

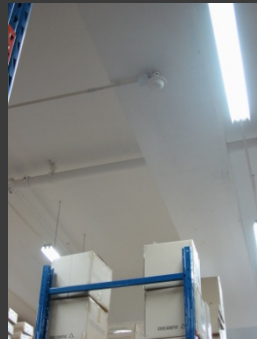
Wi-Fi system powered by DAS

What is DAS ?

Wiki : DAS (distributed antenna system) is a network of spatially separated antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area or structure. (http://en.wikipedia.org/wiki/Distributed_Antenna_System)

DAS is very commonly used at telecom industry for mobile network broadcasting inside buildings.

DAS implementations:



Advantages of DAS enabled Wi-Fi system

- 1) **Dramatically decrease of number of Access Point**
 - decrease total cost of ownership
 - controller based Wi-Fi may not be necessary as limited number of AP
 - decrease wireless controller scale which dramatically cut cost
 - decrease long term management cost
 - decrease upgrade, migration cost

- 2) **Increase and enhance coverage**
 - the best solution of controlling RF signal distribution instead of omni-directional coverage centered at AP
 - the best use of signal instead of loses by concrete walls
 - average distribution of signal along the cable path
 - users no-long suffer noisy effect when close to AP in one hand, while not enough signal rate for reliable connection on the other hand

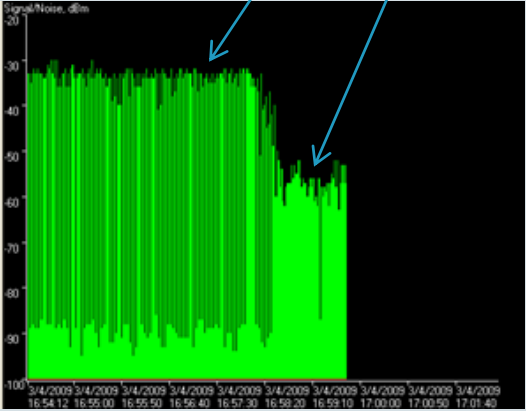
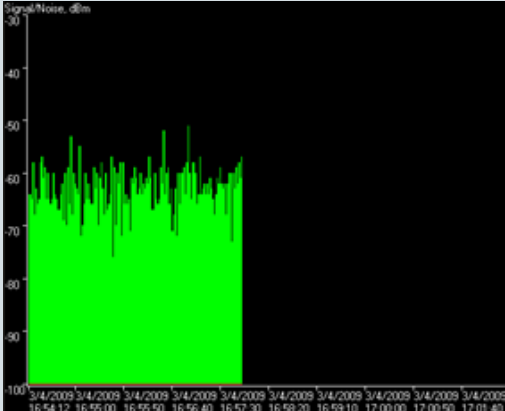
- 3) **Benefit roaming-less required applications**
 - VoIP will be fully implemented by the coming 10 years, roaming between AP is an obstacle of VoIP applications. With less AP, then less roaming, so that quality of VoIP and some critical application are more acceptable to user.
 - video streaming

- 4) **Lowest maintenance cost**
 - the total maintenance cost is very limited as DAS is very durable system which fully utilized by telecoms.

Site Survey & Test

In front of AP

After one wall

Normal AP environment	DAS Wi-Fi
 <p>The graph shows a signal rate of approximately -30 dB. The y-axis is labeled 'Signal/Noise, dBm' and ranges from 20 to 100. The x-axis shows time from 16:54:12 to 17:01:40. Two blue arrows point to the signal level: one labeled 'In front of AP' and another labeled 'After one wall'.</p>	 <p>The graph shows a signal rate of approximately -60 dB. The y-axis is labeled 'Signal/Noise, dBm' and ranges from 30 to 100. The x-axis shows time from 16:54:12 to 17:01:40.</p>
<p>signal rate : -30 dB energy rate : 1mW connection speed : 54Mbps</p>	<p>signal rate : -60 dB energy rate : 0.001mW connection speed : 54Mbps</p>

Site Survey & Test

-The energy level makes a huge difference between two systems (1000 times) but provide the same connection speed.

-Strong signal is necessary in existing design for signal to penetrate wall to another room, but it is not necessary for DAS system because another antenna is around.

-Strong RF signal makes feeling no good, evidence has proved that 50% of people will be affected by RF too strong signal and hence affect working efficiency.

<http://www.articlesbase.com/computers-articles/how-does-wifi-affect-people-health-856526.html>

<http://www.youtube.com/watch?v=luNaDj6VLHw>

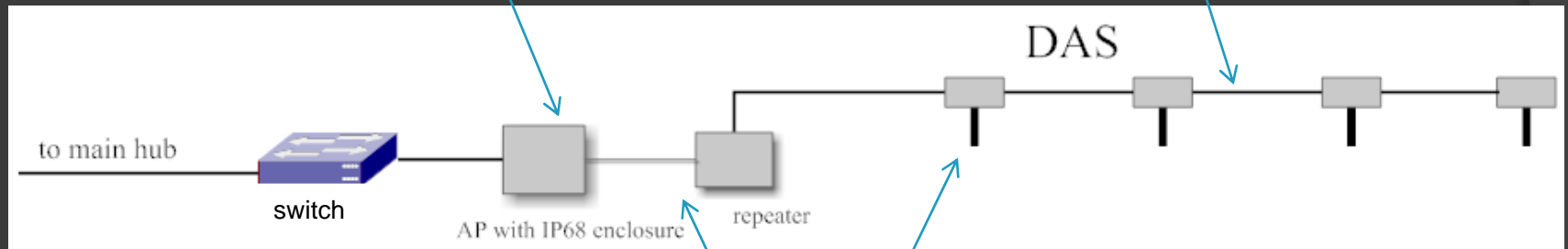
<http://www.youtube.com/watch?v=aGplfEnWptk&feature=related>

<http://www.youtube.com/watch?v=-VqnPtq4GbU&feature=related>

Typical Implementation

IP68 metal enclosure provide 99.99% system runtime

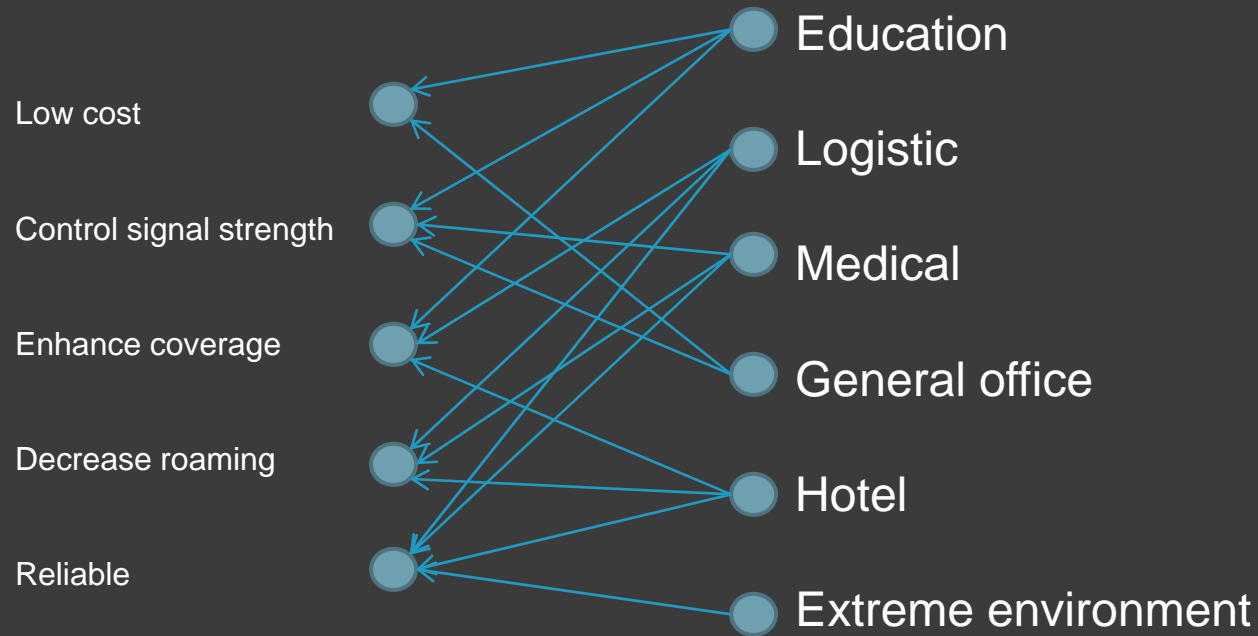
High quality low loss coaxial cable



Industrial repeater boost signal

Omni antenna

Advantages over different industries



Please visit www.wiwiglobal.com for more detail or
Call us now at 852-27630060 or
E-mail : info@wiwiglobal.com