RAPID: Responding to COVID-19 using High-speed Mesh Wireless Community Internet

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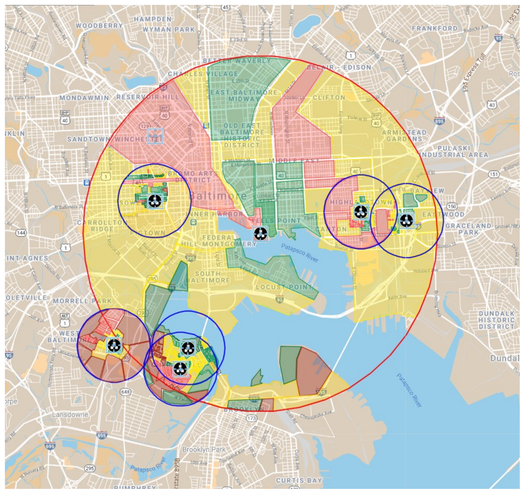
https://projectwaves.net/, https://www.digitalharbor.org/, https://www.participatoryfutures.com/

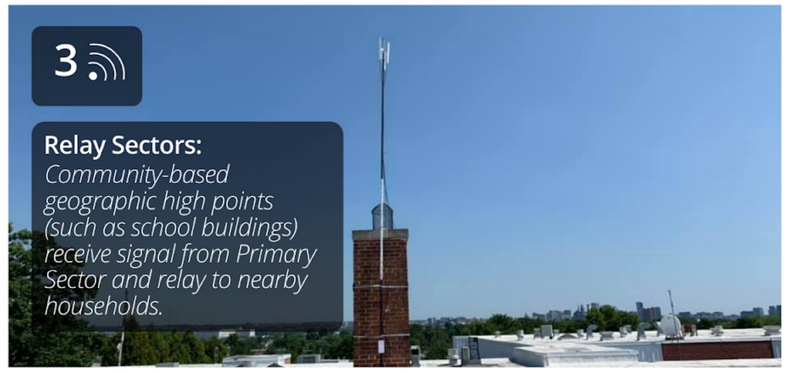
In Baltimore City, where our project is situated, according to the 2019 U.S. Census, 28% of households lack broadband Internet access, and according to a Baltimore City Schools survey 24,000 students lack sufficient Internet or computer device access at home. During the COVID-19 crisis, this lack of access is a major barrier to learning, employment and social engagement.



Mesh network connectivity heatmap in Baltimore City

- Mesh networks can provide efficient access to broadband internet connectivity to low-income households in urban settings.
- In this collaborative project, we are working with community partners to provide internet connectivity to 250 low-income households.
- We are also developing a bilingual localized library of online resources for learning, employment, and social engagement.
- We are using interviews and surveys to study the impact of having access on participants.

Setting up community mesh networks



Broader Impact Highlights:

- Partnerships established with more than 25 local organizations
- 7 sector antennas installed in the city providing line-of-sight coverage to 25 neighborhoods; 50 GB internet backbone secure in kind from partners
- Bilingual digital resource library developed with more than 150 resources
- 3 undergraduate and 1 graduate students trained (all underrepresented in STEM)

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