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Submission

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Standing Committee on Communications and the Arts
PO Box 6021
Parliament House
CANBERRA ACT 2600

RE: Inquiry into co-investment in multicarrier regional mobile infrastructure

The Australian Communications Consumer Action Network (ACCAN) thanks the Standing Committee for the opportunity to respond to its inquiry into co-investment in multi-carrier regional mobile infrastructure. ACCAN is the peak body that represents all consumers on communications issues. We appreciate the chance to contribute to policy reform to improve the experiences of mobile coverage and reliability for communications consumers. In this submission, we consider that:

- Availability of mobile coverage continues to be a concern in parts of Australia.
- Local communities can benefit from multi-carrier infrastructure.
- Government programs to expand coverage should fund location appropriate models of co-investment.

Availability of mobile coverage continues to be a concern in parts of Australia

ACCAN and our members have been long interested in the availability of mobile coverage across Australia. Australia's mobile coverage does not adequately meet the needs of consumers, particularly those in regional, rural and remote areas. Expectations for mobile phone services have evolved. Mobile phone service is regarded as essential by the majority (84%) of consumers and 88% of Australians expect their phone and internet services to work during emergencies.¹

Despite growing consumer expectations, 17% of consumers state that their mobile coverage does not allow them to do everything they need to do and 17% of consumers do not consider their phone service to be of high quality and reliable.² 69% of respondents in regional and remote parts of Australia agreed that their mobile phone service was high quality and reliable (compared with 76% of those in capital cities). 71% of respondents living in regional and remote areas reported that their mobile coverage allowed them to do everything they needed to do (compared with 80% of those in capital cities).³ These research findings suggests that more needs to be done to improve the reliability and quality of mobile services, particularly in regional and remote parts of Australia.

A recent systemic investigation released by the Telecommunications Industry Ombudsman (TIO) on complaints about mobile services illustrates the difficulties encountered by consumers, with mobile

¹ ACCAN 2022. *Consumer Check-in: Expectations in 2022 – Reliability and Fairness Snapshot*. Available at: www.accan.org.au/accans-work/research/2003-consumer-expectations-2022

² Ibid, P.2.

³ Ibid, P.3.

services becoming the dominant complaint type.⁴ Complaints about poor mobile coverage made up 10.8% of the TIO's total complaints for mobile services in 2021-22, whilst complaints regarding intermittent service or dropouts made up 3.8% of mobile complaints.⁵

ACCAN has long been concerned about digital exclusion in remote Indigenous Communities, particularly due to the inadequacy and limited availability of communications infrastructure in these areas. Connectivity is a problem in these communities that continues to be an important issue that requires attention. Reports indicate that the digital divide in remote Indigenous communities, and in other areas, is widening.⁶ Where mobile phone coverage is poor, communities rely on local public phones as the primary means for accessing voice services.⁷ Poor mobile coverage disadvantages communities, especially as governments prioritise the online delivery of services which are inaccessible for people who are not connected.

Local communities can benefit from multi-carrier infrastructure

It is important that gaps in telecommunications infrastructure, particularly mobile infrastructure are addressed. ACCAN supports greater infrastructure sharing or co-investment in mobile infrastructure. Mobile infrastructure sharing occurs when mobile operators share elements of their infrastructure when delivering mobile services to end users. The key benefits include:

- Reduced mobile network deployment costs to encourage greater expansion of mobile coverage and/or reduce cost of services (if passed through to consumers).
- Promotion of a more competitive retail market.
- Reduced loss of environmental amenity from duplicative infrastructure.

Empirical evidence of these benefits has been demonstrated in Europe, where operators that entered into network sharing agreements were able to reduce prices and increase network coverage and quality.⁸ This research also confirmed pro-competitive effects of network sharing, outweighing potential concerns regarding reduction in infrastructure-based competition.⁹

Mobile network providers face minimal returns on their investment in regional, rural and remote locations, and there is little incentive for them to build infrastructure in these areas. Evidence of this can be seen with the increasing need for more Mobile Black Spot Program funding to invest in these areas. With emerging technologies, such as Low Earth Orbit satellites, there will likely be diminishing incentives to invest in the future.

⁴ TIO 2022a. *Investigating complaints about essential mobile services*. Available at:

www.tio.com.au/sites/default/files/2022-07/Investigating%20complaints%20about%20essential%20mobile%20services_03.pdf

⁵ TIO 2022b, P.75. *Annual Report*. Available at: www.tio.com.au/sites/default/files/2022-09/4097_TIO_AR_22_FA-WEB.pdf

⁶ SBS 2021. *Indigenous students face a digital divide and were 'unfairly disadvantaged' during coronavirus lockdowns, says a report*. Available at: www.sbs.com.au/news/article/indigenous-students-face-a-digital-divide-and-were-unfairly-disadvantaged-during-coronavirus-lockdowns-says-a-report/8xf11hq1x

⁷ Parke, E 2022. *Australia's digital divide means 2.8 million people remain 'highly excluded' from internet access*. ABC News. Available at: www.abc.net.au/news/2022-10-16/australia-digital-divide-millions-cannot-access-internet/101498042

⁸ Koutroumpis, P et al. 2021. *To share or not to share? The impact of mobile network sharing for consumers and operator*. Available at: www.oxfordmartin.ox.ac.uk/downloads/Network-Sharing.pdf

⁹ Ibid. P.14.

Reducing the cost of deployment is vital to increasing mobile coverage in rural and remote areas which typically experience mobile black spots. Greater coverage from multiple carriers will provide more continuous coverage for consumers, increase choice of provider, and reduce the need to carry multiple devices or purchase services from multiple providers. These benefits are further compounded by increased competitive pressure, incentivising Mobile Network Operators (MNOs) to compete on price and quality aspects such as reliability, customer service and security.

The high cost of infrastructure deployment in rural and remote areas compared to metropolitan areas reduces the commercial incentives to deploy network infrastructure in these areas. This has resulted in geographic areas that are served by one mobile carrier, typically Telstra. Telstra currently has the most mobile sites,¹⁰ covering 1 million square kilometres more than any other mobile network.¹¹ Yet Telstra currently has the lowest percentage of co-location amongst Mobile Network Operators,¹² with only 35% of its sites co-located with another MNO.¹³

The level of co-location between the MNOs decreases the less populous the area.¹⁴ Because of this, mobile tower facilities in rural and remote areas can be bottlenecks. Carriers seeking access to customers in the area may only have the choice to contract with one tower operator or to build their own facilities.¹⁵ Where only one MNO operates in a geographic area, that carrier has the potential to exercise monopoly power. The consumer harms from abuse of market power are well understood and documented, including:

- Reduced incentives to invest in dimensions of quality.
- The ability to charge above cost price for access.
- A lack of competitive pressure that reduces the MNO's incentive to invest and create dynamic efficiencies in the future, which overtime could lead to higher prices and poorer quality.

The potential to charge above market prices is combined with an incentive to prevent competitors' access to the facilities. This can be seen in the lack of co-location in remote areas, taken as a commercial decision in order to retain the competitive advantage from having the largest network coverage. Recently, the ownership of a number of mobile towers has been transferred from telecommunications carriers to entities that are non-carriers.¹⁶ These recent developments may have changed the incentives for owners of infrastructure to provide access to alternative carriers.

¹⁰ ACCC 2022, P.4. *Mobile Infrastructure Report*. Available at: www.accc.gov.au/regulated-infrastructure/telecommunications-and-internet/mobile-services-regulation/mobile-infrastructure-report/mobile-infrastructure-report-2022

¹¹ Telstra, "Our Network", www.telstra.com.au/coverage-networks/our-network [Date accessed:17/10/2022]

¹² Co-location is where an MNO deploys their equipment on the same passive infrastructure as another MNO.

¹³ ACCC 2022, P.4. *Mobile Infrastructure Report*. Available at: www.accc.gov.au/regulated-infrastructure/telecommunications-and-internet/mobile-services-regulation/mobile-infrastructure-report/mobile-infrastructure-report-2022

¹⁴ Ibid.

¹⁵ See Krattenmaker and Salop 1986. *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price*. the Yale Law Journal, 96(2). P.p.209-293.

¹⁶ Simmons, D 2022 *TPG divests mobile tower assets in deal valued at \$950 million*. Business News Australia. Available at: "www.businessnewsaustralia.com/articles/tpg-divests-mobile-tower-assets-in-deal-valued-at-950-million.html". Dutta, A 2021 *Australia's Telstra to sell 49% of tower business for \$2.1 bln*. Reuters. available at: www.reuters.com/business/media-telecom/australias-telstra-sell-49-tower-business-21-bln-2021-06-29/, Dickinson, A 2021. *Optus sells tower business for A\$1.9B*. Artnet. Available at: <https://www.arnnet.com.au/article/691731/optus-sells-towers-business-1-9b/>

Yet it is important to note that carriers have still retained a percentage of the mobile tower business, therefore likely retaining some incentive to favour its own carrier entity over any competitors.

Regional, rural and remote communities require expanded mobile coverage. Whilst current and previous government funded programs have resulted in greater mobile coverage, there remain premises, community hubs and high traffic areas that are at risk from having no mobile coverage. Greater coverage from multiple carriers would benefit rural and remote communities, as MNOs will have to compete further on price. This will particularly benefit low-income consumers who are already spending a significant proportion of their income in order to stay connected. ACCAN supports encouraging greater co-investment in infrastructure which can be utilised by multiple carriers.

Government programs to expand coverage should fund location appropriate models of co-investment

Attachment A includes a table listing the various models that allow for infrastructure to support multiple mobile carriers and the associated costs and benefit of each type. The table illustrates the trade-off between reducing costs in the eco-system (through sharing more facilities) and allowing for flexibility and retail diversification.

It is ACCAN's view that where government funding is supporting investment in mobile infrastructure, different models will be suited to different situations. For example, given the thinner profit margins in remote areas, roaming may be more suitable as all equipment and spectrum is shared, making it the least costly model of deployment. Due to limited population density, there will be less risk of network congestion. In more populous areas, a form of active sharing may be more appropriate as it reduces risk of network congestion, whilst at the same time reducing costs of deployment.

MNOs already participate in infrastructure sharing to a certain extent and we are seeing greater interest in promoting multi-carrier regional mobile infrastructure. MNOs in Australia already co-locate between 35-90% of their total active sites, depending on operator.¹⁷ MNOs in Australia also have roaming agreements; for example TPG has a roaming agreement with Optus.¹⁸ Additionally, the Federal Government, through the Mobile Black Spots Program is funding Field Solutions Group (FSG) to trial a neutral host mobile delivery model,¹⁹ as well as deliver domestic roaming between Optus and FSG's Regional Australia Network.²⁰ Furthermore, FSG is also being funded to lead a Neutral host trial for the New South Wales Government as part of its Mobile Coverage Project.²¹

Consumers will benefit from greater incentives for incumbent MNOs to further expand infrastructure sharing and there is room for public policies to further drive co-investment. As such, governments should create the right incentives for successful multi-carrier infrastructure through

¹⁷ ACCC 2022, P.15. *Mobile Infrastructure Report*. Available at: www.accc.gov.au/regulated-infrastructure/telecommunications-and-internet/mobile-services-regulation/mobile-infrastructure-report/mobile-infrastructure-report-2022

¹⁸ Ibid, P.26.

¹⁹ Field Solutions Group 2021. *FSG awarded \$3.66M for Regional Australia's First Neutral Host Radio Access Network Trial*. Available at: https://fieldsolutions-group.com/field_solutions_awarded_3660k_mobile_blackspot_5a_neutral_host_optus/

²⁰ Field Solutions Group 2021. *FSG awarded \$0.9M for Domestic Roaming Trial with Optus and Launch Australia's 4th Mobile Network*. Available at: https://fieldsolutions-group.com/field_solutions_awarded_900k_mobile_blackspot_5a_optus_roaming_t4/

²¹ Field Solutions Group 2022. *FSG to Lead Neutral Host Trial (MOCN) for NSW Mobile Coverage Project (MCP) Partnership Trial*. Available at: <https://fieldsolutions-group.com/nsw-mcp/>

changing the grant funding guidelines for mobile infrastructure grants. New towers funded through programs such as the Mobile Black Spot Program should prioritise appropriate models based on location specific factors. In addition to grant funding, gifting spectrum to MNOs could be examined to further commercial incentives for co-investment.

Regulatory scrutiny will still be required to ensure that the benefits of shared infrastructure emerge, and that sharing arrangements do not undermine competition and cause consumer harm.

Thank you for the opportunity to respond to this inquiry. If you have any questions regarding our response, please do not hesitate to contact me at 02 9288 4000.

Yours sincerely,
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The Australian Communications Consumer Action Network (ACCAN) is Australia's peak communication consumer organisation. The operation of ACCAN is made possible by funding provided by the Commonwealth of Australia under section 593 of the Telecommunications Act 1997. This funding is recovered from charges on telecommunications carriers.

Attachment A: Infrastructure which supports multiple mobile carriers

	Model type	Description	Benefits	Costs
Roaming	Mobile Roaming	An MNO uses another MNO's network. Roaming does not involve the shared ownership of physical assets.	<ul style="list-style-type: none"> - Least costly model of network sharing as no infrastructure needs duplicating. 	<ul style="list-style-type: none"> - Potential to undermine commercial incentives to improving network coverage. - Provides least amount of control and flexibility to guest MNOs, preventing competition with respect to speed, network quality and transmission rates. - Price competition may be limited due to underlying costs of wholesale charges paid to host operator. - Capacity limitations and the risk of network congestion, this may reduce data throughput in areas with high traffic.
Active sharing	Neutral host/ Multi Operator Radio Access Network (MORAN)	Where operators share the radio access equipment but still use different spectrum. Base stations, backhaul and RAN are shared. Traffic is split where the MNO's core networks take over.	<ul style="list-style-type: none"> - Costs of deployment are reduced as it allows for all MNOs to share the same mobile network equipment on a mobile tower. 	<ul style="list-style-type: none"> - The MNO will have less influence over the orientation of the antennas and therefore the coverage of the network compared to passive sharing. However, coverage objectives and antenna positioning will likely be aligned amongst MNOs.
	Multi Operator Core Network (MOCN)	At least two MNOs collaborate and share both passive and active infrastructure, including spectrum (known as pooling).	<ul style="list-style-type: none"> - Allows for more efficient use of spectrum. - Increased network capacity can improve download speeds while reducing network congestion. 	<ul style="list-style-type: none"> - Future spectrum auctions may require coordination between competing operators, reducing competition for spectrum, and will likely be prevented under spectrum auction rules. - Reduced demand for spectrum could reduce borrowings (debt and equity) as the cost of spectrum falls. - Higher risk of collusion borne from information sharing arrangements if not adequately restricted.

				<ul style="list-style-type: none"> - High level of coordination required increases the cost of governance.
	Gateway Core Network	Base stations, backhaul, RAN, spectrum and elements of Core Network are shared.	<ul style="list-style-type: none"> - Greater costs savings that MOCN and MORAN. 	<ul style="list-style-type: none"> - Reduced flexibility and differentiation between MNOs, blurring the lines between what constitutes an MNO and a Mobile Virtual Network Operator (MVNO).
Passive sharing	Co-location (site/tower sharing)	An owner of a tower provides access to facilities (towers, tower sites, power connection, power back up etc.) for another MNO to install their own equipment.	<ul style="list-style-type: none"> - Greater product differentiation that other models of infrastructure sharing. 	<ul style="list-style-type: none"> - Greater costs of deployment than active sharing.