OFFICE OF FAIR TRADING

Completed acquisition by Macquarie European Infrastructure Fund II and Macquarie Communications Infrastructure Group (via Guardian Digital Communications Limited) of Airwave Safety Communications Limited

The OFT's decision on reference under section 22(1) given on 8 August 2007. Full text of decision published 15 August 2007.

Please note that square brackets indicate figures or text which have been deleted or replaced with a range by the OFT or at the request of the parties for reasons of commercial confidentiality or public interest.

PARTIES

1. **Guardian Digital Communications Limited (Guardian)** is a UK company ultimately controlled by MCG,[1] a Macquarie fund listed on the Australian Stock Exchange and MEIF II,[2] a Macquarie unlisted investment fund. MCG owns a 60.1 per cent stake in Macquarie UK Broadcast Holdings Limited which in turn wholly owns **Arqiva Limited** (**Arqiva**) and **National Grid Wireless Group** (**NGW**).[3] Arqiva and NGW are the only two companies in the Macquarie group portfolio of companies which are active in similar sectors to the acquired company in the United Kingdom (UK).

2. **Airwave Safety Communications Limited** [Endnote 1] (Airwave) provides communications networks and services to the emergency services and other public service users. Airwave owns the only private mobile radio (PMR) network in Great Britain that is based on nationwide digital terrestrial trunk radio (TETRA) technology. Its 2006 UK turnover was £234 million.

[1] Macquarie Communications Infrastructure Group.
[2] Macquarie European Infrastructure Fund II.

TRANSACTION

3. Guardian completed the acquisition of Airwave on 20 April 2007. The statutory deadline expires on 19 August 2007 and the administrative deadline expired on 11 July 2007.

JURISDICTION

4. As a result of this transaction, Guardian and Airwave have ceased to be distinct within the meaning of section 26(1) of the Act. The UK turnover of Airwave exceeded £70 million for the 2006 financial year. The turnover test pursuant to Section 23(1) (b) of the Enterprise Act 2002 (the Act) is therefore satisfied. The OFT believes therefore that a relevant merger situation under Section 23(1) of the Act has been created.

RELEVANT MARKETS

5. Arqiva and NGW (collectively referred to as 'Macquarie' for the purpose of this decision) and Airwave overlap in four mobile telecommunications activities: (i) network access; (ii) managed services; (iii) mobile data services; and, (iv) site rental. The impact of the merger on competition in respect of each of these activities is considered below.

Network Access

6. Macquarie and Airwave overlap in the provision of access to private communications networks[4] in particular by providing PMR services for use for mobile secure communications.[5]

7. PMR systems include two layers: the infrastructure (including masts and sometimes control centres) and air-time capacity (spectrum). It may also include the provision of related maintenance and integration services (managed services).[6]

---

[3] The acquisition by MUKBV of NGW was completed on 2 April 2007. [Endnote 2]

[4] This refers to access restricted to a discrete group of users.

[5] PMR communications are used by emergency services, public and private security services, transport industry and others who require mobile secure communications.

[6] Section II (paragraphs 24-30 below) deals with managed services.

8. All network access customers who responded to the OFT questionnaire told us that there are no adequate substitutes for PMR services as the features[7] and characteristics PMR systems provide to mobile secure communications cannot (at present) be replicated by other communication systems such as cellular networks or Personal Digital Assistance (PDA) Communications.

9. The Office of Communications (Ofcom) told the OFT that, in principle, when considering network access, the market may be defined as narrowly as the spectrum band in which the parties hold spectrum.

10. Macquarie and Airwave hold adjacent spectrum within a specific band (380 MHz to 430 MHz) that is internationally harmonised and configured for the provision of TETRA services. Other spectrum – for example in the 450 MHz to 470 MHz band may be used for the provision of TETRA services, but this has not been configured in the UK for the optimum use of TETRA services.

11. TETRA technology is particularly suitable for the delivery of PMR services (particularly digital PMR) and while such services may be provided through a range of alternative frequencies and technologies,[8] it may be that a narrower market for 'digital PMR services' could be defined as the attributes 'digital PMR systems' provide are of particular importance to some groups of customers such as the emergency services. Digital PMR services allow for more efficient use of the available frequencies and enhanced encryption, providing superior quality, reliability and security for voice and data services as compared to analogue PMR services.

12. The spectrum for which Airwave holds the licence are bands to be used solely for the emergency services and these bands are not available for general commercial use. Airwave can provide its spectrum to blue light customers (emergency services[9]) and sharer organisations.[10] Because of

[7] Among other features, PMR services provide resilient secured point-to-many and/or many-to-many communications (as opposed to one-to-one communications).

[8] Such as TETRAPOL, MPT1327 and TETRA.

[9] Including police forces and other security services, fire brigades and ambulance services throughout the country.

[10] The list of sharer organisations is controlled and managed by Ofcom and includes those organisations who have a specific need to communication with a blue light service. It includes around 200 organisations such as Coastguard Services, Donor Organ and Transplant Team

these differences in the licence conditions, the assessment of this merger in regard to network access is segmented by type of customer (that is blue light customers, sharer organisations and other commercial customers).

13. Macquarie submitted that PMR is only a part of the wider relevant frame of reference comprising the provision of mobile information communications technology (ICT) for business use in Great Britain, or that at least the frame of reference needs to include suppliers of both analogue and digital PMR services. It contends that customers requiring mobile communication network access have a wide range of choices and options available including a range of technologies (from public cellular communications network to PDA systems) which may be more or less suitable depending on individual customer needs.

Digital PMR versus analogue PMR

14. All network access customers who responded to the OFT request for information said that other communication services are not adequate substitutes for PMR services. This is because PMR services can offer features that no other mobile communication services can offer (such as many-to-many communication systems. Based on the available evidence, the OFT has considered it appropriate to examine PMR services separately from other wireless communication services.

15. As noted above, PMR services can use analogue or digital technologies. There are arguments in favour of assessing digital PMR services together with analogue PMR services, for example, anecdotal evidence from a third party about convincing two customers not to switch to digital PMR services but to stay with analogue. There are also arguments in favour of treating digital and analogue PMR services separately, for example, customer comments about the expense involved in switching to and maintaining a digital service. The inconclusive evidence partly arises because there is currently no widely available, unrestricted digital PMR service in Great Britain and so there were very few examples given to the OFT of customers switching from digital to analogue PMR services.

Transport, Environmental Agency Enforcement Officers, Network Rail (Incident Management Group), RSPCA Inspectors, etc.

16. It is not necessary to conclude on the product frame of reference in this case; the OFT has taken a cautious approach considering the narrowest reasonable frame of reference, assessing the merger on the basis of digital PMR services as a separate frame of reference.

Geographic scope

17. The parties submitted that on the supply side spectrum is licensed on either a national basis or some (sub-national) territorial basis – sometimes very localised such as an airport, race track or shopping centre. On the demand side, some customers require national coverage while others require a lesser geographic coverage.

18. It is not necessary to conclude on the geographic scope as the competition assessment is the same regardless of whether the merger is examined at a national or sub-national basis. We have assessed this merger on a Great Britain wide basis as neither party's licence extends to Northern Ireland.[Endnote 3]

Horizontal issues

19. Airwave is currently the only nationally licensed provider of a national digital PMR TETRA service. However, as noted above, Airwave is restricted by its licence to offer these services only to a restricted group of organisations (blue-light customers and sharer organisations) and not to other commercial PMR customers. The impact of the merger on competition in respect of each customer group is considered below.

20. Macquarie does not compete with Airwave in the provision of PMR services to blue-light customers. Airwave's former parent company, British Telecommunications was awarded the NPIA (formerly PITO)[11] Contract in 2000. The object of this Contract is the provision of PMR services to police forces under the NPIA framework. Although Macquarie (via Arqiva) has now some spectrum (not sufficient to provide a similar nationwide network), the

[11] PITO stands for Police Information Technology Organisation and it is a government led agency responsible for the procurement of a new national radio network using TETRA technology which could then be the norm to harmonize the communication systems of all security services and Sharer Organisations in GB. PITO has now been renamed National Police Information Agency (NPIA) [Endnote 4] retaining similar responsibilities for the administration and management of that contract. Individual organisations (both blue light and sharer organisations)

NPIA Contract means that Macquarie cannot realistically compete with Airwave for blue light customers until around 2016. It would be too speculative for the OFT to attempt to assess the effect of the merger on competition at that time, in particular given the dynamic nature of this sector.

21. Sharer organisations can contract some of their PMR TETRA services under the framework of the NPIA Contract. Airwave does not have an obligation to provide PMR services to any of these organisations. It has the discretion to accept a request from one of these potential customers. Also, the nature of the regulatory framework with respect to the list of sharer organisations means that Airwave may only be allowed to provide some of the PMR services the sharer organisations require: in brief, those services which require communication with the blue light customers.

22. The merger does not change the current situation. Airwave's licence to operate that TETRA network and accreditation from the security services may be withdrawn if Airwave uses the network for any other purpose. Macquarie, on the other hand, cannot realistically be seen as a competitor for sharer organisations before the merger as, although it has some spectrum, it is considered not to be sufficient to provide an equivalent service to Airwave's for sharer organisations (whereas Macquarie (via Arqiva) controls 2x2 MHz, Airwaves controls 2x4.8 MHz); moreover, the economies of scale involved in setting up the network infrastructure makes it extremely unlikely that Macquarie was, prior to the merger, a potential competitor.

23. Similarly, Airwave does not provide network access to any other 'commercial customers' (given its licence restrictions and security accreditations). Prior to the Macquarie (via Arqiva) acquiring spectrum for the provision of TETRA (digital) PMR services by competitive auction organised by Ofcom in 2006, Ofcom granted licences to use spectrum in the relevant bands on ad-hoc basis for those communication operators which required some spectrum in the relevant bands (including optimum spectrum to be used by digital PMR services. In the narrowest frame of reference (if it were accepted that 'digital PMR services' form a separate frame of reference) Macquarie's spectrum monopoly for commercial customers is not merger-related. Customer detriment does not result from this merger. Thus,

---

contract directly with Airwave but the terms and conditions are set out in the framework agreement set out in the NPIA Contract.

'commercial customers' have not suffered a lessening of competition as a result of this merger with respect to network access to PMR services since they would not have access to Airwave's TETRA network in the first place.

Managed services

24. Managed services comprise a very wide range of services. Third parties agreed with the broad definition Macquarie suggested which included at least 19 different services.[12] Out of those 19 categories, Macquarie is active in 16 of them, overlapping in all eight categories where Airwave operates. Other providers compete with the merged entity in different bundles of services.

25. There is no clear boundary around which a product market definition could be determined as each customer may require a tailor-made solution including some or all of those services. Also from the supply side, there are many different suppliers providing a varied selection of those managed services.

26. The outcome of this case is the same regardless whether all 19 categories suggested by the parties constitute the market for managed services or if a narrower selection of services is taken into account to. There is therefore no need to conclude on the scope of the product market for managed services.

27. On the geographic scope, as is the case for network access, some customers require managed services on a local or regional basis while others require it on a national (or at least Great Britain wide) basis. The main suppliers operate on a national basis. While it is not necessary to conclude on the geographic market, the OFT has assessed managed services on a Great Britain wide basis.

28. Airwave only provides some managed services related to its own TETRA-based network to blue light customers and sharer organisations so any overlap will be within that narrow market segment. Within sharer

[12] Services in which Arqiva and Airwave overlap: event support, fault management, incident management, field maintenance, outsource network operations, disaster recovery, control room services, call data record*.* Other managed services, provided by one of the parties, include*:* fleet mapping, terminal supply, terminal configuration, terminal programming, terminal management, asset management, decommissioning, acoustic trauma measurement, vehicle installations, EMC testing, and other ICT services.

organisations, the merged entity's combined market share is estimated to be below five per cent of managed services to all PMR customers in the UK[13] by number of handsets.

29. Regarding blue light customers, the evidence the OFT has been presented with shows that customers have tailor-made requests for managed services. Many of those customers have historically self-supplied many of these services. The evidence suggests there is no link between the provision of network access and managed services (for example Airwave is a relatively small player in managed services, but a significant player in the provision of network access). There are numerous alternative providers, including systems integrators, specialist managed service providers and other IT or communication providers who can by themselves or, more usually, as part of a consortium provide the varied set of managed services each customer may require.

30. The OFT did not receive any concerns from any customers. The competitors' concerns on managed services the OFT received were of a vertical nature and are assessed below.[14] Thus, on the basis of the evidence before it, the OFT does not believe that the merger lessens competition within the market for managed services.

Mobile data solutions

31. The parties submitted that the relevant product market is very wide and should include all wireless mobile data services including cellular networks (with or without encryption). The parties told the OFT that the key components of mobile data services are hardware used for sending and receiving data (for example, PDAs and vehicle mounted mobile data terminals), gateway access to back end communications systems, databases, terminal management and applications (which might include despatch, database access, geo-finding and route mapping).

32. Some customers may require some specific expertise (for example in TETRA-based solutions) to provide mobile data services. However, the parties submitted that TETRA is used for low bandwidth mission critical services while demand is growing for higher bandwidth services. This

[13] The parties submitted data on a UK basis but this makes no significant difference to our assessment of this issue.

indicates that there may be a narrow product market due to the lack of demand side substitution; supply side substitution may also be limited because substitution throughout the radio spectrum is unlikely to occur in a timely manner because any new entrant will require a licence and spectrum is very limited.

33. Nevertheless, it is not necessary to conclude on the product market definition since the competition assessment is unaffected by market definition.

34. On geographic scope, the parties submitted that many mobile data communications systems customers are subject to European procurement rules and, from the supply side, competition for these customers takes place on at least an EEA wide basis. Therefore, the geographic market is at least EEA wide. The outcome of this case is not dependent on the geographic market definition in this segment. Therefore, without prejudice to the possibility that the geographic market is wider, the OFT has examined this merger on a Great Britain wide basis because this is the geographic area in which the parties are active.

35. This is a very dynamic market, growing substantially and with many alternative providers ranging from niche companies targeting blue light customers to large systems integrators. One customer listed around 20 alternative providers.

36. If a customer requires TETRA technology expertise, it is feasible to form a consortium which can partner with a firm providing TETRA expertise in order to offer mobile data solutions. Even for these customers, it does not seem that it is necessary to be linked to a TETRA network provider. For example, the Metropolitan Police used Arqiva (pre-merger) for its mobile data solutions. Thus, the merger does not raise any horizontal concerns in regard to mobile data solutions.

Site rental

37. Sites and masts form a key part of a network infrastructure and are used by all wireless communication operators (WCOs) and mobile network operators (MNOs) to install and carry their transmission equipment.

---

[14] Paragraphs 48-51 below.

38. In Macquarie UK Broadcast Ventures / NGW,[15] the OFT concluded that a further segmentation is required. The provision of site access to MNOs and the provision to other WCOs have different competitive constraints and technical requirements and therefore should be assessed separately.

39. It is not necessary to conclude on the product market in this case because regardless which reasonable market definition is adopted, the outcome of the case does not change. For consistency, the OFT has followed the same market definition as that used in Macquarie UK Broadcast Ventures / NGW for its analysis.

40. On geographic scope, in Macquarie UK Broadcast Ventures / NGW the OFT concluded that the market was national with some elements of local competition. The national element is evidenced in particular by the national umbrella agreements and national pricing that (portfolio) site owners such as Arqiva and NGW conclude with the users. It is not necessary to conclude on the geographic market in this case although we have analysed the case on a Great Britain wide basis.

Horizontal issues

41. Airwave operates from 3,503 sites of which 2,142 (61 per cent) are owned by a third party. Of the remaining 1,361 sites Airwave has tenants on 51 of them. Airwave explained that its contractual obligations with blue light customers require sites in locations where it is difficult to attract tenants because of their remote locations. In the most sought-after locations (for example populated areas), Airwave historically used O2 sites or sites from other third parties. Therefore, Airwave's owned sites do not substantially overlap with those Macquarie owns.

42. Before its acquisition of NGW in April 2007, Arqiva owned 1,246 sites in Great Britain. It now owns approximately 6,320 sites. This represents around 10 per cent of active sites for wireless communications. Airwave holds around two per cent of the active wireless sites in the UK (including sites suitable for cellular communication networks). On this basis, no horizontal concerns arise as a result of this merger.

---

[15] Completed acquisition by Macquarie UK Broadcast Ventures Limited of National Grid Wireless group (NGW).

43. Two third parties (one competitor in site rental and one wireless communication operator) were concerned. The theory of harm put to the OFT was that as the demand for site access increases (given the dynamics of this market) MNOs and WCOs will find it more difficult to obtain site access quickly. This would result in a slow down of innovation and in the implementation of new mobile technologies, thereby reducing competitive choices for consumers.

44. This theory of harm is based on the assumption that the geographic coverage of each of Airwave and Macquarie's networks (including NGW and Arqiva networks) are the only national or near-national in GB. These third parties contended that smaller competitors in site access offer site portfolios in specific geographic areas and therefore impose limited competitive constraint. In addition, one of those third parties submitted that, after the NGW merger, the only remaining credible (potential) alternative offering nationwide site access was Airwave.

45. These concerned third parties considered that the merged entity's portfolio of sites, its national presence and the technical advantage of having in place a nationwide 'backhaul'[16] network has placed Macquarie/Airwave in a unique position to control without any competitive constraints the access to the required sites for any other MNOs or WCOs which could provide a new platform or technology.

46. As mentioned above, Airwave has tenants on only 51 of its 1,361 sites (less than four per cent). As noted above, this is because it is difficult to attract tenants to the sites in question. The parties submitted that Airwave's sites are unattractive alternatives (that is, Airwave's sites may not be close substitutes for Macquarie's sites as Airwave's sites are mainly located in sparsely populated rural areas). Thus, on the basis of the evidence before the OFT, it has concluded that the merger does not result in a lessening of competition within the market for site rental for MNOs and or market for site rental for WCOs.

47. Also, Airwave noted that some sites are not suitable for third party access due to security reasons. In this regard, some third parties noted that

[16] Backhaul refers to the 'site-to-core-network' connection between a site and a telecommunication operator's core network

Airwave's sites are not as widely available as other third parties' sites through the usual marketing channels (such as websites advertising sites). The merger has not changed this situation.

VERTICAL ISSUES

48. Four third parties were concerned that the merged entity could foreclose or raise rivals' costs in the downstream segments of managed services and/or could restrict innovation in the upstream sector for the provision of communication equipment (including terminals and handsets). However, neither Macquarie nor Airwave is active in the production of communication equipment, so it is not clear why they would have an incentive to restrict innovation in this sector.

49. On the possible loss of competition in the downstream market for managed services, three competitors in that market told the OFT that the merged entity has the incentive and ability to foreclose their access or raise their costs as it now controls the spectrum and the infrastructure for digital TETRA PMR services. The theory of harm being that the merged entity could force the customers to bundle network access (including spectrum) and managed services thereby preventing those competitors from obtaining any network access or air-time capacity.

50. As discussed above, the parties are not close competitors in network access services. Therefore, the merger has not changed the parties' ability to tie or bundle downstream services (such as managed services) to the network access. That is, pre-merger Airwave could have tried to tie or bundle downstream services to blue light customers or sharer organisations. The merger does not affect this. Moreover, any attempt to tie or bundle in most of Airwave's network access contracts will not be possible until the termination of the current live contracts lapse and most of them are long term contracts. Similarly, the fact that Airwave does not, and cannot, supply network access services to non-blue light, non-sharer organisations means that the merger does not change Macquarie's incentives or ability to tie or bundle downstream services (assuming Macquarie offers network access services and given it is unlikely Macquarie will compete for blue light or sharer organisation customers). The OFT considers that on the evidence before it, this theory of harm can be dismissed.

51. A competing provider of mobile data solutions raised vertical concerns related to the competitive edge the merged entity gained by becoming a

vertically integrated alternative for blue light customers and sharer organisations. In order for this vertical foreclosure theory of harm to work, it would be necessary for Macquarie/Airwave to have market power at any level of the supply chain. As noted in the horizontal sections above, this is not the case. In addition, as noted in the section on managed services,[17] the OFT believes that the geographic scope may be wider than the UK, (possibly EEA-wide); this means that the pool of suppliers for a UK's provider of mobile data solutions is likely to be wider than the UK. However, the concerns this third party raised referred to its domestic market only. Therefore, on the basis of the evidence before the OFT, the merger does not lessen competition by foreclosing competing providers of mobile data solutions.

THIRD PARTY VIEWS

52. Third parties were generally unconcerned. The concerns some third parties raised have been addressed above.

OFCOM VIEWS

53. Ofcom suggested that the OFT should assess the impact of the merger with respect to any potential for the merged entity to tie or bundle services in such a way so as to foreclose competition in the downstream market for managed services and the impact of the merger with respect to mobile data services. These issues have been addressed above.

ASSESSMENT

54. The parties overlap in four mobile telecommunications activities: (i) network access; (ii) managed services; (iii) mobile data solutions; and (iv) site rental.

55. On network access, the parties are not close competitors. Airwave is unable to provide network access to 'other customers' and although Macquarie (Arqiva) is yet to use its spectrum, the counterfactual is that it is most unlikely that it would have either the incentive or ability to provide PMR services to blue light customers or sharer organisations in a significant way. No horizontal issues arise as a result of the merger in regard to network access.

---

[17] Paragraphs 24-29 above.

56. The merger does not give rise to horizontal concerns in regard to managed services or any competition concerns in regard to mobile data solutions. The evidence before the OFT shows that post-merger many alternative providers remain to provide sufficient competitive constraint in both segments on the merged entity (including the option of self-supply in managed services).

57. For site rental a number of third parties raised concerns about this merger given that it has taken place a few days after Macquarie UK Broadcast Ventures acquired NGW. However, based on the available evidence the OFT considers that Airwave and Macquarie / NGW are not particularly close competitors in regard to site access and therefore the merger does not lead to a substantial lessening of competition. In addition, the parties hold low shares of supply of sites and barriers to entry and expansion are also relatively low.

58. Since the merger does not create any market power in any market related to sites, or change the incentives of the parties in any market in which they are active, no vertical issues arise as a result of the merger with respect to site access.

59. Third party concerns were also raised in regard to the merger creating the ability and / or incentive for the merged entity to use its market power in the network access market to foreclose competitors in the downstream managed services market. Since the parties are not close competitors in network access services, therefore, the merger has not changed the parties' incentive or ability to tie or bundle downstream services (such as managed services) to the network access. Further, Airwave did not operate such a strategy before the merger even though it supplies network access services to almost all blue light customers and sharer organisations. Indeed, two of the largest managed service providers do not supply any network access.

DECISION

60. This merger will therefore **not be referred** to the Competition Commission under section 22(1) of the Act.

ENDNOTES

1. Macquarie has told the OFT that since this merger was completed, the name of the company has changed to Airwave Solutions Limited

2. Correction – The acquisition by MUKBV of NGW was completed on 3 April 2007 and not on 2 April 2007

3. Correction – Airwave's licence does not extend to Northern Ireland. Arqiva's licensed spectrum (in the band 380MHz to 430MHz) extends to the whole of the UK. This does not change the outcome of the competition assessment of this decision

4. Correction – National Policing Improvement Agency (NPIA)