

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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| In the Matter of: |) | |
| |) | |
| International Comparison and Consumer |) | GN Docket No. 09-47 |
| Survey Requirements in the |) | |
| Broadband Data Improvement Act |) | |
| |) | |
| A National Broadband Plan for Our Future |) | GN Docket No. 09-51 |
| |) | |
| Deployment of Advanced Telecommunications |) | GN Docket No. 09-137 |
| Capability to All Americans in a Reasonable and |) | |
| Timely Fashion, and Possible Steps to Accelerate |) | |
| Such Deployment Pursuant to Section 706 |) | |
| of the Telecommunications Act of 1996 |) | |
| |) | |
| To: Office of the Secretary | | |

**COMMENTS OF SEZMI CORPORATION
NBP PUBLIC NOTICE # 26**

Sezmi Corporation (“Sezmi”) offers the following Comments in response to the Commission’s *Public Notice* of December 2, 2009 regarding the potential reallocation of broadcast television spectrum to wireless broadband purposes.¹ Sezmi has launched a complete, end-to-end television service that combines both existing ATSC digital television (DTV) and Internet infrastructures into one video service offering. The service provides consumers with an affordable new way to access broadcast channels, cable channels, movies, and Internet video

¹ The Commission solicited these particular comments in Data Sought on Uses of Spectrum (NBP Public Notice # 26), *Public Notice*, DA 09-2518 (rel. Dec. 2, 2009) (“*Public Notice*”). The comment deadline was extended to today due to the weather-related closure of the Federal Communications Commission on the original deadline. See 47 C.F.R. §§ 1.4(e)(1), 1.4(j); U.S. Office of Personnel Management, *Archived Operating Status* (December 21, 2009) <<http://www.opm.gov/status/pastStatus.aspx?q=217>>.

programming all delivered to the user's television across both DTV spectrum and home Internet connection. Innovators such as Sezmi are creating valuable and affordable services for the public by fully utilizing a complementary broadcast and broadband program delivery model. Sezmi accordingly urges the Commission to recognize that the best solution to a potential explosion in wireless demand relies on both broadband and broadcast.

Question A(1): What factors should the Commission consider when comparing the benefits of spectrum used for broadcast to wireless?

The most important factor in comparing broadcast to wireless broadband spectrum use is **efficiency** in delivering the popular video programming that will continue to comprise the bulk of data transmitted to consumers. The use of broadcast spectrum is tremendously more efficient than wireless broadband for transmitting popular video programming. Wireless broadband networks easily can become strained when just a few users in a cell try to receive video at the same time. As CTIA's submitted report explains:

[S]everal users within the same cell sector engaging simultaneously in high-throughput applications (*e.g.*, video streamlining) can quickly strain the network impacting the user experience for every consumer accessing the network, even if they are not themselves engaging in bandwidth-intensive activities.²

Broadcasting is not subject to such a limitation. There is no marginal distribution burden on a broadcast station when an additional viewer turns on her television receiver. A broadcast television station transmits in point-to-multipoint fashion, and the only limitations on delivery are the size of the service area and the number of people located within it. Broadcasting accordingly is best suited for delivery of popular video programming. While broadband

² CTIA Sept. 29, 2009 Written Ex Parte Communication, GN Docket No. 09-51, Appendix (Mobile Broadband Spectrum Demand, Rysavy Research) at 15 ("CTIA Letter").

networks strain when just a few users attempt to receive video at the same time, it is better suited for delivery of less popular content. And this is precisely how Sezmi has architected its own hybrid service. Sezmi thus believes the most important factor in comparing the benefits of broadcast spectrum use is this efficiency in delivering popular video programming.

A second important factor is **affordability**. As a recent study demonstrated, broadband adoption among minorities actually exceeds that of the general public when expensive equipment is not required, and there is no digital divide in broadcast television adoption where affordability is not an issue.³ Due to the inherent investment that already has occurred during the digital transition, Sezmi is able to deliver a value based service targeted at consumers who are looking for more choices, better pricing, and increased functionality. Tens of millions of Americans either do not possess a personal computer or rely entirely on the over-the-air broadcast service. For such consumers, Sezmi's platform provides a means to view Internet based content to which they would not otherwise have access, and combines that with over-the-air broadcast. With Sezmi's combination of over-the-air television reception and a broadband network, consumers can conveniently and affordably receive online content and other emerging forms of diverse media content on a screen they already own – the television.

A third important factor is **meeting wireless broadband demand**. The wireless industry has asserted there is a “looming spectrum crisis” due to exploding wireless demand,⁴ but there is little in the record about what the wireless industry can do to address this demand short of obtaining more spectrum. This is particularly peculiar given that, based on the wireless industry's own predictions, spectrum reallocation will do little to address consumer demand. For

³ Pew Research Center, *Wireless Internet Use*, at pp. 4, 32-34 (July 2009) available at <<http://pewinternet.org/Reports/2009/12-Wireless-Internet-Use.aspx>>.

⁴ See, e.g., CTIA Letter at 13.

example, AT&T believes that mobile data traffic will grow 300 times by 2018,⁵ but tripling the amount of commercial wireless spectrum means that only 1% of their demand problem is being solved. The Commission accordingly should be considering whether an ambitious nationwide broadcast spectrum reallocation can be justified if the benefit is so negligible. Given as CTIA explains that the kernel of the wireless industry's consumer demand problem is *localized* congestion,⁶ the Commission should be factoring in the merits of *localized* solutions such as increasing cell densities. More generally, the Commission should be considering whether technological advances, partial substitutes (like Wi-Fi), high-volume storage devices, pricing structure, and complementary services (like Sezmi's) will mitigate the burden on wireless broadband networks and help address consumer demand.

The last important factor is licensee **flexibility**. FCC licensees should have the flexibility to innovate and respond to always changing market demands and technological capabilities. A complementary, hybrid service such as Sezmi's, which delivers popular video programming by broadcast and less popular niche content by broadband, reduces the load on wireless networks and helps wireless providers manage consumer demand. Sezmi can provide this service because broadcasters have the flexibility to utilize their spectrum to participate in the hybrid network that makes the innovation and affordability possible. This is but one example of the benefit that regulatory flexibility can offer to licensees and consumers alike. Sezmi urges the Commission to give all licensees the flexibility they may need to meet consumer demands and to refrain from employing compulsory measures that deny creativity and responsiveness to market actors.

⁵ *Id.*

⁶ *Id.* at 15.

Question A(4): How do broadcasters use the capabilities of digital television today?

Question A(5)(a): What innovations in applications, services, or business models will create synergies between broadband and broadcast services, or other new value from currently licensed spectrum?

Question A(6): Consumers are moving to more fragmented and time-shifted television viewing. What impact will this trend have?

A number of broadcasters are using their digital capabilities to partner with Sezmi to roll-out its service in 2010 across the country. As explained in the preceding section, Sezmi delivers content to consumers by efficiently relying on both broadcast and broadband. Popular video programming is delivered via broadcast, and the remaining programming is delivered via broadband. Sezmi subscribers access programming using a set top box (STB) that can store up to 1000 hours of content. The result is an offering that makes content instantly available for the consumer to watch, while not overloading the consumer's Internet connection.

This complementary use of broadcast and broadband, coupled with high-capacity storage devices, is the type of synergistic innovation about which the Commission inquires. The Sezmi service takes advantage of the trend in time-shifting and storage to allow for highly efficient program delivery. Sezmi launched the service in Los Angeles in mid-November with a very positive response. Consumers highlighted the "simplicity" and the "affordability" of the service as being key differentiators that is enabled by a hybrid broadcast/broadband model coupled with high-capacity storage.

And this is just the beginning. With successful roll-outs across the country, Sezmi can attain scale and offer even more affordable services. Moreover, further technological innovations in program delivery and storage capability assuredly will create even greater synergies and services, potentially transforming the television receiver into an affordable portal

that can eliminate barriers to broadband adoption. Sezmi accordingly urges the Commission to recognize the value of nascent broadcast spectrum uses in the content delivery ecosystem.

Respectfully submitted,

SEZMI CORPORATION

/s/

By: _____

James M. Burger

Scott S. Patrick

DOW LOHNES PLLC

1200 New Hampshire Avenue, NW

Suite 800

Washington, DC 20036

(202) 776-2000

Its Attorneys

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