

**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of )  
Amendment of the Commission's rules with ) GN Docket No. 12-354  
Regard to Commercial Operation in the 3550 to )  
3650 MHz band )  
)

**REPLY COMMENTS OF SPECTRUM BRIDGE, INC.**

This comment is focused on the Definition and Use of Secondary Markets for PAL in the 3.5GHz band. In the initial comments and subsequent reply comments there has been significant interest expressed in support of a vibrant secondary market for Priority Access Licenses (PAL). Spectrum Bridge fully supports this concept as a means to ensure the most efficient and effective use of the spectrum while minimizing the negative impacts of 'warehousing'. Through our experience, we do not believe there are significant technical or mechanical challenges to developing, managing and supporting a trading platform for a PAL spectrum exchange. However, our prior experience in developing, managing and running a spectrum exchange (SpecEx) for secondary market spectrum strongly indicates that the most probable impediment to the success of market driven exchange will be the adoption of appropriate rules, policies and procedures that allow efficient trading mechanisms.

Generally, an individual PAL will cover a relatively small population – typically 4000 people (or POPs). Adjusting current licensed broadband spectrum values of ~\$2.24/MHz-POP (Auction 97) down to \$1.00/MHz-POP (to account for uncertainty in the 3-tier model) an individual PAL would be valued at nominally ~\$40,000. Therefore, the transaction costs within a vibrant and efficient secondary market need to be commensurate with this value (a few percent of the transaction value). Today, added transaction costs and fees for secondary market transactions can exceed \$10,000, regardless of the asset size! Furthermore, the time it takes to execute a spectrum transaction is measured in months. If either of

these situations persist, there will simply not be a viable secondary market for PALs. Furthermore, it is envisioned that PALs may also be partitioned by geography or disaggregated by frequency (which is technically feasible) which will drive transaction prices even lower. A PAL may only be required for a short time period, so the FCC should permit the marketplace to define the utility, and not prejudge the size scale or frequency of transactions. Finally, a PAL spectrum exchange must be able to function in real-time, without enduring pending trade approvals by the FCC. All trades should be reported to the FCC, and be subject to review and even reversed if the trade that is illegal or inappropriate. But this should be a rare exception, not the norm. Nevertheless, the rules and policies for trade execution should be simple, clear and to a great extent automatically enforced by the trading platform.

A spectrum exchange may or may not be part of an SAS (Spectrum Access System). However, current PAL licensees must be accurately tracked and exchanged in real-time with SAS's to maintain operational compliance of systems. This function has not yet been discussed or addressed. While not technically difficult, this type of interoperability is a non-trivial aspect of SAS management of PALs.

Before a trade is executed, an exchange must be able to efficiently verify a PAL license and licensee attributes including whether a PAL can be traded in whole or in part. In current secondary markets this process relies on the ULS system, which is not simple to navigate from an M2M perspective, and not always up to date and certainly not updated in real-time.

The exchange must also be able to execute a transactions between two parties that are complete, thus yielding updated PAL ownership immediately to the SAS. The current system, which requires extensive filings with the FCC that must await a review and approval is not compatible with PAL sized transactions. The exchange should be designed such that only compliant transactions can be consummated between licensees. Qualified licensees could be validated in advance much like participants are qualified before spectrum auctions and trading in other commodities markets.

It seems reasonable for the FCC to impose a modest filing or trading fee, which would be collected by the exchange and reconciled on a periodic basis. The exchange can provide daily reports on transactions to the FCC and this could be made available to the public in a variety of formats, including a ULS like system hosted by the exchange or the FCC. We also anticipate that exchange operators will likely need to collect reasonable transactions fees, for each trade, to cover the cost of managing the exchange and complying with all reporting requirements to the FCC and SAS.

Spectrum Bridge has significant experience in secondary spectrum markets and experience that will surely be beneficial in attaining the objectives and vision of the FCC. We would be delighted to share our experience and ideas with the FCC as part of this proceeding.

/s/ Peter Stanforth

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