

**Price Comparisons of
Wireline, Wireless and Internet Services in
Canada and with Foreign Jurisdictions**

2011 Update

May 4, 2011

**Prepared for the
Canadian Radio-television and Telecommunications
Commission and Industry Canada**

Wall Communications Inc.

NOTE: the views expressed in this document are solely those of the authors and do not necessarily represent the views of the Canadian Radio-television and Telecommunications Commission or Industry Canada.

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	METHODOLOGY.....	3
2.1	Basket Design.....	3
2.2	Canadian Price Data.....	4
2.3	International Price Data	5
2.4	Summary of Key Changes in Methodology.....	7
3.0	WIRELINE SERVICE	9
3.1	Canadian Wireline Service Price Comparisons	10
3.2	International Wireline Service Price Comparisons.....	11
4.0	MOBILE WIRELESS SERVICE	14
4.1	Canadian Mobile Wireless Price Comparisons	15
4.2	International Mobile Wireless Service Price Comparisons.....	18
5.0	BROADBAND INTERNET ACCESS SERVICE	21
5.1	Canadian Broadband Service Price Comparisons.....	22
5.2	International Broadband Service Price Comparisons	24
6.0	MOBILE INTERNET SERVICE.....	29
6.1	Canadian Mobile Internet Service Price Comparisons.....	29
6.2	International Mobile Internet Service Price Comparisons	30
7.0	BUNDLED SERVICES.....	32
7.1	Canadian Bundled Service Price Comparisons	32
7.2	International Bundled Service Price Comparisons.....	33
8.0	SUMMARY OF RESULTS	36
	ATTACHMENT 1 – SERVICE BASKETS	37
	ATTACHMENT 2 – CANADIAN PRICE COMPARISON RESULTS	39
	ATTACHMENT 3 – FOREIGN PRICE COMPARISON RESULTS	43

1.0 INTRODUCTION

This report provides an update of the three previous annual international telecommunications price comparison studies conducted in 2008, 2009 and 2010 by Wall Communications Inc. (Wall Communications) for the Canadian Radio-television and Telecommunications Commission (the CRTC or Commission) and Industry Canada.¹ As in previous years, the consumer telecommunications services covered in this year's study include the following stand-alone and bundled services:

- i) wireline,
- ii) mobile wireless,
- iii) broadband Internet access (using wireline technology),
- iv) mobile Internet access (using 3G wireless technology), and
- v) bundled combinations of the first three services and basic digital TV.

The Canadian price information collected in previous years focused primarily on the major incumbent telephone and cable service providers, since they account for the vast majority of each service market covered in the study.

Last year, WIND Mobile (WIND) was included for the first time in the mobile wireless and mobile broadband Internet access service categories. This year, in addition to WIND, several other new entrant wireless service providers have been included in the study – namely, Mobilicity, Public Mobile and Videotron.² In addition, one reseller, Primus Canada (Primus), has also been included in all market segments in which it provides services – i.e., wireline, mobile wireless and broadband Internet access.

In addition, to better capture the rapidly evolving nature of broadband Internet access services, a new broadband Internet service basket has been added to this year's study. The new basket includes high-speed broadband services with advertized download speeds of 20 Mbps or faster.

¹ (i) Wall Communications Inc., *Price Comparisons of Wireline, Wireless and Internet Services in Canada and with Foreign Jurisdictions*, draft dated 4 July 2008; (ii) Wall Communications Inc., *Price Comparisons of Wireline, Wireless and Internet Services in Canada and with Foreign Jurisdictions – 2009 Update*, draft dated 7 April 2009; and (iii) Wall Communications Inc., *Price Comparisons of Wireline, Wireless and Internet Services in Canada and with Foreign Jurisdictions – 2010 Update*, draft dated April 16, 2010, all of which were prepared for the CRTC and Industry Canada.

² As an incumbent cable company, Videotron has been included in all previous studies. However, while it previously provided wireless services on a resale basis, Videotron now provides wireless services on its own wireless network using AWS spectrum acquired in the 2008 AWS spectrum auction.

As in last year's study, in addition to Canada, prices for the above-noted services are also collected and reported for the United States (U.S.), the United Kingdom (U.K.), France, Australia and Japan.

The next section provides a brief review of the methodology used to measure and compare stand-alone and bundled service prices, and highlights all changes made in this year's study relative to last year's study. Sections 3 through 7 provide the Canadian and international price comparisons results for wireline, mobile wireless, broadband Internet access, mobile Internet access, and bundled services, respectively. A summary of the results is provided in Section 8. More detailed summary results are provided in Attachments 2 and 3.

2.0 METHODOLOGY

2.1 Basket Design

This study relies on the service basket-based price comparison methodology described in detail in Wall Communications' 2008 methodology report.³ Relatively minor modifications to the 2008 methodology have been made in both the 2009 and 2010 price comparison studies to reflect changes in service usage patterns over time. All such changes have been carried over into this year's study. In this section, a brief review of the price comparison methodology is provided, and all additional changes in methodology introduced this year are described.

For wireline, mobile wireless and broadband Internet access, three separate service "levels" or "baskets" have been defined as follows:

- **Level 1:** entry level or low-volume service usage
- **Level 2:** average or mid-level service usage
- **Level 3:** premium level or high-volume service usage

Each of the three baskets has been designed to reflect typical low, mid and high-volume Canadian service consumption levels and practices. In addition, this year, we have added a further Level 4 basket in the case of broadband Internet access, which captures high-speed services now available in Canada with advertized download speeds of at least 20 Mbps.

In the case of mobile Internet access services, a single service basket has been included in the study which includes monthly data usage of at least 2 Gigabytes (GB) delivered using 3G or higher mobile wireless technology with advertized speeds of at least 1.5 Mbps. 3G+ and 4G wireless technologies, which offer much higher advertized speeds, are considered where available.

Also as in the previous studies, three service bundles are also considered:

- **Bundle 1:** wireline, broadband internet and mobile wireless
- **Bundle 2:** wireline, broadband internet and digital TV
- **Bundle 3:** wireline, broadband internet, mobile wireless and digital TV

Level 2 or "average-user" stand-alone service baskets were used in each of the bundles. In the case of digital TV service component, a basic digital television service package option was selected for inclusion in the applicable bundles.

³ Wall Communications, *An Examination of Alternative Approaches for Conducting Price Comparisons of Wireline, Wireless and Internet Services in Canada and with Foreign Jurisdictions*, prepared for the CRTC and Industry Canada, 5 May 2008.

The specific service elements included in each service basket are described in detail in the following sections, and the associated service elements and usage assumptions in each case are also summarized in Attachment 1.

2.2 Canadian Price Data

For each defined service basket, Canadian price data has been collected for each applicable service provider included in the study in each of the following five Canadian cities: Halifax, Montreal, Toronto, Regina and Vancouver. In addition to the incumbent telephone, wireless and cable companies, the study also includes, where applicable, Primus and new entrant wireless service providers WIND, Mobilicity, Public Mobile and Videotron. Table 1 lists the service providers surveyed in this year's price study by city and by service basket.

Table 1
SELECTED CANADIAN CITIES AND SERVICE PROVIDERS

City	Basket	Service Providers
Halifax	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	Bell Aliant, EastLink Bell Aliant, EastLink Bell, TELUS, Rogers Bell, TELUS, Rogers Bell Aliant, EastLink
Montreal	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	Bell, Videotron, Primus Bell, Videotron, Primus Bell, TELUS, Rogers, Primus, Videotron, Public Mobile Bell, TELUS, Rogers, Videotron Bell, Videotron, Primus (as applicable)
Toronto	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	Bell, Rogers, Primus Bell, Rogers, Primus Bell, TELUS, Rogers, Primus, WIND, Mobilicity, Public Mobile Bell, TELUS, Rogers, WIND, Mobilicity Bell, Rogers, Primus (as applicable)
Regina	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	SaskTel, Access Communications SaskTel, Access Communications SaskTel, TELUS, Rogers SaskTel, TELUS, Rogers SaskTel, Access Communications
Vancouver	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	TELUS, Shaw, Primus TELUS, Shaw, Primus Bell, TELUS, Rogers, Primus, WIND, Mobilicity Bell, TELUS, Rogers, WIND, Mobilicity TELUS, Shaw, Primus (as applicable)

The measured prices for each of the stand-alone and bundled service baskets in each city were aggregated using each service provider's estimated subscriber-based market share as weights. In addition, to determine a Canada-wide market price for each stand-alone and bundled service basket, city-specific average prices were aggregated using corresponding city population levels as weights.

It is also important to note that, as in previous studies, the price data presented in this report is based on current service price levels offered by the surveyed service providers in each of the selected product and geographic markets covered.⁴ These prices, which are posted on the service provider's websites and/or made available through customer service representatives, are generally available to new customers or existing customers changing service plans. As such, they may not be perfectly reflective of the average price levels paid by a service provider's customer base in that a certain number of existing customers would be on pre-established price plans.

Overall, the Canadian price comparisons included in this year's study are based on the measurement of the total cost of roughly 225 separate Canadian telecommunications service baskets, covering five cities, two to seven service providers by city and up to fourteen different stand-alone or bundled service baskets for each service provider.

2.3 International Price Data

As in last year's study, five foreign jurisdictions are taken into account for price comparison purposes with Canada: the U.S., the U.K., Australia, France and Japan. The cities and service providers surveyed in each of these countries are summarized in Table 2 below.

Table 2
SELECTED FOREIGN JURISDICTIONS AND SERVICE PROVIDERS

City	Basket	Service Providers
United States Boston, MA	Wireline	Verizon, Comcast
	Broadband Internet	Verizon, Comcast
	Mobile Wireless	AT&T, Verizon, Sprint
	Mobile Internet	AT&T, Verizon, Sprint
	Bundles	Verizon, Comcast
Kansas City, MO	Wireline	AT&T, Time Warner
	Broadband Internet	AT&T, Time Warner
	Mobile Wireless	AT&T, Verizon, Sprint

⁴ All Canadian and foreign services price data presented in this report was collected during the period February 10, 2011 to April 8, 2011.

City	Basket	Service Providers
Seattle, WA	Mobile Internet Bundles Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	AT&T, Verizon, Sprint AT&T, Time Warner Qwest, Comcast Qwest, Comcast AT&T, Verizon, Sprint AT&T, Verizon, Sprint Qwest/Verizon, Comcast
United Kingdom London	Wireline Internet Mobile Wireless Mobile Internet Bundles	BT, Virgin, Talk Talk BT, Virgin, Orange, AOL Broadband Orange, Virgin, Vodafone Orange, Virgin, Vodafone BT (Orange),* Virgin
Australia Sydney	All baskets	Telstra and Optus
France Paris	All baskets	Orange (France Telecom), SFR (Neuf Cegetel), Numericable
Japan Tokyo	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	NTT, J:Com NTT, J:Com, KDDI, Yahoo! BB NTT DoCoMo, J:Com (Willcom), KDDI, eMobile NTT DoCoMo, J:Com (Willcom), KDDI, eMobile NTT, J:Com (Willcom)

* BT discontinued marketing mobile wireless services in 2008. For the purposes of the UK bundles, Orange's mobile wireless service was included along with BT's wireline, Internet and digital TV services.

For international price comparison purposes, foreign currency prices have been converted to Canadian dollars using market exchange rates adjusted for purchasing power parity (PPP) differences across countries. The OECD's latest available PPP comparative price level indexes for February 2011 were used for this purpose in conjunction with average market exchange rates for the same one-month period.⁵

Canadian dollar-based price comparisons between Canada and other countries can be significantly affected by year-over-year currency exchange rate fluctuations (e.g., the Canadian to U.S. dollar exchange rate has varied from \$0.80 to \$1.05 over the last two years). PPP-adjusted exchange rates take into account both changes in exchange rates and relative purchasing power differences between countries and, therefore, generally provide a more appropriate basis for comparing price levels between countries. For this reason,

⁵ See the OECD's main economic Indicators at: http://www.oecd.org/document/47/0,3343,en_2649_34357_36202863_1_1_1_1,00.html. Currency exchange rates were obtained from: <http://www.xe.com/ucc/>.

all of the international price comparison results shown in the main body of this report are based on PPP-adjusted Canadian dollars.

Nevertheless, it should be noted that fluctuations in both exchange rates and PPP adjustment factors can affect international price comparisons over time. This caveat is particularly relevant in the case of this study given the significant changes in both Canadian dollar exchange rates and PPP adjustment factors over the course of the last several years.

Lastly, it should also be noted that service prices in the U.K., France and Australia are typically quoted inclusive of value added taxes (VAT) or goods & services taxes (GST). In each case, we have removed applicable VAT or GST charges to allow a cross-country comparison of service rates excluding government sales taxes.⁶ On the other hand, other industry-specific fees or surcharges are included for price comparison purposes (e.g., 911 fees, universal service and regulatory charges in the U.S., and television licence fees in the U.K.).

Overall, the international price comparisons included in this year's study are based on the measurement of the total cost of roughly 250 separate foreign stand-alone and bundled service baskets. Adding the Canadian and international service baskets together, the total cost of roughly 475 service baskets were measured to generate the price comparison results presented in this report.

2.4 Summary of Key Changes in Methodology

The following methodological and measurement changes are included in this year's study:

- i) Primus Canada's service prices are included in the cities of Montreal, Toronto and Vancouver in the case of wireline, mobile wireless, broadband Internet access service baskets and the bundle including these same three services.
- ii) Mobilicity, Public Mobile and Videoton are included where applicable in the cities of Montreal, Toronto and Vancouver in the case of mobile wireless and mobile Internet services.

⁶ VAT in the U.K. is currently 20% (it had temporarily been reduced to from 17.5% to 15% as an economic stimulus measure in 2009 and recently increased from 17.5% to 20% to assist with government debt reduction). The VAT is 19.6% in France and 5% in Japan. The GST in Australia is 10%. Typically in each of these countries prices are quoted including VAT or GST.

- iii) A new, level 4 broadband Internet service basket was included in the study to take into account prices for high-speed broadband services with download speeds of 20 Mbps or faster.
- iv) Updates to the monthly data usage levels for the other three broadband Internet service baskets were made to better reflect current typical broadband usage levels in Canada.
- v) Updates to the mobile wireless service baskets were introduced to reflect changes in Canadian usage patterns (e.g., in the applicable wireless baskets, monthly text message volumes were increased).
- vi) Market share information used for weighted averaging purposes was updated in the case of surveyed Canadian and foreign service providers where applicable.⁷

This year, as in the case of the price comparisons studies conducted in 2009 and 2010, a number of changes in measurement methodology have been implemented. While none of the changes was significant enough to render price comparisons between study years unduly problematic, caution should nevertheless be exercised when considering price trends over the four year period for which price data is now available. Instances where significant impacts have occurred due to methodological changes are highlighted in this and previous years' reports.

⁷ For Canada, the 2010 CRTC Monitoring Report was relied on for this purpose. For the U.S., FCC market share and industry reports were used. In addition, company financial and media reports were also relied on, where necessary.

3.0 WIRELINE SERVICE

The following service element charges are considered for wireline service price comparison purposes:

- i) access line charges (including, as applicable, free calling allowances);
- ii) local usage/calling charges (where applicable);
- iii) long distance charges for both domestic and international calls;
- iv) optional feature charges (e.g., voice mail, call display & other features); and
- v) other recurring charges such as 9-1-1, network access fees and/or other surcharges or regulatory fees.

One-time service charges, such as installation or activation fees are not considered since these fees are often waived for new customers or offset by limited term promotional discounts. Similarly, we have not taken into account any short term promotions or price discounts for which new customers may be eligible. We have used the lowest available current stand-alone price for the purpose of determining the total cost of each wireline service basket.

Three wireline service baskets are included in the study:

- **Level 1:** 400 incoming & outgoing minutes per month, 10 % of outgoing minutes long distance, and no optional features
- **Level 2:** 1,000 incoming & outgoing minutes per month, 20 % of outgoing minutes long distance, two optional features (voice mail and call display)
- **Level 3:** 1,600 incoming & outgoing minutes per month, 30 % of outgoing minutes long distance, full set of optional features

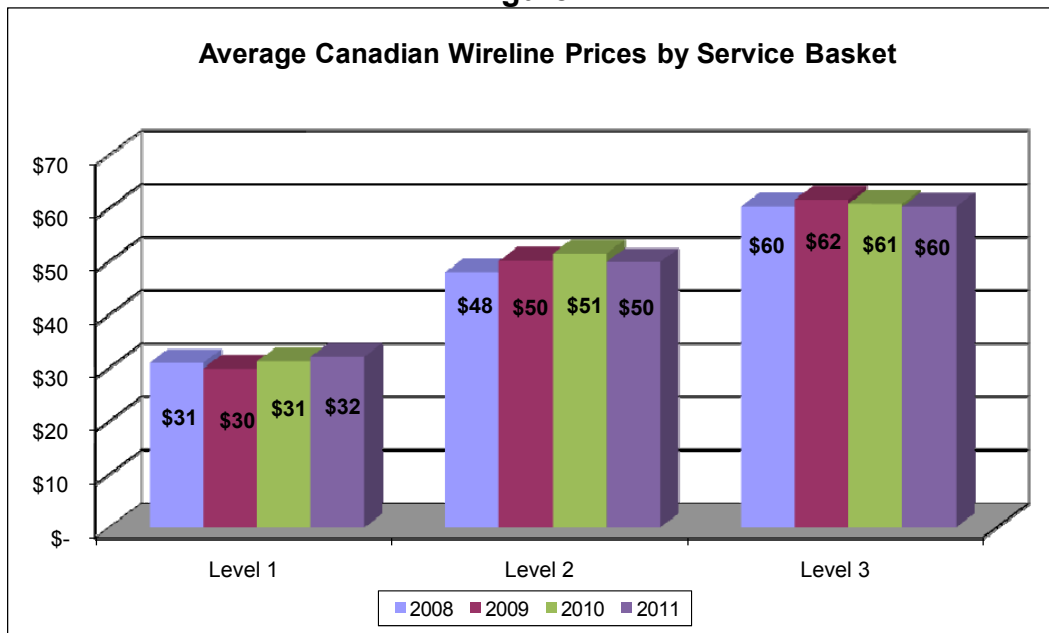
Table A1.1 in Attachment 1 provides a detailed summary of the service elements and usage assumptions for each the three wireline service baskets included in this study. No changes to the wireline service basket definitions have been made relative to the previous studies.

3.1 Canadian Wireline Service Price Comparisons

Figure 1 below provides a summary of current Canadian average monthly prices for each of the three wireline service level baskets. The figure also provides a comparison of prices with those measured in the three previous studies.

Average monthly prices for the Level 1 basket have remained relatively stable at between \$30 and \$32 over the last four years. Average monthly prices for the Level 2 basket have, on the other hand, increased slightly from \$48 in 2008 to \$50 in 2011. Prices for the Level 3 basket have remained relatively stable at roughly \$60 over the course of the last four years. Thus, on balance, average wireline prices in Canada have been relatively stable or otherwise have increased only slightly since 2008 (at a pace of about 1% per year or slightly below the rate of inflation).

Figure 1



Wall Communications Inc. 2011

Table A2.1 in Attachment 2 provides average wireline prices by service level and by surveyed city for the four-year period 2008 to 2011. While there are a few cases where prices have risen faster than inflation since 2008 – i.e., in Toronto (Levels 1 and 2) and Vancouver (Level 1), there are also two cases where rates have declined noticeably since 2008 – i.e., in the case of Montreal (Level 1) and Vancouver (Level 2). On balance, wireline prices have changed very little in most surveyed Canadian cities – i.e., by no more than an average annual rate of $\pm 1\%$ since 2008.

As noted, Primus was included in the study for the first time this year. Its bundled local and long distance services are generally more competitive in the case of the service baskets with higher long distance call volumes (Levels 2 and 3). In any event, given its low market share relative to the incumbent telephone and cable companies, Primus had little impact of the average prices in the cities in which it was included in the measurement of wireline prices.

3.2 International Wireline Service Price Comparisons

As noted in previous studies, in the case of wireline services, there are a variety of important pricing differences to be taken into account when comparing Canadian and foreign prices.

In the U.S., there are a number of unique regulatory and government fees and surcharges (other than sales taxes). These include, among other things, subscriber line charges (SLC) and universal service fund (USF) charges. Collectively, these charges can add up to as much as \$10 a month over and above a service provider's local, long distance and feature charges. The range and magnitude of these charges, however, varies by state and, indeed, municipality.⁸ For this year's price study, we have updated the primary surcharges wireline customers face in the U.S., namely the SLC and USF.

In addition, wireline rate structures in the U.K., Australia, France and Japan differ significantly compared to Canada (as well as the U.S.). Local phone service rates in these countries are priced on a usage sensitive basis. In the case of local calls, per minute charges apply along with a per call set-up or connection fee, both of which can vary depending on the selected service plan.⁹ Charges also vary depending on whether a call is made to a landline or mobile number (and can also vary by mobile service provider). Local and national per minute and per call rates are generally the same; as a result, there is no price difference between local and domestic long distance calling rates.¹⁰ In addition, features such as voice mail and call display are typically included in home phone service plans rather than priced separately.

Figure 2 provides a comparison of current average wireline prices for Canada and all five surveyed foreign jurisdictions for each of the three wireline service

⁸ As noted in previous studies, obtaining precise information on these fees and surcharges proved to be very difficult and even company representatives (customer sales and service reps) were unable to provide complete information with regard to these surcharges. As a result, we have included estimated surcharges for some of the surveyed companies in some cases. See the FCC's Consumer Facts Information on Understanding Your Phone Bill: <http://www.fcc.gov/cgb/phonebills/samplePhonebill.html>.

⁹ Australia is unique among the three countries in that local calls to landlines are charged on a per call basis with no additional per minute charges.

¹⁰ Australia differs somewhat in this respect. Under some phone service plans different per minute rates can apply depending on the distance of a domestic call.

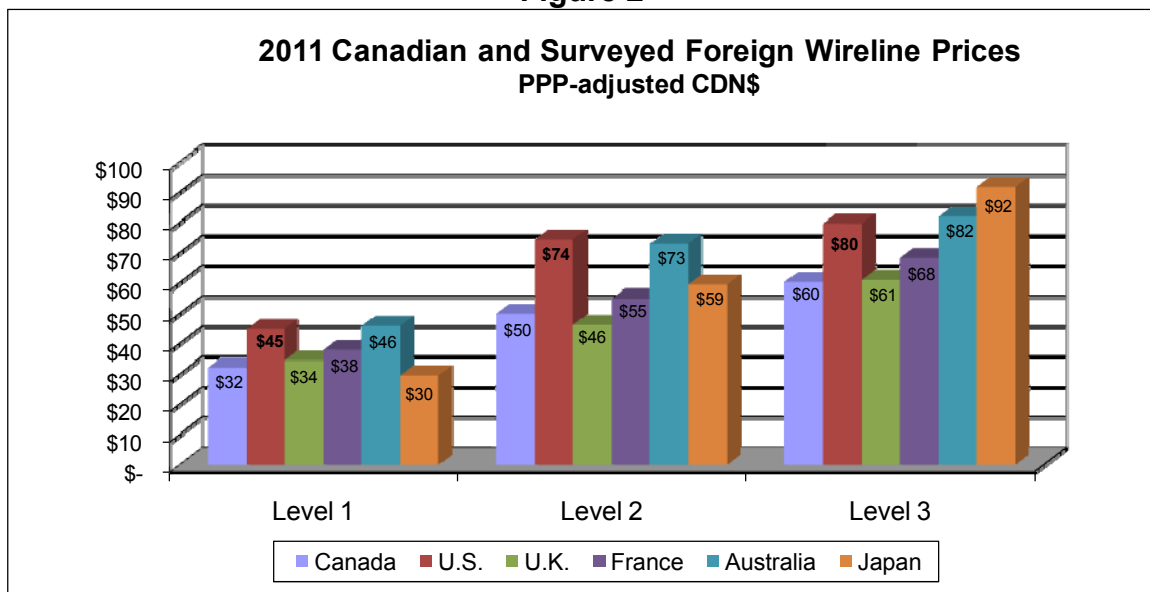
level baskets. All prices have been converted to Canadian dollars using PPP-adjusted exchange rates. Service rates for the U.K., France and Japan exclude VAT and, in Australia's case, GST.

As can be seen from Figure 2, at roughly \$32 per month, Canada has one of the lowest Level 1 wireline service basket prices compared to the other five countries. Only Japan has a slightly lower price. Prices for the Level 1 basket are slightly higher in the U.K. and considerably higher in the cases of the U.S. and Australia.

Turning to the Level 2 wireline service basket, Canada once again has one of the lowest average prices. In this case, only the U.K. has a lower price. Prices are considerably higher in all four of the remaining countries, especially so in the cases of the U.S. and Australia.

Lastly, in the case of the Level 3 wireline service basket, Canada's average price is the lowest of the group. In this case, prices in the U.S., Australia and Japan are all considerably higher than in Canada.

Figure 2



Wall Communications Inc. 2011

Detailed average price comparison results for the four-year period 2008 to 2011 for each of the three wireline service baskets are provided in Table A3.1 in Attachment 3. Table A3.1 includes country-specific prices expressed in terms of (i) own currencies, (ii) PPP-adjusted Canadian dollars and (iii) unadjusted exchange rate based Canadian dollars. In addition, Figures A3.1, A3.2 and A3.3 illustrate the average price trends for each of the three wireline service baskets, respectively, expressed in PPP-adjusted Canadian dollars. As can be seen from the information in Attachment 3, Canada's 2011 relative ranking of wireline

service prices shown in Figure 2 above is generally consistent with the results obtained in the three previous price comparison studies.

As shown in Figure 2, measured in PPP-adjusted Canadian dollars, U.S. wireline rates for each of the three wireline service baskets are considerably higher than in Canada. Compared in terms of own currencies, average U.S. wireline prices in U.S. dollars for each of the three wireline service baskets are also higher than the corresponding prices in Canada measured in Canadian dollars, however, the price differences are far less pronounced on this basis (see Table A3.1 in Attachment 3). Much of the difference in PPP-adjusted Canadian dollar rates is a result of the PPP adjustment to the Canadian/U.S. exchange rate, which accounts for the fact that the purchasing power of a U.S. dollar in the U.S. is higher than a Canadian dollar in Canada (according to the OECD currently 33% higher).¹¹

This same caveat applies in the case of the Canadian and U.S. price comparisons based on PPP-adjusted Canadian dollars in the following sections.

Also note that while the OECD's PPP adjustment for the U.S. dollar relative to Canada increased significantly this year compared to last, this was largely offset by the fact that the value of the U.S. dollar relative to the Canadian dollar also declined significantly over the last year. On balance, compared to previous years' studies, the PPP-adjusted Canadian dollar wireline service basket price differentials between Canada and the U.S. have remained relatively stable (see Figures A3.1, A3.2 and A3.3 in Attachment 3).

In sum, as in previous years' studies, weighted average Canadian wireline service rates generally compare favourably, on balance, with all of the five surveyed foreign jurisdictions.

¹¹ To provide some further context: Suppose that the Canadian/U.S. exchange rate is at par (i.e., a Canadian dollar equals a U.S. dollar). Then suppose the exact same basket of telephone services costs \$40 CDN in Canada and \$40 US in the US. If the PPP is 1.3, meaning that a US dollar will purchase 30% more (of all goods and services) than a Canadian dollar, this implies that the \$40 US paid for the telephone service basket would buy more non-telephone goods and services than the \$40 CDN. In other words, it would take \$52 CDN to buy as much of other goods and services as the \$40 US. Accounting for this PPP difference implies that a \$40 US telephone service basket is equivalent to \$52 CDN in PPP-adjusted terms.

4.0 MOBILE WIRELESS SERVICE

In the case of mobile wireless services, the following service element charges are considered for price comparison purposes:

- i) network access/airtime charges (taking into account defined amounts of daytime, evening and weekend minute volumes);
- ii) optional feature charges (e.g., voice mail, call display and others);
- iii) long distance charges for both domestic and international calls;
- iv) basic data service charges (e.g., text or multimedia messaging);
- v) advanced data service charges (e.g., web browsing and e-mail); and
- vi) other monthly recurring service fees such as 9-1-1 service charges, System Access Fee and other regulatory fees or surcharges.

As in the case of wireline services, we have not included activation fees since they are often waived for new customers or offset by initial promotional discounts. Roaming charges are also not included in any of the wireless service baskets as the complexity of including them would make obtaining reasonably straight-forward comparable measurements impossible.¹² In addition, handset costs are not included since they are often discounted or subsidized by wireless service providers in order to incent customers to subscribe or switch service provider. Similarly, limited term promotional discounts are not taken into account. We have used the lowest posted current stand-alone price for the purpose of determining the total cost of each mobile wireless service basket.

Three mobile wireless service baskets are included in the study:

- **Level 1:** 150 incoming & outgoing minutes per month, 10 % of outgoing minutes long distance, and no optional features
- **Level 2:** 450 incoming & outgoing minutes per month, 10 % of outgoing minutes long distance, two optional features (voice mail and call display), 200 text messages per month

¹² We recognize that roaming charges can be an important component of some users' bills, in Canada, the U.S. and in other countries. A separate examination focused solely on roaming charges would be the best way of providing useful comparisons.

- **Level 3:** 1,200 incoming & outgoing minutes per month, 15 % of outgoing minutes long distance, full set of optional features, 200 text messages and 1 GB data usage per month

This year one change to the mobile wireless service baskets was made. The number of monthly text messages in the Level 2 and Level 3 service baskets has been increased from 150 to 200. The new figure is consistent with the current number of monthly SMS or text messages sent by the average Canadian wireless service subscriber.¹³

In the case of the Level 1 mobile wireless service basket, we have considered both “pre-paid” and “post-paid” service options. We have relied on prices associated with the cheaper of the two options. In the case of the other two mobile wireless service baskets, post-paid plans are generally more economical.

Table A1.2 in Attachment 1 provides a summary of each of the service elements and usage assumptions included in all three mobile wireless service baskets.

4.1 Canadian Mobile Wireless Price Comparisons

Figure 3 below provides a summary of Canadian weighted average mobile wireless prices for each of the three service level baskets for the years 2008 to 2011. The reported 2011 price levels are based on the average prices of the incumbent wireless services providers (Rogers, Bell, TELUS and SaskTel) and, in the applicable cities, Primus and new entrants WIND, Mobilicity, Public Mobile and Videotron. However, the prices offered by Primus and new entrants (as included in our basket measurements) have very little effect on the overall average price level in view of their relatively small market share (which is assumed to be less than 2% collectively).

As shown in Figure 3, Canadian average monthly prices for the Level 1 mobile wireless service basket have remained relatively stable at \$33 to \$34 over the past four year period.

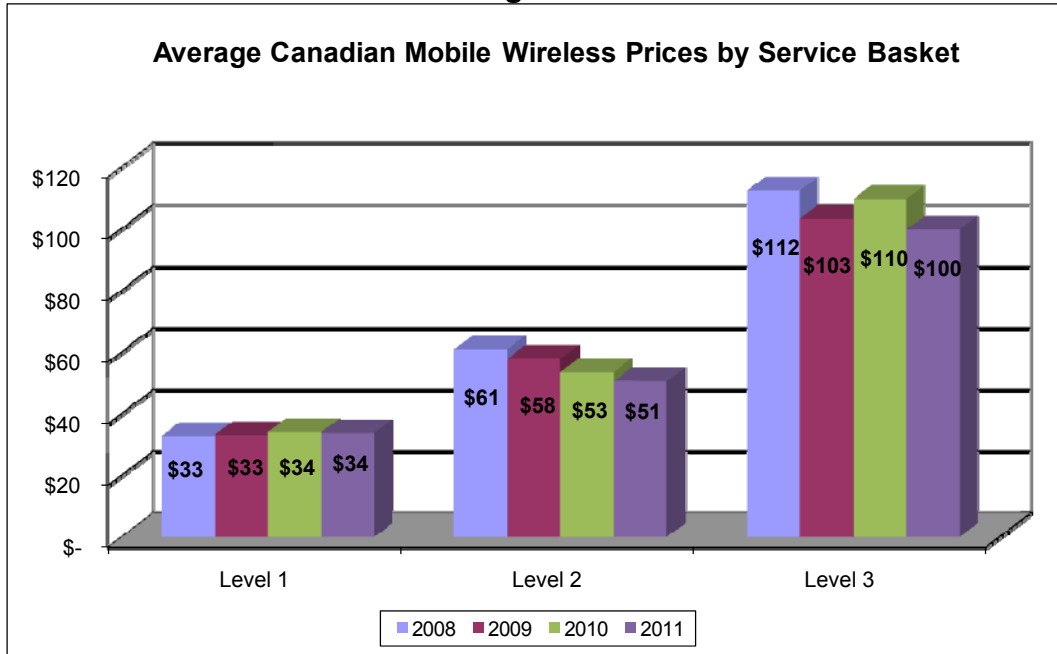
Average monthly prices for the Level 2 mobile wireless service basket, on the other hand, have declined significantly from \$61 to \$51 per month since 2008, representing an average annual rate of decline of roughly 6%. The drop in the Level 2 wireless service basket price can largely be explained by reductions in the monthly plan rates as well as the near complete elimination of former System Access Fee by most incumbent wireless service providers.¹⁴

¹³ Source: <http://www.cwta.ca/CWTASite/english/industryfacts.html>.

¹⁴ SaskTel still charges such a fee, whereas Rogers replaced the fee with a lower "government regulatory recovery fee" which varies by province.

Prices for the Level 3 mobile wireless service basket have also declined considerably since 2008, representing an average annual rate of decline of roughly 4%. However, much of this decline occurred during the last year (2010-11) and can be explained, in part, by the introduction of lower cost smartphone voice and data plans.

Figure 3



Wall Communications Inc. 2011

Table A2.2 in Attachment 2, provides average mobile wireless prices by city and by service basket for the period 2008 to 2011. As can be seen from that table, in most of the Canadian cities surveyed and especially for Level 2 and 3 service baskets, average prices have been generally declining since 2008. In the case of Level 2 service baskets, average prices have declined by between 4% and 8% per year (with the largest reductions found in Toronto and Regina). Level 3 service basket average prices have generally declined almost as fast at rates between 3% and 7% per year (with the largest declines found in Halifax and Regina).

Table 3 below provides a comparison on average monthly rates for the incumbent carriers and the new entrants by service level basket. The three cities where this comparison is currently possible include Vancouver (where WIND and Mobilicity currently operate), Toronto (where WIND, Mobilicity and Public Mobile currently operate) and Montreal (where Videotron and Public Mobile currently operate). It should be noted, however, that Public Mobile does not currently provide data services and therefore is not included in the case of the Level 3 mobile wireless service basket.

As can be seen from Table 3, for the Level 1 service basket, the average monthly prices charged by new entrants is between 11% and 28% lower than those of the incumbents. The relative price discount available from the new entrants is considerably less pronounced in the case of the Level 2 service basket. In contrast, the highest new entrant price discounts are found in the case of the Level 3 service basket, where the discounts offered by WIND and Mobilicity are close to 50% on average in Vancouver and Toronto. Videotron's marketing strategy, in contrast, involves providing service bundling discounts as opposed to stand-alone price discounts, which explains the absence of any significant discount for the Level 3 service basket in Montreal. This also explains the lower new entrant discounts available in Montreal for the Level 1 and 2 service baskets.

Primus was not included in this price comparison exercise since it is not a new entrant and is a reseller rather than a mobile network operator. As well, Primus does not currently offer data services and, therefore, is unable provide all of the service elements included in the Level 3 wireless service basket. That said, we note Primus' rates are similar to those offered by the new entrants, on average, in the cases of the Level 1 and 2 services baskets.

Table 3
Canadian Mobile Wireless Service Rates
Incumbents versus New Entrants

Baskets	Vancouver		Toronto		Montreal		Average
Level 1 Basket (low-volume use, 150 min/month)							
Incumbents	\$	32.29	\$	34.26	\$	34.53	\$ 33.69
New Entrants	\$	23.40	\$	25.27	\$	30.58	\$ 26.41
<i>Percentage Differential</i>		-28%		-26%		-11%	-22%
Level 2 Basket (average use, 450 min and 200 text per month)							
Incumbents	\$	51.18	\$	49.51	\$	51.09	\$ 50.59
New Entrants	\$	43.05	\$	45.37	\$	51.45	\$ 46.62
<i>Percentage Differential</i>		-16%		-8%		1%	-8%
Level 3 Basket (high-volume use, 1,200 min, 200 text and 1GB data per month)							
Incumbents	\$	99.88	\$	99.88	\$	98.48	\$ 99.41
New Entrants	\$	51.35	\$	51.35	\$	98.90	\$ 67.20
<i>Percentage Differential</i>		-49%		-49%		0%	-32%

Averages calculated on a market share and population weighted basis.

Wall Communications 2011

4.2 International Mobile Wireless Service Price Comparisons

There are a number of important pricing differences to be taken into account when comparing Canadian and foreign mobile wireless prices.

In the U.S., as in the case of wireline service, there are a number regulatory and federal and state surcharges and fees that add to the monthly cost of wireless service. These include regulatory cost recovery charges, federal and state USF surcharges and other fees.¹⁵ For this year's study, we have estimated these charges based on information collected in previous pricing studies and, where applicable, updated regulatory cost recovery charges and the USF fees.

In addition, the mobile wireless service plans in the U.K., Australia, France and Japan differ significantly from those in Canada, as well as the U.S. Calling Party Pays (CPP) pricing plans apply in these countries under which mobile customers pay only for outgoing calls. In these countries, mobile calls are rated on a per minute basis and, in some cases, also include a per call setup charge. Per minute rates can vary by time of day and called party – i.e., landline versus mobile (with potentially different rates for on-net versus off-net mobile calls). Identical per minute and per call charges generally apply to domestic long distance and local calls. Features such as voice mail and call display are typically included with packages at no additional charge.

Figure 4 below provides a comparison of current weighted average wireless prices for Canada and all five surveyed foreign jurisdictions for each of the three wireless service level baskets. All prices have been converted to PPP-adjusted Canadian dollars. Service rates for the U.K., France and Japan exclude VAT and, in Australia's case, GST.

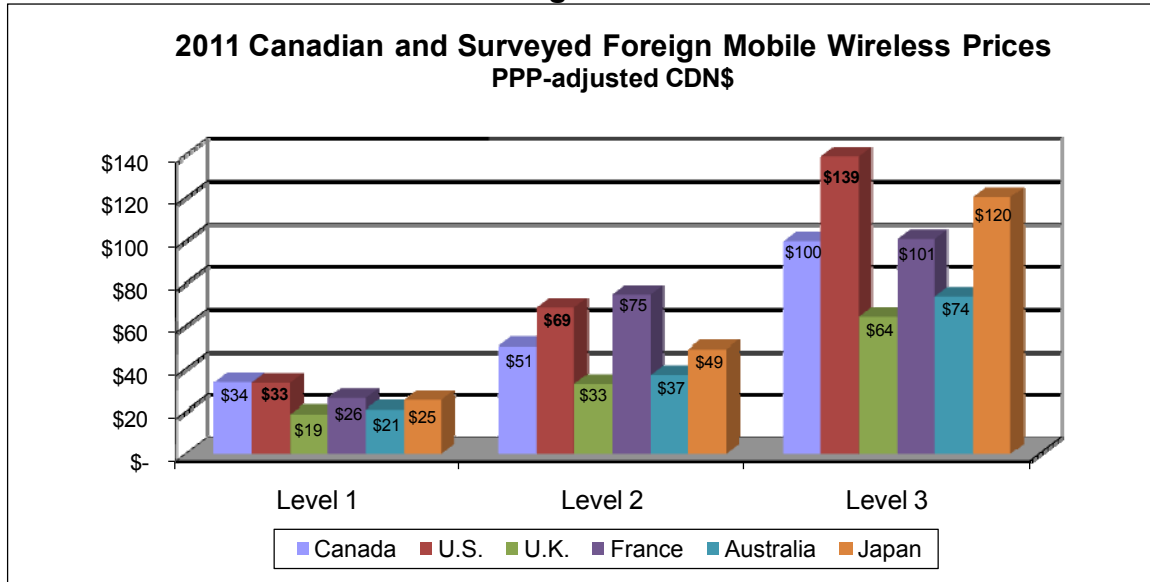
In the case of the Level 1 wireless service basket, the Canadian average monthly price of roughly \$34, while close to the rate in the U.S., is higher than the rates found in all five selected foreign jurisdictions. Moreover, the rate is significantly higher than the rates found in the U.K. and France (i.e., over 60% higher).

In the case of the Level 2 wireless service basket, the Canadian average monthly price of \$51 falls roughly in the middle of the group of surveyed countries. It is similar to, but slightly higher, than the Japanese rate, but well below the rates for the U.S. and France. On the other hand, Level 2 rates in the U.K. and Australia are considerably lower than in Canada.

In the case of the Level 3 wireless service basket the average Canadian monthly rate of roughly \$100 again falls in the middle of the group. In this case, it is similar to the rate found in France, and well below the rates found in the U.S. and Japan.

¹⁵ See, for instance, <http://www.fcc.gov/cgb/phonebills/WirelessPhonebill.html>.

Figure 4



Wall Communications Inc. 2011

Detailed price results for the period 2008 to 2011 for each of the three mobile wireless service baskets by country are provided in Table A3.2 in Attachment 3. In addition, Figures A3.4, A3.5 and A3.6 illustrate the average price trends over the 2008 to 2011 period for each of the three wireline service baskets, respectively, expressed in PPP-adjusted Canadian dollars.

As the results in Attachment 3 show, Canada's relative mobile wireless services ranking has changed little over the period 2008 to 2011 with respect to the five surveyed foreign jurisdictions. One exception is in the case of the Level 1 wireless service basket. In previous years, Canada ranked ahead of the U.S. It has now fallen slightly behind the U.S. The change in ranking is largely due to the introduction of new lower price pre-paid wireless service offers in the U.S.

As discussed in Section 3.2 with respect to the differential between Canadian and U.S. wireline rates, much of the differential between Canadian and U.S. Level 2 and 3 mobile wireless shown in Figure 4 is attributable to the use of a PPP-adjusted Canada/U.S. exchange rate to convert U.S. currency prices into Canadian dollars. Measured in U.S. dollars, the average price of the U.S. Level 1 mobile wireless basket is, in fact, considerably lower than the comparable average price in Canada, whereas the average price of the U.S. Level 2 and 3 baskets is only slightly higher than in Canada on the same basis (see Table A3.2 in Attachment 3). As discussed in Section 3.2 above, the use PPP-adjusted Canadian dollars for price comparison purposes effectively increases the price differences between Canada and the U.S. These results are however fully consistent with previous years' results as shown in Figures A3.4, A3.5 and A3.6 in Attachment 3.

In sum, in terms of mobile wireless service prices, Canada tends to fall into the middle of the pack in comparison to the five foreign justifications included in this study. However, in the case of the Level 1 (low use) service level basket, Canada now has the highest average rate of the group of surveyed countries.

5.0 BROADBAND INTERNET ACCESS SERVICE

In this year's study, two notable changes in methodology have been made to the existing broadband Internet access service baskets. First, the assumed monthly data usage levels have been increased in the case of the Level 2 and 3 broadband service baskets. Second, a new Level 4 higher-speed service basket has been added. The four broadband service level baskets included in the study are defined as follows:

- **Level 1:** "basic" Internet access service with advertized download speeds of up to 1.5 Mbps (ranging from 256 kbps to 1.5 Mbps) – with a targeted speed in the upper end of the range. Data usage per month is assumed to be 2 GB per month.
- **Level 2:** "average" (Canadian) high-speed Internet access service with advertized download speeds of between 1.5 and 9 Mbps – with a targeted speed in the upper end of the range. Data usage per month is assumed to be 15 GB per month.¹⁶
- **Level 3:** high-speed Internet access service with advertized download speeds of 10 to 19 Mbps – with the targeted speed in the middle of the range. Data usage per month is assumed to be 30 GB.
- **Level 4:** high-speed Internet access service with advertized download speeds of 20 Mbps or faster – with the targeted speed in the 20 to 40 Mbps range. Data usage per month is assumed to be 50 GB.

It is important to note that in comparing prices, we rely on company "advertized" broadband service speeds. In practice, actual as opposed to advertized service speeds can vary for a variety of reasons, and the range of any such differences can vary by technology and geographic location. Relative actual to advertized performance can also vary across different jurisdictions.¹⁷ That said, for the purpose of this study we assume that any such variations are roughly equal on a relative basis across the broadband services included in this study.

Some service providers apply monthly data usage caps to their broadband service plans. Where they are applied, they are typically set on the basis of a monthly data allowance (GB/month), with additional fees applied when the data

¹⁶ According to the CRTC 2010 Communications Monitoring Report, Section 5.3, roughly two thirds of Canadian broadband users subscribe to broadband services with speeds of between 1.5 Mbps and 9 Mbps and the average broadband user uploads and downloads just over 15 GB of data per month.

¹⁷ See for instance: Ofcom, March 2011. <http://media.ofcom.org.uk/2011/03/02/average-broadband-speed-is-still-less-than-half-advertised-speed/>.

allowance is exceeded.¹⁸ Where usage caps apply, we have taken them into account, including any overage fees that may apply once assumed usage levels are exceeded. Most of the service providers surveyed for this study either have no usage caps or, where they do apply, they are high enough that no overage fees would be incurred given the data usage assumptions adopted for the four above-noted broadband service baskets.¹⁹

Where required, modem rental or purchase costs are also taken into account. In the latter case, we have assumed that required equipment costs are amortized over 24 months.

Once again, we have not included installation or activation fees. These are often waived for new customers or offset by promotional discounts. We have relied on regular stand-alone prices to determine the total cost of each of the four broadband service baskets.

5.1 Canadian Broadband Service Price Comparisons

Figure 5 below provides a summary of Canadian weighted average broadband Internet access service prices for the Levels 1 to 3 service baskets for the period 2008 to 2011 and for the current year in the case of the newly included Level 4 broadband service basket.

The average monthly price of the Level 1 basket increased to roughly \$35 in 2011, up considerably from \$31 the previous year.

Similarly, average monthly price of the Level 2 basket increased this year as well to roughly \$50, up from \$48 last year. The average advertized download speed of the services included in the Level 2 basket is close to 6.5 Mbps, which is similar to the average speed in last year's study.

The average monthly price of the Level 3 basket also increased slightly to \$63, but still remains well below the 2008 price of \$69 per month. The average advertized download speed of the services included in the Level 3 basket is roughly 14 Mbps, which is slightly higher than in last year's study (where the average speed was 12.5 Mbps).

Lastly, the average price of the new Level 4 broadband service basket is roughly \$78 per month. The advertized download speeds for the Level 4 broadband services included in the study range from 25 to 50 Mbps – the average is close to 30 Mbps.

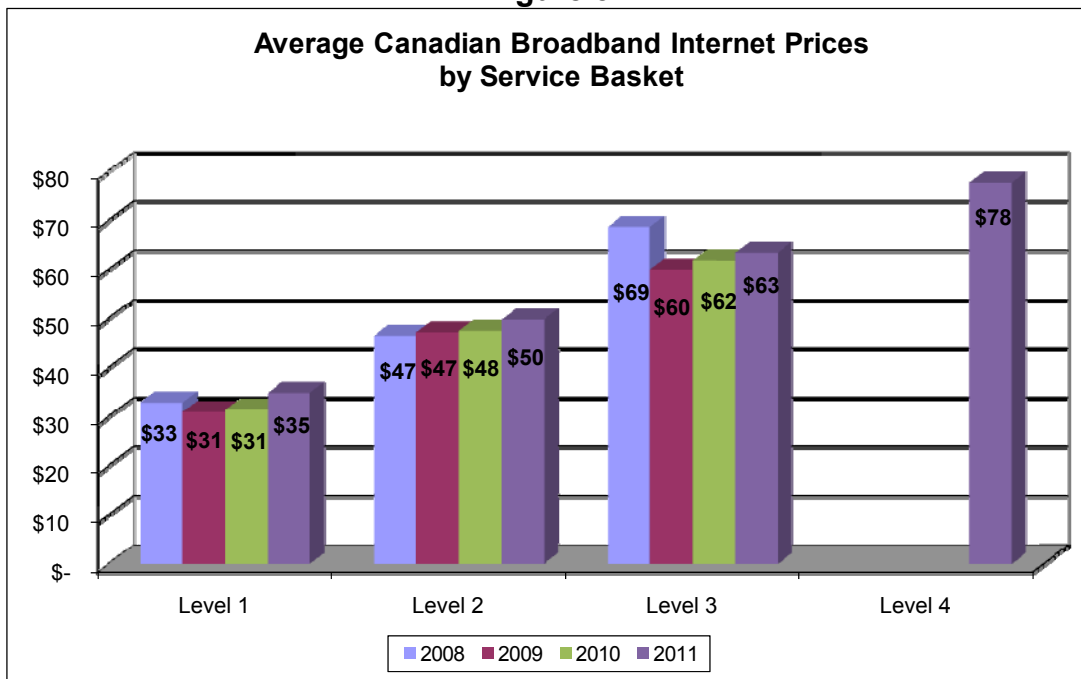
¹⁸ In some cases, as in Australia, rather than excess data charges applying, service speed is throttled significantly (i.e., to 256 kbps).

¹⁹ Of the countries and service providers included in this study, usage caps are common in Canada and Australia and in a few instances in the U.K.

Roughly half of the Canadian broadband service plans surveyed for this study included monthly usage caps. For those that do, they range from 1 to 13 GB on the Level 1 service basket – the average is 7 GB per month. The range for the Level 2 service basket is from 25 to 75 GB – the average is 55 GB per month. The range for the Level 3 service basket is from 75 to 125 GB – the average is just over 90 GB per month. There has been little change in these monthly usage caps, on average, compared to last year.

In the case of the new Level 4 broadband service basket, for those service providers applying data usage caps, the caps range from 75 to 250 GB per month – the average was close to 140 GB per month.

Figure 5



Wall Communications Inc. 2011

Table A2.3 in Attachment 2, provides average broadband Internet access service prices by city and by year for each of the three service baskets. As can be seen from that table, while some of the largest average annual broadband rate increases have occurred in Vancouver, rates in Vancouver also tend to be lower than those found in all other Canadian cities included in the study. On the other hand, broadband prices have been declining on average in Toronto (in the cases of the Level 1 and 3 baskets) and in Montreal (in the case of the Level 3 basket).

Primus was also taken into account in terms of measuring broadband Internet access service prices in Canada this year. However, Primus currently only offers a single 5 Mbps service in the cities surveyed. As a result, Primus has been

taken into account only in the case of the Level 2 broadband service basket price calculation. Moreover, due to its relatively small market share, its pricing has very little effect on the overall average Level 2 service basket price in Canada. At roughly \$38 per month, Primus' 5 Mbps service is nevertheless priced at a significant discount to the national average Level 2 broadband service rate of \$50 per month (i.e., a discount of close to 25%).

5.2 International Broadband Service Price Comparisons

There are some important broadband service differences in certain foreign countries compared to Canada that should be noted. In the case of the U.K. and France, to obtain a DSL broadband Internet service on a stand-alone basis, the customer must also lease a landline. We have included the cost of the landline in the price where applicable. As well, broadband services offered in the U.K. and France typically come with IPTV and/or VoIP services for a single bundled price. The option of a pure stand-alone broadband Internet service is simply not available in some cases. And lastly, in Japan, broadband Internet service often consists of two separately priced elements: (i) a network access facility (fibre or ADSL), generally obtained from NTT, and (ii) an Internet access service provided by an ISP service provider. In such cases, the ISP fee applies over and above the broadband access fee. We have included both price elements where applicable.

As in the case of previous year's studies, not all surveyed service providers offer a broadband service that falls into each of the three defined service baskets. In addition, some broadband service speeds that were offered last year by specific service providers are no longer available this year.

The general trend has been to offer higher speed broadband services, which often has the effect of reducing or eliminating the availability of lower speed alternatives. For instance, some service providers surveyed no longer offer a broadband service that falls into the Level 1 service basket. On the other hand, some service providers such as Optus in Australia offer a single speed service (8 Mbps) with optional monthly usage levels (e.g., 120, 150 or 500 GB per month). Once the usage cap is reached, service speed is throttled to 256 kbps.

A similar situation exists in the case of the Level 2 service basket. Some foreign service providers no longer offer broadband services in the 5 to 10 Mbps range, but only higher speed options. As a result, average Level 2 service basket prices are often based on a subset of the service providers surveyed in foreign jurisdictions.

In this year's study we have limited the Level 3 broadband service basket to services with advertized download speeds of between 10 and 19 Mbps (compared to 10 Mbps and faster last year). However, in view of the fact that in

many cases service providers only offer a small number of broadband service speed options, services with advertized download speeds of 20 Mbps have in a few cases been included in the Level 3 basket. This was only done in the case of foreign service providers who also provided a higher-speed service suitable for inclusion in the Level 4 service basket.

The Level 4 service basket includes broadband services with advertized download speeds of 20 Mbps or faster. As explained below the range of service speeds included in this basket varies considerably.

Summary of Service Speeds included in the Price Comparisons

Table 4 below provides a summary of the range and unweighted average service speeds of the surveyed broadband services taken into account for this study for Canada and the five surveyed foreign jurisdictions. The results are broken out by service level basket.

The number of surveyed broadband service plans in Canada is considerably higher than the other five surveyed countries, because of the fact that rates in five Canadian cities have been taken into account. Surveyed Level 1 speeds in Canada range from 0.3 to 2 Mbps, with an average speed of 1.1 Mbps. Level 2 speeds range from 5 to 10 Mbps. The average of 6.3 Mbps in this case is closer to the lower end of the range due to the preponderance of 5 to 7 Mbps services included in this basket. Level 3 speeds range from 10 to 16 Mbps, with an average download speed of just over 14 Mbps. In this case, many of the surveyed service plans provide advertized download speeds of 15 or 16 Mbps. Lastly, Level 4 includes a relatively wide range of service speeds from 25 to 50 Mbps, with an average of roughly 29 Mbps. In this case, most of the surveyed services provide advertized download speeds of 25 or 30 Mbps.

While three cities were included in the survey of U.S. broadband service rates, only a single city was considered for each of the other four surveyed countries included in the study. As a result, for some of the latter four countries only a single service plan was available from the surveyed service providers (which explains why the range results are fixed in Table 4 in a number cases). No service plan was available in one case (i.e., Level 1 in the U.K.).

With respect to Level 1, the surveyed U.S. service plans are very similar to those in Canada in terms average speed and the range of available services at this service level. The available plans in the remaining four surveyed countries are more limited in range and/or speed. For Level 2, the surveyed U.S. service plans are again very similar to those in Canada, whereas the average speeds of the surveyed services are slightly higher for France, Australia and Japan. Note that in the case of the U.K., a 20 Mbps service plan was included in the Level 2 basket because it included a usage cap which was in line with the Level 2 monthly usage assumption. The same service is available without a data cap for

a higher price – that service option was included in the Level 3 basket. For Level 3, the surveyed U.S. and U.K. plans offer slightly higher average speeds than in Canada. The same is true for France and Australia; however, in each of these two cases only a single plan was available for inclusion in the study. On the other hand, the range of speeds of the surveyed plans in Japan is more limited and the resulting average speed is below that of Canada.

The service speeds included in the Level 4 basket in the case of the U.S. range from 20 to 40 Mbps – the average speed is roughly 26 Mbps. In the case of the U.K., the service speeds included in the Level 4 basket range from 30 to 40 Mbps, and the average speed is 35 Mbps. For France, the speeds range from 25 to 100 Mbps, with an average of just over 50 Mbps. For Japan, the speeds range from 25 to 50 Mbps, with an average of just under 40 Mbps. And lastly, the lone Level 4 service speed included in the case of Australia is 100 Mbps. Thus, for the Level 4 basket, Canada's the average download speed of close roughly 29 Mbps is higher than the average broadband speed of the services surveyed in the U.S., but lower than those for all of the other countries included in the study (considerably so in most cases).

Higher speed services beyond those included in the Level 4 basket were available in most cases, including in Canada. The fastest speed services of the surveyed group of countries were found in Japan, where fibre-based broadband services of up to 1,000 Mbps are available.

Table 4
Comparison of Surveyed Broadband Service Speeds by Country
Range of Surveyed Speeds and Unweighted Average Surveyed Speeds

Country	Level 1		Level 2		Level 3		Level 4	
	Range	Average	Range	Average	Range	Average	Range	Average
Canada	0.3 – 2.0	1.1	5 - 10	6.3	10 - 16	14.2	25 - 50	28.9
U.S.	0.8 – 1.5	1.1	6 - 7	6.5	12 - 20	15.8	20 - 40	25.8
U.K.	na	na	8 - 20	12.7	10 - 20	16.7	30 - 40	35.0
France	0.3	0.3	8	8.0	20	20.0	25 – 100	51.7
Australia	0.3	0.3	8 - 8	8.0	20	20.0	100	100
Japan	1 - 1	1.0	5 - 8	7.0	10 - 12	11.5	26 - 50	39.0

Note: na implies no service in the speed range available.

It should also be noted that most of the foreign broadband service plans included in the study do not have monthly usage caps. The principle exceptions in this respect are the Australian broadband service plans included in the study, all of which have usage caps. As well, there are some plans in the U.K. which also include usage caps.

Price Comparison Results

Figure 6 below provides a comparison of current weighted average broadband service prices for Canada and all five selected foreign jurisdictions for each of the four broadband service level baskets.

In the case of the Level 1 broadband service basket, Canada's average monthly price of roughly \$35 falls into the middle of the group of five surveyed foreign jurisdictions. Prices in France and Australia are lower, whereas prices in the U.S. and Japan are considerably higher. As noted, none of the service providers surveyed in the U.K. offered a broadband service speed at or below 1.5 Mbps.

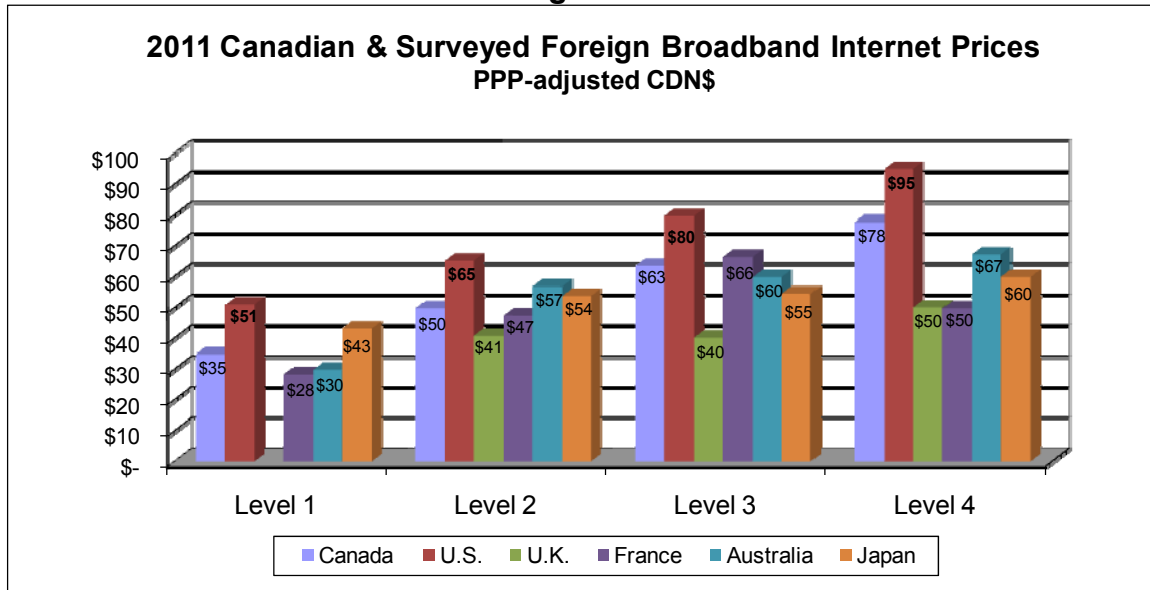
In the case of the Level 2 broadband service basket, Canada's average monthly price of roughly \$50 again falls into the middle of the group of surveyed foreign jurisdictions. Rates in the U.S., Australia and Japan are higher, whereas rates in the U.K. and France are lower than in Canada.

For the Level 3 broadband service basket, Canada's average monthly price of roughly \$63 falls in the higher end of the range of rates compared to the other surveyed countries. It is considerably lower than the rate in the U.S., and only slightly less than the rate measured for France. On the other hand, rates in the other three countries are lower, significantly so in the case of the U.K.

Lastly in the case of the Level 4 broadband service basket, Canada's average monthly price of roughly \$78 is only lower than the rate measured for the U.S. The measured rates in the other four countries are lower than in Canada, significantly so in most cases. It is worth noting in this respect that all of the countries with lower rates in this case also offer higher average download speeds compared to Canada (in respect of the broadband services surveyed for inclusion in the Level 4 basket).

It should be noted that, for France, the reason the Level 3 basket price is higher than Level 4 is due to the fact that only a single Level 3 broadband service plan was available from the surveyed French service providers whereas three were available in the case of Level 4. The weighted average price of the three plan included in the Level 4 basket are less costly than the lone Level 3 plan.

Figure 6



Wall Communications Inc. 2011

Detailed average price level results for the four-year period 2008 to 2011 for each of the four broadband service baskets by country are provided in Table A3.3 in Attachment 3. In addition, Figures A3.7, A3.8 and A3.9 illustrate the average price trends over the 2008 to 2011 period for each of the first three broadband service baskets, expressed in PPP-adjusted Canadian dollars. There is no time trend data available for the Level 4 basket given it has been included in the study for the first time this year.

Relative to previous years' studies, Canada's ranking has fallen slightly in the case of the Level 1 broadband service basket, where Canada formerly had among the lowest rates. It is now in the middle of the group for this basket. Canada's position has also fallen slightly in the case of the Level 3 broadband service basket. However, changes to the service speeds included in this basket, with the creation of the new Level 4 broadband service basket, affect the comparability of this year's with previous years' results for the Level 3 service basket. On the other hand, Canada's ranking in the case of the Level 2 service has not changed compared to previous years.

On balance, Canadian broadband service rates tend to fall within the middle of the pack of surveyed countries for the Level 1 (sub 1.5 Mbps), Level 2 (1.5 – 9 Mbps) and Level 3 (10 – 19 Mbps) broadband service baskets. In the case of the Level 4 (20 Mbps and faster) broadband service basket, Canada's rates are relatively high compared to most of the other surveyed countries (other than the U.S.), despite that fact the average service speeds for the surveyed services in the lower priced countries are higher than in Canada.

6.0 MOBILE INTERNET SERVICE

As in last year's study, a single mobile Internet service basket is included in this year's study which consists of the following service elements and characteristics:

- Technology: Third Generation (3G) or better
- Service speed: Advertized download speed of 1.5 Mbps or faster²⁰
- Monthly usage: 2 GB
- Equipment: USB modem stick (rental or purchase)

As with other telecommunications services included in this study, for price comparison purposes we rely on regular stand-alone mobile Internet service rates – i.e., rates which exclude limited term promotional discounts. We also exclude service activation fees (if any), since they are often waived for new customers. On the other hand, we include any applicable regulatory and/or government non-sales tax fees.

6.1 Canadian Mobile Internet Service Price Comparisons

The service providers considered in the case of mobile Internet services are the same as those included in the measurement of mobile wireless services. These include the incumbent wireless service providers (Rogers, Bell, TELUS and SaskTel) and, where applicable, the new wireless entrants (i.e., WIND, Mobilicity and Videotron).²¹ Here again, the new entrant's mobile Internet market shares are relatively small at this time and, therefore, the impact of their rates on the national average mobile Internet price calculated in this study is also very limited.

On a weighted basis, the current 2011 national average monthly price for the mobile Internet service basket is **\$52.41**, which is slightly lower than the rate measured in last year's study of \$54.02. The average advertised speed of the services included in this year's study is roughly 18 Mbps – i.e., reflecting the fact that most service providers are offering 3G+ mobile Internet access services in Canada (last year the average advertised speed was roughly 6 Mbps). The average data usage cap, where applicable, for the mobile Internet services included in the study is 2.4 GB per month.

²⁰ Note that advertised speeds in many cases are considerably higher than 1.5 Mbps in the case of recently introduced 3G+ and 4G services. The fastest available mobile Internet service speeds have generally been taken into account for price measurement purposes in this study. However, as noted in Section 5.0, actual and advertised speeds can vary significantly, especially in the case of wireless services which can be sensitive to overall network usage levels and a user's location.

²¹ Note that neither Public Mobile nor Primus currently provides mobile Internet access services.

As in the case of mobile wireless rates, we have also provided a comparison of the mobile Internet service rates offered by incumbents and new entrants, where applicable. The results are summarized in Table 5. Here again, the new entrants are currently offering mobile Internet service rates that are significantly lower than those of the incumbents – with relative price discounts of between 24% and 34%. While the mobile Internet service plans considered in the case of WIND and Videotron included 3 GB of monthly usage, Mobilicity's plan provides unlimited data usage. Thus, the new entrant's mobile Internet service plans are not only less expensive but also currently allow for higher data usage levels than the incumbents' plans.

Table 5
Canadian Mobile Internet Service Rates
Incumbents versus New Entrants

Baskets	Vancouver	Toronto	Montreal	Average
Incumbents	\$ 52.32	\$ 52.32	\$ 52.97	\$ 52.54
New Entrants	\$ 40.00	\$ 40.00	\$ 34.95	\$ 38.32
<i>Percentage Differential</i>	<i>-24%</i>	<i>-24%</i>	<i>-34%</i>	<i>-27%</i>

Averages calculated on a market share and population weighted basis.

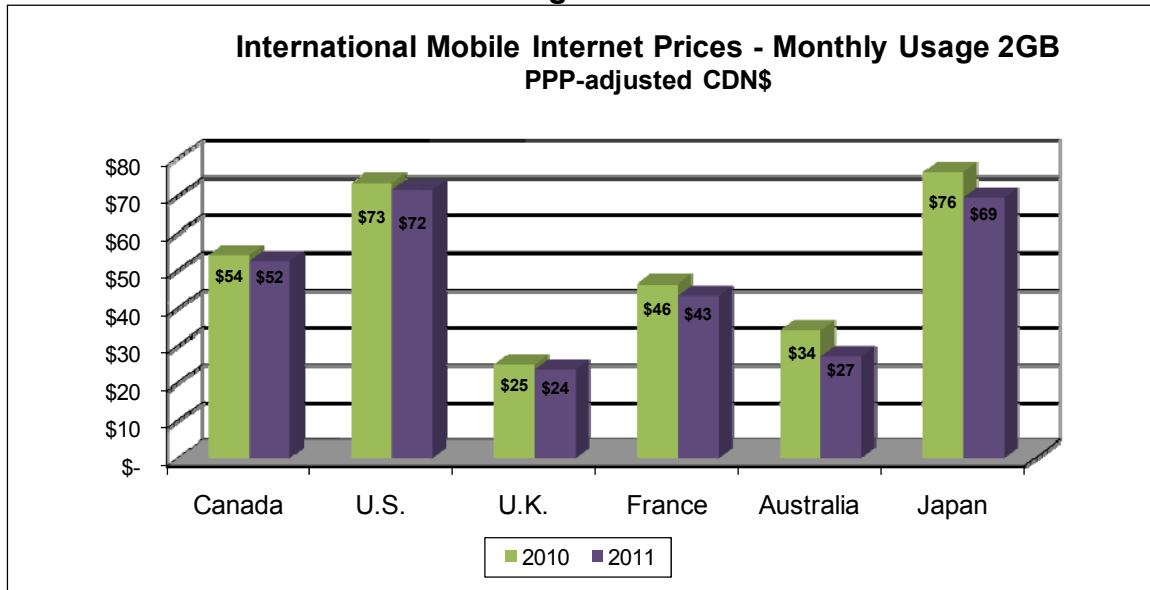
Wall Communications 2011

6.2 International Mobile Internet Service Price Comparisons

Figure 7 below provides a comparison of mobile Internet service rates for Canada and the five surveyed foreign jurisdictions for 2011 along with last year's results. More detailed mobile Internet service price information, by country, is provided in Table A3.4 in Attachment 3.

As shown in Figure 7, mobile Internet service rates in Canada as well as all five surveyed countries declined slightly in 2011 compared to 2010. For 2011, the Canadian monthly average mobile Internet price of roughly \$52 falls within the middle of the group of surveyed countries, as it did in 2010. Rates for the defined mobile Internet service basket are higher in the U.S. and Japan. Rates in the U.K., France and Australia are lower than Canada, significantly so in the cases of the U.K. and Japan.

Figure 7



Wall Communications Inc. 2011

As noted, the average advertized speed of the Canadian mobile Internet services included in this year's study is roughly 18 Mbps and the average data usage cap is 2.4 GB per month. The average advertized speed of the services surveyed in the five surveyed foreign jurisdictions are all lower than the average Canadian speed. For instance, at the low end, the average advertized speed in the U.S. was 2.6 Mbps while, at the high end, advertized speeds in France and Japan are just over 13 Mbps. On the other hand, the average data usage caps, where they exist, are currently higher in all of the five surveyed foreign jurisdictions compared to Canada. The surveyed foreign plans included average monthly usage caps ranging from 2.7 GB in the U.K., to 5 GB in the U.S., to unlimited plans in France and Japan.

On balance, Canadian mobile Internet service rates tend to fall within the middle of the pack of surveyed countries. At the same time, however, while the advertized service speeds of the services in Canada are faster than those in the other surveyed countries, the data usage caps are in Canada are lower.

7.0 BUNDLED SERVICES

Lastly, we have also compared prices for three alternative sets of bundled services:

- **Bundle 1:** Wireline, Internet and Wireless Services
- **Bundle 2:** Wireline, Internet and Digital TV Services
- **Bundle 3:** Wireline, Internet, Wireless and Digital TV Services

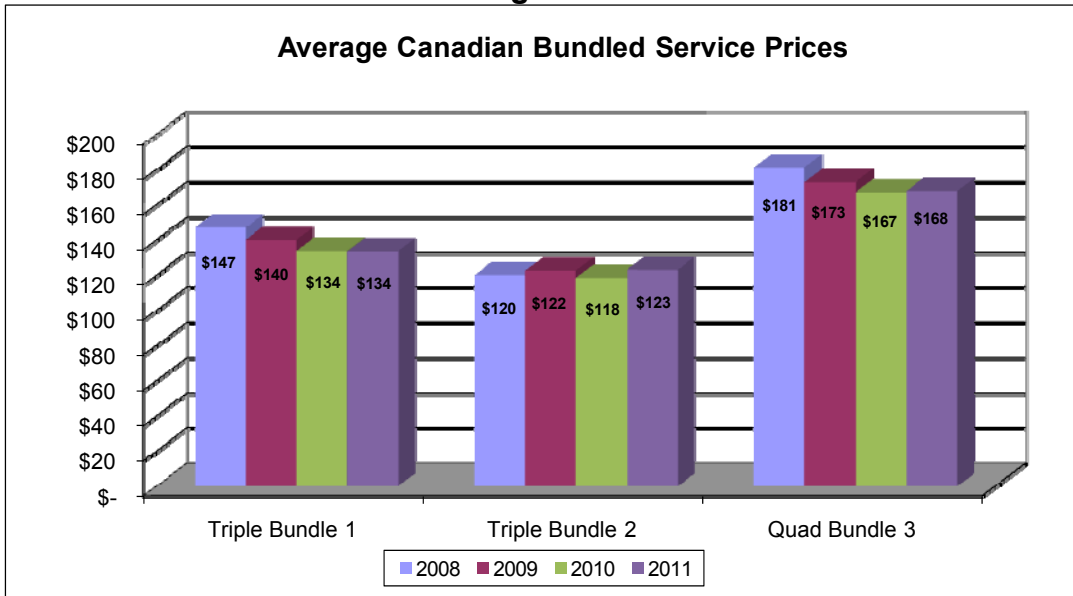
For the wireline, Internet and wireless mobile services elements, Level 2 or "average" usage service baskets were used in each case. For television services, a basic digital TV package was included in the applicable bundle.

7.1 Canadian Bundled Service Price Comparisons

As in last year's study, we measured the price discounts available to consumers who purchased, where available, wireline, broadband, wireless and/or basic digital television services on a bundled basis from either the local incumbent telephone or cable TV company. All of the incumbent telephone companies surveyed are capable of offering all three bundles, whereas some cable companies cannot provide all services, such as Access Communications and Shaw, since they do not provide wireless services either directly or indirectly through a third party. Similarly, while we included Primus in this year's study, it only offers the first of the three bundles (i.e. Bundle 1) since it does not currently offer digital TV services.

Figure 8 below provides a summary of Canadian average monthly prices for each of the three defined service bundles for the period 2008 to 2011. The average monthly price for Bundle 1 has declined significantly since 2008 (i.e., by roughly 9% in total), although the current monthly price of \$134 is roughly the same as last year. Similarly, the average monthly price for Bundle 3 has also declined noticeably since 2008 (by roughly 7% in total). The current Bundle 3 average monthly price of \$168 is very similar to last year's rate. On the other hand, the average monthly price for Bundle 2 has generally increased slightly over the last four years. Generally, for 2011, the bundling discounts for all three bundles fall into the 8% to 12% range on a national average basis relative to the sum of the individual stand-alone prices.

Figure 8



Wall Communications Inc. 2011

Table A2.4 in Attachment 2 provides average bundled service prices by city and by bundle for the period 2008 to 2011. As can be seen from that table, of the five Canadian cities surveyed in the study, the most significant bundled service rate reductions were found in Vancouver, as were the lowest bundled service rates.

7.2 International Bundled Service Price Comparisons

As with the Canadian service providers included in the study, some of the foreign service providers we surveyed can provide all of the three bundles considered in this study (e.g., the incumbent telephone companies in the U.S., France, Australia and Japan), while others cannot typically because they do not offer mobile wireless services. This includes in the latter case the surveyed cable companies in the U.S. (Comcast and Time Warner) as well as BT in the U.K. (it discontinued providing wireless services in 2009). In BT's case, we included Orange's Level 2 mobile wireless service (at stand-alone rates) along with other BT services to ensure that we had two bundled service packages to consider in the case of the U.K. As well, in the case of J:COM in Japan, J:COM no longer resells Willcom mobile wireless service (Willcom was acquired by Softbank last year). In J:COM's case, we have nevertheless continued to include Willcom's Level 2 mobile wireless service as part of J:COM's Bundles 1 and 3; however, there is no longer a bundling discount available for this service element.

In addition, it should be noted that basic digital TV service offerings can vary significantly by service provider, which complicates the comparison of bundles which include this service. Some basic digital TV service offers provide only a

relatively small number of channels, whereas others are more comprehensive in scope and, accordingly, are more expensive. Moreover, in some cases, basic digital TV services are included with broadband services for little or no additional cost (e.g., in the U.K. and France), whereas satellite and cable basic digital TV packages in the U.S. typically start at US\$60. This fact tends to inflate differences in rate comparisons across foreign jurisdictions for bundles which include digital TV services.

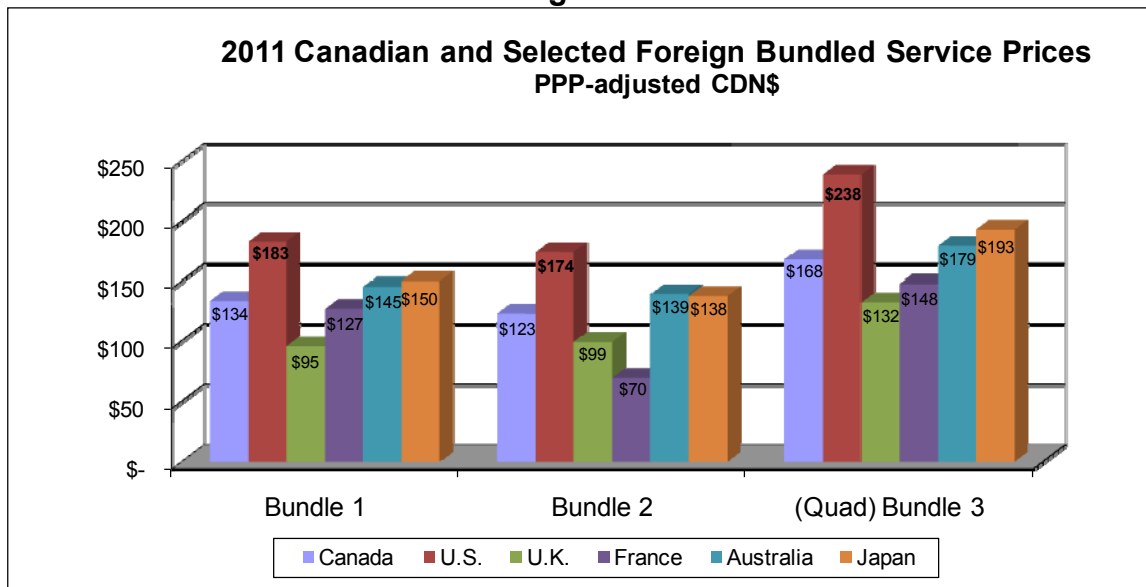
Figure 9 below provides a comparison of current average monthly prices for each of the three service bundles. More detailed bundled price information for the period 2008 to 2011 is provided in Table A3.5 in Attachment 3. As well, price trends in PPP-adjusted Canadian dollar prices for each of the three bundles are shown in Figures A3.10, A3.11 and A3.12.

In the case of service Bundle 1, the current average monthly price in Canada of roughly \$134 falls into the middle of the average rates for surveyed group countries. Rates for Bundle 1 are lower in the U.K. and France, but higher in Australia, Japan and, considerably so, in the U.S.

A similar result occurs in the case of Bundle 2. The current Canadian average monthly price of \$123 is once again higher than the rates in the U.K. and France, but lower than rates in Australia, Japan and the U.S.

Lastly, the same relative ranking applies in the case of Bundle 3 which includes all four services – wireline, broadband, wireless and digital TV.

Figure 9



Wall Communications Inc. 2011

As Table A3.5 of Attachment 3 shows, Canada's middle-of-the-pack rating with respect to bundled services has changed little over the last few years. However, the price differentials across the selected jurisdictions have tended to grow somewhat over time (e.g., the U.S. price is increasingly higher than Canada's whereas the U.K. and French rates are increasingly lower).

In sum, average Canadian bundled service rates, on balance, tend to fall in the middle of the group of countries surveyed for this study. While differences across countries in the underlying services included in the bundles (especially broadband and digital TV services) can make bundled service comparisons somewhat tenuous, it is noteworthy that Canadian bundled service rates continue to compare very favourably to those in the U.S., where service pricing and provisioning practices are similar to those in Canada.

8.0 SUMMARY OF RESULTS

The following table provides a summary of the 2011 price comparison results for Canada and the five surveyed foreign jurisdictions expressed in PPP-adjusted Canadian dollars.

Table 6
Summary of International Price Comparisons
Average Monthly Prices in PPP adjusted \$CDN

	Canada	U.S.	U.K.	France	Australia	Japan
Wireline Service						
Level 1 (low-volume use)	\$ 32.06	\$ 44.84	\$ 34.35	\$ 37.86	\$ 45.86	\$ 29.55
Level 2 (average use)	\$ 49.81	\$ 74.37	\$ 46.18	\$ 54.83	\$ 73.02	\$ 59.33
Level 3 (high-volume use)	\$ 60.22	\$ 79.59	\$ 60.86	\$ 68.20	\$ 81.77	\$ 91.61
Wireless Service						
Level 1 (low-volume use)	\$ 33.73	\$ 33.38	\$ 18.64	\$ 26.13	\$ 20.95	\$ 25.29
Level 2 (average use)	\$ 50.51	\$ 68.69	\$ 32.75	\$ 74.86	\$ 36.97	\$ 49.14
Level 3 (high-volume use)	\$ 99.69	\$ 139.03	\$ 64.27	\$ 100.75	\$ 73.87	\$ 120.21
Broadband (Fixed access)						
Level 1 (\leq 1.5 Mbps, 2GB/month)	\$ 34.85	\$ 51.06	na	\$ 28.33	\$ 29.84	\$ 43.13
Level 2 (1.5 - 9 Mbps, 15GB/month)	\$ 49.79	\$ 65.14	\$ 40.72	\$ 47.41	\$ 56.74	\$ 53.79
Level 3 (10 - 19Mbps, 30GB/month)	\$ 63.44	\$ 79.60	\$ 40.09	\$ 66.37	\$ 59.72	\$ 54.52
Level 4 (\geq 20 Mbps, 50 GB/month)	\$ 77.71	\$ 95.07	\$ 50.07	\$ 49.79	\$ 67.19	\$ 59.76
Mobile Internet (\geq 3G Technology)						
Speed \approx 1.5 Mbps or faster, 2GB/month	\$ 52.41	\$ 71.50	\$ 23.51	\$ 43.30	\$ 27.18	\$ 69.38
Bundled Services						
1) Wireline-Broadband-Wireless	\$ 133.50	\$ 182.65	\$ 95.36	\$ 126.95	\$ 145.28	\$ 149.91
2) Wireline-Broadband-Digital TV	\$ 122.87	\$ 173.88	\$ 99.08	\$ 69.70	\$ 139.49	\$ 137.73
3) Wireline-Broadband-Wireless-Digital TV	\$ 167.81	\$ 238.27	\$ 132.38	\$ 147.60	\$ 179.27	\$ 192.70

Latest available OECD Purchasing Power Parity (PPP) indexes were used to calculate PPP-adjusted exchange rates. Average market exchange rates for the month corresponding to the OECD PPPs were used to convert foreign prices into Canadian dollars.

Wall Communications Inc. 2011

ATTACHMENT 1 – SERVICE BASKETS

**TABLE A1.1
WIRELINE SERVICE BASKETS**

Local Minutes of Use	Level 1	Level 2	Level 3
Outgoing (55%)	220	550	880
Incoming (45%)	180	450	720
Total Minutes	400	1,000	1,600
Outgoing by Time of Day/Week			
Peak (40%)	88	220	352
Off-Peak (60%)	132	330	528
Outgoing LD	10% of total	20% of total	30% of total
National Minutes	16	70	150
U.S. Minutes	6	30	80
Other Int'l Minutes		10	34
Total	22	110	264
Outgoing to Mobile	15% of total	15% of total	15% of total
Local	33	60	100
National		22.5	32
International			
Total	33	82.5	132
Average Call Length	3	3	3
Optional Features			
Voice Mail		Yes	Yes
Caller ID		Yes	Yes
Other			Yes (bundled, if available)

**TABLE A1.2
WIRELESS USER SERVICE BASKETS**

Minutes of Use/Month	Level 1	Level 2	Level 3
Outgoing (60%)	90	270	720
Incoming (40%)	60	180	480
Total	150	450	1,200
Time of Day/Week			
Peak (40%)	60	180	480
Off-Peak (60%)	90	270	720
Outgoing LD	10% of total	10% of total	15% of total
National	9	21	90
US		6	18
Other			
Total	9	27	108
Outgoing to Mobile	50% of total	50% of total	50% of total
On-net (2/3)	30	90	240
Off-net (1/3)	15	45	120
Total	45	135	360
Average Call Length	3 min.	3 min.	3 min.

Minutes of Use/Month	Level 1	Level 2	Level 3
Features			
Voice Mail		Yes	Yes
Caller ID		Yes	Yes
Other			Yes
Data			
SMS		200	200
Data Service			1 GB

**TABLE A1.3
BROADBAND INTERNET SERVICE BASKETS**

Elements	Level 1	Level 2	Level 3	Level 4
Transmission Speed	Basic Services ≤ 1.5 Mbps	1.5 – 9 Mbps Target 5 Mbps	10 – 19 Mbps Target 15 Mbps	≥ 20 Mbps Target 20 – 40 Mbps
Assumed Average Usage	2 GB	10 GB	30 GB	50 GB
Modem	Rental / 24 month amortization	Rental / 24 month amortization	Rental / 24 month amortization	Rental / 24 month amortization

**TABLE A1.4
MOBILE INTERNET SERVICE BASKETS**

Elements	Level 1
Transmission Speed	≥ 1.5 Mbps
Assumed Usage	2 GB
USB Modem	No cost with contract or rental / 24 month amortization

**TABLE A1.5
BUNDLED SERVICE BASKETS**

Elements	Bundle 1 Triple-play	Bundle 2 Triple-play	Bundle 3 Quad-Play
Wireline	Wireline Basket 2 Usage	Wireline Basket 2 Usage	Wireline Basket 2 Usage
Wireless	Wireless Basket 2 Usage		Wireless Basket 2 Usage
Broadband Internet	Broadband Basket 2 Usage	Broadband Basket 2 Usage	Broadband Basket 2 Usage
Television		Basic Digital Package	Basic Digital Package

ATTACHMENT 2 – CANADIAN PRICE COMPARISON RESULTS

Table A2.1

Canadian Wireline Prices

Baskets	Halifax	Montreal	Toronto	Regina	Vancouver	Average
Level 1 Basket (low-volume use, 400 min/month)						
2008	\$ 31.73	\$ 30.27	\$ 31.61	\$ 28.16	\$ 30.90	\$ 30.88
2009	\$ 32.23	\$ 28.92	\$ 32.51	\$ 28.16	\$ 25.92	\$ 29.80
2010	\$ 30.08	\$ 29.39	\$ 33.88	\$ 26.49	\$ 28.27	\$ 31.16
2011	\$ 31.79	\$ 27.33	\$ 34.63	\$ 26.52	\$ 34.52	\$ 32.06
CAGR	0%	-3%	3%	-2%	4%	1%
Level 2 Basket (average use, 1,000 min/month)						
2008	\$ 48.93	\$ 45.44	\$ 48.96	\$ 41.39	\$ 48.67	\$ 47.91
2009	\$ 53.61	\$ 52.01	\$ 57.78	\$ 41.39	\$ 34.68	\$ 50.05
2010	\$ 50.78	\$ 46.81	\$ 58.09	\$ 41.50	\$ 44.18	\$ 51.42
2011	\$ 47.34	\$ 46.72	\$ 54.66	\$ 41.52	\$ 44.62	\$ 49.81
CAGR	-1%	1%	4%	0%	-3%	1%
Level 3 Basket (high-volume use, 1,600 min/month)						
2008	\$ 60.63	\$ 59.36	\$ 63.02	\$ 49.81	\$ 57.45	\$ 60.27
2009	\$ 66.34	\$ 61.68	\$ 67.59	\$ 49.56	\$ 51.51	\$ 61.55
2010	\$ 67.02	\$ 61.15	\$ 64.19	\$ 48.96	\$ 51.79	\$ 60.78
2011	\$ 58.35	\$ 60.97	\$ 61.36	\$ 48.99	\$ 57.59	\$ 60.22
CAGR	-1%	1%	-1%	-1%	0%	0%

Note that some generally minor changes in methodology apply year-to-year.

Averages calculated on a market share and population weighted basis.

Wall Communications 2011

Table A2.2

Canadian Mobile Wireless Prices

Baskets	Halifax	Montreal	Toronto	Regina	Vancouver	Average
Level 1 Basket (low-volume use, 150 min/month)						
2008	\$ 33.25	\$ 31.96	\$ 33.55	\$ 30.16	\$ 32.90	\$ 32.73
2009	\$ 32.48	\$ 33.24	\$ 33.34	\$ 29.44	\$ 33.32	\$ 33.03
2010	\$ 29.23	\$ 34.38	\$ 34.33	\$ 28.64	\$ 34.10	\$ 34.03
2011	\$ 29.24	\$ 34.47	\$ 34.45	\$ 29.59	\$ 31.94	\$ 33.73
CAGR	-4%	3%	1%	-1%	-1%	1%
Level 2 Basket (average use, 450 min and 200 text per month)						
2008	\$ 53.14	\$ 62.62	\$ 63.37	\$ 61.20	\$ 58.34	\$ 60.81
2009	\$ 48.73	\$ 59.17	\$ 59.20	\$ 44.44	\$ 59.30	\$ 57.78
2010	\$ 48.05	\$ 54.34	\$ 53.56	\$ 44.77	\$ 53.74	\$ 53.49
2011	\$ 47.39	\$ 51.50	\$ 49.99	\$ 48.19	\$ 50.86	\$ 50.51
CAGR	-4%	-6%	-8%	-8%	-4%	-6%
Level 3 Basket (high-volume use, 1,200 min, 200 text and 1GB data per month)						
2008	\$ 121.04	\$ 113.21	\$ 111.51	\$ 113.67	\$ 109.68	\$ 112.34
2009	\$ 105.61	\$ 104.38	\$ 102.20	\$ 94.64	\$ 101.24	\$ 103.24
2010	\$ 101.44	\$ 108.37	\$ 112.63	\$ 94.97	\$ 107.27	\$ 109.59
2011	\$ 96.73	\$ 98.73	\$ 100.76	\$ 96.69	\$ 99.61	\$ 99.69
CAGR	-7%	-4%	-3%	-5%	-3%	-4%

Note that some generally minor changes in methodology apply year-to-year.

Averages calculated on a market share and population weighted basis.

Note also that revisions were made to the 2010 Level 1 and 2 basket rates to correct for the exclusion of Rogers' government regulatory recovery fees.

Wall Communications 2011

Table A2.3

Canadian Broadband Internet Service Prices

Baskets	Halifax	Montreal	Toronto	Regina	Vancouver	Average
Level 1 Basket (< 1.5 Mbps, 2 GB/month)						
2008	\$ 34.95	\$ 32.45	\$ 38.95	\$ 30.45	\$ 23.45	\$ 32.88
2009	\$ 35.95	\$ 28.43	\$ 35.45	\$ 30.45	\$ 24.95	\$ 30.98
2010	\$ 36.95	\$ 29.43	\$ 33.45	\$ 30.95	\$ 29.00	\$ 31.44
2011	\$ 36.15	\$ 36.90	\$ 34.15	\$ 32.52	\$ 33.00	\$ 34.85
CAGR	1%	4%	-4%	2%	12%	2%
Level 2 Basket (1.5 - 9 Mbps, 15 GB/month)						
2008	\$ 47.45	\$ 48.95	\$ 48.95	\$ 45.45	\$ 40.95	\$ 46.58
2009	\$ 48.45	\$ 50.43	\$ 50.95	\$ 45.45	\$ 38.45	\$ 47.26
2010	\$ 49.45	\$ 51.43	\$ 47.95	\$ 45.95	\$ 40.00	\$ 47.60
2011	\$ 50.75	\$ 52.83	\$ 49.33	\$ 48.52	\$ 45.65	\$ 49.79
CAGR	2%	3%	0%	2%	4%	2%
Level 3 Basket (10 - 19 Mbps, 30 GB/month)						
2008	\$ 57.45	\$ 83.45	\$ 73.95	\$ 55.95	\$ 50.95	\$ 68.74
2009	\$ 58.45	\$ 64.40	\$ 62.45	\$ 55.95	\$ 53.45	\$ 60.08
2010	\$ 59.45	\$ 65.40	\$ 62.45	\$ 56.45	\$ 55.48	\$ 61.88
2011	\$ 60.75	\$ 66.33	\$ 65.35	\$ 56.75	\$ 55.00	\$ 63.44
CAGR	2%	-7%	-4%	0%	3%	-3%
Level 4 Basket (> 20 Mbps, 50 GB/month)						
2011	\$ 84.75	\$ 73.30	\$ 73.75	\$ 99.95	\$ 91.40	\$ 77.71

Note that some generally minor changes in methodology apply year-to-year.

Averages calculated on a market share and population weighted basis.

Wall Communications 2011

Table A2.4

Canadian Bundled Communications Service Prices

Baskets	Halifax	Montreal	Toronto	Regina	Vancouver	Average
Bundle 1 (Wireline-Broadband-Mobile)						
2008	\$ 139.86	\$ 141.61	\$ 152.20	\$ 140.02	\$ 152.47	\$ 146.96
2009	\$ 135.63	\$ 141.37	\$ 152.65	\$ 120.12	\$ 122.22	\$ 139.86
2010	\$ 132.23	\$ 135.16	\$ 139.75	\$ 125.12	\$ 118.30	\$ 133.83
2011	\$ 132.10	\$ 131.72	\$ 138.69	\$ 130.36	\$ 124.54	\$ 133.50
CAGR	<i>-2%</i>	<i>-2%</i>	<i>-3%</i>	<i>-2%</i>	<i>-7%</i>	<i>-3%</i>
Bundle 2 (Wireline-Broadband-TV)						
2008	\$ 124.71	\$ 118.68	\$ 126.54	\$ 112.13	\$ 111.40	\$ 119.93
2009	\$ 121.14	\$ 123.46	\$ 129.71	\$ 115.13	\$ 110.31	\$ 122.43
2010	\$ 120.37	\$ 116.94	\$ 123.39	\$ 119.47	\$ 108.36	\$ 118.41
2011	\$ 121.46	\$ 119.09	\$ 129.92	\$ 127.52	\$ 112.05	\$ 122.87
CAGR	<i>-1%</i>	<i>0%</i>	<i>1%</i>	<i>4%</i>	<i>0%</i>	<i>1%</i>
Bundle 3 (Wireline-Broadband-Mobile-TV)						
2008	\$ 178.86	\$ 182.13	\$ 183.94	\$ 148.97	\$ 186.47	\$ 181.31
2009	\$ 169.03	\$ 181.24	\$ 182.81	\$ 142.07	\$ 151.22	\$ 172.68
2010	\$ 169.19	\$ 168.65	\$ 169.82	\$ 145.81	\$ 158.98	\$ 167.01
2011	\$ 170.01	\$ 164.24	\$ 177.48	\$ 160.04	\$ 150.77	\$ 167.81
CAGR	<i>-2%</i>	<i>-3%</i>	<i>-1%</i>	<i>2%</i>	<i>-7%</i>	<i>-3%</i>

Note that some generally minor changes in methodology apply year-to-year.

Averages calculated on a market share and population weighted basis.

Wall Communications 2011

ATTACHMENT 3 – FOREIGN PRICE COMPARISON RESULTS

Table A3.1
International Wireline Prices

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
Own Currency							
Wireline Level 1	2008	\$ 30.88	\$ 31.68	£17.14	€ 22.43	\$ 53.84	
	2009	\$ 29.80	\$ 31.56	£18.57	€ 22.95	\$ 54.91	
	2010	\$ 31.16	\$ 32.63	£19.35	€ 23.29	\$ 54.35	¥2,767
	2011	\$ 32.06	\$ 34.23	£20.58	€ 26.71	\$ 55.81	¥2,766
	CAGR	1%	3%	6%	6%	1%	0%
Wireline Level 2	2008	\$ 47.91	\$ 56.64	£24.24	€ 41.25	\$ 104.43	
	2009	\$ 50.05	\$ 56.92	£26.19	€ 41.22	\$ 105.95	
	2010	\$ 51.42	\$ 56.76	£26.15	€ 41.10	\$ 105.28	¥5,416
	2011	\$ 49.81	\$ 56.77	£27.66	€ 38.68	\$ 88.87	¥5,555
	CAGR	1%	0%	4%	-2%	-5%	3%
Wireline Level 3	2008	\$ 60.27	\$ 66.21	£32.87	€ 48.20	\$ 117.00	
	2009	\$ 61.55	\$ 65.33	£36.11	€ 49.48	\$ 117.00	
	2010	\$ 60.78	\$ 63.69	£36.17	€ 47.76	\$ 116.14	¥8,430
	2011	\$ 60.22	\$ 60.76	£36.45	€ 48.12	\$ 99.51	¥8,578
	CAGR	0%	-3%	4%	0%	-5%	2%
CDN\$ - PPP							
Wireline Level 1	2008	\$ 30.88	\$ 37.82	\$ 32.32	\$ 28.73	\$ 43.35	
	2009	\$ 29.80	\$ 39.45	\$ 35.24	\$ 31.24	\$ 45.20	
	2010	\$ 31.16	\$ 39.75	\$ 35.32	\$ 31.53	\$ 44.45	\$ 27.23
	2011	\$ 32.06	\$ 44.84	\$ 34.35	\$ 37.86	\$ 45.86	\$ 29.55
	CAGR	1%	6%	2%	10%	2%	8%
Wireline Level 2	2008	\$ 47.91	\$ 67.63	\$ 45.71	\$ 52.84	\$ 84.09	
	2009	\$ 50.05	\$ 71.15	\$ 49.68	\$ 56.10	\$ 87.22	
	2010	\$ 51.42	\$ 69.13	\$ 47.74	\$ 55.63	\$ 86.10	\$ 53.30
	2011	\$ 49.81	\$ 74.37	\$ 46.18	\$ 54.83	\$ 73.02	\$ 59.33
	CAGR	1%	3%	0%	1%	-5%	11%
Wireline Level 3	2008	\$ 60.27	\$ 79.05	\$ 61.99	\$ 61.74	\$ 94.21	
	2009	\$ 61.55	\$ 81.66	\$ 68.51	\$ 67.35	\$ 96.32	
	2010	\$ 60.78	\$ 77.58	\$ 66.03	\$ 64.65	\$ 94.98	\$ 82.95
	2011	\$ 60.22	\$ 79.59	\$ 60.86	\$ 68.20	\$ 81.77	\$ 91.61
	CAGR	0%	0%	-1%	3%	-5%	10%
CDN\$ - Exchange Rate							
Wireline Level 1	2008	\$ 30.88	\$ 31.52	\$ 34.02	\$ 34.21	\$ 49.26	
	2009	\$ 29.80	\$ 39.45	\$ 33.25	\$ 37.64	\$ 46.12	
	2010	\$ 31.16	\$ 34.27	\$ 31.54	\$ 33.54	\$ 51.09	\$ 33.21
	2011	\$ 32.06	\$ 33.71	\$ 32.72	\$ 36.06	\$ 55.25	\$ 33.20
	CAGR	1%	2%	-1%	2%	4%	0%
Wireline Level 2	2008	\$ 47.91	\$ 56.36	\$ 48.11	\$ 62.91	\$ 95.55	
	2009	\$ 50.05	\$ 71.15	\$ 46.87	\$ 67.59	\$ 89.00	
	2010	\$ 51.42	\$ 59.59	\$ 42.62	\$ 59.18	\$ 98.96	\$ 65.00
	2011	\$ 49.81	\$ 55.92	\$ 43.98	\$ 52.22	\$ 87.98	\$ 66.67
	CAGR	1%	0%	-3%	-6%	-3%	3%
Wireline Level 3	2008	\$ 60.27	\$ 65.88	\$ 65.25	\$ 73.50	\$ 107.06	
	2009	\$ 61.55	\$ 81.66	\$ 64.63	\$ 81.15	\$ 98.28	
	2010	\$ 60.78	\$ 66.88	\$ 58.96	\$ 68.78	\$ 109.17	\$ 101.16
	2011	\$ 60.22	\$ 59.85	\$ 57.96	\$ 64.96	\$ 98.52	\$ 102.93
	CAGR	0%	-3%	-4%	-4%	-3%	2%

Note that some generally minor changes in methodology apply year-to-year.

Note also that changes in the 2010 CDN\$-PPP and CDN\$ prices for the UK and France, compared to last year's study, are due to corrections in the exchange rates for those two countries.

Latest available OECD Purchasing Power Parity (PPP) indexes were used to calculate PPP-adjusted exchange rates. Average market exchange rates for the month corresponding to the OECD PPPs were used to convert foreign prices into Canadian dollars.

Wall Communications Inc. 2011

Figure A3.1

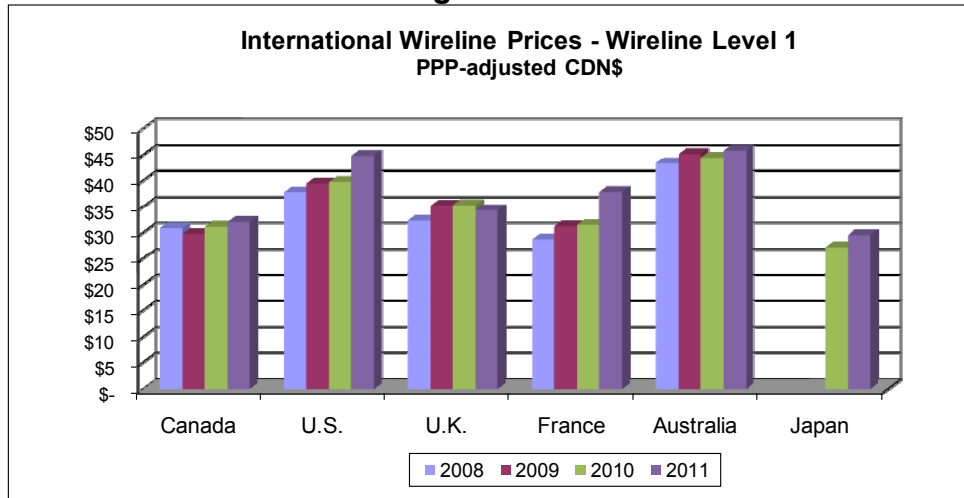


Figure A3.2

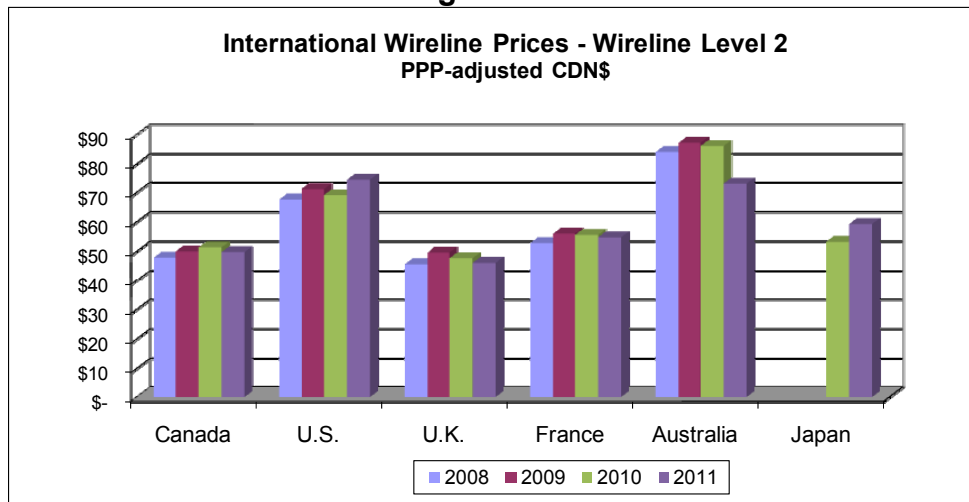


Figure A3.3

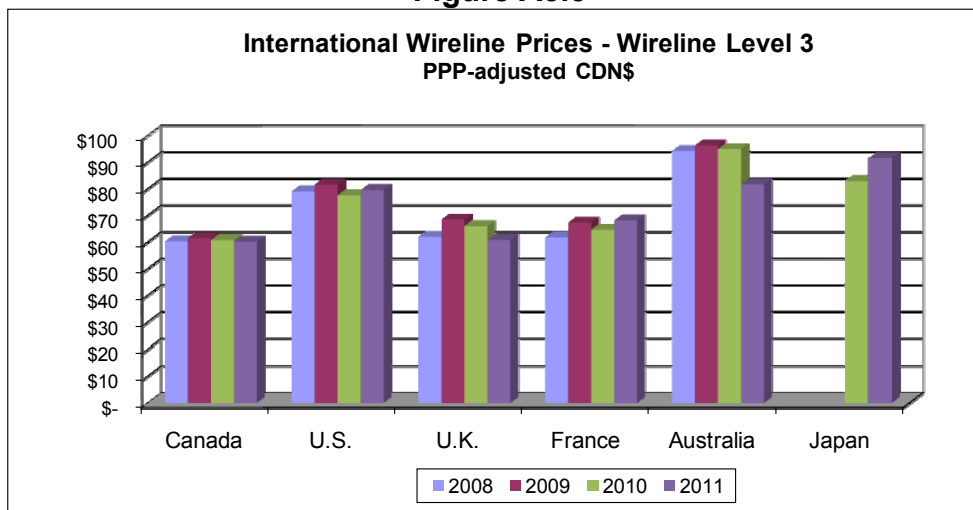


Table A3.2
International Mobile Wireless Prices

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
Own Currency							
Wireless Level 1	2008	\$ 32.73	\$ 34.27	£14.09	€ 18.39	\$ 27.27	
	2009	\$ 33.03	\$ 34.01	£12.82	€ 18.64	\$ 24.27	
	2010	\$ 34.03	\$ 33.20	£12.77	€ 19.61	\$ 23.18	¥2,459
	2011	\$ 33.73	\$ 25.48	£11.17	€ 18.44	\$ 25.50	¥2,368
	CAGR	1%	-9%	-7%	0%	-2%	-4%
Wireless Level 2	2008	\$ 60.81	\$ 54.06	£28.63	€ 43.95	\$ 40.86	
	2009	\$ 57.78	\$ 53.10	£23.57	€ 45.19	\$ 44.55	
	2010	\$ 53.49	\$ 49.75	£20.41	€ 50.76	\$ 43.60	¥4,506
	2011	\$ 50.51	\$ 52.43	£19.62	€ 52.81	\$ 44.99	¥4,601
	CAGR	-6%	-1%	-12%	6%	3%	2%
Wireless Level 3	2008	\$ 112.34	\$ 113.67	£47.85	€ 86.23	\$ 120.16	
	2009	\$ 103.24	\$ 106.06	£40.25	€ 80.13	\$ 113.14	
	2010	\$ 109.59	\$ 101.81	£38.06	€ 80.80	\$ 112.41	¥11,909
	2011	\$ 99.69	\$ 106.12	£38.50	€ 71.08	\$ 89.90	¥11,256
	CAGR	-4%	-2%	-7%	-6%	-9%	-5%
CDN\$ - PPP							
Wireless Level 1	2008	\$ 32.73	\$ 40.92	\$ 26.57	\$ 23.55	\$ 21.96	
	2009	\$ 33.03	\$ 42.51	\$ 24.33	\$ 25.37	\$ 19.98	
	2010	\$ 34.03	\$ 40.43	\$ 23.31	\$ 26.54	\$ 18.96	\$ 24.20
	2011	\$ 33.73	\$ 33.38	\$ 18.64	\$ 26.13	\$ 20.95	\$ 25.29
	CAGR	1%	-7%	-11%	4%	-2%	5%
Wireless Level 2	2008	\$ 60.81	\$ 64.54	\$ 53.98	\$ 56.30	\$ 32.90	
	2009	\$ 57.78	\$ 66.38	\$ 44.73	\$ 61.51	\$ 36.67	
	2010	\$ 53.49	\$ 60.60	\$ 37.27	\$ 68.70	\$ 35.65	\$ 44.34
	2011	\$ 50.51	\$ 68.69	\$ 32.75	\$ 74.86	\$ 36.97	\$ 49.14
	CAGR	-6%	2%	-15%	10%	4%	11%
Wireless Level 3	2008	\$ 112.34	\$ 135.72	\$ 90.23	\$ 110.46	\$ 96.75	
	2009	\$ 103.24	\$ 132.58	\$ 76.36	\$ 109.08	\$ 93.13	
	2010	\$ 109.59	\$ 124.01	\$ 69.49	\$ 109.37	\$ 91.93	\$ 117.19
	2011	\$ 99.69	\$ 139.03	\$ 64.27	\$ 100.75	\$ 73.87	\$ 120.21
	CAGR	-4%	1%	-11%	-3%	-9%	3%
CDN\$ - Exchange Rate							
Wireless Level 1	2008	\$ 32.73	\$ 34.10	\$ 27.97	\$ 28.04	\$ 24.95	
	2009	\$ 33.03	\$ 42.51	\$ 22.96	\$ 30.56	\$ 20.39	
	2010	\$ 34.03	\$ 34.86	\$ 20.81	\$ 28.23	\$ 21.79	\$ 29.51
	2011	\$ 33.73	\$ 25.10	\$ 17.76	\$ 24.89	\$ 25.25	\$ 28.42
	CAGR	1%	-10%	-14%	-4%	0%	-4%
Wireless Level 2	2008	\$ 60.81	\$ 53.79	\$ 56.83	\$ 67.03	\$ 37.39	
	2009	\$ 57.78	\$ 66.38	\$ 42.19	\$ 74.11	\$ 37.42	
	2010	\$ 53.49	\$ 52.24	\$ 33.27	\$ 73.09	\$ 40.98	\$ 40.98
	2011	\$ 50.51	\$ 51.64	\$ 31.19	\$ 71.30	\$ 44.54	\$ 55.21
	CAGR	-6%	-1%	-18%	2%	6%	35%
Wireless Level 3	2008	\$ 112.34	\$ 113.10	\$ 94.98	\$ 131.50	\$ 109.95	
	2009	\$ 103.24	\$ 132.58	\$ 72.04	\$ 131.42	\$ 95.03	
	2010	\$ 109.59	\$ 106.90	\$ 62.04	\$ 116.35	\$ 105.67	\$ 105.67
	2011	\$ 99.69	\$ 104.53	\$ 61.21	\$ 95.96	\$ 89.00	\$ 135.07
	CAGR	-4%	-3%	-14%	-10%	-7%	28%

Note that some generally minor changes in methodology apply year-to-year.

Note also that changes in the 2010 CDN\$-PPP and CDN\$ prices for the UK and France, compared to last year's study, are due to corrections in the exchanges rates for those two countries.

Latest available OECD Purchasing Power Parity (PPP) indexes were used to calculate PPP-adjusted exchange rates. Average market exchange rates for the month corresponding to the OECD PPPs were used to convert foreign prices into Canadian dollars.

Wall Communications Inc. 2011

Figure A3.4

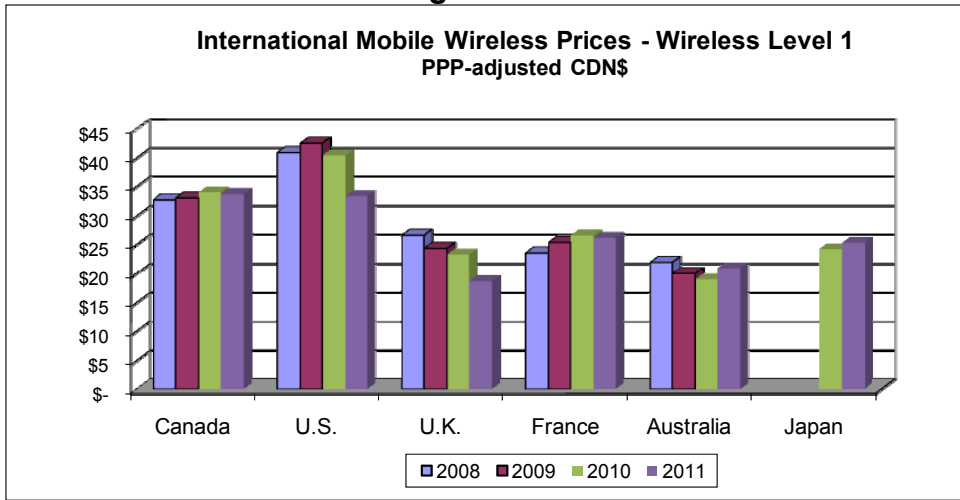


Figure A3.5

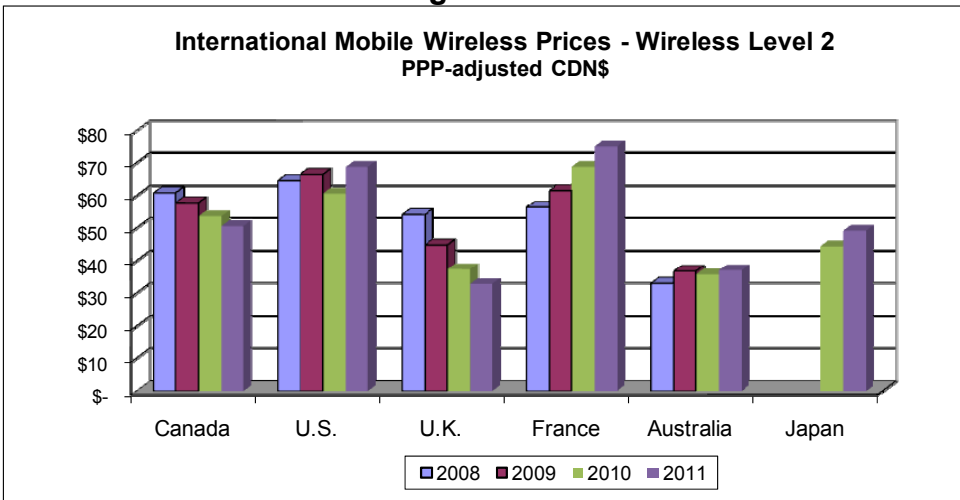


Figure A3.6

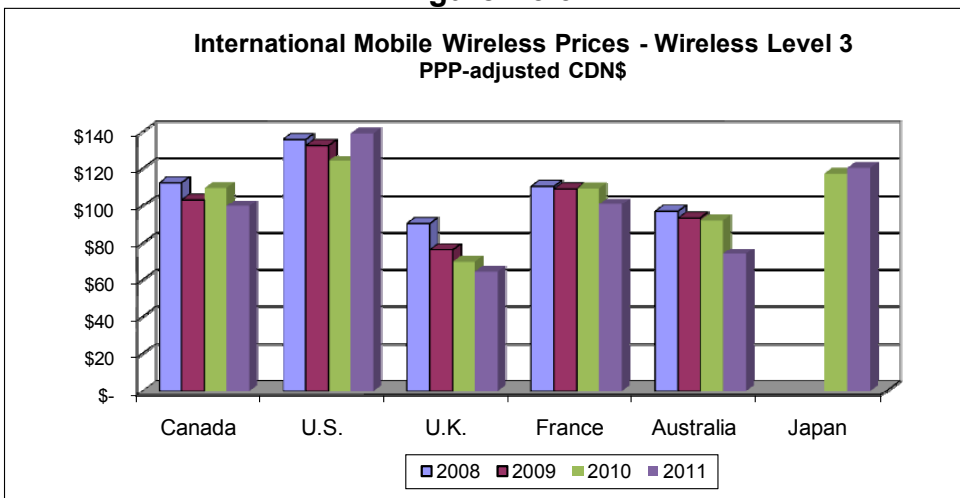


Table A3.3
International Broadband Internet Service Prices

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
Own Currency							
Broadband Level 1	2008	\$ 32.88	\$ 28.28	£15.87	€ 32.97	\$ 53.15	
	2009	\$ 30.98	\$ 32.15	na	€ 32.97	\$ 50.18	
	2010	\$ 31.44	\$ 32.52	na	na	\$ 42.69	¥4,038
	2011	\$ 34.85	\$ 38.97	na	€ 19.98	\$ 36.32	¥4,038
	CAGR	2%	11%	na	-15%	-12%	0%
Broadband Level 2	2008	\$ 46.58	\$ 46.88	£23.36	€ 35.77	\$ 77.69	
	2009	\$ 47.26	\$ 46.34	£15.93	€ 35.77	\$ 77.45	
	2010	\$ 47.60	\$ 48.41	£22.22	€ 32.53	\$ 63.60	¥5,036
	2011	\$ 49.79	\$ 49.72	£24.39	€ 33.44	\$ 69.05	¥5,036
	CAGR	2%	2%	1%	-2%	-4%	0%
Broadband Level 3	2008	\$ 68.74	\$ 56.45	£27.96	€ 38.57	\$ 94.97	
	2009	\$ 60.08	\$ 56.33	£18.94	€ 35.07	\$ 94.73	
	2010	\$ 61.88	\$ 61.79	£25.33	€ 42.44	\$ 90.87	¥7,332
	2011	\$ 63.44	\$ 60.76	£24.01	€ 46.82	\$ 72.68	¥5,104
	CAGR	-3%	2%	-5%	7%	-9%	-30%
Broadband Level 4	2011	\$ 77.71	\$ 72.57	£29.99	€ 35.12	\$ 81.77	¥5,595
CDN\$ - PPP							
Broadband Level 1	2008	\$ 32.88	\$ 33.77	\$ 29.93	\$ 42.23	\$ 42.79	
	2009	\$ 30.98	\$ 40.19	na	\$ 44.87	\$ 41.31	
	2010	\$ 31.44	\$ 39.61	na	na	\$ 34.91	\$ 39.73
	2011	\$ 34.85	\$ 51.06	na	\$ 28.33	\$ 29.84	\$ 43.13
	CAGR	2%	15%	na	-12%	-11%	9%
Broadband Level 2	2008	\$ 46.58	\$ 55.97	\$ 44.05	\$ 45.82	\$ 62.56	
	2009	\$ 47.26	\$ 57.92	\$ 30.22	\$ 48.69	\$ 63.76	
	2010	\$ 47.60	\$ 58.97	\$ 40.57	\$ 44.03	\$ 52.01	\$ 49.55
	2011	\$ 49.79	\$ 65.14	\$ 40.72	\$ 47.41	\$ 56.74	\$ 53.79
	CAGR	2%	5%	-3%	1%	-3%	9%
Broadband Level 3	2008	\$ 68.74	\$ 67.40	\$ 52.72	\$ 49.41	\$ 76.47	
	2009	\$ 60.08	\$ 70.41	\$ 35.93	\$ 47.73	\$ 77.98	
	2010	\$ 61.88	\$ 75.26	\$ 46.24	\$ 57.45	\$ 74.32	\$ 72.15
	2011	\$ 63.44	\$ 79.60	\$ 40.09	\$ 66.37	\$ 59.72	\$ 54.52
	CAGR	-3%	6%	-9%	10%	-8%	-24%
Broadband Level 4	2011	\$ 77.71	\$ 95.07	\$ 50.07	\$ 49.79	\$ 67.19	\$ 59.76

Table A3.3 (Cont'd)
International Broadband Internet Service Prices (cont'd)

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
CDN\$ - Exchange Rate							
Broadband Level 1	2008	\$ 32.88	\$ 28.14	\$ 31.51	\$ 50.27	\$ 48.63	
	2009	\$ 30.98	\$ 40.19	na	\$ 54.06	\$ 42.15	
	2010	\$ 31.44	\$ 34.15	na	na	\$ 40.13	\$ 48.46
	2011	\$ 34.85	\$ 38.39	na	\$ 26.98	\$ 35.96	\$ 48.46
	CAGR	2%	11%	na	-19%	-10%	0%
Broadband Level 2	2008	\$ 46.58	\$ 46.64	\$ 46.37	\$ 54.54	\$ 71.09	
	2009	\$ 47.26	\$ 57.92	\$ 28.51	\$ 58.66	\$ 65.06	
	2010	\$ 47.60	\$ 50.83	\$ 36.22	\$ 46.84	\$ 59.79	\$ 60.43
	2011	\$ 49.79	\$ 48.98	\$ 38.78	\$ 45.15	\$ 68.36	\$ 60.43
	CAGR	2%	2%	-6%	-6%	-1%	0%
Broadband Level 3	2008	\$ 68.74	\$ 56.17	\$ 55.50	\$ 58.82	\$ 86.89	
	2009	\$ 60.08	\$ 70.41	\$ 33.90	\$ 57.51	\$ 79.57	
	2010	\$ 61.88	\$ 64.88	\$ 41.29	\$ 61.12	\$ 85.42	\$ 87.99
	2011	\$ 63.44	\$ 59.85	\$ 38.18	\$ 63.21	\$ 71.96	\$ 61.25
	CAGR	-3%	2%	-12%	2%	-6%	-30%
Broadband Level 4	2011	\$ 77.71	\$ 71.48	\$ 47.69	\$ 47.41	\$ 80.96	\$ 67.15

Note that some generally minor changes in methodology apply year-to-year.

Note also that changes in the 2010 CDN\$-PPP and CDN\$ prices for the UK and France, compared to last year's study, are due to corrections in the exchanges rates for those two countries.

Latest available OECD Purchasing Power Parity (PPP) indexes were used to calculate PPP-adjusted exchange rates. Average market exchange rates for the month corresponding to the OECD PPPs were used to convert foreign prices into Canadian dollars.

Wall Communications Inc. 2011

Figure A3.7

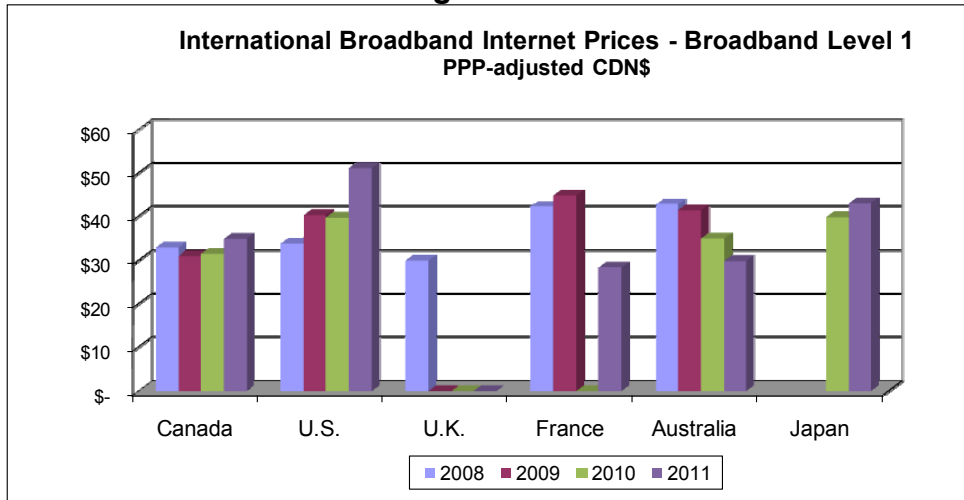


Figure A3.8

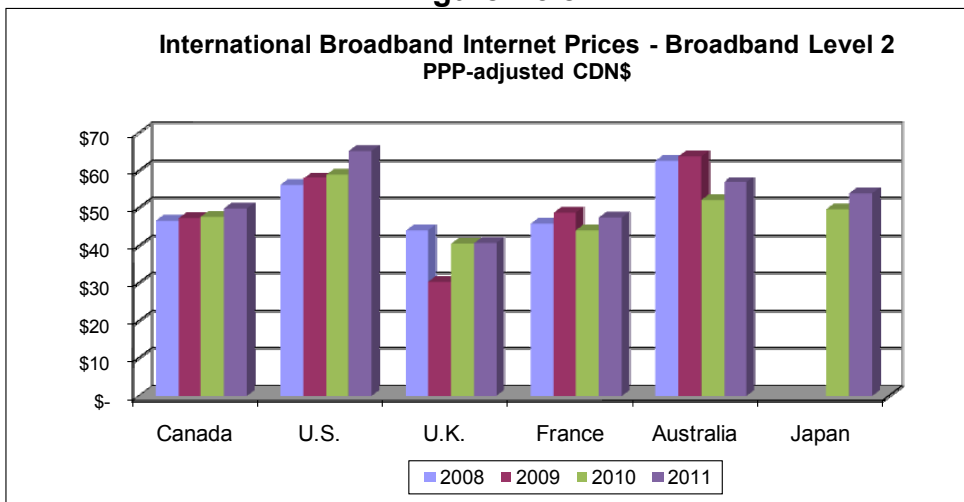


Figure A3.9

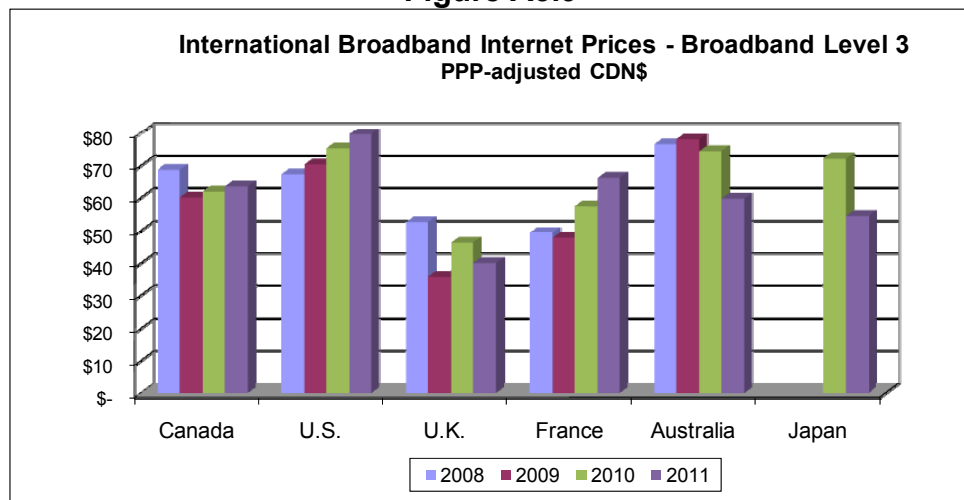


Table A3.4
International Mobile Internet Prices - 2010
3G Technology - Monthly Usage 2 GB

Baskets	Canada	U.S.	U.K.	France	Australia	Japan
Own Currency						
2010	\$ 54.02	\$ 60.15	£13.62	€ 34.20	\$ 41.44	¥7,724
2011	\$ 52.41	\$ 54.58	£14.08	€ 30.54	\$ 33.08	¥6,497
CAGR	-3%	-9%	3%	-11%	-20%	-16%
CDN\$ - PPP						
2010	\$ 54.02	\$ 73.26	\$ 24.86	\$ 46.29	\$ 33.89	\$ 76.00
2011	\$ 52.41	\$ 71.50	\$ 23.51	\$ 43.30	\$ 27.18	\$ 69.38
CAGR	-3%	-2%	-5%	-6%	-20%	-9%
CDN\$ - Exchange Rate						
2010	\$ 54.02	\$ 63.16	\$ 22.20	\$ 49.24	\$ 38.95	\$ 92.69
2011	\$ 52.41	\$ 53.76	\$ 22.39	\$ 41.23	\$ 32.75	\$ 77.96
CAGR	-3%	-15%	1%	-16%	-16%	-16%

Note that some generally minor changes in methodology apply year-to-year.

Note also that changes in the 2010 CDN\$-PPP and CDN\$ prices for the UK and France, compared to last year's study, are due to corrections in the exchanges rates for those two countries.

Latest available OECD Purchasing Power Parity (PPP) indexes were used to calculate PPP-adjusted exchange rates. Average market exchange rates for the month corresponding to the OECD PPPs were used to convert foreign prices into Canadian dollars.

Wall Communications Inc. 2011

Table A3.5

International Bundled Communications Service Prices

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
Own Currency							
Bundle 1 (Wireline-Broadband- Mobile)	2008	\$ 146.96	\$ 147.40	£73.11	€ 107.87	\$ 191.03	
	2009	\$ 139.86	\$ 142.19	£66.65	€ 110.12	\$ 193.53	
	2010	\$ 133.83	\$ 135.15	£57.95	€ 105.77	\$ 161.75	¥13,931
	2011	\$ 133.50	\$ 139.42	£57.12	€ 89.56	\$ 176.81	¥14,037
	CAGR	-3%	-2%	-8%	-6%	-3%	1%
Bundle 2 (Wireline-Broadband- TV)	2008	\$ 119.93	\$ 129.89	£57.02	€ 67.46	\$ 181.41	
	2009	\$ 122.43	\$ 131.05	£58.18	€ 67.42	\$ 183.26	
	2010	\$ 118.41	\$ 135.43	£60.90	€ 70.44	\$ 160.18	¥12,906
	2011	\$ 122.87	\$ 132.73	£59.35	€ 49.17	\$ 169.76	¥12,896
	CAGR	1%	1%	1%	-10%	-2%	0%
Bundle 3 (All four services)	2008	\$ 181.31	\$ 180.17	£84.46	€ 110.40	\$ 225.53	
	2009	\$ 172.68	\$ 170.58	£70.82	€ 112.65	\$ 231.24	
	2010	\$ 167.01	\$ 172.84	£74.21	€ 120.26	\$ 201.30	¥17,533
	2011	\$ 167.81	\$ 181.88	£79.29	€ 104.13	\$ 218.17	¥18,043
	CAGR	-3%	0%	-2%	-2%	-1%	3%
CDN\$ - PPP							
Bundle 1 (Wireline-Broadband- Mobile)	2008	\$ 146.96	\$ 175.99	\$ 137.87	\$ 138.18	\$ 153.82	
	2009	\$ 139.86	\$ 177.74	\$ 126.45	\$ 149.89	\$ 159.31	
	2010	\$ 133.83	\$ 164.61	\$ 105.80	\$ 143.16	\$ 132.28	\$ 137.08
	2011	\$ 133.50	\$ 182.65	\$ 95.36	\$ 126.95	\$ 145.28	\$ 149.91
	CAGR	-3%	1%	-12%	-3%	-2%	9%
Bundle 2 (Wireline-Broadband- TV)	2008	\$ 119.93	\$ 155.09	\$ 107.53	\$ 86.41	\$ 146.07	
	2009	\$ 122.43	\$ 163.81	\$ 110.39	\$ 91.78	\$ 150.86	
	2010	\$ 118.41	\$ 164.95	\$ 111.18	\$ 95.34	\$ 131.00	\$ 126.99
	2011	\$ 122.87	\$ 173.88	\$ 99.08	\$ 69.70	\$ 139.49	\$ 137.73
	CAGR	1%	4%	-3%	-7%	-2%	8%
Bundle 3 (All four services)	2008	\$ 181.31	\$ 215.13	\$ 159.27	\$ 141.43	\$ 181.60	
	2009	\$ 172.68	\$ 213.23	\$ 134.37	\$ 153.35	\$ 190.36	
	2010	\$ 167.01	\$ 210.52	\$ 135.48	\$ 162.78	\$ 164.62	\$ 172.52
	2011	\$ 167.81	\$ 238.27	\$ 132.38	\$ 147.60	\$ 179.27	\$ 192.70
	CAGR	-3%	3%	-6%	1%	0%	12%
CDN\$ - Exchange Rate							
Bundle 1 (Wireline-Broadband- Mobile)	2008	\$ 146.96	\$ 146.66	\$ 145.12	\$ 164.50	\$ 174.80	
	2009	\$ 139.86	\$ 177.74	\$ 119.29	\$ 180.59	\$ 162.56	
	2010	\$ 133.83	\$ 141.91	\$ 94.46	\$ 152.30	\$ 152.05	\$ 167.17
	2011	\$ 133.50	\$ 137.33	\$ 90.82	\$ 120.90	\$ 175.04	\$ 168.44
	CAGR	-3%	-2%	-14%	-10%	0%	1%
Bundle 2 (Wireline-Broadband- TV)	2008	\$ 119.93	\$ 129.24	\$ 113.18	\$ 102.87	\$ 165.99	
	2009	\$ 122.43	\$ 163.81	\$ 104.15	\$ 110.57	\$ 153.94	
	2010	\$ 118.41	\$ 142.20	\$ 99.26	\$ 101.43	\$ 150.57	\$ 154.87
	2011	\$ 122.87	\$ 130.74	\$ 94.36	\$ 66.38	\$ 168.06	\$ 154.75
	CAGR	1%	0%	-6%	-14%	0%	0%
Bundle 3 (All four services)	2008	\$ 181.31	\$ 179.27	\$ 167.65	\$ 168.36	\$ 206.36	
	2009	\$ 172.68	\$ 213.23	\$ 126.77	\$ 184.75	\$ 194.24	
	2010	\$ 167.01	\$ 181.48	\$ 120.97	\$ 173.17	\$ 189.22	\$ 189.22
	2011	\$ 167.81	\$ 179.15	\$ 126.07	\$ 140.57	\$ 215.99	\$ 216.52
	CAGR	-3%	0%	-9%	-6%	2%	14%

Note that some generally minor changes in methodology apply year-to-year.

Note also that changes in the 2010 CDN\$-PPP and CDN\$ prices for the UK and France, compared to last year's study, are due to corrections in the exchanges rates for those two countries.

Latest available OECD Purchasing Power Parity (PPP) indexes were used to calculate PPP-adjusted exchange rates. Average market exchange rates for the month corresponding to the OECD PPPs were used to convert foreign prices into Canadian dollars.

Wall Communications Inc. 2011

Figure A3.10

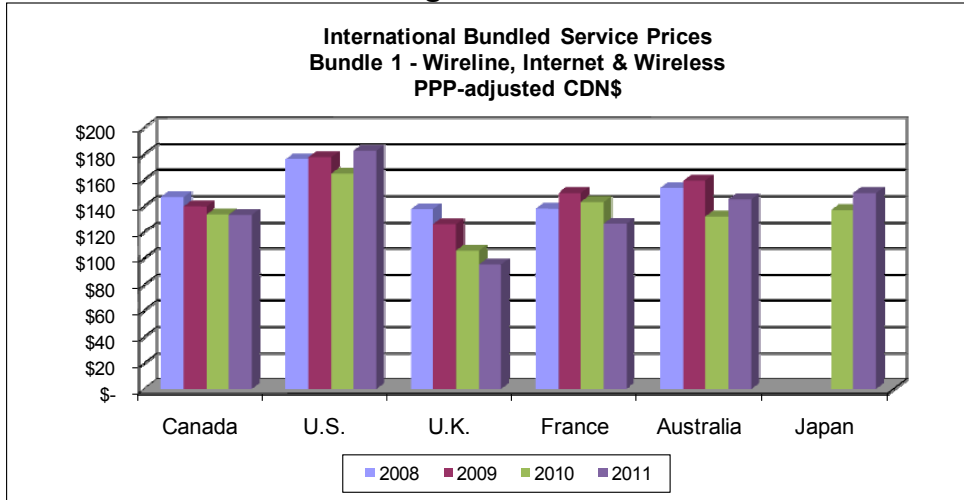


Figure A3.11

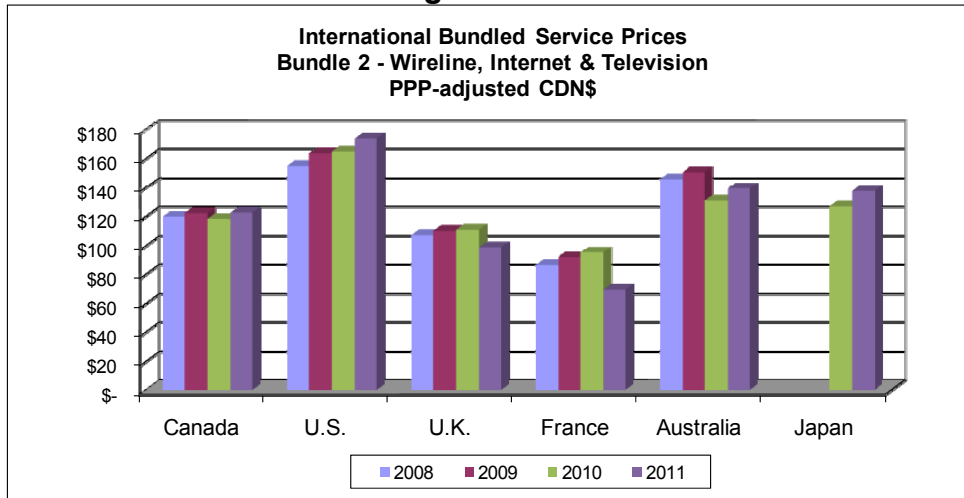


Figure A3.12

