DRAFT

To: Fatih Mehmet Yurdal yurdal@ero.dk

Re: Public consultation on Draft ECC Report 120 ("Technical requirements for UWB DAA (Detect And Avoid) devices to ensure the protection of radiolocation in the bands 3.1-3.4 GHz and 8.5-9 GHz and BWA terminals in the band 3.4-4.2 GHz")

Date: 12 May 2008

Dear Mr. Yurdal,

IEEE 802 develops standards for mobile and fixed broadband wireless access systems that operate in various frequency bands, including those below 9 GHz. We have noted the Draft ECC Report 120 on "Technical requirements for UWB DAA (Detect And Avoid) devices to ensure the protection of radiolocation in the bands 3.1-3.4 GHz and 8.5-9 GHz and BWA terminals in the band 3.4-4.2 GHz", paying particular attention to the protection that Detect And Avoid (DAA) affords to both mobile and fixed BWA terminals in the 3.4-4.2 GHz band.

We support the 99.75% detect and avoid protection reliability specified in the report. However, we have some concerns that DAA may not be able to practically provide this level of support to mobile BWA systems.

In particular, we recommend that, in the development of DAA, ECC should consider that:

- Mobile stations (MSs) can, and are likely to, support power saving features such as idle and sleep modes, and/or multicast and broadcast services (MBS). Such stations cannot be presumed to provide a continuous or periodic uplink transmission.

- An MS typically transmits using a large dynamic range based on uplink power control. The MS is not always required to support high order modulation in the uplink. Furthermore, a base station (BS) may reduce the effective transmit power delivered to an MS close to the BS in order to boost the power delivered to a MS at the cell edge. Ignoring these facts could result in an effective error in the distance calculation larger than accounted for in Draft Report 120.

- Network deployments that are based on mobile BWA using OFDMA operate with lower receive power levels than fixed BWA deployments. Therefore, the performance degradation may be significantly more severe in mobile systems than in fixed ones.

- For FDD BWA operation, DAA should protect the band in which an uplink signal is detected. Moreover, any detection level for the FDD downlink needs to take into account the typical FDD BWA receiver sensitivity.

- Future BWA systems are expected to operate with larger bandwidths , different frame structures, and further improvements to receive sensitivities for MSs.

We hope that these considerations are useful in the refinement of the Draft Report. If the report is adopted, in original or modified form, we recommend that ECC include a process for periodic review of DAA procedures. We would appreciate being advised of any future activities in this area so that we may provide comments.

Yours sincerely,

Mike Lynch
802.18 TAG Chair