



**Wearable sensing: RFduino/Gyro
(ble peripheral)**

Packetized NDN data with HMAC signature

Indoor Positioning: OpenPTrack

Application prefix: /AliceHome/flow1/tracking1
Device name: /AliceHome/devices/ubuntu/123

1A. Unity asks for a "track_hint"

1B. names when asking for a track location



Bridging RFduino: RaspPi2 (ble central)
Application prefix: /AliceHome/flow1/gyros/gyro1
Device prefix: /AliceHome/devices/rpi2/456

3A. Unity asks for gyroscope data, produced by RaspberryPi helper on behalf of RFduinos connected via Bluetooth LE

Visualization: Unity3D
Application prefix: /AliceHome/flow1/visualization1/
Device name: /AliceHome/devices/osx/234

2A. Mobile phone sends command interest and initiates "track matching" of phone's ID to Track ID provided by OPT



2B. command interest to control the dropping of images in Unity

Mobile Phone Interface: Android web browser
Device name: /AliceHome/devices/phone/345

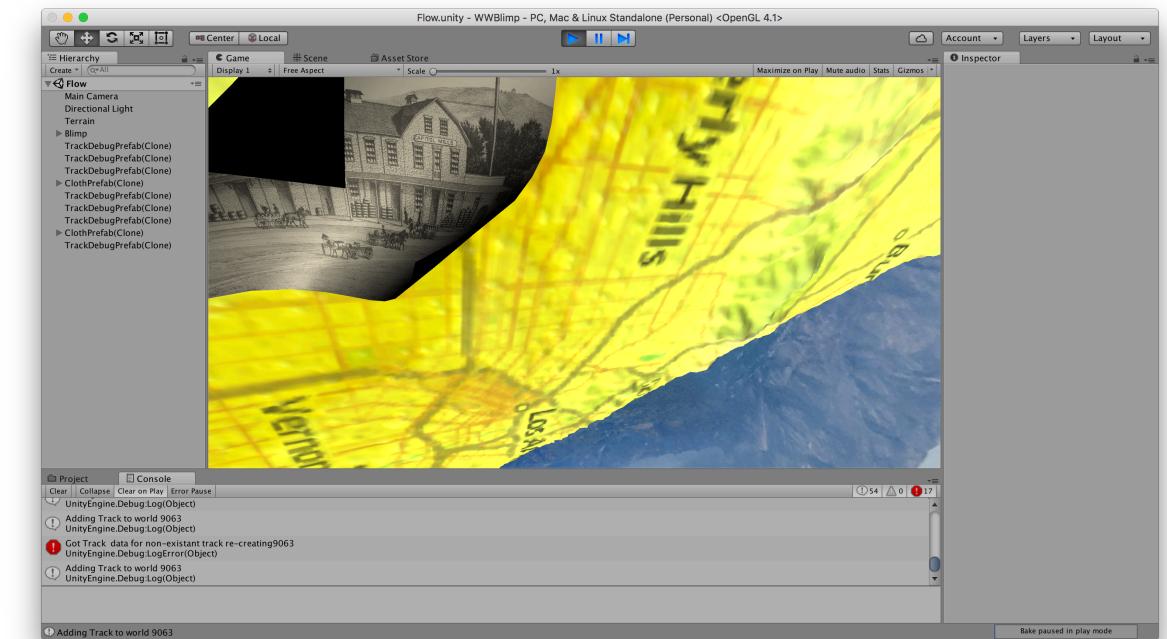


Diagram Key for NDN Interest-Data Exchange

1A.

Interest: /AliceHome/flow1/opt1/<run_id>/metadata/, exclude: <last_received_timestamp>

Data: Interest name + <timestampl>, content: {"id": 45, "seq#": 312}

1B.

Interest: /AliceHome/flow1/opt1/<run_id>/tracks/<track_id>/<seq#>

Data: Interest name, content: {"x": 1.0, "y": 0.9, "z": -0.3}

2A.

Command interest: /AliceHome/flow1/unity1/<action:match, id:alice_phone>

Data: Interest name, content: {"status": "200", "data": "<html>track 45, show links</html>"}

2B.

Command Interest: /AliceHome/flow1/unity1/<action:link_click, id:alice_phone, link:img_3>

Data: interest name, content: {"status": "200"}

3A.

Interest: /AliceHome/flow1/gyros/gyro1/, exclude: <last_received_timestamp>

Data: Interest name, content: {"p": 0.3, "y": 0.5, "r": 0.1}