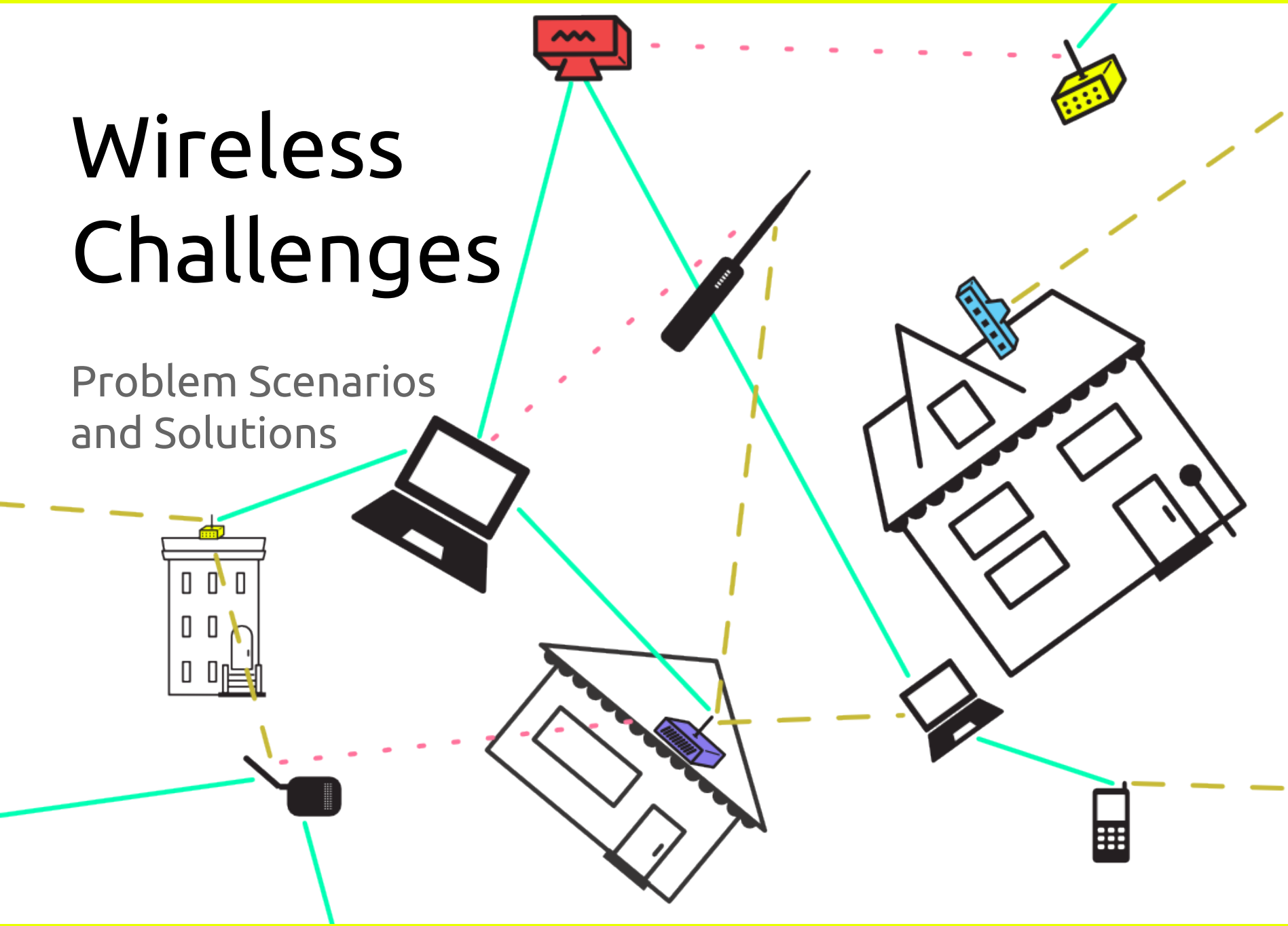
Wireless Challenges

Problem Scenarios and Solutions



Problem: You don't have a good link to your neighbor's roof.

Eye designed by Travis Yunis from The Noun Project

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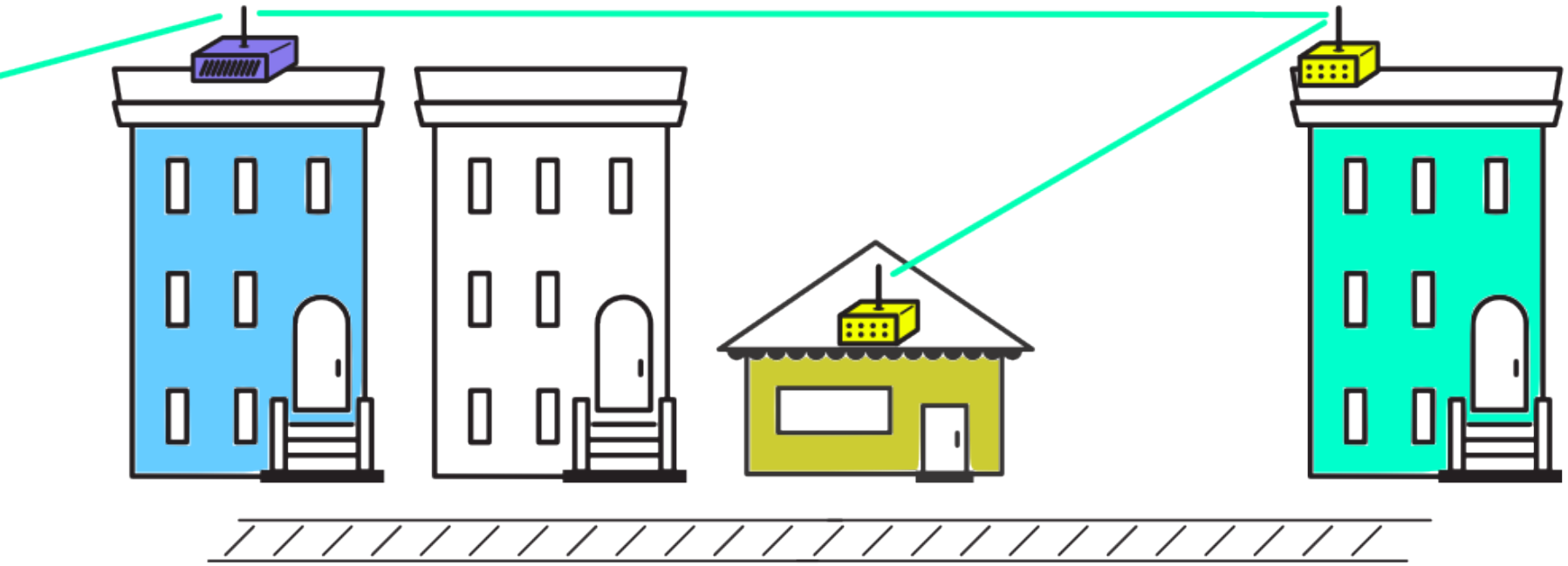
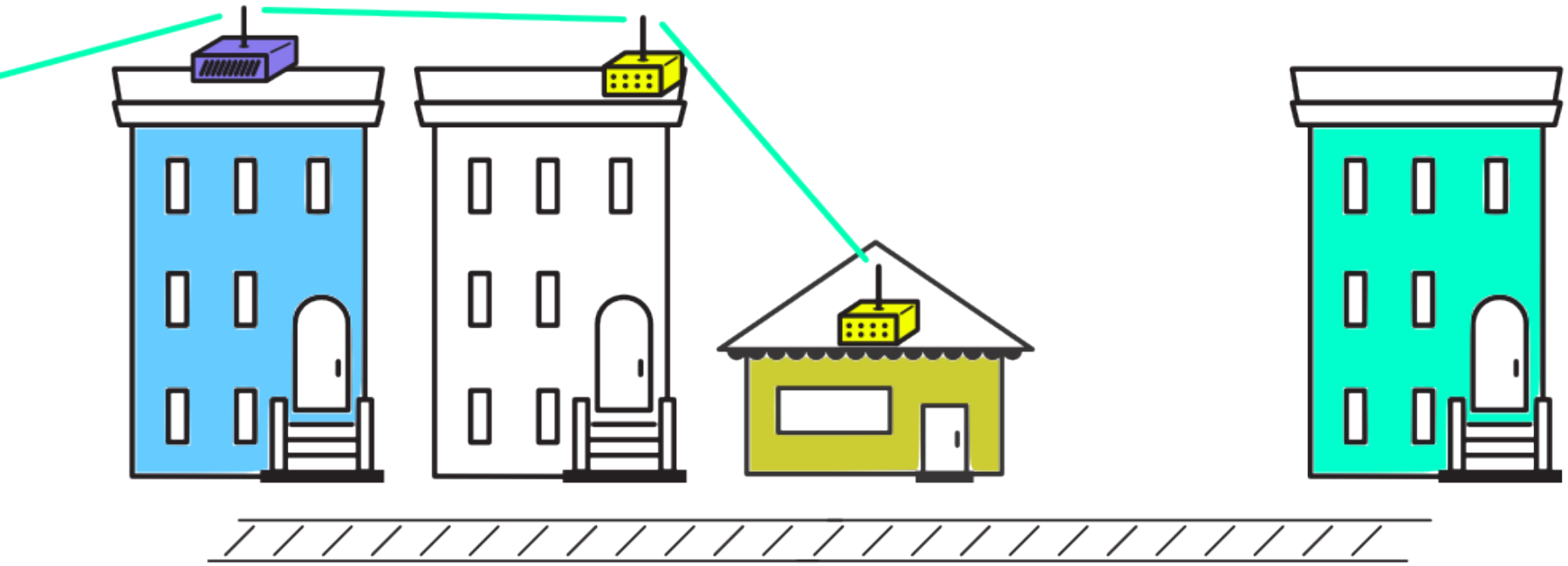


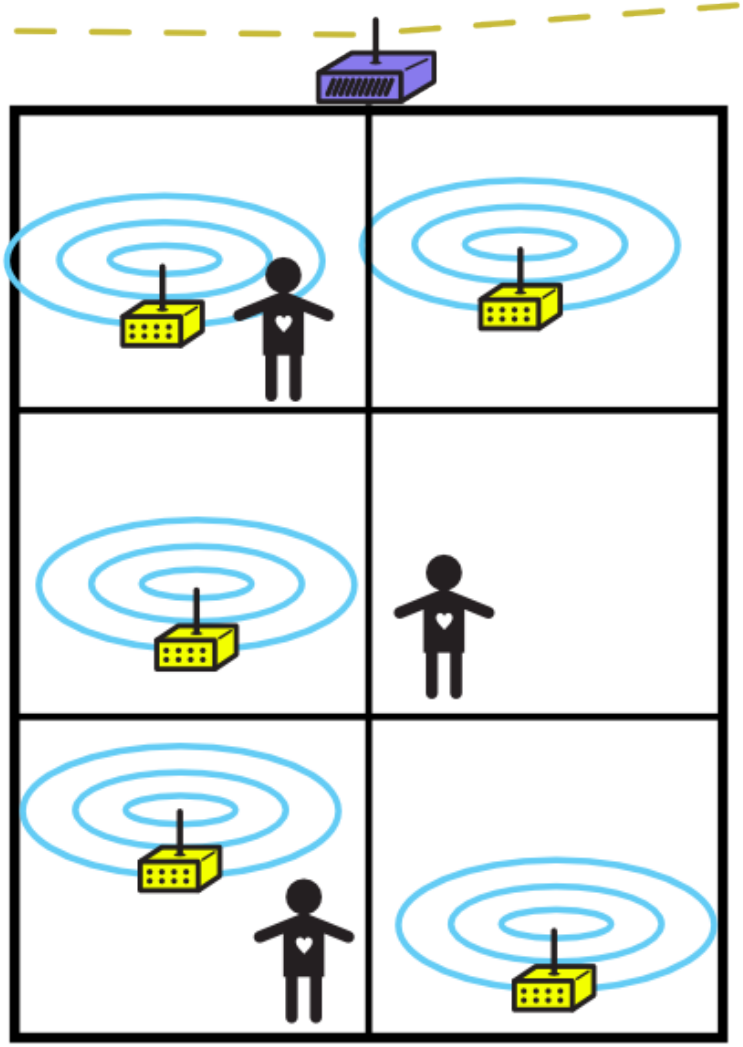
Solution 1: Add a neighbor node to reach the spots you can't see.

Problem: You don't have a good link to your neighbor's roof.



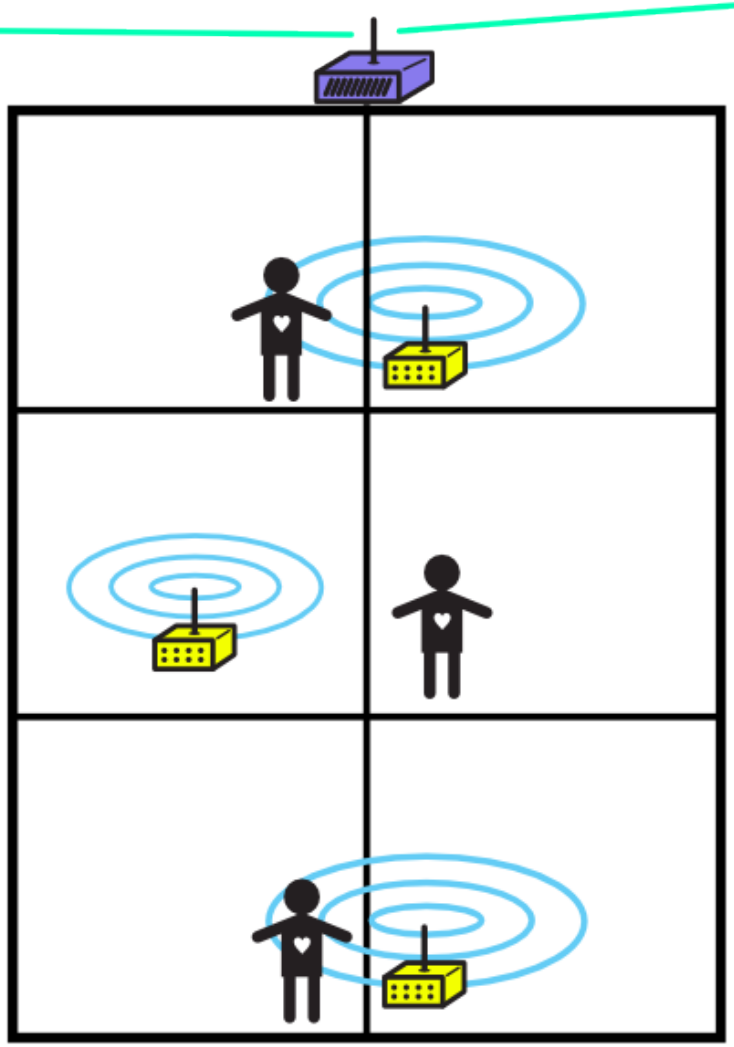
Solution 2: Add a neighbor node to reach the spots you can't see.

Problem: The number of wireless signals in your building cause slow connections on the mesh.



Problem: The number of wireless signals in your building cause slow connections on the mesh.

Solution 1: Ask your neighbors to turn down their wireless power, or share devices and connections.



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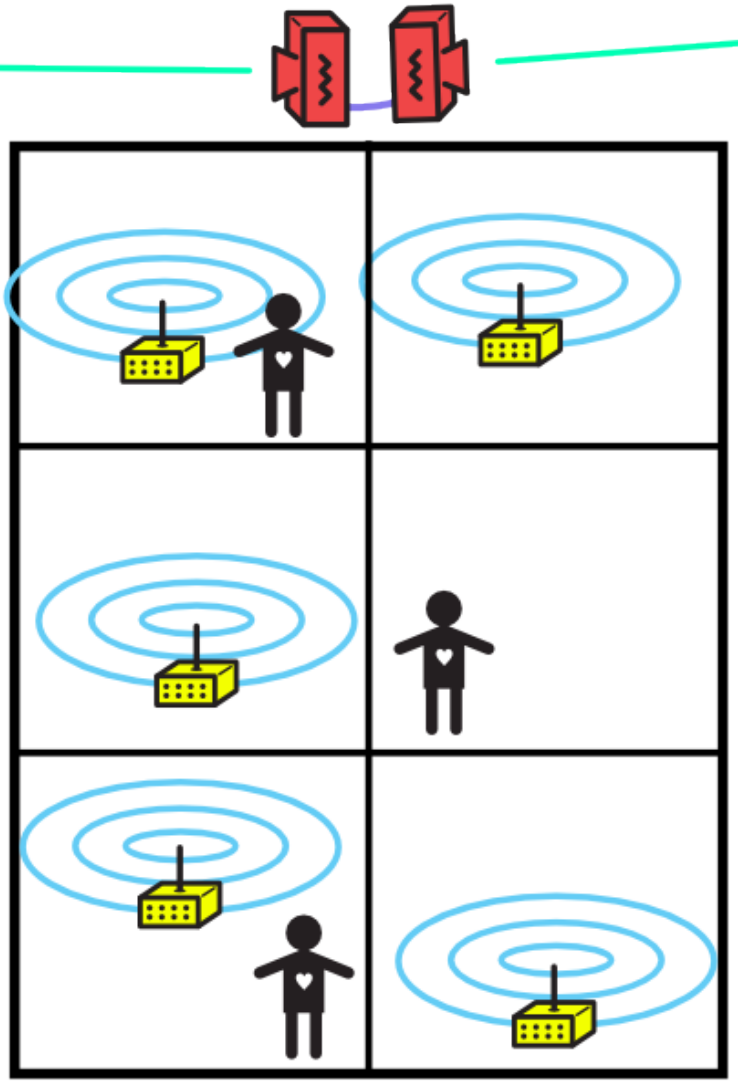

Solution 2: Switch to more focused nodes to minimize signal from interfering sources.

Problem: Frequent rain and snow causes the links to drop in quality or disconnect.

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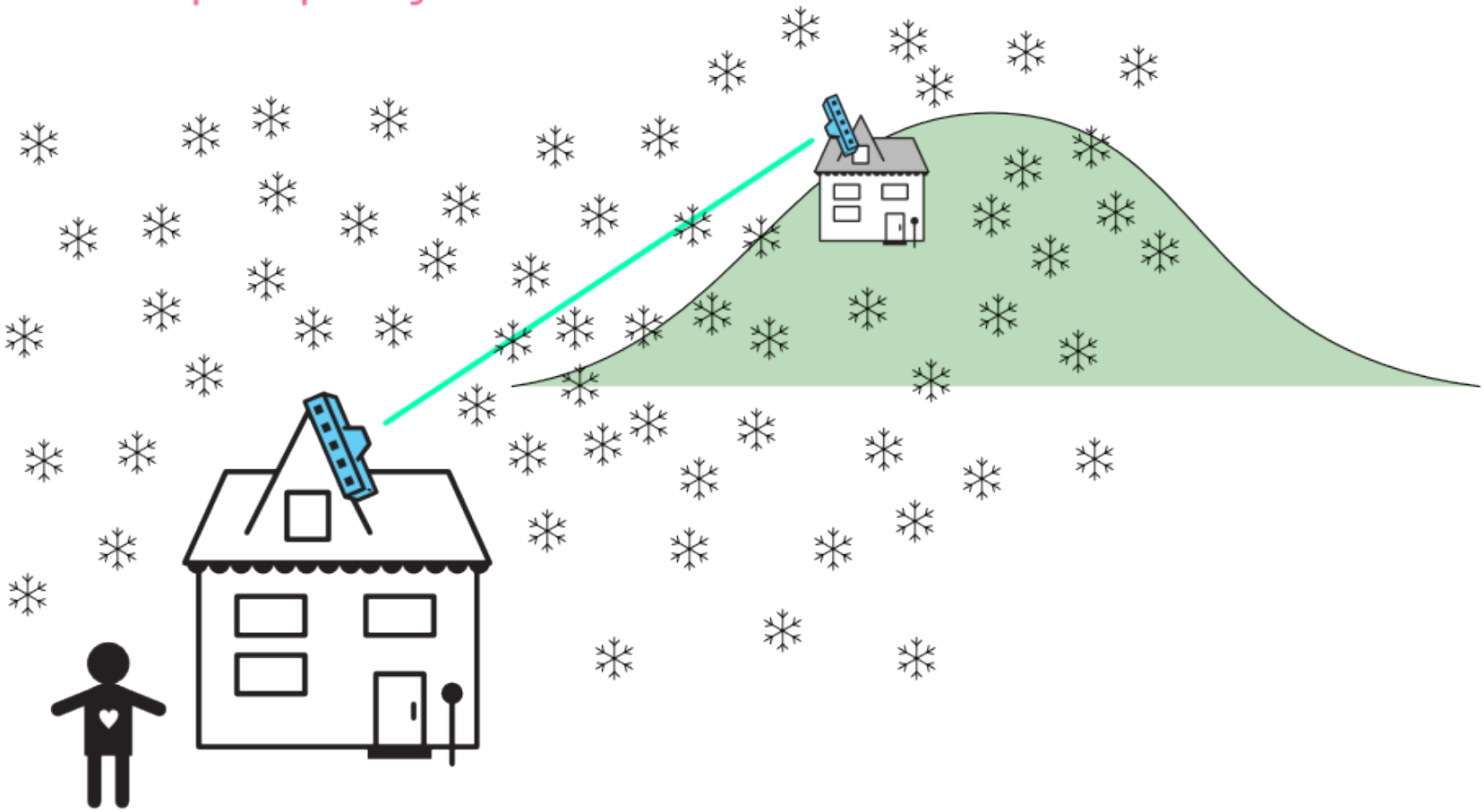
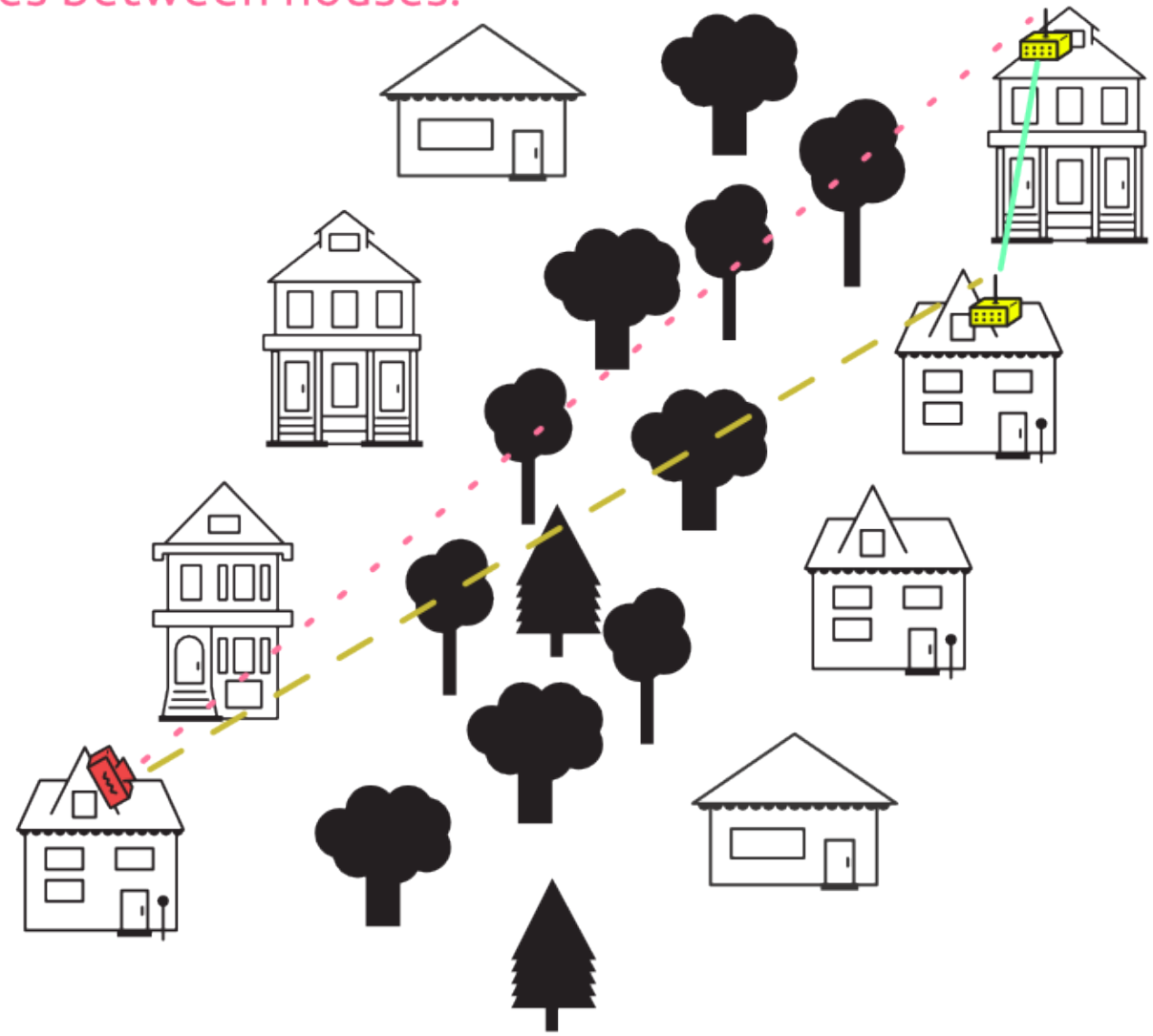


Solution: Changing to a more focused router can improve the signal.

Problem: Some neighbor links are blocked by the trees between houses.



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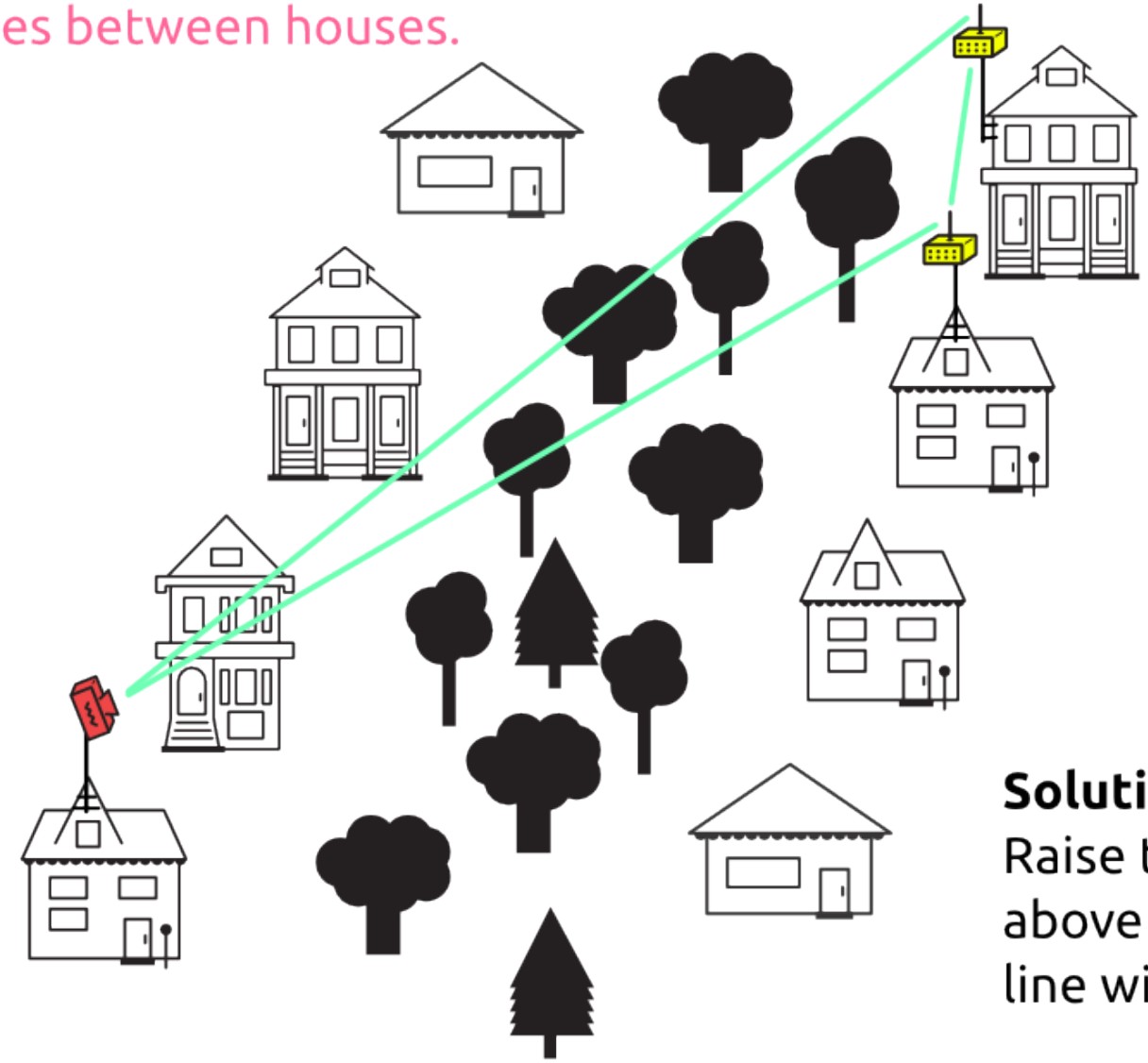

Solution 1:
Raise the routers above the tree line with poles.

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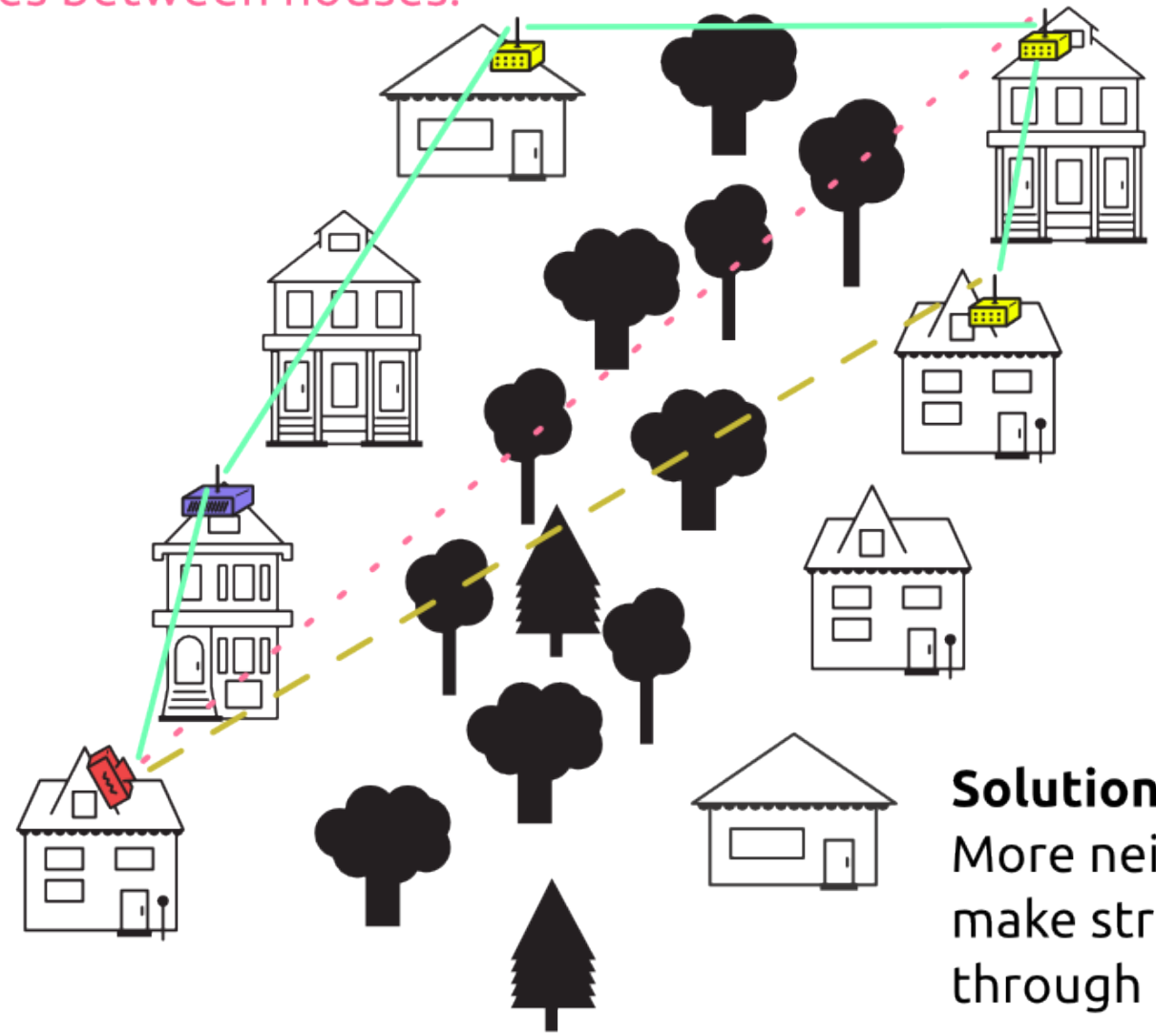
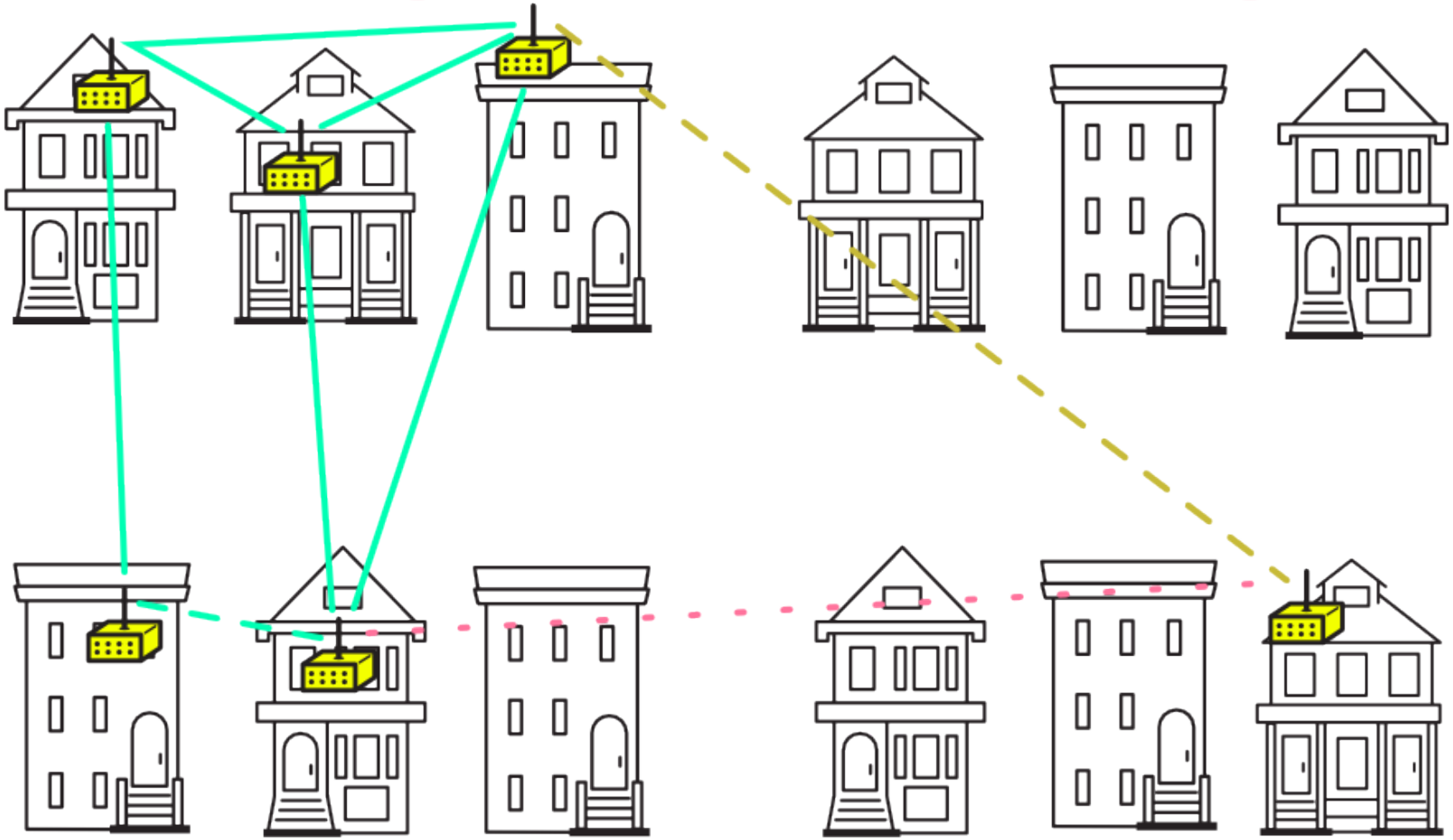


Solution 2:
More neighbor nodes make stronger links through the area.

Problem: One building has weak links to the rest of the neighborhood.



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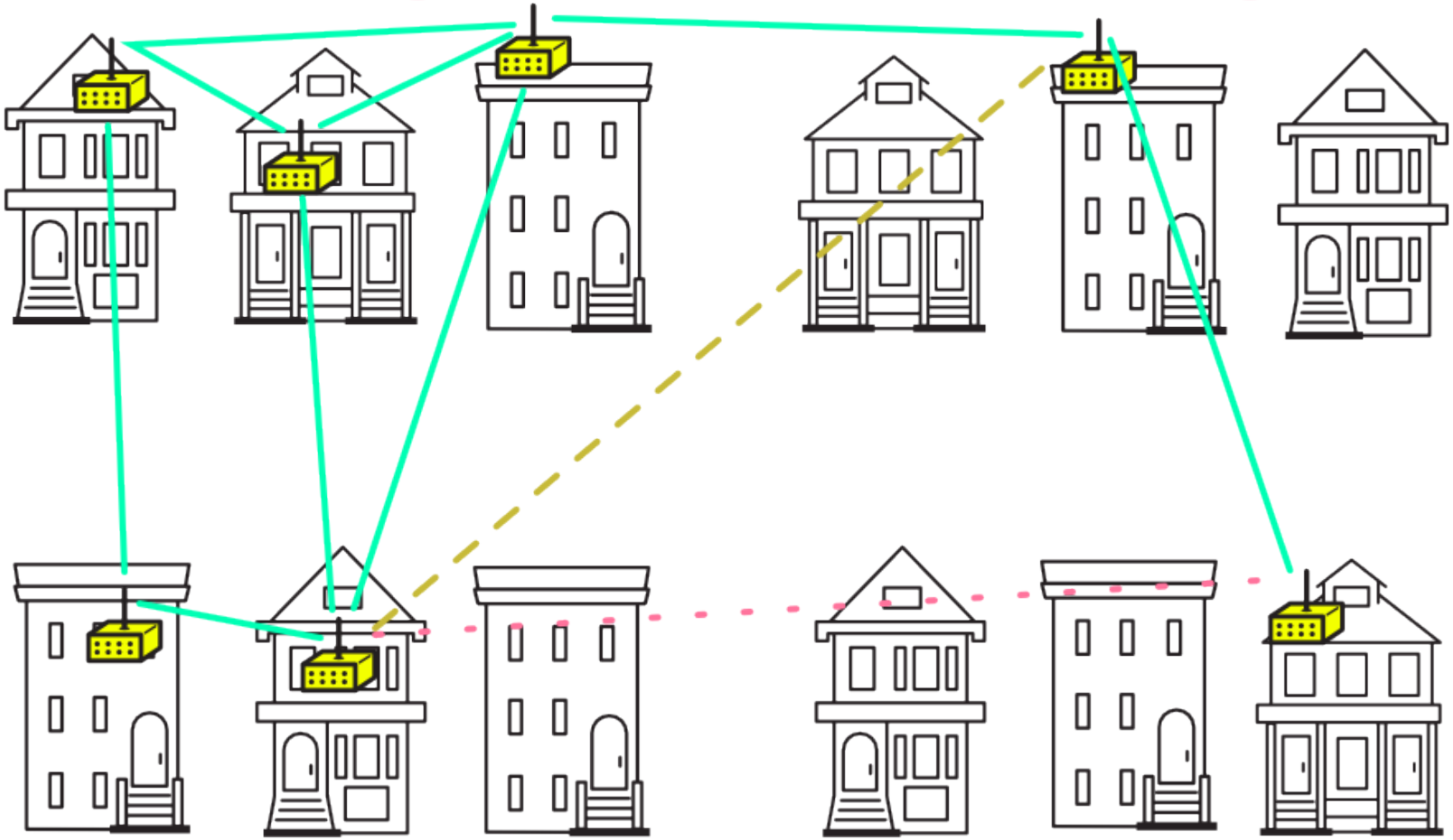

Solution 1: You can add another neighbor node.

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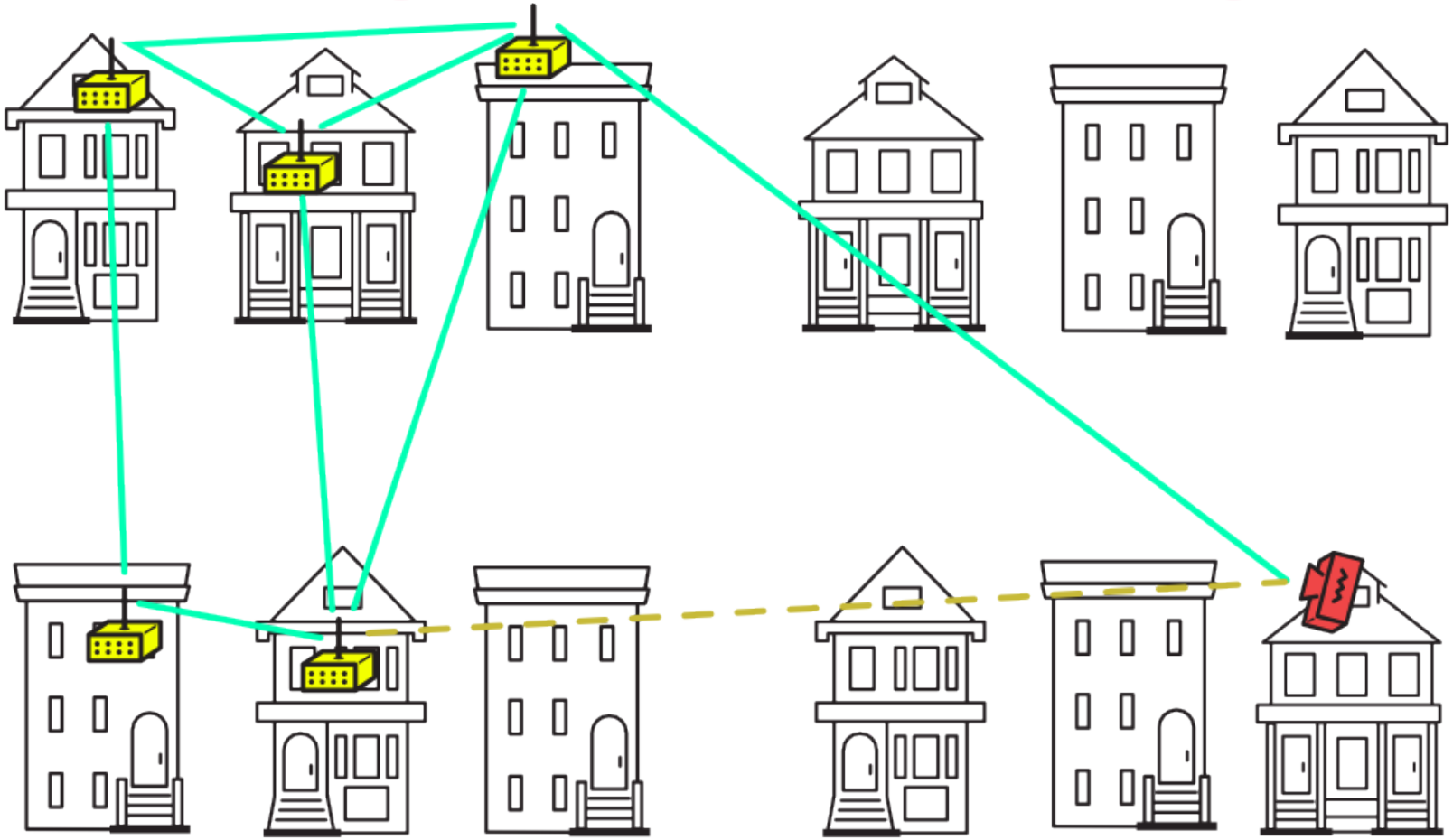

Solution 2: You can use a directional node instead.

Problem: A hill blocks the links to your nearby neighbors.

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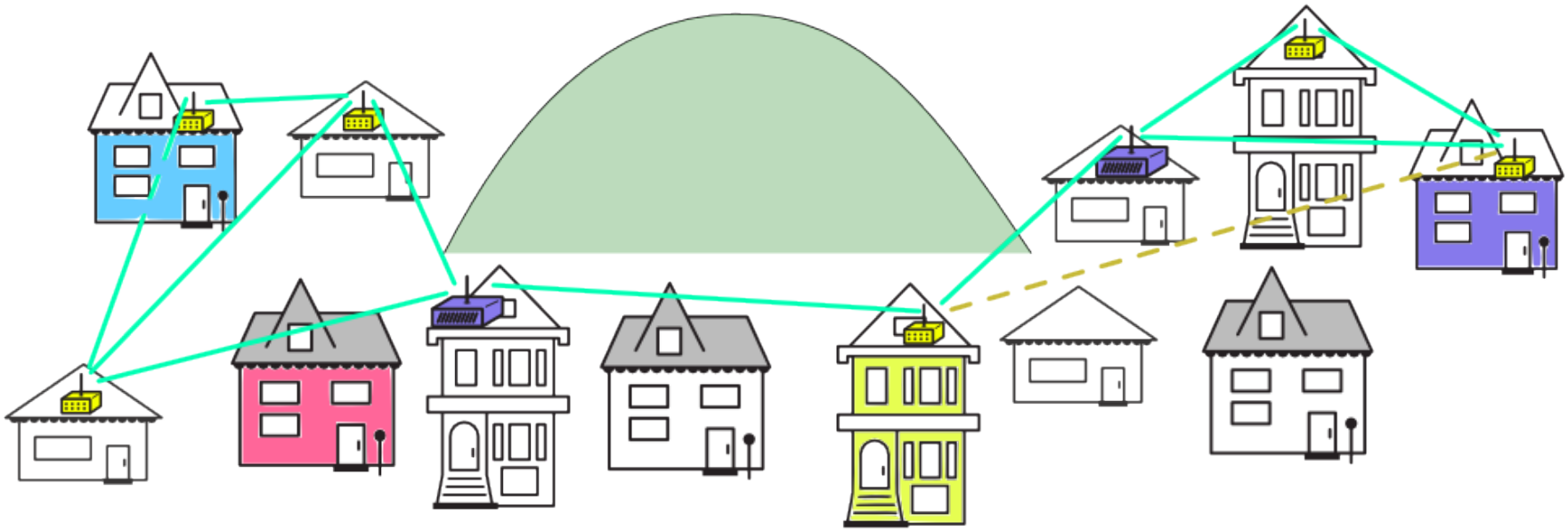
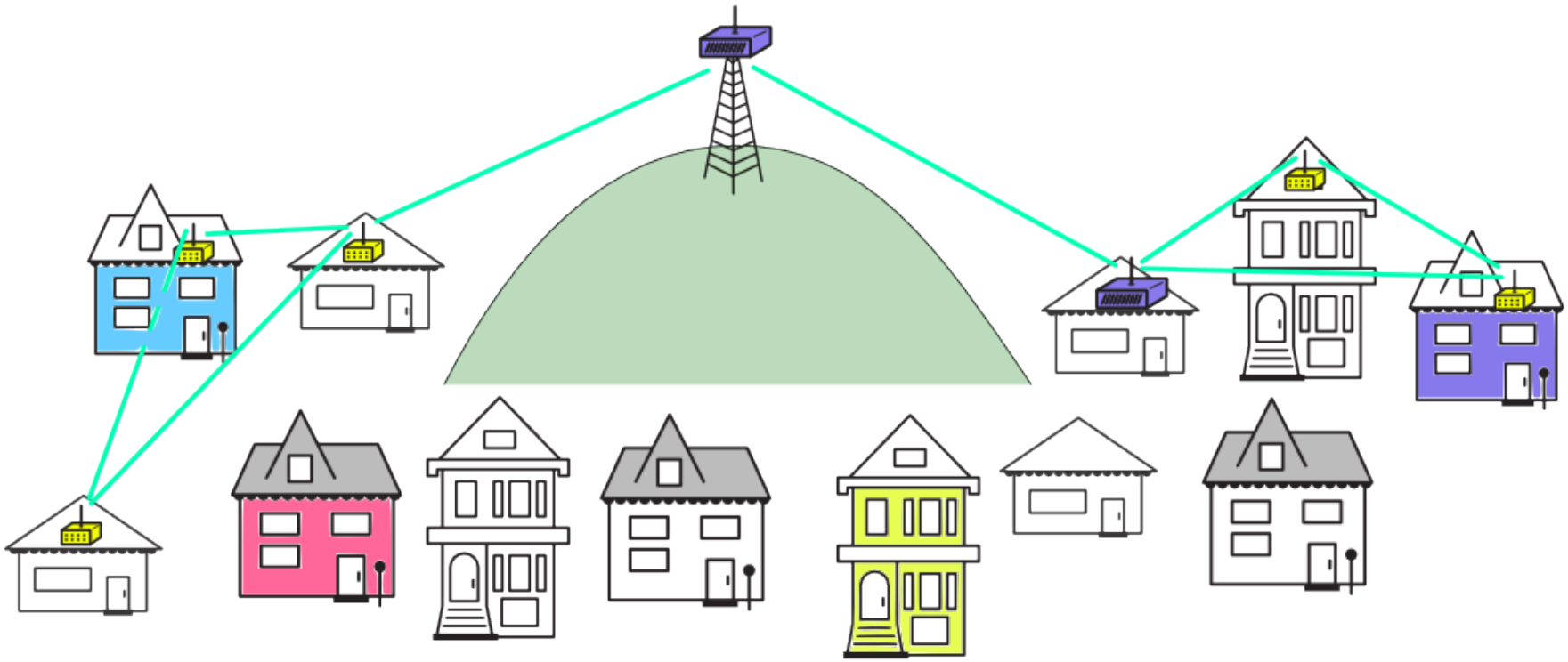


Solution 1: You convince your neighbors to install nodes to help.

Problem: A hill blocks the links to your nearby neighbors.



Solution 2: Find a way to put a node on the top of the hill.

Problem: Two neighbors have potential links that are far away.

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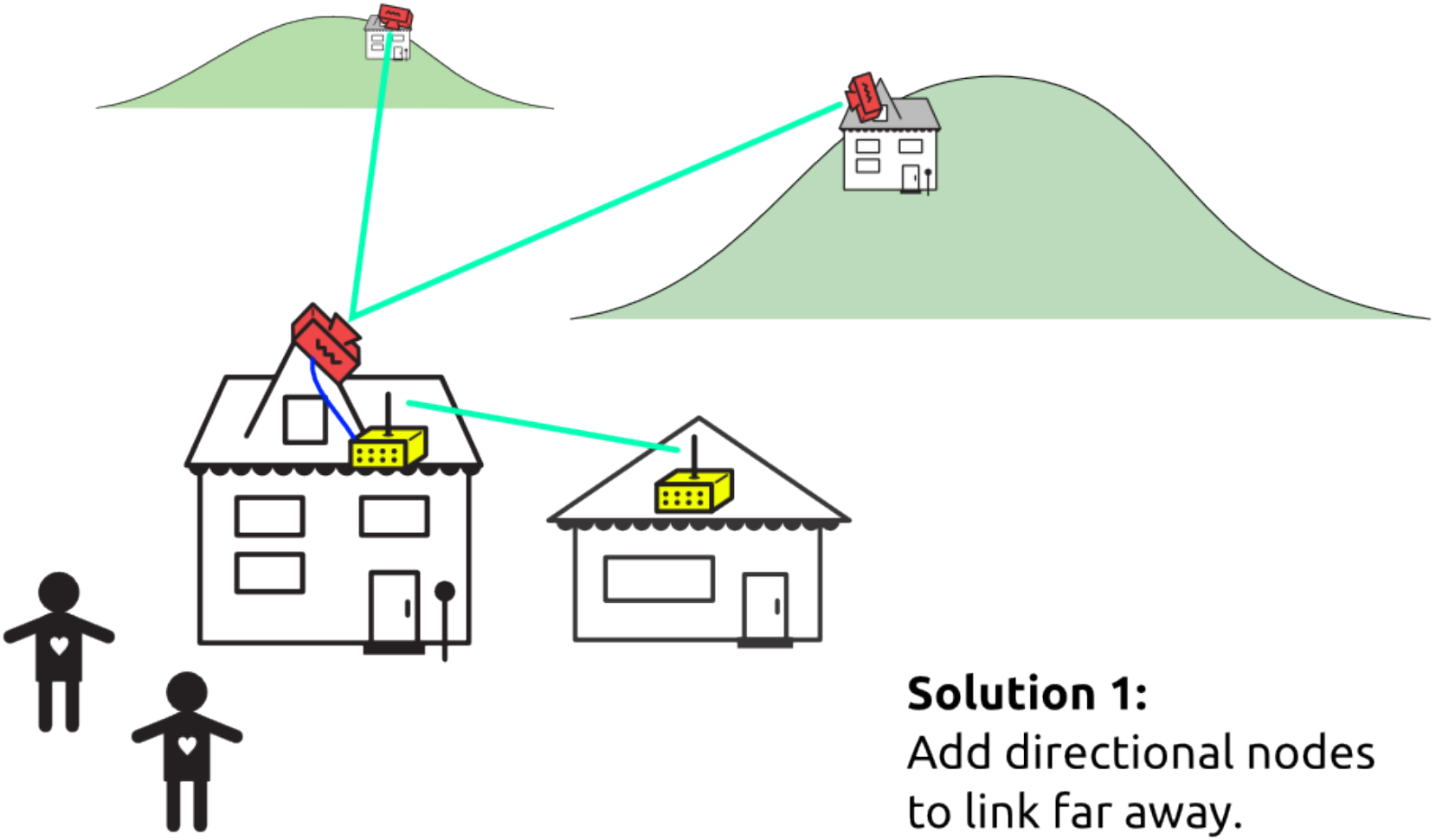
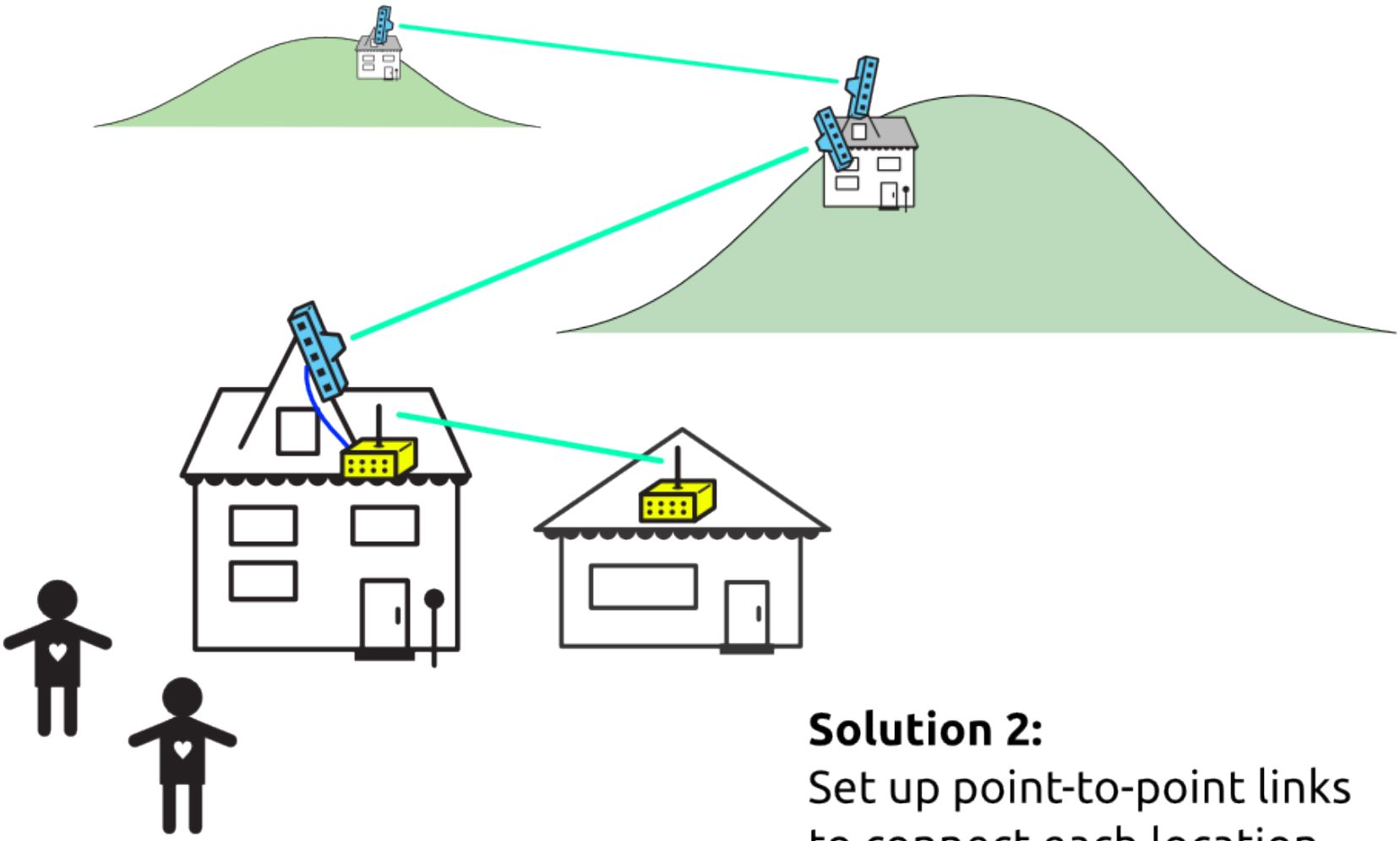


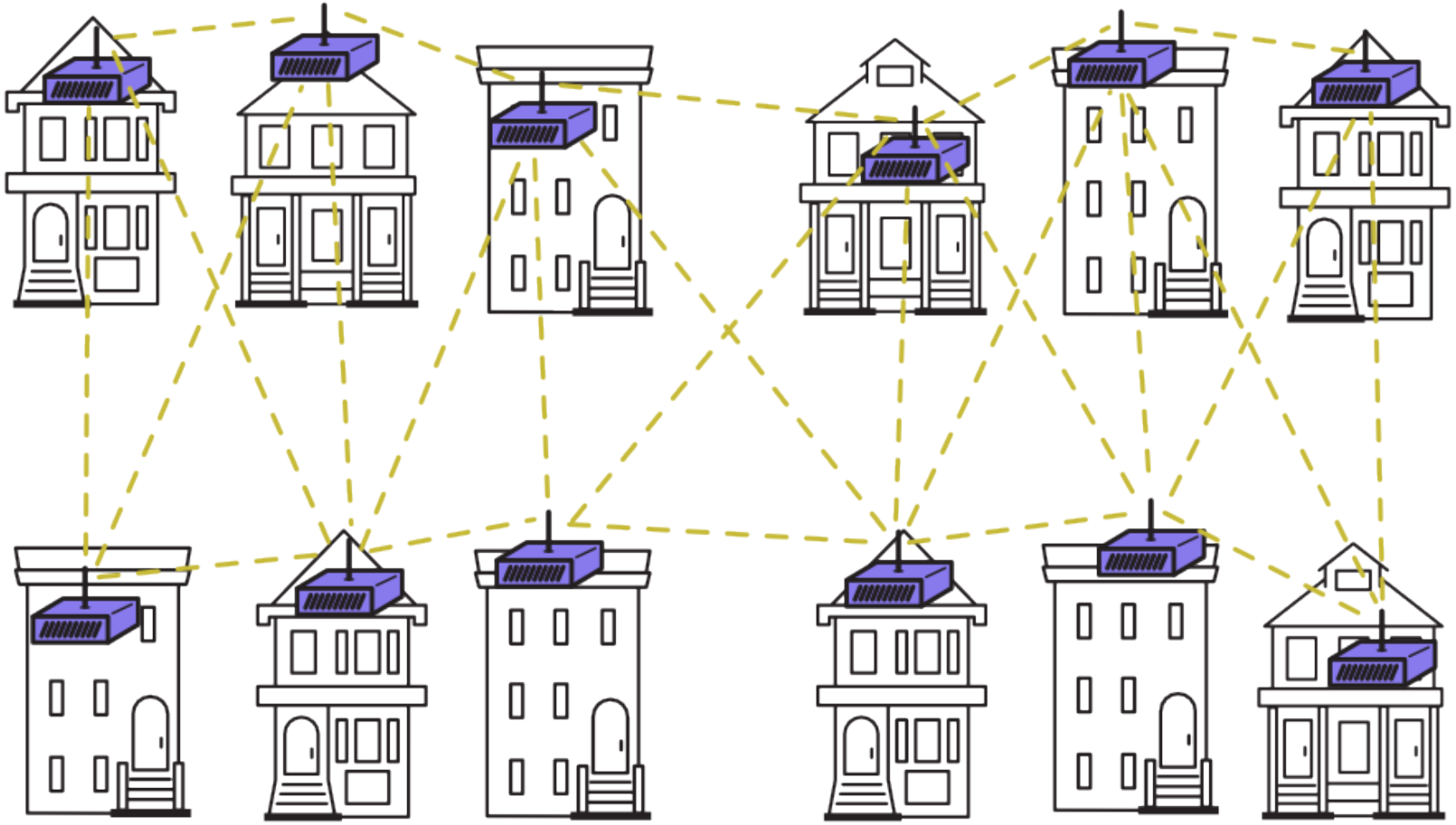
Solution 1:
Add directional nodes to link far away.

Problem: Two neighbors have potential links that are far away.



Solution 2:
Set up point-to-point links
to connect each location.

Problem: The routers seem slow and drop connections, though the signal is very strong.



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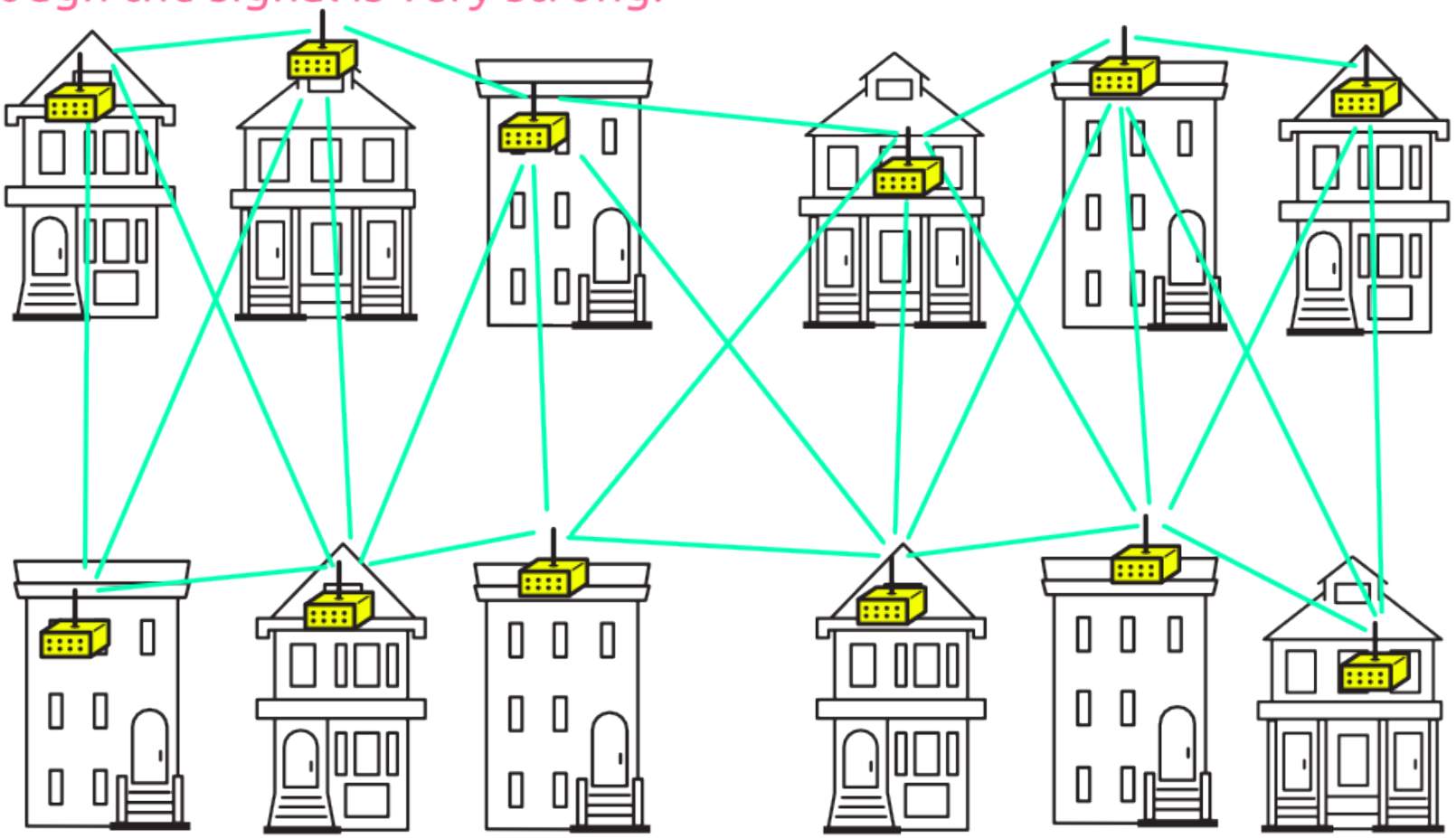

Solution 1: Switch to lower-powered nodes, or turn down the power if you can.

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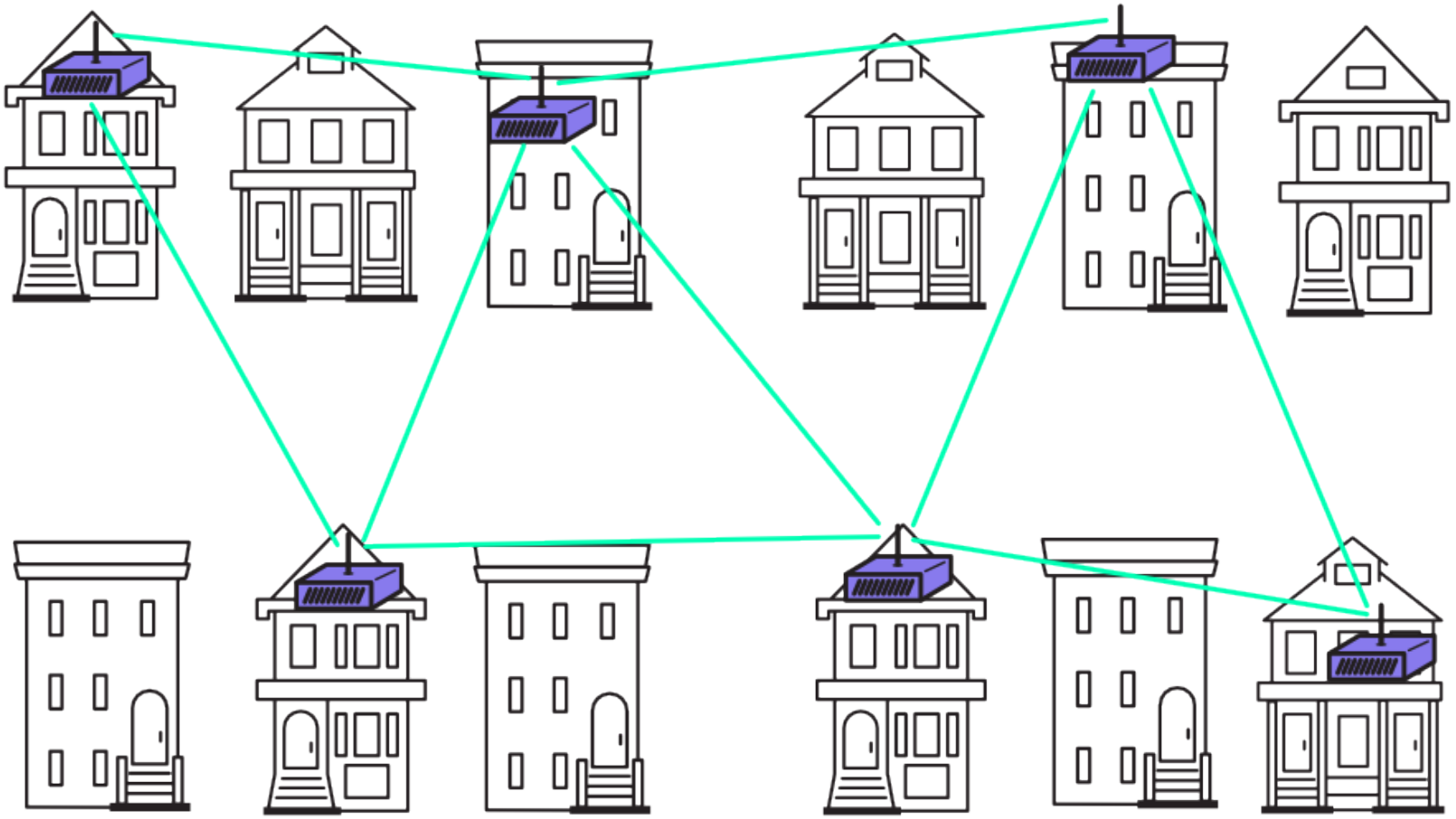
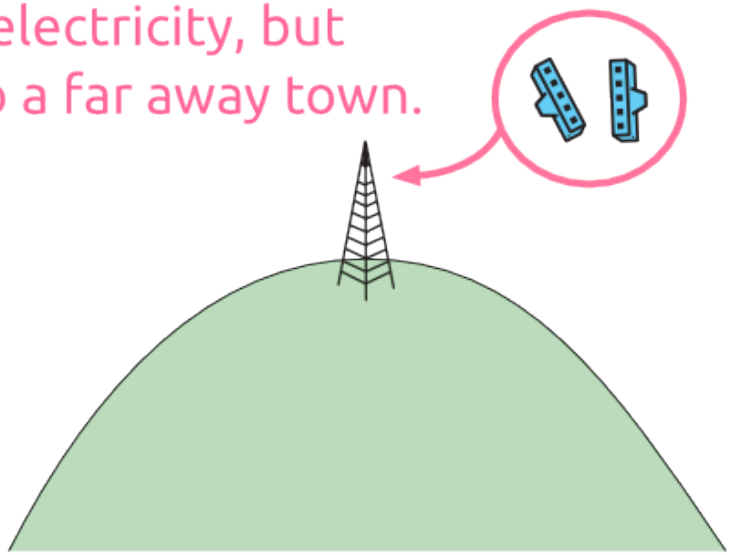
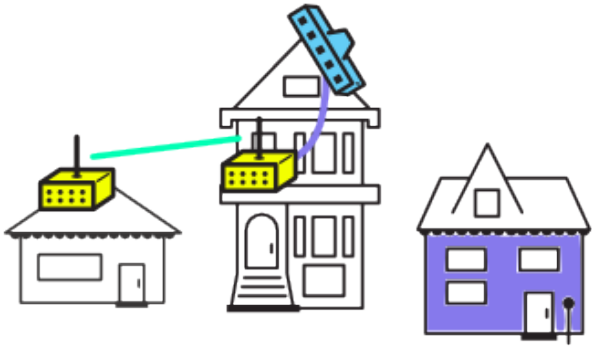


Solution 2: Remove a few nodes and have several neighbors connect to the closest node.

Problem: A hilltop site has no electricity, but would be perfect to connect to a far away town.





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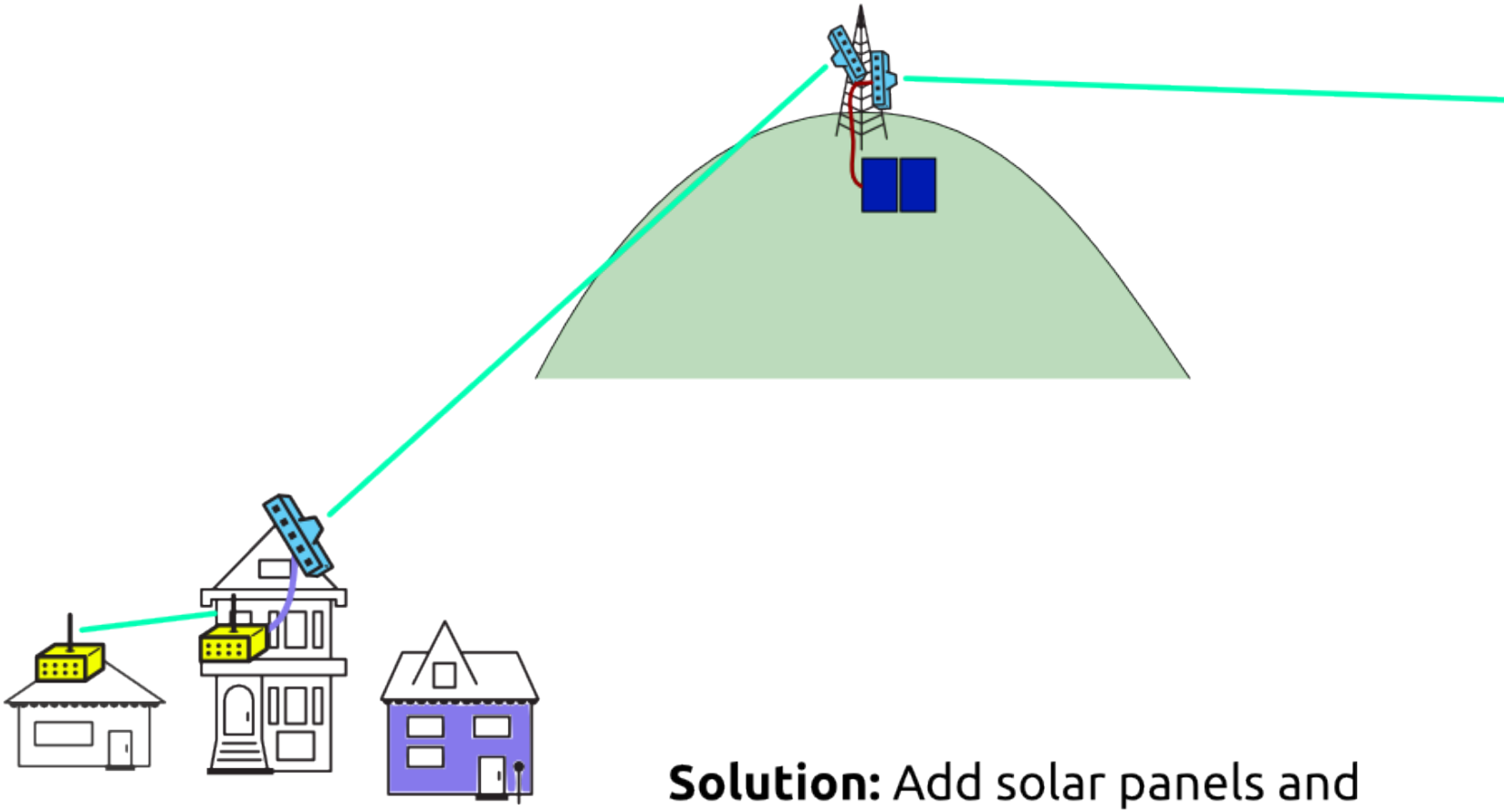
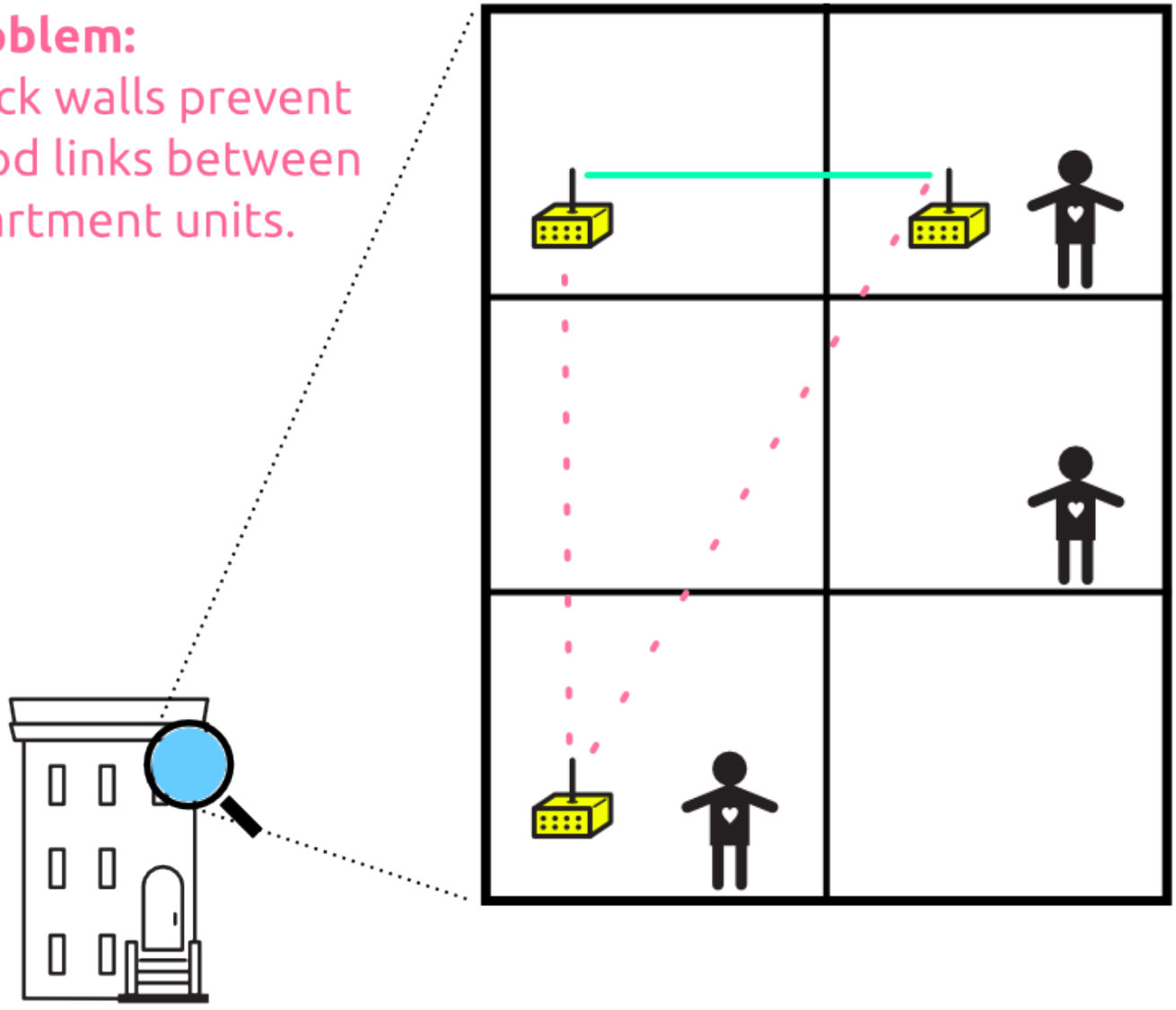


Solution: Add solar panels and batteries for remote electricity.

Problem:
Thick walls prevent good links between apartment units.



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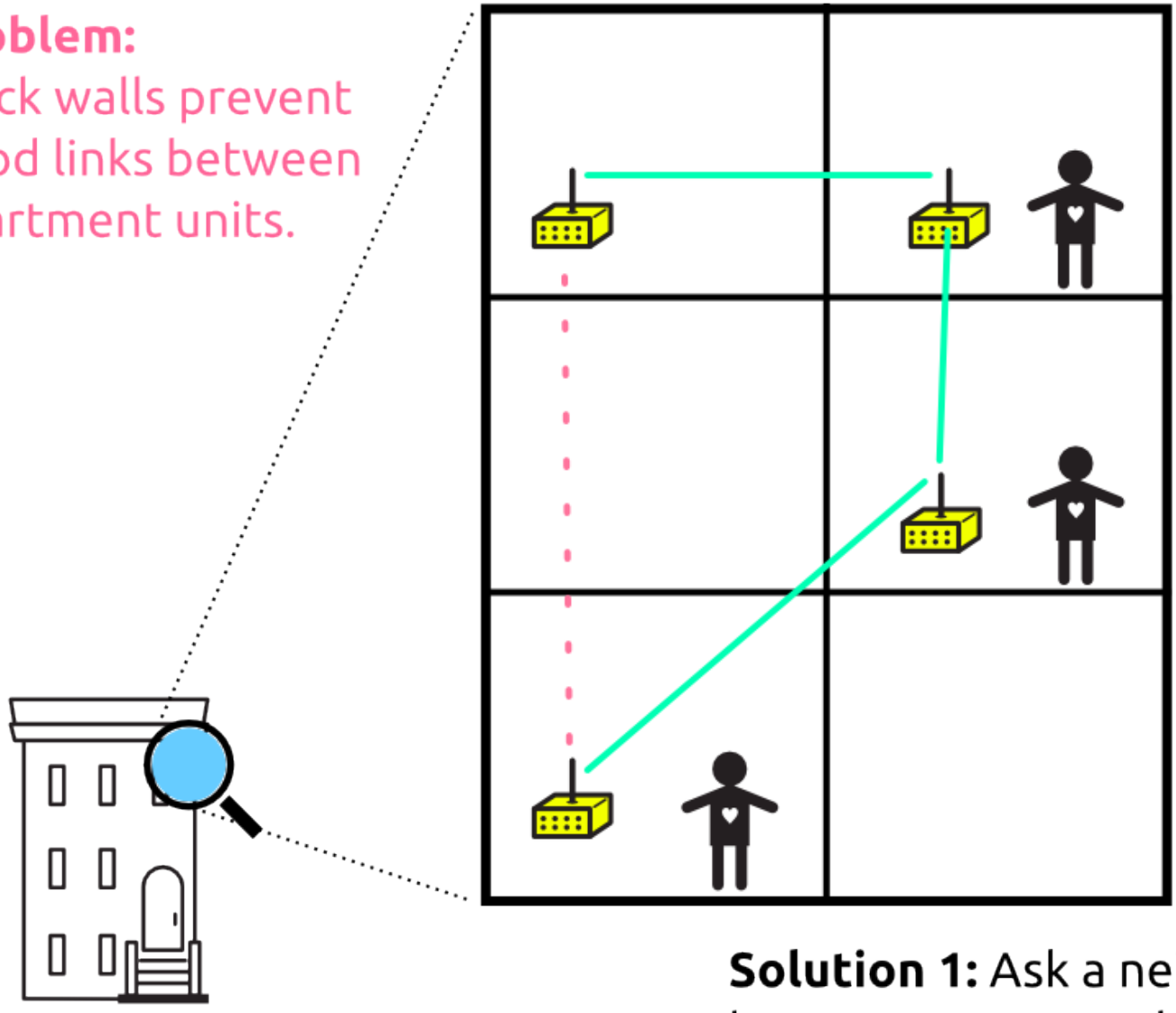

Solution 1: Ask a neighbor to host a repeater node.

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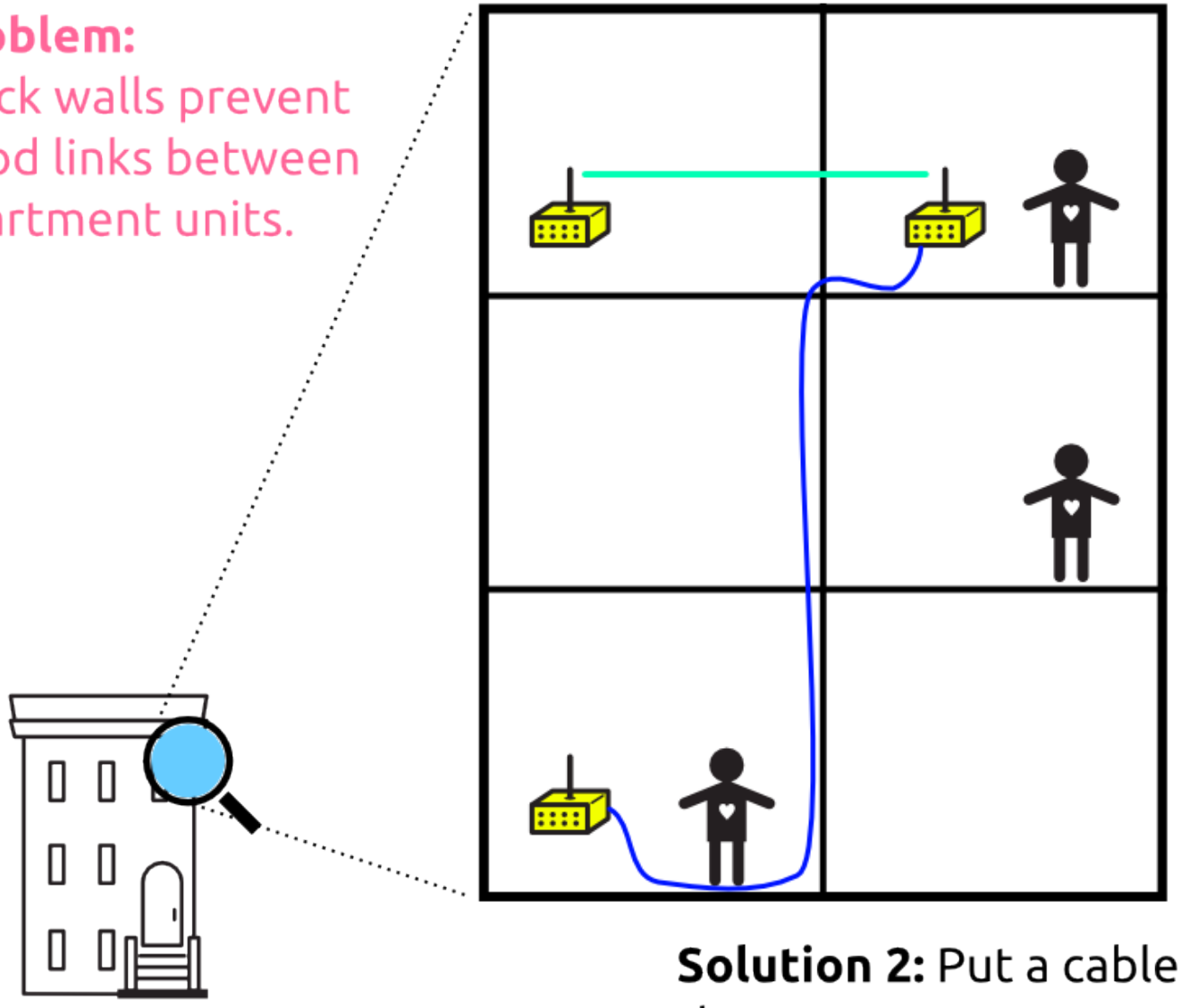

Solution 2: Put a cable between the routers to create a wired link.

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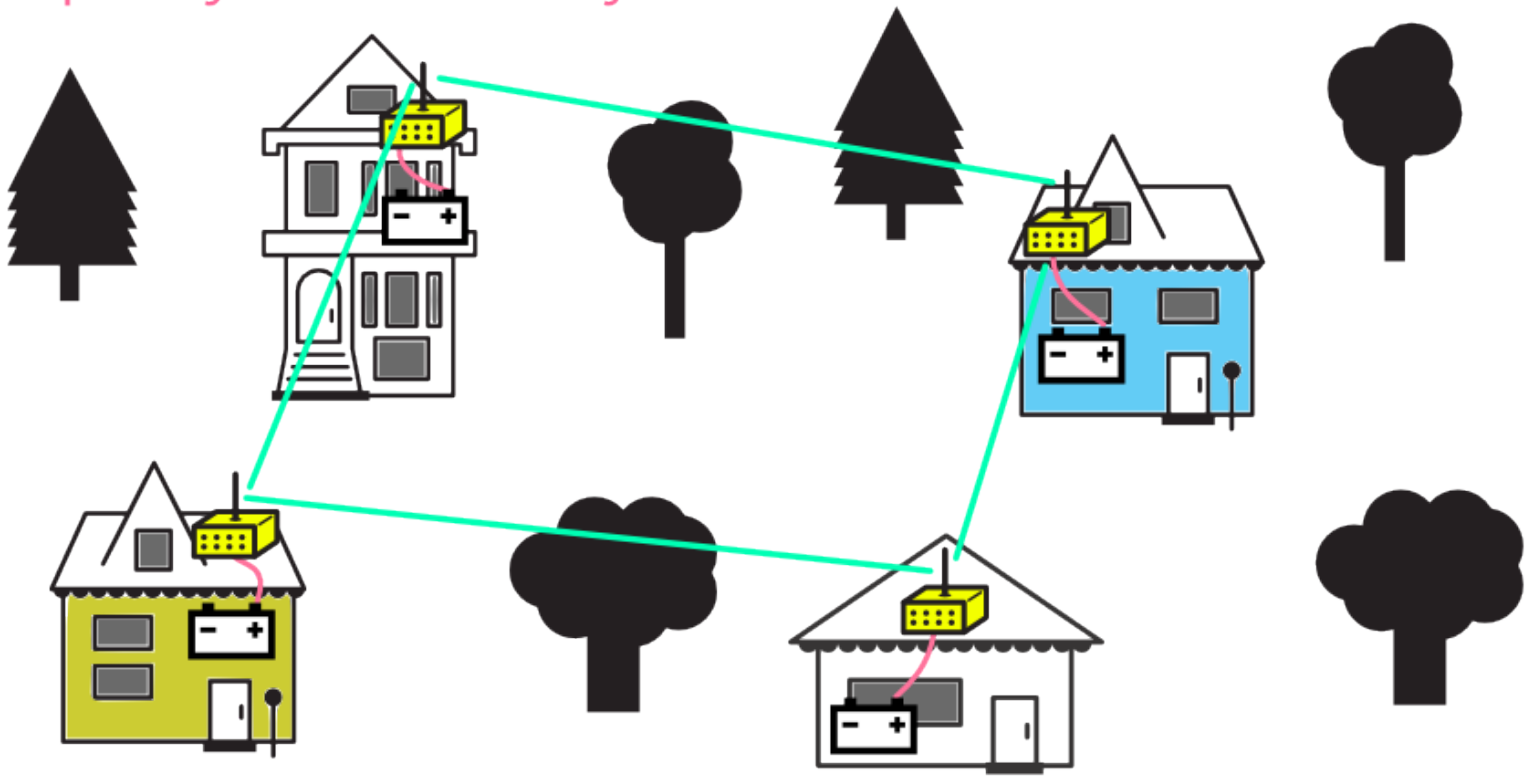

Solution: Connect the nodes to backup batteries for electricity.