Broadband Update 7th December 2014

This is the fourth news update on the subject of broadband and proposed improvements to the service available to the village. See the Village web site Broadband page for previous issues.

Gigaclear Update

Gigaclear came to the village to host an open meeting on 27th November. They gave a very good account of themselves giving the impression of a credible and honest supplier. Before the meeting we sent Gigaclear a comprehensive list of questions; these were all answered in a very open way by the presentation. We learned a lot about Gigaclear and the benefits of fibre to the property (FTTP). Some of the important points are covered later in this newsletter, see *Gigaclear USP's* and *Fibre Optic Broadband Explained*.

 The meeting was open to other villages, so was well attended, however, Medbourne residents were only eleven in total and therein lies a problem. Gigaclear will only deploy a network in Medbourne if it represents a viable business proposition, as they will not be receiving a public subsidy like BT. This will require a number of residents to sign up for the service; on paper the target is 35% of properties but, as they plan the network in more detail and gather commitments from other villages, we feel this target could be negotiable.

Parish Council Policy

For the technical reasons covered later (see *Fibre Optic Broadband Explained*), extending the fibre optic network to every property is vital, if not immediately then within a few years. We have seen from neighbouring villages what happens when the demand for broadband service exceeds the capacity of the network; fortunately, we will just avoid that happening here. At some time the BT fibre to the cabinet solution will have to extend to every property in order to meet capacity demands. However, there is no plan in place for this; BT may consider it not cost-effective without public subsidy; such funds may be limited by austerity and, if they become available, we may find ourselves at the back of the queue once again.

What Gigaclear offers is the opportunity to future-proof the village now as there is no inbuilt upper constraint on the speed of their solution. Those who take the service will enjoy exceptionally fast broadband whilst every property will have an access point in the road outside, enabling Gigaclear to be installed in the future. The impact on property prices will be positive.

For these reasons, after the meeting, Paul Polito and I agreed that having a Gigaclear network in the village, in competition with BT, is a target that we should definitely aim for. This proposition was put before the Parish Council on 1st December when it was unanimously approved. The effect of this decision is that we will give Gigaclear the assistance it needs to achieve a cost-effective deployment into the village. Note that this is about helping them to target their marketing and not about becoming surrogate Gigaclear sales persons.

Welland Valley Broadband Group

The aims of Medbourne Parish Council and those of the Welland Valley Broadband Group have now converged as the focus is firmly on Gigaclear. Consequently, we met with them on December 3rd to compare notes. We learned that Gigaclear met with the other villages in September giving them time to prepare the ground for Gigaclear's registration process (to determine interest levels). Since our first meeting with Gigaclear was on 27th November we are now fully two months behind the other villages.   As it happens,

there have been sufficient expressions of interest for Gigaclear to move to their next stage of planning in spite of very low returns from Medbourne. See the [press release](#) issued by WVBG this week.

Where next with Gigaclear?

So far, the marketing effort behind Gigaclear has been a game of two halves. In the first half we had postcards from Gigaclear and WBVG Newsletters inviting residents to register with Gigaclear. My soundings in the village have revealed people who knew too little about Gigaclear (Giga who?) to take any further action. The second half was Gigaclear's excellent village meeting where too few Medbourne residents attended? The whole process could have been managed better.

As a consequence Martin Griffin of WVBG is arranging for us to meet with Gigaclear when we will aim to agree a better and more focused marketing effort into the village. We also wish to achieve clarity on the level of commitment needed to ensure that Gigaclear deploys here.

I expect that we will be hosting another one or more Gigaclear village meetings. In the meantime, for any residents wishing to commit to Gigaclear the process of registration is now closed; they have moved on to taking orders. You will need to click on http://www.gigaclear.com and then choose "Get Gigaclear".

The Gigaclear USP's

It would be impossible to re-iterate everything from a 2-hour meeting so a few unique selling points are listed below:

- The theoretical maximum speed is 1000mbps. In-home equipment connected to the network will probably constrain this speed but, as equipment develops, it will not outgrow the network.

- Upload and download are the same speed – the service is symmetrical. Skype users take note. Currently in Medbourne upload speed is $1/10^{th}$ of download speed.

- There are graduated pricing packages for 50mbps, 100mbps, 200mbps and 1000mbps.

- If Gigaclear comes to Medbourne every property gets a connection point whether or not they are a customer.

- The fibre cable into the Welland Valley will come from Liddington (via Stoke Dry). From Liddington to London the connection goes via a cable belonging to Vodafone. Hence, Gigaclear is a true competitor to BT and not just another supplier sharing BT's network.

- It is possible to use the network for telephone calls over the internet via a product called Vonage. This is available for £7 per month and removes the need to pay £16.99 per month line rental. Users can keep their existing phone number.

There's more information on the [Gigaclear web site](#); however, the consensus is that this isn't the most useful source. The village of Appleton with Eton has implemented Gigaclear and produced a web site full of useful information; see http://www.appletonbroadband.co.uk.

Fibre Optic Broadband Explained

This section is provided mainly for non-techies so some readers may wish to stop here.

Fibre optic cable transmits data at the speed of light. A light pulse input at one end is immediately visible at the far end and, unlike light, it can go around corners. At either end of a length of cable a computer converts information into light pulses or light pulses into information. These computers are what constrain the speed of the network, not the cable. As time goes by these computers are upgradeable, either by changing the hardware or the software. As these computers are in our home (e.g. routers), or in the cabinets of the network provider, they do not present a major logistical challenge to upgrade.

Fibre to the property (FTTP) is the term for a network where every cable between a property and the World Wide Web is fibre optic. By contrast, fibre to the cabinet (FTTC) relies on copper wire for the last hop from the cabinet to the home. This copper connection slows down the signal according to distance travelled. For instance a speed of 80mbps at the cabinet will degrade to 24mbps after travelling through 1.2km of copper wire.

It is also important to know the predictions for the increase in broadband traffic. In 1989 I attended a future technology conference at MIT (Massachusetts Institute of Technology). The keynote address from Prof. Nick Negroponte concerned the (immodestly titled) Negroponte Switch. This theory stated that, in time, every signal we receive through the atmosphere will arrive via a cable and every signal we receive via a cable will come through the atmosphere. Twenty five years on the trend is clear; many people now use a mobile phone exclusively rather than a landline, and many of us catch up on missed television by downloading it from the internet.

Whilst the current standard for television is "HD", Ultra High Definition (UHD) is on its way with 4 or 8 times the resolution of HD (known as 4k and 8k), hence the bandwidth required for this is much greater than that required for HD. For example, a two-and-a half-hour film shot in 4K would take over 12 hours to download at 1000mbps.

Recently, BBC announced that BBC3 would only be available online, so we have the first UK instance of today's television coming via a cable rather than an aerial. Eventually, television signals will be simply too "fat" to be broadcast via an aerial and, when this happens, Nick Negroponte's prediction will come true.

Hence, fibre to the cabinet (FTTC) is, at best, a stop-gap solution. Before long we must have fibre to the property (FTTP) and it must be upgradeable to speeds far greater than the 1000mbps discussed here.

David Tuffs
Information Resources Advisor to Medbourne Parish Council
7th December 2014