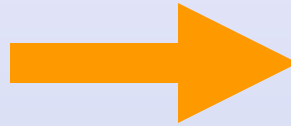




2nd and 4th Order Diversity

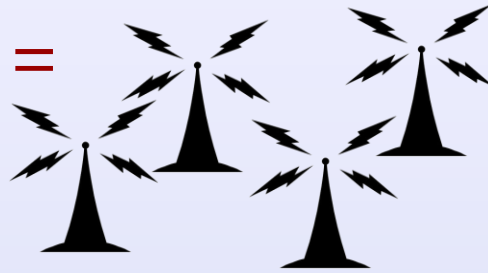
Microwave Systems

WiMAX - 3 Years On



WiMAX Review

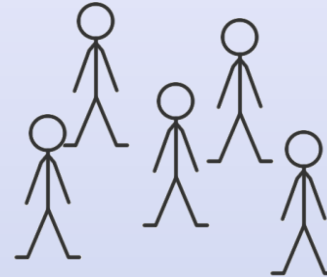
**Licenced bands =
no interference**



**Security
features**



**Scheduled transmissions =
higher subscriber count**

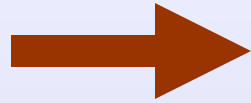


**QoS = varying
service levels**



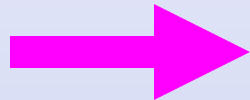
Progress in WiMAX

800.16d
fixed



800.16e
mobile

FDD



TDD

Spectrum: 3.5GHz
+3.65GHz



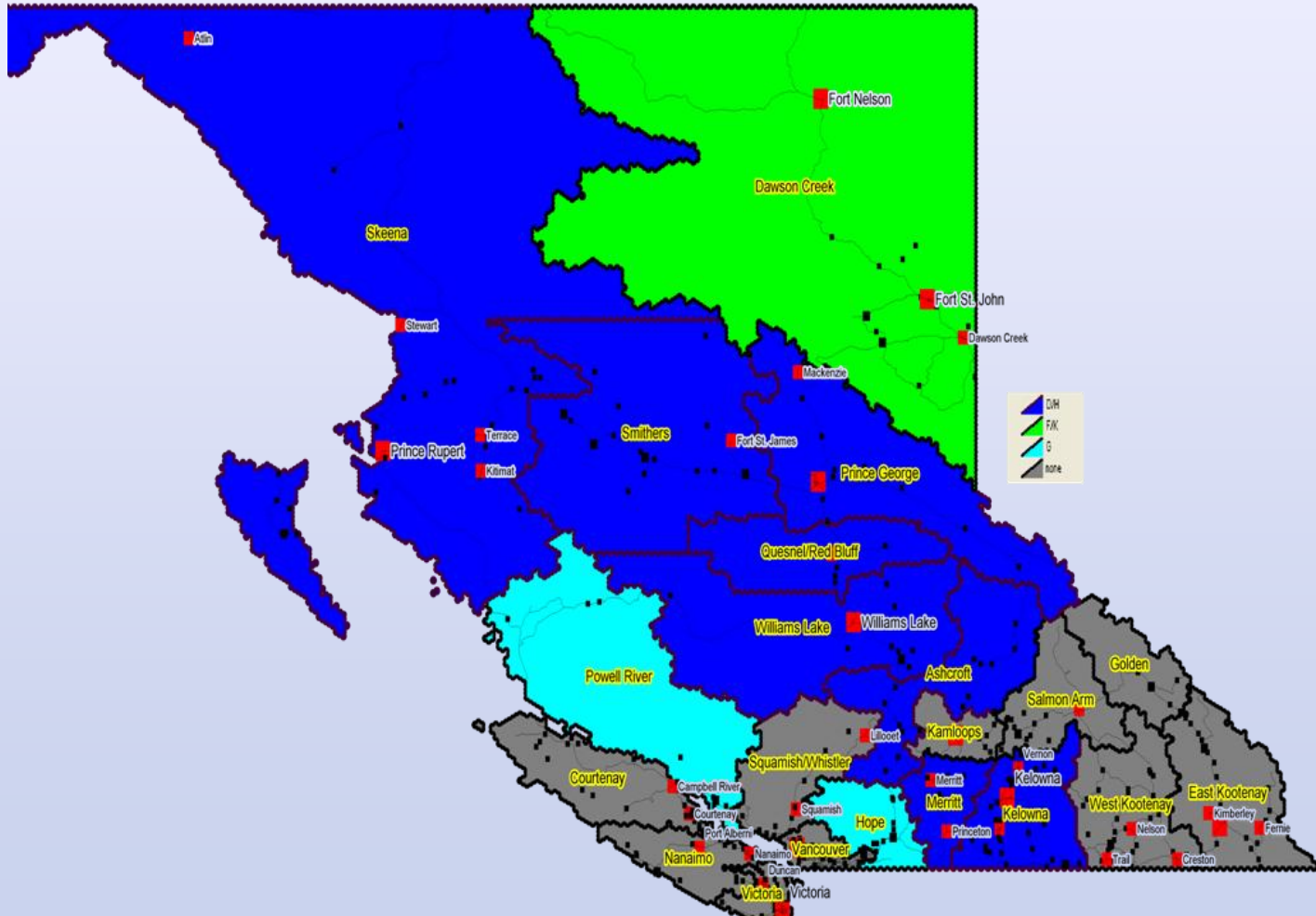
diversity

ABC's WiMAX Deployment



- **Initiated in 2006**
- **8 Base Stations deployed**
- **650-700 WiMAX CPE**
- **1 second-order diversity AP**
- **licenced 3.5 GHz spectrum**

WiMAX - 3.5 GHz



WiMAX - 3.65 GHz

“Light Licencing”

National registry of users

First-come first-served

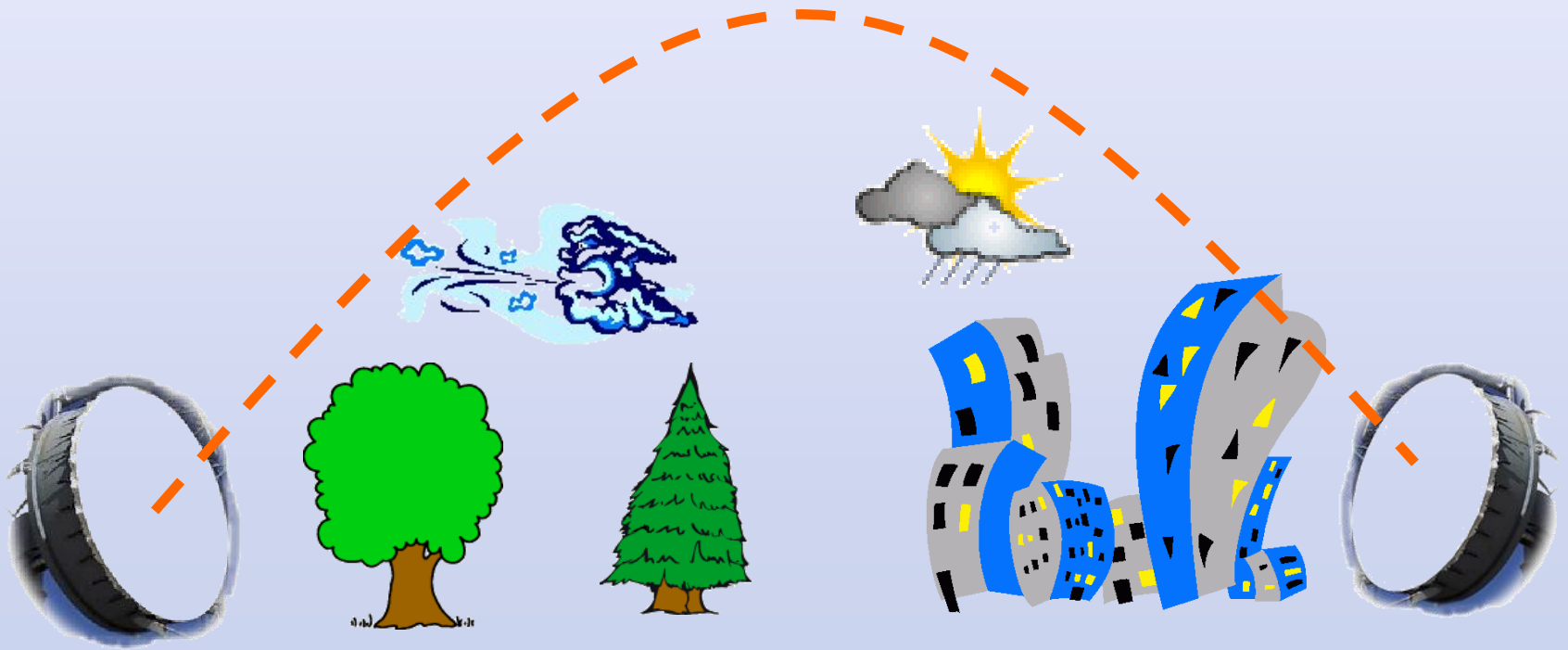
Minimal government involvement

Power limitations

Free or low fees

No consumer devices

The RF Channel



Diversity

Time

Frequency

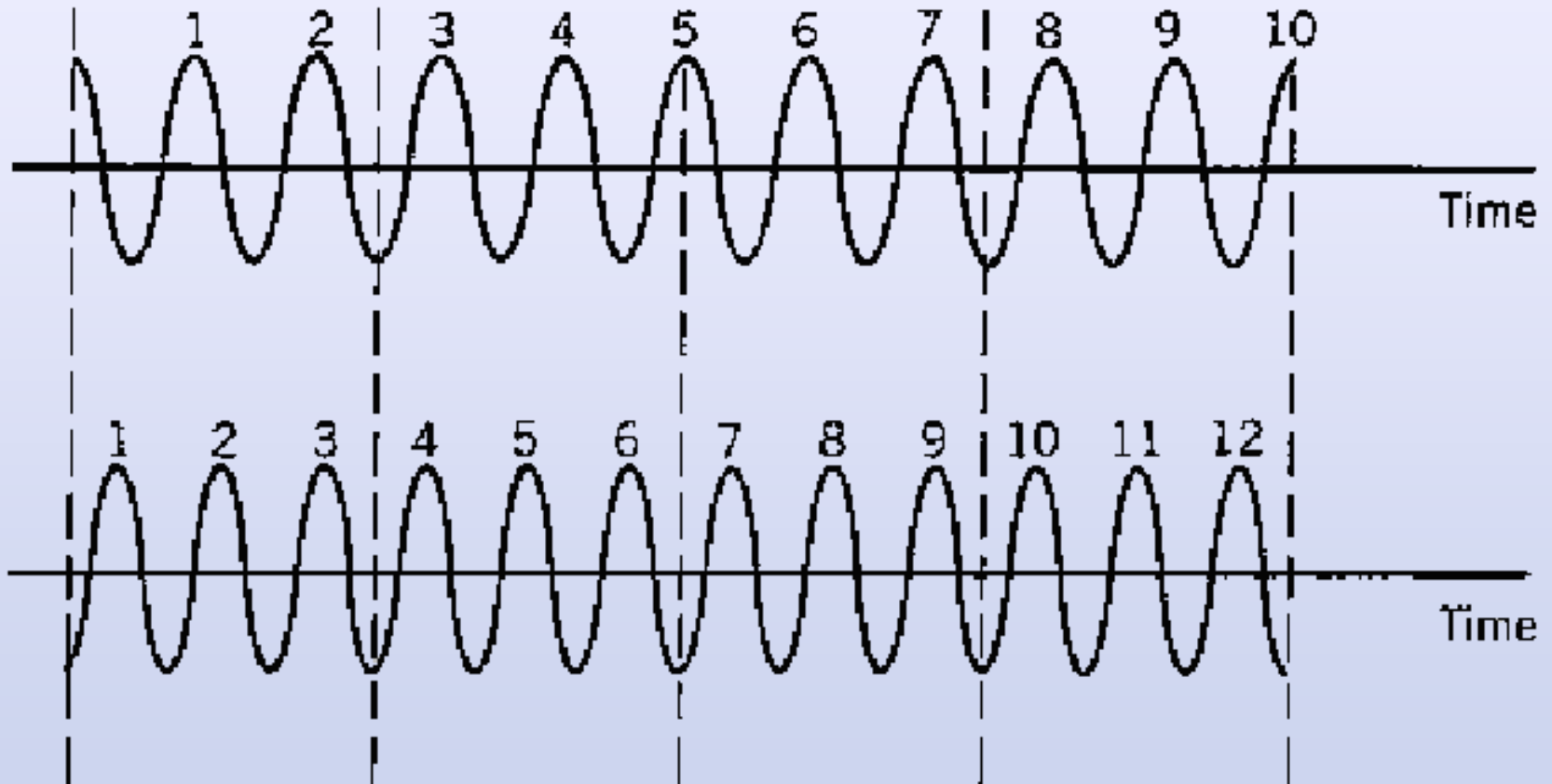
Space

Polarity

Diversity - Time



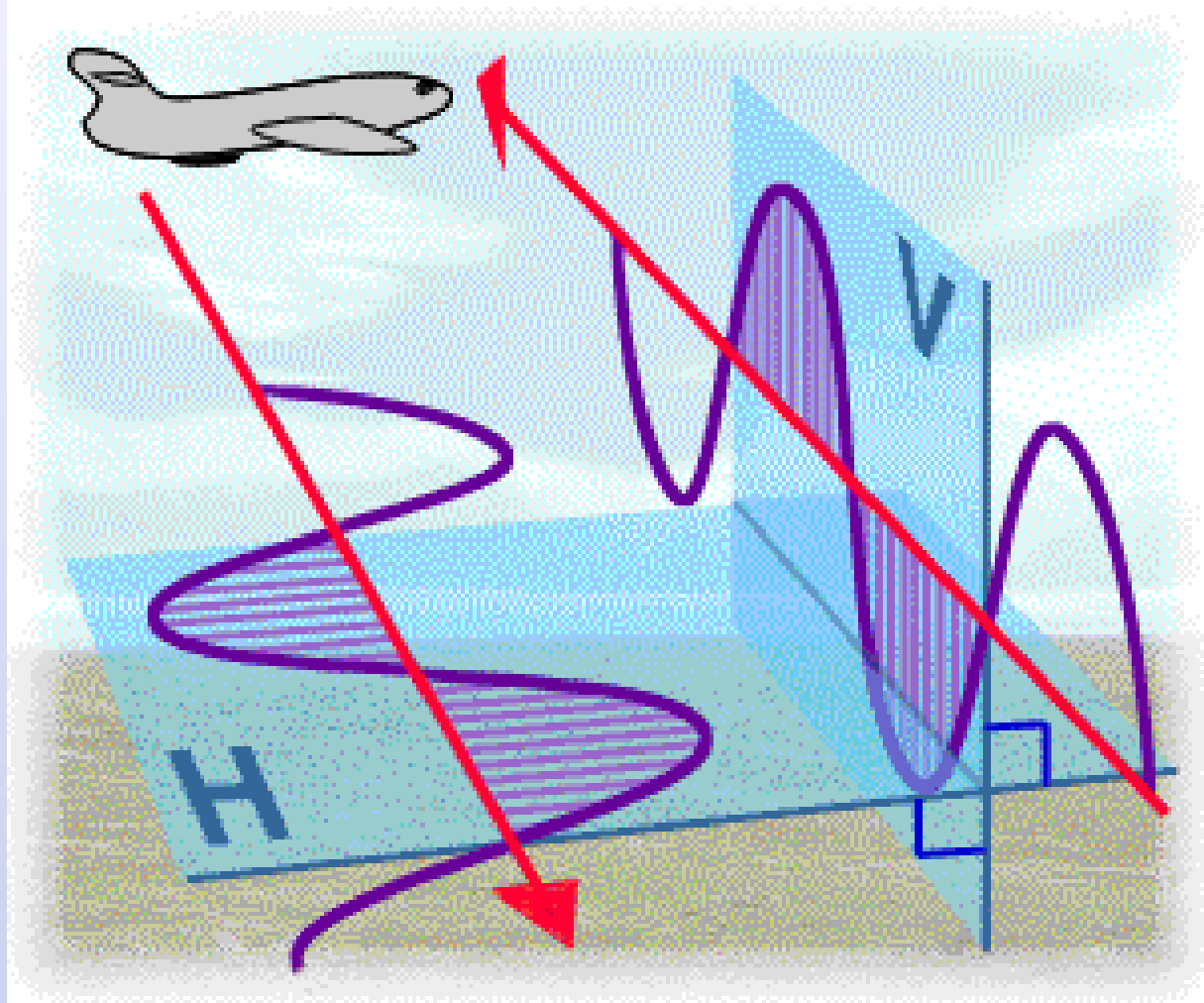
Diversity - frequency



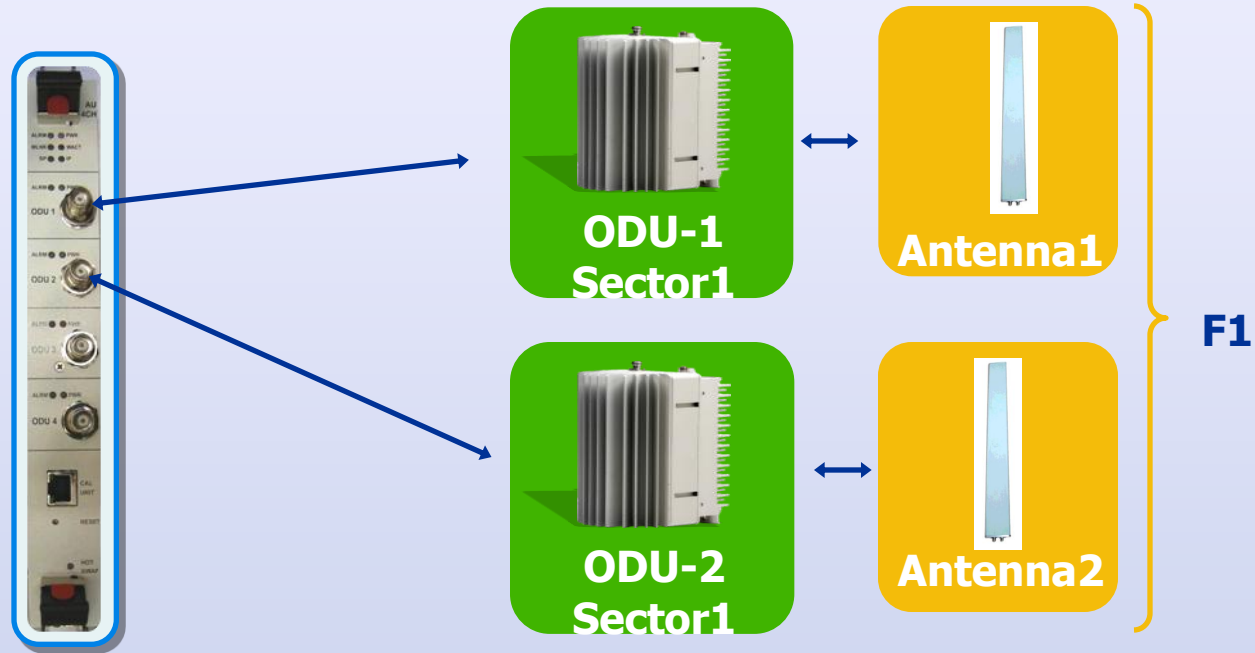
Diversity - space



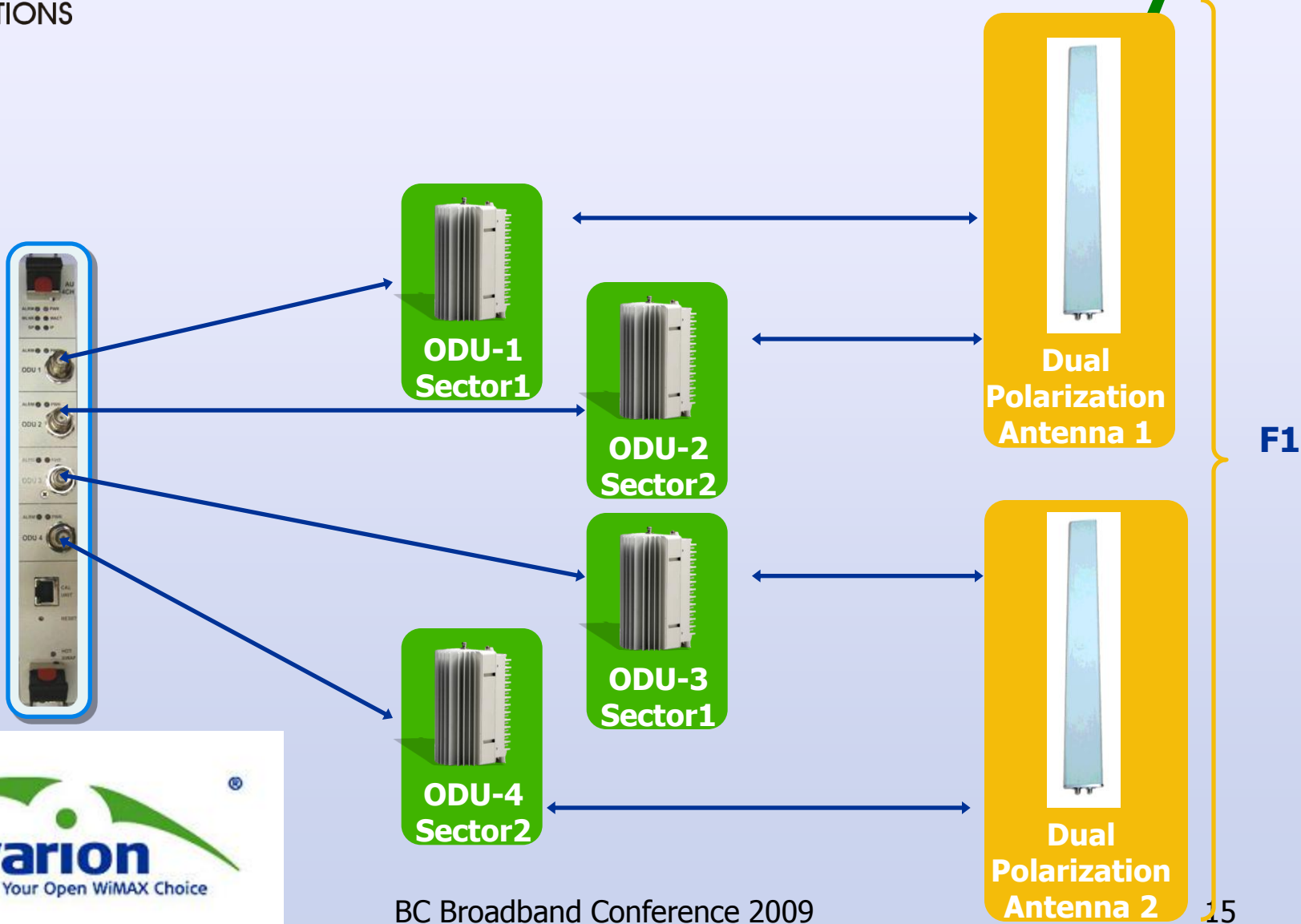
Diversity - polarity



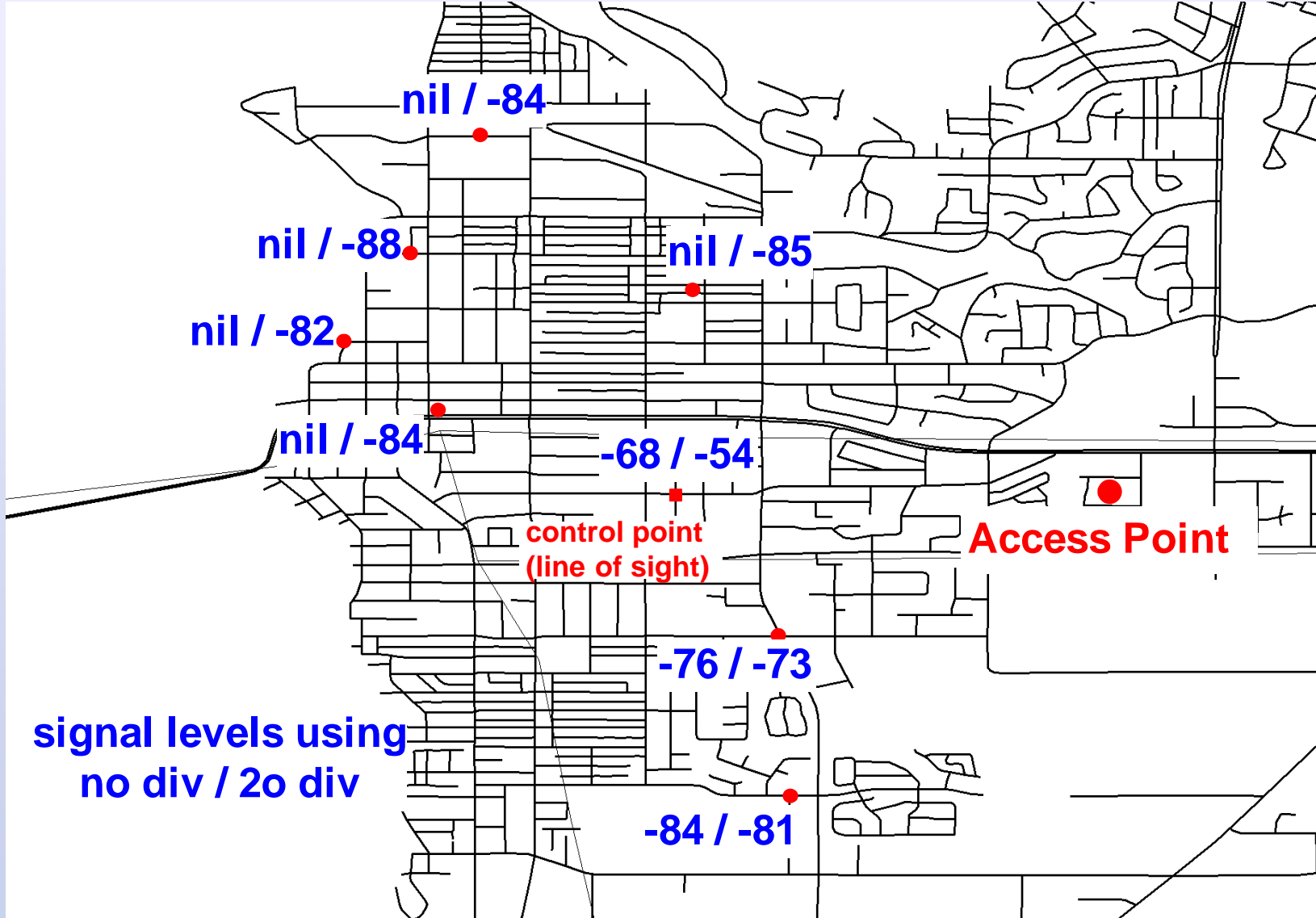
2nd-order Diversity



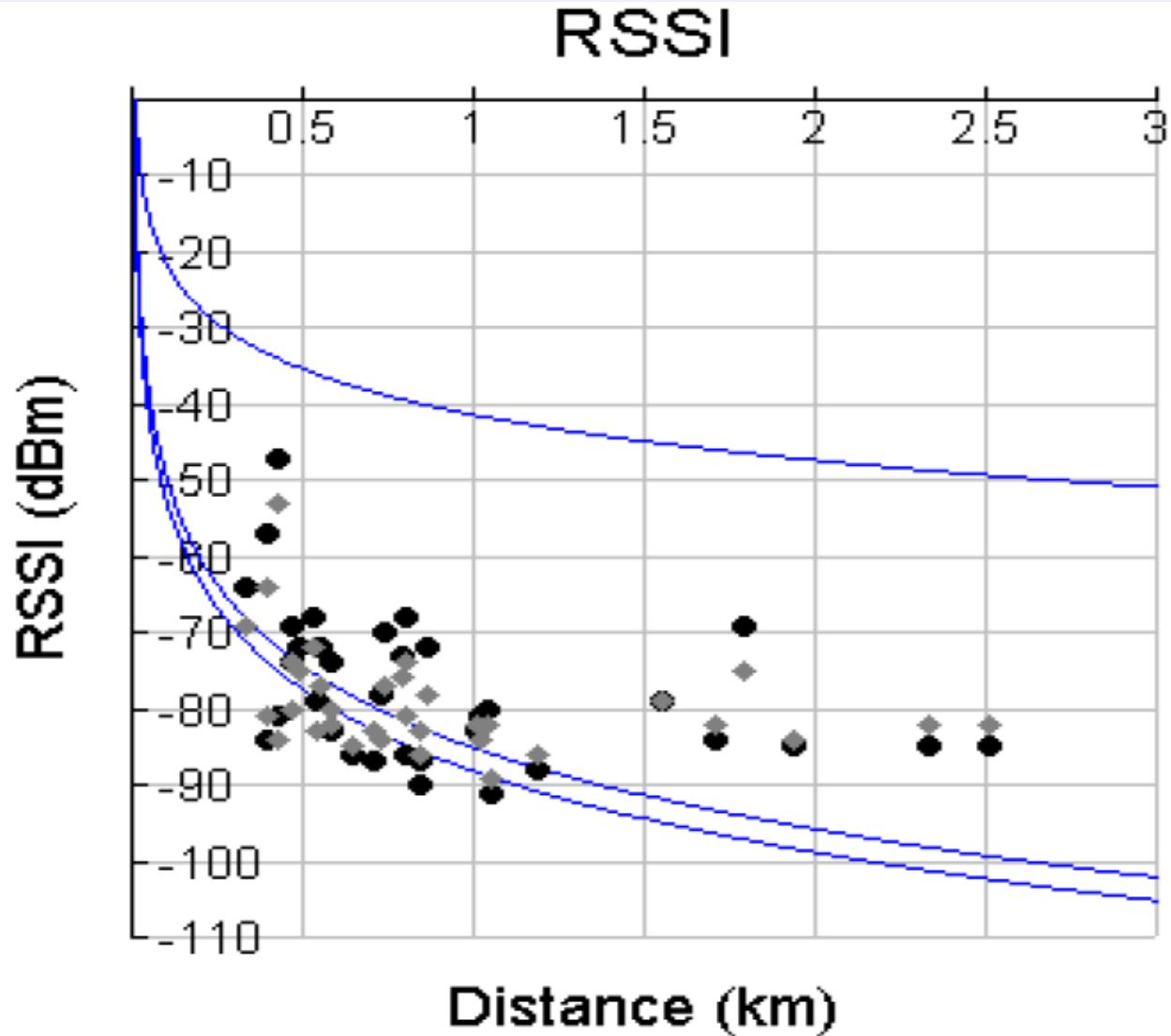
4th-order Diversity



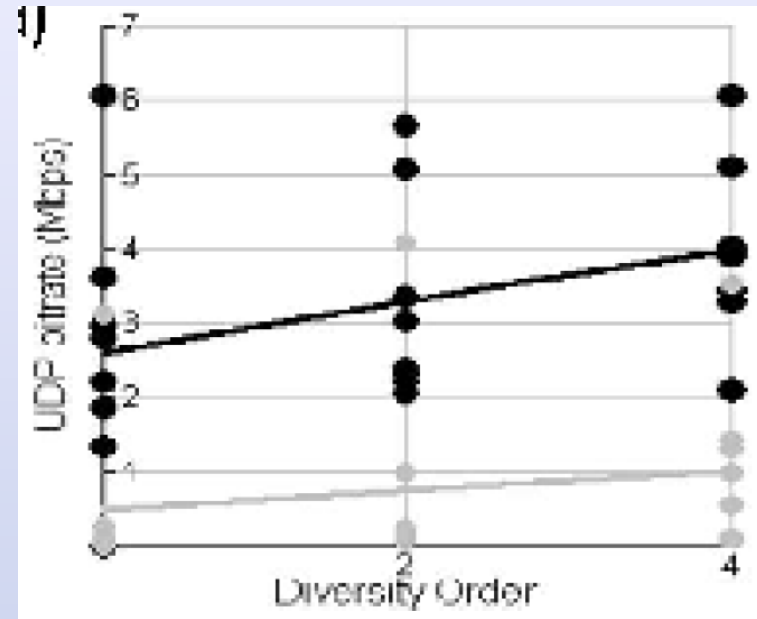
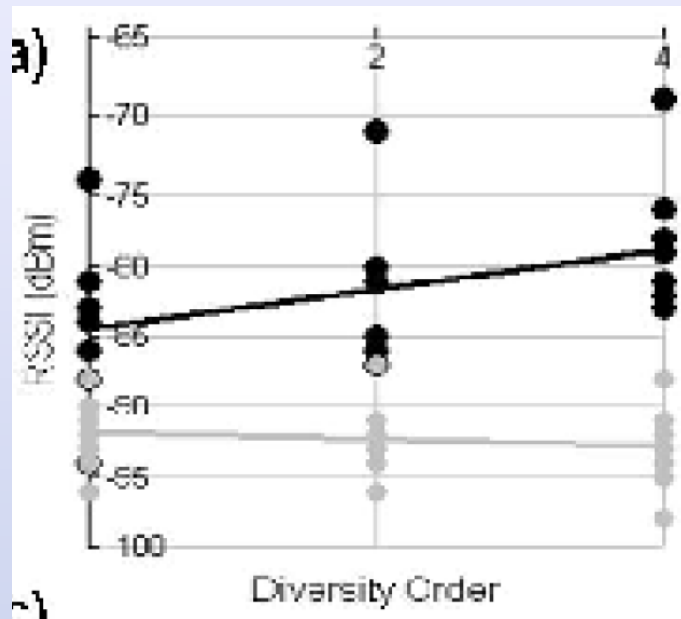
Diversity test - ABC



Diversity test - Oslo



Diversity test - Oslo



Conclusions

2nd Order:

increase customer count

increase coverage in treed / built-up areas

4th Order:



Thanks