American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

November 10, 2002

RE: Samsung EMC
FCC ID: E2XSWL-2200U

I have a few comments on this application:

1.) This is a “stick radio” LAN adapter which is capable of plugging directly into a USB port. It is therefore excluded from RF Category “Mobile” because it can be used within 2.5cm of the body. Please revise the RF Exposure exhibit.

RESPONSE:
The RF exposure statement was modified in the RF exposure exhibit and the manual. Please refer to these revised exhibits uploaded with this response.

2.) Please revise manual to reflect RF Category “Portable” configuration.

RESPONSE:
The manual has been revised to reflect the RF portable category; please refer to the revised manual uploaded with this response.

3.) Show math in RF Exposure exhibit.

RESPONSE:
The EIRP was determined on the through substitution measurement; it represents the maximum EIRP for all the channels. The SAR measurement will prove that the measured EIRP is the actual RF transmitted power, instead of the calculated EIRP. The RF exposure distance was determined by using EIRP at 6.8 dBm, the calculation is based on the FCC RF exposure limit of $1mW/cm^2$ at 2.4GHz.

4.) The October 22 attestation by Samsung claims the conducted Pout is 16dBm. Please note this is above the current low threshold limits according to the TCB Exclusion list of July 2002. SAR testing is required for all “Portable” devices used within 2.5cm of the body with either a radiated or conducted power in excess of 60mW/f (GHz).

RESPONSE:
The SAR evaluation report has been uploaded with this response.

5.) FYI: please also note that the FCC doesn’t care about “average” antenna gain – the only units which are valid are peak.

RESPONSE:
Noted.

6.) Test Report must quote Pout in terms of conducted power. Using data supplied by antenna manufacturer combined with Samsung's admitted conducted power; I would expect to see peak radiated power on the order of +17.8dBm. Please explain.

RESPONSE:
You are right, the theoretical EIRP would be the manufacturer's verified conducted power and the maximum vendor-provided free space antenna gain value (unloaded characteristic, i.e. without any EUT housing). Therefore, the EIRP data was determined through the substitution measurement method; it represents the actual maximum EIRP transmitted for all the channels. The antenna gain provided by the antenna vendor is not a loaded antenna gain specification, i.e. gain-specification within a typical EUT housing. When the antenna is installed inside the EUT, the gain characteristic is different from the free space gain value. The SAR measurement proves that the measured EIRP is the actual RF transmitted power, instead of the calculated EIRP.

7.) Please demonstrate that when this device functions as a computer peripheral it will not make an existing Class B computing system fail, or provide evidence of DoC.

RESPONSE:

Please see the DoC uploaded with this response.