

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	GN Docket No. 09-47
Spectrum for Broadband)	GN Docket No. 09-137
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
)	NPB Public Notice #6

To: The Commission (filed electronically)

REPLY COMMENTS OF CTB GROUP, INC.

1. CTB Group, Inc. (“CTB”) hereby submits these Reply Comments in the above-captioned proceedings, in response to NPB Public Notice #6. CTB urges the Commission not to use an “either/or” approach in deciding how to allocate spectrum. Instead, the Commission should ask how many different services each MHz of spectrum can provide simultaneously. CTB has developed a technology which enables the simultaneous use of spectrum for multiple purposes, including both broadcasting and wireless Internet-based broadband services. CTB’s solution would avoid the need for the Commission to referee a political war over the future of the television spectrum. The services which both current wireless mobile providers and broadcasters deliver can be provided using the CTB platform over UHF spectrum, with the public (not the Commission) deciding which service is needed at which point in time.

2. The Commission’s invitation to comment on the sufficiency of spectrum for broadband has set off a lobbying war between the wireless and broadcast industries, with each side naturally touting the value of its own services and solutions, as evidenced by the initial comments of CTIA, The Wireless Association, and the National Association of Broadcasters and Maximum Service Television. The problem with their approaches is that they promote one or

another use of the spectrum in an “either/or” scenario, which sets the Commission up as a referee to pick winners and losers. History has repeatedly demonstrated that the Commission’s ability to fulfill that role is limited. The agency usually ends up in a judicial quagmire and is accused of taking too long to act and ending up with rules tailored to fit the prior decade’s circumstances. “Either/or” is an approach which may suit investors who profit from controlling spectrum and want their particular investment to be enhanced, but it is not the way in which the Commission should approach its mission to advance the public interest, convenience, and necessity. The better approach is to maximize the use of all spectrum, including broadcast spectrum, so that the spectrum can provide for many diverse applications instead of being forced into limited applications catering to the traditional desires of a particular industry segment. CTB and its technology partners have developed a new technology to enable that approach.

3. It will be unfortunate if the Commission relies too much on previous auction pricing decisions, which reflect a myriad set of business judgments, as a guide to future spectrum allocation decisions. Corporate investors who purchase spectrum at auctions are seldom motivated by public service or sociological benefits. The Commission, which is charged with protecting the public, must consider the needs of everyone and recognize the value of activities which may not generate the most auction revenue for the government or the most operating revenue for business. That is why, among other cogent reasons, the Commission has allotted spectrum for noncommercial broadcasting and public safety wireless activities, free from auctions and regulatory fees.

4. There is no doubt that increased access to broadband will spread education and access to information, with great value to our society, even though broadband access is also used for activities of much less worth, or even negative worth, as far as the public interest is concerned.

However, it must be made clear that broadband as envisioned by cellular operators is in reality nothing more than an extension of the *status quo*. Only broadcasters are well positioned to “broadcast” the Internet, which as of today has virtually no means of providing one-to-many-distribution of content. The initiatives under way by CTB will bring this new dimension and expansion of the unique utility value inherent in broadcast architectures, in contrast to the highly inefficient and limited capabilities of the point-to-point Internet access offered by cellular operators and traditional telephone and cable network based ISPs.

5. Broadcasting also continues to play a critical and highly valuable role in our society. The most elementary sociology course explains that the advent of coast-to-coast network television brought us more together as one nation than ever before, because for the first time, everyone was seeing the same news and entertainment at the same time and could talk about their shared experiences. Even those who do not agree on the value of a nationwide common experience usually acknowledge the value of common local experiences, which are enhanced by local broadcast stations whose programming reaches the entire community at once.

6. Why cast aside the values of either wireless or broadcasting? CTB has developed a technology which retains the best of both. Using the ancillary signal capacity of a 6 MHz ATSC digital television channel, and enhancing the information-carry capacity of that channel with a distributed transmission system (multiple transmitter sites) as permitted by existing rules, CTB’s technology can disseminate broadband traffic throughout a community without pre-empting broadcast television service. Moreover, because of the desirable propagation characteristics of UHF television spectrum, compared to spectrum above 2 GHz where most wireless broadband is being implemented, CTB can provide broadband service with fewer cells and at much lower cost than other wireless technologies, with favorable deployment and cost implications for both urban

and rural areas and disadvantaged population segments. Two-way traffic is possible using various techniques, ranging from partnering with out-of-band licensees to innovative new technologies within the TV broadcast spectrum which CTB will soon demonstrate. CTB plans to deploy its first system by the first quarter of 2010. It will be available for all to see and scrutinize.

7. CTB's approach has many advantages. It fits within the current ATSC technical standard and so obsoletes no existing system. It can be implemented by television broadcasters who are already licensed, eliminating the time and struggle that accompanies any new licensing process. It will provide a new and needed revenue stream for the broadcast industry, which has been injured by the economic downturn. Because the system uses multiple low power transmitters, it can work with low power as well as full power stations and can rejuvenate the low power television industry. Meanwhile, it preserves television broadcasting, with all of its virtues, including disseminating news, entertainment, education, and emergency information.

8. It is important to note that wireless services, the way they are constructed today, cannot replace broadcasting, even if a lot of TV programming migrates to the likes of Hulu and other websites. The reason is that existing wireless systems, including 3G systems and the coming 4G systems like LTE, are session-oriented. They may allow multiple users to share channels through multiplexing of one kind or another; but basically, a wireless session involves one subscriber demanding and receiving a communication stream directed to that subscriber. Only broadcasting is set up to deliver a common information stream to large numbers of people, which is a far more efficient use of spectrum than devoting capacity to a communication desired by an individual user who seeks access to the same content which many others seek at the same time. Transmitting an emergency bulletin to everyone at once is nearly impossible for most

wireless systems, unless the wireless handset or other receiver incorporates separate circuitry which essentially constitutes an independent radio or TV broadcast receiver. The concept of broadcasting must never be surrendered if we are to maintain the ability to reach large numbers of people simultaneously and to use spectrum only once to do so.

9. CTB urges the Commission to take a broad view of its spectrum allocation responsibility and to ask not what is the best use of each MHz but rather how much each MHz can do for how many people. Never mind who wants to grab hold of a license. The important point is to maximize efficiency and to make sure that both individual and mass communication capability remain available to everyone. CTB is ready to show how to achieve those objectives in the TV broadcast spectrum.

Respectfully submitted,



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November 13, 2009