RESOLUTION NO. 2109

Introduced by Commissioner: Frank Orrell

Exempting Police Department Radio and Radio Modems
from Low Competitive Bidding Requirements

Be it resolved that the Warrenton City Commission, sitting as the Local Contract Review Board, hereby exempts Police Department Radio and Radio Modems from Competitive Bidding Requirements based on the following:

ORS 279.017 (2)(c)   *There is only one manufacturer or seller of the product of the quality required,* as established by the findings in the attached memo from Police Chief Bob Maxfield dated January 5, 2005.

PASSED by the City of Warrenton Local Contract Review Board this __19th__ day of January, 2005.

This Resolution takes effect immediately upon its passage.

APPROVED

Gilbert Gramson, Mayor

ATTEST

Linda Engbretson, City Recorder

WARRENTON POLICE INTEROFFICE MEMORANDUM

TO: LINDA ENGBRETSON, CITY RECORDER

FROM: ROBERT L. MAXFIELD, CHIEF OF POLICE

DATE: JANUARY 5, 2005

SUBJECT: **CITY BID PROCESS/EXEMPTION**

CC:

I have been researching equipment for our Mobile Data Terminal (MDT) grant that was awarded late last year. I have found only one company that meets our needs for radio modems. Esteem Inc. builds radios and radio modems for wireless RF data over VHF frequencies. I received a quote from Esteem which includes $21,000 in radio and radio modem equipment, however, the total package is estimated to cost approximately $44,541.

Esteem only builds equipment to transmit data over VHF frequencies, they do not build mounts, laptop computers or other related equipment that we would need to purchase from other suppliers.

I have looked at many other companies that provide wireless radio modems, however these modems are made to operate with cellular phone systems. Since we do not have very good coverage with cellular phones in Warrenton, my preference was not to use this technology, but to use VHF radio modems which would give us better coverage at a lower cost per unit, without any ongoing cellular phone costs.

The only company that I have found that meets our needs is Esteem. They are one of the top 50 companies in Washington. They are based in Kennewick, Washington.

Therefore, would it be possible to make an exemption to this bid since they are a single source supplier of this type of equipment.

I have attached some basic information about Esteem.

If you require any further information, please do not hesitate to contact me.

ESTEEM

Model 192M

Wireless Solution

ESTeem® wireless modem products provide a "Wireless Solution" by eliminating conventional hard wiring, leased phone lines, or cellular costs.

The ESTeem Model 192M comes with the industry standard RS-232C, RS-422, and RS-485 asynchronous communications ports to give the user a new dimension to "Local Area Networking".

Our packet burst, narrow band, frequency agile, VHF communications products allow the user to create a "Radio Area Network" of up to 255 users on a single frequency. The packet burst communications technique was chosen to give the system very high data integrity in high noise industrial environments. The ESTeem incorporates forward error correction and CRC error checking that provides received data accuracy of greater than one part in 100 million.

Packet Protocols

By using a Carrier-Sensed-Multiple-Access (CSMA) communication protocol no polling station or token is required in the ESTeem network. When an ESTeem has information to send, it will check to see if the channel is clear before transmitting its packet and await an acknowledge. The ESTeem is a Master/Master system, meaning any ESTeem of the same model type can communicate with any other ESTeem of the same model type.
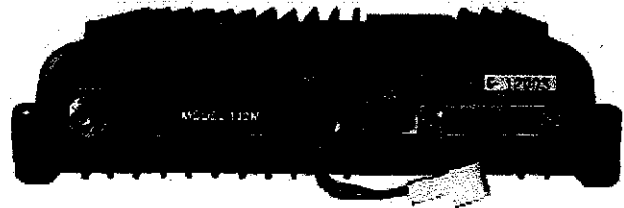
Data Privacy

Transmitted data privacy is insured by the use of an interleaving technique of the modulated data, user definable commands for unit addressing, network addressing, and security lock-out of software programming.

Increased Operating Range

The internal Digi-Repeater feature allows the user to increase operating range by relaying transmissions through a maximum of three ESTeems to reach the destination ESTeem. An ESTeem can operate as an operating node, a repeater node, or both simultaneously for added flexibility.

User Friendly

The ESTeem has user programmable software to allow the configuration of the unit for any application. These commands are saved in the ESTeem's internal non-volatile memory.

FEATURES

Transceiver
- 19,200 bps RF data rate
- 150 to 174 MHz VHF operating frequencies
- Integral Digi-Repeater
- Frequency of operation Software Programmable
- Receiver Squelch Software Programmable
- Remote Programmability of all features over the RF or Infrared Interfaces
- Radio Diagnostic Programs included
- Radio Self-Test
- Packet Monitor
- Received Signal to Noise Ratio
- Received Signal Strength Output (Optional)

Interfaces
- RS-232C, RS-422, and RS-485 communications ports for hardware interfacing
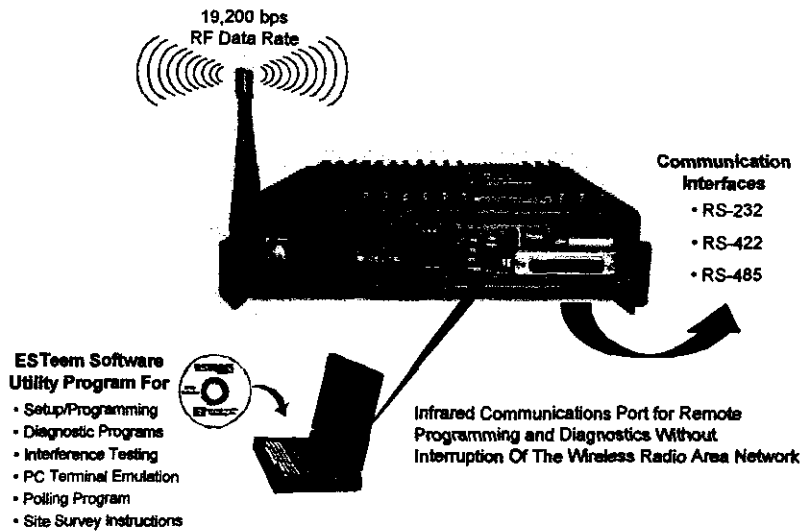- Infrared communication port for Local Programming and Diagnostics

Protocols
- Integral PLC And RTU Protocol Drivers
- Point-to-Point Protocol
- Point-to-Multi-Point Protocol
- Polled With Report-By-Exception Protocol
- Contingent Protocol
- Transparent Protocol

WARRANTY
- One Year

Technical Specifications Model 192M

19,200 bps
RF Data Rate

Communication
Interfaces
• RS-232
• RS-422
• RS-485

ESTeem Software
Utility Program For
• Setup/Programming
• Diagnostic Programs
• Interference Testing
• PC Terminal Emulation
• Polling Program
• Site Survey Instructions

Infrared Communications Port for Remote
Programming and Diagnostics Without
Interruption Of The Wireless Radio Area Network

RF POWER
• 2 Watts (4 Watts optional)

RF DATA RATE
• 19,200 bps @ 25 KHz Channel Spacing
• 9,600 bps @ 12.5 KHz Channel Spacing

RECEIVER SENSITIVITY
• < 1 uV

RECEIVER SQUELCH
• Four Levels · Software
  Programmable

MINIMUM RADIO TURN AROUND TIME
• < 30 ms + Data (W/ACK)
• < 15 ms + Data (W/O ACK)

POWER REQUIREMENTS
• 10.8-16 VDC input voltage
• 400 mA Receive
• 1.5 A Transmit (2 w)
• 2.0 A Transmit (4 w)

SIZE
• 2.45 in. Height
• 8.16 in. Width
• 9.37 in. Length

WEIGHT:
• 5 lbs.

ENVIRONMENT
• -30° to 60° C
• 95% Non-condensing

WARRANTY
• 1 Year

SWITCHES
• CPU Reset
• RS-232/422/485 Setup

LED INDICATORS
• Power On
• Receiver Carrier Detect
• Transmitter Enable
• Link Connect/Disconnect
• Auto Connect Enable
• RS-232/422/485 Framing Error

I/O - CONNECTORS
• RS-232C/422/485 - 25 Pin Sub D
  Female
• Infrared Programming Port
• Antenna Output - TNC
• Input Power - 2 Pin Molex Female

ADDRESSING RANGE
• 1 to 254

DATA INPUT
• RS-232/422/485 Async
• Selectable 600 to 19,200 baud
• 7 to 8 data bits
• Even, Odd or no parity
• One or Two Stop Bits

DATA BUFFERS
• Transmit 4000 bytes
• Receive 4000 bytes

FLOW CONTROL
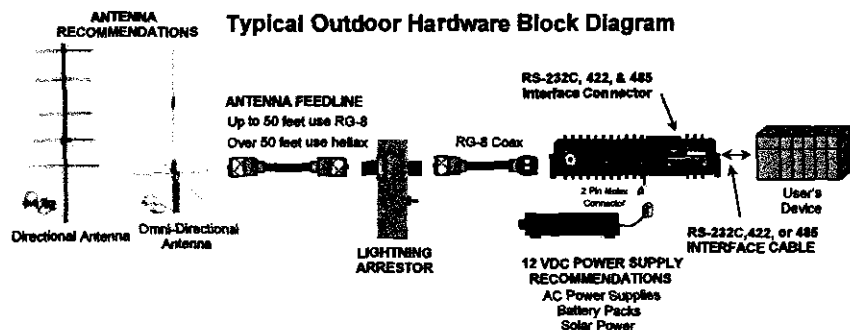• Hardware or Software

DATA TRANSMISSION PROTOCOL
• Carrier Sensed Multiple Access with
  Collision Detection (CSMA-CD)

ERROR CHECKING
• Forward Error Correction and 32 Bit
  Cyclic Redundancy check (CRC)
  with Packet Acknowledge and Retry

FREQUENCY OF OPERATION
• 1500 to 174 MHz.
• 6.25 KHz. (5 KHz Opt.) Channel
  Spacing -Software Programmable
• Simplex

ANTENNA
RECOMMENDATIONS

Typical Outdoor Hardware Block Diagram

RS-232C, 422, & 485
Interface Connector

ANTENNA FEEDLINE
Up to 50 feet use RG-8
Over 50 feet use heliax

RG-8 Coax

2 Pin Molex
Connector

User's
Device

Directional Antenna   Omni-Directional
Antenna

LIGHTNING
ARRESTOR

12 VDC POWER SUPPLY
RECOMMENDATIONS
AC Power Supplies
Battery Packs
Solar Power

RS-232C, 422, or 485
INTERFACE CABLE

ELECTRONIC SYSTEMS TECHNOLOGY. INC.