked what devices and connection types they used in various locations. The results show that Triple Connectors clearly align location, device, and type of broadband more than they correlate task, device and type of broadband, indicating that for Triple Connectors the location can dictate the type of connection and device used, while they consistently perform a wide range of tasks irrespective of the device and type of broadband. This suggests that Triple Connectors will select their device depending on location rather than task, whereas the other connectors will select their device depending on the task.

<table>
<thead>
<tr>
<th>Location</th>
<th>Device</th>
<th>MBB</th>
<th>Mobile Internet (3G)</th>
<th>WiFi</th>
</tr>
</thead>
<tbody>
<tr>
<td>At a place of study</td>
<td>Laptop</td>
<td>38.6%</td>
<td>25% 13.6%</td>
<td>11.4%</td>
</tr>
<tr>
<td>In the workplace</td>
<td>Phone</td>
<td>20.5%</td>
<td>34.1% 13.6%</td>
<td>13.6%</td>
</tr>
<tr>
<td>At work when away from my desk</td>
<td>iPad/Tablet</td>
<td>29.5%</td>
<td>15.9% 13.6%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Business travel when away from home</td>
<td>Laptop</td>
<td>59.1%</td>
<td>54.5% 20.5%</td>
<td>13.6%</td>
</tr>
<tr>
<td>When travelling and WiFi connection is not available</td>
<td>Phone</td>
<td>59.1%</td>
<td>61.4% 20.5%</td>
<td>0 0</td>
</tr>
<tr>
<td>In the car travelling between work appointments</td>
<td>Laptop</td>
<td>18.2%</td>
<td>43.2% 11.4%</td>
<td>2.3% 0 0</td>
</tr>
<tr>
<td>At the airport</td>
<td>NA</td>
<td>54.5%</td>
<td>18.2% 11.4%</td>
<td>11.4%</td>
</tr>
<tr>
<td>At a conference/meeting</td>
<td></td>
<td>59.1%</td>
<td>45.5% 15.9%</td>
<td>11.4%</td>
</tr>
</tbody>
</table>

Table 4 - Work related locations used by Triple Connectors by wireless connection and device

IN THE WORKPLACE

An unexpected result was the high use of 3G mobile broadband in the workplace. The combination of laptops and Mobile Broadband along with mobile phones and Mobile Internet use in the workplace was unexpected because WiFi is commonly available in most workplaces. Using WiFi in the workplace would also be at no cost to the end user, suggesting perhaps that for these two segments their Internet connections (Mobile Broadband and Mobile Internet) are paid for by their employers. Yet when data is analysed according to who pays for
the forms of Internet connection, this is not the case. As can be seen in Figure 2, the majority of Triple Connector respondents pay for their own wireless broadband.

Self-payment for wireless broadband is reflected across all the Connector categories. In the majority of cases the individual employee pays for their wireless broadband, not their employer. It is interesting to note that the majority of employees prefer to use their personally-paid wireless connection instead of the free WiFi supplied in the workplace. There could be a variety of reasons as to why end-users prefer to use their personal data plan and not the free WiFi in their workplace. One possible explanation is that some company IT policies restrict access to organisational Internet connections for non-company issued devices (Howarth 2011). A second relates to the digital media literacy level of the end-user. The end-user may prefer to use their personal connection rather than changing to the workplace WiFi connection because it is not a familiar, straightforward or easy process. The diversity of devices and forms of connection (wireless, fixed and mobile), along with the burgeoning numbers of communication applications such as social networking, and telephony applications such as Skype all place a greater emphasis on the end-user keeping up to date with how to use technology. Digital media literacy identifies the ‘participation gap’ among users (ACMA 2009, 2).

MAKING TRAVEL TIME PRODUCTIVE

As shown in Table 4, when travelling for business, rates for all levels of wireless broadband increase for Triple Connectors. An always-on mindset and greater access to mobile computing and broadband means that since the telecommuter revolution of the 1990s people work in locations other than at home or at the office. Wireless broadband means that Triple Connectors are always available to work, even while travelling (Bergman and Gustafson 2008). Whether it is short trips during everyday work life or longer business trips, people are working during what may have once been viewed as ‘unproductive’ periods such as in taxis, at airports (Breure and van Meel 2003; Julsrud 2005), at cafes (Julsrud 2005) in conferences and meetings, and in cars (Eost and Flyte 1998). Creating more productive time enables the mobile worker to reduce the amount of work brought home.

Mobile technologies such as the mobile phone are often viewed as responsible for the increase in an unbalanced work/life balance (Townsend and Batchelor 2008). Bergman and Gustafson (2008) reported in a study of three organisations that ‘frequent travelers were more likely than other employees to work overtime, to work unregulated hours, and to bring work home.’
Their findings are consistent with findings by Madden and Jones (2008, iv), who state that ‘those who are most tethered to work are more likely to say that their gadgets and connectivity have increased demands that they work more hours’ and they experience an increased level of ‘availability’ (Julsrud 2005, 96). The ubiquitous presence of the smart-phone and its ability to support multiple tasks such as telephony, calendar, computing, and Internet connectivity increases the potential for work-related disruptions during personal time. The smart-phone enables employees to easily bring work home and to take work away on holiday (Wajcman et al 2010). The trend towards small portable computing devices such as the smart-phone and tablets and away from larger computers will increase the possibility of the blurring between personal and work boundaries.

Boundaries are not always blurred in favour of work (Townsend and Batchelor 2008). Boundary management when away from work premises is essential. There are fewer symbolic boundaries to assist in time management, which can in turn make focusing on work more difficult (Ward 2006). Disruptions from family and friends during work hours are on the increase since mobile telephony, email and social networks became part of everyday communication practice and not simply work practice (Townsend and Batchelor 2008). Smart-phones in particular enable direct personal communication as they bypass company software applications by using personal connectivity.

**PRODUCTIVE SPACES FOR MOBILE WORKERS**

As a result of greater mobility for knowledge workers, location independent ways of working are emerging. The types of spaces needed by mobile knowledge workers may be different from that of their stationary colleagues. Mobile workers no longer conduct work in a single fixed location, but rather in multiple workspaces (Julsrud 2005). Mobility may encourage a more self-contained ‘mobile office’ approach, with documents stored electronically on hard-drives and the cloud. Computing needs can be met through laptops and tablets, communication needs through teleconferencing apps on smart-phones and the Internet. A constant fixed geographical space from which to work is no longer required. Instead the focus for employers in the immediate future should be on the spaces that are currently being used by mobile knowledge workers, to better understand their current and future needs.

**AT WORK**

According to Venezia (2007), self-contained mobile knowledge workers showed less desire for a fixed working space at the office and a greater need for collaborative spaces. Venezia (2007) identified thirteen different types of spaces desired by mobile workers in the workplace, only one of which was an ‘enclosed quiet room’. The purpose of the other rooms was collaboration and social space (Venezia 2007, 5). The desire for an increased number of collaborative spaces and ‘hot desks’ within the workplace reflects the changing needs of workers as a result of wireless broadband. In Sydney the Commonwealth Bank of Australia (CBA) recently launched its’ new Commonwealth Bank Place, a 56,000 square metre office of ‘flexible workspace’ featuring WiFi connectivity, hot desks, and home zones (Cummins 2011).

It is possible that like the mobile workers in Venezia’s study, Triple Connectors make the best use of previously unproductive time to conduct work, and see returning to the workplace as a space for meetings with internal staff and clients rather than as a place to undertake ‘work’. Face-to-face meetings are extremely important even in an age of video calling. Aguilera contends that face-to-face meetings are decided upon for reasons irrespective of the type of information (Aguilera 2008, 1111). Aguilera suggests face-to-face meetings are significant because in meeting with external clients they signal interest that is invaluable, and they are also important because they assist in building ‘mutual trust’ (Aguilera 2008). Hence the desire by respondents in Venezia’s study for rooms that focused on collaboration and social interaction.

Mobile Knowledge Workers need not only the opportunity for physical collaborative spaces but also virtual ones. The aim of the introduction of social networking tools into organisations
such as the Australian Bureau of Statistics (ABS) is to foster greater communication between colleagues, and to increase employee opportunities for participation (Hutchinson 2010). The ABS has introduced blogs and wikis as part of their suite of Web 2.0 tools which enable increased engagement by employees by allowing tags, comments and even videologs as a way of disseminating information accessible to all employees mobile and stationary (Hutchinson 2010). Participatory social media at this level within an organisation increases collaborative opportunities between stationary and mobile workers.

IN TRANSIT

Mobile Knowledge Workers often have specific requirements when they travel, which may seem contradictory. In airports the main concern for business travelers with no access to flight lounges is often privacy (Breure and van Meel 2003). The inability to work in a space where no one can read your screen impacts hugely on the work being conducted while waiting for transport. Tackling other basics, such as power sources and refreshments, can impact on constructive work time (Breure and van Meel 2003).

Paradoxically we find many mobile knowledge workers happily using their laptops in cafes and restaurants, places that can be noisy and also lack privacy. Several factors may account for cafes being preferred locations for work. Some Australian chain restaurants and coffee shops, as well as independents, offer free Internet access with food or beverage purchases (McDonalds 2011, Starbucks 2011). Another key attraction is table service. Computer users can work steadily away while their meal is being prepared and then delivered to their table removing the need to pack and unpack their belongings each time they wish to order refreshments (Breure and van Meel 2003).

A third factor is ‘remote socialising’ (Ling and Thrane 2002). While mobile knowledge workers may be able to conduct work at their office, in some instances they may prefer a physical separation from their work place, but at the same time wish to be social. Cafes and public spaces such as a library provide physical co-presence without the need to interact. Wireless broadband enables contact and collaboration to occur with physically remote colleagues using email or social networking tools. For mobile knowledge workers without internal organisationally-based collaborative tools, it may be possible to collaborate with colleagues and contacts using a wide range of smart phone apps such as LinkedIn, FaceTime, Skype or location aware apps such as Mingler.

The current and future challenge for organisations is to assist and support their mobile workers with appropriate tools to conduct work (Drake et al 2010). As discussed earlier there are various levels of employees within the category of mobile knowledge worker, all of whom would have different needs in relation to tools and IT support. The IT requirements of mobile knowledge workers need to be balanced carefully with corporate policies.

CONCLUSION AND FUTURE RESEARCH

This study recognises the flexibility of connection offered through wireless broadband services and how it is impacting on the location and practice of work. Wireless connections offer the employee the flexibility of connecting to ‘the office’ and their colleagues near and far all the while situated in a different space at work, in a different branch office, at an airport, coffee shop, library, or other place that suits that day’s location needs.

Further research needs to be conducted into a contemporary profile of the ‘mobile worker’ from the perspective offered in this paper of the Triple Connector. Extant research about mobile workers does not differentiate between forms of connection, nor between devices. There may be a correlation between the different mobile knowledge workers and the type of connection they use in their everyday work tasks. As outlined in this paper different connector groups use different types of connectivity and devices for particular tasks. This differentiation may impede work efficiency and needs further investigation. The results also showed that irrespective of location, Triple Connectors are consistently using wireless broadband to perform work from a variety of in-transit locations, irrespective of device. By performing
tasks during periods of transit, mobile workers make the best use of previously unproductive work time. This indicates that of all the connector groups, Triple Connectors are likely to be the most productive mobile workers and have a disciplined approach to work-life balance.

More specific data collection in relation to the types of devices, tasks, and applications and services used by Triple Connectors should form part of the next round of research. An elite group of mobile knowledge workers may exist who travel regularly, rarely visit their workplace, and require different devices that are cross platform and internationally compatible. This elite group may also take advantage of collaborative, social networking and cloud-based tools and services as part of their everyday life, along with other yet to be uncovered communication tools. Knowledge of this elite group may assist in informing us about the future of mobile work, workplaces and spaces, and the needs of the broader range of mobile workers in their everyday lives.

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ENDNOTES

1. Total combined figures of VoIP (ISP) and VoIP using a web-based branded service such as Skype. Single Connectors – WiFi are the only group not to use ISP provided VoIP services hence their low take-up percentage.

2. The complete list of questionnaire responses in relation to tasks included checking emails, online banking, paying bills, making travel arrangements, checking weather updates, checking traffic/transport updates, reading local news, checking sports scores/updates, downloading music, online shopping, managing my photo collection, reading online newspapers and magazines, reading blogs, posting to my personal blog, posting to my work blog, watching television catch up episodes, watching music videos, just surfing the web, porn, in car navigation, skyping family and friends, checking Facebook, instant messaging or chat, gambling, GPS tracking of their children’s mobile phones, and playing social games through Facebook.

3. 54.5% of Triple Connectors use an Internet enabled smart phone or iPhone (45.5%). A small percentage use an iPhone that is not Internet enabled (2.3%).

4. The iPad was launched at the time of the online questionnaire. The results can only be indicative as only 25% of Triple Connectors used an iPad.

5. The response option was ‘checking emails’. There was no response option for the writing or sending of emails.

6. The list of spaces included: shared common areas, enclosed “quiet” rooms, video conference rooms, war rooms, informal lounge areas, café, team space in open area, shared equipment/service spaces, learning/training spaces, break rooms, small meeting rooms, conference rooms.