PART 3 - MULTI-HOP LINKS

- Heterogenous links

- Routing essential

- Simulated multi-hop network
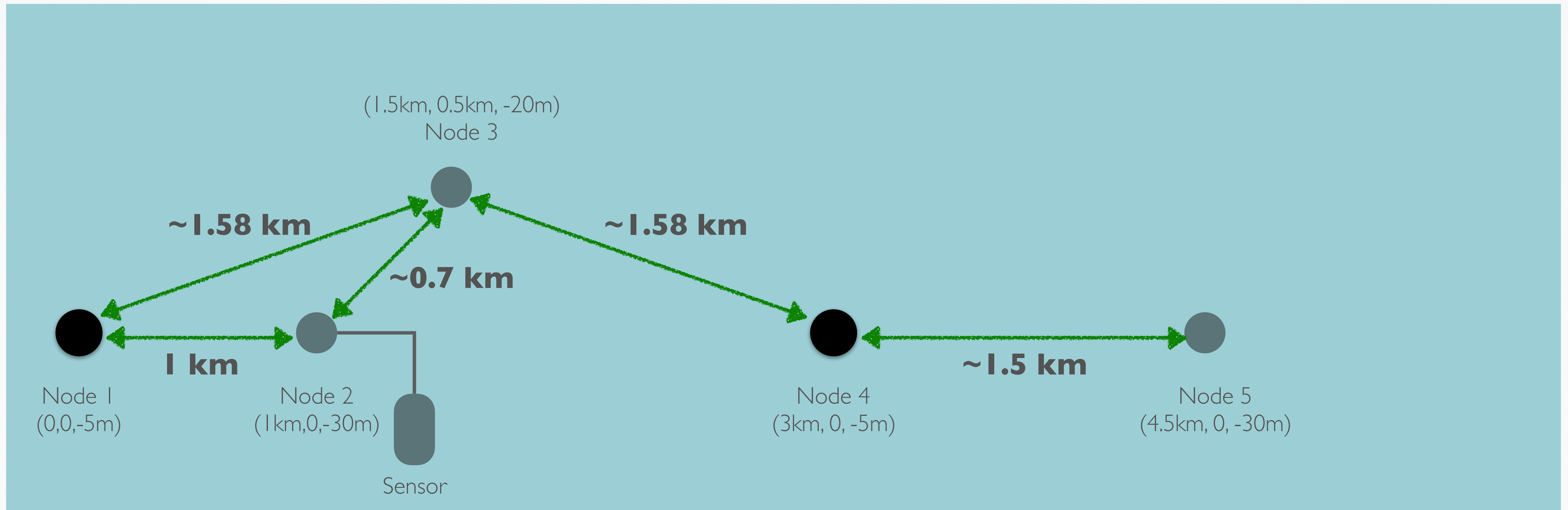

Credit: https://unetstack.net/
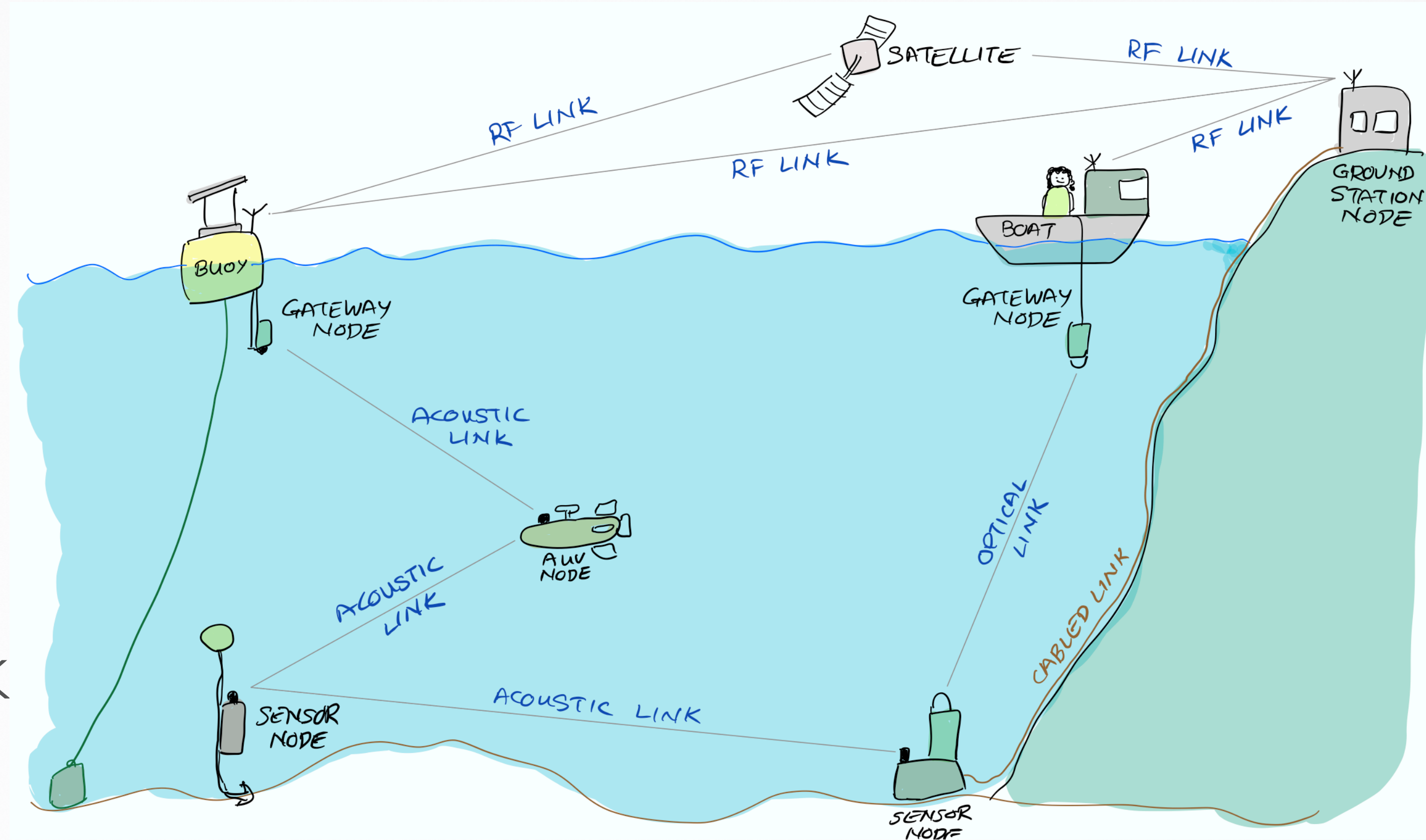
MULTI-HOP NETWORK - FROM SEA TRIAL
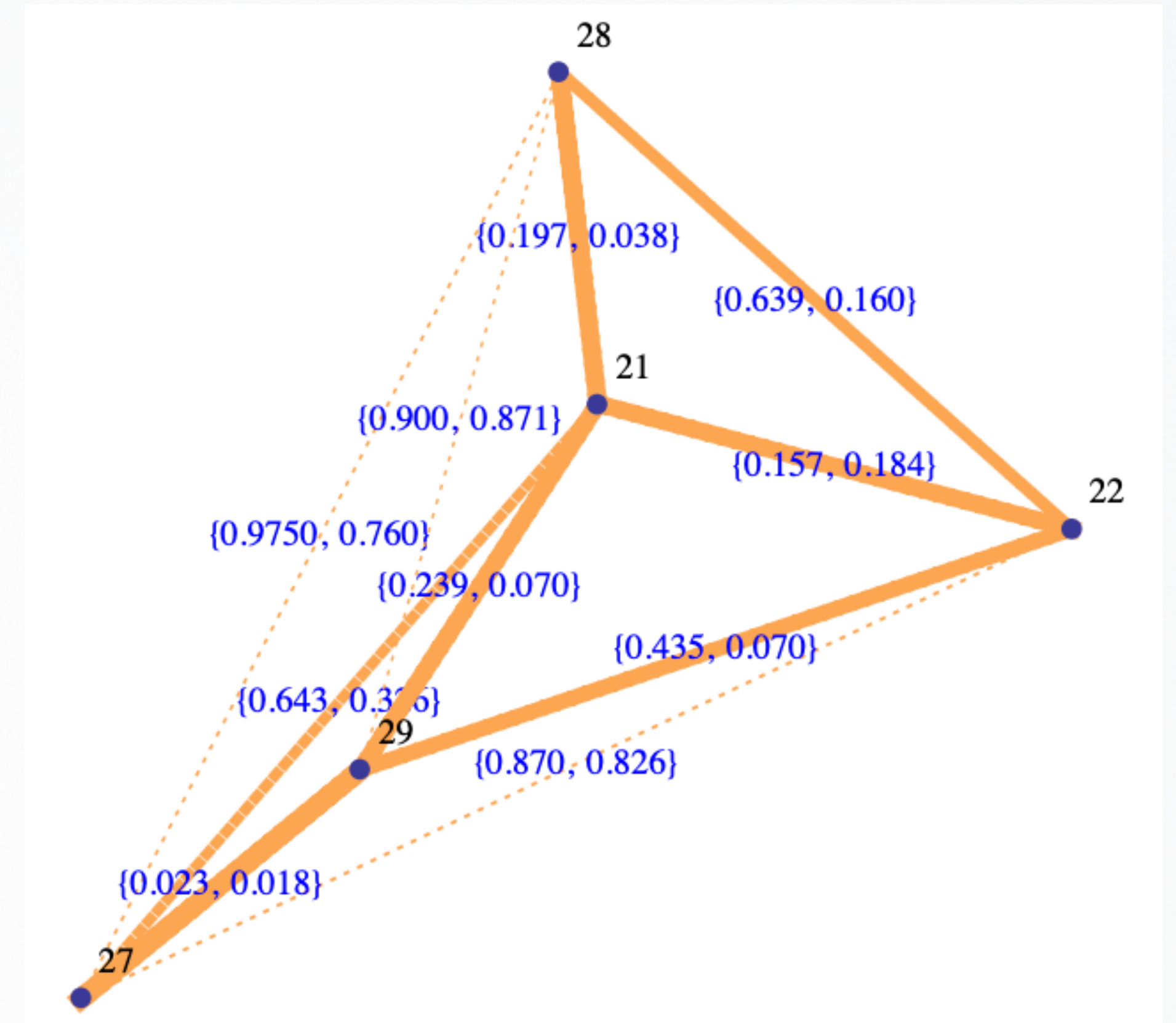
Credit: *Chitre M, Topor I, Bhatnagar R, Pallayil V. Variability in link performance of an underwater acoustic network. In 2013 MTS/IEEE OCEANS-Bergen 2013 Jun 10 (pp. 1-7). IEEE.*
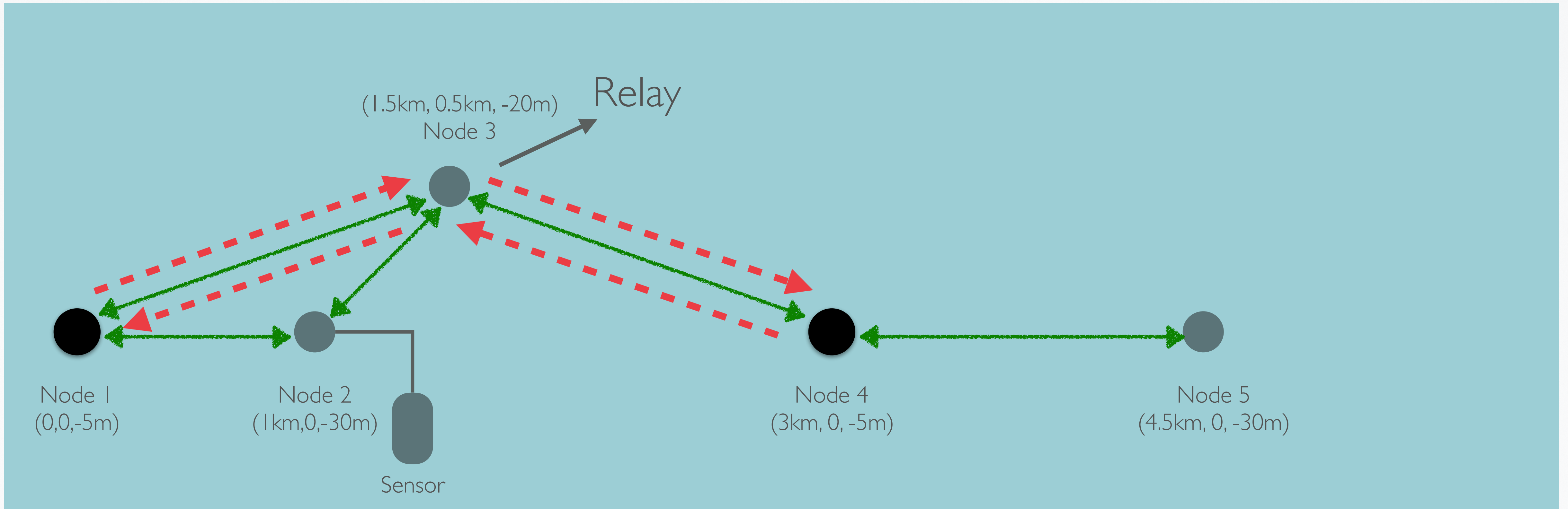
MULTI-HOP NETWORK - LET'S SIMULATE

DEMO 3.1

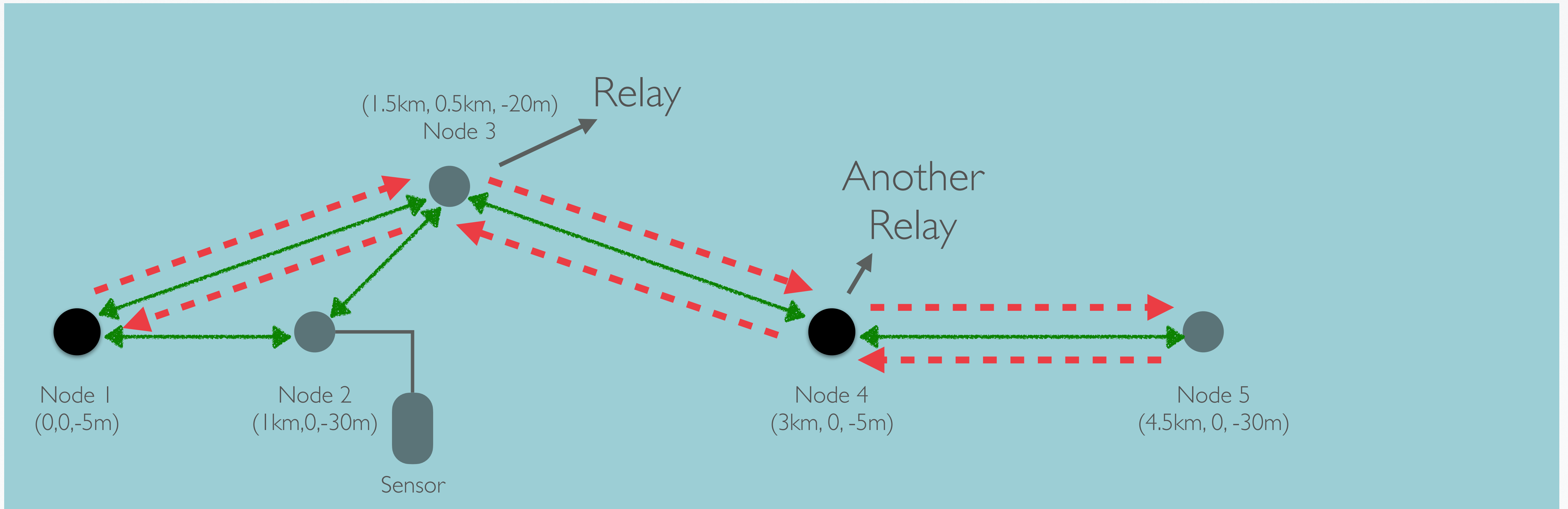# ADDING ROUTE IN THE NETWORK

(1.5km, 0.5km, -20m)
Node 3

Relay

Node 1
(0,0,-5m)

Node 2
(1km,0,-30m)

Sensor

Node 4
(3km, 0, -5m)

Node 5
(4.5km, 0, -30m)

No direct link between Node 1 and Node 4

Let's add a route between these nodes

DEMO 3.2

ADDING ROUTE IN THE NETWORK

Relay

(1.5km, 0.5km, -20m)
Node 3

Another
Relay

Node 1
(0,0,-5m)

Node 2
(1km,0,-30m)

Sensor

Node 4
(3km, 0, -5m)

Node 5
(4.5km, 0, -30m)

No direct link between Node 1 and Node 5

Let's add a route between these nodes

ADDING ROUTE REMOTELY

Relay

(1.5km, 0.5km, -20m)
Node 3

Another
Relay

Node 1
(0,0,-5m)

Node 2
(1km,0,-30m)

Sensor

Node 4
(3km, 0, -5m)
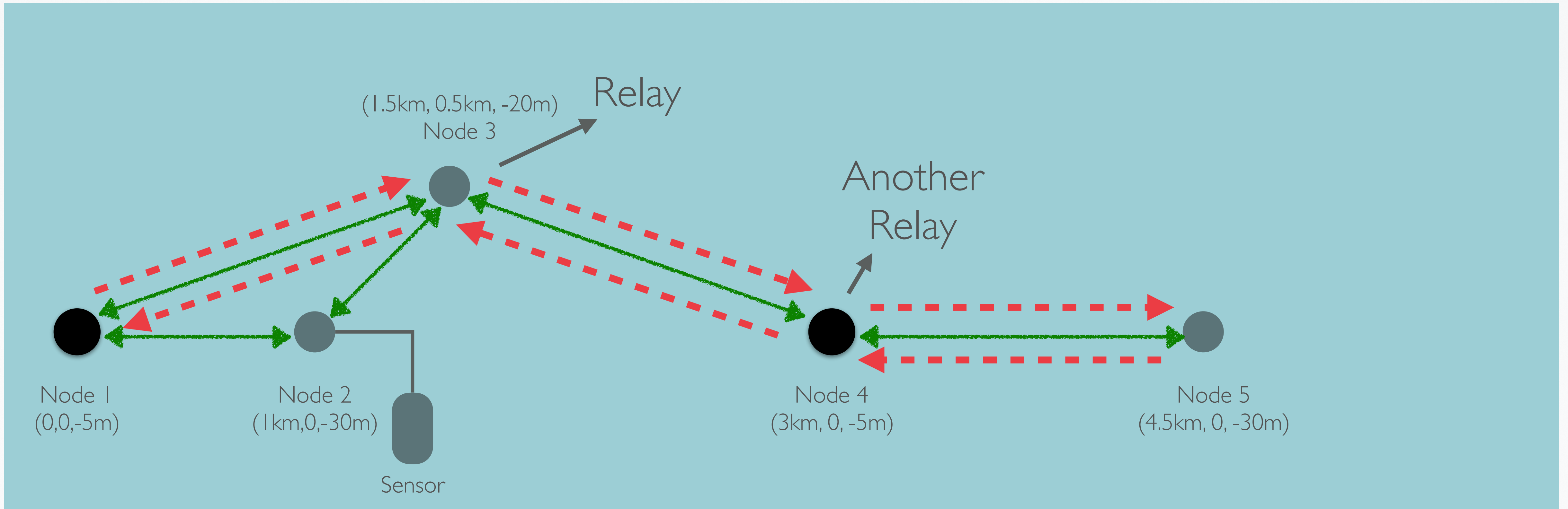
Node 5
(4.5km, 0, -30m)
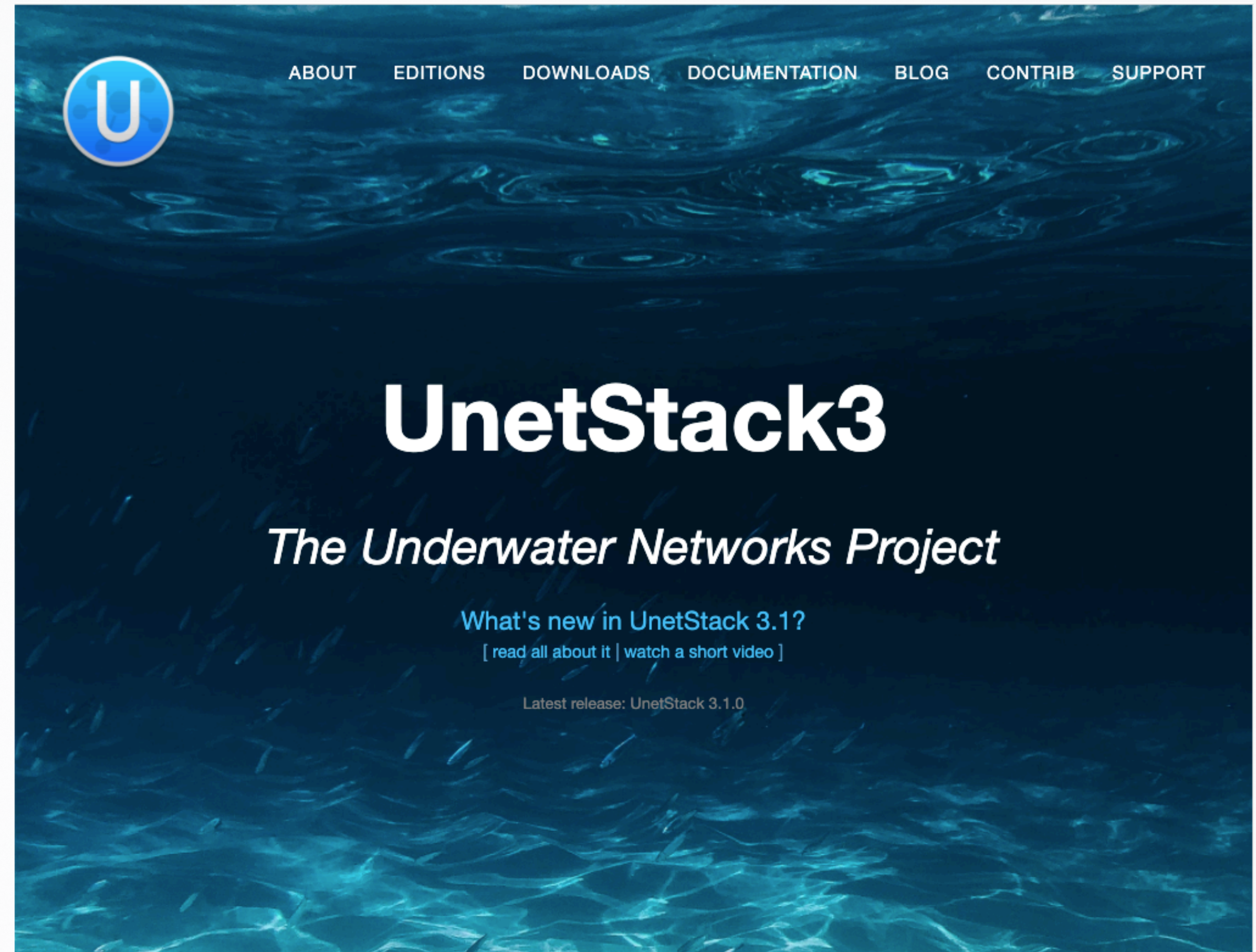
Do not have access to Node 3 and Node 5

Can we add routes remotely from nodes that we have access to ?

DEMO 3.3

HANDS ON SESSION 3

- Try out Demo 3.1 and 3.2 and 3.3 using UnetStack

- Ask questions in the chat

- http://subnero.com/oceans20

NEXT...

- Part 4 : Check out the next session on "Sensors and The Internet"

Visit http://subnero.com/oceans20 for slides, code examples and other resources from this tutorial