Establishing a Toronto Community Network

A Toronto Mesh Proposal Brief, for Discussion

About Toronto Mesh

Over the past six years, Toronto Mesh[1] has gained extensive knowledge and experience regarding community and mesh networking, along with a myriad of non-technical, socio-economic issues involved in fostering digital literacy and citizen inclusion. Toronto Mesh collaborates with technologists, artists, activists, civic-tech enthusiasts, network operators, and many other stakeholders around the globe, working together to secure rights of equity, privacy, security, diversity, inclusion, transparency, resiliency and accountability in the realm of digital information.

Here in Toronto, we've convened hands-on instructional workshops at Toronto Public Library[2], and in 2019 we were invited by The Internet Archive to design and deploy a temporary mesh network[3] for participants of DWeb Camp at their remote location on the California coast. With an emphasis on open source software and hardware, community mesh networks, and peer-to-peer software, we engage individuals and communities in the reflection and learning necessary to understand alternative digital infrastructures, their democratic governance, and many other pathways toward greater digital inclusion for more equitable and sustainable communities.

> *Community networks are networks collectively owned and managed by the community for non-profit and community purposes. They are constituted by collectives, indigenous communities or non-profit civil society organizations that exercise their right to communicate, under the principles of democratic participation of their members, equity, gender equality, diversity and plurality.*
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> –Cumbre Latinoamericana de Redes Comunitarias, Argentina 2018

Background Information

The global COVID-19 pandemic poses many challenges within our communities and our capacity for successful adaptation to these measures is made all the more difficult where there is inadequate access to a digital broadband connection. Digital inclusion encompasses a wide range of issues related to home internet access, personal devices, access to technology, training and support, and much more. It determines whether individuals and communities can benefit equitably from the opportunities created by information and communications technologies. Under the present conditions of global pandemic, deficits of digital inclusion will be experienced more severely and the magnitude of their impact will exceed well beyond that of "normal" times.

To ameliorate these impacts and expand the city's capacity for coping and adaptation, the City of Toronto is working with several commercial partners to provision temporary networking infrastructure, extending Internet connectivity for tenants of several high-needs residential buildings (referred to as towers). Toronto Mesh wishes to participate in this process so that some of the infrastructure and other advances made will be sustained beyond the pandemic, resulting in lasting benefits for the communities involved, as well as expanding the City's capacity for effecting greater digital inclusion in the years to come.

Purpose of this Proposal Brief

Toronto Mesh is inviting discussion among city representatives and other interested groups, as we gather information and detail strategies, plans, and budgets toward a comprehensive proposal for achieving these objectives. This proposal brief identifies the major anticipated features of our detailed proposal and outlines a process, and timeline for earning the consideration of the participating agencies, organizations, and individuals for including Toronto Mesh in these network deployments.

Major Features of Our Proposal

The Neighbourhood and The Network

Two towers that have been identified by the city as candidates for the installation of Internet access are 10 San Romanoway and 35 Tobermory Drive. We propose to augment these deployments using directional point-to-point antennas installed on their respective rooftops, along with sector antennas producing a mesh signal extending over approximately 80 square kilometres of residential housing surrounding the towers.

Once in place, households in the surrounding area will be able to connect to the community network with smaller antennas, an approach commonly used in successful community networks around the world. Connecting to the community network will allow citizens to participate in this digital public space and make collective decisions about how they access the Internet, while expanding its reach and interacting with citizen-created content and services. We will first engage with value-aligned partners and residents in the currently planned areas of the city where connectivity will be established, to practice networking together in areas of art, technology, education, and experimentation with progressive networking projects.

Proposed Partnerships

City of Toronto

Ongoing collaboration across a variety of City departments will help to sustain the resulting community network by expanding the resources available to address practical problems and barriers, as they arise, while also establishing the flows of communication and cooperation that will facilitate well-informed evolution of City policies and plans, concerning community networks, over the longer term.

Toronto Public Library

The Library embodies many of the values that inspire community networks, and offers a wealth of information and knowledge resources to the network. Likewise, the proposed community network, advances the Library's strategic plans for digital inclusion, digital literacy, life-long learning, and better web services that enrich community connections and cultures, and a more informed and democratic society.

Internet Society

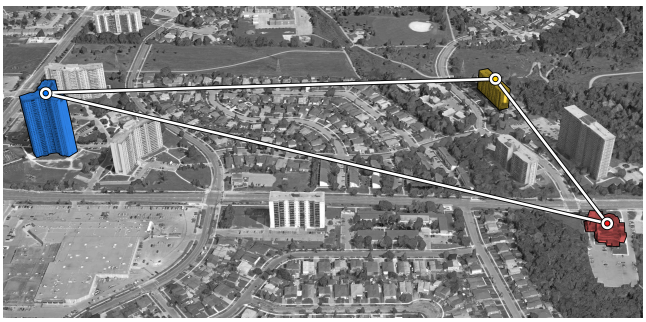
Based on discussions with the City and the collaborating firms and organizations, and subsequent formal acceptance of our community network proposal, we will seek financial support from our local Internet Society Chapter. We anticipate soliciting financial and in-kind support from other sources; however, we view the Internet Society a value-aligned anchor partner with unique community network knowledge and experience, and with whom we can expand our base of support in a manner that preserves essential governance and maximizes the freedom and self-determination of the communities.

Cisco Toronto Innovation Centre

As part of the COVID-19 support plan by the City, Cisco has volunteered to provide hardware, expertise and planning resources to support the deployment of the temporary network in Toronto. We propose to utilize these deployed resources to reduce our up-front costs and carry the deployed value forward for the proposed community network.

The Surrounding Community

Ongoing engagement with people living, learning and working in the newly networked area is essential in realizing the envisioned benefits for the connected community. While this represents a dynamic and on-going process, we have identified local institutions such as universities, colleges, and other innovation leaders that can play a valuable role in sustaining the success of our proposed community network.



The Proposed Network Location

Process and Timeline for Proposal Development

We appreciate that, under these emergency conditions, the City and its partners will be moving very quickly to design and deploy the networking equipment and services to these locations. Any planning and scheduling information the City and collaborating partners can provide will assist Toronto Mesh in ensuring that our proposal presents a feasible, efficient and timely approach to the community network deployment. Subject to revision, on the basis of such information, we propose the following process and timeline for securing our inclusion in the project and for finalizing production and acceptance of the community network proposal.

May 12th Toronto Mesh begins distributing this brief to prospective partners, and engages the proposed core partners in dialog, to learn their plans and, together, elaborate essential requirements of a community network in Toronto, and to better understand any process requirements and qualifications enabling collaboration with Toronto Mesh.

May 22nd Toronto Mesh releases a detailed Draft Community Network Proposal for review and, at the earliest opportunity, presents the proposal at a joint meeting of the collaborating parties, to receive and discuss their recommendations.

May 29th Having worked with the project partners to fully understand, explore and incorporate their recommendations, Toronto Mesh releases a Final Community Network Proposal for expeditious acceptance; on receipt of which, Toronto Mesh submits requests for financial and in-kind support sufficient for realizing the proposed community network deployment.

Links

1: Toronto Mesh

https://tomesh.net

2: Building the Peer-to-Peer Internet Workshop

https://tomeshnet.github.io/p2p-internet-workshop

3: DWeb Camp Meshnet 2019

https://dweb-camp-2019.github.io/meshnet/

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