



Ofcom Response

Document WINNF-RC-5012

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Consultation response form

Please complete this form in full and return to sharingupper6ghz@ofcom.org.uk

Consultation title	1 Consultation: Expanding access to the 6 GHz band for commercial mobile and Wi-Fi services
Full name	Peter Young
Contact phone number	+1 703 726 5764
Representing (delete as appropriate)	Organisation
Organisation name	Wireless Innovation Forum
Email address	pyoung@comsearch.com

Confidentiality

We ask for your contact details along with your response so that we can engage with you on this consultation. For further information about how Ofcom handles your personal information and your corresponding rights, see [Ofcom's General Privacy Statement](#).

Your details: We will keep your contact number and email address confidential. Is there anything else you want to keep confidential? Delete as appropriate.	Nothing
Your response: Please indicate how much of your response you want to keep confidential. Delete as appropriate.	None
For confidential responses, can Ofcom publish a reference to the contents of your response?	Yes

Your response

Question	Your response
Question 1: What interest do you have in deploying outdoor or standard power Wi-Fi or other licence exempt RLANs in the Lower 6 GHz band? Please provide details of the types of expected deployments.	No Answer
Question 2: Are you interested in providing or developing AFC databases for use in the Lower 6 GHz band in the UK?	Confidential? – N Many of our members have developed AFC databases for use worldwide based on WinnForum standards. However, the WinnForum does not develop or operate AFC databases directly.
Question 3: Do you have any views on the operational considerations of setting up and running AFC databases?	Confidential? – N WinnForum has produced several outputs available on our Technical Specifications page that can help inform Ofcom's question on the operational considerations of setting up and running AFC databases: <ul style="list-style-type: none"> • WINNF-TS-1014, Version 1.4.1, provides functional requirements for the U.S. 6 GHz band under the control of an AFC System. • WINNF-TS-5008, Version 1.2.0, provides a supplementary data repository specification in order to address data issues with the FCC's Universal Licensing System that affects the ability of AFC Systems to protect fixed service receivers.
Question 4: Do you have any views on how we should manage the approval process for AFC databases and, in particular, whether we should rely on parts of the FCC process rather than requiring the whole process to be re-run in the UK?	Confidential? – N WinnForum, in collaboration with the Wi-Fi Alliance, developed outputs in support of the process to approve AFC Systems. See our 6 GHz website for a diagram showing the relationships of these outputs. The Wi-Fi Alliance, in collaboration with the WinnForum, produced the following outputs to support AFC System development and approval:

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	<ul style="list-style-type: none"> • AFC Interface Specification • AFC System Test Plan • AFC System Test Vectors <p>In conjunction with the Technical Specifications mentioned above, the WinnForum produced the following outputs to support the AFC System Approval:</p> <ul style="list-style-type: none"> • WINNF-6GHZ-002 Traceability Matrix - traces the AFC System Test Vectors to the requirements captured in WINNF-TS-1014 • AFC System Test Harness - (https://github.com/Wireless-Innovation-Forum/6-GHz-AFC) <p>With the FCC's announcement commencing testing of the AFC systems, the approval process included both a lab test and a public trial.</p> <p>For the lab tests, the FCC permitted FCC recognized accredited test labs that have also been approved through the WinnForum CBSD testing and certification program to conduct the lab testing. This significantly reduced the time to approve AFC Systems as these labs were already familiar with the software used for CBSD testing, which is similar to the AFC System Test Harness. The test labs executed the AFC System test vectors using the AFC System Test Harness, which included tests to ensure proper protection of fixed service, radio astronomy, and systems across international borders. The test labs produced a report for the AFC System operator to submit to the FCC for approval.</p> <p>For the public trial, the FCC required the AFC system applicants to provide a website for members of the public to test the functionality of their AFC system for a period of 45 days. Instructions were provided to the public on how to submit challenges to responses provided by the AFC system applicant. The challenge period lasted 15 days after the end of the trial period, allowing the public to review the responses and submit challenges.</p>

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	The WinnForum stands ready to leverage this experience to support Ofcom in whatever decision is made.
Question 5: Please provide any other comments on our proposals for extending access to standard power Wi-Fi and outdoor use, including the overall approach, any details on technical parameters and the running of the AFC databases in this band.	Confidential? – N The WinnForum supports standard power Wi-Fi and outdoor use as per rules provided by the FCC and the requirements defined in WINNF-TS-1014.
Question 6: Do you have any comments on our proposal to use a “phased” approach, or on the alternative to wait for European harmonisation?	No Answer
Question 7: Do you have any comments on the above suggestion to manage any “legacy” Wi-Fi devices, or alternative suggestions?	No Answer
Question 8: Do you have a view on the amount of spectrum that should be prioritised for Wi-Fi under the prioritised spectrum split option? Please provide evidence for your view.	No Answer
Question 9: Do you have any comments on our plan for a “phase 1” when Wi-Fi will be introduced?	No Answer
Question 10: One variation on “phase 1” would be to only authorise Wi-Fi in client devices to “seed” the market. Would you have any views on this, or suggestions for other variations?	No Answer

Question	Your response
Question 11: Do you have any comments on our plan for a “phase 2” when mobile will be introduced?	No Answer
Question 12: Do you have a view on the amount of spectrum that should be prioritised for mobile under the prioritised spectrum split option? Please provide evidence for your view.	No Answer
Question 13: Do you have any evidence or views about the geographical extent of mobile networks’ likely deployment in Upper 6 GHz?	No Answer
Question 14: Do you have any comments on our proposed phased approach to authorisation of both Wi-Fi and mobile in the Upper 6 GHz band?	No Answer
Question 15: Do you have any comments on our proposal to not include very low power portable devices in the Upper 6 GHz band at this stage, but to keep this under review?	No Answer
Question 16: Do you have any comments on our proposal to authorise the use of low-power indoor Wi-Fi access points and client devices to use 6425–7125 MHz?	No Answer
Question 17: Do you have any comments on the proposed technical conditions?	No Answer

Question	Your response
Question 18: Do you have any comments on the proposed VNS draft?	No Answer
Question 19: Do you have any suggestions for an appropriate mechanism for enhanced sensing, or comments on the proposed solution above?	No Answer
Question 20: Do you agree with our proposal to restrict Wi-Fi from transmitting in the 6650-6675.2 MHz band to protect the radio astronomy service? Please provide any technical evidence to support your view.	No Answer
Question 21: Do you agree with our assessment of Wi-Fi coexistence with existing users of the band? If not, please provide details.	No Answer
Question 22: Do you have any evidence about the costs to operators of moving fixed links in and around “high density” areas (such as urban centres) to other bands?	No Answer
Question 23: Do you have any comments on our initial assessment of our likely approach to coexistence between future mobile use and current users in the Upper 6 GHz band?	No Answer
Question 24: Do you have any other comments on our policy proposals or any of the issues raised in this document?	Confidential? – N To the extent that this consultation creates issues that must be addressed through technical compromise among incumbents and new entrants in the band, WInnForum offers itself as a technology-neutral multi-stakeholder organization with members that

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	<p>span all sectors of the wireless telecommunications industry.</p> <p>WInnForum members have expertise in all relevant areas, with representatives from many of the same companies that are potentially affected as incumbents or new entrants (or both). WInnForum members recognize the desire for rapid new unlicensed deployments in 6 GHz. The existing WInnForum framework can help reach convergence in areas of contention efficiently and expeditiously, while both protecting incumbents and providing for rapid deployment of new unlicensed systems in the band. Unlike CBRS, which required significant time to develop standards and procedures to satisfy complex and classified government operations, the 6 GHz Automated Frequency Coordinator (AFC) concept as proposed is much lighter weight and exists to protect incumbents whose operations are fully transparent through existing public databases. Under the best circumstances, incumbent protections will be fully specified and agreed prior consultation. More likely, however, some points of contention will remain, and WInnForum is ready and able to address them rapidly. Areas of focus might include the following, which are within the areas of WInnForum's expertise:</p> <ul style="list-style-type: none"> • Propagation models • Interference protection criteria • AFC framework • Security • Interference determination, reporting and mitigation • AFC testing and certification <p>WInnForum members have contributed significantly to developing standards and guidelines necessary to the success of the CBRS band and the US 6 GHz band. During the CBRS proceedings, the US FCC noted the following when discussing WInnForum's role as an MSG:</p> <p>"...we agree with ... the Wireless Innovation Forum, and others, that a multi-stakeholder process could provide insight into the technical factors and</p>

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	<p>interference limits between coexisting services in the 3.5 GHz Band.” (FCC 15-47, par. 289)</p> <p>“We further note that the specific policies and protocols needed to enforce this general requirement may be developed as part of the SAS approval process and may be informed by the work of an industry-led multi-stakeholder group.” (FCC 15-47, par. 321)</p> <p>“...we believe that a multi-stakeholder group focused on the complex technical issues raised by this proceeding could provide us with a wealth of valuable insights and useful information. A broad-based group incorporating wireless carriers, network equipment manufacturers, potential SAS Administrators, satellite operators, existing 3650-3700 MHz band licensees, and other parties with an interest in the 3.5 GHz Band could be instrumental in developing answers to some of the novel technical questions raised by the Citizens Broadband Radio Service rules. We hope that any such group would work collaboratively towards innovative solutions that would encourage the rapid development of the Citizens Broadband Radio Service, protect valuable incumbent operations, and benefit all potential stakeholders in the band.” (FCC 15-47, par. 416)</p> <p>During the 6 GHz proceedings, the Commission further noted:</p> <p>“We appreciate the work of WinnForum in developing technical standards for the AFC systems. In considering proposed modifications to AFC system operations, we will give great weight to inter-industry consensus reached in organizations such as the WinnForum.” (DA 24-166, p. 7, footnote 46)</p> <p>WinnForum has provided an environment where all CBRS and 6 GHz stakeholders could collaborate on these efforts. We are confident that WinnForum could, if requested, provide a framework to collaboratively study and develop guidelines around the suggestions provided above (and others as</p>

Question	Your response
	needed), and do so on a rapid timescale, consistent with the expectations of the unlicensed community.

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