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RESEARCH

RURAL & REMOTE ACCESS TO JUSTICE: APPLICATION RESEARCH

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RURAL & REMOTE ACCESS TO JUSTICE
A BOLDNESS PROJECT

Rural & Remote Access to Justice Application Research

July 2015, Toronto, ON

the Canadian Forum on Civil Justice for the Rural and Remote Access to Justice Boldness Project.

The Rural and Remote Access to Justice Boldness Project:
This review has been commissioned to support the work of the Rural and Remote Access to Justice Boldness Project (RRBP). The RRBP is a special initiative funded by Legal Aid Ontario (LAO) to transform legal service delivery. It is led by four community legal clinic Executive Directors and a LAO staff liaison working in rural and remote communities. The project partners are using a social innovation methodology (The Boldness Collaboratory™) to investigate and experiment with a multiplicity of ways to increase access to justice for people living on a low income in rural and remote communities of Ontario. By commissioning the review, the partners wished to identify the current trends, gaps in the research, and promising practices in service delivery. Specifically, they wished to know how "rural and remote" is understood, what is known about access to justice challenges and opportunities in rural and remote communities, whether the research to date has documented differences with urban communities, and how other provinces and countries have handled the access to justice challenges in rural and remote areas.

INTRODUCTION

This memo provides a survey of smartphone applications that might serve as useful reference points for the development of a rural access to justice app. It is hoped that such an application could help "address the rural conundrum" by using natural language, issue identification, resource listing and mapping, as well as data tracking and sharing to improve access to justice in Canada's remote communities. By sorting through the "shopping list" of suggested features and functionality provided by the Boldness Project, and by searching for similar use cases, a number of applications came forward as potential sources of inspiration.

In addition to summarizing and comparing related apps, this memo also attempts to contextualize the app development landscape in Canada. To that end, a brief overview of mobile phone technology statistics in Canada (Appendix B & C) as well comparative charts of national network coverage (Appendix A) have been included.

REVIEW OF FINDINGS

Research was conducted primarily within the Apple iTunes and Google Play online storefronts. Generally speaking, there were very few dedicated legal applications, especially compared with medical applications. Almost half of the comparable applications covered in this report are medical in nature. These apps have diagnosis, information sharing, and professional support functions that could be implemented in a rural access to justice app.

Of all the apps included in this report, the most promising research finding was not, properly speaking, an app at all. FrontlineSMS is a technology that works on all mobile phones, and is currently deployed in rural communities around the globe to gather and disseminate information. It could be used by the rural and remote project without extensive modification, and is free for organizations to download and run. FrontlineSMS has even developed a legal branch (FrontlineLegal) to adapt its technological solution to the legal market.

MOBILE PHONE TECHNOLOGY IN CANADA

In 2014, 28,412,638 Canadians subscribed to a mobile phone service plan. It is estimated that approximately 68% of those subscribers owned and operated at least one smartphone.[1] Smartphones can connect to the internet either through local wifi or on mobile data networks and are capable of handling complex computational tasks. In contrast, so called "feature phones", owned by an estimated 19% of Canadian mobile users, may or may not be capable of internet access, and do not have the computational power required to run all smartphone applications.[2] There are two dominant smartphone operating systems in the market today: Apple's iOS, and Google's Android. Comscore estimates that approximately 50.5% of mobile phone owners in Canada have an Android smartphone, and 38.3% own and operate an iPhone running iOS. (see Appendix B, Table 2.1).[3]

APPLICATION COMPARISON CRITERIA

An effort was made when comparing apps to include information that might be relevant to the development of a rural access to justice app. The main functions of applications are listed, as well as foreseeable use scenarios that illustrate the purpose and scope of the app. Various strengths and weaknesses of apps are also canvassed. If the app developer or associated organization indicated that data is gathered by the app this is also conveyed. Finally, apps were differentiated based on their complexity and assigned a rough of idea how complex the apps would have been to develop is conveyed by a low, medium, or high rating according to how difficult it may have been to develop the app. Low complexity apps will have

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[1] Canadian Wireless Telecommunications Association, *Wireless Phone Subscribers in Canada: 2014* (2014) Facts and Figures, online: <http://cwta.ca/facts-figures/>; Langlois, Brett "With Growth Comes Change: The Evolving Canadian Mobile Landscape" (March 2015) Catalyst, online: <http://catalyst.ca/2015-canadian-smartphone-market/>.

[2] Comscore, *Digital Future in Focus Canada 2015: The 2014 Digital Year in Review & Predictions for the Year Ahead* (2015) Presentations and Whitepapers, online: <http://www.comscore.com/Insights/Presentations-and-Whitepapers/2015/2015-Canada-Digital-Future-in-Focus>.

[3] *Ibid*.

taken less time and resources to build and maintain than medium complexity apps, and high complexity apps are likely to be close to the cutting edge of what is possible in application development today.[4]

COMPARABLE SMARTPHONE APPLICATIONS

	**Name**	Legal Aid NSW
	Platform	iOS, Android
	Created By	Legal Aid (New South Wales, Australia)
Functions	- Search for closest legal aid center - View contact & hours information for each center - Travel estimate to each center from current location - Watch videos about a range of common legal issues - View a calendar of legal aid workshops - View legal aid eligibility criteria - Pay contribution towards the legal costs in your case - Calculate your legal aid eligibility - View legal aid factsheets and resources	
Use Case	*A person could watch a video and realize they are experiencing a legal issue, check to see if they are eligible for legal aid, calculate exactly how much they were eligible for, find out where the nearest legal aid clinic was, and how long it might take them to get there.*	
Strengths	Easy to use tile navigation system (by category); feasible technology; scalable; easy to update; good resource hub.	
Limitations	Cannot search for, or diagnose, legal issues; Does not directly host communication between lawyers or clinics; unilingual.	
Data Gathering	Does not appear to collect or log user information.	
Complexity	**MEDIUM**	

	**Name**	**Legal Dictionary & Guide**

[4] The complexity of computing logic is also taken into consideration here. Application, and all software for that matter, can range in the complexity of machine computing logic from (i) purely displaying information, to (ii) using conditional, if-then logic to take users down a decision tree path, to (iii) keyword searching and display, to (iv) understanding and interpreting natural language and responding appropriately. Even cutting edge tools developed by Apple, Google, and Microsoft struggle to manage this last area of machine logic, making this level of computing less than feasible for smaller developers. However, there is always news of progress in this field. In the legal world, University of Toronto's Ross, powered by IBM's Watson, represents the leading edge of responsive natural language computing. This technology has yet to be implemented in smartphone app form.

	Platform	**iOS**, **Android**
	Created By	The Law.com LLC (New York, New York)
Functions	- Access to over 14,000 searchable legal concept definitions - Access to hundreds of "legal guides" and articles - Allows users to ask legal questions in app - Links to law.com forum where users can ask legal question - Links to law.com lawyer directory to find a nearby lawyer	
Use Case	*A tenant has a particular question about a term in her lease, she uses the app to look up 'easement' and finds out what it means.*	
Strengths	Dictionary available offline; search feature is quick and easy to use.	
Limitations	Covers U.S. law only; Unilingual; Dictionary works well and forms the core of the app, other services take place off-app and are not well executed (e.g. "ask a legal question" button brings you to an online forum where you may or may not have a question answered by a reputable lawyer, no time guarantees); very short definitions, no examples provided. Articles are not easily searchable.	
Data Gathering	The app itself does not appear to log any user data.	
Complexity	**LOW** (difficult to populate dictionary however)	

	**Name**	Avvo Advisor
	Platform	iOS
	Created By	Avvo (Seattle, Washington)
Functions	- Allows users to choose an area of law and talk to a lawyer for 15 minutes who specializes in that area for a fee ($39) - Collects payment prior to call - Transfers payment to lawyer after call	
Use Case	*A person has a few legal questions about setting up their small business, they open avvo, select the business tile, pay $39 and within minutes are talking to a lawyer experienced in that area.*	
Strengths	Lawyers available on call within minutes of requesting legal advice, whenever and wherever people need the service; An easy way to solve small legal issues; does not rely on video conferencing; simple to use; relatively low cost.	

Limitations	Available in the U.S. only; Available for iPhone users only; Limited to short phone calls and not ideal for complex legal problems; cost may still be prohibitive for many people.
Data Gathering	It is likely that Avvo collects data user topic requests.
Complexity	**MEDIUM**

	**Name**	iTriage
	Platform	**iOS**, **Android**
	Created By	iTriage (Denver, Colorado)
Functions	- You can search health-related symptoms, learn about potential causes, and then iTriage Health will help you find the most appropriate treatment option, nearby health facility or doctor - Find any doctor in your area quickly and easily (U.S.), with maps, contact information, and availability hours. - Stores personal health records - Access to emergency hotlines - Appointment setting with doctors and other health providers - Information on thousands of medical symptoms, treatment, drugs, and procedures - Save your medication plan, insurance, health plan advice and doctor information in one place	
Use Case	*A mother is concerned about the irregular health symptoms that her child is showing. Not sure how serious the problem is, she uses iTriage to search the symptoms and find the most likely cause, find a doctor who is available and nearby, and plans to call her after work because the problem isn't too serious. See video*	
Strengths	Lots of useful information; well organized; very well reviewed; being able to self-diagnose is incredibly useful; provides a one-stop information storage place for all health care information; quick access to health hotlines is great for emergencies; helps reduce unnecessary ER visits; helps coordinate care; helps rural users find the right specialist and set up an appointment.	
Limitations	Designed for the U.S. market; Does not provide direct contact with a physician; user may not be able to self-discover health problem, and may be misinformed; unilingual.	
Data Gathering	User data and trends are most likely captured by iTriage.	
Complexity	**HIGH**	

	**Name**	Doctor on Demand
	Platform	**iOS**, **Android**
	Created By	Doctor on Demand Inc. (San Francisco, California)
Functions	- Facilitates a live video visit with a doctor or psychologist - Make a video call appointment; take a video call - Book a walk-in appointment - Doctors can prescribe after visit - Visits cost $40	
Use Case	*A person living far away from the nearest population center can set up an appointment to talk to a psychologist about the panic attacks they have been experiencing lately.*	
Strengths	Allows medication prescriptions (where appropriate); on-board video calling makes communication easier; efficient, timesaving tool for anyone who finds it difficult to visit a doctor or psychologist in person (the elderly, busy people, persons with a disability etc). See video	
Limitations	Only available in 15 U.S. states; requires video calling proficiency & relatively fast internet connection; requires users to be 17+; only some prescriptions are available.	
Data Gathering	Visits with physicians & psychologists are confidential.	
Complexity	**HIGH**	

	**Name**	Sherpaa
	Platform	iOS
	Created By	Sherpaa (New York, New York)
Functions	- Users can instant message doctors in real time to ask a wide range of medical and psychological questions - Users can view doctor information before asking a question - App provides insurance information - Doctors can act as referral hubs for user inquiries	
Use Case	*A person working a stressful office job gets a sharp and prolonged headache, he uses Sherpaa to ask a doctor if taking Advil will help and whether or not he should work through the headache or take the day off and visit a physician.*	

Strengths	Doctors attempt to respond immediately if messages are sent between 8am and 8pm; App intentionally avoids video to make responses faster and make the service more approachable; Convenient for doctors; convenient for quick medical questions (doctors will also recommend further assessment or treatment if needed). See video
Limitations	Limited to number of doctors participating in the service; Limited to the U.S.A; Only available for iPhone users; designed for employers, requires employers to pay a monthly fee/employee.
Data Gathering	Sherpaa likely gathers data on user questions (timing, subject matter, length of "conversation" etc).
Complexity	**MEDIUM**

	Name	Community Health Centers
	Platform	**Android**
	Created By	Segue Technologies (Arlington, Virginia)
Functions	- Uses current location metrics from gps enabled smartphone to show nearby community health centers - Provides a map and directions to community health centers - Provides information on each of the centers - Provides the latest public health information from the Center for Disease Control (CDC) & Department of Health with a direct news feed	
Use Case	*A parent opens the news feed on the app and sees that a new flu vaccination program is in effect in their area, they search for the nearest available vaccination center and are given driving directions and a phone number to call and book an appointment.*	
Strengths	Keeps users up to date with the latest U.S. health care initiatives; Provides dynamic location information.	
Limitations	Limited to Android; Limited to the U.S.; Providing in-app driving directions might be redundant, many people may prefer to use their phone's native map application; does not allow users to communicate directly with representatives from nearby health care centers (in-app). *App did not display map properly when tested*.	
Data Gathering	This app gathers location data, but it is unlikely that the app makers record this data (privacy concerns).	
Complexity	**LOW**	

	**Name**	Quora
	Platform	**iOS**, **Android**
	Created By	Quora, Inc (Mountain View, California)
Functions	- Search, ask, and answer questions - Vote on best question answers	
Use Case	*A group of friends were caught trespassing on a neighbors property, he forced them to leave at gunpoint; one of the friends wants to know if this was legal, he asks the Quora community by posting a question and receives a number of helpful responses.*	
Strengths	Allows users to get information about current topics of interest; Sifts community responses through a voting system; more professional and highly regarded than other community question platforms (e.g. Yahoo answers); Has a number of professional contributors.	
Limitations	Requires lengthy login and signup process; takes a long time to load content, even in fast wifi areas; requires users to log on with their real full name; questions may or may not be answered, and there is no guarantee that professional advice will be given; Legal professions are wary of providing advice.	
Data Gathering	Quora logs all questions asked and answered by users; user signups and profile information are also logged.	
Complexity	**MEDIUM**	

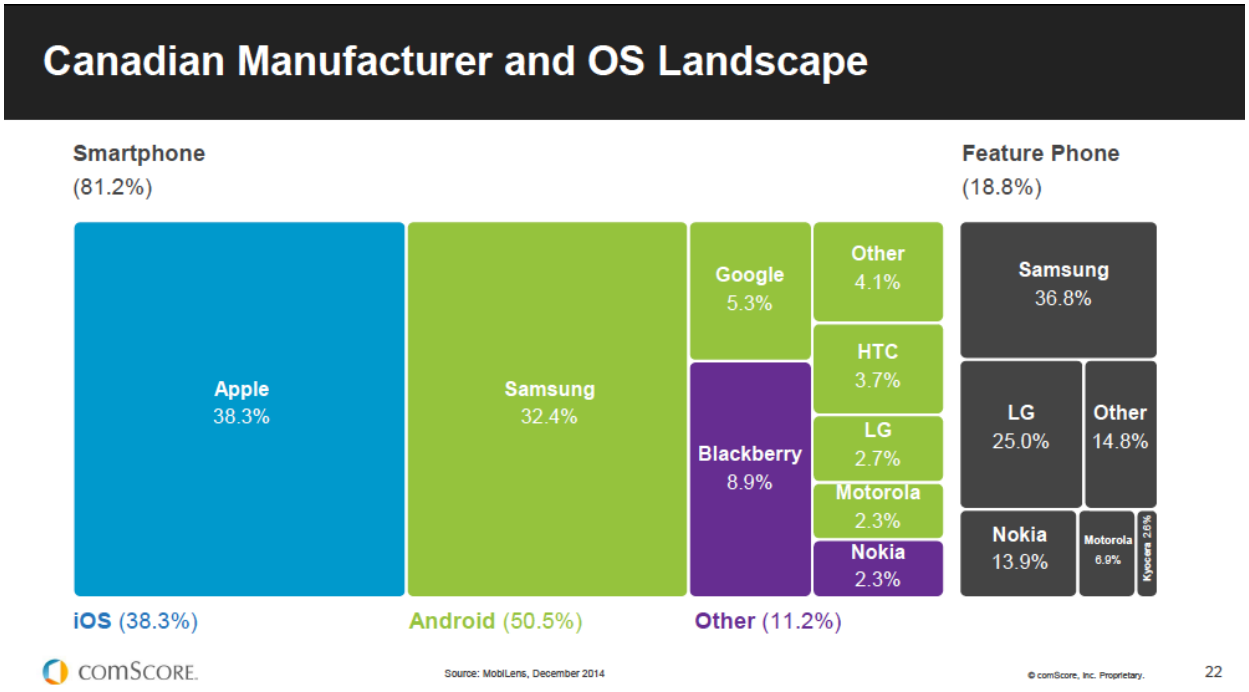
APPLICATIONS FOR BOTH SMART & FEATURE PHONES

	**Name**	Frontline SMS
	Platform	All phones (including feature & basic)
	Created By	Occam Technologies (Washington, DC)
Functions	- Software program that allows an organization to monitor and interact with individuals via text message (sms) - Can connect to twitter - Can be used to administrate polls and gather data - Can be used to have text conversations - Can be used to send out important alerts	

Use Case	*A person living in a rural location, without regular access to the internet wants to ask a legal question and get help with a family conflict. They know that they can get information by sending a text message to a certain number. Using FrontlineSMS software, the nearest family legal receives the text message and is able to respond in a timely and helpful manner. They conduct a short intake assessment and provide referral advice to the client.*
Strengths	Free to use; able to contact and connect with any mobile phone user with access to text (sms) messaging; does not require an internet connection on the user's end to work; allows one organization to push information and have conversations with multiple users simultaneously; can be connected to twitter sms is monitored and responded to much faster than email or voicemail. See this video for further benefits.
Limitations	Requires interaction to be effective (human <-> human), and as such needs to be monitored; If overused, people may be annoyed (sms seen as a personal way to connect).
Data Gathering	Data collection is encouraged, polls can be distributed and results tabulated.
Complexity	**LOW**

APPENDIX A: CANADIAN SMARTPHONE OPERATING SYSTEM ADOPTION

TABLE 1.1
Comscore December 2014 [5]



[5] *Supra note 2, at 22.*

APPENDIX B: SMARTPHONE VS. FEATURE PHONE OWNERSHIP

Smartphone: a cellular phone that performs many of the functions of a computer, typically having a touchscreen interface, Internet access, and an operating system capable of running downloaded applications.

Feature Phone: a mobile phone that incorporates features such as the ability to access the Internet and store and play music but lacks the advanced functionality of a smartphone.

TABLE 2.1
Comscore December 2014[6]

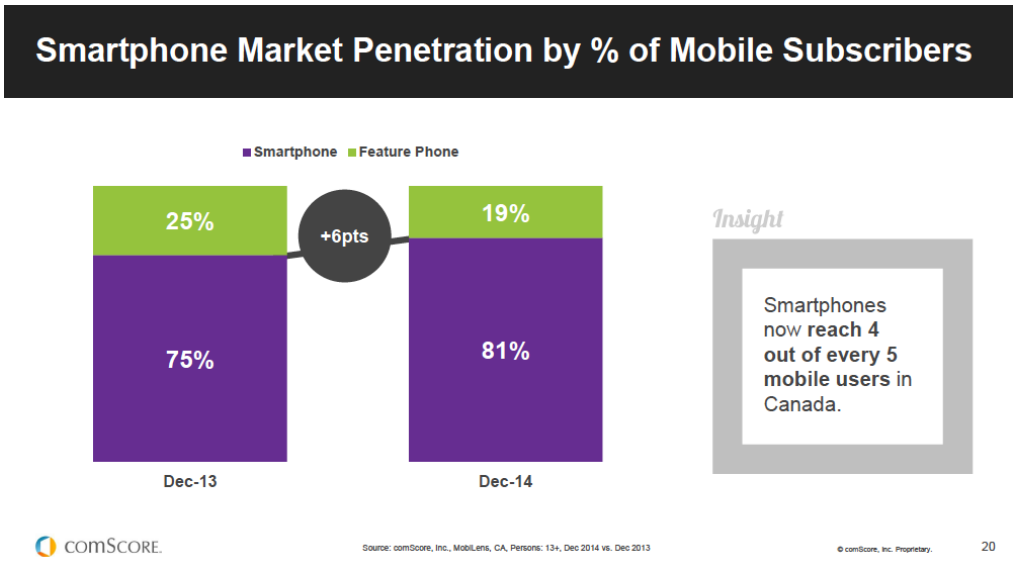
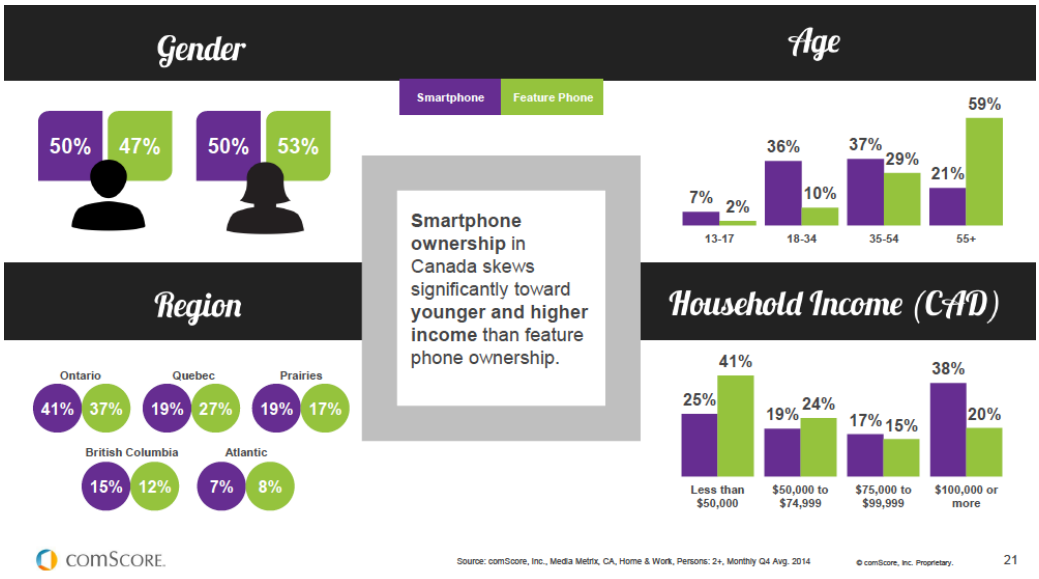


TABLE 2.2
Comscore December 2014[7]



[6] *Ibid, at 20.*
[7] *Ibid, at 21.*

APPENDIX C: NETWORK COVERAGE IN CANADA

TABLE 3.1
Rogers (4g, LTE, 3g)[8]

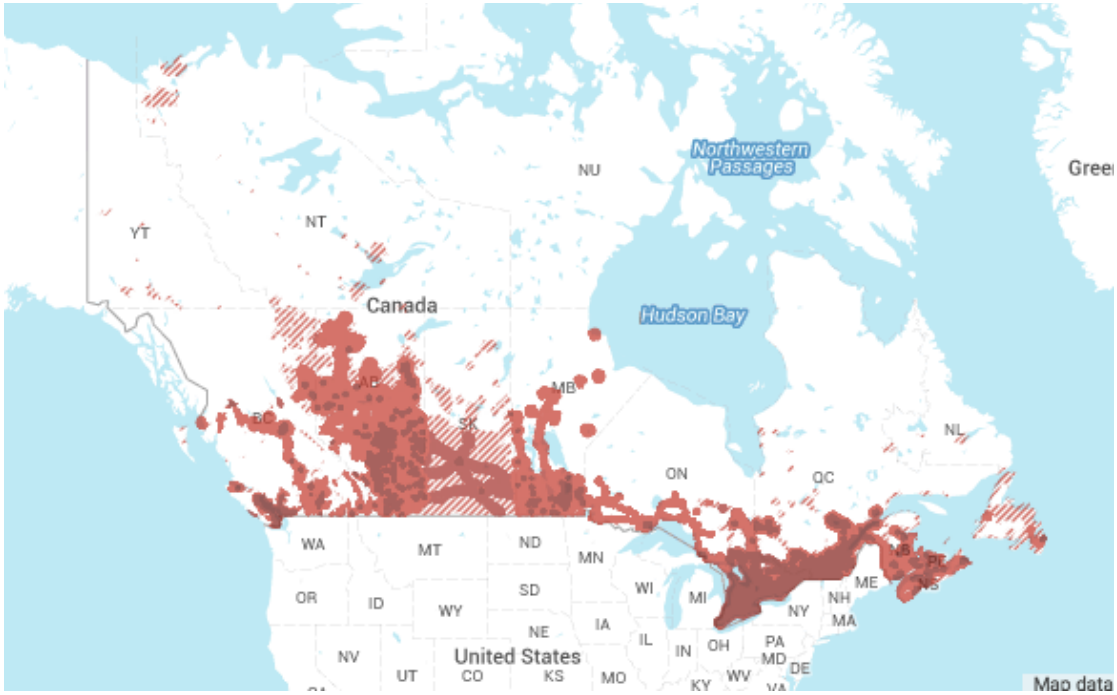
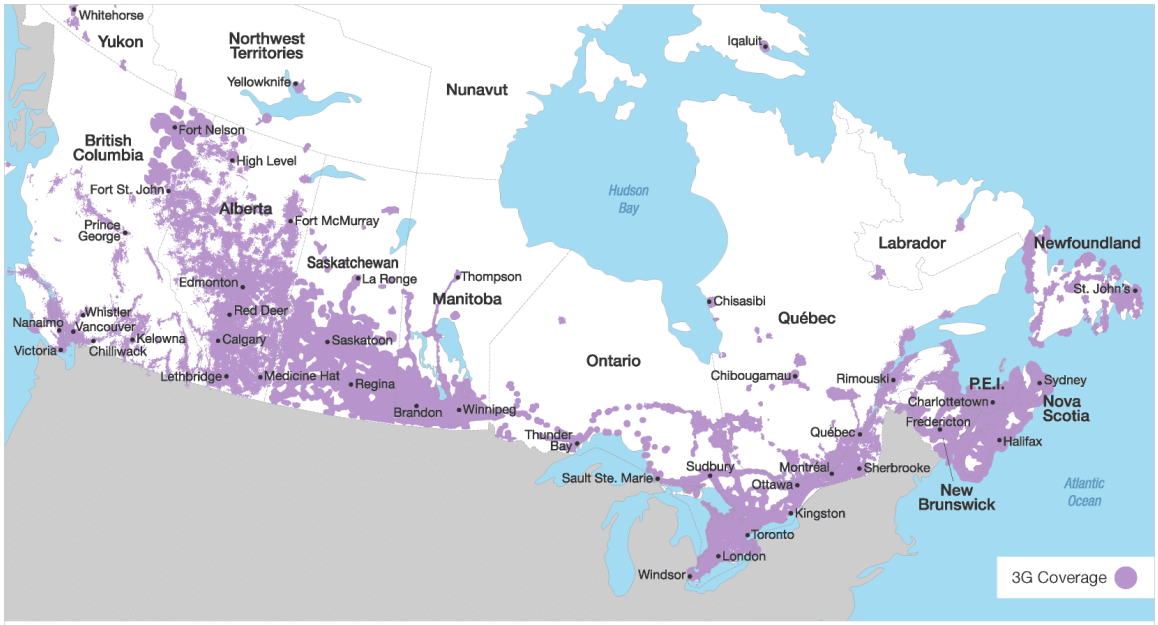


TABLE 3.2
Bell (4g, LTE)[9]

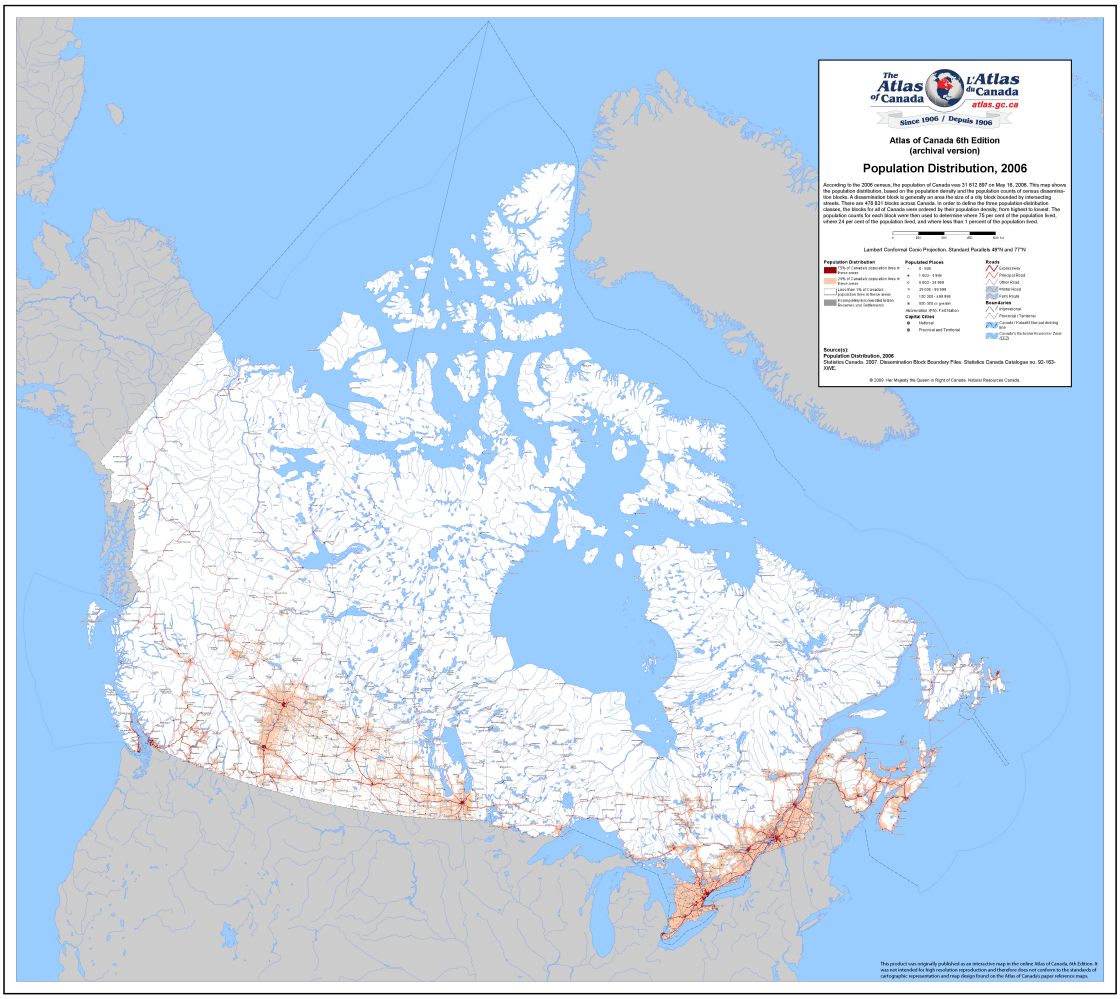
[8] Rogers, *Network Coverage* (2015), online: <http://www.rogers.com/web/content/network-coverage/>.
[9] Bell, *Coverage Map* (2015), online: <http://network.bell.ca/en/coverage/>.

TABLE 3.3
Telus 3g (4g map here.)[10]



[10] Telus, *Coverage Map* (2015), online: <http://www.telus.com/en/on/mobility/network/coverage-map.jsp>.

TABLE 3.4
Canadian Population Distribution (2006)[11]



[11] Natural Resources Canada, *Population Distribution* (2006) Population: Population Distribution, online: <http://www.nrcan.gc.ca/earth-sciences/geography/atlas-canada/selected-thematic-maps/16880>.