

**IEEE 802.11  
Wireless Access Method and Physical Layer Specifications**

**Title: Alternatives & Arguments on Some Issues**

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**Abstract:**

This paper presents opinions on some of the issues in the 802.11 Issues Document 92/64. When reading through the issues document for issues addressed by another document, I noticed these issues about which I also had some thoughts.

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**13.7 Is MAC support required for Power Control?**

Assuming power control means control of signal strength - Yes. Determining signal strength required to converse with a given station requires interpreting the contents of MSDUs. The PHY must not be required to do this. The MAC may not understand that telling the PHY to improve communications is telling it to adjust signal strength, but this is still MAC support.

**13.8 Is MAC support required for antenna diversity?**

Yes. Same answer as above.

**15.4 What are the services or functions unique to wireless networks?**

4) Overlapping networks.

**16.4 What does graceful degradation mean?**

(1) As a station moves out of range of a PCF its performance may degrade, but in doing so it should not interfere with the operation of other stations still in the PCF.

(2) As traffic increases in a BSA performance of each individual station should degrade gradually, the BSA should not just hit a point where it ceases to function.

**18.4 Will the standard allow PHY data rate to vary as a function of signal quality?**

If the standard allows PHY data rate to vary, the criteria for changing should be up to the implementer.

**18.5 Is data rate 'agility' only a PHY matter?**

No. If stations are functioning at various speeds the MAC must maintain (somehow) the mapping of stations to speeds because the PHY cannot interpret address fields on MSDUs.

**19.4 Can some minimum Bit Error Rate be assumed for a PHY? If so, what is it? Is it constant or variable?**

According the document 93/45 Joint MAC/PHY Subgroup Minutes of March 1993, the PHY group reported that the raw bit error rate provided is  $10^{-5}$ .

**19.9 How will the standard address the 'range' related to Data Density?**

There is an editor's note on this issue asking for clarification help, so ...

There is a section in Document 92/40 "Functional Requirements Draft", called Other Functional Issues. A category in that section is Data Density, and a bullet item in that category is Range. Suggest that this issue was intended to mean:

19.9A Will the standard specify a minimum or maximum coverage area per station?

19.9B If so, what are the values?

**25.3 What is the channel definition: PHY? logical?**

Channel = an instance of media use that can coexist with other instances of media use for the purpose of transporting MSDUs. This is a logical definition.

**28.1 How important is the physical size?**

Although extremely important to some implementations, should not be considered as any kind of functional requirement for 802.11 .