Regional Mobile Infrastructure Inquiry

Consultation Paper

1 July 2022

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1. About this inquiry

On 25 March 2022, the former Minister for Communications, Urban Infrastructure, Cities and the Arts directed the Australian Competition and Consumer Commission (ACCC) to hold a public inquiry under Division 3 of Part 25 of the *Telecommunications Act 1997* (Telco Act) into:

- access to towers and associated passive and active infrastructure provided by telecommunications and other infrastructure providers in regional, rural, remote and peri-urban areas within Australia, that can be used in the supply of mobile telecommunications and other radiocommunications services, and

- the feasibility of temporary mobile roaming services to be provided during natural disasters and other such emergencies.

This consultation paper formally commences the inquiry.

Structure of this paper

This consultation paper is structured as follows:

- Section 2 outlines the requirements of the Minister's direction

- Section 3 provides relevant background on regional mobile issues and recent developments in the telecommunications tower market

- Section 4 outlines the telecommunications access regime

- Section 5 addresses specific matters to be considered under the Minister's direction

- Section 6 notes information gathering processes relevant to this inquiry

- Section 7 outlines the next steps in the inquiry process.

Timetable for the inquiry

The ACCC requests written submissions by **5 August 2022**. After considering submissions the ACCC will engage further with stakeholders and seek additional information as required.

The ACCC proposes to publish a draft report on or before 14 April 2023. A final report is due within 12 months from the commencement of the inquiry (by 30 June 2023).

Making submissions

The ACCC encourages industry participants, stakeholders and the general public to make submissions on the issues set out in this consultation paper. We have set out questions in this paper as a guide for those wishing to make a submission. This is a guide only and the ACCC will consider all issues raised in submissions that are relevant to the inquiry. The ACCC prefers to receive submissions in electronic form, either in PDF or Microsoft Word format.

The ACCC considers that, for the consultation process to be effective, it is necessary for the consultation process to be as public and transparent as possible. This is to enable effective participation by all stakeholders. Public consultation is particularly important in this regard given the importance of the matters to regional mobile coverage and the range of stakeholders potentially impacted, including Australian consumers of mobile services.

To foster an informed and consultative process, all submissions will be considered as public submissions and will be posted on the ACCC's website.

If interested parties wish to make any claim of confidentiality over material provided to the ACCC during this consultation, they should follow the process below:

1. Please submit two versions of the submission:

    a) a **public** submission that can be published on the ACCC's website, in which all confidential material has been removed and replaced with 'c-i-c'. Please ensure that redacted information is not searchable or otherwise able to be viewed.

    b) a **confidential** version that clearly identifies the information over which confidentiality is claimed by bookending the confidential material with a marking of 'c-i-c'. Please also highlight for ease of reference the material over which confidentiality is claimed.

2. Information over which a party claims confidentiality must be limited to ensure full consultation on all relevant material.

3. Please provide a supporting submission that specifically substantiates the confidentiality claim for each item of information over which confidentiality is claimed. Confidentiality claims need to detail why the information is competitively sensitive or otherwise confidential, or why disclosure of the information would be likely to cause significant commercial harm to the person to whom the information is confidential. 'Blanket' claims of confidentiality will not be accepted. The ACCC will notify parties of any additional information required to assess a confidentiality claim.

4. Where the ACCC proposes to publish the information the subject of a confidentiality claim, it will provide a right to be heard and to amend or withdraw the information before proceeding to publication with redactions removed.

5. Where the ACCC proposes to not publish information the subject of a confidentiality claim and publishes a redacted submission, it may reconsider that claim at a future date if it becomes evident that the redacted information is important to the ACCC's consultation on the inquiry and needs to be tested with third parties. The ACCC will notify with the relevant party and engage with them in relation to how this information can be disclosed.

The [ACCC-AER information policy: the collection, use and disclosure of information](#) sets out the general policy of the ACCC and the Australian Energy Regulator (AER) on the collection, use and disclosure of information.

Submissions should be emailed to:

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2. Introduction

Achieving better mobile connectivity in regional Australia requires significant ongoing investment in mobile infrastructure. However, the commercial incentives for investing in regional Australia, particularly in areas of low population and undeveloped geographical areas, remain challenging.

There are also limited incentives outside government subsidisation to improve either reliability or depth of coverage in many areas as the costs of doing so will likely far outweigh the potential commercial returns from that investment. In rural, regional and remote areas the cost of building telecommunications infrastructure, and particularly mobile networks, are high (particularly on a per population basis) and the commercial returns from sparsely populated areas are generally low. This means that the commercial case for extending networks is generally a difficult one to make.

The recent report by the 2021 Regional Telecommunication Independent Review Committee (RTIRC), *2021 Regional Telecommunications Review – a step change in demand*[1], made a number of findings about mobile networks and services. Improvements in mobile coverage, capacity and competition were strong themes in submissions to the review and in its findings.

The report highlighted the continuing importance of mobile services in rural, regional and remote areas, and during natural disasters and emergencies. It considered, amongst other things, ways of improving coverage and competition in mobile services, particularly through shared network access. It recommended (recommendation 2) the Government continue to support the provision of new mobile coverage through investments that address coverage, capacity and competition issues as well as considering funding vehicles that leverage private sector co-investment. It also recommended (recommendation 10) that preference is given to government funded mobile infrastructure providing shared network access, including a particular focus in the design of the Mobile Black Spot Program towards neutral host solutions.

The RTIRC also recommended (recommendation 9) that the government undertake a feasibility study to consider the capability for mobile roaming to be deployed in emergency circumstances.

2.1. Ministerial Direction

The previous Minister directed[2] the ACCC to hold a public inquiry under Division 3 of Part 25 of the Telco Act[3] into:

- access to towers[4] and associated passive and active infrastructure provided by telecommunications and other infrastructure providers in regional, rural, remote and peri-urban areas within Australia, that can be used in the supply of mobile telecommunications and other radiocommunications services, and

- the feasibility of temporary mobile roaming services to be provided during natural disasters and other such emergencies.

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[1] https://www.infrastructure.gov.au/department/media/publications/2021-regional-telecommunications-review-step-change-demand

[2] The Ministerial Direction is available at the ACCC website.

[3] Specifically, section 496

[4] Towers also include NBN towers, radio and television broadcasting towers and other suitable towers or similar structure that could be used to improve mobile coverage

The inquiry tasks the ACCC to provide evidence-based findings that can clarify technical and market issues and contribute to potential policy and program development to improve mobile coverage, capacity and competition. We will focus on the real-world operating environment for tower access and associated facilities to inform and support government policy decisions to enhance the provision of regional mobile services.

The reference to 'telecommunications and other infrastructure providers' includes specialist tower operators, neutral host operators, telecommunications carriers and the owners of other suitable infrastructure including utilities and emergency service organisations.

The ACCC must have regard to:

- the costs of providing towers and associated passive and active infrastructure that can be used by third party telecommunications providers and others to supply mobile telecommunications and other radiocommunications services

- the costs of accessing land to provide towers and associated infrastructure

- the existing commercial and other fee arrangements under which third party telecommunications providers and other likely users can access the towers and associated infrastructure, including the considerations that contribute to establishing such fee arrangements (such as the costs of providing such access, as distinguished from the costs of providing the towers and associated infrastructure), and

- the effectiveness of current commercial and regulatory arrangements in enabling third party telecommunications providers and other likely users to access the towers and associated infrastructure.

The direction also requires the ACCC to have regard to the matters (including the impact of costs) that the providers of towers and associated infrastructure consider in deciding to provide the towers and associated infrastructure and provide access to towers and infrastructure.

The ACCC is also required to report on how these matters may affect the provision of greater mobile coverage.

The Minister specifically noted that this inquiry is not an inquiry into domestic mobile roaming generally, nor is it a regulatory review or inquiry that the ACCC might conduct under the facilities access regime in Part 5 of Schedule 1 of the *Telecommunications Act 1997* or an access inquiry under Part XIC of the *Competition and Consumer Act 2010 (CCA)*.

The Direction also specifically requires the ACCC to consider and report on:

- the implications (if any) for the provision of access to towers and associated infrastructure of mobile carriers divesting their tower and associated infrastructure businesses including:
    - the scope of access offered
    - the terms and conditions of access
    - the commercial and other fee arrangements for access, and
    - the kinds of considerations that contribute to establishing these commercial and other fee arrangements for access

- the feasibility of providing temporary mobile roaming services during natural disasters and other such emergencies including:
    - the technical feasibility of providing such services
    - the support systems and business processes required, and

- the associated time and costs expected in providing these services.

The ACCC must consult with a range of persons, bodies and agencies including:

- providers of mobile towers and associated infrastructure namely specialist telecommunications tower operators, neutral host operators, telecommunications carriers, owners of other suitable infrastructure, utilities and emergency service organisations.

- providers of other infrastructure that could similarly be used in supplying mobile telecommunications and other radio communications services such as electricity and other utility service providers, the NBN and dedicated emergency services networks

- likely users of the towers and associated infrastructure including mobile network operators (MNOs), communication service providers, businesses, emergency service organisations, and

- members of the community that may be interested in improvements in mobile coverage and/or temporary mobile roaming services to be provided during natural disasters and other such emergencies including mobile phone users, consumer organisations, business organisations and other interested parties.

The ACCC is required to report to the Minister on its findings within 12 months from the commencement of the inquiry.

3. Background

3.1. Regional Mobile Issues

The availability and adequacy of mobile coverage has been a longstanding issue for many Australians, particularly those living in rural, regional and remote Australia. It has also been a focus of various RTIRC inquiries.

In 2017, the ACCC concluded an inquiry into whether to declare a wholesale domestic mobile roaming service (mobile roaming service). The ACCC was not satisfied that declaration would promote the long-term interests of end-users and did not declare a mobile roaming service.[5]

During the inquiry, the ACCC heard from many regional Australians concerned about inadequate mobile coverage where they live and work. Many considered that declaring a mobile service would bring substantial benefits including both increased coverage and choice. On the other hand, others were concerned that a decision to declare mobile roaming would result in less future investment in mobile networks, particularly in regional areas where the return on investment was likely to be low. Over time, this could degrade the quality of existing networks. However, most pointed to the substantial public and economic benefits of further investment in infrastructure in regional areas for the expansion of mobile networks.

The ACCC also notes the work done by state and local government departments, agencies and development organisations to improve mobile coverage. They have been significant contributors to co-funding arrangements and play a key role in identifying initiatives to improve mobile coverage in regional areas.

The ACCC considered there was scope to improve the outcomes for regional Australians' mobile services using policy and regulatory measures. In our paper, *Measures to address regional mobile issues*[6], the ACCC canvassed several measures which could improve outcomes for regional mobile consumers, including measures to reduce the costs of deploying and improving mobile networks.

One of the key outcomes of this inquiry is to provide the government with a better understanding of how costs affect tower access fees and broader decisions to invest in towers and associated telecommunications infrastructure. The inquiry will also consider measures that could improve mobile coverage.

3.2. Regional Telecommunications Independent Review Committee

Every three years the RTIRC is appointed to conduct a review into telecommunications services in regional, rural and remote parts of Australia. Committee reports are important in setting the regional communications policy agenda in the following years.

The RTIRC report on the 2021 Regional Telecommunications Review made a number of findings about mobile networks and services in regional, rural, remote and peri-urban Australia. It highlighted the continuing importance of mobile services including their use during natural disasters.

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[5] ACCC, Domestic Mobile Roaming Declaration Inquiry 2016. Final report available at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/domestic-mobile-roaming-declaration-inquiry-2016/final-report

[6] See: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/domestic-mobile-roaming-declaration-inquiry-2016/regional-mobile-issues-paper

The Committee recommended, amongst other things, that preference is given to government funded mobile infrastructure providing shared network access. This included a particular focus on:

- the design of the Mobile Black Spot Program towards neutral host solutions and innovative funding models to encourage participation, and

- that the government undertake a feasibility study to consider the capability for mobile roaming to be deployed in emergency circumstances.

These recommendations are aligned with suggestions the ACCC made in its submission[7] to the review including how co-contribution programs could be better designed to promote increased coverage and promote the efficient use of infrastructure. The ACCC also noted how limited and well-defined circumstances, such as during a natural disaster or an emergency, mobile roaming might provide an important safety measure that would not impact the overall competitive dynamics in the market.

The report also considered ways of improving mobile coverage and competition such as shared network access. It also considered the conditions under which MNOs gain access to the necessary inputs from the owners of tower infrastructure. It recommended that the government continue to support the provision of new mobile coverage with investments that address coverage, capacity and competition issues and consider funding vehicles which leverage private sector co-investment (recommendation 2).

The RTIRC inquiry also recommended that the government undertake a feasibility study to consider the capability for mobile roaming to be deployed in emergency circumstances (recommendation 9). It noted that mobile roaming during emergencies could assist members of the public to contact emergency or rescue organisations, or each other, during natural disasters or emergency situations if they are in an area where their own mobile provider does not have coverage. While mobile phones in Australia can access emergency numbers (e.g. 000) via other providers' networks, where other numbers are concerned a mobile phone operating on one carrier's network is restricted from accessing another carrier's network.

3.3. Mobile Black Spots Program

The ACCC's submission to the 2021 RTIRC Inquiry noted that achieving better connectivity in regional Australia requires significant ongoing investment in infrastructure. However, the commercial incentives for investing in regional Australia, particularly in areas of low population and undeveloped geographical areas, remain challenging.

For MNOs, the competitive advantage derived from having the largest population coverage has provided an incentive for investment in regional areas. Many consumers, particularly those in regional areas, place value on having wide coverage. However, commercial incentives to extend coverage or improve depth of coverage become increasingly marginal in more regional and remote areas. There are also limited incentives outside government subsidisation to improve either reliability or depth of coverage in many areas as the costs of doing so will likely far outweigh the potential returns from that investment.

The costs of building networks, both fixed and mobile, are high in rural, regional and remote areas and returns are generally low. This means that the commercial case for extending networks in sparsely populated areas is generally a difficult one to make absent some form of government subsidy.

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[7] The ACCC submission to the RTIRC review is available at: https://www.infrastructure.gov.au/have-your-say/2021-regional-telecommunications-review

Due to the low returns from building network infrastructure in sparsely populated regional and rural areas, the commercial incentives to roll out network infrastructure in these areas are typically lower than in metropolitan areas. Consequently, co-contribution funding is likely to be a key driver for MNOs when considering expanding mobile coverage. As a result, local, state and federal governments have developed co-contribution programs from time to time to provide subsidies to network operators to roll out infrastructure in these areas. Co-contribution programs, like the federal government's Mobile Black Spot Program, provide incentives to invest in areas where there is either inadequate or no mobile coverage.

The Mobile Black Spot Program has provided funding to build over 1,270 new base stations across Australia under the first 5 rounds and Round 5A, and has committed further funding for Round 6.[8] The early rounds of the Mobile Black Spot Program provided for co-location on funded sites as a means to attract MNOs, other than the funding recipient, to provide services on the funded sites. However, the extent to which the MNOs actually co-locate on Mobile Black Spot Program funded sites has been limited. As at January 2021, only 8 per cent of active mobile sites funded under the Mobile Black Spot Program has more than one MNO operating on them.[9] This means that while the Mobile Black Spot Program has delivered improved mobile coverage in many regional and remote communities, those improvements are largely only accessible by the subscribers of the successful applicant's network, rather than available for all end-users.

The ACCC considers the experience with earlier rounds of the Mobile Black Spot Program suggests that a co-location framework for co-contribution programs is unlikely to be sufficient, on its own, to promote competitive outcomes or maximise choice of providers for regional communities.

The ACCC noted that co-contribution programs could potentially seek to promote competition by adopting other models to co-location such as:

- a neutral host model, where funding is awarded to a non-MNO infrastructure provider who can then provide wholesale services to all MNOs. The neutral host should be provided with incentives to collaborate with as many MNOs as possible. The ACCC notes that Round 5A of the Mobile Black Spot Program awarded funding to Field Solutions Group (FSG) to trial this model.

- an active sharing model, where at least two MNOs collaborate and jointly apply for funding on the basis that they will share both passive and active infrastructure being deployed under the co-contribution program, perhaps through a joint venture. For instance, in New Zealand, the Rural Connectivity Group (RCG) is a joint venture of the three mobile operators to build sites under the Rural Broadband Initiative and the Mobile Black Spot Fund. Sites are acquired, built and operated independently by the RCG and are actively shared by the operators.[10]

In Australia, there are indications that co-contribution programs at both federal and state levels are increasingly considering the neutral host and the active sharing model as a means to improve mobile coverage in regional areas.

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[8] See the Department of Infrastructure, Transport, Regional Development and Communications' (DITRDC) website at https://www.communications.gov.au/what-we-do/phone/mobile-services-and-coverage/mobile-black-spot-program.

[9] Data from the MNOs' reports in accordance with the ACCC's Infrastructure Record Keeping Rules and published in the ACCC's Mobile Infrastructure Report.2021.

[10] See the RCG website at: https://www.thercg.co.nz/.

3.4. Peri-Urban Mobile Program

The government has also committed $16.4m to the Peri-Urban Mobile Program[11], a grants program that provides funding to improve mobile connectivity in bushfire priority areas along the edges of Australia's major cities. This program will complement the Mobile Black Spot Program, providing grant funding to mobile network operators and infrastructure providers to deploy new mobile phone infrastructure to address mobile reception and coverage issues in peri-urban areas.

3.5. Telecommunications tower infrastructure

Telecommunications tower infrastructure can be categorised into three main types:

- macro tower sites – lattice tower and monopole tower structures generally above 20m in height. These often include microwave backhaul equipment in addition to mobile antennas,

- roof-tops and high vantage points (e.g., multi-story buildings, water towers or any high vantage point), and

- small structures such as power and light poles and street furniture.

MNOs historically established telecommunications tower infrastructure. MNOs built many of their own towers and/or sought to co-locate on other MNOs' towers or towers owned by independent towers operators. However, more recently the MNOs have been divesting the tower infrastructure into new entities set up by the MNOs or to independent tower operators.

There are around 12,000 macro towers in Australia and many more sites that utilise roof tops, light poles and other structures (around 27,000).[12] Around seventy-five per cent of macro sites are owned by entities related to vertically integrated MNOs.

3.6. Geographic distribution of mobile sites (by MNO)

Telstra had largest number of sites (10,766) followed by Optus (8,238) and TPG (5,892).[13] Table 1 shows a breakdown of the MNOs' sites by ABS Remoteness Areas from 2018 to 2021. It shows that in the major cities, the number of sites each MNO had was relatively comparable in 2021. However, in areas outside of major cities, Telstra had significantly more sites than either Optus or TPG.

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[11] See https://www.infrastructure.gov.au/media-technology-communications/phone/mobile-services-coverage/peri-urban-mobile-program

[12] ACCC estimate

[13] See ACCC Mobile Infrastructure Report 2021, available at: https://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/regional-mobile-issues/mobile-infrastructure-report-2021

Table 1: Total number of sites by MNO and ABS Remoteness Area – 2021

ABS Remoteness Area	2018	2019	2020	2021
Major Cities of Australia				
Optus	4691	4758	4874	5037
Telstra	4737	4801	5060	5165
TPG	4207	4268	4306	4503
Inner Regional Australia				
Optus	1374	1524	1611	1677
Telstra	1819	2019	2104	2176
TPG	757	813	836	849
Outer Regional Australia				
Optus	959	1074	1124	1145
Telstra	1553	1736	1816	1877
TPG	400	458	465	470
Remote Australia				
Optus	191	209	225	228
Telstra	611	655	667	692
TPG	50	61	60	62
Very Remote Australia				
Optus	120	147	146	151
Telstra	709	761	804	856
TPG	8	8	8	8

Source: ACCC Mobile Infrastructure Report 2021
Note: Passive infrastructure at telecommunications sites in Australia may be owned and/or shared by MNOs or third party (non-MNO) tower operators. MNOs may also collocate on sites. This means the total number of the MNO's mobile sites may not equal the total number of passive infrastructure structures.

3.7. Recent developments in the telecommunications tower market

Over the last year, the MNOs have been divesting their telecommunications tower assets into new tower entities while maintaining various levels of ownership. This has resulted in significant and ongoing structural changes in the telecommunications tower industry.

Amplitel

In November 2020, Telstra announced a legal restructure as part of its T22 strategy. This involved the establishment of a new parent company, Telstra Group Limited and the transfer of assets to four separate legal entities including Amplitel, the owner and operator of Telstra's mobile tower infrastructure.[14]

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[14] Telstra, Proposed legal restructure – Frequently Asked Questions.

On 30 June 2021, a consortium of the Future Fund, the Commonwealth Superannuation Corporation and Sunsuper Superannuation Fund acquired a 49 per cent interest in Amplitel for $2.8 billion.[15]

Amplitel manages over 8,000 physical towers, mast, large pole and antenna mount structures.[16] Telstra has entered into a 15-year extendable lease back agreement with Amplitel to secure ongoing access to the new entity's existing and future towers.[17]

Australian Tower Network

In August 2020 Singtel Telecommunications Limited (Singtel), parent company of Optus Mobile Pty Ltd and Optus Networks, established Australia Tower Network (ATN), a wholly owned subsidiary to operate Optus' passive telecommunications tower infrastructure comprising over 2,300 mobile network towers and sites.[18]

On 1 October 2021, Singtel sold a 70 per cent stake in Australia Tower Network to AustralianSuper for AU$1.9 billion, with Singtel retaining the remaining 30 per cent. Under the terms of the agreement, Singtel has continued access to the sites through long-term leasing arrangements.[19] In April 2022, ATN also acquired independent tower operator Axicom for $3.58bn.[20] This diluted Singtel's share in ATN to 18.55%.

Axicom

Crown Castle Australia first became a tower asset owner in 2000, when it acquired 712 mobile tower sites from Optus Group. The following year, Crown Castle acquired 669 of the then Vodafone Hutchison Australia's towers. In 2007 and 2008, Crown Castle acquired a further 190 mobile tower sites from Vodafone Hutchison Australia.[21] In 2015, Crown Castle changed its name to Axicom following a change in ownership.

Axicom operated over 2,000 sites and had contractual sharing arrangements for towers and sites with a broad range of MNO's and other wireless operators. Axicom was acquired by ATN in April 2022 for $3.65b.

TPG Telecom (Vodafone)

In August 2021, TPG Telecom announced a strategic review of its portfolio of tower assets to obtain a preliminary market assessment. While it operates around 5,800 rooftop and tower sites across the country, it owns passive infrastructure at only about 1,200 of these sites, most of which are in metropolitan areas.[22]

In addition, Telstra and TPG Telecom announced a network sharing proposal in February 2022 which includes physical site sharing and radio access network sharing in regional

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[15] Telstra, Telstra sells 49 percent of Towers business for $2.8 billion and announces returns for shareholders, Media Release, 30 June 2021.

[16] B Riley, Introducing Amplitel, the largest mobile infrastructure provider in Australia, *Telstra News*, September 1, 2021, accessed 14 March 2022.

[17] Telstra, Telstra sells 49 percent of Towers business, Media Release.

[18] Singtel Telecommunications Limited, Announcement pursuant to rule 706A of the SGX Listing Manual, 31 August 2020.

[19] Sovereign Wealth Fund Institute, Singapore Telecom to Sell 70% Stake in Australian Tower Network to AustralianSuper, 10 January 2021.

[20] L Baird, Optus parent company snaps up $3.6b mobile tower deal, *Australian Financial Review*, 1 April 2022.

[21] Axicom, History, accessed 4 April 2022.

[22] TPG Telecom, TPG Telecom record solid HY2021 result, Media Release, 20 August 2021.

Australia and on urban fringes. [23] The ACCC has received an application for merger authorisation in relation to the proposal with a decision by the ACCC due in October 2022.[24]

In May 2022, a consortium including the Ontario Municipal Employees Retirement System (OMERS) was the successful bidder to acquire TPG's mobile tower and rooftop infrastructure assets for a reported $950 million. OMERS will lease back the towers to TPG for the next 20 years under the terms of the transaction, with an option to extend that agreement further.[25]

BAI Communications Ltd

BAI Communications is a tower asset owner with 752 transmission sites across Australia. It provides digital broadcasting and radio services for the Australian Broadcasting Corporation, Special Broadcasting Service and the Ten Network.[26] While predominantly a broadcast tower operator, many of its towers are also capable of being used for telecommunication purposes by mobile network and other operators.

BAI Communications is currently undertaking a sale process for its tower portfolio.[27]

NBN Co

NBN Co also owns a significant number of towers (including lattice towers and monopoles) mainly used for its wireless broadband network. NBN towers are mainly located in peri-urban, and more densely populated rural and regional areas. They are located at NBN specific sites or shared/co-located with other telecommunications carriers or utility networks. These consist of towers of different sizes which are used both for the direct connection of end-user equipment and towers which are only used for the relay of microwave transmission links.

NBN has more than 2,200 fixed wireless infrastructure sites and more than 22,000 wireless cell sites mainly in semi-rural areas and across regional and remote Australia.[28]

Stilmark

Stilmark is an independent telecommunications tower and neutral host operator. Its core business is to deploy, own, operate and manage wireless infrastructure. Stilmark provides specialised telecommunications asset and access management services to tower owners, REITs (Real Estate Investment Trusts) and other infrastructure owners. It is estimated Stilmark has around 70 sites it owns and operates.

Stilmark partners with ATN International, one of the largest neutral host mobile carriers in the US, to pursue opportunities in Australian telecommunications infrastructure.

OMERS Infrastructure has recently signed an agreement to acquire Stilmark.[29]

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[23] TPG Telecom, Telstra and TPG Telecom sign landmark network sharing agreement for regional Australia, Media Release, 21 February 2022.

[24] https://www.accc.gov.au/public-registers/mergers-registers/merger-authorisations-register/telstra-corporation-limited-and-tpg-telecom-limited-proposed-spectrum-sharing

[25] AFR, *TPG last out the door with $950m tower sale* https://www.afr.com/companies/telecommunications/tpg-last-out-the-door-with-950m-tower-sale-20220509-p5ajms

[26] BAI Communications, Our solutions, accessed 4 April 2022.

[27] https://www.marketscreener.com/quote/stock/BROOKFIELD-ASSET-MANAGEME-1409206/news/BAI-CommunicationsTower-Sale-Appeals-to-Infrastructure-Buyers-40032257/

[28] https://www.nbnco.com.au/corporate-information/media-centre/media-statements/750-million-investment-to-5G-enable-nbn-fixed-wireless-to-deliver-faster-speeds-to-regional-australia

[29] https://www.omers.com/news/omers-infrastructure-announces-second-agreement-of-2022-to-acquire-australian-digitial-infrastructure-asset

TXA Australia

TXA Australia is an Australian joint venture company equally owned by the Seven Network and the Nine Network. It was formed in 1999 and was involved in providing terrestrial television transmission services for the Seven, Nine and Ten networks. It owns 69 sites mainly used for broadcast television towers.

3.8. Other developments in mobile infrastructure deployment

Infrastructure sharing amongst mobile telecommunications operators in Australia is not new. There have been numerous arrangements for the sharing of both spectrum and infrastructure (towers, backhaul etc). Most of this sharing has been within the passive network although active network sharing is becoming more prevalent globally. Infrastructure sharing is also present in the form of commercial roaming agreements (for example, TPG has a roaming agreement with Optus in certain areas).[30]

Passive infrastructure sharing is where MNOs share non-electronic infrastructure at a tower site such as land, power and physical elements such backhaul transport links. This form can be further classified into site sharing, where MNOs share the physical sites of base stations. In addition, MNOs can also share backhaul from shared sites to an operator's core network. Passive infrastructure sharing is relatively simple because the network's active equipment remains separated.

Active infrastructure sharing involves sharing of electronic components of the network including the radio access network (antennas, transceivers, base station controllers). It is also common for MNOs to share backhaul transmission equipment and core network elements (servers etc) under this model. This form of sharing is known as multi-operator radio access network (MORAN), where MNOs share radio access networks and dedicated spectrum is used by each sharing operator.

Another network sharing arrangement is where MNOs combine active and passive sharing under a multi-operator core network (MOCN) approach. MNOs typically share multiple elements including the radio access network, spectrum and the core network (at least parts of the core). The ACCC notes a number of trials and commercial arrangements for infrastructure sharing are under consideration, particularly through state and federal government funded programs and initiatives.[31]

Infrastructure sharing allows greater efficiencies or economies of scale to be pursued, resulting in lower costs. However, this is often balanced against the competitive advantage derived from having the greatest mobile coverage to attract customers and revenue. The benefits of lower costs are often pursued in less densely populated areas where it is less economic to extend mobile coverage

TPG Telecom and Telstra infrastructure sharing arrangement

As noted above, the ACCC is currently considering an application for merger authorisation from Telstra and TPG who have entered into three interrelated agreements in respect of a multi-operator core network commercial arrangement.

The arrangement involves TPG authorising Telstra to use spectrum which TPG currently owns and Telstra providing TPG with network services (by way of active mobile network infrastructure sharing) in certain regional and urban fringe areas. These areas account for approximately 17% of the Australian population coverage.

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[30] https://www.zdnet.com/article/vodafone-australia-and-tpg-merger-everything-you-need-to-know/

[31] For example, see NSW Mobile Coverage Project and Connecting Victoria

TPG would use the MOCN services supplied by Telstra to offer 4G and 5G retail and wholesale services in the regional coverage zone. TPG would also transfer up to 169 of its existing mobile sites in the regional coverage zone to Telstra and proposes to decommission the remainder of its sites in the regional zone. The initial term of the MOCN service agreement is 10 years with TPG having the an option to extend the agreement by 5 years.

TPG and Telstra would continue to operate their own networks in metropolitan areas where around 81.4% of Australia's population resides. TPG and Telstra would also continue to operate their own mobile 'core' networks (both in, and outside, the regional coverage zone).

Shared access

Sharing of telecommunications network infrastructure has developed along two main approaches. The neutral host model enables construction of a new tower with one (or more) set of radio access network equipment. Access to the passive tower infrastructure is available on an open-access basis to the mobile network operators. The open radio access network model provides an open, non-proprietary approach to the active elements of the network.

Both approaches avoid costly duplication, removing the need for individual operators to install their own mobile network radio access network equipment such as antennas and base station units and reduce costs through the use of common equipment and standards. It also is likely to lead to more efficient use of towers as it reduces the amount of equipment required on each tower.

The ACCC is also interested in other approaches, for example, neutral host radio access network-as-a-service models which use spectrum and shared wireless networks to enhance or improve existing mobile networks.[32]

Neutral host model

Neutral host models allow multiple parties - both private and public - to use the same network. This may be managed by a third-party managed services provider or by public or private network operators themselves. The neutral host model seeks to use tower and associated infrastructure more efficiently in a way that is more economically viable. Rather than MNOs or private network operators each building their own sites or towers, the neutral host builds and maintains sites and equipment for use by multiple operators.[33] As such, it has the potential to open up less economically viable areas to not only improve coverage but at the same time give consumers increased choice if more than one operator can be encouraged to use the site.

However, despite the operational and efficiency gains, this model has yet to be adopted broadly in Australia. The ACCC notes current funding initiatives and trials of the neutral host model currently being conducted in association with state and federal government grant programs.

However, a similar approach is currently operational in New Zealand through the wholesale-only operator, the New Zealand Rural Connectivity Group (RCG). The RCG is an independent entity established to build, operate and maintain a new open-access network with each new tower and radio access network equipment shared by the existing MNOs. All three mobile network operators in New Zealand will share spectrum, network equipment and have one set of antennas on each new tower using multi operator core network technology.

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[32] For example, see https://denseair.net/dense-air-acquires-new-spectrum-to-build-neutral-host-shared-wireless-networks-in-australia/

[33] For example, see https://fieldsolutions-group.com/mobile-blackspot-programs/

Like the Mobile Black Spot Program, the program utilises public funds to expand mobile coverage in rural and regional areas where the commercial incentives to provide new coverage are low. The shared model approach reduces duplication, lowers costs and delivers greater choice of service provider for end-users. The ACCC would like to understand the neutral host model as a means to improve mobile coverage more generally.

Open radio access network (RAN) standards

The purpose of open radio access networks is to develop a set of common radio access network standards that is open, as opposed to proprietary, and interoperable between network operators. Open radio access networks enable service providers to use components from a variety of vendors. The open radio access network is made possible by a set of industry-wide standards that telecommunications suppliers adhere to when producing related equipment. The interfaces between components in an open radio access network are interoperable. This open access system is emerging as an alternative to the traditional vendor system which locks-in networks to proprietary systems.

Open radio access networks seek to lower costs by reducing the price of network equipment (see the O-RAN Alliance[34]) potentially making them more suitable for deployment in areas where the traditional business case for deployment is more marginal.

4. The Telecommunications Facilities Access Regime

As noted earlier, the MNOs historically established telecommunications tower infrastructure. Given their degree of ownership of tower infrastructure, Parts 3 and 5 of Schedule 1 to the Telco Act establishes the facilities access regime that sets out the conditions of access to certain Australian telecommunications infrastructure including telecommunications towers and the sites of towers. Compliance with the facilities access regime is a carrier licence condition, directly enforceable by the ACCC.[35] Under the regime the ACCC also has power to make a Code setting out conditions that are to be complied with in relation to the provision of access to certain telecommunications facilities. More recently, the addition of Part 34B extends access obligations to non-carriers that are determined to be 'eligible companies'.[36]

4.1.   Access to telecommunications facilities

Part 3 of Schedule 1 to the Telco Act contains provisions for general access to supplementary facilities. It provides that a carrier (the first carrier) must, if requested to do so by another carrier (the second carrier), give the second carrier access to facilities owned or operated by the first carrier.[37] A 'facility' is broadly defined as any part of the infrastructure of a telecommunications network including tower, mast, antenna or other structure or thing used, or for use, in or in connection with a telecommunications network. The meaning of a supplementary facility also extends to land on which a facility is located, a building or structure on that land and customer equipment connected to a telecommunications network owned or operated by a carrier.[38]

Part 5 of Schedule 1 to the Telco Act contains facilities access provisions that apply specifically to telecommunication transmission towers and the sites of towers. Under this part:

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[34] https://www.o-ran.org/

[35] Schedule 1, s1, *Telecommunications Act (1997)*.

[36] See Part 34B of the *Telecommunications Act (1997)*, particularly s581X

[37] Subject to certain exceptions, such as where access is not technically feasible. See, Schedule 1, s33(3), 34(3) and 35(3), *Telecommunications Act (1997)*.

[38] Schedule 1, s17(5), *Telecommunications Act (1997)*.

- a telecommunications transmission tower means a tower, pole, mast or similar structure used to supply a carriage service by means of radio communications, and

- sites of telecommunications transmission towers include land, a building on land, or a structure on land.

Similar to Part 3, Part 5 requires carriers to provide other carriers with access to these facilities upon request. Under Part 5 the ACCC also has the power to make a code setting conditions that are to be complied with in relation to the provision of access to eligible facilities.

The new Part 34B provisions of the Telco Act

As a result of the divestment by MNOs of tower assets to tower operators who do not hold a carrier licence, the *Telstra Corporation and Other Legislation Amendments Act 2021* amended the Telco Act to ensure that carrier obligations under the facilities access regime continued to apply non-carrier tower operators.

Non-carrier tower operators who are related to a carrier and part of a carrier company group are defined as an eligible company and subject to the facilities access provisions under the new Part 34B. Where a group of companies includes a carrier, and that carrier was sufficiently 'related to'[39] the carrier company group, the group would be subject to the same or similar facilities access provisions that the MNOs and other carriers are subject to under Part 5 of Schedule 1 to the Telco Act. The ACCC is currently conducting an inquiry into the appropriate control percentage.[40]

An eligible company must, if requested to do so by a carrier, give the carrier access to supplementary facilities or telecommunications transmission towers owned or operated by the eligible company

4.2. The ACCC's Facilities Access Code

The ACCC's Facilities Access Code applies to 'eligible facilities' defined under Part 5, which collectively refers to telecommunications transmission towers, sites of telecommunications transmission towers and underground facilities that are designed to hold lines. It operates in conjunction with other regulatory mechanisms that promote access to facilities. These other mechanisms include the facilities access provisions of the Telco Act (discussed above) and the Part XIC access regime provisions of the *Competition and Consumer Act 2010* (CCA).

The Facilities Access Code seeks to ensure that, as far as possible, facilities are shared and/or co-located and that access to facilities is provided in a timely and fair manner. This policy is intended to:

- promote competition and efficiency in the provision of telecommunications services by facilitating the entry of new mobile and fixed line telecommunications operators, who could use existing towers without the need to invest in constructing their own towers, and

- improve environmental amenity by avoiding a proliferation of mobile towers and overhead cables associated with new entrants to the telecommunications market.

The Facilities Access Code provides the minimum standards of practice for administrative and operational procedures that allow access to eligible facilities in a timely manner. It

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[39] Under the Act, a carrier company group is defined as a group of two or more bodies corporate where at least one of those bodies is a carrier and where they are related to each by the carrier body holding at least a 15% ownership interest in the group.

[40] Note that the current default control percentage is15% but can be changed by Ministerial determination. The ACCC is currently conducting an inquiry to report to the Minister on whether she should make a determination that the control percentage is something other than the default 15% set out in the legislation (see s581ZH).

contains mandatory conditions of access, which carriers must comply with, and other conditions that will apply unless parties negotiate their own terms.

5. Matters to be considered by the inquiry

The matters to which the ACCC must have regard are intended to provide the government with a better understanding of how costs affect tower access fees and broader decisions to invest in towers and associated infrastructure. The inquiry will also consider measures that could improve mobile coverage (including during natural disasters and other emergencies). The ACCC is not limited to considering only these matters. The costs of providing towers and associated infrastructure

The inquiry is to have regard to the costs that underlie the provision of towers and associated infrastructure, including land access charges, and the fee arrangements that relate to obtaining access to those towers and that infrastructure.

The ACCC is expected to generate evidence-based information on the costs that are incurred in providing towers and associated infrastructure, and how these costs flow through to existing fee arrangements for accessing towers.

The ACCC must also consider the costs of providing access (for example, relevant business practices and systems) as well as the costs of providing towers and associated infrastructure themselves.

The ACCC notes that there is little publicly available information on the costs of providing towers and associated infrastructure or on the costs of providing towers and associated infrastructure to support carrier neutral operators and open access radio access networks.

Questions

1. What are the typical costs incurred in providing telecommunications towers and associated infrastructure? Can you quantify these costs by providing examples?

2. What costs are involved (for example, in setting up and maintaining) business practices and systems needed to support the provision of access to towers and associated infrastructure?

3. What costs are involved in accessing land required for the establishment and operation of telecommunications tower infrastructure? Do these fees differ depending on the owner of the land (for example, public v private ownership)?

5.1. Commercial and other fee arrangements required for access

There are also likely to be numerous commercial and other fee arrangements required for access to telecommunications towers. Typically, those requiring access will acquire a master services agreement from a tower operator to locate their own equipment. The ACCC is interested to understand the range of commercial and other arrangements by which third party telecommunications providers and other users access telecommunications and other infrastructure including those considerations that contribute to the cost of such fee arrangements. These include the component costs of providing access as distinct from the cost of providing the towers and associated infrastructure.

Tower providers on the other hand will generally need to negotiate access or rent with land holders include private landholders, the owners of crown land and other local landholder

entities such as local government bodies and associations. The ACCC would like to understand, from both tower providers and land holders, the costs of both accessing and providing land for telecommunications towers and associated infrastructure.

The ACCC understands that access requires numerous commercial and other fee arrangements. We want to understand the range of commercial arrangements that govern access to towers and associated infrastructure such as land.

The ACCC notes that there is little publicly available information on the commercial and other fee arrangements for access.

Questions

4. What are the typical commercial arrangements for access to towers and associated infrastructure?

5. What role do specialist entities such as land aggregators, both commercial and government, play in acquiring access to land or the sites of towers?

6. Are there any other considerations that contribute to/determine these commercial and other fee arrangements for access to towers and other infrastructure?

7. What other matters do providers of towers and associated infrastructure consider in deciding to provide towers and/or provide access to towers?

5.2. The effectiveness of current commercial and regulatory arrangements

The ACCC is required to assess whether the existing settings are effective. However, this does not extend to a formal technical review of the facilities access regime in Part 5 of Schedule 1 of the Act or the access regime in Part XIC of the *Competition and Consumer Act 2010*.

The inquiry will focus on the real-world operating environment for access to towers and associated infrastructure and whether that can better support improvements in mobile coverage, capability and competition in regional, rural, remote and peri-urban Australia.

The ACCC notes that the tower market has undergone significant change with new tower operators emerging from the divestment of towers assets by MNOs. It is unclear how new commercial arrangements will impact on existing access arrangements, in particularly potentially new pricing structures.

It is also unclear how the new tower entities will structure master services agreements and how these might impact access to towers. The ACCC notes that the new tower entities are likely to maintain existing commercial relationships with related MNOs in various forms such as through long term leasing and pricing arrangements. The ACCC is interested to hear from non-MNOs as to their experience with new or renegotiated commercial arrangements with tower operators.

The ACCC notes that there are also many differing commercial arrangements with a broad range of stakeholders including other telecommunications service providers, access seekers, business entities, community-based organisations and state-based agencies and emergency service providers who require access to tower infrastructure. The ACCC is

interested to hear the experiences of these stakeholder group as to the effectiveness of current commercial and regulatory arrangements.

The regulatory arrangements to ensure the ongoing access to towers have also been impacted by the divestment of towers assets by MNOs. For example, the new Part 34B to the Telco Act extends access obligations to non-carrier 'eligible companies'. While these regulations will not come into effect until mid-August 2022 the ACCC is interested to hear views on how these changes might impact access to towers and associated infrastructure.

Questions

8. Are current commercial arrangements for access to mobile towers and associated infrastructure effective? If not, why and what could be done to improve their effectiveness?

9. Are current regulatory arrangements for access effective? If not, why and what could be done to improve their effectiveness?

10. Has the recent divestiture of tower infrastructure by MNOs impacted on the effectiveness of current commercial and regulatory arrangements? Please provide details and examples.

5.3. The impact of costs on decisions to invest and provide access

The ACCC is also required examine the kinds of matters (including the impact of costs) infrastructure and tower providers consider in deciding to invest in and provide towers and associated infrastructure including land access costs, tower establishment costs and infrastructure charges such as electricity and backhaul access costs.

This extends to the provision of new tower infrastructure by commercial operators, the use of existing infrastructure (for example, NBN towers and radio and television broadcasting towers) and the provision of tower infrastructure within existing government funding programs such as the Mobile Black Spot Program.

Achieving better connectivity in regional Australia will require significant ongoing investment in infrastructure. However, the commercial incentives for investing in regional Australia, particularly in areas of low population and undeveloped geographical areas remain challenging.

The competitive advantage derived from having the largest population coverage has provided an incentive for investment in regional areas. However, the returns on investment to extend coverage is becoming increasingly marginal in more regional and remote areas. There are also limited incentives outside government subsidisation to improve either reliability or depth of coverage in many areas as the costs of doing so will likely far outweigh the potential returns from that investment.

The costs of building and maintaining mobile networks are substantial and the returns from sparsely populated areas are generally low. Due to these low returns, the commercial incentives to roll out network infrastructure in these areas are typically lower than in metropolitan areas.

Questions

11. What costs do providers of towers and associated infrastructure incur in providing active and/or passive mobile infrastructure? Can you quantify these costs?

12. How does the cost of providing new, or upgrading existing, mobile tower (both active and passive) infrastructure impact the decision to invest in infrastructure that can be used to supply mobile telecommunications and other radiocommunications services?

13. How does the cost of access to mobile towers impact the decision to provide access to mobile telecommunications and other radiocommunications services?

14. Are there additional costs specific to rural, regional, remote or peri-urban areas?

5.4. The implications of MNOs divesting their tower businesses

The divestment of MNOs tower assets into either related tower operator entities or to independent tower operators is likely to have implications in terms of both the terms and conditions of access to towers and the cost of accessing towers.

The ACCC is seeking comment on the ability of carriers to access tower infrastructure. For example, do carriers find it easier to access towers owned by a carrier-neutral operator? Likewise, what is the possibility for preferential treatment from a tower operator with a degree of vertical integration with a MNO and how might that vertical integration potentially hinder access to a related tower operator's structures or sites.

The ACCC is seeking views on the implications of MNOs divesting their tower businesses on the general ability of carriers to gain access to telecommunications towers and associated facilities.

Questions

15. What are the implications of MNOs divesting their tower assets on the commercial and other fee arrangements for access to towers? How have these changed as a result of the divestment of tower assets by MNOs? Do you expect these to further change in the future and why?

16. How has the recent divestment of tower infrastructure by MNOs impacted:
    (i) the scope of access offered
    (ii) the terms and conditions of access, and
    (iii) the commercial and other fee arrangements for access.

5.5. Greater mobile coverage

The ACCC is also to consider how access to towers may affect the provision of greater mobile coverage. That is, how do costs impact on investment decisions that provide improvements in mobile coverage in regional, rural, remote and peri-urban areas of Australia.

In considering how access to towers may affect the provision of greater mobile coverage the ACCC is to have regard to the implications (if any) for the provision of access to towers and associated infrastructure of mobile carriers divesting their tower and associated infrastructure businesses. This notes that mobile carriers like Telstra, Optus and TPG have

divested, or are divesting, themselves of their tower businesses and how this may impact the dynamics of providing access to towers and associated infrastructure. The ACCC is particularly interested in how the new tower entities will approach investment decision in new tower infrastructure that extends mobile coverage.

The ACCC seeks stakeholder views as to how recent changes in the mobile tower market is likely to impact investment decisions to increase mobile coverage, including 5G coverage, particularly in areas where the commercial returns from extending mobile coverage are more marginal.

Questions

17. How does the cost of providing mobile towers and associated infrastructure affect the provision of greater mobile coverage?

18. What kinds of measures would promote improved mobile coverage?

19. To what extent will the matters raised in the consultation paper impact, or be impacted by, the extension of 5G coverage?

20. How are consumers impacted by a lack of mobile coverage? What are the impacts for indigenous people in regional and remote areas?

21. In what geographical areas could mobile coverage be improved?

5.6. Feasibility of providing mobile roaming during natural disasters and emergencies

The availability and reliability of telecommunications services is critical to ensuring the safety of communities during emergencies and natural disasters. The possibility to access information easily and quickly from almost any place and at any time is now not only much more possible but increasingly expected. People are now more and more reliant on their mobile phone and the expectation to be connected anywhere at any time is high, particularly in times of stress and emergency.

The ACCC's submission to the RTIRC inquiry noted that mobile roaming could play a role in improving regional communications during an emergency. The submission noted the ACCC would support policy measures to improve the reliability and redundancy of telecommunications networks, including by improving the ability of people to communicate during times of stress.

In Australia, a domestic mobile roaming service is where an MNO uses (or roams) onto the mobile network of another MNO (the host mobile network operator) so that the first operator can provide mobile services to its customers outside of its own network coverage area.[41]

Currently, MNOs are not required to provide roaming services to each other. It is up to each MNO to negotiate roaming services on commercial terms if required. However, there are special roaming arrangements in place to ensure that even when you are out of your service provider's coverage but in another carrier's mobile phone network coverage area your emergency call will be carried on the other carrier's network.[42]

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[41] ACCC, Domestic mobile roaming declaration inquiry guide for consumers

[42] See https://amta.org.au/calling-triple-zero-from-your-mobile/

The RTIRC report noted that roaming could help to improve the reliability and utility of mobile networks both during and after natural disasters. In particular, access to reliable mobile connectivity, regardless of provider would assist emergency personal to effectively coordinate response measures, particularly where individual networks fail due to a power outage or damage but others remained operational.[43]

The RTIRC report also noted that policymakers and mobile network operators should consider the feasibility of trials of domestic roaming on infrastructure in disaster affected areas as part of a range of measures to ensure there is access to reliable communications in emergency situations. The NSW Bushfire Inquiry also recommended expanded domestic roaming arrangements during periods of emergency.[44]

Mobile roaming is one option that could potentially play a role in improving communications during emergencies and natural disasters. The ability to roam onto working networks in such circumstances would mean that end-users could continue to communicate using mobile services, regardless of whether they are a subscriber on that particular network, as long as they are within the coverage area of a mobile network.

The use of mobile roaming in limited and well-defined circumstances such as these could serve important public safety policy objectives.

However, there are significant issues to explore regarding the feasibility of such a service. Mobile networks are capacity constrained, and so the types of services that can be offered in an emergency will also be constrained, particularly if demand increases from users of other networks. Other issues to be considered include:

- who decides when an emergency is declared and where

- what services (text, voice or data) should be available in areas where temporary roaming is enabled

- will the remaining operational network(s) become congested?

There are also likely to be complex technical and operational issues (spectrum capacity) in implementing mobile roaming during emergencies.

This review is required to report on the feasibility of providing temporary mobile roaming services during natural disasters and emergencies including:

- the technical feasibility of providing such services

- the support systems and business processes required, and

- the associated time and costs expected in providing such services.

In terms of technical feasibility, the provision of roaming services is common. International and domestic roaming are features of mobile networks both in Australia and overseas. Roaming is a form of active network sharing.

To assess the technical feasibility of mobile roaming during natural disasters and emergencies the ACCC is seeking stakeholder input on:

- the importance of roaming during periods of natural disasters or emergencies

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[43] 2021 Regional Telecommunications Review – A step change in demand. Final report (p54), https://www.infrastructure.gov.au/department/media/publications/2021-regional-telecommunications-review-step-change-demand

[44] Final Report of the NSW Bushfire Inquiry, Recommendation 30 (pp 12 and 423), https://www.dpc.nsw.gov.au/assets/dpc-nsw-gov-au/publications/NSW-Bushfire-Inquiry-1630/Final-Report-of-the-NSW-Bushfire-Inquiry.pdf

- the capability of Australian mobile networks to provide mobile roaming in certain circumstances defined by disaster or emergency status

- any technical limitations in providing roaming during such situations

- the capacity for consumer handsets to support roaming, and

- the congestion management practices and processes needed to ensure that systems can provide the necessary services needed in emergency situations.

The ACCC is seeking information from stakeholders on the technologies and support systems required to operate and sustain the necessary processes and systems to implement mobile roaming during emergencies. This includes the passive and active infrastructure required, as well as business, operational and information technology support systems necessary to implement mobile roaming during emergencies.

The ACCC would also like to gain an understanding of the business processes (such as commercial arrangements including authorisation, billing and security requirements) that might be needed to enable roaming during emergencies.

The ACCC is also seeking views on how various regulatory and legislative frameworks might impact on, or be impacted by, the enablement of mobile roaming during emergencies. These include how an emergency (for the purpose of enabling mobile roaming) is declared, for how long such an emergency might last and what types of services might be provided.

We would also like to hear views as to alternative measures, such as battery back up or other types of messaging services (such as paging systems or other forms of wireless broadcast) that might provide alternative forms of communication to temporary mobile roaming during periods of natural disaster or emergency.

Time and costs

The ACCC is also seeking information on the time and costs that various stakeholders, but particularly MNOs, might incur to enable and/or provide mobile roaming during emergencies.

Questions

22. What are the benefits to the general public from the provision of temporary mobile roaming during emergencies? Are there any potential detriments?

23. What are the benefits to emergency service personnel and organisations from the provision of temporary mobile roaming during emergencies?

24. What are the technical requirements to enable temporary mobile roaming during natural disasters and other emergencies?

25. Are there limitations (eg. capacity) to current technology and business processes that would impact the ability for MNOs to provide mobile roaming during natural disasters and emergencies?

26. Are there any likely impacts on quality of service if mobile roaming during emergency situations was enabled? What level of service should be enabled – voice, sms, data?

27. What are the protocols for declaring a natural disaster or emergency? How is this communicated and co-ordinated with mobile network operators?

28. What alternative solutions (other than temporary mobile roaming) could be considered to improve network resilience during or after a natural disaster or other emergency?

29. What are the costs involved in providing temporary mobile roaming during emergencies?

30. To what extent can emerging technologies improve mobile coverage, including during times of emergencies such as a natural disaster?

6. Information gathering

The ACCC is conducting this inquiry as a result of a formal direction by the Minister under section 496 of the Telco Act. The ACCC must have regard to the costs of providing towers and associated passive and active infrastructure, the costs of accessing land to provide the towers and associated infrastructure, and existing commercial and other fee arrangements under which third parties access telecommunications towers.

Much of this information is likely to be commercially sensitive and strictly held within commercial operators. While some of this information may be forthcoming in confidential submissions made to this consultation paper and during the course of the inquiry generally, it is unlikely to be sufficient to answer key questions around the costs of providing towers and associated passive and active infrastructure, the cost of accessing land or the existing and other fee arrangements under which third party telecommunications providers can access towers and associated infrastructure. The ACCC will likely require access to a broad range of commercial material relating to the cost structure of towers and the terms and conditions of access to towers and tower infrastructure. As such, the ACCC is proposing to seek information from industry, particularly telecommunications tower operators, in the first instance on a voluntary basis.

The ACCC will engage with tower operators directly on what information is needed to fulfil the requirements of the Minister's direction. Where practical, the ACCC will endeavour to draw upon existing information sources to avoid unnecessary duplication of effort and to minimise the burden placed on those from whom information is requested. The ACCC is interested to understand what information tower operators hold on the costs of providing towers and associated fee arrangements for access more generally.

Engagement of consultants

The ACCC may engage consultants to provide advice on specific matters of a technical or commercial nature. This may include:

- a specialist business consultant to advise the inquiry on the effectiveness of current commercial arrangements enabling access to towers and associated infrastructure, and

- technical consultants to advise the inquiry on technical issues including mobile coverage mapping and the provision of temporary mobile roaming services during natural disasters and emergencies.

7. Consultation process - next steps

Under the direction, the ACCC must consult persons, bodies and agencies as applicable. While the ACCC's inquiry will be public, the direction provides four examples of the types of parties from whom views should be sought including:

- the providers of towers and associated infrastructure

- providers of other infrastructure that could similarly be used in supplying mobile telecommunications and other radiocommunications services

- likely users of towers and associated infrastructure, and

- members of the community that may be interested in improvements in mobile coverage and/or temporary mobile roaming services to be provided during natural disasters and other such emergencies.

The ACCC considers that, for the consultation process to be effective, it is necessary for that the consultation process be as public and transparent as possible. This includes engagement with a broad range of community groups, regional and remote indigenous organisations, and communities and consumers more generally. This is to enable effective participation by all stakeholders. Public consultation is particularly important, given the range of stakeholders who own and rely on mobile services. The ACCC is initially seeking submissions responding to the broad range of issues raised in this consultation paper.

Following consideration of submissions to the initial consultation paper the ACCC will engage directly with stakeholder groups. This includes the providers of towers and associated infrastructure including MNOs, specialist tower operators, independent tower providers, broadcast tower providers, NBN Co and the providers of associated infrastructure including facilities owners, land aggregators, specialist real estate brokers and transmission networks used to provide mobile backhaul capacity. In particular, the ACCC is interested in gaining a deep insight into the real-world operating environment for access to towers and associated facilities.

Likewise, the ACCC is seeking views from the providers of other infrastructure that could similarly be used in supplying mobile telecommunications and other radiocommunications services such as electricity tower infrastructure, tower infrastructure owned by state governments for emergency services use and other physical infrastructure that could be used to improve mobile coverage.

The ACCC will also seek to engage with vendors and providers of the active components of radio networks to gain further insight into new and emerging technological developments and use of mobile radio networks and how this might improve mobile coverage in rural and regional areas.

The ACCC is also seeking views from the likely users of towers and associated infrastructure, particularly those businesses and consumers in rural, regional, remote and peri-urban areas. This may include wireless network operators, farmers, business owners and operators, emergency services providers (such as police, fire, ambulance and the SES) and consumers of mobile phone services more generally. This is a diverse group of stakeholders spread across a broad geographical area. The ACCC welcomes initial input to this inquiry through submissions to this consultation paper. ACCC will consider what type of further consultation process will best suit the needs of this group of stakeholders but may include target group discussions, forums or other appropriate means of consultation and engagement.

Finally, the ACCC is seeking views from members of the community that are interested in improvements to mobile coverage and/or the availability of temporary mobile roaming services during natural disasters and other such emergencies. This includes consumers and users of mobile services as well as individuals who use mobile infrastructure as part of community service organisations, local government bodies and specialist disaster organisations.

The ACCC is also seeking views as to the feasibility of providing temporary mobile roaming during emergencies. The ACCC plans to have targeted stakeholder consultations and discussion over the course of the inquiry.

Further information

Further information on the consultation process will be placed on the ACCC website and communicated through the ACCC's Communications Information Network and RMII inquiries email communication lists.

Stakeholders are encouraged to email the inquiry team at rmii@accc.gov.au to express an interest to contribute to the inquiry.

8. Consolidated list of questions

Access to towers and associated infrastructure

1. What are the typical costs incurred in providing telecommunications towers and associated infrastructure? Can you quantify these costs by providing examples?

2. What costs are involved (for example, in setting up and maintaining) business practices and systems needed to support the provision of access to towers and associated infrastructure?

3. What costs are involved in accessing land required for the establishment and operation of telecommunications tower infrastructure? Do these fees differ depending on the owner of the land (for example, public v private ownership)?

4. What are the typical commercial arrangements for access to towers and associated infrastructure?

5. What role do specialist entities such as land aggregators, both commercial and government, play in acquiring access to land or the sites of towers?

6. Are there any other considerations that contribute to/determine these commercial and other fee arrangements for access to towers and other infrastructure?

7. What other matters do providers of towers and associated infrastructure consider in deciding to provide towers and/or provide access to towers?

8. Are current commercial arrangements for access to mobile towers and associated infrastructure effective? If not, why and what could be done to improve their effectiveness?

9. Are current regulatory arrangements for access effective? If not, why and what could be done to improve their effectiveness?

10. Has the recent divestiture of tower infrastructure by MNOs impacted on the effectiveness of current commercial and regulatory arrangements? Please provide details and examples.

11. What costs do providers of towers and associated infrastructure incur in providing active and/or passive mobile infrastructure? Can you quantify these costs?

12. How does the cost of providing new, or upgrading existing, mobile tower (both active and passive) infrastructure impact the decision to invest in infrastructure that can be used to supply mobile telecommunications and other radiocommunications services?

13. How does the cost of access to mobile towers impact the decision to provide access to mobile telecommunications and other radiocommunications services?

14. Are there additional costs specific to rural, regional, remote or peri-urban areas?

15. What are the implications of MNOs divesting their tower assets on the current commercial and other fee arrangements for access to towers? How have these changed as a result of the divestment of tower assets by MNOs? Do you expect these to further change in the future and why?

16. How has the recent divestment of tower infrastructure by MNOs impacted:

    (i)   the scope of access offered

    (ii) the terms and conditions of access, and

    (iii) the commercial and other fee arrangements for access.

17. How does the cost of providing mobile towers and associated infrastructure affect the provision of greater mobile coverage?

18. What kinds of measures would promote improved mobile coverage?

19. To what extent will the matters raised in the consultation paper impact, or be impacted by, the extension of 5G coverage?

20. How are consumers impacted by a lack of mobile coverage? What are the impacts for indigenous people in regional and remote areas?

21. In what areas could mobile coverage be improved?

Mobile roaming during natural disasters and other emergencies

22. What are the benefits to the general public from the provision of temporary mobile roaming during emergencies? Are there any potential detriments?

23. What are the benefits to emergency service personnel and organisations from the provision of temporary mobile roaming during emergencies?

24. What are the technical requirements to enable temporary mobile roaming during natural disasters and other emergencies?

25. Are there limitations (eg. capacity) to current technology and business processes that would impact the ability for MNOs to provide mobile roaming during natural disasters and emergencies?

26. Are there any likely impacts on quality of service if mobile roaming during emergency situations was enabled? What level of service should be enabled – voice, sms, data?

27. What are the protocols for declaring a natural disaster or emergency? How is this communicated and co-ordinated with mobile network operators?

28. What alternative solutions (other than temporary mobile roaming) could be considered to improve network resilience during or after a natural disaster or other emergency?

29. What are the costs involved in providing temporary mobile roaming during emergencies?

30. To what extent can emerging technologies improve mobile coverage, including during times of emergencies such as a natural disaster?