



bai communications

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Dear Sir / Madam,

SUBMISSION TO THE AUSTRALIAN FEDERAL GOVERNMENT DISCUSSION PAPER:  
Mobile Black Spot Program – Round 5A

BAI Communications Australia (BAI) welcomes the opportunity to provide input to the Federal Government on the Mobile Black Spot Program – Round 5A.

BAI Communications is a neutral host communications service provider in Australia, USA and Canada, and provider of communications services in Hong Kong. In Australia, BAI provides managed services and portal services to broadcasters as well as site access arrangements to telecommunications and radiocommunications operators. BAI also operates and maintains the Government Radio Network (GRN) for the NSW Government. In the USA and Canada, BAI Communications companies provide neutral host communications services within the New York City and Toronto subway systems for telecommunications, WiFi and emergency services communications.

BAI welcomes the discussion paper's proposal to further support the sharing of all infrastructure and necessary operational and backhaul costs as a key part of the Mobile Black Spot Program. BAI believes this has multiple benefits for regional communities across the country, namely:

- The sharing of radio access networks enables the roll out of infrastructure to regional areas that were previously not economic even with simple site sharing.
- The sharing of services automatically brings competition, choice and redundancy to regional areas covered by the program.
- Competition and choice are essential to incent operators to upgrade regional services and ensure these communities are not left behind the metro communities in the future.

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In support of the Government's clearly stated design principles and objectives, BAI would suggest the following detailed considerations to assist the program in delivering its objectives.

1. **Funding:** BAI welcomes the suggested prioritisation of MBSP Round 5A funding through favouring solutions which provide at least two mobile network operators. BAI has two specific suggestions that would significantly aid in the practical achievement of this program objective:
  - Firstly, a significant issue for mobile infrastructure providers (MIPs), in striking service agreements with mobile network operators (MNOs), is the requirement for the MIP to know the funding it will need to invest to deliver the proposed solution. This is needed to ensure the solution is priced economically for both the MIP and the MNOs. In the case of the MBSP, the MIP will not know its share of the funding requirement until after the MBSP funds are awarded. This 'chicken and egg' situation makes it very difficult for the MIP to supply mobile service agreements at the time of the MBSP funding application. The situation gets even more difficult when two or more MNOs are involved. BAI would suggest that a letter of intent from the MNOs should be sufficient at the time of the MBSP application, as opposed to service agreements. BAI then proposes that once a MBSP allocation is awarded to the MIP this would be contingent on the MIP negotiating the MNO service agreements within 3 to 6 months of the award, extendable at the Government's discretion, otherwise the funds would be returned to the program and allocated to another applicant.
  - Secondly, BAI is very supportive of the design principles that will help to supply mobile services to the emergency services. BAI would suggest network operators such as the NSW Telco Authority, that owns and has responsibility for government emergency communications in the state of NSW, are included in the definition of 'mobile network operator' for the purposes of the MBSP funding evaluation criteria. This would provide an important incentive for sharing of future public and emergency mobile broadband networks, particularly in natural disaster-prone areas.
2. **Evaluation Criteria:** BAI strongly supports the proposal to modify the coverage benefits formula so that overlapping coverage areas are *equally* weighted to entirely new coverage areas. As stated earlier, the importance of competition, choice and redundancy in mobile broadband services is even more critical for regional communities as for those communities in metropolitan areas. Indeed, as seen in the recent bushfire disasters, having alternative mobile service operators in regional areas can be extremely important in life threatening, natural disaster situations that unfortunately tend to occur more frequently in regional areas. With the simple adjustment of equally weighting overlapping and new coverage areas, the program can significantly help address these issues and support key objectives of the MBSP.

3. New Technology: BAI believes that the deployment of new global 4G / 5G technology standards, such as very large macro-cell capabilities and network slicing for shared networks, could provide significant opportunities for more cost effective regional mobile broadband coverage. These new technologies, in combination with new shared service models, could significantly reduce the cost of delivering first-class, future proof, mobile broadband services in regional areas. While these technologies show great promise, BAI believes proof-of-concepts (POCs) are required in some selected cases to ensure that the MBSP program benefits can be realised. BAI would suggest that for this class of funding application, the program requires a shorter minimum operational period commitment of 1-2 years as the technology utilised in POCs may not prove to be economic or provide the services at sufficient quality. BAI believes this adjustment to the program structure would significantly encourage innovation and bring new solutions to regional mobile coverage issues.

Attached are BAI's answers to the specific questions outlined in the Mobile Black Spot Program – Round 5A Discussion paper.

Kind Regards



Stephen Farrugia  
Chief Technology Officer  
BAI Communications Australia

## APPENDIX

### Consolidated list of issues and BAI comments

1. Are there any comments on the coverage areas proposed to be targeted?

*BAI is very supportive of the proposed targeting of non-major urban regions and the specific focus on transport corridors and the prioritisation of natural disaster prone areas*

2. Are there any comments on the types of proposals that would be eligible for funding, including the required coverage outcomes?

*As stated above, BAI strongly believes that both unique and new overlapping coverage proposals need to be supported (and recognised in terms of evaluation weighting) equally by the program. The benefits to communities into the future of choice of provider both ensures future service upgrades but also provides redundancy of emergency services such as "000" during natural disasters.*

3. Is the RAN model an effective sharing model for Australia?

*The RAN sharing model is a very effective, industry standard, approach to reducing both capital and ongoing costs for operators. Through the rationalisation of both active equipment and backhaul requirements the shared service model reduces the upfront investment. Perhaps more importantly, the shared RAN model reduces the significant cost of rural backhaul in the regions. Many of the commercial difficulties encountered in setting up a shared RAN model are eliminated with the introduction of network slicing and other advanced 4G / 5G functionality.*

4. What other design options could be considered that provide multi-provider outcomes?

*BAI would suggest that the Government specifically prioritise neutral host solutions in the same way as is proposed for two operator solutions, even if the neutral host is only able to initially sign on a single MNO service agreement. The rationale for this is that the neutral host model naturally incents the provider to attract more MNOs to the site. Also, as opposed to a single operator solution, the neutral host provider is ready to take on a second MNO without the commercial issues an MNO has in negotiating for site access with a competitor.*

5. Are there any comments on the funding cap for Round 5A and eligible costs?

*BAI welcomes the Federal Governments proposed inclusion of backhaul and other operating costs as capitalised costs for funding by the MBSP. Specifically, backhaul cost are a significant barrier to entry for the provision of mobile broadband services in regional areas and Government assistance in lowering these investment costs would be very helpful.*

6. Are there any comments that you wish to make in relation to eligibility to apply for funding?

*One important practicality for mobile infrastructure providers (MIPs) in striking service agreements with mobile network operators (MNOs), is the requirement for the MIP to know the funding it will need to invest to deliver the proposed solution. As outlined above, we submit that a letter of intent from the MNOs is more appropriate at the time of the MBSP application as opposed to service agreements. A contingent MBSP allocation would then be made allowing the MIP 3 to 6 months to negotiate the MNO service agreement.*

7. Are there any comments that you wish to make regarding ways the program could assist potential state government and third-party co-contributors?

*As indicated above, BAI is particularly supportive of the design principles that will help to supply mobile services to the emergency services via network operators such as the NSW Telco Authority.*

8. Are there any comments regarding the need for a shorter minimum operational period, particularly in remote and very remote areas?

*BAI believes that more cost effective regional mobile broadband coverage will be facilitated through new global 4G / 5G standards that can be demonstrated and validated through proof-of-concepts (POCs), and that for this class of funding application the program requires a shorter minimum operational period commitment of 1-2 years.*

9. Are there any comments on the proposed equivalency requirements and 4G reference power levels for handheld and external coverage?

*BAI believes the stated equivalency requirements and reference levels are appropriate for handheld devices.*

10. What criteria should be used to identify key sites where independent power systems or redundant backhaul could be funded?

*BAI believes that MBSP applications could provide a review of the local history of power supply outages and relevant disaster issues as a basis of determining the need for, and autonomy duration required of, independent power systems in a proposed area.*

11. Are there any comments regarding the requirement for at least 12 hours of auxiliary backup power for small cells?

*As BAI's experience during the bushfires over the summer of 2019/20 demonstrated, 24 hours is the minimum autonomy time required for auxiliary backup power units due to site accessibility constraints during disasters, with 72 hours being highly desirable. It should be noted that any system will likely require a refuelling / replenishment capability as power outages due to grid damage often last for some days or weeks.*

12. Do you have any comments on the proposed assessment criteria?

*BAI strongly supports the proposal to modify the coverage benefits formula so that overlapping coverage is equally weighted to entirely new coverage. As stated earlier, the importance of competition, choice and redundancy in mobile broadband services is just as critical for regional communities as those in metropolitan areas. Indeed, as seen in the recent bushfire disasters, having alternative mobile service operators in regional areas can be extremely important in life threatening, natural disaster situations that unfortunately tend to occur more frequently in regional areas. With the simple adjustment of equally weighting overlapping and new coverage the program can significantly help address these issues and support key objectives of the MBSP.*