

## **Michelle Vetterkind**

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**From:** Michelle Vetterkind  
**Sent:** Tuesday, February 20, 2018 8:30 AM  
**To:** Michelle Vetterkind  
**Cc:** Brandon Scholz  
**Subject:** WBA: "White Space" Internet Consideration  
**Attachments:** "White Space" Internet Consideration - Backgrounder.pdf

Members of the Wisconsin Assembly and Senate,

The Wisconsin Broadcasters Association Board of Directors recently discussed the issue of "white space" as it relates to the Joint Resolutions (AJR-100 and SJR-96) under consideration in the Legislature.

As part of that conversation, I'm pleased to share a memo with you that explains the "white space situation" in Wisconsin and how it could affect television viewers.

The attached memo was compiled by Richard Wood, a local expert in broadcast engineering.

The Wisconsin Broadcasters Association Board of Directors and our radio and television stations across the state look forward to continuing this conversation.

Thank you for reviewing the memo and taking into consideration the concerns it raises.

My best,

Michelle

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# Wisconsin Broadcasters Association



The Wisconsin Broadcasters Association fosters and promotes the development of the arts of aural and visual broadcastings in all its forms...

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Feb. 20, 2018

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## **“White Space” Internet Consideration - Background**

The Wisconsin Broadcasters Association is pleased to provide this information to help interested parties understand this highly complicated issue.

### Background

The Federal Communications Commission (FCC) recently held an auction of broadcast airwaves to make more channels available to wireless services. As part of the broadcast spectrum incentive auction, the FCC is authorized to “repack” the television band by assigning television stations to new channels. This process will pose significant challenges for the broadcast industry. Repacked television stations will need to complete channel moves. Radio stations and non-repacked television stations might also be affected if they are located on or near a tower with a repacked television station.

Over the air broadcasting is separate from cable TV and satellite TV and is a free service to the public. Television broadcasters have been providing free over the air TV service since the 1940's. Along with TV stations, these repacked channels service low power TV translators and wireless microphone signals.

During the TV repack, tech companies such as Microsoft chose not to buy the spectrum needed to build out their services. Instead these providers are attempting to use “free” over the air channels for their service.

### Impact

With the TV repack there are fewer frequencies available for existing services. The plans of some tech companies like Microsoft to occupy some of these frequencies might preempt or disrupt existing services. The FCC has limited the range of the fixed internet base stations for rural broadband to approximately nine miles and the handheld devices will have even less

coverage. This means that for rural users, towers will have to be setup approximately every four or five miles to make the system viable. Each of these sites will need to be connected by fiber cable or another wireless signal (which would put even more pressure on a shrinking commodity).

### Summary

**Considering the high number of current users of TV frequencies, adding more users will cause service degradation for all. The current equipment that is being sold for “white space” internet use has very limited data speeds. The number of tower sites that would be required to provide a viable network is disproportionately large. For example, Waukesha County is 581 square miles and would require at least 150 towers for effective coverage. Using this example, if we multiply the number of towers by 72 counties, that equals 10,800 towers. County zoning offices would have to issue at least this many permits because any less of a build out for this rural broadband initiative would be ineffective at best and cause more harm than good.**

The following definitions might be helpful in understanding the highly technical nature of this issue:

White Space - TV band frequencies from TV Channel 2 (54 MHz) to Channel 36 (610 MHz) that are not used by a local full power full service television broadcaster.

Repack – The FCC-administered reduction of the total number of channels available to TV stations to Channel 2 to Channel 36 to make frequencies available for auction. TV stations previously had access to Channel 2 to Channel 51.

TV Translator – A low power TV transmitter repeating the program of a full power local station. This type of device is used frequently by full power stations in western and northern Wisconsin to fill in their service coverage areas due to terrain issues. These devices use existing “White Spaces”.

Wireless Microphone - Wireless device used in public events like church services and sporting events. As an example, during a Packers home game there can be as many as 200 wireless microphone devices in service. These devices use existing TV “White Spaces”.

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