Althea

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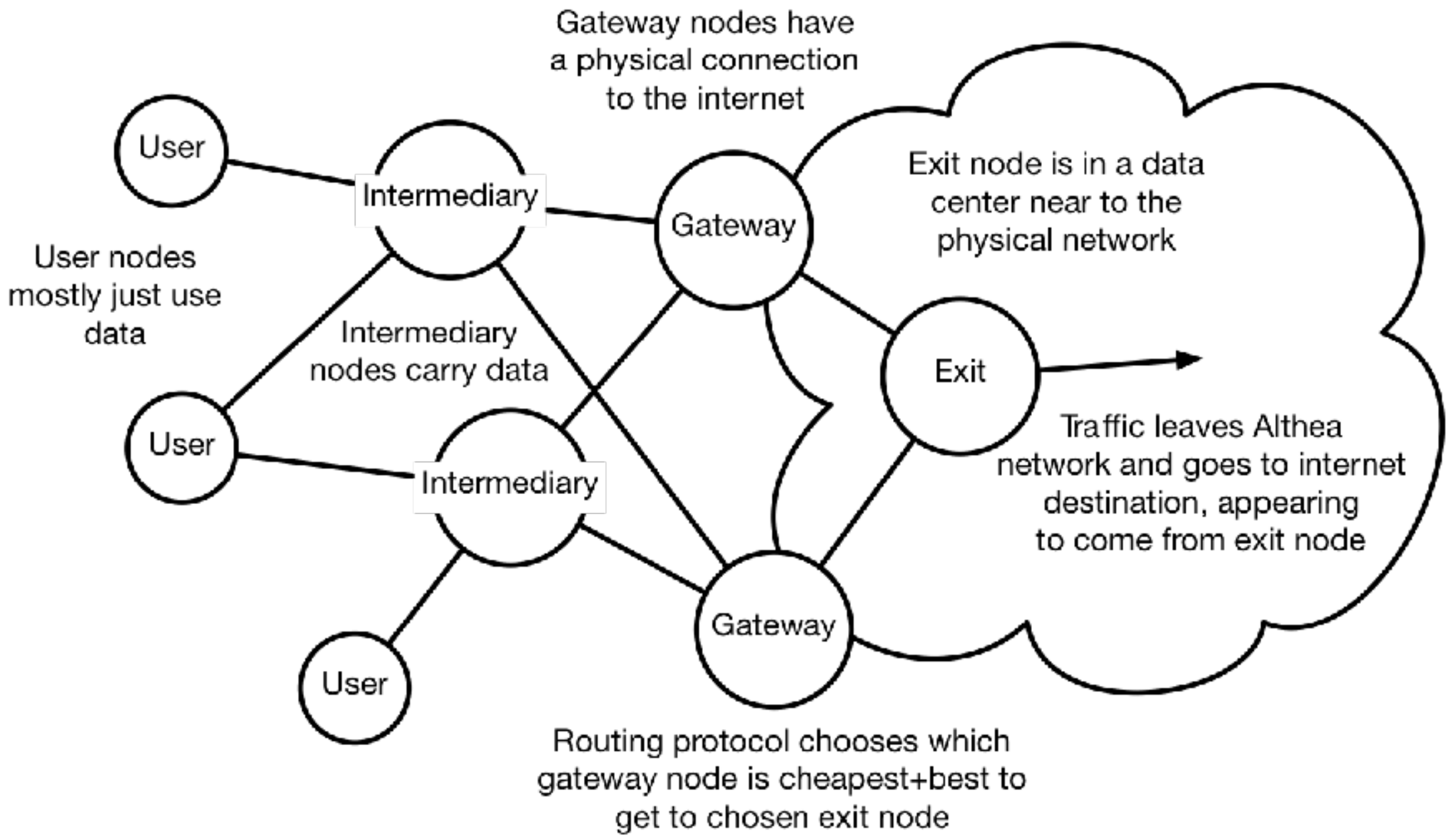
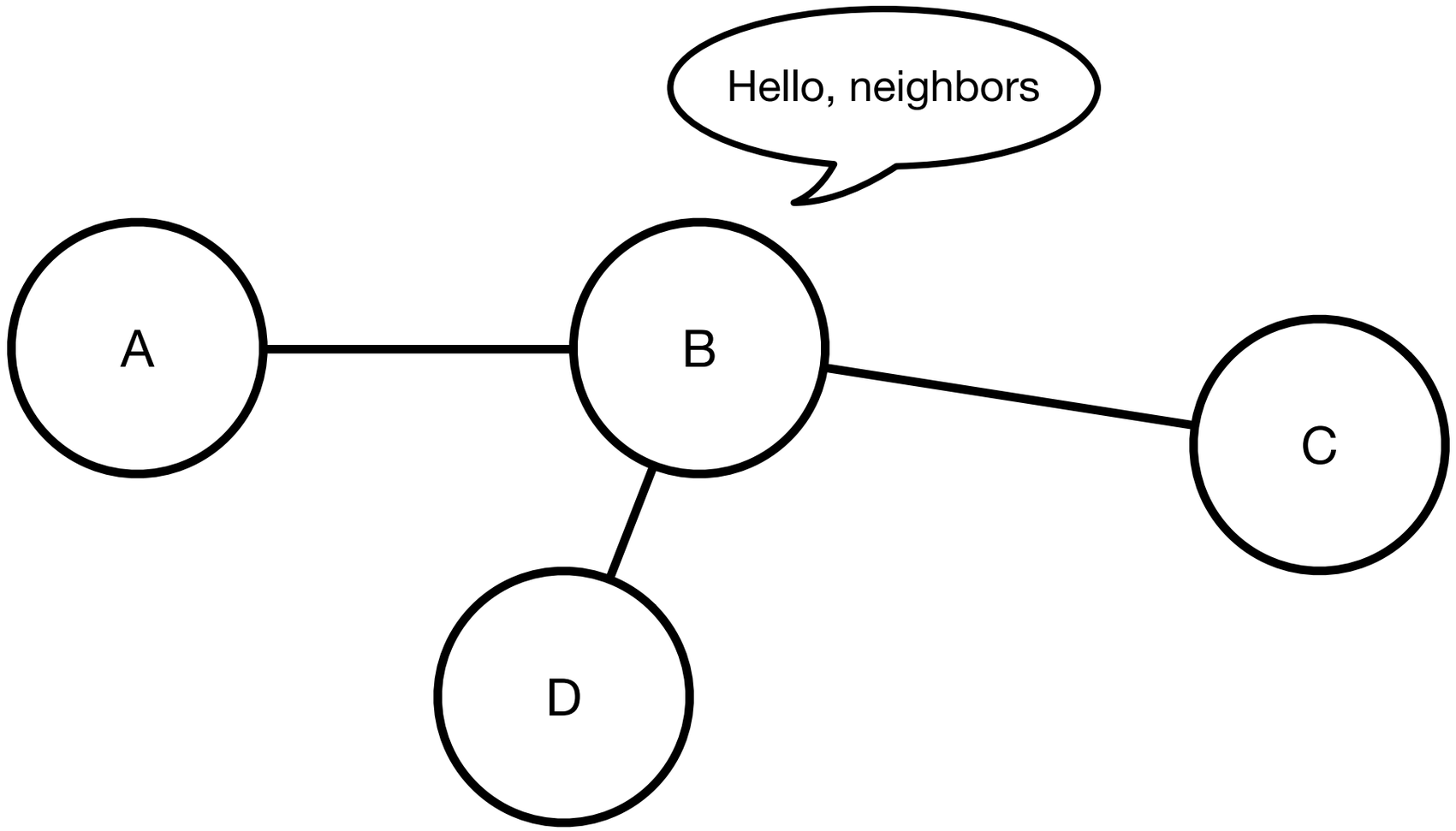
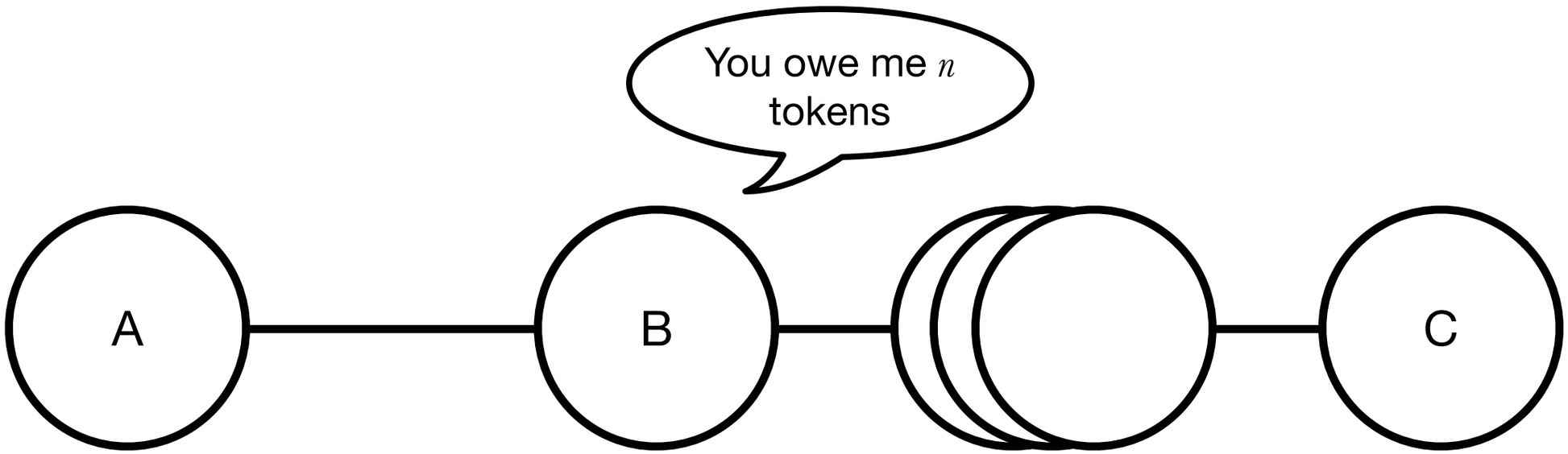
Goals

- Last mile network without a centralized ISP.
- Routers form an “incentivized mesh” network, routing over several hops.
- Not client to hotspot (e.g. Fonera, Comcast Wifi).
- Not building hardware. There is a lot of excellent hardware out there.
- Not making a new blockchain. Lots of projects out there and we will use the best available.

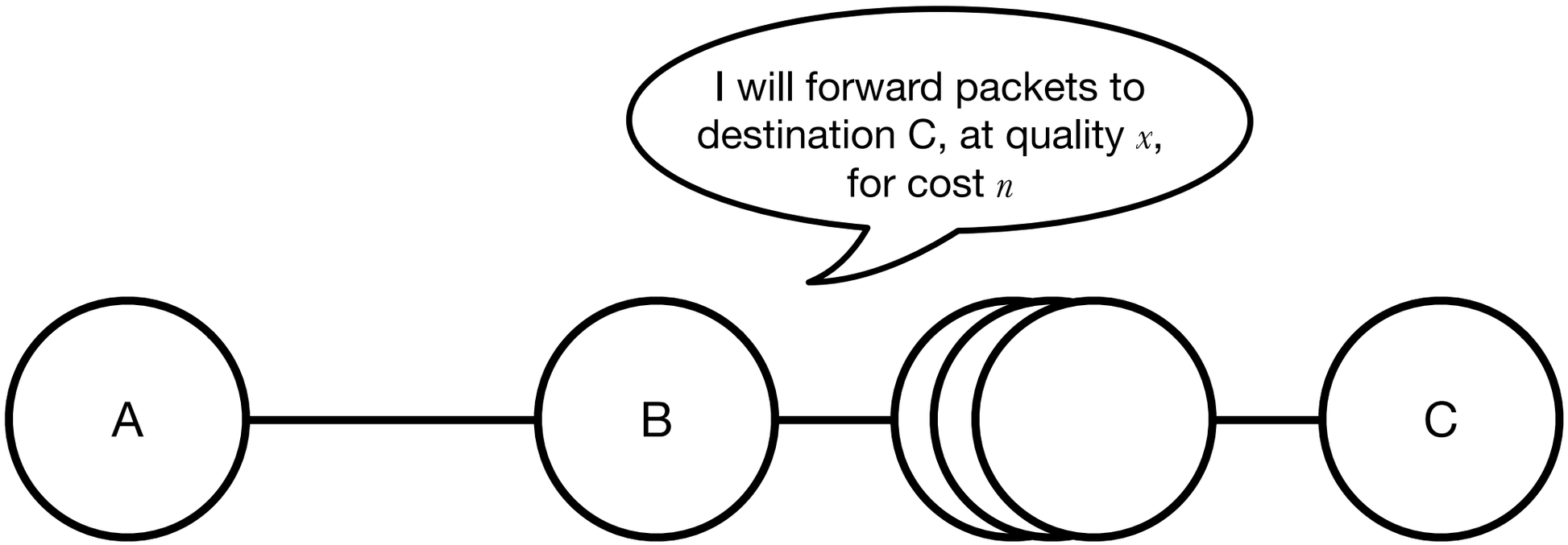
Logical architecture




Hello, neighbors
A
B
C
D

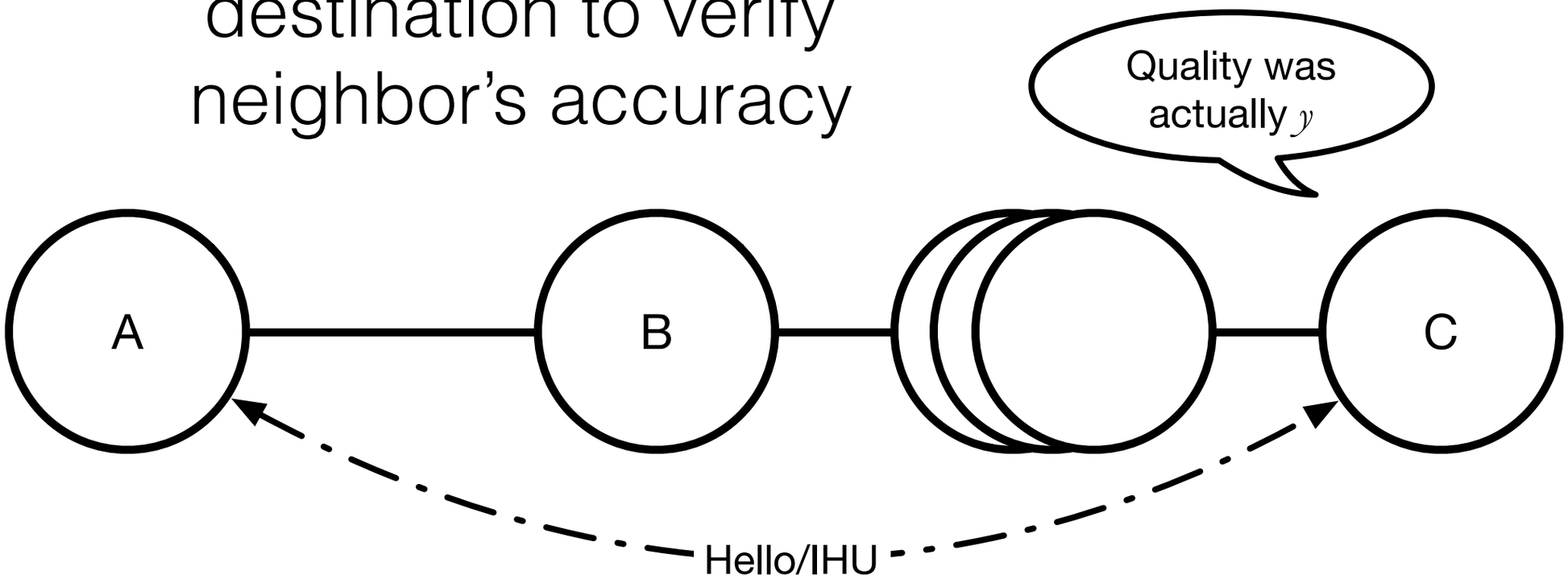


Nodes charge each other for forwarding

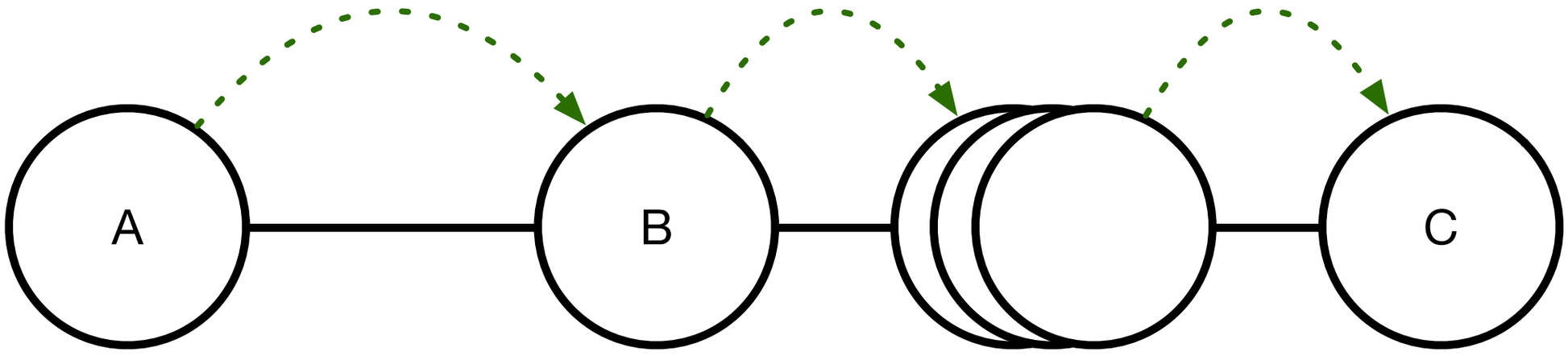


Distance-vector with additional price field

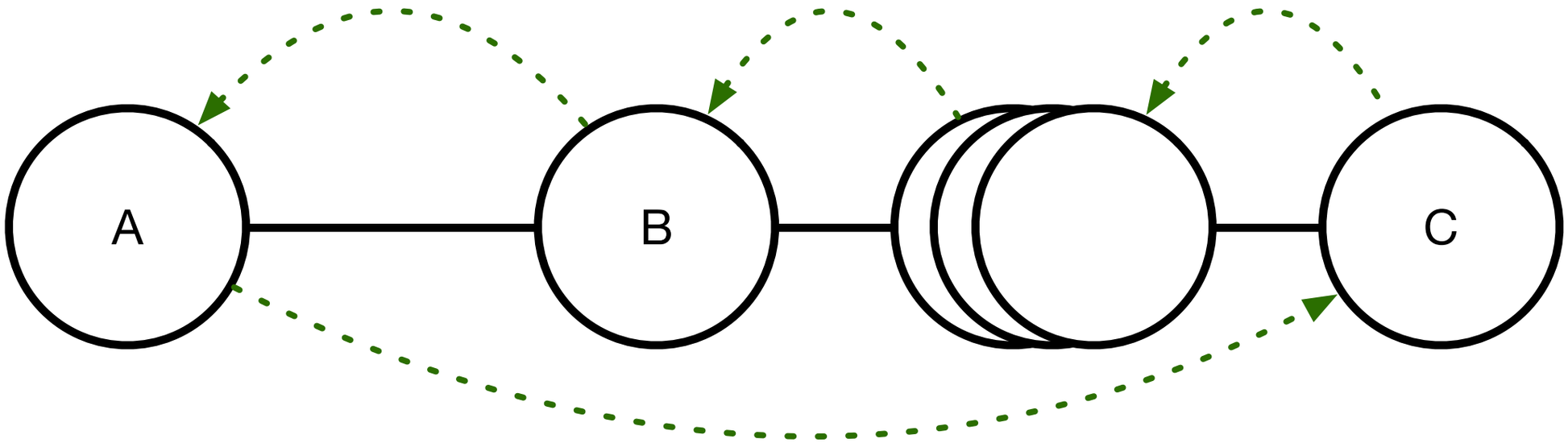
Quality estimation with destination to verify neighbor's accuracy



User node pays upstream



Exit node pays downstream on behalf of user node



Oregon test deployment

- A local mesh group wants to bring better connectivity to their small town.
- Deborah is a leader of the group and has a resalable high bandwidth connection at her business.
- It’s very rural, but the group is doing a lot of work on getting the physical layer set up with long range directional radios.

Buffalo test deployment

- Frank wants to sell internet to his neighbors.
- Paul wants to sell internet to his tenants and adjacent property owners.
- Backhaul is provided by a wireless ISP which services businesses now, but will be able to make money from retail service by selling into the incentivized community mesh.

For community meshes

- Who want a system which automatically compensates members for running hardware.

- No need to deal with bank accounts or billing software.

- Built-in incentive for commercial ISPs to provide backhaul to the network.

For ISPs

- Attractive to regional, wholesale, and business-oriented ISPs.

- Someone else may be able to pay the upfront install cost for the connection to the mesh.

- No need to worry about supporting retail customers.

www.altheamesh.com

www.github.com/althea-mesh