

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
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Amendment of Part 90 of the Commission's Rules)	WP Docket No. 07-100

**REPLY COMMENTS OF THE SAN FRANCISCO BAY AREA RAPID TRANSIT
DISTRICT ON THE SIXTH FURTHER NOTICE OF PROPOSED RULEMAKING**

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(Comments of the City of New York, page 8). The Comments of the San Francisco Bay Area Interoperable Communications Systems Authority (“BayRICS”) explain (at page 2) that “Public Safety Agencies in the Bay Area are using the 4.9 GHz Band in many innovative and important ways” and point out the FCC’s ULS database indicates that there are 58 active 4.9 GHz licenses on file in the greater twelve-county San Francisco Bay Area. BART agrees with BayRICS that the Commission should “protect existing and planned public safety projects using the band and avoid taking actions that would subject public safety licensees to additional interference, costs or other burdens” (*id.*).

The Commission should reject suggestions that any current incumbent public safety users be relocated to accommodate proposed new non-public safety uses (as proposed, for example, by the Joint Comments of the Telecommunications Subcommittee of the American Petroleum Institute and the Regulatory and Technology Committee of the Energy Telecommunications and Electrical Association, API/ENTELEC” at page 2), for expanded spectrum for commercial aerial, drone and robotic uses.

As BART advocates in its Comments, the Commission’s rules should continue to support vital public safety uses and prevent harmful interference within areas of public safety use.

II. Protection from Harmful Interference Is Vital to Protect the Public

BART agrees with APCO (at page 5) that “public safety communications require reliable, interference-free access to spectrum.” BART notes the concern about interference issues in the Comments of the Regional Transportation District (“RTD”). RTD currently uses 4.9 GHz to implement Positive Train Control on its passenger rail network serving the Denver Metropolitan Area, and experiences harmful interference to its service. RTD points to several examples (at page 3) where it needed to resolve interference issues with other agencies, and expresses concern that permitting use by additional parties will increase the potential for interference issues. Given that

BART's plans include a new Communications Based Train Control System ("CBTC") at 4.9 GHz, interference protection is a vital safety need for train control services.

As BART sets forth in its Comments, the Commission should adopt rules that will ensure that public safety users continue to have priority in the 4.9 GHz band, and establish rules and procedures to prevent harmful interference to vital public safety uses of the spectrum. BART agrees with the Comments of the Public Safety Communications Council (at page 3) that "it is vitally important that the Commission understand how the [4.9 GHz] band is being used on a daily basis to help protect lives and property..."

BART emphasized in its Comments that it will need protection from harmful interference for current and proposed public safety uses and does not support licensing any "co-primary" or secondary users in its operational area, or within two miles of BART's operations.

Several commenters seek co-primary/secondary status to use all or significant parts of the service. The Commission should continue to empower Regional Planning Committees to review and approve all uses. BART supports prior frequency coordination by qualified frequency coordinators familiar with the public safety services, and opposes any scheme of regulation that would permit uncoordinated or temporary use of the frequencies.

BART opposes unlicensed use of the 4.9 GHz spectrum (*see, e.g.*, Comments of the WiFi Alliance, at page 4, proposing "unlicensed devices on a non-interference basis" without explaining how such "non-interference" to vital public safety services would be assured). BART emphasizes that it objects to any authorization, on any basis, be it temporary or ongoing, to any users that may cause interference to any BART train operations or passenger and public safety use.

III. Several Commenters Agree That The Band Plan Should Be Flexible

BART's Comments suggest full and flexible ability to use band aggregation plans ranging from 40, 30, 20, 15, 10, 5 and 1 MHz. Similarly, the City of New York (at page 3) supports

maximum band-plan flexibility. APCO (at page 9) agrees, stating that “To permit maximum flexibility in this band and facilitate the development of innovative broadband uses, the Commission should expand the aggregation limit to the full 50 MHz available in the band.”

BART opposes the suggestion of API/ENTELEC (at page 2) that a 20 MHz “ADR band” be created for manned aerial systems (Aerial), unmanned aerial systems (Drones) and robotic systems (Robotics), leaving only 30 MHz (dismissively deemed by API/ENTELEC as the “Remaining Band”) for “other use cases.” BART urges the Commission to reject the API/ENTELEC suggestion that “Any incumbent Public Safety use would need to be located in the Remaining Band” to receive protection as a primary user (thereby suggesting relocation of existing systems, which is not acceptable). BART also urges the Commission to reject the further suggestions that no formal coordination be required for its proposed ADR band, and that API/ENTELEC members be offered co-primary status in what they call the Remaining Band (thereby suggesting taking over the entire 4.9 GHz for their the primary use of their members without respecting the current and future needs/uses and accompanying plans and financial commitments of the public safety community. API/ENTELEC also suggests that their preferred “use cases” need not be tethered to any requirement to offer public safety services because, as they assert, “by their nature” the operations of oil and gas companies, utilities and railroads “make them nearly as important” as public safety operations (at page 4). Certainly there may be emergency public safety situations involving utilities and railroads, and some arrangements might be made in specific emergency situations to coordinate with public safety entities to avoid public harm. However, this ADR band/Remaining band proposal that non-public safety entities be authorized to use the entire band on a “co-primary” basis, with a reserved specific use of up to 20 MHz of spectrum for drones and other commercial purposes unrelated to public safety, should be rejected by the Commission.

BART opposes any requirements for repurposing, relocating or reconfiguring existing uses and users. Not only do proposals for relocation or reallocation cause harm and disruption to existing public safety uses, it imposes potentially unfunded/unreimbursed cost upon public entities in favor of for-profit entities. BART's plans, and the plans of many other public entities, have been developed in reliance on the current licensing scheme. Any major changes that impose additional costs upon, or require changes in operations or equipment for public entities are not in the public interest.

IV. No Waiver of Frequency Coordination for New Users

BART's Comments support the NPRM's proposal that an existing user should not be required to frequency coordinate for current uses. BART's Comments also propose that BART retain a specific geographic footprint for its public safety train control uses, so that other potential users will be on notice that BART has actual and planned critical public safety uses throughout its operating area. BART agrees that the ULS database may need some additional fields of information and good coordination to receive into the FCC's database the large volume of fixed sites that current licensees, such as BART and other public safety train control uses, will require for particular operations.

Some commenters question the one year time limit to complete the ULS filing process. BART disagrees with the Comments of the Enterprise Wireless Alliance ("EWA" at page 9). EWA erroneously suggests that one year is an "overly generous period." EWA's Comments fail to take into account the limitations faced by many public entities, such as timeframes for grant application and funding, public procurement processes, personnel and construction issues. BART's Comments suggest that the time frame remain at 18 months, especially if there is a very large volume of fixed sites within a current geographic area.

BART uses the 4.9 GHz frequencies for critical public safety uses and therefore opposes the suggestion that in a co-primary scenario “it is unreasonable to presume that a Public Safety licensee would always have priority” (as Southern Company dangerously suggests in its Comments at page 10). It may be that “emergency” priorities and procedures will need to be established if the Commission decides to proceed with some co-primary and secondary use in some geographic areas. However, Southern Company opposes conditioning eligibility for the band to provide only public safety services (at page 6). It is precisely because of the inevitable tensions between non-public safety commercial operations and non-emergency uses, and resulting actual and potential conflicts with public safety uses, that BART opposes grant of authority to secondary or co-primary users in its service territory (the two mile zone surrounding BART’s transit system).

V. ULS Database-- Practical and Procedural Issues

BART’s Comments note that its planned CBTC System will require hundreds of fixed sites, and therefore BART is concerned about the one year time limitation for ULS filings, and suggests that it should be extended to 18 months or longer. The Commission also should consider a simple waiver process in particular cases of demonstrated need.

BART agrees with the suggestion made in the Comments of the Public Safety Communications Council (at page 6) that the Commission should impose a “freeze” on new applications during the time that existing licensees are filing information in the ULS database “to prevent coordination over incumbent stations not in the database” (*see also* July 3, 2018 Letter of the American Association of State Highway and Transportation Officials, “AASHTO” at page 3 for a similar suggestion of a “freeze” during the one year period.).

In addition, BART strongly objects to the proposal to authorize “notice-based” access whereby a non-public safety party seeking to use public safety frequencies would give 30-days’ notice for a public safety entity to file its application for the frequencies sought by a non-public

safety entity (as discussed by Southern Companies Comments at page 10). Most public entities would need longer than 30 days to get all the required internal approvals and technical support to file an application. It is not clear whether the individual public safety entities or regional committees would be served with such a notice, or whether such “notice” would simply be the FCC public notices, which may not be regularly reviewed by counsel for public safety entities. Such a process would not adequately protect the interests of public safety entities, and should be rejected.

VI. BART Supports a Regional Planning Process

BART’s Comments support a regional planning process. As the BayRICS Comments (at page 2) point out, the San Francisco Bay Area public safety agencies currently are engaged in active and continuous use of the 4.9 GHz band, and the band is not underutilized in the Bay Area. BART needs to be able to review and approve any proposed new uses of the 4.9 GHz frequencies within its license zone to assure the safety of its passengers.

VII. Technical Standards May Need Additional Notice and Comment

BART’s Comments suggest that the Commission provide notice and seek further comments if it does determine to adopt new or additional technical standards, both to develop a complete record in this matter and to allow current and prospective users notice and an opportunity to review and comment on any new proposals. For example, the Comments of Federated Wireless, Inc. discuss (at page 7) the concept of “dynamic spectrum sharing” to expand eligibility of non-public safety users. BART opposes this proposal—no adequate record has been established to support this alternative technical concept. The burdens on the public safety community, such as the need to purchase new and different equipment, have not been adequately considered, quantified and addressed in this rulemaking proceeding, and any new technical rules would need a fuller record.

VIII. No Temporary and Secondary Uses of Point to Point and Point to Multipoint

BART's Comments oppose temporary and secondary uses of the 4.9 GHz frequencies within two miles of its geographic zone of operations, and also oppose any uses that would cause interference to BART systems and public safety. Several commenters propose "sharing" frequencies through a spectrum database. However, as the Comments of Federated Wireless (at page 16) acknowledge, public safety entities have pre-existing investments in their 4.9 equipment and such equipment would not be capable of communicating with a database, so such a proposal would impose unfunded obligations upon public safety entities to upgrade equipment to avoid harmful interference. BART's equipment will be supplied by a vendor selected through a required procurement process, and obtaining new equipment can be time-consuming, expensive, and cumbersome to implement in BART's complex operating environment. BART's Comments explain that its use of the 4.9 GHz frequencies is essential to public safety, continuous and conducted during all of its hours of operation and maintenance, throughout its service area, 24 hours a day. Such extensive use precludes sharing opportunities in BART's service area.

IX. Deadlines, Eligibility, Shared Use and Other Alternatives

BART's Comments explain that strict application of the one year period for constructing systems may prove to be an impediment to large and worthy public safety projects and urge the Commission to consider leaving the construction deadline at 18 months and extending the time period in cases of demonstrated need. Another approach that BART advocates is designating a specific geographic area to BART for its public safety operations.

X. Eligibility, Shared Use and Other Alternatives

BART's Comments oppose opening its service territory to secondary, co-primary or shared uses. BART is concerned that such uses would interfere with its planned public safety uses,

including its plans for a new system-wide communications based train control system. BART notes that APCO (at page 12-13) does not support expanded eligibility without conditions that the use is only for communications related to the protection of life, safety and property (as opposed to general business purposes). Also, APCO only supports secondary uses that are pre-emptible by public safety entities. BART does not support secondary access on a pre-emptible basis because BART's use in its service territory will be continuous. BART agrees with APCO (at page 16) that any sharing techniques adopted "must be tested and proven in advance to be effective at protecting public safety's use of the band." BART, along with APCO (at page 4), "strongly opposes re-designation of the band for non-public safety use, whether in whole or in part." As noted in BART's Comments, BART opposes extension of eligibility to commercial entities and only supports "sharing" when there is an agreement in place with a public safety entity and the use is for a public safety purpose.

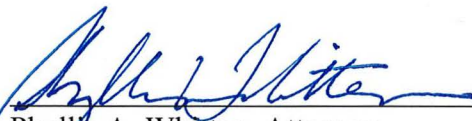
XI. Conclusion

BART supports continued priority in the 4.9 GHz frequency band to public safety entities and respectfully requests that the Commission adopt rules and policies that protect both its current and planned uses of 4.9 GHz frequency band.

Respectfully submitted,

**SAN FRANCISCO BAY AREA RAPID TRANSIT
DISTRICT, a rapid transit district established pursuant
to California Public Utilities Code section 28500, et seq.**

By: _____



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