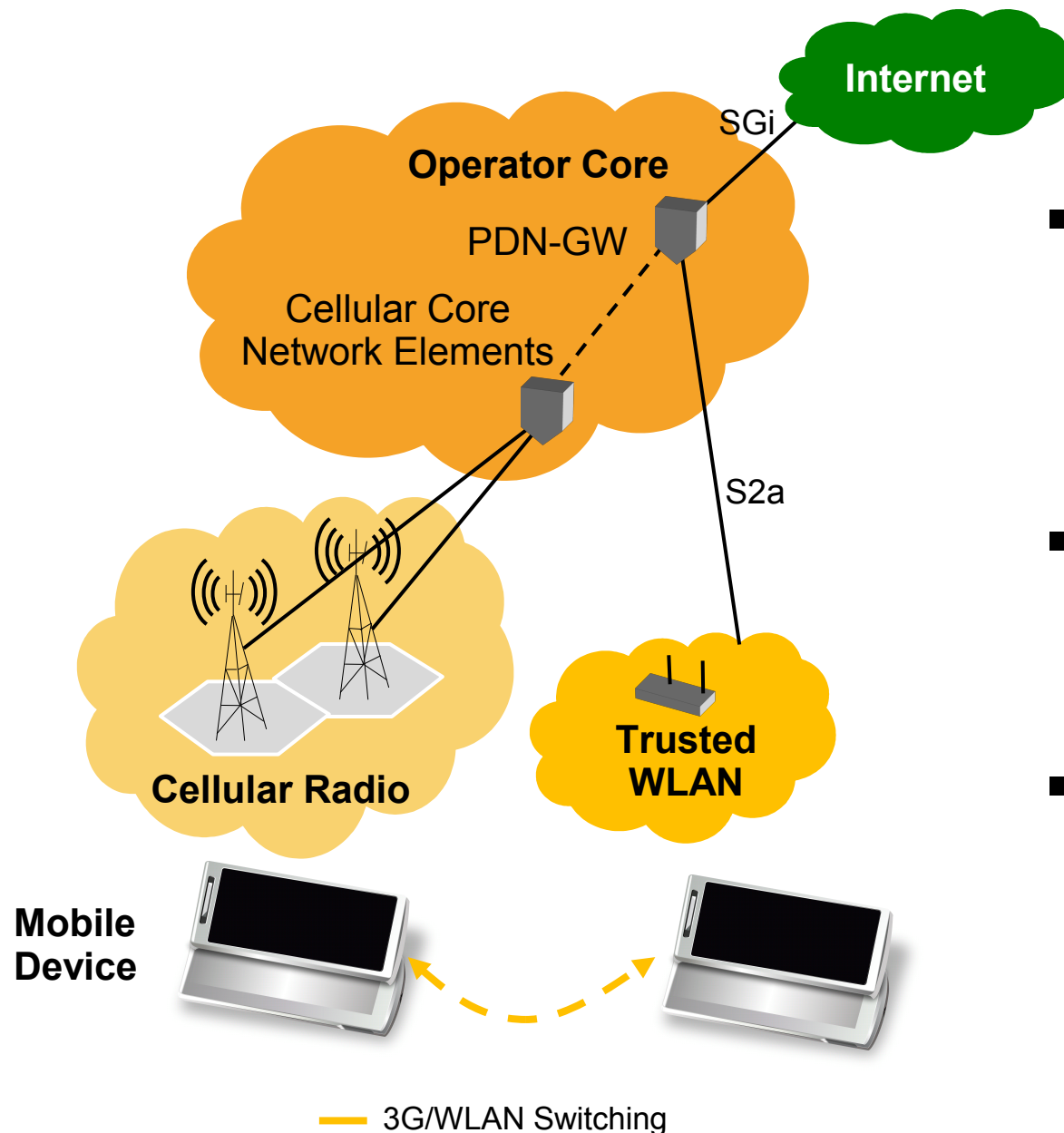




Signal Strength-Based Approach for 3G/WLAN Handover on Nokia N900 Devices

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Switching between WLAN/3G



- Near a public AP, the mobile device can select either 3G or WLAN
- Favor WLAN if the **signal strength** is higher compared to 3G
- Manual Selection of access network is often tedious

Problem Statement

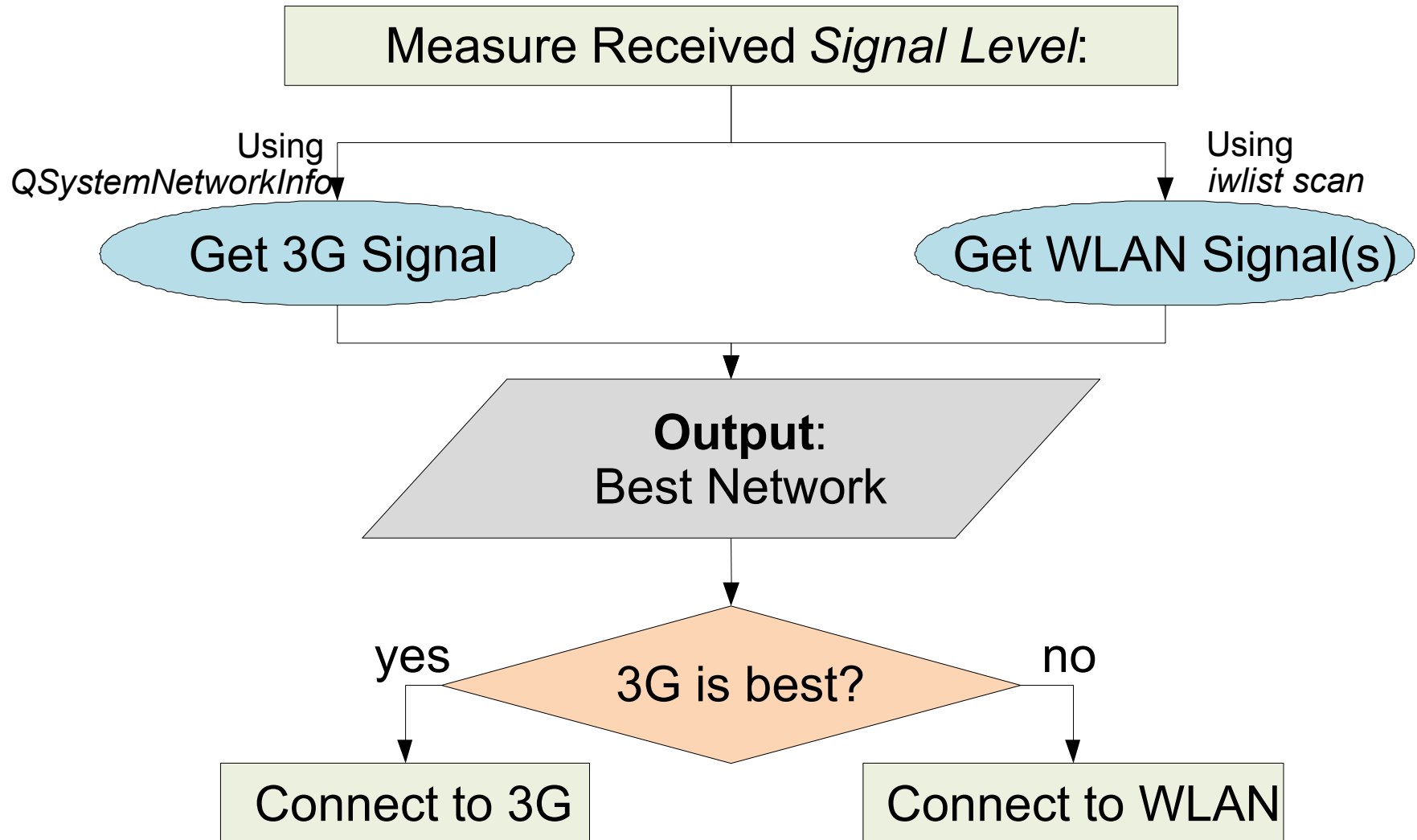
Goals

- Lay the groundwork for creating flexible handover solutions on Linux-based devices
- Choose the "best" (=highest signal level) network automatically.

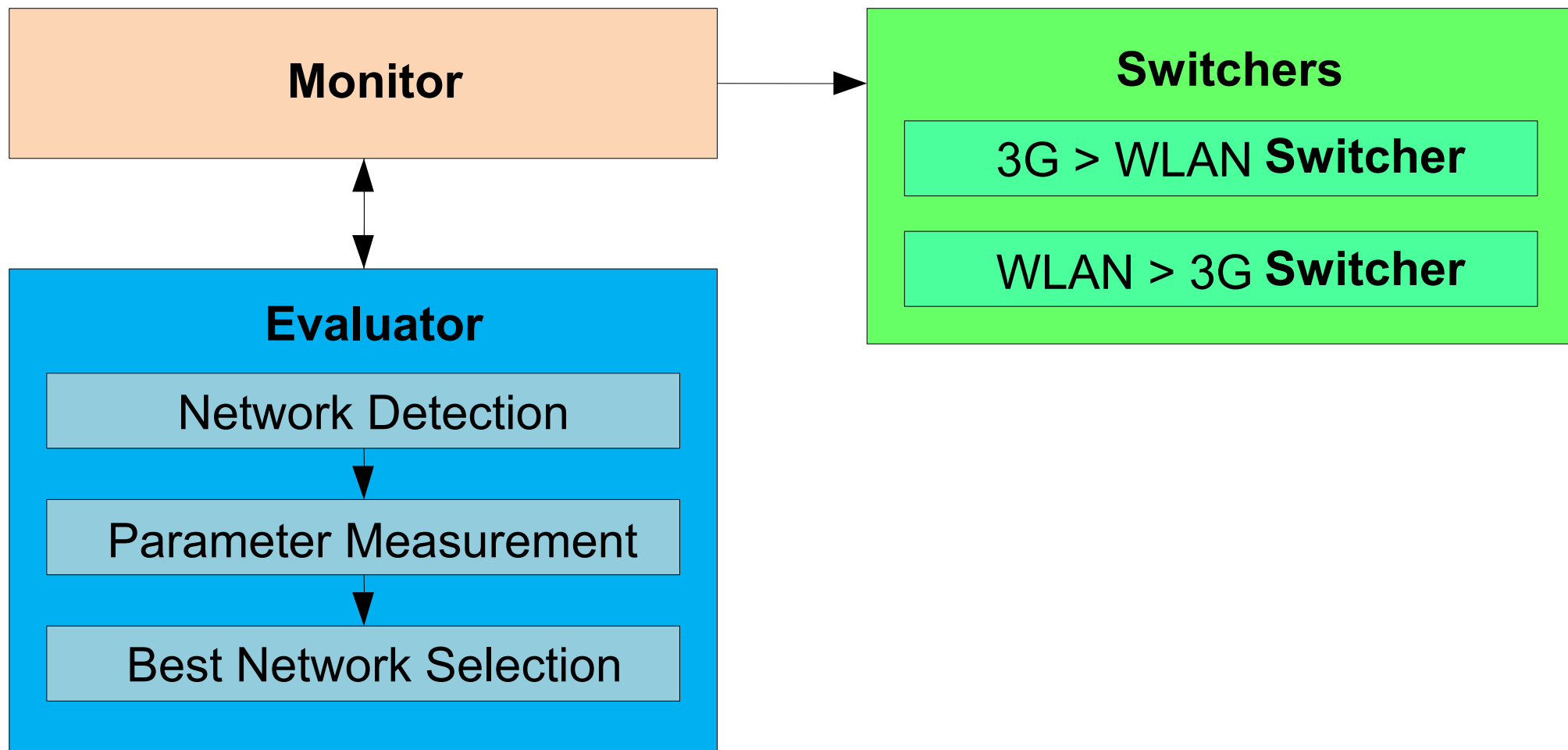
Tasks

- Develop a general algorithm for network selection and create its implementation
 - choose network with maximum signal level
- Test the implementation

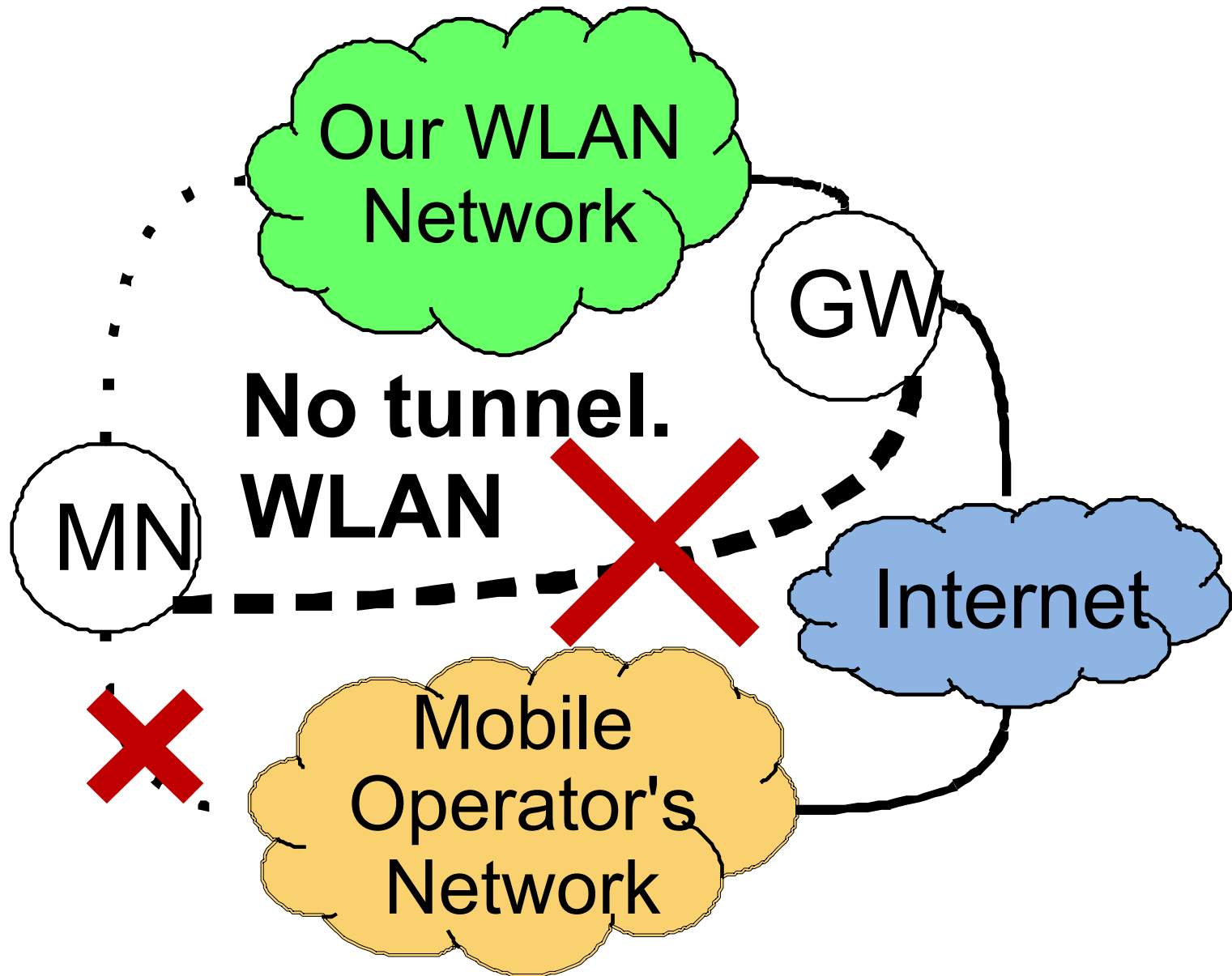
General Algorithm



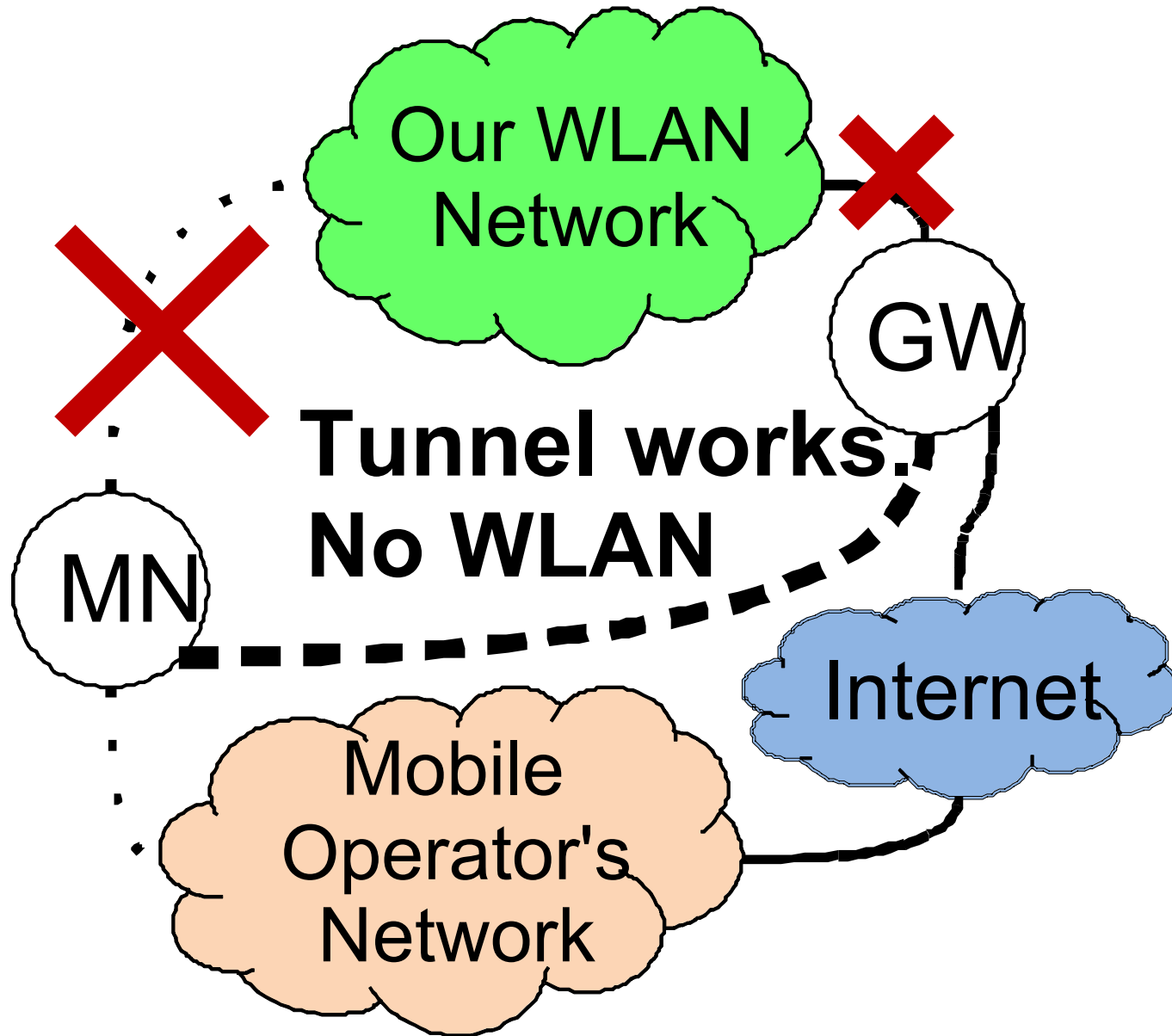
Implementation Architecture



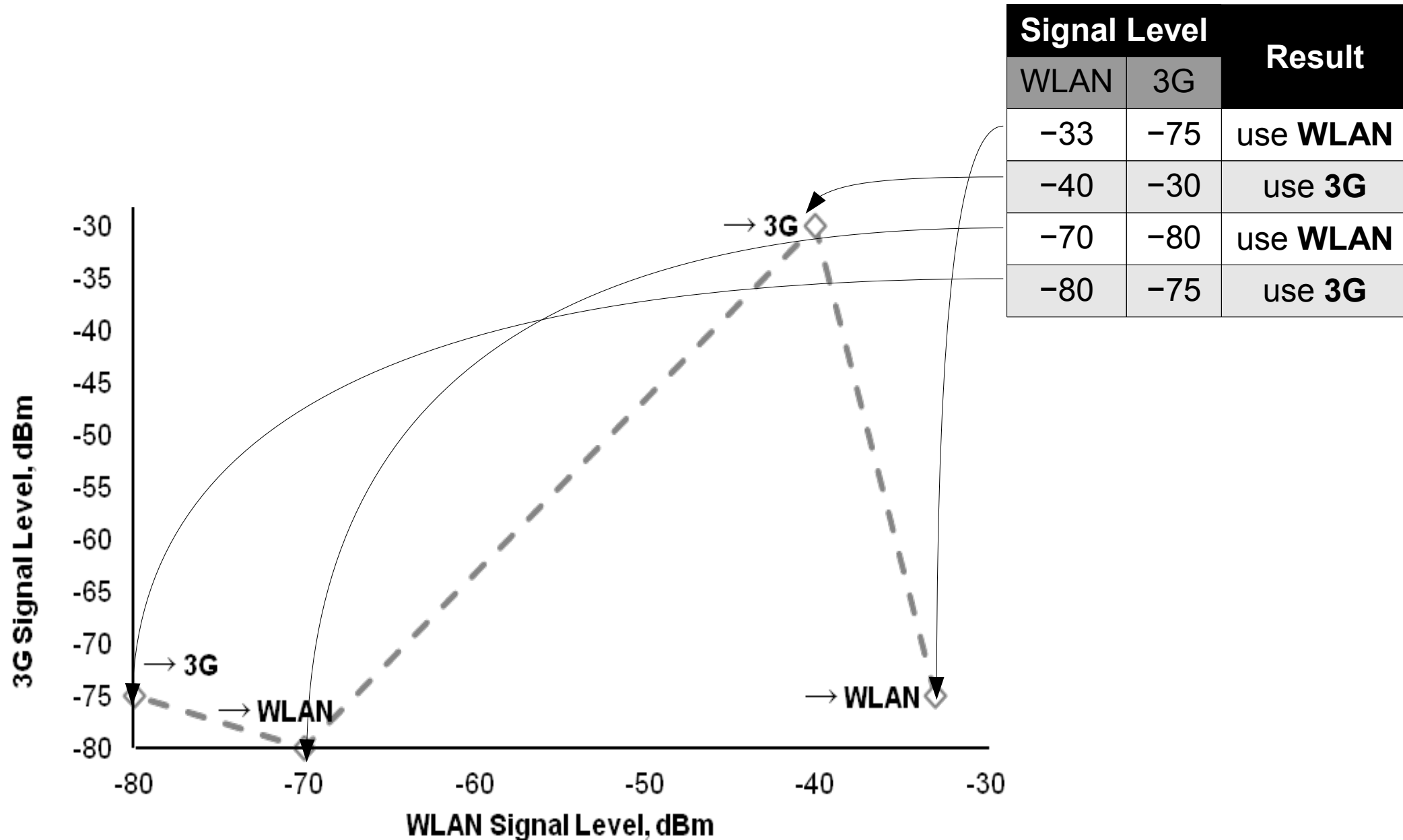
Switcher: WLAN



Switcher: 3G



Test Results



Current Results

- Successfully created and tested the signal level-based automatic handover solution
 - [git://github.com/OSLL/sw3g.git](https://github.com/OSLL/sw3g.git)
- The solution can be extended to support new supported **network types**
 - create new switcher scripts
- New **network evaluation techniques** can be supported if the Evaluator component is modified

More to Come in the Future

- Support multiple WLANs
- Eliminate unwanted handovers
 - minimum *interval* between handovers
 - minimum *time of existence* to consider a particular network for selection
- Take more network parameters into account
 - signal strength, throughput
 - packet loss, jitter
 - etc.*



Questions?



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