



American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

August 9, 2002

RE: Microsoft Corporation

FCC ID: C3KTR1

After a review of the submitted information, I have a few additional comments on the above referenced Application.

- 1) Taiyo Yuden test site is listed with the FCC as required for 2.948. However the FCC site does not show Taiyo Yuden listed as an Accredited test lab as required to perform testing for DoC authorizations.
- 2) The FCC has required testing of frequency hopping systems to be hop-stopped for tests such as the spurious emissions unless the manufacturer can not provide this mode of operation (see attached document, section 15.31(m)). The purpose behind this is to ensure that the emissions can be adequately captured given that when a unit is typically hopping the results will depend on the hopping speed, spectrum analyzer sweep times, spectrum analyzer span, and maximizing the azimuth and antenna height. Without a "hop-stopped" signal, obtaining fully maximized results for azimuth and antenna height is incredibly time consuming (given the spectrum analyzer sweep times or capture times necessary to maximize the signals) and can still yield questionable results. Please note that the sweep time can significantly affect how the measurements are captured or whether they are missed. Also with wider spans, dynamic range gets reduced and spectrum analyzer may not accurately capture and or display the emissions. Testing while the device is hopping also questions how the devices was fully maximized for azimuth and antenna height given the difficult nature of obtaining data at any given point. Please provide
 - a) new results/plots with the hopping function disabled for low, middle, and high channels, or
 - b) If the manufacturer can not provide a hop stopped mode of operation, then please explain why and provide better supporting detail regarding how the device was fully maximized (spectrum analyzer settings and how care was taken to obtain maximum azimuth and antenna height given the difficulty in fully capturing highest emissions across the band during hopping) when the results were obtained.
- 3) You stated that the unit may derive its power from an already approved host. 15.207(d) requires "Devices that include, or make provisions for obtaining their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits". The FCC does not require to test all possible configurations of PC's and peripherals as this would not be practical. However they do require you to test for the known configuration (if this exists), or if a known configuration does not exist to test using a single typical configuration. Please note that we have seen the cases where the approved hosts conducted emissions vary (pass vs. fail) due to the peripheral(s) attached.
- 4) FYI, we are still awaiting certain items as specified in your last reply.

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Examining Engineer

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The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.