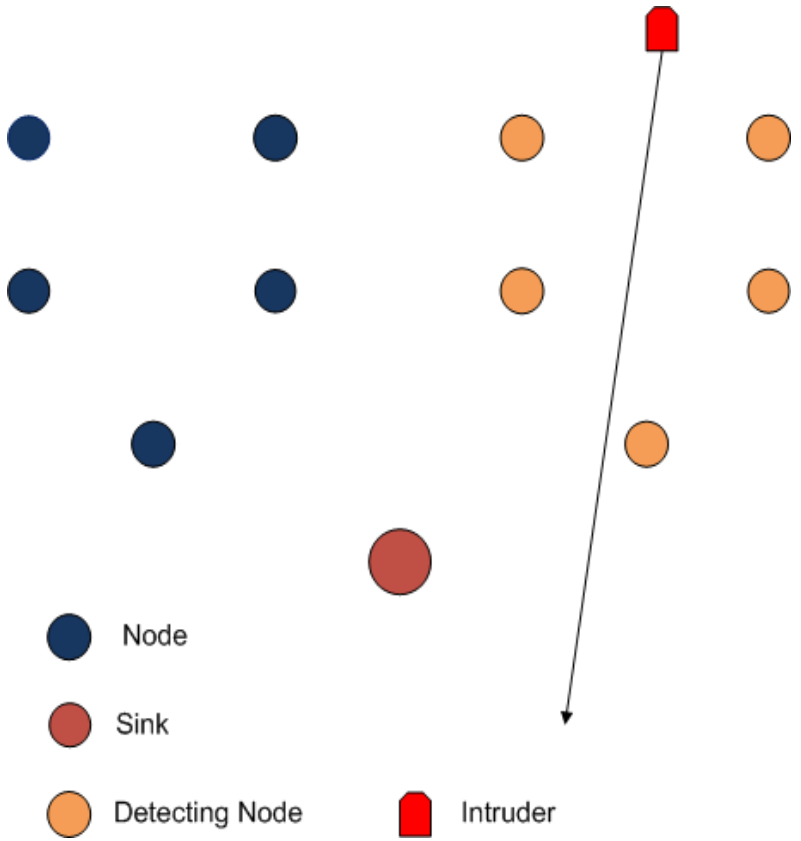
Experiment Proposals

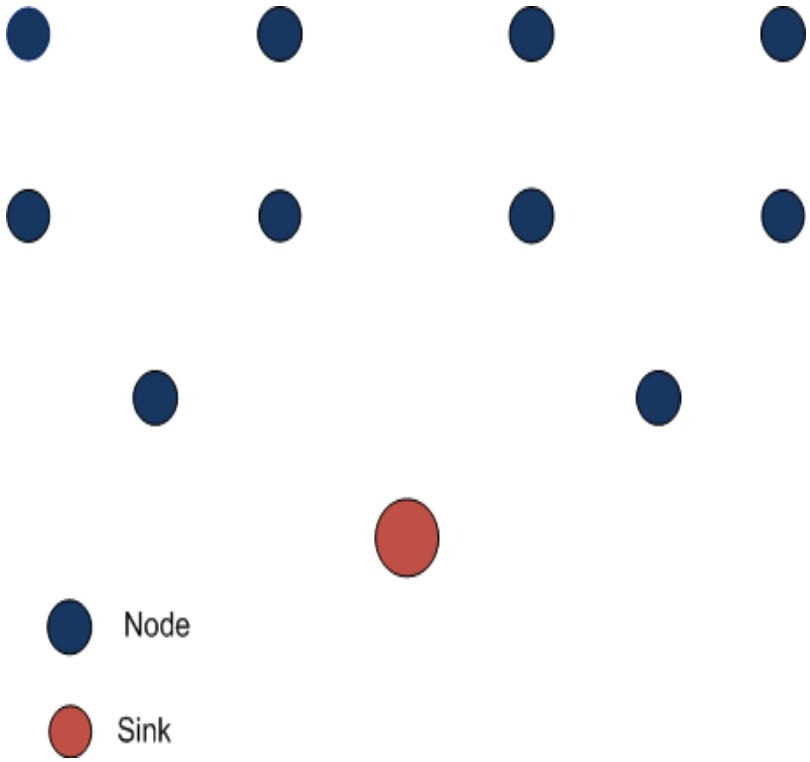
Saiful Azad

Detecting Intruder Path Using Nodes Positions



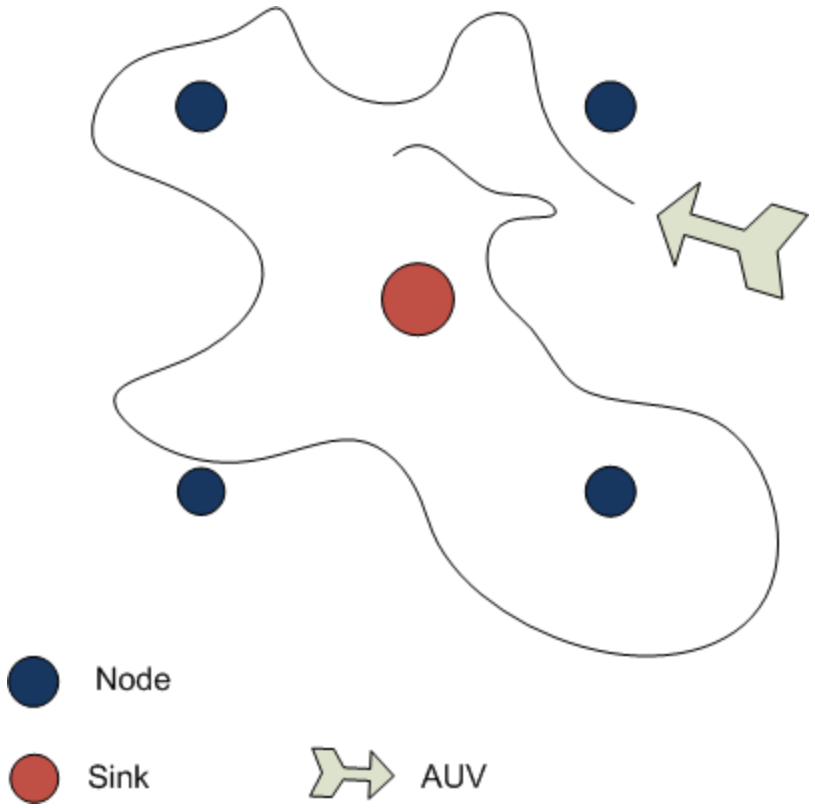
- Instruments Needed:
  - No. of nodes: 10
  - Sink: 1
- Scenario Descriptions:
  - Every node knows its position info
  - After detecting a intruder a node sends its position info to the sink via packet
  - We can compare various protocols like MSRP, MSRP with FEC, Restricted Flooding etc in this scenario
  - We may also need an engine boat which will continuously create noise
  - We can set up a story board for intruder detection
- Outcome:
  - We can analyze the performance and can come to a conclusion that which protocol is suitable for this kind of scenario
  - We can also demonstrate a comparison between the results we got from simulations and in experiments

Investigating High Throughput Routing Metrics for Underwater Acoustic Networks



- Instruments Needed:
  - No. of nodes: 10
  - Sink: 1
- Scenario Descriptions:
  - Nodes will employ various kind of metrics to find out a high throughput path
  - The metrics we can consider is like
    - Hop Count
    - Packet Pair
    - Round Trip Time (RTT)
    - SNR
    - ETX
    - ETT
    - WCETT, etc…
- Outcome:
  - We can analyze the performance and can come to a conclusion that which metric is suitable for this kind of scenario

Controlling an AUV Movement using a sink and bottom sensors



- Instruments Needed:
  - No. of nodes: 4
  - Sink: 1
  - AUV: 1
- Scenario Descriptions:
  - Every nodes know their position
  - After every random time, a node transmits its position info
  - Based on the position info of multiple nodes, AUV can find out its location and move accordingly
- Outcome:
  - It could be the early stage scenario of coastal patrolling
  - We'll learn how we can manage an AUV movement using bottom nodes and surface sink

Thank You

What is your current emotional state?