

STA APPLICATION

Date: 8/30/05

File Number:

Full Company Name: Intel Corporation

FRN of Company or Contact: 0009362237

Please complete all sections below with entirety.

| | |
|--------------------------|--|
| Full Contact Name: | Mark Hatala |
| Contact Mailing Address: | 1515 Route 10 Parsippany, New Jersey 07054 |
| Event Name | Glenfield Field Testing |
| STA Start / End Dates : | October 1st 2005 to September 31st 2007 |

Description of Experiment or Research – Which Needs to Include the Following

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| <p>Specific Objectives to be covered (detailed):</p> <p>Intel is developing new WiMAX components that are customizable and programmable. Development of such equipment requires field testing of these units. Testing will use Intel pre-production fixed unit equipment named “Glenfield.” In addition Redline Communication, RedMAX Subscriber Unit (SU-0), will be used as the mobile units. Testing will be conducted both indoors and outdoors with unit separation not to exceed 16.1 kilometers. Included in testing will be variations of modulation schemes and channel bandwidths.</p> |
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Description of equipment (detailed):

The base station platform is an Intel board level pre-production device identified as Glenfield for baseband processing. The PHY/MAC implementation is based on a Picochip PC102 and an IXP2350 processor. The Glenfield system includes a Filtronics (CY151F1 fixed for FDD/TDD) 3.5GHz, high efficiency multi-element transceiver.

The first eight mobile units are the Redline Communication, RedMAX Subscriber Unit (SU-0), based on the Intel PRO/Wireless 5116 device.

The last mobile unit is an Intel board level pre-production device identified as Glenfield for baseband processing. The PHY/MAC implementation is based on a Picochip PC102 and an IXP2350 processor. The Glenfield system includes a Filtronics (CY151F1 fix for FDD/TDD) 3.5GHz, high efficiency multi-element transceiver

Transmitter Equipment and Station Details

| | |
|-------------------------------|---|
| Equipment Manuf / P/N: | Intel pre-production “Glenfield” device with Filtronics CY151F1 Transceiver and Redline RedMAX Subscriber Unit (SU-0) |
|-------------------------------|---|

| | | | |
|---|----------|----------------------|-----------------|
| Number of Fixed Units: | 1 | | |
| Location of Fixed Antennas (Lat / Lon, Street Address) | 1. | Intel | |
| | 2. | 1515 Route 10 | |
| | 3. | Parsippany, NJ. | |
| <u>NAD 27</u> | | <u>NAD 83</u> | <u>x</u> |
| | 4. | N 40 50 18 | |
| | 5. | W 74 27 17 | |

| | | | |
|---|----------|--|--|
| Number of Mobile Units | 9 | | |
| Radius of Mobile Unit location from Fixed station(s) (specify km) | 1. | Redline unit maximum 16.1 km from fixed unit | |
| | 2. | Redline unit maximum 16.1 km from fixed unit | |
| | 3. | Redline unit maximum 16.1 km from fixed unit | |
| | 4. | Redline unit maximum 16.1 km from fixed unit | |
| | 5. | Redline unit maximum 16.1 km from fixed unit | |
| | 6. | Redline unit maximum 16.1 km from fixed unit | |
| | 7. | Redline unit maximum 16.1 km from fixed unit | |
| | 8. | Redline unit maximum 16.1 km from fixed unit | |
| | 9. | Intel unit maximum 16.1 km from fixed unit | |

| TX Frequency Range / Tolerance | HIGH (MHz) | LOW(MHz) | % Tolerance |
|---------------------------------------|-------------------|-----------------|--------------------|
| Station Number | 1. 3400.0 | 3600.0 | 0.001 |
| | 2. 3400.0 | 3600.0 | 0.004 |
| | 3. 3400.0 | 3600.0 | 0.004 |
| | 4. 3400.0 | 3600.0 | 0.004 |
| | 5. 3400.0 | 3600.0 | 0.004 |
| | 6. 3400.0 | 3600.0 | 0.004 |
| | 7. 3400.0 | 3600.0 | 0.004 |
| | 8. 3400.0 | 3600.0 | 0.004 |
| | 9. 3400.0 | 3600.0 | 0.004 |
| | 10. 3400.0 | 3600.0 | 0.001 |

| Transmitter Parameters | Modulation | Emission Designator | Bandwidth | Power Out dBm |
|-------------------------------|-------------------|----------------------------|------------------|----------------------|
| Station Number | 1. BPSK | W1D | 3.5 MHz | +32 |
| | 1. QPSK | W1D | 3.5 MHz | +32 |
| | 1. 16QAM | W1D | 3.5 MHz | +32 |
| | 1. 64QAM | W1D | 3.5 MHz | +32 |
| | 1. BPSK | W1D | 7.0 MHz | +32 |
| | 1. QPSK | W1D | 7.0 MHz | +32 |
| | 1. 16QAM | W1D | 7.0 MHz | +32 |
| | 1. 64QAM | W1D | 7.0 MHz | +32 |
| | 1. BPSK | W1D | 10.0 MHz | +32 |
| | 1. QPSK | W1D | 10.0 MHz | +32 |
| | 1. 16QAM | W1D | 10.0 MHz | +32 |
| | 1. 64QAM | W1D | 10.0 MHz | +32 |
| | 2. BPSK | W1D | 3.5 MHz | +20 |
| | 2. QPSK | W1D | 3.5 MHz | +20 |
| | 2. 16QAM | W1D | 3.5 MHz | +20 |
| | 2. 64QAM | W1D | 3.5 MHz | +20 |
| | 2. BPSK | W1D | 7.0 MHz | +20 |
| | 2. QPSK | W1D | 7.0 MHz | +20 |
| | 2. 16QAM | W1D | 7.0 MHz | +20 |
| | 2. 64QAM | W1D | 7.0 MHz | +20 |

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|--|----------|-----|---------|-----|
| | 3. BPSK | W1D | 3.5 MHz | +20 |
| | 3. QPSK | W1D | 3.5 MHz | +20 |
| | 3. 16QAM | W1D | 3.5 MHz | +20 |
| | 3. 64QAM | W1D | 3.5 MHz | +20 |
| | 3. BPSK | W1D | 7.0 MHz | +20 |
| | 3. QPSK | W1D | 7.0 MHz | +20 |
| | 3. 16QAM | W1D | 7.0 MHz | +20 |
| | 3. 64QAM | W1D | 7.0 MHz | +20 |
| | 4. BPSK | W1D | 3.5 MHz | +20 |
| | 4. QPSK | W1D | 3.5 MHz | +20 |
| | 4. 16QAM | W1D | 3.5 MHz | +20 |
| | 4. 64QAM | W1D | 3.5 MHz | +20 |
| | 4. BPSK | W1D | 7.0 MHz | +20 |
| | 4. QPSK | W1D | 7.0 MHz | +20 |
| | 4. 16QAM | W1D | 7.0 MHz | +20 |
| | 4. 64QAM | W1D | 7.0 MHz | +20 |
| | 5. BPSK | W1D | 3.5 MHz | +20 |
| | 5. QPSK | W1D | 3.5 MHz | +20 |
| | 5. 16QAM | W1D | 3.5 MHz | +20 |
| | 5. 64QAM | W1D | 3.5 MHz | +20 |
| | 5. BPSK | W1D | 7.0 MHz | +20 |
| | 5. QPSK | W1D | 7.0 MHz | +20 |
| | 5. 16QAM | W1D | 7.0 MHz | +20 |
| | 5. 64QAM | W1D | 7.0 MHz | +20 |
| | 6. BPSK | W1D | 3.5 MHz | +20 |
| | 6. QPSK | W1D | 3.5 MHz | +20 |
| | 6. 16QAM | W1D | 3.5 MHz | +20 |
| | 6. 64QAM | W1D | 3.5 MHz | +20 |
| | 6. BPSK | W1D | 7.0 MHz | +20 |
| | 6. QPSK | W1D | 7.0 MHz | +20 |
| | 6. 16QAM | W1D | 7.0 MHz | +20 |
| | 6. 64QAM | W1D | 7.0 MHz | +20 |
| | 7. BPSK | W1D | 3.5 MHz | +20 |
| | 7. QPSK | W1D | 3.5 MHz | +20 |
| | 7. 16QAM | W1D | 3.5 MHz | +20 |
| | 7. 64QAM | W1D | 3.5 MHz | +20 |
| | 7. BPSK | W1D | 7.0 MHz | +20 |
| | 7. QPSK | W1D | 7.0 MHz | +20 |
| | 7. 16QAM | W1D | 7.0 MHz | +20 |
| | 7. 64QAM | W1D | 7.0 MHz | +20 |
| | 8. BPSK | W1D | 3.5 MHz | +20 |
| | 8. QPSK | W1D | 3.5 MHz | +20 |
| | 8. 16QAM | W1D | 3.5 MHz | +20 |
| | 8. 64QAM | W1D | 3.5 MHz | +20 |
| | 8. BPSK | W1D | 7.0 MHz | +20 |

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|--|-----------|-----|----------|-----|
| | 8. QPSK | W1D | 7.0 MHz | +20 |
| | 8. 16QAM | W1D | 7.0 MHz | +20 |
| | 8. 64QAM | W1D | 7.0 MHz | +20 |
| | 9. BPSK | W1D | 3.5 MHz | +20 |
| | 9. QPSK | W1D | 3.5 MHz | +20 |
| | 9. 16QAM | W1D | 3.5 MHz | +20 |
| | 9. 64QAM | W1D | 3.5 MHz | +20 |
| | 9. BPSK | W1D | 7.0 MHz | +20 |
| | 9. QPSK | W1D | 7.0 MHz | +20 |
| | 9. 16QAM | W1D | 7.0 MHz | +20 |
| | 9. 64QAM | W1D | 7.0 MHz | +20 |
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| | 10. QPSK | W1D | 3.5 MHz | +32 |
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| | 10. BPSK | W1D | 10.0 MHz | +32 |
| | 10. QPSK | W1D | 10.0 MHz | +32 |
| | 10. 16QAM | W1D | 10.0 MHz | +32 |
| | 10. 64QAM | W1D | 10.0 MHz | +32 |

| Antenna Details | Type | Gain (dB) | Beam Width (H) | Beam Width (V) | HAAT (meters) | AMSL (meters) |
|-----------------------|------------------|-----------|----------------|----------------|---------------|---------------|
| Station Number | 1. Sector Panel | 16 | 120° | 6° | -33 | 102 |
| | 2. Sector Panel | 18 | 90° | 6° | NA | NA |
| | 3. Sector Panel | 18 | 90° | 6° | NA | NA |
| | 4. Sector Panel | 18 | 90° | 6° | NA | NA |
| | 5. Sector Panel | 18 | 90° | 6° | NA | NA |
| | 6. Sector Panel | 18 | 90° | 6° | NA | NA |
| | 7. Sector Panel | 18 | 90° | 6° | NA | NA |
| | 8. Sector Panel | 18 | 90° | 6° | NA | NA |
| | 9. Sector Panel | 18 | 90° | 6° | NA | NA |
| | 10. Sector Panel | 16 | 120° | 6° | NA | NA |