

# Mobile Commerce: New Experiences, Emerging Consumer Issues

This Update explores the emerging field of mobile commerce, generally defined as business-to-consumer commercial activities conducted via a mobile device. Technological developments within the wireless industry are giving rise to healthy growth forecasts for the mobile sub-set of electronic commerce. This paper describes the main types of mobile commerce applications available to Canadian consumers. Consumer protection issues and a number of policy initiatives are also discussed, in light of experiences of early-adopting countries. Monitoring the consumer issues raised by mobile commerce will assuredly be required as technological developments and consumer uptake further evolve.

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The recent boom in mobile devices, in terms of both the scope and nature of usage, is heightening the potential for mobile commerce. A majority of Canadians today have access to a mobile phone<sup>1</sup>; in fact, some have access to more than one, and a growing number even rely exclusively on wireless telephony.<sup>2</sup> Recent models integrate voice communications with various non-voice functions, such as reading e-mail, viewing videos, accessing the Internet, and using geo-location data. The emergence and quick take-up of these models underscores “the remarkable transformation the cellphone has undergone since it was introduced over 25 years ago” (McLean 2008). At the same time as the transformation of the wireless scene, the consumer payment market has also been undergoing change. As illustrated by the U.S. market (see textbox), the deployment and consumer uptake of new payment technologies is accelerating. This is the context in which businesses are creating strategies to engage consumers in *mobile commerce*.

### The pace of technological adoption: the U.S. payments example

It took:

- 28 years to reach 100 million mag-stripe credit card accounts.
- 12 years to reach 100 million debit accounts.
- 7 years to reach 100 million PayPal accounts.

It is projected that it will take only:

- 5 years to reach 100 million contactless credit/debit cards.
- 2-3 years to deploy 100 million NFC-enabled (near field communication) mobile handsets<sup>3</sup>.

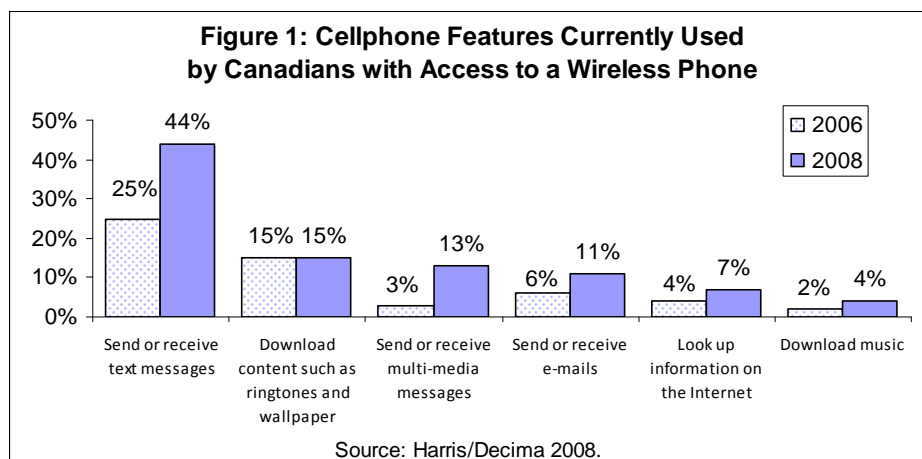
Source: McCarthy 2008.

<sup>1</sup> In this paper, ‘cellphone’, ‘mobile phone’, and ‘mobile device’ are used interchangeably.

<sup>2</sup> For an overview of statistics and references with respect to Canadians’ ownership and use of cellphones, see Industry Canada 2006 and Industry Canada 2008. Other data also indicates that “[i]n 2008, 8.0% of households reported having cell phones only, up from 6.4% in 2007” (Statistics Canada 2009).

<sup>3</sup> NFC phones offer the potential to use the mobile phone for contactless payments at point-of-sale, much like the tap-and-go functions being added to new chip-based credit cards.

As a general term, mobile commerce refers to various electronic commerce activities conducted through the use of a handheld mobile device.<sup>4</sup> While most handsets sold in Canada are SMS-enabled (i.e. offer Short Message Service<sup>5</sup>) and/or able to access the Internet<sup>6</sup>, not all subscribers choose to pay for and use these functions (see figure 1). Canadians' uptake of mobile commerce has thus been slower than in other countries, a situation that past research has linked to high home broadband connectivity, "the comparably high cost of the medium and carriers' rather inflexible pricing strategies, the still somewhat limited content available for wireless communication and commerce and the lag of network speed and robustness to handle more advanced and sophisticated services" (Zwick 2006, p.31). Media reports indicate that Americans have been similarly slower to embrace this new way to shop.<sup>7</sup> In contrast, Japan, one of the world leaders in mobile commerce<sup>8</sup>, has experienced significant growth: a 2006 report indicated that the size of Japan's mobile commerce market more than tripled between 2002 and 2005, reaching US\$3.5 billion (reported in Izumi 2006).



<sup>4</sup> The definition of mobile commerce varies across the references used in this Update; the reader is therefore advised to consult the sources for details. It is usually implicit in these definitions that mobile commerce includes transactions conducted with a mobile device but through the use of non-voice functions.

<sup>5</sup> Short Message Service (SMS) is a messaging protocol that allows cellphones to send plain text-based messages of up to 136 characters to another cellphone or computer.

<sup>6</sup> "Every carrier is now promoting the smartphone in Canada. Most new phones, with the exception of the most basic, are Internet ready." (CMA 2008, p. 5)

<sup>7</sup> For example, "[t]hough it [mobile commerce] has gained steam in overseas markets such as Japan, where mobile devices are widely used to make payments in person and over the Internet, it has grown much more slowly in the U.S." (Regan 2008).

<sup>8</sup> In 1999, NTT DoCoMo introduced a technological innovation called i-mode, which was a system of Internet-enabled mobile phones. In the following years, "DoCoMo and its competitors established a new technological platform for the internet in Japan, sparking an m-commerce revolution that is one of the most significant and successful commercial application of the internet age" (Holroyd 2005).

Despite a slow start, conditions in the Canadian market today could indicate an expansion in mobile commerce, notably technological upgrades, handset innovations and some lower priced data plans.<sup>9</sup> This new environment may encourage more data-intensive usage of cellphones, on a broader scale than could have been imagined a few years ago. It can then generally be expected that “as mobile commerce takes off, the size of the market will increase exponentially because of network externalities” (OECD 2007, p. 4) – the more users or suppliers there are, the more worthwhile it becomes for a new user or supplier to join in. Recent projections suggest that, while still low in absolute numbers, growth in the North American mobile commerce market may be on its way to some level of catch-up with world leaders.<sup>10</sup>

In light of the anticipated future growth of mobile commerce in Canada, the following sections highlight the potential benefits to consumers as well as the potential consumer protection issues associated with five main categories of mobile commerce: premium services and content, mobile banking and payments, mobile marketing, location-based services, and mobile shopping.

### *Premium services and content*

One way that Canadian mobile users today can buy electronic information and digital content is by using text messaging systems, with the purchase costs being added to their cellphone bill.<sup>11</sup> Examples of SMS fee-based services include dating chat sites, various mobile information services (from horoscopes to flight status alerts), SMS voting systems in reality shows, and SMS chat boxes that appear during programs.<sup>12</sup> Another recently launched application provides Canadian consumers the opportunity to text a donation to a registered charity and charge it to their cellphone bill (CWTA 2009a).

Over the past few years, wireless networks’ enhanced data transfer capabilities and handsets’ increased processing power and display capabilities have allowed for the addition of Internet-based mobile services. This access to more data-rich content has clearly raised mobile commerce’s potential compared to a SMS-only environment. Wireless service providers have in fact developed content portals with Web browsing that offer various fee-based services, such as downloadable

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<sup>9</sup> “The boom in data adoption is driven by availability of more functional handsets (...). The iconic Apple iPhone was the prime market mover followed quickly by a series of new devices from Canada’s RIM [Research in Motion] that also made the Internet experience easier. But it took more than devices to drive adoption and usage. Canadian mobile data prices have also shifted considerably over the past thirty months.” (SeaBoard Group 2009, p. 4)

<sup>10</sup> The number of mobile transactions in North America is expected to grow from 34 million in 2009 to 221 million by 2012, representing an increase of 6.5 times over the period. In comparison, the number of mobile commerce transactions in Asia, while starting at higher levels (500 million in 2009), is expected to grow 4.8 times by 2012 (reported in Isensee 2009).

<sup>11</sup> For example, consumers can subscribe to The Weather Network’s SMS weather alert service for a monthly fee. They simply need to send a text message to the Network’s SMS number, and the monthly charges are then automatically added to their cellphone bill. See [www.theweathernetwork.com/mobile/messaging](http://www.theweathernetwork.com/mobile/messaging).

<sup>12</sup> For a list of text messaging programs available in Canada, see [www.txt.ca/english/current\\_codes.html](http://www.txt.ca/english/current_codes.html).

ringtones<sup>13</sup>, games, and video<sup>14</sup>. However, in recent years, “off-portal” (i.e., not from the service providers themselves) mobile content offered by third-party suppliers has been a growing part of the mobile marketplace, a development that parallels the experience in the early years of home-based Internet access, also originally done solely through the ISPs’ portals.<sup>15</sup>

The increasing use of premium SMS and mobile content services has raised some issues. There have been reports of Canadian cellphone users being charged for premium SMS services to which they allegedly had not willingly subscribed.<sup>16</sup> This is often referred to as ‘cramming’, a term coined in the 1990s after a surge of complaints about unauthorized third-party charges on wireline phone bills (NCL 1999).<sup>17</sup>

#### Disclosure and consent in 6 centimeters?

The very small cellphone screen size raises a general challenge for ensuring adequate, and readable, disclosure and meaningful consent in mobile transactions. As noted by the OECD, consumers “may simply be presented with ‘click-wrap’ agreements and may not have access to, or be provided with, a full version of the contract, comprehensive terms and conditions, or details of complaint handling mechanisms before entering into an agreement” (OECD 2007, p. 22). Some lawmakers have taken a detailed prescriptive approach: for example, mobile marketing guidelines developed by Florida’s Attorney General include details such as a maximum number of pixels allowed between certain information elements in the contract.<sup>18</sup> Others have suggested alternatives to deal with the textual information overload, such as the use of specific symbols and sounds (Henschel and Cleff 2007).

Advertising that underestimates the costs of subscriptions (with ‘free’ or low-cost initial offerings) has also been identified as a problem (Sibonney 2007). Further, consumer advocates have highlighted redress issues when a consumer contests charges:

[TRANSLATION] Cellphone companies refuse to reimburse consumers for amounts billed, and consumers struggle to obtain refunds from companies that send text messages. Despite the fact that they have never authorized their service providers to invoice them for third-party services, consumers find themselves obliged to pay the amounts billed in order to avoid adverse consequences, such as the interruption of their wireless service or an unfavourable mention in their credit file. (Union des consommateurs 2009)

<sup>13</sup> For example, see [www.bell.ca/shopping/en\\_CA\\_ON.Ringtones/VasWlsRingtones.details](http://www.bell.ca/shopping/en_CA_ON.Ringtones/VasWlsRingtones.details), a ringtone service that, at the time of writing, offered thousands of song clips, sound effects, and voice clips, for prices ranging from \$2.50 to \$4.00 each.

<sup>14</sup> For example, see [www.rogers.com/web/content/wireless-fun/wf\\_vod](http://www.rogers.com/web/content/wireless-fun/wf_vod); at the time of writing, this was a \$15 per month video-on-demand service, which also included some mobile TV content. Further, while “[w]atching mobile TV is still considered a niche activity in North America, (...) it's growing” (LaSalle 2009a).

<sup>15</sup> “Just as in the early days of the PC [personal computer] Web, where users initially experienced the on-line world through a safe portal (e.g., Yahoo, AOL, MSN) before venturing out to find interesting and relevant sites and services directly, we are now starting to see increasingly wide browsing behaviour amongst mobile users. For example, 50% of all U.S. users who can access WAP [Wireless Access Protocole] services now also browse outside of the carrier’s deck (...)” (MMA 2007, pp. 1-2)

<sup>16</sup> See, for example, MacRury 2008, Union des consommateurs 2009 and CBC News 2009.

<sup>17</sup> Nowadays, according to a Consumers Union representative in the U.S., “many of the latest cramming scams target smart phones and other wireless devices with Internet connections” (reported in Hall 2008).

<sup>18</sup> See Florida Office of the Attorney General 2009 for an example of an Assurance of Voluntary Compliance concluded with Verizon Wireless in June 2009 that includes the specifics of the guidelines. The agreement with Verizon also included a multi-million refund to consumers for ringtone services advertised as ‘free’.



These questions are not unique to Canada, and have been raised in other parts of the world.<sup>19</sup> The problem may be more acute for Canadian consumers, however, as the Canadian wireless marketplace continues to be dominated by long-term service contracts. That is, a consumer could be disconnected from cellphone service for refusing to settle a bill that contains a disputed premium service charge that is unrelated to the provision of the contracted cellphone service – and this is more likely in markets where more long-term contracts exist.<sup>20</sup> Further, such risks may be an increasingly important concern for the growing number of cellphone-only households.

Mobile commerce raises particular issues when considering the extent to which Canadian children have access to, and use, cellphones (see figure 2).<sup>21</sup> “[P]arental control over minors’ commercial activities is currently being challenged in the mobile marketplace” (OECD 2008a, p. 9); for example, contrary to computer-based e-commerce, SMS-enabled mobile commerce transactions can be directly billed to the cellphone account, allowing children a way to shop for digital content without a parentally controlled credit card.<sup>22</sup> The previously-mentioned issue of advertising that underestimates costs may be exacerbated, given that “it is especially easy for children, who lack an adult’s capacity to question the message of an advertisement, to miss the small print in the lower corner of a commercial message stating that by ordering these ‘extraordinarily inexpensive’ services they commit to a standing, chargeable subscription” (Finnish Consumer Ombudsman / Consumer Agency 2007). Risks related to minors’ overconsumption of certain mobile services (such as marketed games, logos, ringtones, etc.) have also been underscored by the Finnish Consumer

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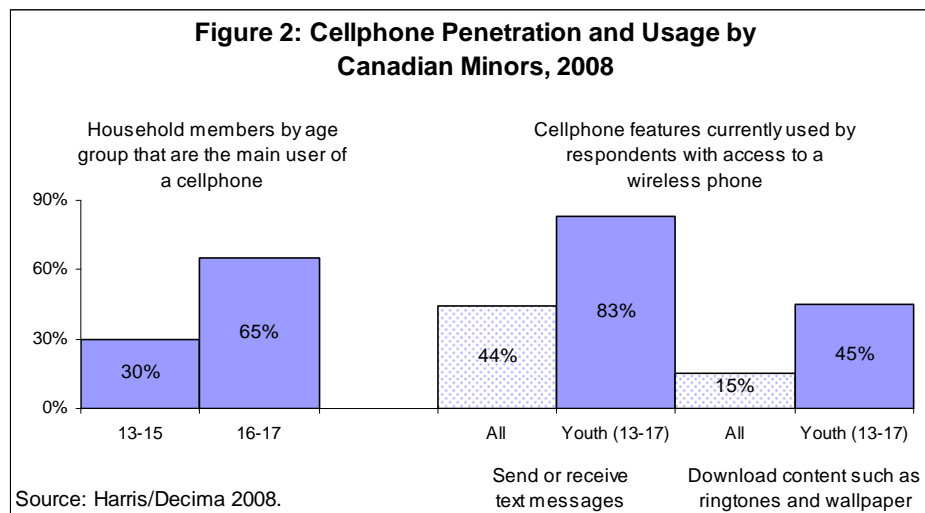
<sup>19</sup> “The power of premium rate debt over consumers is greatly increased if the originating operator is entitled to suspend the service because of non-payment of the bill and if there is no alternative access provider. In this case the threat of service suspension is used to recover a debt for money that is due eventually to the PRSP [premium rate service provider]. If instead of leveraging the power of the originating operator, the PRSP had to use the normal legal processes for debt recovery, it would not be cost effective to recover the smaller debts and the PRSP would not be willing to go to Court in cases where it had not complied with all relevant legislation.” (ECC 2006, p. 7)

<sup>20</sup> Pre-paid mobile ownership typically dominates in other countries. In the U.K., for example, it is recognized that: “The original rationale for PRS [premium rate services] regulation, to protect consumers from the risk of possible disconnection if they could not pay their phone bill, has now become less relevant. By the end of 2008, 61% of mobile users (...) were on pay-as-you-go services (...). The fact that 61% of mobile users are pay-as-you-go customers gives rise to a different set of potential concerns. Pay-as-you-go customers are likely to be less aware as to how much they spend on any given PRS. They do not receive a bill (...) and they are therefore generally less able to analyse their experience and learn from it.” (Ofcom 2009, p. 11).

<sup>21</sup> Surveys in the U.S. indicate that teenagers are in fact closing the gap with adults when it comes to cellphone ownership (Lenhart 2009). With its even stronger cellphone-based – as opposed to computer-based – Internet culture, Japanese youth appear to be leaders in terms of actual mobile commerce usage: for example, “80 percent of e-commerce by teenagers aged 15-19 was done on cellphones in 2005” (Izumi 2006).

<sup>22</sup> Note that this concern also applies with respect to cellphone bills in general and minors’ sometimes expensive misunderstanding of cellphone plans (costs for use beyond the plan’s limits, roaming charges, etc.). For example, see Polak 2008.

Ombudsman.<sup>23</sup> Access to adult content is another issue of concern<sup>24</sup>, especially as the availability of such content is expected to grow with the use of advanced cellphones (Carew 2008).



Some of the consumer issues associated with premium services and content are addressed in the U.K. through PhonepayPlus, a non-profit agency established in 2007 to carry out the day-to-day regulation of the phone-paid services market (wireline and mobile) on behalf of the UK's Office of Communications (Ofcom).<sup>25</sup> In early 2009, new mobile-specific measures were issued to address three main areas of concern: subscription-based services, promotional text messages, and the provision of adequate information. These new measures include the requirement for subscription services to obtain the prior permission from PhonepayPlus to operate if the weekly cost for the service exceeds a certain pricing threshold, and the requirement for service providers to first seek consumers' permission when charging for each page viewed on a mobile website they visit (PhonepayPlus 2009a). The UK's Code of Practice for premium rate services is periodically reviewed and will soon be the subject of a formal consultation exercise (PhonepayPlus 2009b). Among the recommendations received from Ofcom, PhonepayPlus has been asked to consider creating minimum standards for complaints handling across the PRS industry (Ofcom 2009).

In Australia, the government is requiring carriers to provide the option of barring premium SMS services on all plans by mid-2010 (Australian Communications and Media Authority 2009). An industry code has also been given legal force with the Australian communications regulator. The Code notably requires that all chargeable

<sup>23</sup> The Finland note also emphasized that "it is more difficult for a child to understand how costs accumulate when the money spent on purchases and orders is invoiced later than would be the case if cash pocket money were involved" (Finnish Consumer Ombudsman / Consumer Agency 2007).

<sup>24</sup> In Canada, Telus decided in 2007 to withdraw one such program, when faced with opposition to its adult-content service (Guglielminetti 2008).

<sup>25</sup> See PhonepayPlus 2008 for the UK Code of practice for premium rate services.

messages be prefixed with a '\$Msg' indicator and that consumers be notified each time that they incur an incremental \$30 of content fees from a particular short code program within a given calendar month (Communications Alliance Ltd 2009).

With respect to minors' use of cellphones, some carriers in the U.S. provide monthly blocking services that can allow parents to set limits on the number of text messages, and monetary limits on downloads.<sup>26</sup> The Australian Communications Authority, for its part, has set out rules requiring age verification for the provision of adult services on premium mobile messaging numbers.<sup>27</sup>

In Canada, the Canadian Wireless Telecommunications Association (CWTA) manages and enforces industry guidelines for short code programs.<sup>28</sup> In response to a request in early 2009 from a consumer group to regulate billing of text messages from short codes<sup>29</sup>, the Canadian Radio-television and Telecommunications Commission (CRTC) preferred to endorse the existing voluntary approach. The CRTC's rationale rested, in part, on its conclusion "that industry self-regulation mechanisms, put in place by WSPs [Wireless Service Providers] and CWTA, include safeguards that serve the interests of consumers, such as voluntary opt-in, mandatory confirmation, and the mechanism to unsubscribe" (CRTC 2009).

#### Introducing cellphone applications

Smartphones are multifunction devices with advanced operating systems; the latter imply that, contrary to regular mobile phones, these can run applications (apps), much like on a computer. Apple's launch of an applications store is having a transformative impact on the wireless industry<sup>30</sup> and consumers' use of their cellphone: "Apps used to be a niche market for the tech-savvy crowd. Not anymore. Consumers are taking to apps and Apple has led the way." (LaSalle 2008) The number of programs available worldwide on Apple's App Store has grown to more than 85,000 as of September 2009 (reported in Reisinger 2009).<sup>31</sup> Industry analysts predict that this new trend will raise a number of consumer issues, most notably about security, as evidenced by recent reports of the first worm that spreads between mobile devices by spamming text messages: "As mobile devices take on greater functionality and operate like minicomputers, it's likely they will be targeted by malware writers and eventually lassoed into botnets" (Kirk 2009). When combined with another trend – cellphones powered by open-source operating systems<sup>32</sup> – there are also potential liability issues, considering that it "could result in handsets becoming 'bricked' (rendered unusable) if users install incompletely tested applications produced by third parties, independent from the handset maker, carrier or major vendor" (FTC 2009a, p. 40).

<sup>26</sup> See, for example, [www.wireless.att.com/learn/articles-resources/parental-controls/smart-limits.jsp](http://www.wireless.att.com/learn/articles-resources/parental-controls/smart-limits.jsp).

<sup>27</sup> See Australian Communications Authority 2005. Technical measures that have been put in place in the Australian marketplace include the use of a personal identification number (PIN) to restrict access to adult content services (noted in OECD 2007, p. 29).

<sup>28</sup> See Part 5 of CWTA 2009b.

<sup>29</sup> Information on this file is available at [www.crtc.gc.ca/PartVII/eng/2009/8620/u11\\_200901951.htm](http://www.crtc.gc.ca/PartVII/eng/2009/8620/u11_200901951.htm).

<sup>30</sup> The industry is recognized as having shifted to a new focus on cellphone programs (Cheng 2009). Research in Motion, Google, Microsoft and Nokia are among the industry players having made subsequent announcements regarding their own launch of an application store (Perez 2009).

<sup>31</sup> This is significant growth from just 500 at the time of its July 2008 launch (Thangham 2008).

<sup>32</sup> Smartphones powered by Google's open-source Android operating system were first introduced to Canada in June 2009; see <http://micro.newswire.ca/release.cgi?rkey=1706029871&view=5804-0&Start=0>.

## Mobile banking and payments

While the last ten years' predictions for mobile commerce have not fully materialized, particularly in North America, certain researchers have argued that "mobile payment and banking are the most likely candidates for the killer apps that could bring the expectation of a world of ubiquitous mobile commerce to fruition" (Hu et al. 2008).

Some Canadian financial institutions (FIs) offer "text-banking" to their online clients who, via SMS, can view account information and recent transactions.<sup>33</sup> A number of banks appear to operate full-range Web-based mobile banking programs where customers can transfer funds between accounts and pay bills.<sup>34</sup> It is recognized that adoption rates in Canada are still relatively low, but industry analysts believe that "[i]n the next three to five years, mobile banking should become more popular as more consumers get smartphones and wireless network speeds increase making the experience easier" (reported in LaSalle 2009b).

Technological advancements have also enabled mobile payment applications, where Canadian consumers can text payments for real-time transactions in the 'real world'. For example, cellphones can be used to pay parking meter charges in Vancouver (Boei 2006).<sup>35</sup> In addition, there have been Canadian-based pilot tests using a mobile phone as a contactless payment option in the retail marketplace (Persaud 2009).<sup>36</sup> With multimedia messaging service (MMS)<sup>37</sup>, mobile ticketing is available: the cellphone literally becomes the wireless ticket to access, for example, a concert, movie or flight.<sup>38</sup> Still, from an international perspective (see textbox), "mobile payments are growing rapidly worldwide but are in their infancy in Canada" (CBA 2009, p. 7).

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<sup>33</sup> See, for example, Shaw 2008a. Consumers send a command by SMS and, in a text response, can see their account information directly on the displays of their mobile devices.

<sup>34</sup> See, for example, [www.rbcroyalbank.com/mobile/index.html](http://www.rbcroyalbank.com/mobile/index.html), [www.tdcanadatrust.com/ebanking/wireless.jsp](http://www.tdcanadatrust.com/ebanking/wireless.jsp), [http://scotiabank.com/cda/content/0,1608,CID407\\_LIDen,00.html](http://scotiabank.com/cda/content/0,1608,CID407_LIDen,00.html) and [www.cibc.com/ca/how-to-bank/mobile.html](http://www.cibc.com/ca/how-to-bank/mobile.html). Consumers must be pre-registered with the institution's Internet banking services and then use their same password to access the mobile banking Web site via their cellphones.

<sup>35</sup> Consumers pre-register their credit card account and license plate information at a city website and call a city phone number when parking. A mobile payment service has also been tested for taxi cab fares (Jay 2007).

<sup>36</sup> Using chip-embedded cellphones that contain credit card account details, consumers pay by tapping the handset close to a compatible point-of-sale reader. These NFC (near-field communication) contactless payment pilots parallel the migration to chip-based credit cards that is underway in Canada.

<sup>37</sup> MMS is essentially a SMS upgrade where messages can also include images, photos, audio clips, etc.

<sup>38</sup> Subscribers receive tickets as a multimedia message with an embedded barcode that can be scanned. See, for example, [www.empiretheatres.com/mobile](http://www.empiretheatres.com/mobile) and <https://fp.aircanada.com/en/travelinfo/traveller/mobile/mci.html>.



### Mobile's world leaders

While mobile financial services in Canada are generally still only at the pilot stage or not broadly deployed, they have been present in other parts of the world for some time now. South Koreans, for example, are recognized as leaders when it comes to using their mobile phones to complete banking transactions: local banks began offering such services in 2003 with just over 189,000 users, a number that reached 8.47 million at the end of 2008, representing a 70% year-on-year growth rate compared to 2007 (Tong-Hyung 2009). Japanese consumers have been experiencing contactless mobile payment services since 2004, and one-third of the users carrying 'wallet phones' are reportedly using them for purchases (Izumi 2008). As for mobile ticketing, the Helsinki city transportation authority first introduced it to its users in 2001 and, in 2007, 20% of all single-day tickets sold were SMS ones (Idean Enterprises, Inc. 2009).<sup>39</sup> Other non-Asian countries identified as having advanced mobile banking and payment markets include Austria and Norway (Hu et al. 2008).

Beyond the business-to-consumer environment, the cellphone may also be increasingly used by Canadians for person-to-person payments. In September 2008, RBC began lab testing a service called Mobex Mobile Payment, which allows for person-to-person fund transfers through SMS.<sup>40</sup> Other parties are offering similar services; for example, Canadian and American consumers can text money to each other's PayPal accounts.<sup>41</sup> Separate from the financial industry, Canada's main wireless carriers have developed an application for money transfers between subscribers.<sup>42</sup>

Mobile financial services such as mobile payments can offer consumer benefits in terms of convenience, as well as economy-wide productivity gains.<sup>43</sup> However, as noted by Canada's payment industry association, one of the challenges facing the mobile payment industry is the fact that "[b]uilding consumer demand is not yet a home run" (ACT Canada 2009, p. 2). Canadian consumers appear to be questioning the value-

<sup>39</sup> Users receive a SMS ticket confirmation, which they can then show to the driver.

<sup>40</sup> See [www.rbcmobex.com](http://www.rbcmobex.com). The targeted market was said to be \$20-and-under transactions, such as paying a babysitter, settling up for lunch, or contributing to a gift in the office (Shaw 2008b). The trial ended in February 2009; at the time of writing, no information on the program's evaluation appeared to be publicly available.

<sup>41</sup> See <https://www.paypal-media.com/releasedetail.cfm?ReleaseID=192226>. In the U.S., Visa is also testing a person-to-person service, which can link any Visa credit or debit card and, in a second phase, will support cross-border transactions (Bills and Aspan, 2008). Mastercard has also announced the launch of its person-to-person payments service in the United States; see [www.mastercard.com/us/company/en/newsroom/pr\\_mc\\_mobile\\_moneysend\\_platform\\_set\\_to\\_go\\_live.html](http://www.mastercard.com/us/company/en/newsroom/pr_mc_mobile_moneysend_platform_set_to_go_live.html).

<sup>42</sup> At its launch, Zoompass was described by the carriers' joint venture company as "an important milestone towards developing a mobile commerce ecosystem in Canada that provides users a convenient mode of doing everyday transactions with their phone" (see <http://media.zoompass.com/2009/06/15/zoompass-%e2%80%93-a-revolutionary-new-mobile-payment-service-launched-in-canada/>).

<sup>43</sup> "Mobile payments are about much more than mere credit card substitution; rather, they represent a transformative digital application that will benefit consumers, merchants, and the economy and society at large. Mobile wallets will enhance consumer convenience through the potential to replace a litany of artifacts of analog life designed to convey money or information—credit cards, loyalty cards, transit cards, ID cards, keys, key fobs, tickets, passes, etc.—with a single, more powerful digital device. Moreover, mobile payments will benefit the economy by driving a range of productivity improvements through: 1) bringing operational efficiencies to merchants, retailers, transit authorities and others engaged in routinized monetary or information transactions; 2) enabling a range of innovative new business models and service offerings; and 3) pushing distributed computing intelligence into the physical world." (Ezell 2009, p. 2)

added of services such as mobile banking: according to one international survey, “in Canada, 80 percent indicate that online banking is important but not worth paying for”, compared to 59% of global consumers (KPMG LLP 2009). Canadian consumers are also concerned with the potential security risks associated to these new mobile financial services.<sup>44</sup> However, the influence of future consumers may change the dynamics with respect to mobile banking’s perceived and envisaged benefits, as expressed by a Canadian banking executive: “This younger generation is born to the view that there is no limit as to what a smartphone can do. So they will have an expectation going forward that there is no limit to where online banking can go.” (reported in Lasalle 2009c).

#### Mobile payment applications: other countries’ introduction to e-payments

While some North American eyes may question the value of mobile financial services, the perspective is different in the developing world. In certain African countries, mobile phone penetration is actually higher than that for financial services.<sup>45</sup> The devices therefore represent a new opportunity to reach out to unbanked consumers and provide them with their first significant contact with electronic payments’ benefits.<sup>46</sup> International development organizations are investing in mobile banking initiatives, as “[i]t also allows people to move out of cash-based informal systems and fully participate in the formal economy, making it a key way to improve livelihoods” (IFC 2008). In this context, it is not surprising that international money transfer companies have shown an interest in developing mobile services.<sup>47</sup> Some mobile money schemes in emerging markets are also being used as a form of savings vehicle.<sup>48</sup>

Associating cellphones with personal financial data obviously raises security questions, as noted in consumer surveys, as well as in a number of other reports. In a 2008 review of banking security, just over half of the American FIs surveyed were found to be lacking strong authentication for their mobile banking systems (reported in Fest 2009). Finland has experienced some specific mobile commerce security gaps, where “people have managed to take out an instant loan with a text message in another person’s name by using this person’s mobile phone and ID number” (Finish Consumer Ombudsman / Consumer Agency 2007).<sup>49</sup>

<sup>44</sup> “(...) among those respondents who had not conducted banking through their mobile device, 44 percent globally and 55 percent in Canada cite security and privacy issues as a primary reason for not utilizing the service.” (KPMG LLP 2009)

<sup>45</sup> For example, less than half of South Africans reportedly have bank accounts, but nine out of ten are said to own a mobile phone (Lapper 2009).

<sup>46</sup> The cellphone-based payments essentially operate as a wireless cash transfer system: “The mobile payments schemes work because field agents can be appointed who carry a cash float. A relative in Nairobi can send money back to family in the Rift Valley using Safaricom’s M-pesa system. The person in the village takes the phone to an agent, which in Kenya is often a local Safaricom shop, shows the text message and some ID, and is handed the Kenyan Shillings. The receiver doesn’t have to have an M-pesa account, or even be on Safaricom. It’s been fantastically successful, and Safaricom now has 5m accounts in a country which only has 4m bank accounts.” (Rockman 2009).

<sup>47</sup> For example, Western Union rolled out a mobile pilot that is available from its global agent locations for money transfers to subscribers in the Philippines; see <http://ir.westernunion.com/press/releasedetail.cfm?ReleaseID=290683>.

<sup>48</sup> “Although for regulatory reasons M-PESA accounts do not pay interest, the service is used by some people as a savings account. (...) Mobile banking is safer than storing wealth in the form of cattle (which can become diseased and die), gold (which can be stolen) or by stuffing banknotes into a mattress.” (The Economist 2009, p. 13)

<sup>49</sup> In November 2008, a working group reporting to Finland’s Justice Ministry recommended that secure procedures such as web bank logins be required (Pohjanpalo 2008).

As mobile phones increasingly link to payment and banking functions, this may increase the allure of stealing devices<sup>50</sup>, and lead to ID theft and risks of financial losses.<sup>51</sup> The “taxi mishap”<sup>52</sup> (i.e. inadvertently leaving your mobile phone somewhere) is already a significant threat for cellphone users today when handsets do not have password protection or password protection has not been activated, and the handset itself stores personal information: “Modern handsets contain a myriad of sensitive data, including geo-location data, personally identifiable information about the user, carrier information, information from other applications cached on the handset, email information, and passwords” (FTC 2009a, p. 39).

Consumers may not yet fully understand how the various new mobile payment options are expanding the importance of one’s cellphone number. In light of the growing number of goods and services that ‘mobile’ consumers can pay for by typing their cellphone number, “Canadians are being warned they should protect their cellphone number with the same vigilance that they would a credit card” (Sadler 2009). The situation may become even more complex if pre-paid funds come to be commonly stored on mobile devices, for use in the marketplace.<sup>53</sup>

The technological breakthroughs that are enabling new mobile financial services, as well as their security problems, may also serve to enable consumer protection tools. For example, voice biometrics are suggested as a possible approach to securing mobile payments (Yeo 2008). Applications that remotely encrypt data when the cellphone is stolen and send information with the location of the phone (and hence the thief) are also being tested (Miller 2008). Further, handset manufacturers are reportedly starting to implement additional security features directly in some of their devices, particularly smartphones (McAfee 2009).<sup>54</sup>

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<sup>50</sup> As reported by the U.K.’s Home Office, a mobile phone was stolen in half of all 2007-08 robberies recorded by police in England and Wales, and it was the only thing taken in a third of all robberies; see [www.homeoffice.gov.uk/crime-victims/reducing-crime/robbery/](http://www.homeoffice.gov.uk/crime-victims/reducing-crime/robbery/).

<sup>51</sup> In the specific case of unauthorized transactions through FIs’ mobile banking sites, it appears that the banking industry’s online protections are simply extended; see, for example, [www.tdcanadatrust.com/ebanking/wireless.jsp](http://www.tdcanadatrust.com/ebanking/wireless.jsp) and [www.rbcroyalbank.com/mobile/safety-security.html](http://www.rbcroyalbank.com/mobile/safety-security.html). However, a review of online banking policies by security experts concluded that: “Although banks heavily advertise an apparent ‘100% online security guarantee’, typically the fine print makes this conditional on users fulfilling certain security requirements. We found that many security requirements are too difficult for regular users to follow, and believe that some marketing-related messages about safety and security actually mislead users.” (Mannan and Oorschot 2007, p. 1).

<sup>52</sup> A 2008 survey of New York City cab drivers estimated that over 30,000 cellphones were forgotten over a 6-month period; see [www.logisticsit.com/absolutenm/templates/article-news.aspx?articleid=4130&zoneid=26](http://www.logisticsit.com/absolutenm/templates/article-news.aspx?articleid=4130&zoneid=26).

<sup>53</sup> In Denmark, “the SIM [Subscriber Identification Module] card in mobile phones is explicitly regarded as a means of payment like other payment cards covered by the Act on Certain Payment Instruments” (OECD 2007, p. 27).

<sup>54</sup> For example, Apple introduced a MobileMe feature on its iPhone, which allows users to locate their lost phone on a map and remotely wipe out personal data; see [www.apple.com/ca/mobileme/whats-new/](http://www.apple.com/ca/mobileme/whats-new/).

### SMS: a security tool for electronic financial transactions

Mobile phones are also being integrated into the 'traditional' electronic banking and payments environment, as a complement to security procedures. PayPal Canada has introduced a SMS Security Key option that its members can use as an additional layer of protection to their account.<sup>55</sup> Further, one credit union offers to send SMS transaction alerts (reported in Shaw 2008a), and Visa is testing a similar service in a pilot that involves three Canadian FIs (Butcher 2008). Use of such SMS capabilities as a security feature tie in with a more general trend in North American banks towards multifactor authentication defenses against fraudsters and hackers (Arellano 2007).

### Mobile marketing

It is recognized that “the [mobile] marketing reality in Canada is one where examples, while growing, are few from within our borders” (CMA 2008, p.1). According to an industry association, mobile advertising revenue in Canada grew from \$1.1 million in 2006 to \$2.7 million in 2007, and was expected to almost double again in 2008 (IAB Canada 2009a), a level which will nonetheless be minimal compared to Canada’s estimated \$1.6 billion online advertising market in 2007 (IAB Canada 2009b). However, the prospects of direct mobile marketing to consumers are viewed as promising: “The fact that we now carry media centric devices that deliver an always on, and always on us experience, makes the possibilities for marketers seem almost limitless” (CMA 2008, p. 7).<sup>56</sup>

Canadian consumers have seen some SMS-based advertising campaigns<sup>57</sup> and SMS programs delivering information about sales, coupons, and similar offers<sup>58</sup>. While such opt-in-based marketing may be desired, there are concerns about the degree of personalization that can and might be used.<sup>59</sup> The Canadian legal

<sup>55</sup> See <https://www.paypal-media.com/releasedetail.cfm?ReleaseID=350376>: “The PayPal SMS Security Key adds another layer of protection to PayPal accounts and uses the same security infrastructure as the PayPal Security Key, which generates a unique security code approximately every 30 seconds on a small electronic token. Members receive this code to their phones or tokens, and use the codes along with their usernames and passwords to sign in to their accounts.”

<sup>56</sup> A U.S. industry analysis also concluded that there is plenty of opportunity: “We believe that mobile marketing is one of the few instances in which the current hype actually underestimates the full potential of the market opportunity” (IDC 2007).

<sup>57</sup> Companies invite consumers to send a text message to participate in a contest or obtain a promotion. See, for example, [http://web.shoppersdrugmart.ca/surveyWeb/offers\\_on\\_the\\_go/rules.html](http://web.shoppersdrugmart.ca/surveyWeb/offers_on_the_go/rules.html) and [www.torontorock.com/page/fanzone\\_proline\\_rules](http://www.torontorock.com/page/fanzone_proline_rules).

<sup>58</sup> See, for example, <https://www.procouponmedia.com/account.php>. Projections for global growth in coupons issued via mobile phones by 2010 are as high as 30%, as “mobile coupons are expected to be one of the biggest winners of the current global recession” (Juniper Research 2009).

<sup>59</sup> CDD and U.S. PIRG 2009 document worrisome industry practices or intentions with respect to behavioral targeting, location-based targeting, user tracking / mobile analytics, audience segmentation and data mining. In Canada, the marketing strategies deployed by some wireless providers with respect to their download storefronts and related pay-per-use services also raise questions. For example: “(...) Virgin Mobile Canada is able to monitor on an individual basis, each customer’s download lifecycle – so if a reduction in download usage is observed, highly tailored messages can be sent to incent and motivate the customer to increase interactions. (...) Without using discounts or incentives we saw a 70 percent increase in downloads by customers that was directly attributable to the highly focused marketing message delivered (...)” (reported in Verisign 2007).



privacy framework is said to be effective so far, as “the Office of the Privacy Commissioner has not received a single complaint or inquiry related to mobile marketing”; nevertheless, a spokesperson has stated that “it is an issue that is of interest to us and we are in the initial stages of studying it”, including reviewing some of the industry’s voluntary practices (reported in Howorun 2009). Indeed, in a study of online behaviourally targeted advertising, consumer group representatives have cautioned that the absence of complaints may only reflect consumers’ lack of awareness of such practices.<sup>60</sup>

### Cellphone spam

As the number of cellphone users using SMS functions increased over the past years, so have spammers’ interest in this communication channel. One American wireless carrier reported blocking 100-200 million spam text messages in a typical month (FTC 2009a, p. 10). Wireless spam has also taken the form of voice mails sent to cellphone numbers, with deceptive alerts regarding automobile warranties being one important case.<sup>61</sup> Similar to the e-mails, some wireless spam – such as the automobile warranty case - originates from fraudsters trying to obtain individuals’ personal and financial information. In April 2009, the Government of Canada introduced anti-spam legislation that is technology-neutral and hence captures cellphone spam such as text messaging (Industry Canada 2009).<sup>62</sup>

### Location-based services

Canadian cellphone users have also been exposed to some forms of mobile marketing campaigns and services that use location-based technologies<sup>63</sup>. Basic wireless location-based services (LBS) that provide cellphone users with information on nearby services (such as restaurants, gas stations or theatres) have been offered by Canadian carriers for a number of years.<sup>64</sup> More recent examples of LBS include a cab calling service that uses a cellphone’s location data to connect to the closest taxi company (reported in Harvey 2007) and a child locator application<sup>65</sup>.

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<sup>60</sup> “(...) the Privacy Commissioner has not yet used PIPEDA to specifically address the issue of online behavioural targeted advertising practices. Moreover, it is unreasonable to expect consumers to complain about the practice when they are unaware of the extent to which their personal information is collected, used and disclosed for the purpose of online behavioural targeted advertising.” (PIAC 2009, p. 76)

<sup>61</sup> The U.S.-based telemarketing scam that targets both landlines and cellphones has been reported in Canada (see, for example, Mah 2009); in May 2009, the FTC filed a suit to stop these illegal robocalls (FTC 2009b).

<sup>62</sup> One Canadian wireless provider has also requested that the CRTC include text-messaging in Canada’s Do-Not-Call rules and system; the Commission indicated that it has prioritized other implementation issues (Cole 2008).

<sup>63</sup> Location-based services (LBS) use location information (from cellular networks, a phone’s global positioning system (GPS), or Bluetooth technology) to offer personalized marketing or services to users.

<sup>64</sup> See, for example, [www.bce.ca/en/news/releases/bm/2002/12/17/69631.html?displayMode=print&](http://www.bce.ca/en/news/releases/bm/2002/12/17/69631.html?displayMode=print&).

<sup>65</sup> In 2007, one carrier launched a \$5 per month Kid Find service, which offers family members on the same account the possibility to locate each other on an interactive map; see [http://about.telus.com/cgi-bin/news\\_viewer.cgi?news\\_id=833&mode=2&news\\_year=2007](http://about.telus.com/cgi-bin/news_viewer.cgi?news_id=833&mode=2&news_year=2007).



The LBS market is said to be growing rapidly: it was valued at about US\$50 million in North America in 2005 and is expected to reach \$3 billion in 2010 (reported in Harvey 2008). Many more initiatives are indeed likely to be deployed in the coming years, as smartphone penetration levels increase. For example, a recent partnership between a location-based social networking service and a Canadian newspaper will offer alerts with location-specific reviews (restaurants, events, etc.).<sup>66</sup> Anticipating what are likely to be the top categories of consumer mobile applications for 2012, one industry research group has placed LBS second, after money transfers (Gartner 2009). LBS are part of context-aware services, a growing area that these analysts see as one of the most transformative in the next few years.

The possibility for, and likely business interest in, linking a consumer's location to a whole range of information about that consumer, has raised broad concerns:

Mobile commerce vendors may be able to collect information about what goods and services consumers purchase and where they go, and use it for secondary purposes or share it with others. This could lead to more intrusive marketing and other uses of information about consumers' activities and locations that they neither expected nor desired. This information could also be used to identify the most profitable consumers and offer them the best deals, leaving less profitable consumers increasingly excluded from markets. (TACD 2005, p. 2)

Commenting on the recent launch of a location-based tracking service available on cellphones to social networking subscribers who wish to share information on their whereabouts, consumer privacy experts underscored the importance of consumer education and awareness:

There's a legal obligation for privacy implications to be clearly spelled out to consumers when they use these types of services, says the Canadian Internet Policy and Public Interest Clinic. 'But that doesn't absolve consumers of their obligation to make an effort to be informed about the privacy implications of the services they take on' (...)." (reported in LaSalle 2009d)

In its work on emerging information and communication technologies, the Office of the Privacy Commissioner of Canada has identified location data as one of the "three specific privacy concerns that are expected to become more important as the use of wireless devices increases" (OPC 2009).<sup>67</sup>

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<sup>66</sup> "Foursquare.com, a social network that lets users broadcast their location, will add content from Metro's Canadian papers that are specific to where they are. Using a mobile phone's GPS system, a user can receive, for example, a restaurant review from Metro if that user is near the corresponding eatery." (Rocha 2010)

<sup>67</sup> This and a number of other issues will be part of the Office's 2010 Consumer Privacy Consultations; see [www.priv.gc.ca/resource/consultations/notice-avis\\_e.cfm](http://www.priv.gc.ca/resource/consultations/notice-avis_e.cfm).

## Mobile shopping

In terms of retail-based mobile commerce initiatives, Canadian wireless users must be pro-active if they want to go beyond the services offered on a cellphone service provider's own portal. At a minimum, they can wirelessly access mobile versions of the most popular Internet search engines to facilitate some general Web navigation. They can also find and use mobile-adapted online shopping portals and comparison-shopping tools to access additional information while shopping, either in a store or online.<sup>68</sup> Further, Canadians have access to mobile versions of some shopping sites from major American e-retailers.<sup>69</sup> Overall though, opportunities for Canadians to mobile shop for consumer goods and services with Canadian businesses still remain few in number.

However, there are indications that the launch of the iPhone, with its unique combination of a 3.5-inch multi-touch screen interface and advanced mobile Web browser, might significantly change North Americans' use of the cellphone. Six months after the U.S. launch of the iPhone, a survey indicated that close to six out of ten American iPhone users reported having accessed a Web search.<sup>70</sup> Another part of the iPhone's potential effect on mobile commerce stems from the media spotlight – and hence greater consumer awareness – that it created for smartphones more generally. U.S. analysts have observed that “now, thanks to the growing popularity of smartphones with rich, detailed Web browsers and easy-to-use keyboards, consumers across the country are finally using wireless devices to buy physical items—not just pizzas and sodas, but also books and clothes and the sorts of things typically associated with in-store browsing or online shopping via personal computer” (Kharif 2009). While the number of mobile handsets shipped in Canada declined by 11% in the first half of 2009 compared to the first six months of 2008, shipments for the smartphone sub-category actually increased by 44% over the same period (data reported in Ruffolo 2009).

### QR codes, a consumer information tool

Quick response (QR) codes are two dimensional barcodes that can be read by cellphone cameras and redirect the user towards embedded URLs (Uniform Resource Locators) for additional website content. There have been reports of initial experiments with the QR code technology in Canada for marketing purposes (see, for example, Kohl 2008). It has been a fast-growing mobile technology in Japan, where a typical application has codes on packaging to provide product information (International Trade Canada 2006). Such mobile technologies have been identified as “another opportunity to provide sustainability information to consumers” (United Nations Environment Program 2007, p. 9). They are also being used for food traceability programs (Nikkei Report 2009).

<sup>68</sup> See, for example, <http://pages.ebay.ca/wireless/> and <http://m.redflagdeals.com/>.

<sup>69</sup> See, for example, Amazon.com's pared-down mobile web site at [www.amazon.com/gp/aw](http://www.amazon.com/gp/aw).

<sup>70</sup> This compares to a little less than four out of ten for other smartphone users, and less than one in ten for the mobile market in general (M:Metrics 2008).

### The blurring line between e-commerce and m-commerce

A number of other devices may be leading to more mobile Web surfing and mobile commerce: there is the iPod Touch, a version of Apple's music player that comes with wireless networking capabilities, but also the recent popularity of ultra-portable netbooks<sup>71</sup> or, as seen in the U.S., the use of wireless e-readers<sup>72</sup>. When also considering the fact that recent cellphones tend to be Wi-Fi-enabled, it may become increasingly difficult to define m-commerce separately from e-commerce. For example, how should one define purchasing a book from an online retailer while sitting in a Wi-Fi hot spot (e.g. at a coffee shop), using a laptop; using a smartphone; using an e-reader? Similarly, how should one define doing Internet banking at home using a wireless router and a computer; or a small netbook; or a Wi-Fi-enabled cellphone? Some retailers are already acknowledging that SMS programs were only a first step, and that web-based wireless e-commerce is the next trend (Khan 2009).

This new environment may generate more interest from Canadian online retailers in developing iPhone or Blackberry adapted Web sites. Such a shift appears to be gradually occurring in the U.S., where a recent study concluded that 5% of the top 500 e-retailers now offer m-commerce sites or iPhone-optimized m-commerce sites, with "more m-commerce sites and iPhone-optimized sites to come in the near future" (reported in Internet Retailer 2009). Merchants need to be vigilant, however. There is some concern that fraudsters might take advantage of beginners' blunders in this exploration phase of mobile commerce: "Mobile device users are generally less protected when accessing a merchant's Web site, frequently due to the merchant's establishment of 'light' versions of the Web site, ironically designed to attract more mobile users. Merchants typically have not yet considered the potential new security threat or established stronger user-authentication on this platform, and fraudsters know it." (Eisen 2009).

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<sup>71</sup> The netbook category includes "stripped-down PCs optimized for Internet use and costing a relatively affordable \$300-\$400 (U.S.)" (Madway 2009).

<sup>72</sup> Purchases on a Kindle, for example, can be automatically linked to the credit card associated with the Amazon customer's account; see [www.amazon.com/gp/help/customer/display.html?nodeId=200137090](http://www.amazon.com/gp/help/customer/display.html?nodeId=200137090).

### Applying e-commerce consumer protections to mobile commerce

It should be noted that many of the general fair business practice issues raised more than a decade ago with respect to PC-based e-commerce also resonate in the mobile world. Conceptually, mobile commerce is covered by any consumer protection framework that is technology-neutral<sup>73</sup> and/or developed for e-commerce. However, given the potential discrepancies, consumer advocates both in Canada and internationally have called on governments to review existing general consumer protection frameworks and those applying specifically in electronic commerce (e.g. the Canadian Code of Practice for Consumer Protection in Electronic Commerce), to ensure that they apply in the context of mobile commerce, as well as identify gaps and examine inconsistencies across countries (PIAC 2007, p. 61; TACD 2005). The European Union has adopted a proposal that includes the extension of general EU-wide consumer rights to mobile commerce (EC 2008). Similarly, developments in mobile commerce will be one of the new elements to be considered in the forthcoming review of the 1999 OECD Guidelines for Consumer Protection in the Context of Electronic Commerce.<sup>74</sup> As governments assess existing instruments, a U.K. consumer group that conducted an international mystery shopping study of mobile commerce suggests that attention be paid to emerging problems, such as restrictive access (e.g. interoperability issues), limited net neutrality of software and equipment, limited right to redress and remedies for faulty or undelivered digital content, and limited protection of children (Consumer Focus 2009).

A decade ago, as electronic commerce was emerging and still a relatively unknown territory, policymakers recognized that:

The impersonal and remote nature of electronic commerce places a heavy burden on the need for means to reduce or eliminate risk. Security, privacy and consumer protection are all required to instill trust in electronic commerce, for both businesses and consumers. (Industry Canada, 1998, p. 18)

We are now seeing the beginnings of mobile commerce's evolution in Canada. As Canadians increasingly become accustomed to using their mobile device to access online information and use various applications, this new form of business-to-consumer transaction clearly has the potential to reach much higher levels of usage and the applications may take unexpected directions. However, building on the experience with electronic commerce, uptake is also dependent on reviewing mobile commerce's particularities and addressing challenges to the consumer protection framework and consumer trust. Many key players revolve around the mobile marketplace, and cooperation may be necessary to address the challenges raised by this trend. Such multi-stakeholder approaches are already the norm for today's fast-paced Internet economy<sup>75</sup>, the overarching context in which mobile commerce will continue to evolve.

<sup>73</sup> "Some countries apply general provisions prohibiting unfair or deceptive acts or practices to consumer protection issues relating to mobile commerce. For example, the provision prohibiting misleading representations and deceptive marketing practices in Canada's Competition Act is technologically neutral." (OECD 2007, p. 23)

<sup>74</sup> See [www.oecd.org/ict/econsumerconference](http://www.oecd.org/ict/econsumerconference) for information on the OECD Conference on Empowering E-Consumers: Strengthening Consumer Protection in the Internet Economy, to be held in December 2009.

<sup>75</sup> See the OECD work related to the 2008 Ministerial Meeting on the Future of the Internet Economy, which "recognizes that the dynamic nature of the Internet and its rapidly changing environment (...) may lead to unforeseen – and unforeseeable – developments. It acknowledges that the open and collaborative nature of the Internet challenges traditional policy-making processes and that a multi-stakeholder approach to achieving an appropriate balance of laws, policies, self-regulation and consumer empowerment may be the only way to promote the Internet economy effectively." (OECD 2008b).

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