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Morality of Buying/Selling Legacy WiFi

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What is Keith talking about? Isn't this supposed to be about Wireless LAN technologies? What's all this "morality" bit anyway?

I should have labeled this as "**Here Be Dragons**" instead.



Many years ago, when cartographers didn't actually know what existed, they would draw mythical creatures to supposedly inhabit the unknown lands. The term in Latin was *hic sunt dracones* for "Here Be Dragons".

Looking back from our position where we *know* there are no dragons, and *know* the earth isn't flat, it's kind of humorous to look to the beliefs of these old cartographers and those who purchased these maps.

Wouldn't you think it a bit "immoral" if a current-day shop sold you one of these old maps to help you find your way around our big world?

Likewise, people who prey on the weak-minded by selling legacy WiFi equipment are in the same boat.

Yes, I know that's a pretty strong statement. But let me explain with a couple of points:

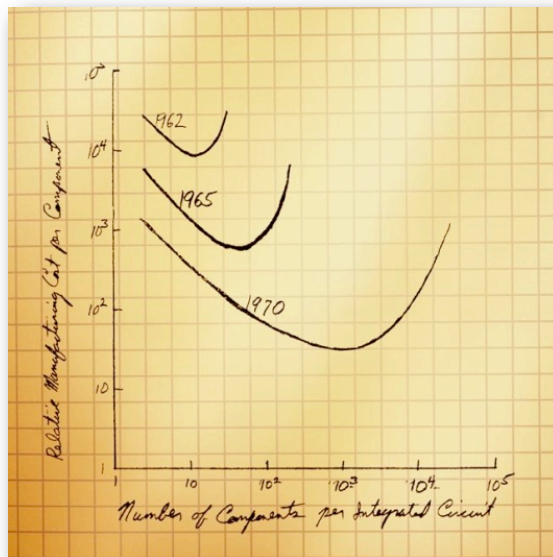
Any 802.11n Device is Better than Any 802.11abg Device

This holds true for client side devices, or access points. They call all non-802.11n devices LEGACY for a reason.

.11n devices are faster, smarter, and 'listen' better than anything that came before. Thus selling or buying any non-.11n device - also known as Legacy devices is tantamount to selling a map of the world being flat. Patently wrong.

Moore's Law Wins

Over the past 40+ years the simple concept put forth by Intel's Moore has held fairly true. (Yes, I know there are current reasons to talk about Moore's law into the future - but it's fine for our discussion here)



Every 18 months or so, the transistor count (read smarts) on a chip doubles.

So since the 802.11b devices first starting hitting the marketplace, we've had at least five Moore's Law cycles - netting approximately 32 times more computing power available to WiFi chipset designers today, than in the past.

So any 802.11n device will have much more computing power than anything in the legacy sphere.

802.11 Trumps Legacy

The technology behind 802.11n has been coming for years now. Even before the 802.11g committee put the finishing touches on their handiwork, the 802.11n committee was already started to make technological innovations to improve the 802.11 protocol. They knew *how* to make 802.11 go faster, but had to wait years for the hardware platforms to catch up.

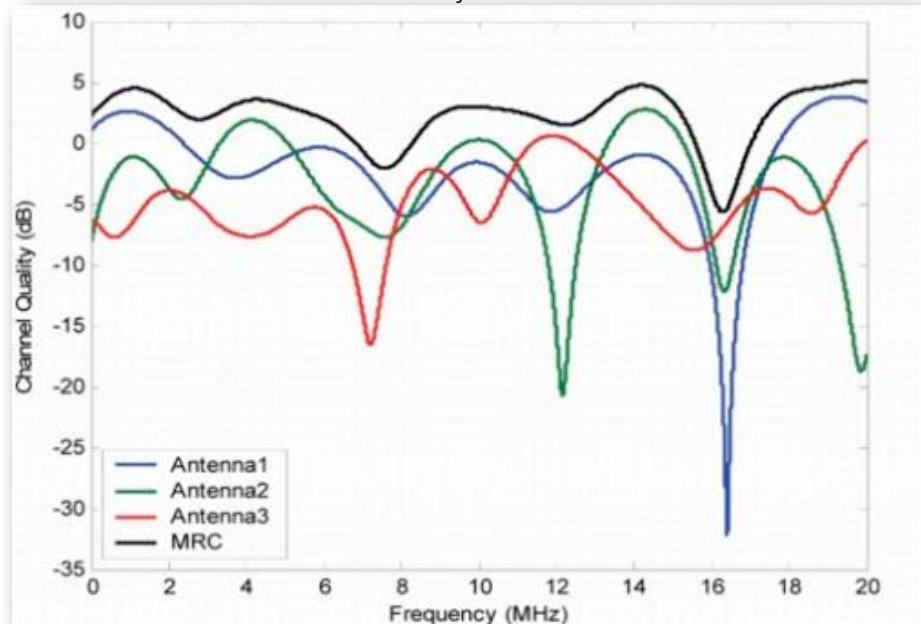
This isn't the place, but there are many new technological innovations

for making .11n superior in every way to the legacy devices.

Updates at the PHY, as well as at the MAC layers. With the incorporation of full Digital Signal Processors included in the WiFi silicon, we can now take advantage of the many new acronyms that came along with the .11n standard. Things like SDM, STBC, FEC, ASEL, MRC, MCS, and even MIMO. And yes, it is pronounced “My Moe...” they had vote.

To highlight only one of the many advances incorporated in .11n - and one of my personal favorites.

Maximal Ratio Combining - this alone is worth moving the .11n in the enterprise. This technique is akin to the older “Diversity” antennas - but with diversity the two antenna receive patterns are compared, and the weaker one thrown away.



With MRC - all the antenna patterns are evaluated in real-time, using those new on-board Digital Signal Processors - and with this extra processing power compare multiple antenna signals, and take only the best of each before moving on to work with the combined best signal available.

This single bit alone makes every .11n AP much better able to discern and process client RF signals!

Production Costs are The Same

It shouldn't be too hard to believe that the actual hard production costs of .11n APs is almost exactly the same as legacy Access Points! The chipsets might even be cheaper today for .11n chips than for legacy chips. (since there is less demand for legacy, those chipsets have a slightly higher price)

So if the costs to produce Legacy or .11n devices are the same, why then do manufacturers charge so much more?

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I'll give you the point that vendors would like to recoup some of their R&D costs for producing these new technologies. And by adding costs for this to their new product lines, they may in some small way justify the additional retail fees for .11n over Legacy.

But this is a very small reason.

The main reason is because they can. Plain and simple greed. As consumers your firms also want the benefits inherent in .11n and so you are willing to pay a premium for these features.

Some vendors go way overboard, well past any line of propriety and charge extra licensing fees to "turn on" .11n features. This vaporware is sold as an "extra" in order to sell into a company with new hardware - that supports .11n - but has those features behind a license trigger. Thus charging extra licensing fees for something that was already paid for.



Can you imagine heading down to your local electronics retailer and buying a new HD LCD Panel TV - and then after getting it home, realizing it only shows Standard Def TV... you can "upgrade" it to display High Definition TV though paying an extra "license" fee to the manufacturer? Ludicrous to the extreme. Yet some WiFi vendors do just the same thing!

Your Decisions

If you are a reseller or vendor of WiFi equipment, why are you still selling a known inferior product?

If you are a buyer of WiFi equipment why are you specifying or purchasing known inferior equipment?

Either of these is akin to a current-day map-maker selling maps showing “Here Be Dragons” by the edge of the flat world!

Once you *know* 802.11n is superior in every way, and costs the same, why again are you doing this?

In the final analysis, every day you delay the movement to an “all-.11n” environment, you are delaying the massive benefits of .11n Greenfield.

Conclusion

I encourage you to walk into the Purchasing Office *tomorrow* and get them to raise their right hand and take the following oath:

“I will never again buy any non .11n equipment, ever”



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