

Welcome to our Reseller Webinar.  
We will commence at 10am Melbourne  
time

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The logo for i-Serv, featuring a red dot above the 'i' and the text 'i-Serv' in a large, bold, black sans-serif font.

IP DECT - SME Voice over IP

Presentated by Craig Harrison  
Craig.harrison@alloy.com.au



i-Serv

ALLOY  
**IP COMMUNICATIONS**  
VOIP & UNIFIED COMMUNICATIONS



## Architecture

- Fixed Points (base Stations) 8630BS
- Portable Points (handsets) 8630HS
- Wireless Relay Stations (repeaters) RTX4002P



8630HS



RTX4002P



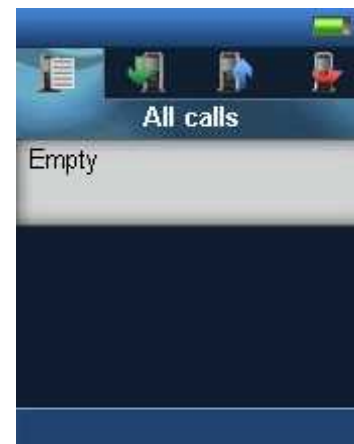
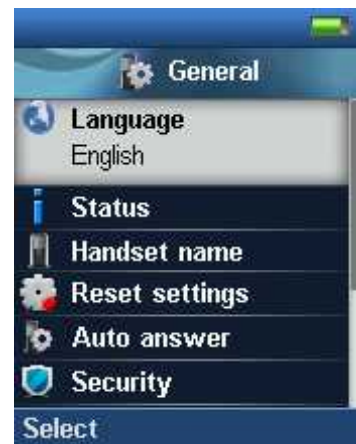
8630BS



## Main features

- Wideband Audio (G.722) support
- 176x220 TFT color display with graphical user interface
- Polyphonic ringtones
- 100 local and 200 central phonebook entries
- GAP compliant
- SW upgrade over-the-air
- Wideband two-way speaker phone mode
- Key light, Vibrator, MWI led & Headset jack
- Fast antenna diversity and directional antenna
- Long Battery life

## Graphical user interface with animated icons



## 8630BS Base Station

**Maximum of 40 Base Stations in a system**

**Maximum of 200 Handsets in a system**

**Maximum of 30 handsets to a single Base Station**

**Maximum of 10 concurrent calls per Base Station**

**1880 – 1900 MHz (10 carriers) Europe/Australia**



8630BS

Wireless Relay Station (Repeater) acts in two modes

Presents to the Base Station as a  
Portable Point (Handset)

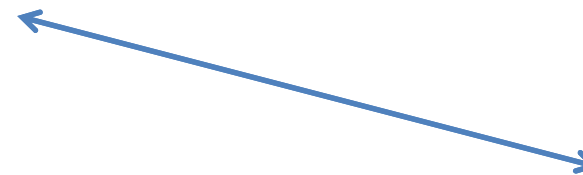
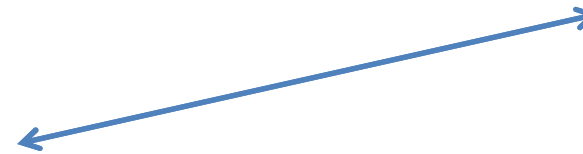
Presents to the handset as a  
Fixed Point (base Station)



BaseStation



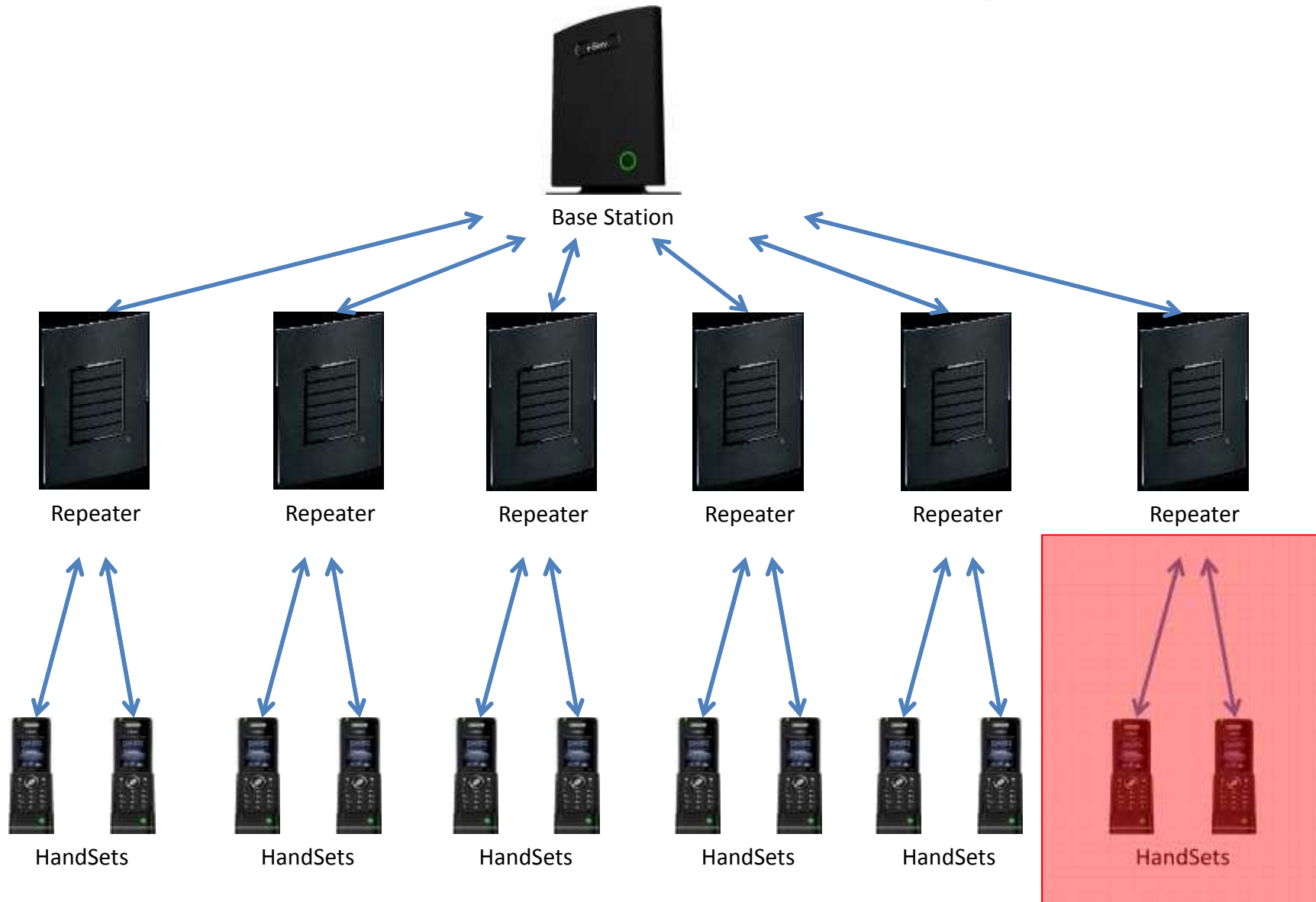
Repeater

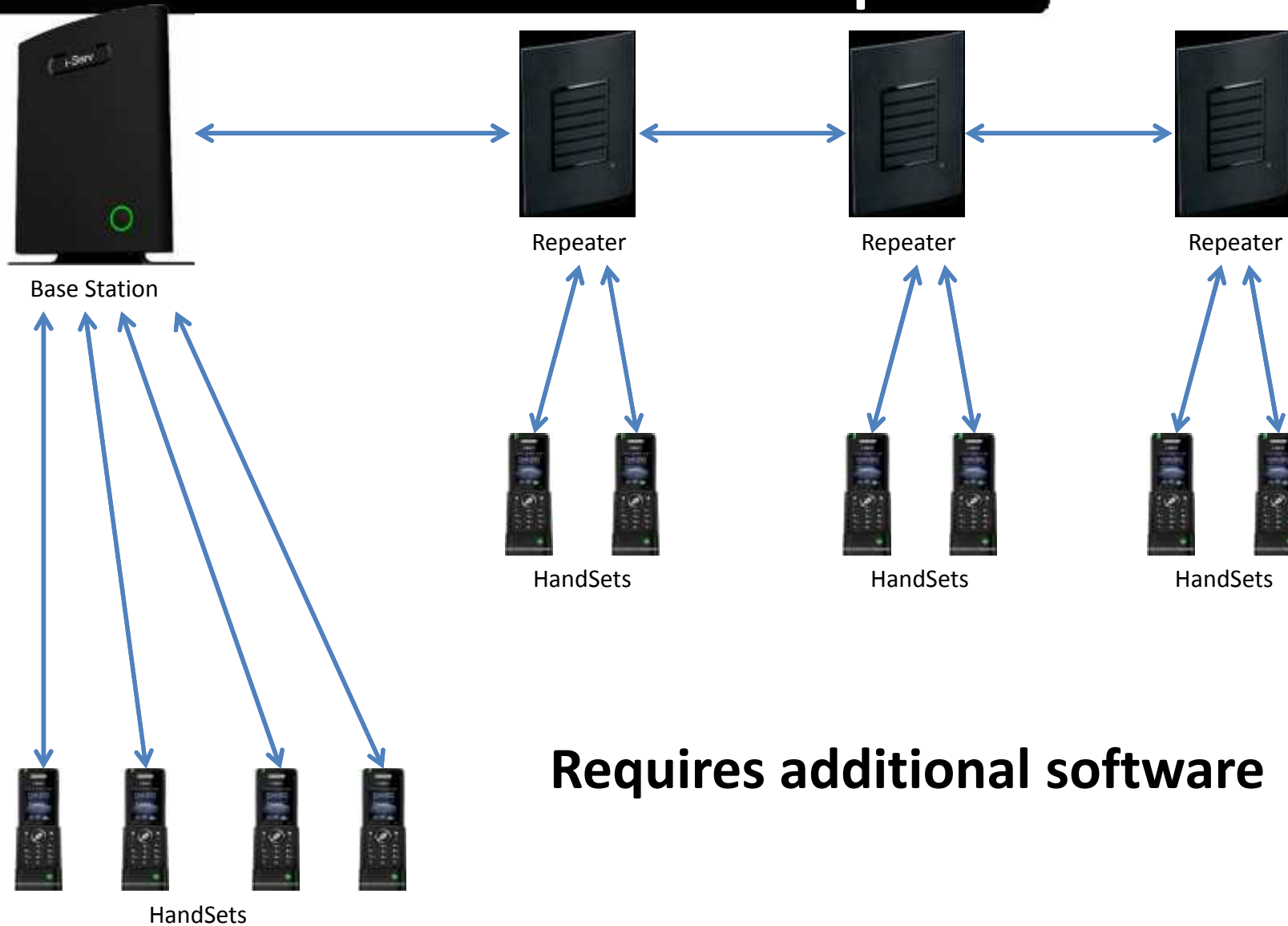


HandSet



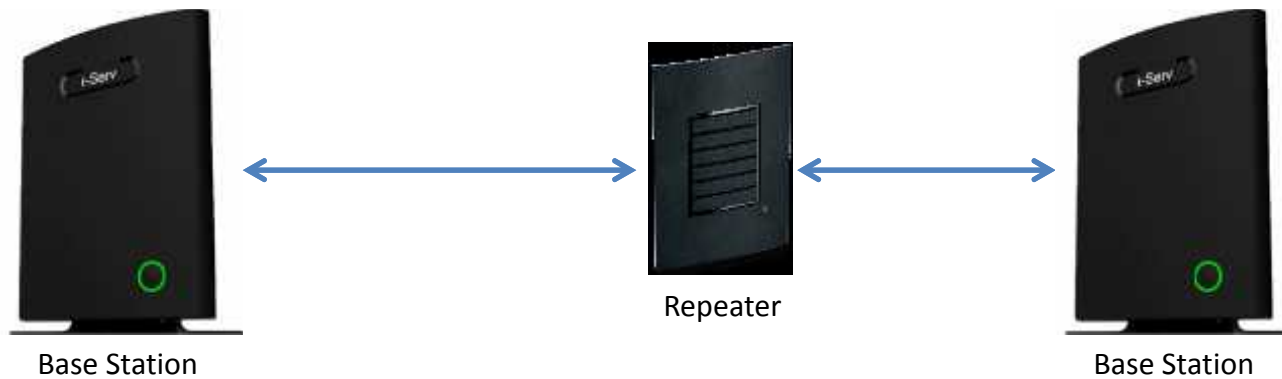
HandSet

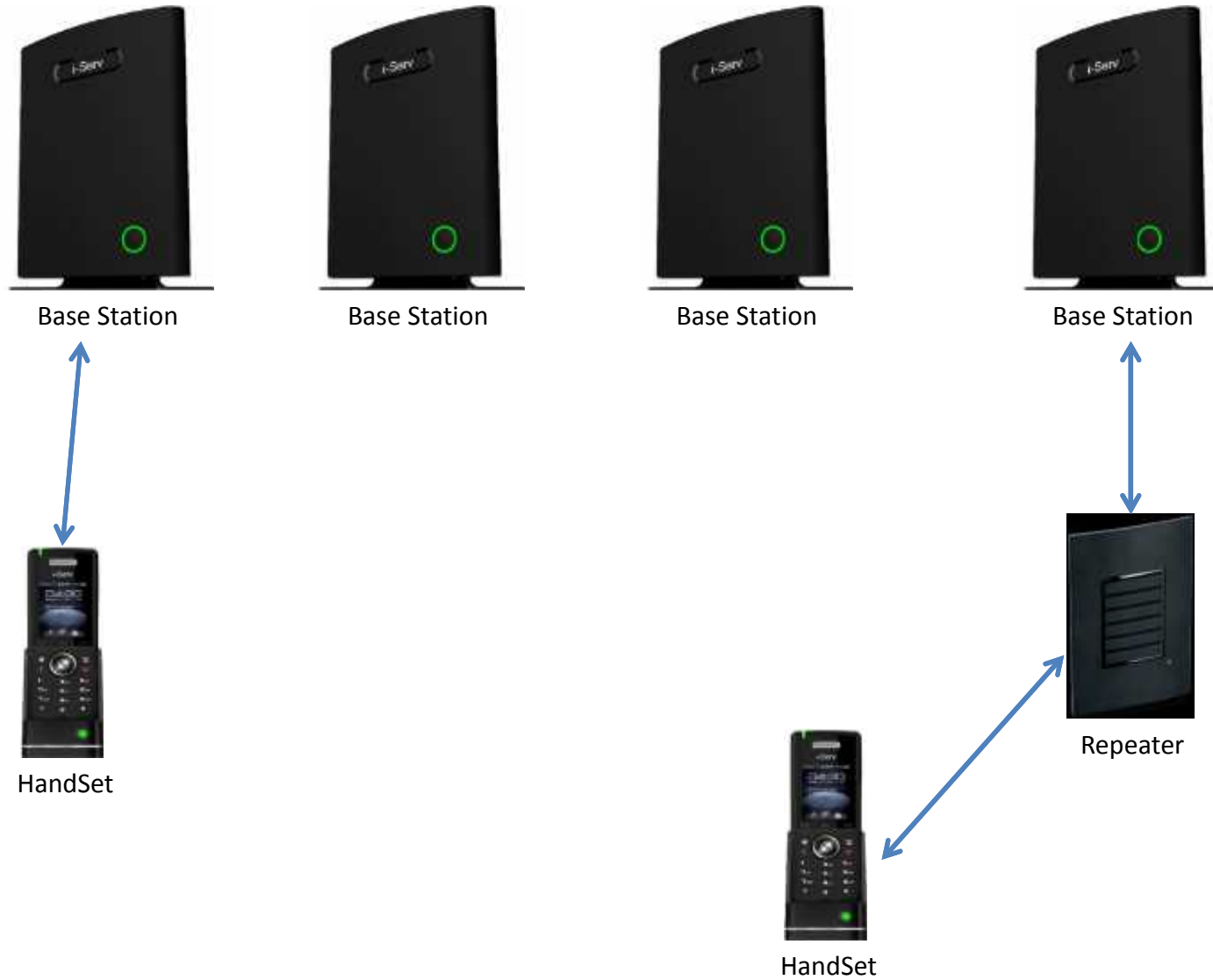




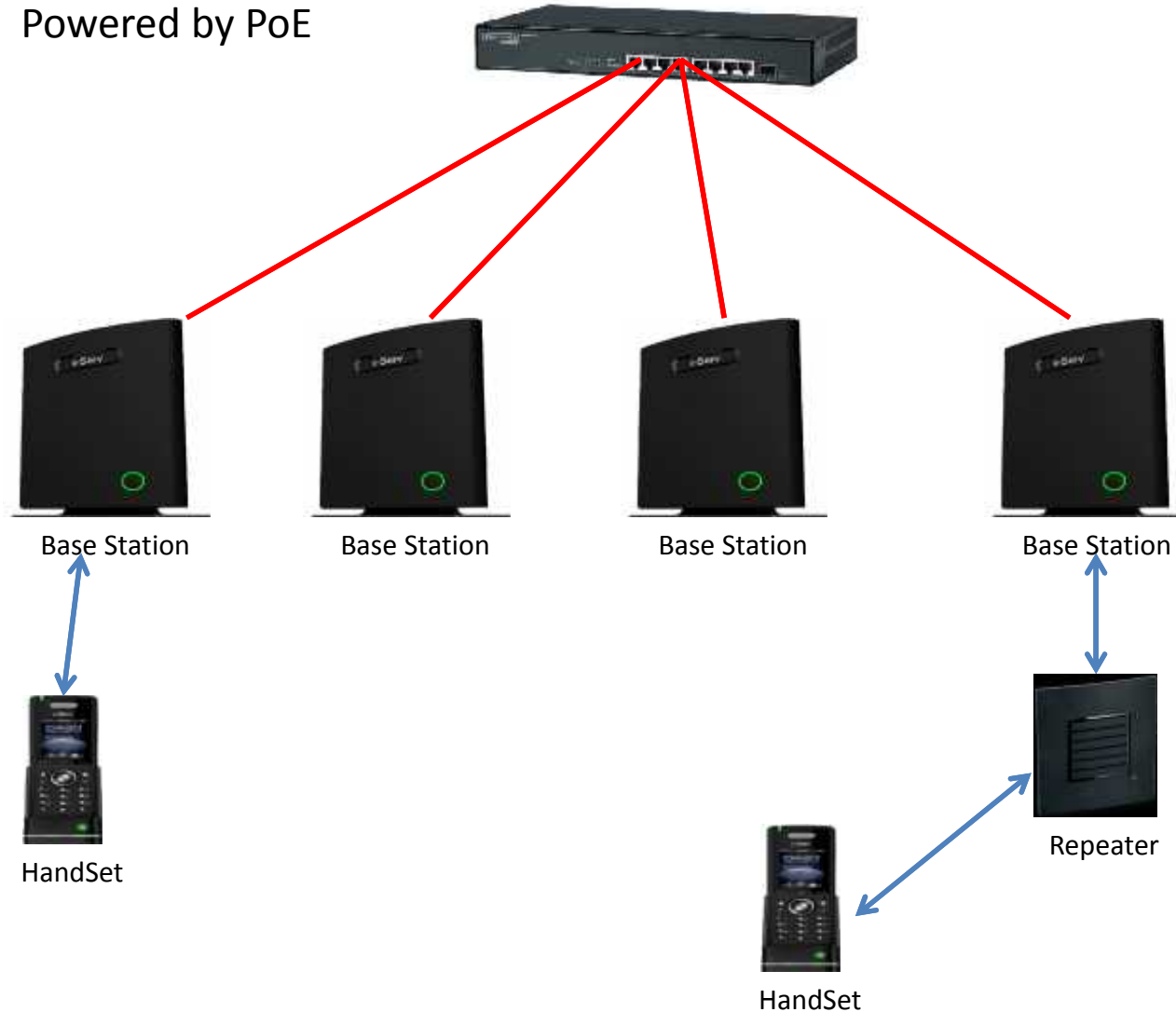
**Requires additional software**

**This DOES NOT Work**

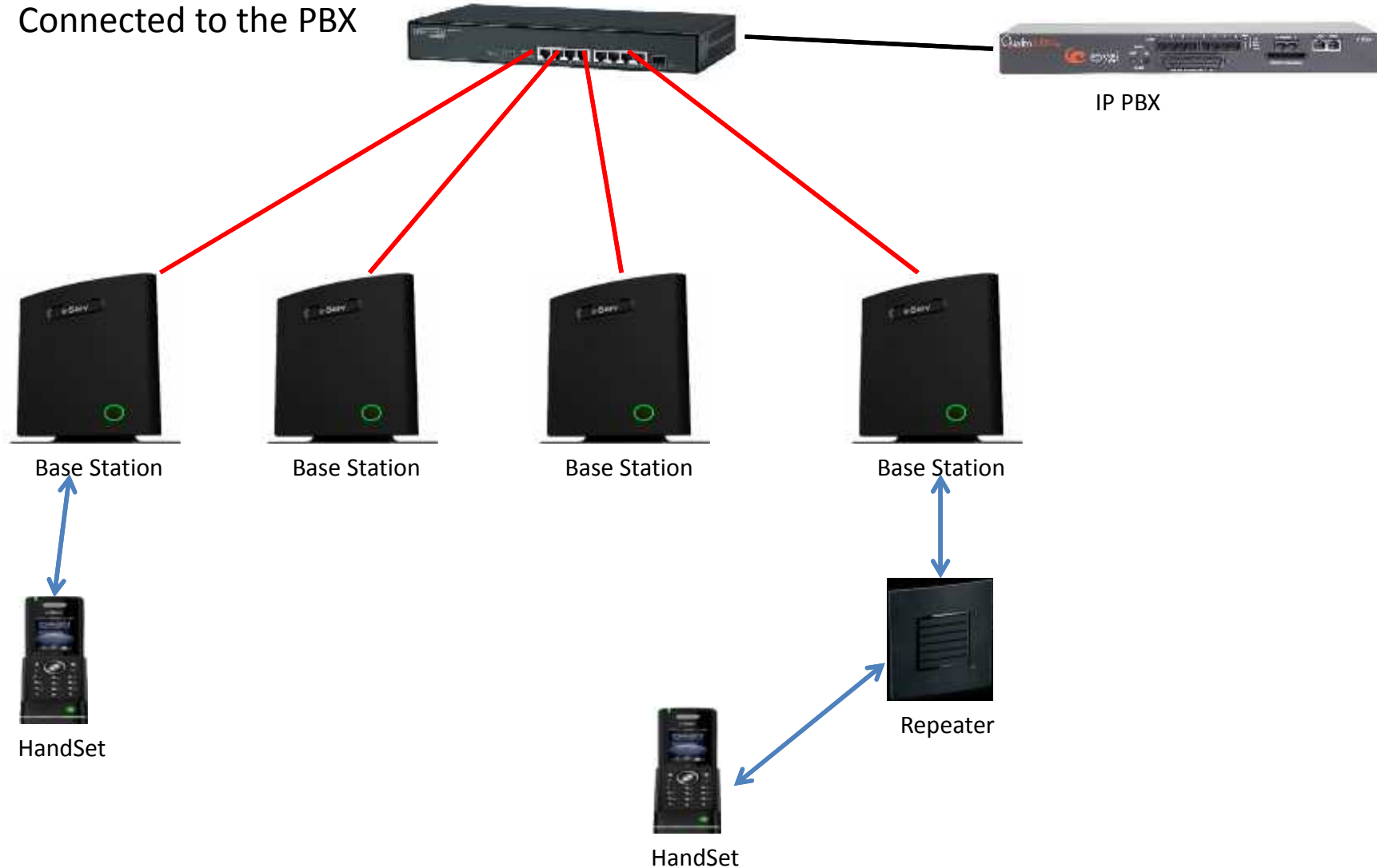




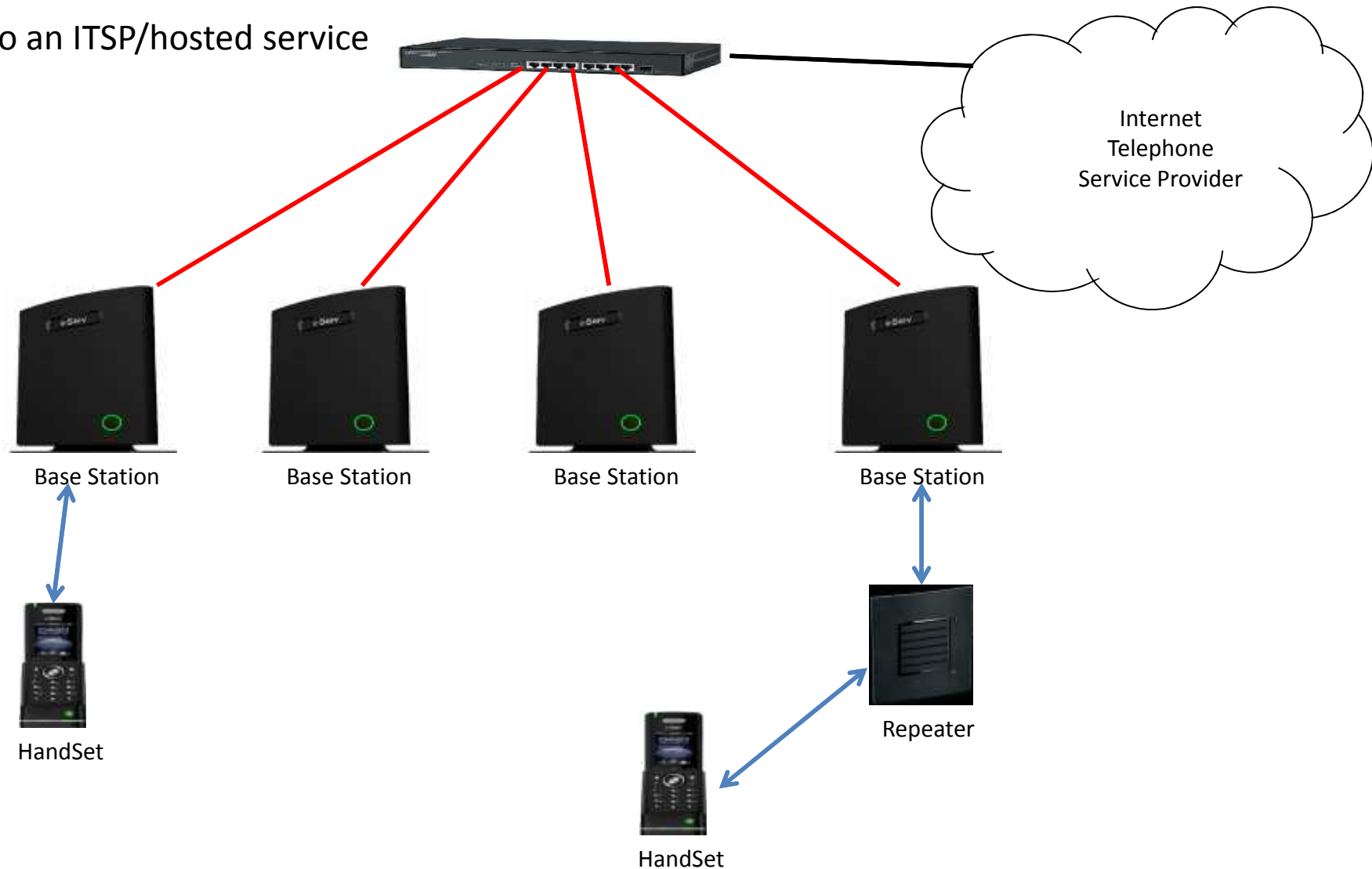
Powered by PoE



Connected to the PBX



Or to an ITSP/hosted service



# Is DECT superior to WiFi

## Range



DECT Base Station

**300m**



WiFi Access Point

**Up to 200m**

The effective distance of for a wireless transmission. Wi-Fi CERTIFIED n devices typically have a range of up to 200 meters and can cover an entire home with a strong Wi-Fi signal. Another benefit of 802.11n technology is much better coverage. Wi-Fi CERTIFIED n devices use "reflections" of the signal (from walls, etc.) to strengthen it and eliminate cold or weak spots in the signal.

[http://www.wi-fi.org/knowledge\\_center\\_overview.php?type=3](http://www.wi-fi.org/knowledge_center_overview.php?type=3)

## Frequency



DECT Base  
Station

**1.88-1.93  
GHz**



WiFi Access  
Point

**2.4 and/or 5.8  
GHz**

## Frequency

### Things that aren't in 1880-1930 MHz

- Microwaves ovens
- Mobile phones
- Bluetooth
- WDECT
- Wireless video cameras and other devices
- Movie/TV streaming devices
- Wireless game controllers
- ZigBee
- Fluorescent lights
- WiMAX
- RADAR
- satellite



## Interference

### % of Traffic Loss

▪ Microwave oven	50-60
▪ DSSS Cordless phone	100
▪ WDECT	5-10
▪ Wireless video cameras	55-100
▪ Blue Tooth Headset	8-10
▪ WiFi Network	75-95



The Effects of Interference on WLAN Traffic. A Farpoint Technical Note. Document FPG 2006-328.3

## Telstra Says

### DECT (1.88-1.9GHz)

DECT is the latest cordless platform, providing **improved range** without needing to boost the power. This platform has been set aside exclusively for cordless phone use, which means that DECT models have **superior sound quality** and **do not suffer from interference** created by wireless networks. This advanced digital technology has been in use for a number of years in Australia and Europe and has been recently introduced in North America. It has proven to provide **exceptional quality of voice and sound, high protection against eavesdropping and better range than 2.4GHz and 5.8GHz phones.**



HandSet

<http://www.telstrahomephones.com.au/bgtech.php>

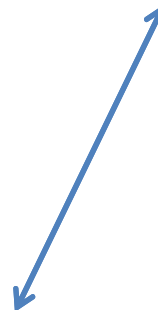
## Handover - Intracell

### Step 1

- Phone is connected to base station  
Using channel 2



Base Station



HandSet

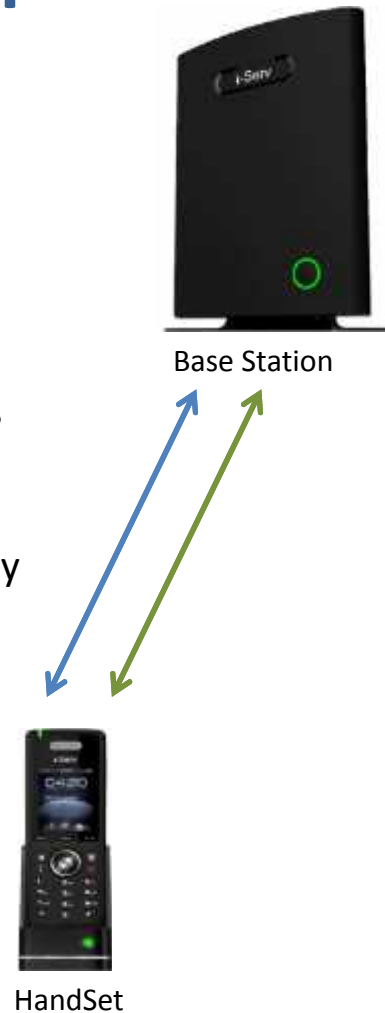
### DCSA

- Dynamic Channel Selection and Allocation
- Antenna Diversity

## Handover - Intracell

### Step 2

- Base station monitors link and decides it can do better on another channel
- It establishes a new link simultaneously on another channel eg 4



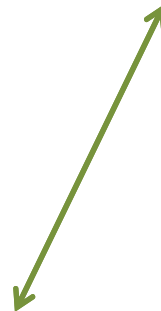
## Handover - Intracell

### Step 3

- Base station releases channel 2
- Call is now continued on channel 4 only



Base Station



HandSet

## Handover - Intercell



Base Station



Base Station



Base Station



HandSet

### Step 1

- Handset is connected to just the one base station

## Handover - Intercell



## Handover - Intercell



Base Station



Base Station



Base Station

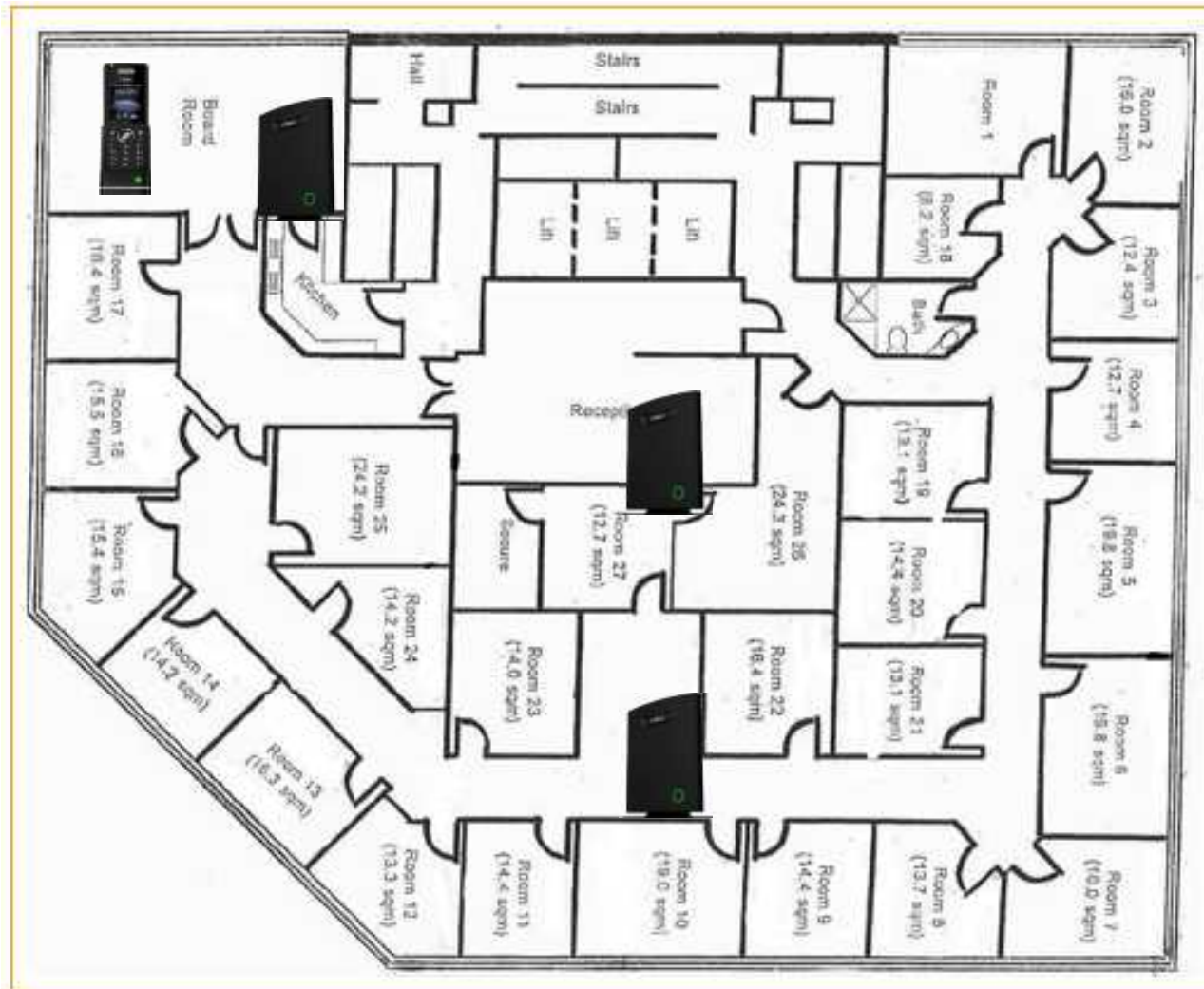


HandSet

### Step 3

- Handset is now connected to 1 base station

## Handover - Intercell



**Geographic requirements**

**Portability**

**Lone worker**

**Efficiency**

**Costs**



## Schools

- Grounds
- Campus wide coverage
- Teachers
- Security



## Manufacturing/retail

- Large environment
- small businesses
- Security



## Healthcare

- Doctors/nurses
- Hospital wide coverage
- Security

*And most SME businesses with mobile office workers*

## SIP:

- SIPS
- RFC2833 & In-band DTMF
- RFC2976 SIP INFO
- RFC3261
- Digest/basic authentication
- RFC3263 DNS SRV redundancy
- RFC3264 Offer/answer
- RFC3326 Reason Header
- RFC3489 STUN
- RFC3515 REFER
- RFC3581 RPORT
- RFC3842, RFC3265 Messaging Waiting
- RFC3892 Referred-by mechanism
- RFC3960 Early media and Ring Tone

## Security:

- TLS
- HTTPS support
- RFC3711 SRTP encryption

## TCP/IP

- IPv4
- IPv6
- QoS: DiffServ Tagging and QoS per IEEE 802.1p/q
- DHCP option 66 and 160
- TFTP
- VLAN

## What Now?

The Alloy Sales Team is available to discuss the i-Serv range in more detail, or to help you with specific customer opportunities.

## The i-Serv Reseller NFR Program

Until 25<sup>th</sup> November, you can access our NFR program and source sharply discounted i-Serv NFR kits for customer demonstration/test/in-house use. Email or call now to notify us of your interest



*Thank You for Attending Our Webinar – and happy selling!*