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Geographic digital divide - urban/rural issues, and internationally

GIS Trends

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Abstract

This issue's GIS Trends section discusses the current efforts underway to close the Geographic Digital Divide in Canada. While the Government of Canada has promised every Canadian will have access to high-speed internet by 2030, the actual availability is highly geographically determined, and mal actors continue efforts to restrict access. GIS companies may promote their use in closing the divide, but do not address systemic issues.

Editorial

The geographic digital divide – the difference in access and service based on location – has been an issue for many years but has received greater urgency since the onset of the COVID-19 pandemic. While planners struggled to mitigate problems, the digital divide highlighted for education, health, and economies (Reddick et al, 2020), large gaps still remain at local, provincial, national, and international levels. GIS plays a role in determining the locations and managing the networks that allow internet access (Esri, n.d.).

The Government of Canada announced in December of 2022 that, by 2030, every Canadian would have access to high-speed internet ("High-speed internet for all...", 2022). The National Broadband Internet Service Availability Map ("National Broadband Internet...", 2022) offers a look into what internet service exists within Canada, particularly when it comes to Rural coverage. The coverage seems, at first glance, impressive. However, the data source information itself notes the amount of aggregation done, and relies on industry reporting as well as some surveys ("National Broadband Data...", 2022). Indeed, this author can attest to a location in Prince Edward Island where the reported 50/10 mbps is not available, and the only telecom in the area – a national one – offers a "high-speed" package of 2 Mbps, at a cost of ninety dollars per month.

This is one of many issues in the geographic digital divide. While the government of Canada offers a lofty goal, it depends on continued adequate funding, good faith engagement from private corporations and proper communication with the local people affected. Losing one of the above, and 100% high-speed availability becomes simply a lofty goal rather than a possibility.

Further to this, the next step in access to the internet is affordability. The cost of access is determined by the internet service providers (ISPs), which, while receiving public funds to expand their networks, are under no obligation to make those networks affordable. To mitigate this, the Government of Canada announced $20/month high-speed internet to low-income families and seniors ("Government of Canada Announces...", 2022). Access to this program, though, assumes that you know about it, qualify for it, have your application approved (or you can navigate any appeals process should you be rejected), and that a connection is available. Information about this program is handily available online – if you are not already digitally-savvy, or you don't have a stable or functional connection, you may not know about this, or know how to access it. This author only discovered it when researching this paper with a high-speed internet connection. Moreover, while the program offers speeds up to 50 Mbps (or the fastest available in the region), it includes a data cap of 200 Gb per month. A divide remains.

Add to this is another threat from capitalism, namely in the form of exclusivity agreements such as those many U.S. municipalities have signed (see Koebler, 2014). Thankfully, these are not the norm in Canada; while large providers continue to ensure a paucity of providers, options have grown in many jurisdictions in recent years. There are more protections in Canada as well, including oversight by the CRTC (Zimmer, 2018). Still, a 2021 CRTC ruling allows for exclusive access to some in-building wirings in multi-dwelling units, limiting the companies one can use in said buildings (CRTC, 2021). Availability of providers, then, is a threat in the digital divide, and cost becomes unimpeded in a geographic monopoly.

Is the geographic digital divide bridgeable? Certainly. Is enough being done? In this economy? Of course not. Even if every building is connected with at least 50/10 Mbps internet connections, prohibitive variables abound, particularly on the urban/rural divide, including cost, restrictions, and infrastructure maintenance. Even with all of these accounted for, the availability of 50/10 internet speeds everywhere does not mean there is equitable access – any notable difference in access based on geography means the divide remains. Urban areas have significantly more options than 50/10 speeds. GIS can be used to highlight some of these concerns, though only if explicitly put towards doing so. There are examples of this in the U.S. (see bstgermain, 2022 and lisa_berry, 2021), but Canada has fewer discussions… Perhaps this will be accounted for in the next round of planning.

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