



Unit 7 Greenways Business Park
Bellinger Close
Chippenham
Wiltshire SN15 1BN

Telephone: 01249 800100
Facsimile: 01249 800101

8th December 2010

PCTEST Engineering Laboratory Inc.
6660-B Dobbin Road
Columbia
MD 21045
USA

RE: Application of Source Based Averaging to the RF Exposure Calculation.

To whom it may concern,

The IPWireless Outdoor UE is a time division duplex W-CDMA based wireless modem and the design/operation is based on the UMTS 3GPP TDD air interface requirements.

The air interface supports a radio frame length of 10ms, this radio frame is divided into 15 timeslots each of duration $666.67\mu\text{s}$. As defined in the applicable 3GPP/ETSI documentation, of these 15 timeslots, in the worst-case configuration timeslots 0-2 are assigned to the downlink (modem receive) and timeslots 3-14 are assigned to the uplink (modem transmit).

Downlink

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
---	---	---	---	---	---	---	---	---	---	----	----	----	----	----

Uplink

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
---	---	---	---	---	---	---	---	---	---	----	----	----	----	----

Of the timeslots assigned to the uplink, timeslots 4-14 are used to transmit the subscriber's data and control signals to the base station. Timeslot 3 is reserved for the call setup procedure as a call can only be initiated by the subscriber. Timeslot 3 transmits the Random Access CHannel (RACH) to the base station as part of the call setup procedure, once the call setup procedure has been completed, the RACH is no longer transmitted for the remaining duration of the call and the Outdoor UE only transmits on the remaining timeslots 4-14.



Based on the inherent operation of the Outdoor UE, source based averaging has been applied to the MPE calculations with the unit transmitting on 12 out of 15 timeslots as this is worst-case operation of the unit when transmitting.

Yours sincerely

A handwritten signature in black ink, appearing to read "P. Warburg", with a long, sweeping underline.

Peter Warburg
Principal Engineer
IPWireless Inc.