

For further information contact:
Mark Hook / Becky Martin-Jones
www.ascentpr.co.uk
etherlive@ascentpr.co.uk
T. 01454 629 741

Q and A on Wi-Fi at Events

September 2010 – Tom McInerney, Etherlive

1. What's the best way of guaranteeing brilliant, seamless Wi-Fi service at a PR launch for 100 users?

Get the experts in!

No seriously, from our experience you need to consider three things. Firstly, what type of internet backhaul do you have available? Wi-Fi is important, but counts for nothing without adequate internet bandwidth behind it.

Secondly, what type of users you are servicing? If they are internet streaming, blogging and posting video (i.e. you are launching the next iPhone), you will need serious bandwidth and access points infrastructure.

Lastly, consider how you will deploy access points around the venue to minimise interference but maximise coverage. You should take into account walls and existing networks which may be broadcasting on the same channel.

2. Now, factor that up to 10,000 or 20,000 people at a huge exhibition? What kind of technology is needed to support that?

Once you begin servicing thousands of users in high density locations, Wi-Fi starts to show its limitations.

Due to the Wi-Fi spectrum a normal 2.4Ghz network only has three broadcast channels to play with. This is akin to only having 3 radio channels in your car which you can listen and talk over at any one time... and hundreds of people trying to communicate over just those channels! A good way to alleviate this issue is use 5Ghz networks which have more channels, and eases the burden on the networks however only newer phones and laptops will support this.

Another option is to use less dense locations which can service thousands of users. We use mesh Wi-Fi to coverage sites up to 350 acres. It just takes some planning with your access points so they are deployed to achieve optimum coverage.

3. What kind of technical considerations are required when you're dealing with multi-room or huge venues like Earls Court or big, big hotels that might need connectivity on multiple floors?

Interference is king, avoiding it will make your network perform better. You also need to consider bottlenecks in the network like switches or some network controllers.

4. Once you've managed to assign and log a user on to a Wi-Fi network, what's the best way to assure brilliant internet connectivity? Is it just a matter of a big data pipe? The bigger the better?

Well, in simple terms, - yes!

The more bandwidth the better, but in reality buying more pipe can get expensive.

You may want to consider options such as proxy caching which will serve regularly used content locally instead of pulling it all the way from the internet. Also, think about bonding several smaller (cheaper) lines together to provide the internet bandwidth required.

5. Is there a functional limit for the amount of people that you can get connected to a single Wi-Fi network?

This would depend on the hardware vendor; a number quote 200 or more concurrent users per access point, some less.

Generally 'industrial' units will handle more than what's in your home but serving over 100 users from any access point will give you airtime challenges, which is the amount of time each client is allowed to talk to the access point at any one time.

Imagine, for example, each laptop standing in a queue waiting to talk to the network...the longer the queue the longer wait when you are sent to the back for your next internet page request.

6. Do you have any suggestions for a rule of thumb in terms of data consumption? e.g. 1 user consumes 200mb Wi-Fi internet data in a day; therefore 100 users would need 20gb bandwidth in total.

What kind of backhaul pipe is needed for a decent service? Does 'fast broadband' from the likes of BT cut it in this arena? Or should we be talking super-fast dedicated connectivity?

Dedicated uncontested connectivity is a must if bandwidth is critical to the success of the event.

'Super fast' or 'home broadband' will feel slow once 10 people are using it for anything significant.

The amount of data consumption varies hugely based on your customer. Tech types can use gigabytes per day quite easily, while someone with a smart phone may not even download 30mb.

7. In reality, is it just too expensive to do this properly to serve, say, 5,000 or 10,000 delegates?

Providing high speed wireless internet to thousands of people is possible; it depends on the value attached to providing the service by the organiser and attendee.

8. What are the main 'gotchas' that result in event organisers being harassed by frustrated users?

Normally the 'gotchas' fall into two things. Firstly, thinking that in house Wi-Fi will meet their user needs, when normally it doesn't since it's not designed to handle the required density and has no onsite support structure to address their issues.

The second 'gotcha' is underestimating the amount of required internet connectivity. It's very difficult to address a lack of internet bandwidth quickly especially if you are using normal broadband services which are limited to whatever the local exchange can provide.

9. Do you have any brief case studies or examples you could share where the technology has really worked?

Etherlive works every day to setup and support temporary internet and Wi-Fi throughout the UK. We recently provided the Sky Election debate with a high speed redundant Wi-Fi network for a large pool of national and international journalists without issue.

We also recently deployed site wide Wi-Fi over the WOMAD music festival to support the organisers communication requirements and provide attendees with free Wi-Fi which was well received. Attendees could finally enjoy all their festival iPhone applications, see what artists where on stage and go and buy their music.

10. What would your equipment/service shopping list look like to deliver Wi-Fi to 500 or 10,000 delegates?

I would say:

1. Good internet pipe.
2. Lots of access points and a good RF scanner that can identify interference.
3. A great technical team.

11. Take a gaze into the future: What should we be looking for in the future to deliver this kind of connectivity?

Improved 802.11 (wireless) standards will help deliver connectivity in the future.

I also see in future 4G services like LTE (new cellular standard), being brought in and this will deliver more reliable, high speed connectivity.

ENDS

About Etherlive

A successful event depends on great performances. From WOMAD and The Green Man Festival to the Southampton Boat Show and the Three Counties Show, we are the ones that make IT work. Etherlive sits behind the scenes delivering reliable Wi-Fi internet, telephony, laptops, PDQs and interactive messaging. Whether in a field or a building, we make connectivity simple.

<http://events.etherlive.co.uk>