Dear Sir/Madam,

I am a wireless development engineer. I have been developing wireless technology since 1995. I was a member of the University team which developed 802.11a technology in collaboration with the CSIRO. For the past three years, I have been developing world leading 802.11b receiver technology. Currently I am designing and building a prototype for the next generation of space-time coded wireless LAN networks.

Until recently, it was thought that available wireless spectrum was limited, necessitating strict regulations to apportion a precious resource. Recent advances in space-time coding and smart antennas have shown that it is possible to resolve multiple users based on their spatial positions. This means that a number of users can each simultaneously use exactly the same wireless spectrum to full capacity. It is a bit like having a wire connecting each communicating party, only the wire isn't actually there.

In other words, one can multiply the available data capacity, effectively multiplying the 'amount of spectrum'.

As computing power increases, better methods for removing interference between users will be implemented, so the available wireless data capacity increases. Computing power is currently doubling every eighteen months, with no end in sight.

These increases in capacity are not a theoretical artifact. Bell Laboratories, in the United States, have demonstrated a
working prototype which multiplies available capacity by a factor of ten. Their work is available on the world wide web (reference [1]).

Any changes to the rules which govern radio spectrum must consider a future where there may be no limits on available wireless capacity. Does it make sense to tightly regulate an unlimited resource?

Yours Faithfully
John Dalton

References

[1] http://www.bell-labs.com/project/blast/

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