

# East of England Telematics Development Trust

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Version D

## Response to the Radiocommunications Agency's Consultation:

**"Broadband Fixed Wireless Access (BFWA) at 28 GHz: proposals to amend new and existing licences and for the next stage of the award process"**

Dear Joe,

The East of England Telematics Development Trust is pleased to have the opportunity to provide the attached response to your consultation on 28 GHz.

The [East of England Telematics Development Trust](#) (EETDT) is a public/private/voluntary sector partnership dedicated to supporting and developing the ICT infrastructure in the region.

[Membership](#) includes: EEDA, GO-East, all the County Councils and Unitary Councils in the region, several Universities, Anglia Television, Apple, BT, Cable & Wireless, ntl, and many other public and private organisations.

This response has been developed by the membership of the Broadband Working Group, a group within the EETDT who have particular interests and expertise in broadband in rural areas and the East of England region. The membership has been consulted during the production of this response.

EETDT is happy for this response to be made public.

Further information about EETDT is available from our website :

<http://www.TelematicsEast.org.uk>

Yours sincerely,

Martin Burrage

Director, East of England Telematics Development Trust and a member of EETDT  
Broadband Working Group.

# East of England Telematics Development Trust

**The East of England Telematics Development Trust Response**

**to**

**The Radiocommunications Agency's Consultation:**

**“Broadband Fixed Wireless Access (BFWA) at 28 GHz:**

**proposals to amend new and existing licences and for the**

**next stage of the award process”**

## 1. Executive Summary and Introduction

The Radiocommunications Agency (RA) consultation document issued on 15<sup>th</sup> October 2002 concerns proposals for the further licensing of unused 28 GHz spectrum. We note that these licences have been offered previously as part of two auction-based licensing processes held since November 2000. Twenty seven of the 42 licences are currently still available and no licence at all has been issued in seven of the fourteen UK regions. We believe that radical changes are needed in order to correct this situation. The interests of developing Broadband Britain will not be served by continuing with the existing licensing process and then finding, perhaps, in another year that little progress has been made in the use of this spectrum.

28 GHz can be used to provide broadband services to end users directly. However, there will be licensing, economic and business considerations that limit its use in certain ways, particularly if the proposed arrangements are implemented. The issues to be addressed are:

- The auction-based process has failed to achieve a widespread take up of licences.
- After nearly two years, there has only been a very limited system implementation where licences have been issued.
- The licensing regions that are being used do not align with other regional organisations, such as Regional Development Agencies. This means that it is difficult for the licences to be acquired as part of a regional broadband initiative for supporting a range of projects within a region.
- The “reserve price” based auction approach further hinders the use of the spectrum in parts of a region. It also works against the use of the spectrum in conjunction with other technologies, such as lower cost wireless access using unlicensed spectrum, to provide a workable overall broadband solution for smaller communities. This is because system implementation will be concentrated towards serving larger SME users in the major urban areas in order to achieve a viable business case. Smaller communities will therefore be unlikely to obtain broadband services using this spectrum in the foreseeable future unless changes are made.

An alternative approach for the use of **some** of this spectrum is possible in order to overcome the above deficiencies. This will provide additional impetus to the development of broadband in those areas where market failure means that broadband is not, and will not become, available. The main part of this response proposes that:

- Licence 3, which is still available in eleven regions, is separated from the current licensing arrangements, and is not made available directly to commercial operators via the third round auction process envisaged for early 2003. The other 16 licences could continue to be made available by an auction-based process.
- For Licence 3 only, the licence regions are redrawn so as to coincide with existing regional structures. This is currently still a technically possible option.
- A Regional Licence Holder is appointed for Licence 3 in each of the new regions.
- The Regional Licence Holder provides the spectrum for use in the provision of broadband service to those areas where market failure has led to inadequate broadband availability.

- The Reserve Price/Auction-based licence charge should not be payable. The licence payment would be usage based.

It is acknowledged that these proposals represent a significant change to existing arrangements. However, they provide the best opportunity for the spectrum to be used to bring broadband to areas where it is extremely unlikely that its use would otherwise be possible.

It is our view that the failure in the 28 GHz licensing process is not solely attributable to the downturn in the telecoms market. However, the downturn in the market means that significant changes are needed to the 28 GHz process in order to provide the best conditions for market improvements to be realised.

Whilst the main part of our response therefore addresses Q4, our response also addresses the three specific questions (Qs 1, 2 and 3) asked by the RA in its consultation document.

## **2. Response to Question 1, “purpose of use” clause**

Previously, there was a requirement that the spectrum be used for providing broadband fixed wireless access (BFWA). This meant that the spectrum could not be used, for example, for providing backhaul transmission from 3G wireless base stations. There will be additional transmission requirements for 3G base stations, since 3G is an “always on”, higher bandwidth service that will require more bandwidth to base stations than with existing GSM cellular services. This limitation had the effect of weakening the business case for a deployment – the potential for multiple revenue streams was removed.

We note that responses to earlier consultations on 28 GHz recommended that use restrictions were not applied to the licences. We are therefore pleased to see that the RA intends to remove the “purpose of use” clause and we support that decision. In addition to strengthening the business case, this move could also enhance the possibility of 3G coverage being extended outside the main urban areas. This could be achieved as part of an overall strategy for bringing broadband to those areas.

## **3. Response to Question 2, “use it or lose it” clause**

The “use it or lose it” clause required that a certain level of coverage be achieved within a certain timeframe. This was intended to ensure that the spectrum is used and avoids the possibility that an Operator could buy a licence, not deploy anything, and block its use by others. The coverage was based upon being able to serve a minimum number of users. There was never a requirement for systems to be implemented in all parts of a region. We also note that the licence terms included the opportunity for the Secretary of State to exercise discretion in terminating licences so that Operators with acceptable build activities and plans could retain their licences even if they failed to meet the coverage requirements.

We note that whilst one operator has returned a licence, all other licences have been maintained; the usage condition has been met in some cases and discretion applied in others.

It is our view that the spectrum should be put to use in the earliest possible time frame and we are therefore supportive of “use it or lose it” conditions. We think that it will be some time before spectrum trading will allow unused spectrum to be transferred to others and, even then, there is no guarantee that spectrum will be available through this process.

We also note that had the RA adopted a “beauty contest” approach, with licences available at significantly lower cost, then prospective operators would have submitted plans detailing build milestones and coverage commitments – coverage could have been made a licence requirement. Licences would then have been awarded to those with the best plans and commitments. This could have strengthened use of the spectrum outside the main urban areas.

We therefore do not support removal of the “use it or lose it” clause.

#### **4. Response to Question 3, application of a minimum path length policy**

Whilst we appreciate some of the reasoning behind the RA’s policy on use of spectrum for point-to-point links, we believe that imposition of this condition to 28 GHz licences will lead to an illogical position.

It is our understanding that a licensee will be free to provide 2 Mb/s, or greater bandwidth, point-to-point links of less than 2.5 km for service provision to his own end customers, or for connecting his own network. However, under the RA’s proposal, the licensee will not be free to provide such a link for another operator. We therefore consider that this restriction is illogical and should not be included. We believe that the licensee will wish to ensure that he plans for, and obtains, the most efficient use of the spectrum available and that this aspect of its use should therefore be his responsibility.

#### **5. Response to Question 4, consideration of other licence changes**

##### **5.1 Justification for an alternative licensing process**

It is still proposed that the licences are for specific regions and specific spectrum in those regions. To date, this has meant that it has been practically impossible for someone wanting to provide a sub-regional service to use the spectrum. Also, because the regions do not correspond to existing regional structures it has been difficult for a group of interested parties within a region to come together to acquire a licence. In the East of England Region for example, the region is covered by licences E and F and both these licences include counties not included in the East of England Region. A similar situation exists across most other English regions.

The reserve price has also acted against regional or sub-regional initiatives. There is a minimum licence price and it is being proposed that this is maintained. Typically, the reserve price is £1m or £2m for each licence (spectrum package) in each of the English, Scottish and Welsh regions; Northern Ireland licences have a £100k minimum. The reserve price for the East of England Region is therefore £4m, based on licences E and F. We note that the RA have expressed the view publicly (RA Roadshow, London, 5<sup>th</sup> November 2002) that these licences are “cheap”. We strongly disagree. A sub-regional project serving North Norfolk towns for example would require a £2m licence (licence F) and that would represent a substantial percentage of the cost. A similar situation exists in other parts of the UK.

The timing of the first auction round coincided almost exactly with the start of the very significant decline that has occurred in the Telecommunications Industry. The Industry became more risk averse and unable/unwilling to pay grossly inflated licence prices at auction. Ten of the sixteen licences sold in the first round auction were sold at the reserve price. It should be noted that many operators did not enter the auction process. These facts, together with 26 licences being unsold in the first round, suggest that the spectrum is not cheap and that the reserve price is too high. Many would argue that the Industry is still in recession and that this will work against achieving a successful third round process, particularly if it is similar to rounds one and two.

However, the state of the Telecommunications Industry is not the only factor working against a successful auction process. There are a number of misconceptions about the use of 28GHz and some of these are evident from the RA's marketing of the spectrum. (RA BFWA presentation 18<sup>th</sup> September 2001) These misconceptions centre on system capability and costs and the associated addressable market for BFWA. The result is that the RA may be approaching the licensing process with an incorrect model for the use of 28 GHz spectrum.

The per link costs for 28 GHz systems are of the order of several thousand pounds per user, if planning, equipment and installation costs are all considered. 28 GHz systems are therefore not comparable with the lower cost DSL or cable modem systems. However, 28 GHz systems have the capability to provide significantly higher bandwidth capacity per end user than can be provided by DSL or cable modem. 28 GHz systems are therefore higher capacity but higher cost. It is therefore incorrect to consider that they have the same addressable market as DSL or cable modem. They are not therefore going to be deployed to serve the majority of the ca. 1.1m end users in the SME segment nor can they be used to serve directly customers who are only able or willing to pay £25 to £50 per month for service. However, they are of interest for direct service provision to the higher end of the SME market, potentially 200,000 to 300,000 users across the UK. It is unfortunate that the RA has presented these systems as serving the lower end of the market. As discussed below, 28 GHz systems could be used in conjunction with other lower cost systems to serve that market.

From the above, it is likely that an Operator deploying a 28 GHz system will adopt the following approach provided that a sustainable business case can be achieved:

- The locations of the addressable upper end SME market in an area will be identified
- Base stations will be installed in those places where there is the best opportunity to provide service to the largest numbers of target customers
- The amended licence conditions, giving the ability to provide backhaul, will make service to areas more likely, if that transmission has not already been provided by other means

However, it still remains unlikely that smaller locations in more remote areas will be provided with commercial service using 28 GHz systems because there will be too few larger users. If public sector involvement encouraged provision by others in these areas then, if the provider does not hold a licence, it is uncertain that a licence holder would make spectrum available. Also, if there were no licensee then the licence charge for the region would add an extra burden impacting viability.

If the licensing issue could be solved, then it could be possible to provide a service to these areas in conjunction with other technologies:

- Where appropriate, 28 GHz point to point systems could be used to provide transmission into an area from a core fibre or high capacity microwave network; there could be some cost savings in using 28 GHz point to point as part of a point to multi-point system deployment. It is important to remember that connection to core bandwidth is unlikely to be available in areas with few large users and can be expensive to provide.
- Larger users in the area could be served by direct use of the 28 GHz spectrum for access.
- Small business and residential users could be served by the connection of Wireless LAN systems, using unlicensed spectrum, on to the end of the 28 GHz system. These are lower cost systems and can provide broadband access. Other options, such as use of DSL technology, either directly by BT or through local loop unbundling could also be possible depending on location and cost.

The existing approach is to leave provision of service in these areas entirely to the market if 28 GHz spectrum is being used. The last two years have demonstrated that service is not being provided. Furthermore, no licence has been issued in half the UK regions. It can be argued that this is clear evidence of market failure. There is an alternative approach to making this spectrum available that could resolve these issues.

## **5.2 Alternative approach to spectrum licensing for 28 GHz.**

As indicated above, one of the three spectrum packages is still available across all of Wales, Scotland and Northern Ireland and across most of England, including the great majority of the lower population density areas. This is spectrum Package Three.

**a) It is proposed here that Licence 3 is separated from the intended licensing arrangements, in the eleven regions where it is still available, and is not made available directly to commercial operators via a Round Three auction process.**

The opportunity for new licences to be obtained in regions would only be affected slightly since only two regions have this single licence remaining. One licence would still be available in two regions and two licences would still be available in seven regions.

**b) It is proposed that the licence regions are redrawn for Licence 3 and that the licence is held by a suitable Regional Licence Holder.**

It should be noted that it is not necessary for the existing licensing regions to be maintained, except for those three areas where licence 3 has already been issued. The map can be redrawn to coincide with existing regional structures so that a suitable Regional Licence Holder could be nominated. Coordination requirements to minimise interference would still be required. (Alternatively, the Regional Licence Holder function could be provided centrally by the RA.)

**c) It is proposed that the Regional Licence Holder provides the spectrum for use in the provision of broadband service to those areas where market failure has led to inadequate broadband availability.**

A Public Sector led initiative to provide defined levels of service into broadband-poor areas is envisaged. The 28 GHz spectrum could be used as one element in that service provision. This approach means that smaller areas could be addressed. Furthermore, it would not be necessary for the system provider to be the same in different areas of the same region. This would provide much greater flexibility. The Public Sector initiative could be based upon aggregation of demand.

**d) It is proposed that a Reserve Price licence charge should not be payable.**

Since the spectrum is to be removed from the auction process the concept of a Reserve Price ceases to be relevant. However, when the spectrum is used a licence charge would be payable. It is proposed that a suitable mechanism could be devised in consultation with Industry to enable a technology neutral approach and a “level playing field” with existing licencees.

## **6. Conclusion**

28 GHz spectrum has a potentially important value for bringing broadband services to lower subscriber density areas. This could be done in conjunction with other technologies. Existing and proposed licensing arrangements will not support these initiatives. Alternative arrangements are possible for Licence 3 because that spectrum is largely still available. The proposed changes are needed to realise this opportunity as part of Building Broadband Britain. We urge the Radiocommunications Agency to give serious consideration to our response.