

Arqiva response to Ofcom's consultation on "Future broadband"

About Arqiva

Arqiva is owned by a consortium of investors led by Macquarie Communications Infrastructure Group and operates at the heart of the broadcast and mobile communications industry.

Arqiva is at the forefront of network solutions and services in an increasingly digital world. The company provides much of the infrastructure behind television, radio and wireless communications in the UK and has a growing presence in Ireland, mainland Europe and the USA. Major customers include ITV, Channel 4, Five, the BBC, BSkyB, Classic FM, the five UK mobile operators, the RNLI and the Metropolitan Police.

For broadcasters, media companies and corporate enterprises Arqiva offers an end-to-end capability ranging from outside broadcasts, satellite newsgathering, studios, playout, satellite distribution and terrestrial transmission, the latter including digital switchover and mobile TV development.

In the communications sector the company supports cellular, wireless broadband, video, voice and data solutions for the mobile phone, public safety, public sector, public space and transport markets.

Arqiva now has eight international satellite teleports, over 60 other manned locations, and around 3500 shared radio sites throughout the UK and Ireland including masts, towers and rooftops from under 30 to over 300 metres tall.

Executive summary

- Arqiva cannot forecast a time when investment in NGA should take place. This would require second-guessing how early-adopting market segments might be served by the range of suppliers and technologies. The industry has a track record of failure in this.
- It is unlikely Ofcom and Government would fare any better; their role must be to help create the right market conditions for the market to work and for those to be in place soonest.
- But there will come a time when existing access networks will no longer be able to meet customer expectations. While early days, there is evidence of increasing consumer demand for both bandwidth and mobility.
- A wireless NGA network could address both, be built out faster than a fixed network, beyond densely populated areas, and without digging up streets. Arqiva believes that broadband wireless is an essential technology in the development of an NGA market.
- Arqiva believes that competition of scale and scope may well require both cooperative investment and deployment at the wholesale level to avoid the sub-scale investment of many previous licensing approaches, from cable franchises to spectrum auctions.
- Ofcom should ensure that there are no unreasonable barriers to the market achieving the necessary scale and scope.
- Given that, Arqiva's view is that it is essential that forthcoming spectrum awards enable such cooperation both in terms of bids and caps.

Answers to questions

Q1: When do you consider it would be timely and efficient for next generation access investment to take place in the UK?

While Arqiva agrees that most consumers are not yet demanding (downlink) speeds of 20+ Mbit/s, and that it would likely be hard to justify investment in either near-universal fibre to the cabinet or to the home in the short-medium term, there are some undeniable trends in consumption patterns which will bring forward the point when the UK will need access networks which are higher bandwidth, less asynchronous and more mobile to meet changing consumer demands.

Evolving trends in the retail market (which 3G was a little early in anticipating) see consumers increasingly demand access while mobile to IP-based services and content which are personalised, location- and context-specific, and which require increasing bandwidth.

Evidence of this can be seen in:

- Wi-Fi untethering owners of current generation mp3 players (such as the hugely popular Apple iPod Touch) from PCs, not just for downloading music and video, but for web browsing too;
- Skype being integrated with H3G mobile phones;
- McDonald's introducing free WiFi in most of its 1200 restaurants; and
- the innovative service launched in the US by AnchorFree which offers retailers revenue-share to install free-to-use WiFi, funded by serving up (context-specific) adverts.

In the business market increasing home working and mobility of workforces has created a demand for wireless to extend corporate VPNs (Virtual Private Networks).

Demand for greater mobility in broadband access is occurring against the backdrop of increasing demand for downlink bandwidth. This is driven by increasing searching for audiovisual content, combined with the increasing embedding of such content within websites. In addition IPTV, while in its early days in the UK, may imply similar consumption patterns for its adopters as seen in France where it isn't unusual for a household to demand simultaneous audiovisual streams (perhaps in HDTV) while also surfing and playing online games. Indeed, for current generation games machines, led by the X-Box 360, online gaming is at the core of their offering. Even if online gaming never achieves the penetration and usage it has in, say, Korea, it is likely to become another *simultaneous* use of broadband which Service Providers will have to allow for.

Demands for higher bandwidth, including upload speeds (required for business file uploads and P2P applications such as the BBC's iPlayer), could be met (within limitations) by copper assets or by wireless with the use of higher frequencies.

New wireless technologies, principally WiMAX and LTE, will be far more appropriate to satisfy these demands than Wi-Fi with its poor upload speeds, variable reliability, frequency congestion and inadequate security. A key enabler for WiMAX is its embedding within Intel Centrino laptop chipsets from this year.

Arqiva therefore agrees with Ofcom that there will come a time when existing access networks will no longer be able to meet customer expectations. Unfortunately, by the time that the UK realises that it is being significantly disadvantaged economically or socially by not having NGA infrastructure, it may not be easy to catch up, although a wireless NGA network could be built out near-universally faster than a fixed network, beyond densely populated areas, and without digging up streets (as per the cable laying days, that caused so much disruption).

As the consultation points out NGA networks may take many forms, both fixed and wireless (both cellular and otherwise), where wireless can not only meet the increasing consumer demand for mobility but also may have a role in delivering broadband to consumers for whom fixed delivery (certainly over the copper access network) would not be practical.

Wireless broadband is the essential complement to fixed and the market will mix and match provided it has real choices.

Wireless would also offer greater opportunities for the emergence of investors bringing new thinking into access networks with room to grow alongside existing players like BT and the MNOs.

Next year's 2.6 GHz spectrum auction, complemented with other wireless access technologies, provides an opportunity to establish a near-universal wireless NGA network. Shared network infrastructure would enable multiple platforms to compete, yet at lowest build and operating cost - a consortium approach could deliver this. If a substantial facility were bought by a consortium of service providers it might have a big enough combination of scale and scope and the spreading of risk.

The business model would be similar to Inmarsat in its early days where a wholesale facility was owned by a number of interested parties and marketed in scalable chunks to whoever wanted to buy it (scalability has the additional advantage of enabling small amounts to be sold to entrepreneurs and developers).

There is also no reason why an integrating wholesale vendor might not sell both fixed and wireless.

Arqiva therefore suggests that, unless responses suggest otherwise, Ofcom should revisit the situation again in, say, 18 months. In the meantime, Ofcom should ensure that there are no unreasonable barriers to the market achieving the necessary scale and scope outlined above where we note that Ofcom continues to propose the considerably interventionist measure of a spectrum cap for the 2.6 GHz auction where, given the technology- and service-neutral nature of the proposed licences, and spectrum substitutability for many potential uses of the 2.6 GHz spectrum, it is impossible for Ofcom to predict which downstream markets may be adversely affected by any spectrum hoarding.

*Q2: Do you agree with the principles outlined for regulating next generation access?
Q3: How should Ofcom reflect risk in regulated access terms?*

Yes. Arqiva agrees with Ofcom that a continuation of the clear regulatory framework from the Strategic Review of Telecommunications, combined with the new principles of regulatory certainty and ensuring access terms reflect investment risk, is the right

approach to take. We further agree forbearance is probably not appropriate for the UK.

Q4: Do you agree with the need for both passive and active access remedies to promote competition?

In principle, yes. But getting NGA right is too important for UK plc to entrust its delivery only to the incumbents proposing the same old competitive models.

Wireless has a key role to play in delivering such new networks, in competition to access methodologies such as fibre to the home, yet brings additional advantages and scope including mobility, where WiMAX is a key technology platform for delivering on the NGAN promise, and spectrum such as 2.6GHz and the DDR can realise it. Interconnect to the core networks is key to delivery of NGAN, assured by regulation.

A wireless NGA network, with its own backhaul network from transmitter sites, could be built out near-universally faster than a fixed network, and beyond densely populated areas, rendering as academic much of the discussion about which passive and active line access remedies may be most appropriate.

Q5: Do you consider there to be a role of direct regulatory or public policy intervention to create artificial incentives for earlier investment in next generation access?

Arqiva agrees that at the moment any such intervention must be deemed premature and, if at some point the evidence indicates that intervention might be appropriate, that market investment should continue to take the lead.

In the short term, Ofcom should maintain a close eye on market trends and focus on removing barriers to market-led investment, for example around next year's 2.6 GHz spectrum auction.

And if at any time the Government believes that the UK has fallen behind other major countries, and as a result is significantly disadvantaged economically or socially, there remains the option of providing investment incentives such as tax treatment.