

Form 442 Confirmation Number: EL661692
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Item #7

- a) The complete program of research and experimentation proposed including description of equipment and theory of operation.**

Can we convert existing equipment, for one frequency, to a new design and frequency usage, and achieve results that will enable us to sell the newly designed equipment to a specific industry end user?

Use low cost up converted 2.4GHz equipment

Base Station: 500Mw converter output power. (27dBm)

Sector antenna 90 Degree Sector 15.5dBi

-1dBm for cable loss

EIRP 41.5dB under the 25 Watt proposed for the Base Station.

Or

Directional panel antenna 17dBi

Mobile Node:

500Mw converter output power. (24dBm)

Omni antenna 6dBi

-1dBm for cable loss

EIRP 29dB under the 1 Watt proposed for the Mobile Node.

- b) The specific objectives to be accomplished.**

- 1) Determine if we can convert the equipment.
- 2) Will the equipment transmit effectively in the 3.650 – 3.700 GHz range?
- 3) Can we transmit video effectively?
- 4) Can we make the equipment work with “Multipoint” antennas?
- 5) Can we make the equipment transmit Broadband IP?
- 6) Will the signal be relatively “noise free”?
- 7) Can we make the end product cost effective?
- 8) Can we generate a transmission that is “Broadcast Quality”?

- c) How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along line not already investigated.**

Upon completion of our 3.7 experiments we hope to discover new methods and possibilities in delivering bundled services; Video Distribution, Broadband IP access and Voice Services. As this process is developed and perfected our hope is to extend these services to rural and metropolitan areas, where cost effect alternative can be implemented. Although the theory of wireless offering bundled services, such as Video Distribution, Broadband IP access and Voice Services is not new our goal is to bring the theory to fruition and actually implement in test areas.