

Submission for ACMA consultation regarding
ECS Direction:
Exception for mobile-phone development

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I am making two separate submissions for this consultation: this one focussing on mobile-phone development; the other treating more general concerns of standardisation, clarity, competition, innovation and environment.

1 SUMMARY

Just as the current Direction has an exemption for travellers, there must also be made — in the interests of innovation and competition — an explicit exemption for mobile-phone development. Those developing and testing innovative mobile-phone hardware and software obviously need access to the mobile-phone network. These people will generally need to have another mobile phone for everyday use, so access to emergency calling on mobile phones under development is not an issue. Requiring cancellation of service for such development phones will only stifle innovation and further advantage established providers, reducing competition.

Also, in the interests of consumer choice, telcos must be compelled to provide the modem configurations needed to connect to their respective networks.

2 Submission

In the current environment, two giant American technology companies almost entirely control mobile-phone operating systems: Apple with iOS, and Google (Alphabet) with Android. This is extremely unsatisfactory, in terms of competition, and for us in Australia a question of national sovereignty, in

that so much of the lives of our citizens, and of our commerce, takes place within the framework set by these two foreign companies.

This is also extremely unsatisfactory in regard to innovation. While these companies have huge budgets for “innovation”, it is not free innovation — it is proscribed to be innovation in the service of these companies’ profits and dominance, often not in the interests of citizens. And while there is smaller-scale innovation at the level of app development, this innovation is limited to be within the constraints and parameters set by the policies of Apple and Alphabet.

This dominance of Apple and Alphabet also extends to the mobile-phone hardware: Apple produces its own hardware, as does Google to some extent, and other mobile-phone manufacturers, such as Samsung, must comply with Google requirements if they are to produce mobile phones running the Android operating system.

I belong to a community of developers, testers, and early adopters working on alternative mobile-phone hardware and software (operating systems and apps), as far as possible using open hardware designs and FOSS (Free and Open Source Software). An emphasis of the hardware designs is repairability and long lifetime — good for the environment. This contrasts with almost all of today’s mobile phones, in effect designed to become electronic waste after only a few years: batteries not replaceable, the device not designed for repair, and software support dropped by the manufacturers — making the device effectively unusable even though its hardware is still capable of use.

Examples of alternative mobile phones (all designed for repairability and long life, with easily replaceable batteries):

1. The Librem-5 and Liberty made by Purism. These run Purism’s free-software PureOS operating system.
2. The Pinephone and Pinephone Pro made by Pine64. These run various operating systems such as Mobian, Manjaro, PostMarketOS, almost all free software. That there are a number operating systems available for these phones shows how vibrant is this space of innovation.
3. The Fairphone. While the Fairphone mostly runs stock Android, it does emphasise repairability and environmentally friendly hardware.

In order to develop and test these innovative mobile phones, developers and testers need access to the mobile-phone network, even though at earlier stages of development these mobile phone might not yet be capable of emergency calls. Therefore, as with foreign travellers, there needs to be made an explicit exception for mobile-phone development and testing. While this

community of developers and testers is important for innovation, it is a numerically small group and exempting them should have no material effect on availability of 000 emergency calling. Indeed, generally such developers and testers need also to hold a mainstream phone for everyday use.

I would therefore recommend inserting an additional section to the Direction:

- (f) there be an exception to the objectives referred to in (2)(b)(ii) and (2)(d)(ii) where:
 - (i) the mobile phone is being used for development and testing of mobile-phone hardware and software; and
 - (ii) the subscriber to the service has been notified by the carriage service provider that the mobile phone is not able to access the emergency call service.

I should also point out that the designers and developers of these innovative mobile phones take great care to conform to regulations. They use approved modems with approved (proprietary) firmware. So in their interaction with the mobile-phone network they are no different from mainstream mobile phones. One issue is that telcos often require specific modem configuration to connect to their respective networks, and the configuration details are often not easily available. This also affects ordinary users who BYOD, “bring your own device”. Really, greater standardisation is needed, but in the short term telcos should be compelled to provide such information about modem configuration.

3 Conclusion

Thank you for your time in reading and considering this submission. I really hope that ACMA will insert into the Direction an explicit exception for mobile-phone development as suggested above, preferably in consultation with the community, to foster innovation and competition in this crucial area.

4 About the Author

Les Kitchen is a retired computer-science academic, active in the FOSS (Free and Open-Source Software) and FP (Functional Programming) communities in Melbourne/Naarm.

5 Links

- Purism, Librem-5 and Liberty mobile phones:
 - <https://puri.sm>
 - <https://puri.sm/products/librem-5/>
https://en.wikipedia.org/wiki/Librem_5
 - <https://puri.sm/products/liberty-phone/>
- Pine64, Pinephone and Pinephone Pro mobile phones:
 - <https://pine64.com>
<https://pine64.org/>
 - <https://pine64.com/product/pinephone-beta-edition-with-convergence-pack>
<https://en.wikipedia.org/wiki/PinePhone>
<https://pine64.org/documentation/PinePhone/>
 - <https://pine64.com/product/pinephone-pro-explorer-edition/>
https://en.wikipedia.org/wiki/PinePhone_Pro
https://pine64.org/documentation/PinePhone_Pro/
- Fairphone
 - <https://www.fairphone.com/>