

# Antenna Alignment FOR LIFE

## Antenna Alignment Tool

For the perfect installation



## Keep it perfect with our Antenna Monitoring Sensor

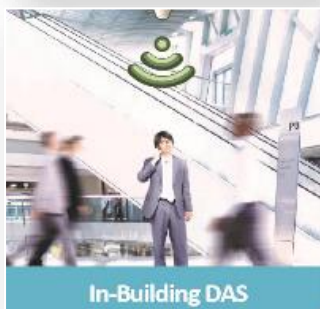


## Telecom Infra Event - 15<sup>th</sup> of September 2016

# About

## 3Z Core Products & Services

## Microlease - Livingston



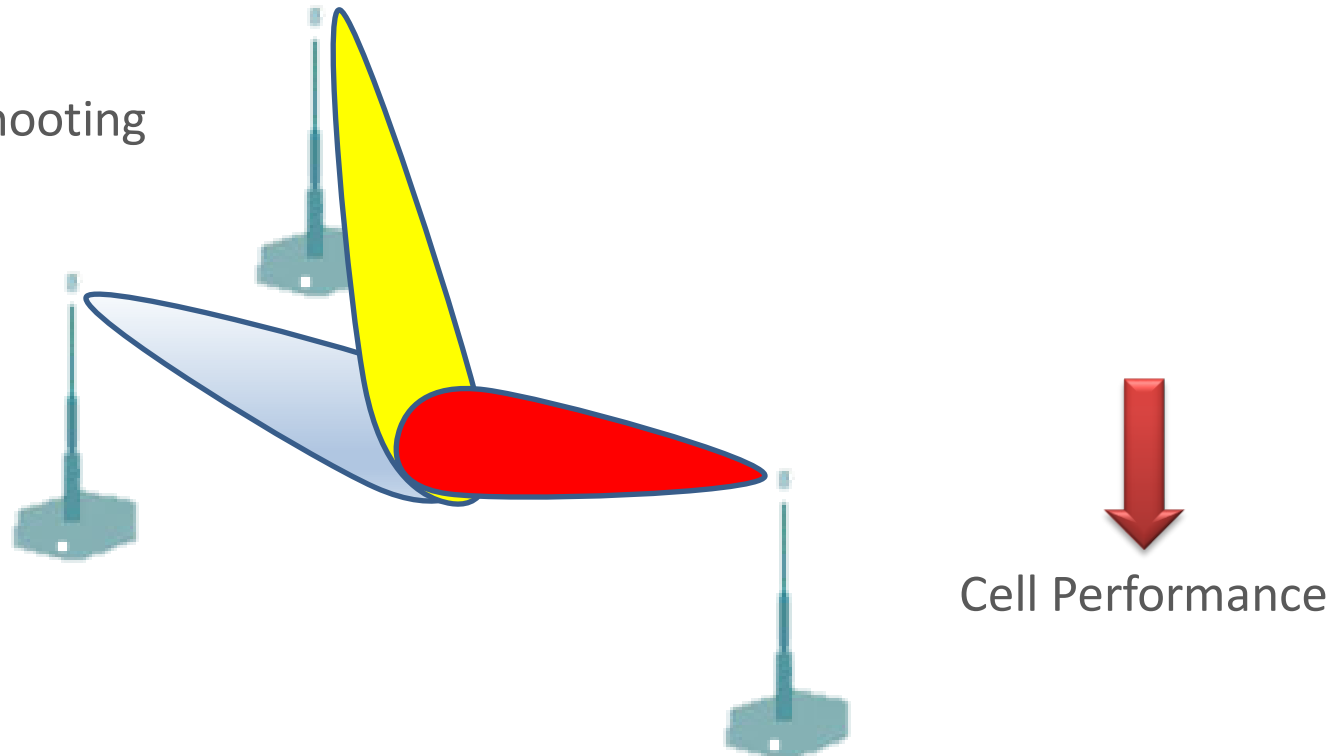
## Wireless Operators are facing the Effects of **Antenna Alignment Changes** on their networks with

- Lower Data Throughput
- New Coverage Gaps
- More Dropped Calls
- More Interference
- Lost Traffic, more handovers and cell edge
- Decrease Capacity
- Lost RF Engineering & Technician time, more OPEX costs
- Customer Churn

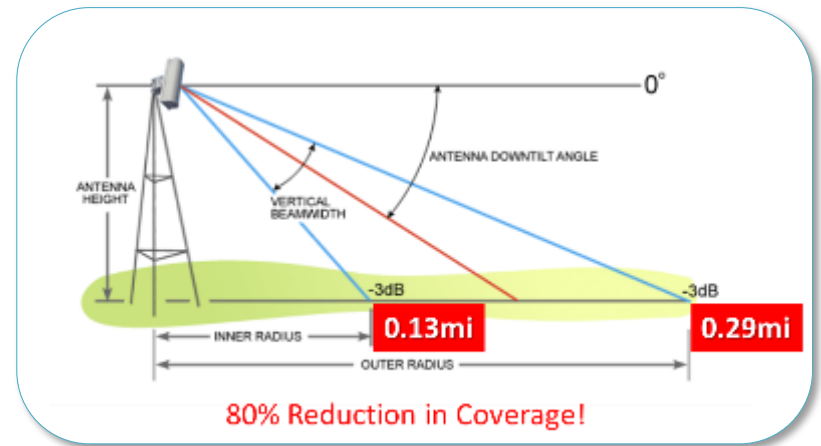
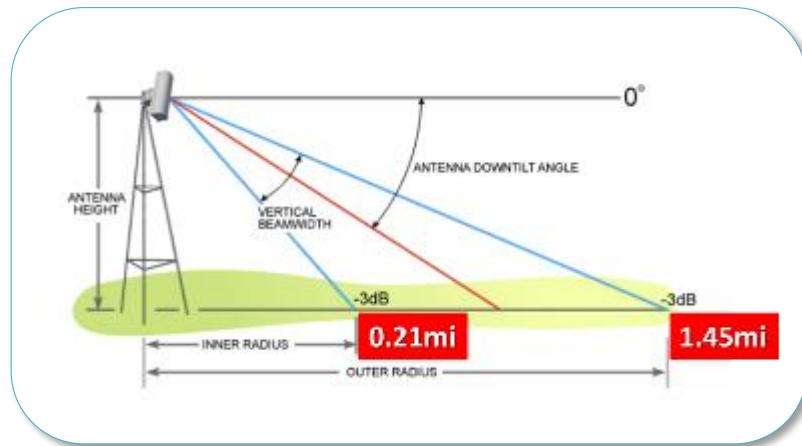


## Because **Antenna Alignment Changes** can generate

- Cell RF overshooting
- Interferences



# Because Antenna Alignment Changes can generate



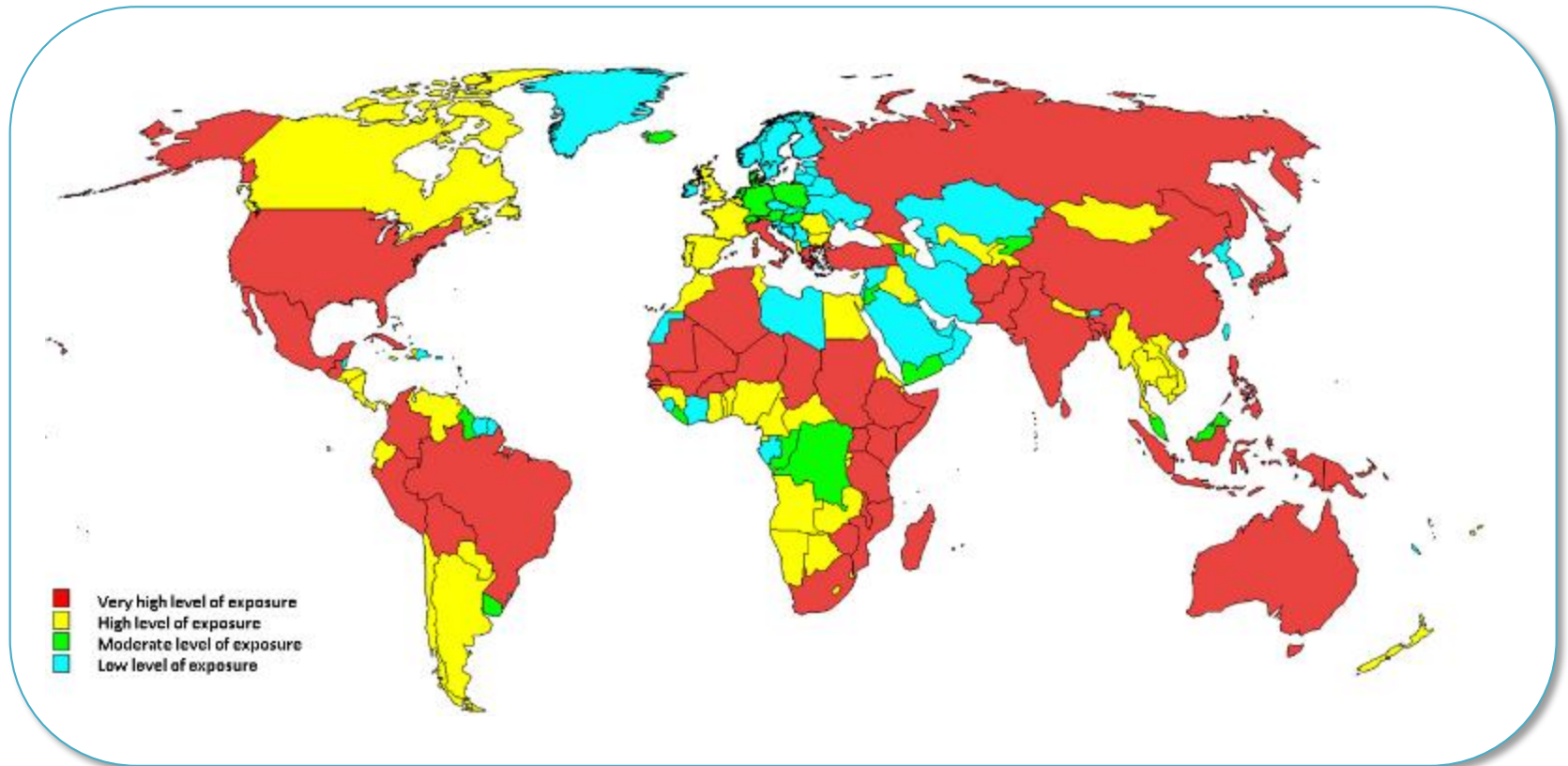
80% Reduction in Coverage!



Cell Coverage



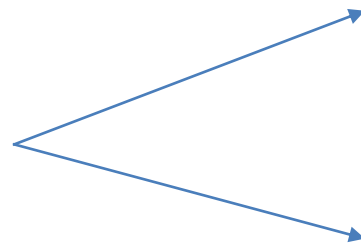
## And Antennas are also changing due to **Natural Hazards**



## And to improve the effects of **Antenna Alignment**



- Quality
- Coverage
- Performance



- Have a good alignment during the installation
- Monitor the alignment over time



# Methods of improving **Antenna Alignment**

## Traditional Installation Techniques:

- Magnetic Compass/Phone apps
- Google Earth
- Gun Scopes
- Laser Pointers

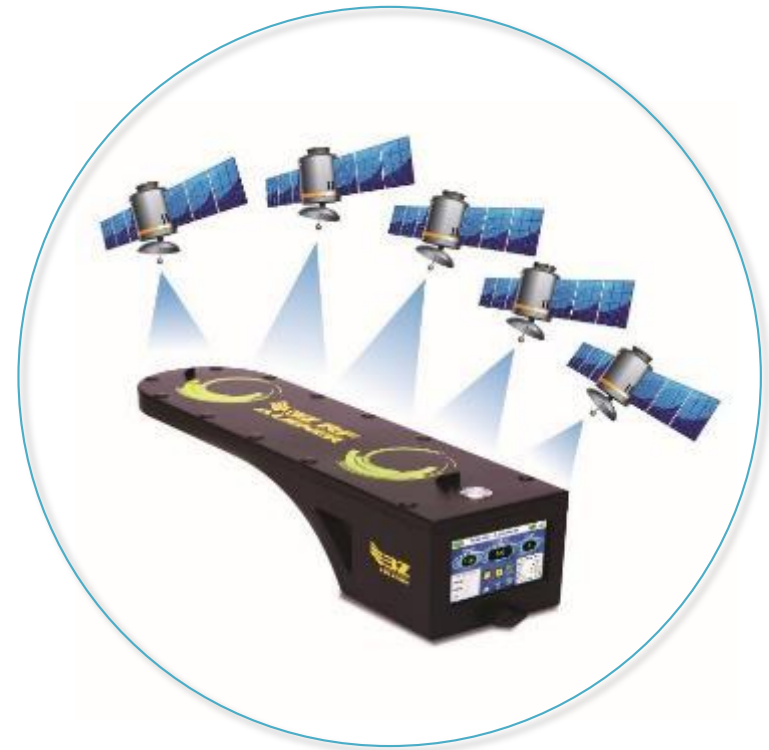




# Methods of improving **Antenna Alignment**

## New GPS Antenna Alignment Tools

An Alignment Tool requires 5 visible satellites with good quality signal to calculate azimuth.



# How do you use the tools



# Provides Azimuth, Tilt and Roll alignment

- Built-in Intuitive Touch-Screen interface
- No PDA/Smartphone/Tablet Required
- No pre-configuration required
- One Battery to Charge
- No post processing software required
- Designed to be used by all levels of experience



And now its possible  
to remotely  
monitor

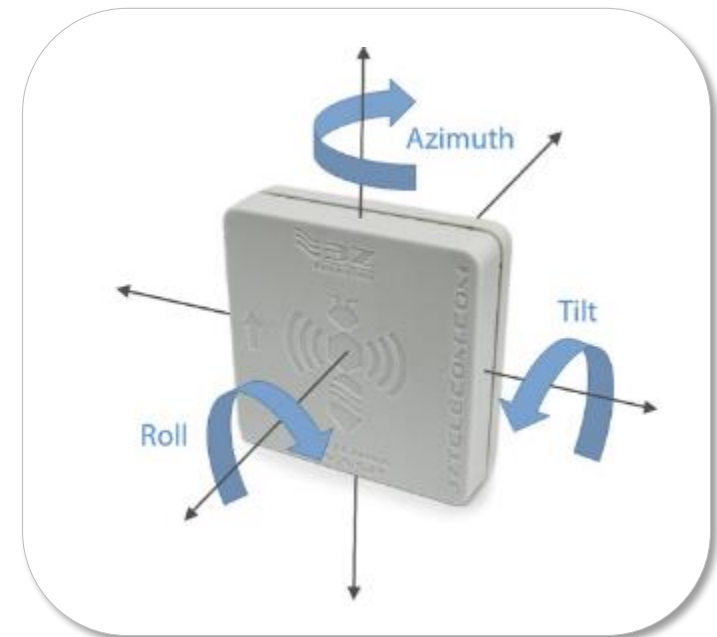




# Antenna WASP

## Wireless Antenna Sensor Pod

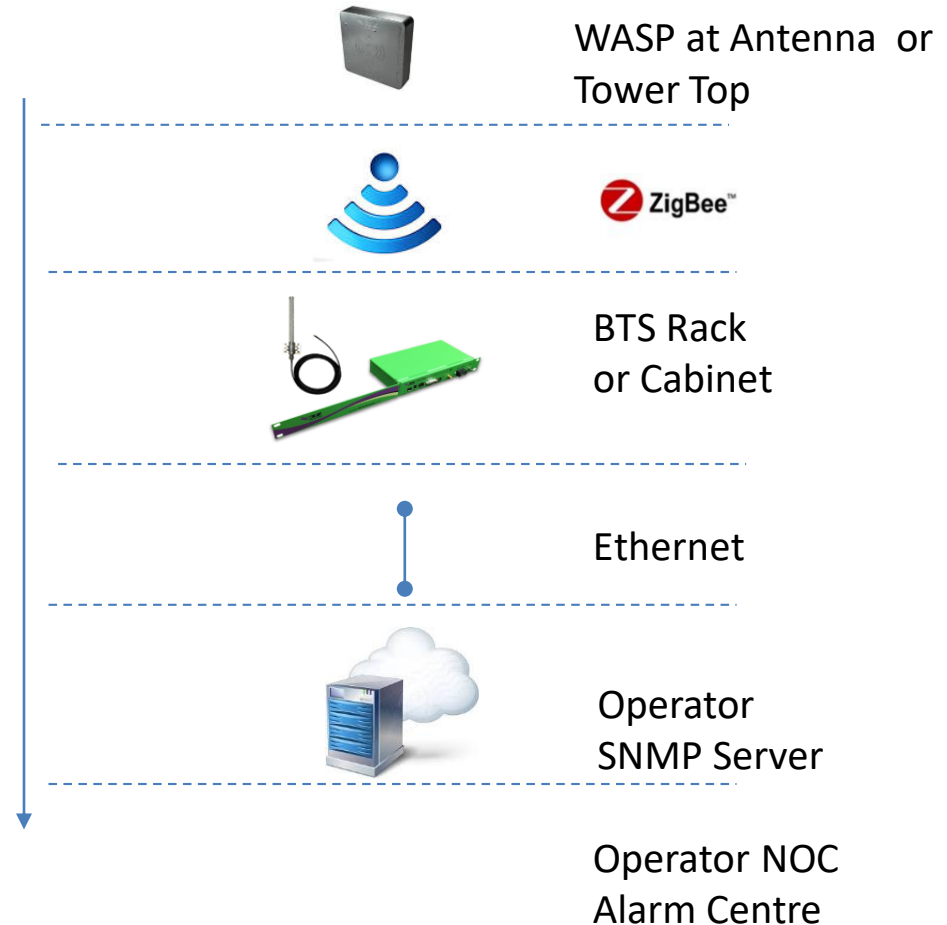
- Hourly Monitoring Changes to Antenna Azimuth/Tilt/Roll
- 330' ft Wireless Range
- 10+ Year Battery Life
- Compact Size 3"x3"x0.9"
- Alarm Cable via SNMP or Cloud
- Can be used as an Asset tracking system
- Can be used as a bus bar theft alarm
- Will reduce disaster recovery time by 50%
- Performance Tool integration, New KPIs Azimuth/Tilt/Roll



# WASP Possible Interfaces

## Now

- Ethernet – SNMP – Alarm System
- Remotely Modem – Static IP and 3Z Telecom SW
- Azimuth – Tilt – Roll
- Data Collector can be used to capture other sensors or alarms





**Live Demos**

## Contact Information



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