

## Re: Atheros, hardware access layer, collisions

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**From:** Sam Leffler (*sam\_at\_errno.com*)

**Date:** 07/26/05

Date: Tue, 26 Jul 2005 11:55:47 -0700  
To: David Malone <dwmalone@maths.tcd.ie>

David Malone wrote:

>>I just had a lengthy discussion with a couple of guys about the 802.11  
>>protocol. One had said that the random delays inserted before  
>>transmission was one of the \*IFS delays (can't remember which  
>>now), and that it was a standard 802.11 number, not a random  
>>delay.  
>  
>  
> Yep – in 802.11b CWmin is fixed at 32 and the random number is  
> chosen between 0 and CWmin-1 (unless you have a collision). The  
> recent Atheros cards support adjusting CWmin as part of their  
> WME/802.11e support.

Well "recent" is any 5212 or 5211 card so you're talking about any Atheros card except the 5210—which is not so recent. It may also be possible to program the 5210 but given how few of them are in use it's hardly worth the effort (and they'll never support WME).

>  
>  
>>The thing he said was that if carrier sensing "sensed" that the channel  
>>was busy, it would not decrement the CW, effectively NOT transmitting  
>>this packet until the channel is clear.  
>  
>  
> That's correct, but it probably takes a few microseconds for the  
> carrier sense to kick in (if there wasn't a delay there would  
> be almost no need for the random backoff). That's why you'll  
> also have to have your transmissions synchronised very closely.  
>  
>  
>>Is the carrier sensing something done in the HAL, or is it embedded  
>>in the hardware itself?  
>  
>  
> I'm afraid I don't know – Sam might.

freebsd-hackers: Re: Atheros, hardware access layer, collisions

Hardware.

Sam

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freebsd-hackers@freebsd.org mailing list

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