# functional debugging performance comment / question

I am taking this embedded systems class as a review given I've worked in this area in the past, and also because I wanted to get to know

your system you are using for this online class.  I am also a bit behind in it for many reasons, so about one week behind the recommended

syllabus suggestion (just finishing C9) and in that section you discuss the functional debugging performances.

Yesterday I attended an Agilent presentation on a "spectrum analyzer" which I've never used before, but the person sitting next to me said

that that would have been something that you could use to debug a wireless driver I had ported once for an embedded system on which I had

worked.  Having just watched the performance of debugging video for C9, I'm guessing that the "spectrum analyzer" falls in the realm of non-intrusive

debug tool as the logic analyzer is considered for observing outputs from an embedded system.  At the time I did this (14 years ago!) I only

had a sniffer tool to look at ethernet and USB packets coming out on those wires, but no wireless debug tool, so perhaps that would have been a

non-intrusive tool I could have used for that?

Also, I seem to recall and I don't know if it is going to be covered in this class, that when you have to use print statements,

the most time consuming and intrusive tool for debugging an embedded system, that your code may not even work correctly if you made

the mistake of putting a print statement in an interrupt service routine, because of all the context switching you do saving register state,

return address, etc.  So even if there is no bug in your code, your code could be so slowed down by putting a print statement in an interrupt

service routine that that in itself could cause a bug in your code due to too much time spent saving state combined with the time it takes

to do a print statement.

I'm from ancient times though, and these comments were made to me when I was working in those ancient times, but thought I'd mention it,

given this was the week (C9--I'm a week behind in my review of taking this class!) for debugging performance.