County of Santa Cruz

Sheriff-Coroner

701 Ocean Street, Suite 340, Santa Cruz, CA 95060
(831) 454-2440 FAX: (831) 454-2353

Mark Tracy
Sheriff-Coroner

Agenda: February 27, 2001

Board of Supervisors
County of Santa Cruz
701 Ocean Street, Room 500
Santa Cruz, California 95060.

RE: Authorization to Release a Request for Proposal for a Wireless Data Communications System for the Sheriffs Office

Dear Members of the Board:

As your Board is aware, the Sheriffs Office, working closely with the County Administrative Office, the County Information Systems Department, the County General Services Department and the Santa Cruz Consolidated Emergency Communications Center (NETCOM) is undertaking a comprehensive reevaluation, reconfiguration and improvement of its technology and information management systems. The four major areas being addressed are: the Records Management System (RMS), the Detention Management System @MS), the message switcher (communication link between the Sheriffs Office and the Department of Justice), and implementation of a Wireless Communications System which provides for installation of Mobile Data Computers (MDCs) in all patrol vehicles. This multi-year effort began with and continues to include the consulting services of Public Safety Consultants, Inc.

Due in part to time constraints of grant funding, the Wireless Communications System project has priority status, with work on replacement of the other three systems well underway. This letter is intended to provide your Board with background information regarding this part of the project. It also requests authorization to release a Request for Proposal (RFP) (see Attachment) to receive plans and bids for the purchase and implementation of a Wireless Data Communications System including mobile data computers in all patrol vehicles. You will recall, the Board approved this project as a part of the Sheriffs budget and our office was successful in receiving various grants for this project.

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The Project

The purpose of the wireless data communications project is to bring computer aided dispatch (CAD), car-to-car communication, criminal data, photos, and report writing to the deputies in the field. Computers in the cars will provide deputies with tools to check information regarding license plates, driver's licenses, wants and warrants, as well as receiving timely location and suspect-specific information. This data is valuable to a deputy before they enter a home, stop a car or make an arrest. Deputies need quick information for optimum response time. With computers in cars, deputies can retrieve information immediately, without time-consuming radio traffic or telephone calls to dispatch or records clerks. They save time currently lost in waiting for airtime, calling in a request, and waiting while someone else completes the routine look-up. Deputies will have more control over what information they check and how frequently. Deputies will also be able to communicate with each other and with dispatch in a voiceless environment during investigations requiring secure communications.

The project is distinct from the existing Sheriffs radio dispatch operations and from the 9-l-l emergency response systems in that it is data vs. voice driven. The new computer-aided system is intended to support and enhance these existing radio systems, not replace them. These systems will remain intact, in that they ensure 95% total radio coverage of the county and essential emergency communications.

The new data communications system is more limited in range than existing voice radio coverage. It is intended to assist deputies driving within the major urban corridors of the County. Computers installed in their vehicles will allow them to access data from local and state data systems. The corridors identified on the map attached to the RFP (see last page of RFP) indicate the minimum coverage to be provided by proposing vendors. However, the actual area covered by the system will be considerably larger do to frequency spill over from each base station.

Approximately 85 Patrol Lieutenants, Sergeants and Deputies will access these fixed computers, in the Sheriffs fleet of 33 patrol cars. It is our intention to build upon this core system using future grant funds, to provide deputies with access to allied agencies, crime reports, fingerprints and photo images from patrol cars.

The RFP

Technology consultants PSCI developed this Request for Proposal for the Sheriff's Office wireless communications system. County Departments including the Information Services Department, County Administrative Office, General Services Department, the Radio Shop and NETCOM have spent numerous hours reviewing and providing input for this RFP.

Funding

The cost of implementing Phases One and Two of this system includes hardware, software and interface programming to link local and national databases, dispatch and the County mainframe, to

patrol officers out in the field. Your Board has approved the funding of this complex project through a combination of funding sources including: County Technology Fund monies ($126,550), Sheriffs Office revenues, including a federal COPS MORE '98 Technology grant ($489,190); CLETEP II technology award ($188,131); and SB-90 revenue rebudget ($60,000).

In summary, the Sheriffs Office, in cooperation with other County departments and PSCI consultants, has completed the groundwork necessary, in the form of the attached RFP, to implement a successful wireless communications infrastructure geared to the challenging topography of unincorporated Santa Cruz County. Our efforts are intended to get the best system for the Sheriffs Office, while embracing this opportunity for eventual radio data communication exchange with other police departments. Our office looks forward to this opportunity to provide deputies with the technology and equipment they need to provide increased safety and security to the community.

Therefore, it is RECOMMENDED that your Board:

1. Authorize the Sheriff-Coroner and the Purchasing Division to release a Request for Proposal for a wireless communications system, and to return on August 1, 2001 with a recommendation for a contract award, as recommended by the Sheriff-Coroner.

Very truly yours,

MARK S. TRACY
Sheriff-Coroner

RECOMMENDED:

Susan A. Mauriello
County Administrative Officer

ATTACHMENTS:

1. Sheriffs RFP for Wireless Communications System

cc: Auditor Controller
County Administrative Office
Information Services Department
Santa Cruz Consolidated Emergency Communications Center
Sheriff-Coroner
General Services Department

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Request for Proposal

Implementation of an 800 MHz Radio Infrastructure and Field Computing System

For the

County of Santa Cruz, California
Sheriff-Coroner's Office

Proposals Due: **No** later than 5:00 p.m., Pacific Standard Time, Tuesday, May 1, 2001.

Proposal No. 00C1-014

County of Santa Cruz
General Services Department
Purchasing Division
701 Ocean Street, Room 330
Santa Cruz, CA 95060

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Executive Summary

The County of Santa Cruz, California, through its Sheriff-Coroner's Office (SCCSO) is seeking to implement a comprehensive data radio infrastructure that will support the SCCSO's field mobile computing requirements. The SCCSO's longterm goals are to develop a comprehensive information technology capability that includes mobile computing as a key component. The specific mobile computing goal is to establish a mobile office environment for the field deputies. This goal will be achieved in two phases: 1) Establish field communication computing interface that links the field unit with the communication center; and 2) Develop a field computing capability that empowers the officer in the field with information that assists them in performing their job, to include field report writing and a variety of field support capabilities.

The specific objectives of this project are as follows:

1. To provide an automated mobile computing environment that enhances operations and supports the apprehension of criminals by providing timely information to field personnel.

2. To implement a Mobile Data Computing (MDC) system that provides communication capability between field officers and the communication center.

3. To empower field officers with the ability to access local, state and national criminal information databases directly from their field units.

To achieve these goals and objectives, the SCCSO intends to implement the necessary data radio infrastructure capable of supporting current and future data radio needs. The SCCSO has defined three required components:

A. Radio infrastructure that includes the installation of antenna sites, base radios and other radio components necessary to establish the data radio network.

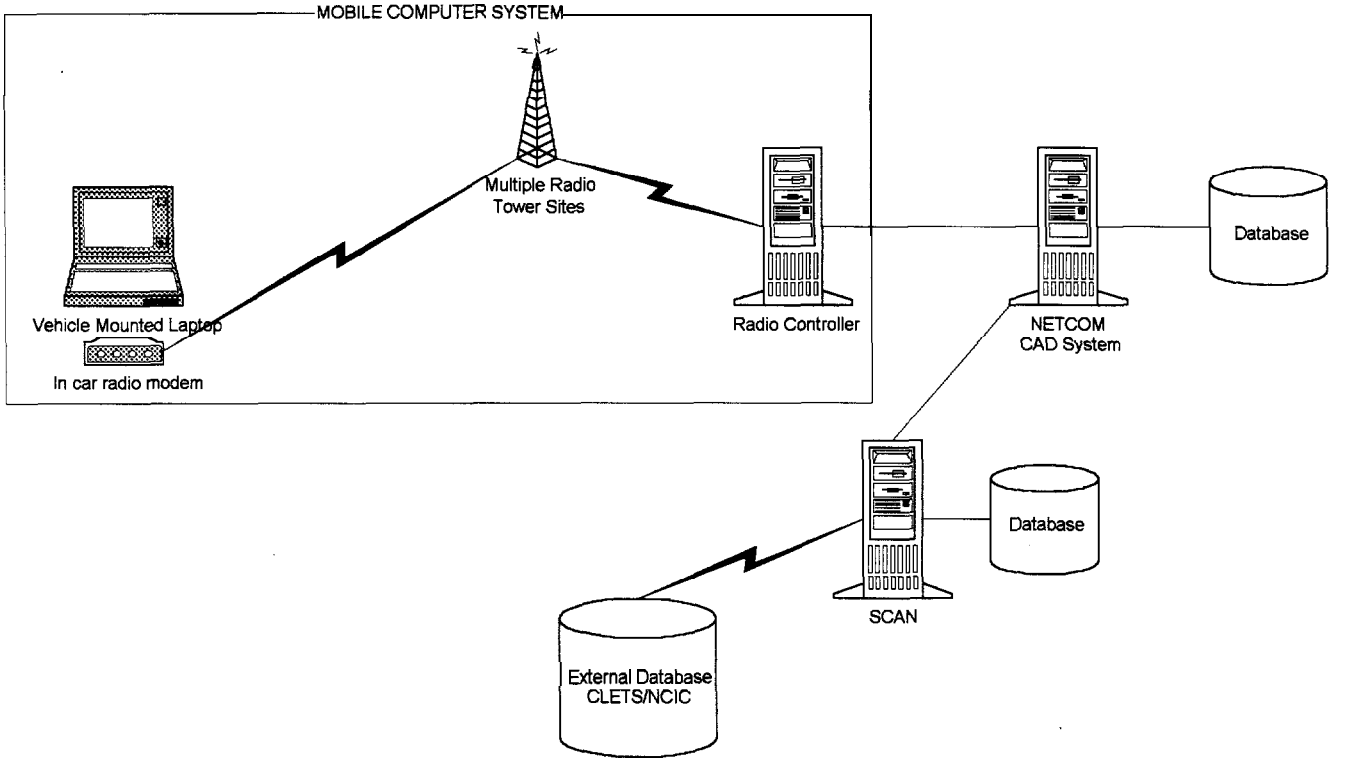
B. In car computer computing capability that includes the necessary hardware and software that will allow field units to communicate with the Computer Aided Dispatch (CAD) system. This communication link will allow deputies to enter and transmit status changes directly to the CAD system. This will also provide the deputies the ability to perform inquiries into local, state and national crime information databases, without the intervention of the dispatcher.

C. Field computing capabilities that include automated field report writing, crime analysis information, mapping, community policing data, investigative tools and other computing capabilities that would comprise a mobile computing office.

This Request for Proposal specifically addresses components A and B above. Component C will be addressed as part of the larger Automated Information System project that is also under way and will be procured at a later time.

The following diagram depicts the mobile computing environment that the SCCSO seeks to implement through this procurement.

Figure 1: Mobile Data Computing Infrastructure



Contained within the vehicle is the required radio modem and laptop. Through the vehicle modem, inquiries, status changes and other data communication will be transmitted over a dedicated 806 MHz radio channel to one of the various transmitter sites, which will forward the transmission to a radio data controller located at the Santa Cruz Consolidated Emergency Communications Center (NETCOM) dispatch facility.

The radio controller will be interfaced to the NETCOM CAD system. The controller serves as the interface between the radio system and the CAD system. Transmission from the vehicle will be sent through the controller to the CAD system. Transmissions to the vehicle from the CAD system will also go through the radio controller where the message is formatted and sent to the appropriate mobile unit.

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From the vehicle, deputies will be able to access the local, state and national databases. This access will occur through the CAD system. The mobile computer will not directly access the Sheriff's Centralized Automated Network (SCAN) system. Access to SCAN occurs through the CAD interface.

The Proposer will be required to provide all the necessary hardware, software and interfaces to the CAD system. This includes:

1. All in-car radio and computer equipment
2. All necessary antenna and base station equipment
3. Radio network controller
4. Interface to the CAD system
5. All necessary software

This project is funded in part by a Federal grant and should be completely operational and accepted by July 1, 2002.

Chapter One

INSTRUCTIONS TO PROPOSERS

1 .O Introduction

1.1 Summary of Project

The County of Santa Cruz invites sealed Proposals from fully licensed, insured and qualified Proposers to provide a complete mobile data system including infrastructure, in-car computers and related software. The County has received Federal COPS grant funding for this project. The grant has a timeline requiring the system be fully functional and accepted by July 1, 2002.

1.2 Goals and Objectives

The Santa Cruz Sheriffs Office's (SCCSO) long term goals are to develop a comprehensive information technology capability that includes mobile computing as a key component. The specific mobile computing goal is to establish a mobile office environment for the field deputies. This goal will be achieved in two parts: I) establish field communication computing interface that links the field unit with the communication center; and 2) develop a field computing capability that empowers the officer in the field with information that assists them in performing their job, including field report writing and a variety of field support capabilities.

The specific objectives of this project are as follows:

- To provide an automated mobile computing environment that enhances operations and supports the apprehension of criminals by providing timely information to field personnel.
- To implement a Mobile Data Computing (MDC) system that provides communication capability between field officers and the communication center.
- To empower field officers with the ability to access local, state and national criminal information databases directly from their field units.
- The short-term goal is to procure and install a mobile data system that fulfills the grant requirements for personnel redeployment through the use of technology by providing a digital link between the field unit and the existing consolidated communications (NETCOM) dispatch system.

1.3 Instructions to Proposers

- All Proposal's shall be in accordance with minimum specifications, instructions and conditions contained in or attached to this request. These 'instructions outline the guidelines governing the format and content of the Proposal and the approach to be used in its development and presentation. Only that information which is essential to an understanding and evaluation of the Proposal should be submitted. No limitation on the content of the Proposal is intended in these instructions and inclusion of any pertinent data or information is permitted.

Proposer shall submit a Proposal with responses that directly correspond to and numbered identically to each and every numbered paragraph contained in Chapter Three of this RFP. All responses must be complete and unequivocal. The SCCSO understands that certain paragraphs are provided for information. The Proposer should respond to these questions with the following: " *This paragraph was* read *and understood."* All pages are to be consecutively numbered. Proposers are to complete the requirements checklist provided in Exhibit A of this document.

While Chapter Three deals primarily with the technical requirements, the Proposer must thoroughly review Chapter Two. Chapter Two provides background information, sizing data and the Acceptance Testing procedures the SCCSO intends to use to ensure that the system meets the Sheriff's Department's requirements.

The Proposer must provide written material and illustrations supporting or explaining the Proposal, pursuant to the requirements in this RFP. The Proposer should include in their submission all relevant information supporting, demonstrating, and evidencing each of the following:

- The Proposer must include a detailed management plan describing the functional and/or organizational structure of the Proposer's overall organization.
- Any innovative management methods to increase effectiveness of the operation should be described, as well as their projected value to the overall operation.
- The Proposer should identify the specific activities it intends to engage in and state how these activities will positively benefit the County in order to incur minimum cost while providing the highest level of service.

1.4 General

Proposers are required to provide itemized costs for all items mentioned in their response to the RFP. The fact that costs for certain features are required in the Proposer's response does not obligate the County to purchase those features. Items not specifically marked with a cost are considered to be included at no cost to the County.

Exceptions to specifications or requirements will not necessarily be disqualifying, but must be

clearly stated in the response. If a requirement can be partially but not completely satisfied, the Proposer should state so. If an exception is not specifically taken relative to any particular requirement, the County will accept this as a tacit acknowledgment by the Proposer that the requirement will be provided by the Proposer.

If a requirement is only partially addressed, the County will accept this as tacit acknowledgment that the Proposer will meet all other elements of the requirement(s).

It is the responsibility of all Proposers to examine the entire request for Proposal document and seek clarification of any item or requirement that may not be clear and to check all responses for accuracy before submitting a Proposal. Negligence in preparing an offer confers no right of withdrawal after due date and time.

Failure to present Proposals that are complete in every detail, clear and fully acceptable without the need for additional evaluation information from the Proposer may result in disqualification of the Proposal. The County intends to evaluate the Proposals based on their submittal and will not necessarily request additional information. The County may award a contract, based on Proposals received, without further discussion of such a Proposal. Accordingly each Proposal should state the most favorable terms, from a price and technical standpoint that the Proposer can submit. Proposals will be evaluated based on the criteria defined in section 1.11 of this RFP.

1.5 Confidentiality

Responses to the RFP become the property of the County. At such time as the Sheriffs Office recommends a Proposer to the County Board of Supervisors, all Proposals received in response to this RFP become a matter of public record and shall be regarded as public records with the exception of those elements in each Proposal which are defined by the Proposer as business or trade secrets and plainly marked “Confidential”, “Trade Secret”, or “Proprietary”. The County shall not in any way be liable or responsible for the disclosure of any such Proposal or portions thereof, if they are not plainly marked as “Confidential”, “Trade Secret”, or “Proprietary” or if disclosure is required under the Public Records Act. Any Proposal which contains language purporting to render all or significant portions of the Proposal “Confidential”, “Trade Secret”, or “Proprietary”, shall be regarded as non-responsive.

1.6 Schedule

The following Proposal schedule outlines the Request for Proposal (RFP) process. The County reserves the right to modify this schedule at its own discretion and convenience.

RFP Release	February 27, 2001
Pre-Proposal Conference..	March 12, 2001
Last day for questions..	April IO, 2001
Proposals Due	May 1, 2001, 5:00 p.m. PST
Demonstrations by top candidates...	May 16, 2001
Estimated Award Date	June 15, 2001
Contract negotiations begin...	June 18, 2001
Tentative date for award of contract	August I', 2001
Anticipated project completion date.. . .	July 1, 2002

1.7 Pre-Proposal Conference

For the dissemination of information and clarification of the intent of the Contract Documents, and other County requirements, a pre-Proposal conference will be held on Wednesday, March 12, 2001, beginning at 9:00 AM. The conference will be held at the County Government Center, 701 Ocean Street, Santa Cruz, CA. Detailed location information will be sent to all Proposers prior to the conference.

Requests for interpretations and explanations to specifics in the Proposal, or pertaining to the Proposal, are encouraged before the Conference. The County must receive these questions in writing five (5) working days before the Pre-Proposal Conference. All requests for information shall be in written form. Questions from the floor will also be accepted at the Pre-Proposal Conference. A transcript of all responses to the questions asked at the Pre-Proposal Conference will be sent to Proposers as clarification to the RFP. Any verbal explanations of instructions will not be binding on the County.

Attendance at the Pre-Proposal Conference is not mandatory, however this conference will be the only opportunity open to Proposers to visit the facilities.

Proposers may wish to visit one or more of the potential antenna sites. If a Proposer wishes to see an antenna site, they must specify the specific sites in advance of the conference. After the question and answer period, the SCCSO will conduct site visits to the various tower sites as requested by the Proposer. No questions will be answered during the site visits. The Proposer must put all questions in writing and submit them to the County. The County will respond in writing to all questions and distribute those answers to all potential Proposers.

Prior to the pre-Proposal conference, submit questions to:

A.J. Breda C.P.M., Supervising Buyer
County of Santa Cruz Purchasing
701 Ocean Street – Room 330
Santa Cruz, CA 95060
FAX (831) 454-2710

The issuance of this Request for Proposal does not obligate the County to pay or reimburse any cost incurred by Proposers in the preparation and submission of a Proposal. All costs associated with the Proposer's preparations, submission, presentations, benchmark testing, or oral interviews shall be the sole responsibility of the Proposer.

1.8 Addenda

Any addenda issued to this RFP will be accompanied by an acknowledgment page. All Proposers must acknowledge each addendum in the following manner:

1.8.1 The appropriate addenda acknowledgment page must be signed and accompany the Proposal(s).

1.8.2 Failure to indicate receipt of addenda in the above manner may result in a Proposal being rejected as non-responsive.

1.8.3 Only formal written addenda will bind the County.

1.9 Response format guidelines

All Proposals must adhere to the following format:

1. Introduction and Company Overview

2. Detailed Technical Proposal that defines the proposed system. Included in this section will be a comprehensive response to each numbered paragraph of this RFP. In this section the Proposer shall provide all necessary diagrams and technical references that describe the proposed system.

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3. Client References. The Proposer must provide a minimum of three client references of projects similar in size and scope to the SCCSO project described in this RFP.

4. Cost Proposal that includes detailed costs for all hardware components, installation, software, training, manuals and any other item(s) required to implement a turn-key system.

5. Authorized Signature. Signed Proposal, original document, section 1.19 Proposer's Signature page must be completed in ink and returned with Proposal.

1.9.1 If the Proposer is a corporation, the Proposal (and addenda, if any) shall be signed in the name and under the seal of, the corporation by a duly authorized officer of the corporation with the designation of his or her official capacity. The signature shall be attested properly. The Proposal shall show the state in which the corporation is chartered.

1.9.2 If the Proposer is a firm or co-partnership, the Proposal (and addenda, if any) shall be signed in the name and style under which the organization is doing business, by the proper officer or officers whose official capacity shall be designated. The name and address of each member of the organization shall be shown on the Proposal.

1.9.3 If the Proposer is an individual, he or she shall sign the Proposal (and addenda, if any) in person, stating the name and style, if any under which he is doing business.

1.9.4 In every case, the Proposal shall show the present business address of the Proposer at which address communication will be received and service of notices accepted.

1.9.5 Proposers responding to this Request for Proposals must submit:

1.9.6 Five (5) original printed copies of the complete Proposal.

1.9.7 Two (2) original copies of the complete pricing/cost Proposal in a separate sealed package.

1.9.8 3.5" disk(s) or CDROM with the complete Proposal in Microsoft Word '97 or 2000 and Microsoft Excel '97 or 2000.

1.9.9 3.5" disks or CDROM with the complete pricing/cost Proposal in Microsoft Word '97 or 2000 and Microsoft Excel '97 or 2000 for Windows.

1.9.10 The Proposal shall be submitted no later than 5:00 p.m. Pacific Standard Time,

Friday, April 13, 2001, to the office of:

A.J. Breda C.P.M., Supervising Buyer
County of Santa Cruz - GS/Purchasing Division
701 Ocean St. – Room 330
Santa Cruz, CA 95060

1.9.11 Effective Time of Proposals. Once Proposals have been opened, they shall be expressly stated to be valid for a period of one hundred twenty (120) calendar days from the Proposal due date.

The Proposal should be firmly sealed in an envelope, which shall be clearly marked on the outside "Proposal for the Sheriffs Mobile Data System". Any Proposal received after the due date and time cannot be accepted and will be rejected and returned to the Proposer unopened. Therefore, the envelope must also have a return address on the outside.

1.10 Proposer Contact

The County of Santa Cruz General Services Department Purchasing Division will be the sole point of contact for any and all issues pertaining to this procurement. Contacting any member of the Santa Cruz County Sheriffs Office could result in the Proposer being disqualified.

Proposer shall provide the name, address, fax number and telephone number of an individual in their organization to whom notices and inquires by the County should be directed as part of this Proposal.

The following person is the specific point of contact at the County General Services Department, Purchasing Division:

A. J. Breda C.P.M., Supervising Buyer
County of Santa Cruz Purchasing
701 Ocean St. – Room 330
Santa Cruz, CA 95060
FAX (831) 454-2710

1.11 Evaluation Criteria

It is the Proposer's responsibility to effectively communicate an understanding of their products to the County by thoroughly responding to each requirement contained in this RFP. The following criteria will be used in the evaluation:

- Overall technical approach
- Equipment technical performance specifications

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- Robustness of the RF link protocols
- Site switching process
- Quality of proposed service
- Cost to the County
- Completeness of the Proposal
- Adherence to technical specification
- Capabilities and expertise of the Proposer
- Financial responsibility of the Proposer
- Capacity of the Proposer to perform the service
- References

1 .12 Disqualification

Factors such as, but not limited to, the following may be considered to disqualify a Proposer without further consideration:

1. 12.1 Evidence of collusion among the Proposer(s).

1.12.2 Any attempt to improperly influence any member of the evaluation board (SCCSO, CAO, GSD and PSCI.)

1.12.3 Existence of any unresolved litigation between the Proposer and the County.

1.12.4 Failure to meet the submittal deadline will result in disqualification of the Proposal without review.

1.13 Rejection / Award

Rejection

1.13.1 The County of Santa Cruz reserves the right to accept or reject any and/or all items or groups of items in a Proposal, to waive any minor informality or irregularity in any Proposal.

1.132 Proposers whose Proposals have been evaluated and determined unresponsive to the County will be notified in writing.

Award

1.13.3 The project shall be awarded to the Proposer whose Proposal most closely satisfies the needs of the County and the Sheriffs Office and is deemed to be most advantageous to the County. The County reserves the right to waive any minor informality or irregularity in any Proposal. The County also reserves the right to make any award on an item basis, as a group or as determined most advantageous to the County, price and other factors as considered.

1.13.4 The successful Proposer will be expected to enter into a contract with the County of Santa Cruz based upon the terms, conditions, scope of work, and specifications contained in this RFP and the Proposer's Proposal. The County reserves the right to negotiate the final terms and conditions for any agreements required for software licenses, hardware acquisition, hardware and software maintenance, or other support requirements. The specific payment schedule will also be a part of the contract negotiation phase.

1.13.5 The Santa Cruz County Board of Supervisors, reserves the right to accept any Proposal which it considers to be for the best interest of the public, and to award a contract thereon.

1 .1 4 Proposer's Representations

Proposer understands, agrees, and warrants:

1.14.1 That the Proposer has carefully read and fully understands the information that was provided by the County to serve as the basis for submission of this Proposal to the County of Santa Cruz.

1.14.2 That the Proposer has the capability to successfully undertake and complete the responsibilities and obligations of the Proposal being submitted. The Proposer must have at least five years of directly related experience and three completed installations similar to that being proposed to the SCCSO.

1.14.3 A Proposal may be withdrawn by written or telegraphic notice prior to the time set for Proposal opening. Any Proposal may be withdrawn at any time prior to the time fixed in the public notice for the opening of Proposals only by written request for the withdrawal of the Proposal filed with the Purchasing Division. The request shall be executed by the Proposer or his or her duly authorized representative. The withdrawal of a Proposal does not prejudice the right of the Proposer to file a new Proposal. Whether or not Proposals are opened exactly at the time fixed in the public notice for opening Proposals, a Proposal may not be received after the time specified for receipt of Proposals. No Proposer may withdraw their Proposal for a period of one hundred twenty (120) days after the opening thereof.

1.14.4 That all information contained in the Proposal is true and correct to the best of

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Proposer's knowledge.

1.14.5 That the Proposer did not, in any way, collude, conspire or agree, directly or indirectly, with any person, firm, corporation or other Proposer in regard to the amount, terms, or conditions of this Proposal.

1.14.6 That the Proposer did not receive unauthorized information from: Any County staff member or consultant during the Proposal period except as provided for in the Request for Proposals package, addenda thereto, or the pre-Proposal conference.

1.14.7 That by submission of this Proposal, the Proposer acknowledges that the County has the right to make any inquiry it deems appropriate to substantiate or supplement information supplied by the Proposer, and the Proposer hereby grants the County permission to make said inquiries, and to provide any and all requested documentation in a timely manner. The Proposer waives any right or opportunity to read or review any information gathered as a part of this process.

1.14.8 That by submission of this Proposal, the Proposer acknowledges that it has examined carefully all documents and data provided. No plea of ignorance of the requirements of its documents will be accepted as a basis for any claim whatsoever for extra compensation.

1.15 Equal Opportunity

Proposers shall not discriminate against any employee or applicant for employment because of race, color, creed, religion, national origin, ancestry, disability, medical condition (cancer related and genetic characteristics), marital status, sex, sexual orientation, age (over 18), veteran status, gender, pregnancy, or any other non-merit factor unrelated to job duties. Such action shall include but not be limited to the following; recruitment; advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training (including apprenticeship), employment, upgrading, demotion, or transfer. The Proposer agrees to post in conspicuous places, available to employees and applicants for employment, notice setting forth the provisions of this non-discrimination clause.

The County encourages responses to requests from certified minority, women and businesses owned by disabled persons, suppliers and contractors. Furthermore, the County encourages good faith effort by contractors, suppliers and Proposers in their performance as County contractors, to subcontract and procure from small minority, businesses owned by disabled persons and women contractors, suppliers and Proposers. Prospective suppliers shall agree to adhere to an affirmative action program as required by law.

1.16 Other Terms

All terms or portions thereof, listed in the County's Standard Instruction and Conditions, (A copy of which is attached as part of this RFP), not otherwise covered in this RFP, will be considered a part of any award made, subject hereto.

1.17 Tropical Hardwood

The contractor shall not provide any items in performance of the contract and/or purchase order, which are tropical hardwoods or tropical hardwood products. The County of Santa Cruz urges all companies not to import, purchase, obtain or use for any purpose, any tropical hardwood or tropical hardwood product. As used in this section, "tropical hardwood" means any and all hardwood scientifically classified as angiosperm that grows in any tropical rainforest. "Tropical rainforests" means any and all forests classified by the scientific term "tropical moist forests", the classification determined by the equatorial region of the forest and average rainfall.

1.18 Brand Names & Descriptions

The user department has provided technical equipment specifications contained in this request. Any brand names, model designations or descriptions that may appear in this RFP are solely for the prospective Proposer's reference, and are used only as an indication of the general type and quality of equipment considered acceptable. Equipment and features listed herein are known to meet the performance and quality needs of the using department and are intended as a guide to prospective offers. Offers on equipment of comparable quality and performance capabilities will receive consideration, providing they meet the technical approval of the Santa Cruz County requesting department(s) and conform to the conditions of this RFP concerning exceptions, variances and/or deviations.

1.19 Contractual Provisions

A response to a Request for Proposal is an offer to contract with the County based upon the terms, conditions and specifications contained in the County's Request for Proposal. Offers do not become contracts unless and until they are selected by the selections committee, awarded by the Santa Cruz County Board of Supervisors and completed through mutual agreed terms and conditions in the contract documents. A contract has its inception in the award document and includes, but is not limited solely to, the terms and conditions contained in the Request for Proposal.

At the time of the contract, the following provisions will be required:

1.19.1 Execution of Contract. The contract shall be signed by the successful Proposer and returned, within thirty (30) days excluding Saturdays, Sundays, and legal holidays, and no later than July 27, 2001.

1.19.2 Changes. The County reserves the right to make such alterations, deviations, additions to or omissions from the plans and specifications, including the right to increase or decrease the quantity of any item or portion of the work or to omit any item or portion of the work, as may be deemed by the County to be necessary or advisable and to require such extra work as may be determined by the County to be necessary or advisable and to require such extra work as may be determined by the County to be required for the proper completion or construction of the whole project completed.

Any such changes will be set forth in a written contract order which will specify, in addition to the work to be done in connection with the change made, adjustment of contract time, if any, and the basis of compensation for such work. A contract change order will not become effective until approved in writing by the County.

Upon receipt of an approved contract change order, the Contractor shall proceed with the ordered work. If ordered in writing by the County, the Contractor shall proceed with the work so ordered prior to actual receipt of an approved contract change order therefore. In such cases, the County will, as soon as practicable, issue an approved contract change order for such work.

1.19.3 Payment of Taxes. The contract prices paid for the work shall include full compensation for all taxes which the Contractor is required to pay, whether imposed by Federal, State or local government, including, without being limited to Federal excise tax. No tax exemption certificate nor any document designed to exempt the Contractor from payment of any tax will be furnished to the Contractor to any tax or labor, services, materials, transportation, or any other items furnished pursuant to the contract.

1.19.4 Patents and Licensing. The Contractor shall assume all costs arising from the use of patented and licensed materials, equipment, devices, or processes used on or incorporated in the work, and agrees to indemnify and save harmless the County of Santa Cruz, and all officers and employees connected with the work and their duly authorized representatives, from all suits at law, or actions of every nature for, or on account of, the use of any patented or licensed materials, equipment, devices or Processes.

'1.19.5 Personal Liability. Neither the Board of Supervisors nor any other officer or authorized employee of the County of Santa Cruz, nor any officer or employee of any county, city or district shall be personally responsible for any liability arising under or by virtue of the contract.

1.20 Proposer's Signature

No Proposal shall be accepted which has not been signed in ink in the appropriate space below:

Authorized Signature:

_____
Proposer's Signature

_____
Date Signed

_____
Proposer's Typed Name and Title

_____
Company Name

_____
Street Address

_____
City, State, Zip

_____ _____
Phone Fax

_____
Email Address

Chapter Two

BACKGROUND

2.0 County of Santa Cruz

The County of Santa Cruz geographically is one of the smallest counties within the State of California yet it has one of the largest unincorporated area populations. Santa Cruz County is home to many hi-tech companies moving to the area from Silicon Valley. The 1998 population of Santa Cruz County was approximately 245,600. The population has been steadily increasing by approximately 2-3% per year since 1980. This growth pattern is continuing. Most of the growth is taking place in the outlying areas of the county.

The Sheriffs Office encompasses a service area of approximately 400 square miles. This service area ranges from urban to rural.

2.1 Santa Cruz County Sheriff's Office

2.1 .1 Organization

The Santa Cruz County Sheriffs Office (SCCSO) is respected nationwide as an innovative department and has been at the forefront of many innovative programs throughout the years.

The office is committed to community oriented policing. Many of the functions of this system will be implemented in support of community oriented policing. The Santa Cruz County Sheriffs Office has a total authorized personnel strength of 351. The division of sworn to non-sworn is as follows:

Sworn: 164

Non-Sworn: 187

Automation is seen as a means of working smarter and offsetting work force growth requirements.

2.1.2 Workload and Growth

The SCCSO intends to implement a system capable of meeting current and future needs. This requires a system that is expandable. Historically, patrol workload originated primarily from dispatched calls for service. This scenario has changed over the past five years. Calls for service now come from a variety of sources including dispatch, four (4) service centers (1998); two (2) Community Service Officer call-taker positions (1999); and the Sheriffs Office at

Cabrillo College (1997). These other sources reduce calls for service obtained through the 911 center, yet increase overall workload. Calls for service and workload trends from all of these sources must be considered when measuring the overall workload of the Sheriffs Office.

The following tables depict general workload trends for the past five years:

PATROL WORKLOAD TABLE (Dispatcher initiated events)

YEAR	TOTAL DISPATCHED CALLS FOR SERVICE	TOTAL INCIDENTS	TOTAL CRIMES REPORTED
1995	129,277	19,575	13,940
1996	115,735	19,522	13,399
1997	115,522	20,799	12,285
1998	90,484	21,447	10,051
1999 *Est.	87,474	19,760	8,546

SERVICE CENTERS WORKLOAD TABLE

YEAR	TOTAL COMBINED CALLS FOR SERVICE	VOLUNTEER HOURS WORKED	TOTAL REPORTS
1998	32,880	9,530	2,051.
1999	27,406	8,610	1,388
2000 * Est.	28,467	8,575	1,000

The chart above represents all four community service centers. Note: Calls for service indicates the combined phone calls received and walk-in contacts. The workload of these centers needs to be considered as part of the overall workload for patrol services. All of these reports and calls for service could potentially involve patrol services.

CABRILLO COLLEGE WORKLOAD TABLE

YEAR	TOTAL CALLS FOR SERVICE	SELF INITIATED INCIDENTS	TOTAL REPORTS
1997	N/A	N/A	83
1998	9,216	7,396	543
1999	11,291	11,720	577

The Sheriff's Office is contracted to provide police services for Cabrillo Community College. In the chart above, calls for service include tasks such as vehicle lockouts, alarm response and security functions. Self-initiated incidents reflect citations and security checks. The reports solumn reflects all reports written. All law enforcement functions at Cabrillo College will expand in the near future with the remodel of the Aptos campus and the expansion of the Watsonville campus. The estimated workload change will be an additional 15 % in calls for service and a corresponding increase in reports and self initiated activity. Cabrillo College patrol units will eventually become part of the mobile computing system.

SHERIFF'S COMMUNITY SERVICE OFFICERS WORKLOAD TABLE

YEAR	TOTAL CALLS FOR SERVICE RECEIVED	TOTAL HOURS OF OPERATION	TOTAL REPORTS
1999 *	9000	700	250
2000 **	17800	1425	590

The Sheriff's Office presently employs three (3) full-time Community Service Officers (CSOs). Beginning in July 1999, two (2) CSO call-taker positions began answering the business line for the Sheriffs Office. These positions have greatly reduced the number of non-emergency calls for service taken by the dispatch center. This function relieves the emergency communications center of non-priority calls and creates a single point of contact for citizens reporting non-emergency incidents. The CSO accepting a call for service may handle the contact in several ways including: generate a crime report, refer the caller to another resource, or initiate a call for service involving a Deputy Sheriff. The CSO positions' workload should be considered in designing the MDC system, as their operation is a potential patrol function.

(* Operation began in July 1999, ** projected numbers for calendar year 2000)

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2.1.3 Physical locations

The Santa Cruz County Sheriffs Office has one central office, three (3) detention facilities, four (4) service centers and a Cabrillo Community College division. All major functions and operations occur from the central office. The department does support several additional off site locations where Deputies can also complete work tasks. The sites may have desktop computers using a mobile data radio and access the data infrastructure to send car-to-car messages or other inquiries. The sites need to be considered as part of this system. The radio frequency (RF) system must be able to work adequately at each of these locations with limited MDC capability at the desktop level. These capabilities must be under the control of the system administrator. The system administrator must be able to set access rights and system capabilities for the group and individual users. The following is a listing of those sites:

Sheriffs Main Office Government Center 701 Ocean Street, Room 340 Santa Cruz, CA	Freedom Service Center 2020 Freedom Blvd. Freedom, CA
Cabrillo College Sheriffs Office 6500 Soquel Avenue Soquel, CA	Aptos Service Center 19D Rancho Del Mar Center Aptos, CA
Felton Service Center 6060 Graham Hill Road, Ste. D Felton, CA	Live Oak Service Center 870 17th Avenue, Unit 4 Santa Cruz, CA
Santa Cruz Consolidated Emergency Communications Center (NETCOM) 495 Upper Park Road Santa Cruz, CA 95065	

This list of sites will be expanded and future growth should be considered in any Proposal.

2.1.4 Santa Cruz Consolidated Emergency Communication Center (NETCOM) and RMS Interfaces

2.1.4.1 The public safety agencies in Santa Cruz County have formed a joint powers agreement for consolidated dispatching services. The County dispatch center (NETCOM) provides 9-l-l PSAP and public safety dispatching. Additionally, NETCOM provides police records administration services to the city police agencies of Santa Cruz, Capitola, Scotts Valley and Watsonville. This joint venture is known as Santa Cruz Metro Records Management System (METRO RMS).

2.1.4.2 The NETCOM CAD is supplied by PrinTrak International and currently supports two mobile data interfaces.

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2.1.4.3 A Cerulean switch serves the agencies participating in two ways: first, as a connection to the METRO RMS; and, the second, as a connection to the mobile computing for the listed agencies. The agencies served by this switch are Santa Cruz Police, Watsonville Police and Capitola Police.

2.1.4.4 The SCCSO would like to be able to communicate with the other agencies' mobile data systems; however, this desire is secondary to the primary requirement for the SCCSO, which is a full-featured mobile data system, to support their organization. SCCSO requires finite pricing that describes both options. Also include the cost for future expansion of the system to include multi-agency communication in the event the SCCSO does not implement it in the first phase, but desires to add the feature in the future.

2.1.4.5 The selected Proposer will act as the integrator with PrinTrak International to allow for mobile unit access to the NETCOM CAD system.

2.1.4.6 The PrinTrak contact for additional information is Ron Pequette at (303)527-4000.

2.1.4.7 The County intends for the radio controller to be located at the NETCOM facility. The controller will be linked to the Sheriffs Office with a T-l data line. The location of this equipment at NETCOM is intended to take advantage of the 24X7 staff availability and the proximity to the CAD. A "Systems Administrator,, will manage all of the Sheriff's Office information systems. This administrator will be the liaison with the vendor for maintenance related issues.

2.1.4.8 The Sheriff's Office is also in the process of acquiring a complete new Records Management System (RMS). The mobile data system purchased with this RFP will in future be interfaced with the new RMS for transfer of field report data and for RMS inquiries by field personnel.

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2.2 Scope Of Project

Functions to be automated

This section is a high-level summary of the functions to be automated as described in more detail in the subsequent sections of this RFP. The following paragraphs will form the basis of the statement of work that will be a part of any contract issued in connection with this RFP.

The functions of information processing to be automated as a part of this project are as follows:

2.2.1 Responsibilities

The Santa Cruz County Sheriff's Office plans to execute this project by forming a fully integrated project team consisting of the Contractor, the County, and the Consultant team. The SCCSO requires that the project organization and responsibilities be clearly delineated at the outset so that the team members have a clear understanding of their respective responsibilities, and so that the project progress can be measured as a whole. As currently foreseen, the responsibilities will be as follows:

2.2.1 .1 Contractor

The successful proposer will hereafter be referred to as the Contractor for this project. Contractor will act in the capacity of the system integrator and will supply the following:

2.2. 1. 1.1 Project Management: Coordination and management of all subcontractors and suppliers. Status reports must be provided to SCCSO on a monthly basis. Correction of any failure to perform as required by the contract by any of the subcontractors who are working for the primary contractor.

2.2.1.1.2 Detail System Design: Final technical design of the system, including all interfaces.

2.2.1.1.3 Infrastructure Hardware: All radio hardware and other data infrastructure devices, including required interface devices.

2.2.1.1.4 In-car hardware: All computers, displays, keyboards and mounting equipment.

2.2.1.1.5 System software: Operating system, network software, and network management software.

2.2.1.1.6 Applications software: All components specified herein.

2.2.1 .1.7 Creation of all necessary code tables, and system help documentation unique to the SCCSO.

2.2.1 .1.8 Installation services for all hardware and supplied software.

2.2.1 .1.9 Training of all relevant disciplines as defined herein.

2.2.1 .1.10On-site implementation assistance during cut over and for two months following initial system implementation.

2.2.1.1.11 Post implementation support, which will include correction of programming deficiencies or hardware failures.

2.2.1.1 .1 2Preparation of an Acceptance Test Plan to verify that all furnished equipment, software, interfaces, and other items operate in accordance with the requirements of this RFP.

2.2.1.2 County and SCCSO

The County and the SCCSO will be responsible for the following during the course of the project:

2.2.1.2.1 Assignment of a single project manager who will be the single point of contact between the Contractor and the County during the course of the project and who will be the only person who can commit the County to any decision required by the Contractor:

2.2.1.2.2 Approve the deliverables specified in the RFP.

2.2.1.2.3 Provide access to individuals within the County and the SCCSO, as required, to discuss design and project issues with contractor personnel.

2.2.1.2.4 Convene the project Steering Committee (SCCSO, CAO, GSD and PSCI) as frequently as required to review contractor issues and deliverables.

2.2.1.2.5 Provide timely feedback and comments to the contractor on all deliverables prior to final acceptance.

2.2.1.2.6 Provide training resources, facilities, and availability of personnel in order to meet the training requirements in the RFP. This must include the appointment of a training coordinator.

2.2.1.2.7 Provide appropriate physical workspace for contractor personnel as requested by the contractor and as defined in the Proposal.

2.2.1.2.8 Approve the Proposer Acceptance Test Plan, observe the system test and attest to reported results prior to turnover to the County.

2.2.1.2.9 Monitor and coordinate the cut over to the new system following final acceptance, directing the contractor in the correction and completion of any remaining contractual obligations.

2.2.1.2.10 County will provide oversight and final acceptance of installation of the hardware, software, and communications equipment, which is to be performed in accordance with pre-approved installation plan.

2.2.1.2.11 Act as a liaison with external agencies regarding external system interfaces specified herein. This must include acquiring any and all approvals necessary to implement the approved technical design.

2.2.1.2.12 Entry of all data subsequent to system implementation.

2.2.1.3 Consultants

The County plans to engage the services of a consulting firm to assist in the implementation of this project. The specific responsibilities of the consultants are the following:

2.2.1.3.1 Approve the overall project plan, implementation schedule, and assigned work breakdown structure for both the contractor and the County.

2.2.1.3.2 Monitor the progress of both the contractor and the County in the performance of the approved project plan, and report periodically to the SCCSO Steering Committee on progress, problems, and issues that must be resolved.

2.2.1.3.3 Evaluate the technical design and implementation plan provided by the contractor and approve it prior to its submission to the SCCSO Project Manager.

2.2.1.3.4 Evaluate the project relative to the goals and objectives and functional components as specified herein and attest to the completion of all components prior to the County approving final acceptance of the system as defined herein.

2.3 System Support and Maintenance

2.3.1 Customer Support

2.3.1.1 Proposer will describe the procedure to be followed in reporting a software or hardware problem, and the escalation policies used.

2.3.1.2 Proposer will identify the location, service days/hours, and availability of'a toll-free telephone number for obtaining assistance to system problems.

2.3.1.3 With the exception of scheduled maintenance, the SCCSO requires use of the system 24 hours a day, 7 days a week. Proposer will describe the type of immediate emergency services available, the terms, and the warranted or estimated time for response.

2.3.1.4 Proposer will describe the support team and their liaison to the SCCSO and to the radio communications project.

2.3.2. System Maintenance and Upgrades

2.3.2.1 Proposer will describe its maintenance and repair procedures, including warranty periods, preventive maintenance, on-site repair, etc., for all system components.

2.3.2.2 Proposer will describe the process used for installing software and hardware system repairs in advance of scheduled upgrades.

2.3.2.3 System Upgrades

2.3.2.4 Proposer will describe the frequency and types of typical system upgrades. Cost of system maintenance will be identified on the pricing schedule.

2.3.2.5 When upgrades are required, they will be performed with minimum disruption to current operations.

2.3.2.6 Software and hardware upgrades will be fully documented for review prior to installation. The Proposer will state if, and for how long older versions of the product are currently supported.

2.3.2.7 The SCCSO may elect to install or not install each software upgrade feature or fix.

2.3.2.8 Operational ongoing stability of the data radio infrastructure and field computing system is required for the SCCSO. Software upgrades should not require site-specific rewriting or revisions to operational procedures, system databases and interfaces with other systems.

2.3.3. Emergency Maintenance

Proposer will clearly explain how the system will be restored to normal operations following damage due to natural disaster, security breach, equipment malfunction, or software malfunction.

2.4 Project Installation and Acceptance Testing

2.4.1 Installation - Installation of the hardware, . software, and communications equipment will be performed in accordance with a pre-approved installation plan.

2.4.2 The Proposer must describe, perform and supply all necessary diagnostic routines and demonstrate that all hardware, software and other items will meet the published specifications.

2.4.3 The Acceptance Test Plan (ATP) shall be submitted to the Project Manager at least sixty days prior to the commencement of any tests and shall be subject to the approval of the Project Manager. The Proposer must provide a sample test plan and test procedure.

2.4.3.1 The following is a preliminary description of the Acceptance Test Procedures (ATP's). A final version of the ATP, based upon the final system design, will be described in the system Detail Design Document as mutually agreed upon in the project kick-off process. All warranties shall become effective and begin to run upon successful completion of the final version of the ATP and delivery of the documentation set forth in the Detail Design Document. The successful completion of the ATP and the delivery of the system documentation shall be the sole criteria for system acceptance and release of the final payment.

2.4.3.2 The Acceptance Test Procedure is divided into five functional areas. The acceptance tests will be performed by the contractor and witnesses by Santa Cruz County personnel during the installation and test phases:

- Deliverables Verification Acceptance Procedure
- RF Subsystem Link Verification Acceptance Test
- RF Coverage Demonstration
- Software Subsystem Performance Test
- System Performance Assessment

2.4.3.2.1 The Deliverables Verification Acceptance test will verify that the deliverables, as set out in the Detailed Equipment/Software List, have been delivered to the County of Santa Cruz. Representatives from the County and the contractor will reference the list of system deliverables. To verify receipt of items, the representatives will initial beside each line item indicating acceptable receipt. Once all items have been initialed, both representatives shall sign the Acceptance of System Deliverables Statement.

2.4.3.2.2 The Communication Link Verification Acceptance test will verify the integrity of the RF subsystem, that is, the communications links between the network controller and the RF in-car modem via each base station in the system. The test exercises the host link, network controller, base

station modem link, base station and RF link to a mobile unit and back again. Each up-link and down-link in the system from the network controller through the base station to an in-car RF modem and back will be tested.

2.4.3.2.3 The Coverage Demonstration Acceptance test will demonstrate that messages can be transmitted over the RF network within the coverage area specified by the coverage maps provided by the County in this RFP. In order to provide a realistic and statistically complete coverage demonstration a large number of test locations will be necessary. The County of Santa Cruz and the contractor will need to determine a minimum of 200 test locations. The County will select 75 locations for testing and the remaining 125 will be randomly selected either by a computer or the County. Tests will also be performed while vehicles are in motion throughout the coverage areas. The test will be performed at a minimum of three (3) different speeds. The test procedures will specify these speeds.

2.4.3.2.4 The System Performance Assessment will be used to verify that the system achieves a defined performance target as defined in the Detail System Design. Performance predictions are based on the loading model provided by the County and included in this RFP. The assessment will consist of three (3) phases:

2.4.3.2.4.1 System Statistics Evaluation examines live-system statistics provided by the active network controller over a period of 24 hours. The statistics collected include the outbound message rate, the inbound message rate, slow-down and speed-up messages from the CAD host and the number, type and length of messages as provided by the CAD host.

2.4.3.2.4.2 For the analysis, the contractor will sample the RF messages from four (4) mobile units over a period of four (4) hours. The message information will be used to estimate the total system load profile on a per user basis. The same data will be used by the contractor to simulate system loading to predict the approximate system capacity. The simulation results coupled with the statistics evaluation will be used to provide a prediction of current system utilization and remaining capacity.

2.4.3.2.4.3 The Timing Test will be used to validate the message packet delivery time as projected by the contractor's simulation results for the Santa Cruz County system. The test will be conducted on a Friday or Saturday night between 2200 and 0200 hours with a fully staffed watch on duty in the field. A network traffic analyzer will be used to track the flow of packets from the CAD host to the network

controller and the RF system logging will be enabled to track packet delivery times for the RF portion of the system. Each mobile unit will send a series of pre-defined messages at pre-determined time with the intent of tracking message packet delivery time with a load on the system.

2.4.3.2.4.4 The Software Subsystem Performance acceptance test portion shall be used to determine software integrity. Each software function and command will be tested under static dynamic conditions. The interface and the stability of the software shall be tested under standard operating conditions but also non-standard conditions such as out-of-range of any site, during site switching, interrupted boot-up, mobile computer shutdown prior to closing the application, etc.

2.4.3.3 Prior to acceptance testing, the County must be in receipt of all software, and user manuals, hardware user and technical manuals, and other software/hardware support items specified in the delivery order.

2.4.3.4 The contractor will have a representative readily available on site for the duration of acceptance testing and for post installation evaluation. The contractor will have a representative on-site on the initial cut over of any major component of this system.

2.4.3.5 If successful completion of the acceptance period is not attained within ninety calendar days of the contractor certification date, the County shall have the option at its sole discretion, of canceling the contract at no further cost to the County or continuing the acceptance test.

2.4.3.6 Immediately upon successful completion of the acceptance-testing period, the County shall notify the contractor in writing of acceptance of the system.

2.4.3.7 If, for any reason, before final acceptance is made of the equipment, software or other items installed, it is found to be defective or not as warranted and/or contracted for, the County may refuse to accept it. The contractor shall be so advised and shall be required to correct the defective equipment, software, or other item within reasonable time as defined by the County. All costs relating thereto, including freight, would be at the contractor's own expense. In the event of such an occurrence, the initial or final performance test that is in progress shall be suspended for the defective component or the entire system, at the option of the County, until the faulty equipment or software has been corrected. Once the correction is complete, the test shall be restarted at the beginning or resumed at the point of suspension, depending upon the nature and seriousness of the defect, and at the discretion of the County.

2.5 Project Time Line

Proposal must include a project timeline with milestones in installation, interfaces, training and acceptance testing. Start and end times must be listed for each project task. This timeline should take into consideration grant time constraints.

2.6 Training

2.6.1 Training of users and programming staff shall be in accordance with the jointly developed training plan. The SCCSO intends to provide training to all members of the department. All training must be done on-site. The Proposer must submit a description of training to be provided, including course descriptions, training materials and duration as well as class limitations. The SCCSO anticipates a minimum of three (3) levels of training:

1. System Administrator Training (including NETCOM and SCCSO), on-site

2. End-user training, on-site

3. Maintenance training for radio shop personnel, on-site

The Proposer must specify how they will provide this training.

Chapter Three

SYSTEM DEFINITION AND REQUIREMENTS

3.0 Mobile Computing System

The Mobile Computing System (MCS) to be supplied as a part of this procurement is intended to enhance the SCCSO's capabilities by providing the following functions:

3.0.1 Full access to State (CLETS) and national (NCIC) databases, messaging between units, real-time access to call data from the computer aided dispatch system (NETCOM).

3.02 The software and services for field reporting of accidents, incidents, field contacts, and arrest reports will be specified and purchased in a subsequent RFP at a later date. Proposers are encouraged, but not required, to include a separate line item for this service in the event the RMS vendor's solution is deemed unacceptable.

3.0.3 Local repository of state penal codes and county ordinances.

3.0.4 Locally stored map capable of receiving X, Y coordinates, latitude, longitude, or State Plane coordinates from the CAD system.

3.0.5 Local database contact information and phone numbers.

3.0.6 The system must be proposed as a total turnkey solution, including hardware, software, installation, and all related services required to create a fully functioning MCS.

3.0.7 All hardware purchased for this implementation shall be the latest and most up to date currently available from the manufacture that supplies such hardware. To ensure the County obtains the latest hardware, the SCCSO will use "Just-In-Time" (JIT) purchasing. This will ensure the County purchases the most up to date hardware.

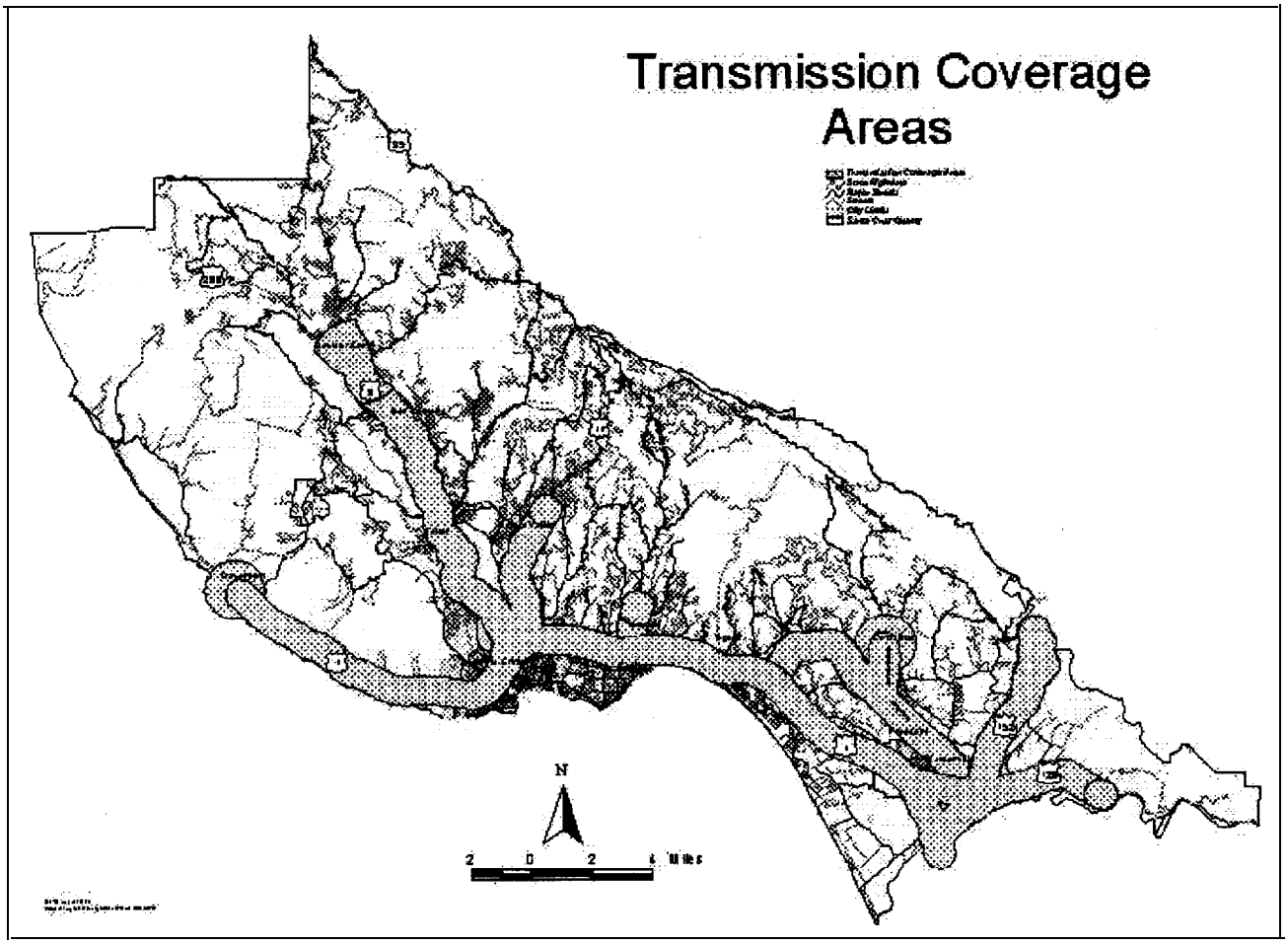
3.1 Radio Infrastructure

The SCCSO requires a data radio infrastructure that will provide mobile data access to field Deputies and has the following specific requirements:

3.1.1 Coverage

3.1.1.1 It is the basic desire of the County to achieve the maximum amount of radio coverage with the minimum number of antenna sites. To that end, the County has performed an initial engineering study which has determined the following minimal radio coverage requirements:

3.1.1.2 The system shall provide a minimum of 95% radio coverage of the area, which extends one-half mile on either side of all the major roadways in the County. Radio coverage is defined as the ability to send and receive data transmissions with a maximum of 3 system re-tries 95% of the time throughout the coverage area. The minimum coverage area is depicted on the following County map:



The SCCSO requires the Proposer to submit coverage maps (printed copies and transparencies) of the proposed sites that illustrates a coverage estimation of the proposed infrastructure. In addition to the coverage maps, the Proposer must submit supporting documentation and methods of calculation to verify its ability to provide the desired radio coverage.

3.1.1.2.1 The roadways depicted are California highways 1, 9, 17, 152, 156 and San Jose-Soquel Road (Old Santa Cruz highway). Coverage is required only for those portions of the roads that are within the Santa Cruz County limits.

3.1.1.3 The initial County engineering study has shown the following antenna sites to be preferred by the County to achieve the coverage goal:

Davenport	350'	37-00-5 1	122-l 1-48	accessible site
Fetton-County Probation	100'	37-02-46	122-02-Q	accessible site
Ben Lomand Fire	35'	37-05-23	122-05-l 5	accessible site
Boulder.Creek Fire	35'	37-07-l 0	122-07-l 7	accessible site
Watsonville Airport	100'	36-56-01	121-47-03	accessible site
NETCOM-Tower	100'	36-59-36	121-59-44	accessible site
Loma Prieta	TBD	37-06-40	121-50-29	accessible site

3.1.1.4 Proposors are encouraged to use the preferred sites, but are free to reduce the number of sites required to achieve minimum coverage. If additional sites are required to achieve coverage, they should be selected from the following list:

Sites	Tower height	Latitude	Longitude
Empire/CYA	100'	37-07-51	122-l O-03
Felton,CDF	100	37-02-56	122-04-22
Toro	60'	36-32-18	121-37-34
Mt. Bielawski	60'	37- 13-24	122-05-38
Scott Valley PD	35'	37-03-l 3	122-01-07
Cabrillo Cell site	TBD		

3.1.1.5 If the Proposer knows of a site that will provide significantly better coverage than the sites listed, they may propose the use of that site. The County reserves the right to reject the proposed site because of inaccessibility problems, and/or other issues which may affect the County's ability to use the proposed site.

3.1.2 System Speed

3.1.2.1 The system shall be configured to provide a minimum system throughput speed of 19.2 Kbps.

3.1.3 System Loading

3.1.3.1 The system shall be sized to accommodate a minimum of 40 simultaneous units based on the following loading estimate for one unit in a ten (10) hour period:

Function	Quantity	Characters from	Characters to

		mobile (inbound)	mobile (outbound)
Calls for service	15	0	200
Status messages	30	10	10
4-Page reports	8	10,000	100
Vehicle license plate inquiries	25	15	300
Vehicle stops	10	15	300
Person stops	8	15	200
Person inquiries (local, state & national)	24	50	300
Car-to-car and car-to-dispatch messages (administrative)	100	100	100
CAD system inquiries	40	10	200
Image (mugshot from photo system)	15	50	3000
Field interview cards	6	500	10

3.1.4 System Expansion

3.1.4.1 The system shall be sized to accommodate future expansion over the next 5-l 0 years with an anticipated number of simultaneous units growing to 60.

3.1.4.2 The County may choose to add a Global Positioning System (GPS) / Automated Vehicle Location (AVL) component to their MDC system in the future. While the County understands this would involve the purchase of a GPS receiver and the related software, the County requires that the MDC system purchased with this RFP shall allow for the addition of an AVL component without the purchase of additional infrastructure equipment. The base stations, network controller and in-car RF modems shall allow for the transmission of the GPS data to the CAD system.

3.1.4.3 The County may also wish to add wireless Local Area Network (LAN) functionality using Internet Protocol (IP, either TCP or UDP) in the future. The system shall be able to accommodate a wireless LAN component using IP either through the use of an available PCMCIA slot, or via a factory installed internal LAN modem.

3.2 Technical Infrastructure Requirements

The radio infrastructure must meet the following technical requirements:

3.2.1 Critical infrastructure components shall have built-in fail-safe systems, which may include redundant components to ensure high availability. Santa Cruz County requires 99.99% up time system performance.

3.2.2 All radio and electronic equipment requiring Federal Communications Commission (FCC) type approval; acceptance or certification shall have approval at time of installation of the equipment.

3.2.3 All electrical power equipment must meet UL minimum standards for the type device.

3.2.4 All electronic equipment shall reflect the latest advances in the state of the art technology. Equipment design and construction shall be consistent with good engineering practices, and shall be executed in a neat and organized manner. All hardware installation should be rack mounted and physically secured. Installation must comply with all local, state and federal applicable codes.

3.2.5 All equipment and materials shall be new and shall be the best of their respective kinds, free of corrosion, scratches, or other defects. All equipment must be of current design and manufacture. It must meet basic military specifications for all primary components. Any equipment, which is being phased out due to new product replacement, shall be identified.

3.2.6 All installations shall be conducted in accordance with Motorola R-56 site standards with respect to Heating, Ventilation, Air Conditioning (HVAC), seismic and radiation requirements. SCCSO is in seismic zone four (4) and all installations must meet zone for installation standards.

3.2.7 In the case of performance-related specifications, the Proposer shall be prepared to conduct emulation tests to demonstrate compliance. Performance specifications include providing five references operating at 19.2 Kbps.

3.2.8 All equipment shall conform to the specifications of the local telephone company with respect to audio levels, frequencies and 'control voltages to be impressed upon telephone lines.

3.2.9 Proposers shall include, in their Proposal, complete information on required leased lines including circuit types and quantity for all site locations. Santa Cruz County recognizes that the ongoing cost for these types of lease costs are its responsibility.

3.2.10 The data radio system shall be designed utilizing one (1) new 800 Mhz frequency pair (806 Mhz wideband), which the County is in the process of obtaining. Additional channels may be added in the future. Therefore, the system must be capable of accommodating growth. The Proposer must specifically address adjacent channel interference and inter-modulation performance of their receiver.

3.2.11 The successful Proposer shall install all antennas and coax at their expense. No assumptions should be made as to the availability of space at desired heights on existing structures.

3.2.12 The system design must meet the minimum performance criteria presented in this RFP and shall be easily expanded by using a modular system design approach. The system design may require zoned channels and/or automatic frequency switching in the mobile/portable unit to accomplish the required system performance.

3.2.13 The Proposer shall present the technical merit of the system design and related cost trade-off. A technical discussion of the maximum utilization of the frequency pairs used in the design shall be detailed.

3.2.14 Proposers shall state the mean and 90% cumulative frequency of occurrence inbound and outbound response times of mobile units at the projected busy hour load, and at maximum capacity

3.2.14.1 The system shall provide mean inbound and outbound acknowledgment response times of no greater than four (4) seconds at the projected busy hour load.

3.2.14.2 The system shall provide 90% cumulative frequency of occurrence inbound and outbound acknowledgment response times of no greater than six (6) seconds at the projected busy hour load.

3.2.14.3 Proposers shall state the maximum number of mobile units the system is capable of controlling, and shall perform a system resource utilization analysis that identifies the "weak link,' in the system design.

3.2.15 The radio channel protocol must support single frequency network configurations

as well as multiple frequency system designs. Automatic roaming across both geographic areas and radio frequencies must be transparent to the user.

3.2.16 Proposers shall describe in detail how system access and contention of mobile/portable units is handled in the proposed system. A state-of-the-art highly efficient contention technique is required to allow maximum utilization of the scarce radio channel resource. The specific type of contention scheme shall be identified and appropriate support documentation supplied.

3.2.17 The radio channel protocol must allow for individual, group, and all call unit addressing.

3.2.18 The radio channel protocol must provide automatic acknowledgment for all transmissions, with the exception of certain outbound all call/group call broadcast transmissions.

3.2.19 The radio channel protocol shall incorporate an error correction and error detection procedure. This error correction and detection must be discussed in detail with the efficiencies and merit highlighted.

3.3 Network Controller

3.3.1 The successful contractor shall furnish a Network Controller to manage the network of base station controllers and provide a host communications interface. The controller and associated equipment should be installed in a rack in order to provide a unified, professional appearance.

3.3.2 The network controller shall automatically route received inbound messages to the Message Switch and send outbound messages to a terminal via the optimal base station without user intervention.

3.3.3 The network controller shall handle a minimum of 100,000 messages per hour total inbound and outbound message load. For these criteria, messages are assumed to be 50 characters inbound, and 100 characters outbound.

3.3.4 The Network Controller shall provide the following minimum functions:

3.3.4.1 Provide an industry standard data communications interface.

3.3.4.2 Manage the radio data network to minimize response time, by performing load balancing of a multi-channel system automatically without intervention.

3.3.4.3 Support a fleet of at least 200 terminals.

3.3.4.4 Provide system statistics, which may be analyzed locally or remotely, which

can be used to identify problem conditions within the data network.

3.3.5 The network controller can become a single point-of failure for the MDC system. As such, the County desires configuration and pricing information for a spare controller, or components sufficient to repair a unit on site.

3.4 In-Car RF Modem

3.4.1 The RF modem shall be of rugged construction and designed for vehicle mounting.

3.4.2 The RF Modem shall meet the following MIL-STD 810F specifications:

3.4.2.1 Sand and dust

3.4.2.2 Vibration

3.4.2.3 Shock

3.4.3 The modem shall connect to the in-car computer using an RS-232 serial data port.

3.4.4 The modem shall operate on 12 volts DC and be able to handle current fluctuations from 10 to 17 volts DC.

3.4.5 If the proposed solution includes an external RF modem, the unit shall contain both the modem and the radio transmitter in one unit.

3.4.6 RF Modem diagnostic & configuration software and training shall be provided for County radio shop technicians.

3.5 Radio Network Interface / Message Switch

The intent here is to describe general functionality and requirements regardless of who is the supplier of the interface. The Radio Network Interface will include all necessary software and hardware required to provide and support the following minimum functions:

3.5.1 Provide TCP/IP over Ethernet interface to the NETCOM CAD/host.

3.5.2 Provide message routing between MDCs.

3.5.3 Provide message reformatting to conform to the hardware constraints of the terminal/host being addressed.

3.5.4 Provide message store and forward capability.

3.5.5 Provide the ability to log all or specific messages based upon type at option of the Santa Cruz County Sheriffs Office.

3.5.6 Provide access validation processing for MDCs on the network and the interface system on a terminal-by-terminal basis to prevent unauthorized access to restricted access databases.

3.5.7 Provide statistics on message volumes by message type, destination, and host communications statistics including NAKs received, messages delivered, number of messages not delivered, and number of times the host link is down.

3.5.8 Provide a log file function to collect manager data and time stamped transmission occurrences from selected field units.

3.5.9 Provide a command function to allow the System Administrator to archive (dump) the log file to backup medium.

3.6 Data Base Station / Controller

3.6.1 The successful Contractor will furnish a radio base station system that is fully compatible with the MDCs. The radio base system shall consist of base stations with required automatic station identifiers, duplexer, and isolator, base station antennas with appropriately sized coaxial cable, connectors and mounting hardware described below. Each base station must have an automatic station identification feature that is compliant with FCC Base Station Identification specifications.

3.6.2 The base station must operate full duplex and be capable of sending an outbound message to one MDC while simultaneously receiving an inbound message from another MDC. (Simple repeaters do not meet the intent of this specification.)

3.6.3 Transistors, integrated circuits, and other solid-state silicon devices shall be used throughout to maximize the life expectancy of radio equipment in keeping with good engineering practice. All tunable circuit adjustments shall be easily accessible. Commercial-grade circuit boards shall be used throughout the radio unit for maximum durability. Each base station shall operate on a single transmit and receive frequency pair.

3.6.4 The Data Base Stations shall meet or exceed all specified TIA/EIA 603 Standards. The equipment shall contain all the necessary base station control circuitry to interface the required digital signaling equipment.

3.6.5 The successful contractor will furnish one base station controller, or software equivalent for each and every base station provided in the system. The failure of any given controller shall only disable one base station.

3.6.6 The base station controller, or software equivalent will directly interface to the supplied base station and provide the conversion and control function of data signals between the terminals and the Network Controller.

3.6.7 The Data Base Station will provide the following minimum functions:

3.6.7.1 Maximize throughput by minimizing occurrences of data collisions from field units.

3.6.7.2 Encode outbound host message for RF transmission.

3.6.7.3 Decode inbound MDC messages for transmission to the host.

3.6.7.4 The controller must be field upgradeable to support future protocol considerations.

3.6.7.5 The controller must utilize extensive self-test and diagnostics upon power up.

3.6.7.6 Transmitter base stations shall be of a modular design to ease maintenance and repair.

3.6.7.7 Transmitter base stations shall be equipped with a battery backup system to be used in case of primary power source failure. The SCCSO requests that the Proposer provide incremental pricing for battery backup minimum of two to maximum of 12 hours.

3.6.7.8 One "hot spare" or field replacement unit shall be provided for the transmitter sites.

3.6.7.9 Transmitter base stations will connect to the radio system controller using voice grade or equal phone lines.

3.6.7.10 System will be "staged" and verified using a factory acceptance test (FAT) at the contractor's facilities, prior to installation in Santa Cruz County,

3.6.7.11 The remote transmitter sites and the network controller shall have software and hardware required to perform remote diagnostics and basic remote maintenance.

3.6.7.12 The system delivery shall include any specialized test or diagnostic equipment required for system maintenance.

3.6.7.13 All mobile equipment will be installed at the County radio shop facility at 701 Ocean Street, Santa Cruz. Mobile equipment installation will be done making every effort to minimize the impact to existing vehicle equipment.

3.6.7.14 The system will be installed in accordance with established installation quality standards. The County uses the Motorola R56 installation standard as its baseline for quality assurance.

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3.7 Systems Software Specifications

The following functionality must be supplied by the mobile data system:

3.7.1 Real-Time Messaging. This feature should be used for sending a one-line message to another user. The software should activate a tone or a bell to indicate the arrival of a message. If the user is out of range for a short period of time, the message is to be held in queue and delivered when the unit comes back within range.

3.7.2 Users should also be able to request "return receipts" from other mobile terminals, so that they know when a message has been opened and read.

3.7.3 Announcements. Any user should be able to transmit messages of general interest to all other users or to a predefined group of users. The message to be displayed only on the computers where those specific users are logged in, but recorded on the main system.

3.7.4 Crime Computer Interface. This feature should allow access to the CLETS/STATE system through Windows-based dialogue boxes.

3.7.5 CAD/Records Interface: The system should be configured to exchange information from NETCOM's computer-aided dispatch system, allowing 'Voiceless dispatch".

3.7.6 The system must also be capable of providing inquiry capability to our future record management system using a published message format, which the RMS Proposer will take from the message switch or network controller and execute an inquiry into the SCCSO's corporate database, and return a response to the network controller or message switch for delivery to the field unit.

3.7.7 The system shall have the capability to display photo images in JPEG, GIF or TIF formats.

3.7.8 The proposed mobile data system must interface to the CAD System via a TCP/IP, Serial, Ethernet, providing a two-way line of communications link between the dispatcher's CAD system and the officers in the field. This will give the officer the ability to access and update a wide range of information.

3.7.9 Below are minimum functions that should be available in the interface:

3.7.9.1 Send Dispatch Incident Detail directly from the CAD Dispatchers Workstation

3.7.9.2 Send and Receive Messages from within CAD Messaging component

3.7.9.3 Receive Live Vehicle Status Updates of vehicles from the field

3.7.9.4 Update Call Disposition

3.7.9.5 Close Calls

3.7.9.6 Self Initiated Traffic Stops

3.7.9.7 View Vehicle Status Screen

3.7.9.8 View Incident Information

3.7.10 When the message has been received at the vehicle, a visual and audio alarm should sound in the patrol car. The patrol officer will then press a single function key to view or hear the incident detail sent by the dispatcher. At this time, the deputy should be able press a single function key to transmit his/her status change (i.e. In Route, At Scene, etc.) that will automatically be updated within the CAD system. Received and unacknowledged dispatch messages will flash and sound the audio alarm using a unique tone. Alerts sent in response to a flagged (wanted) inquiry return must be a dual alert, alerting both the deputy and dispatcher for all flagged wants and warrants.

3.7.11 Mobile Proposer must supply API specification document.

3.7.12 All messages, mail, and data sent should be encrypted or transmitted in a method to prevent unauthorized reception. Only users appearing on a pre-defined list shall be able to log into the system. The system should support an audit trail to include all users logins, information requests, message traffic, and other data transmitted to be automatically time-stamped and recorded on disk at the appropriate location.

3.7.13 Customized Privileges. This feature should permit discretionary granting or denial of certain privileges to specific users.

3.7.14 User Names. When a user logs in with his name and password, the user should receive messages as their unit number or name. This feature should support messages or mail sent to an officer, even if his/her present vehicle assignment is unknown. If the user changes to another vehicle and logs in, all messages and mail should be re-routed to his or her proper unit.

3.8 Training, Warranty and Maintenance

The County maintains its own radio service shop. The successful Proposer must provide the following as part of the system delivery:

3.8.1 The successful Proposer shall provide technical system maintenance and diagnostic

training for all of the infrastructure components for up to six (6) technicians. The training will take place at the County radio shop and other County' locations as required.

3.8.2 A complete set of manuals must be provided at each training location(s), for instructional purposes, and reference material must be provided to each end user. The SCCSO also requires an additional three (3) sets of system manuals for use in the radio shop and the Sheriffs Office. The manuals will include maintenance procedures, as-built documentation and detailed factory service manuals, including engineering specifications and board level diagrams for every component of the system.

3.8.3 All specialized equipment and all software required to maintain and operate the system will be provided as part of the system delivery.

3.8.4 The entire infrastructure shall be warranted to be free from defects for a period of at least two (2) years or standard manufacturer warranty, which ever is longer. This period shall include the latest software upgrades to each component of the system. The warranty period shall begin upon final system acceptance.

3.8.5 Optional extended warranties may also be proposed for the system.

3.9 In-Car Hardware

3.9.1 Hardware Specifications:

3.9.1 .1 The SCCSO expects to purchase 33 mobile computers for its core patrol fleet and an additional seven (7) "briefcase" (portable) models. However, the actual number of units may vary by time of installation. Pricing must be provided separately for these two (2) items, and shall include the individual per unit cost.

3.9.1.2 In addition to the 33 units for vehicle deployment, four (4) additional vehicles units must be supplied, to be used as working spares and for testing by County radio technicians.

3.9.1.3 The Proposer must provide a minimum of three (3) different in-car computer hardware solutions, with appropriate mounting solutions. The SCCSO prefers fixed mount in-car devices with the display and keyboard in the passenger compartment and the main central processing unit (CPU) mounted either in the trunk or remotely in the passenger compartment. Single unit prices for computers and related vehicle components must be included in the price Proposal.

3.9.1.4 The SCCSO wants to be able to take advantage of the frequent technology update in the industry and desires the most computing power for the money. Therefore, the mobile computers must have the following *minimum* characteristics:

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3.9.1.4.1 550Mhz Pentium III based CPU
3.9.1.4.2 128 MB of RAM
3.9.1.4.3 4.0 GB hard drive
3.9.1.4.4 1.44 MB floppy disk-integrated
3.9.1.4.5 CD-ROM Drive-integrated
3.9.1.4.6 Keyboard, optionally removable
3.9.1.4.7 Screen display viewable under all light conditions and with a wide viewing angle.
3.9.1.4.8 Touch screen capability
3.9.1.4.9 Microsoft Windows 2000 as the minimum operating system
3.9.1.4.10 Battery life exceeding 3 hours (for removable CPU) and briefcase solution
3.9.1.4.11 Capability to connect to SVGA external display
3.9.1.4.12 PCMCIA Type II port
3.9.1.4.13 Parallel printer port
3.9.1.4.14 RS-232 serial interface port
3.9.1.4.15 Universal Serial Bus (USB)
3.9.1.4.16 Optional magnetic stripe reader attached with the capability of reading in-state licenses.
3.9.1.4.17 Built-in infrared communication is desirable to facilitate docking and enhance hardware reliability
3.9.1.4.18 Optional PCMCIA card(s) providing network interface capabilities

3.9.1.5 The SCCSO would like to examine the possibility of using Spread Spectrum technology to update both the units in the field with the latest information and to upload data (such as crime, booking reports, etc.) to the Sheriff's Office information systems. The Proposer must clearly discuss how they would accomplish this and provide the appropriate costing as a separate line item.

3.9.2 Mounting Specifications

Car mounting units for the display, keyboard and CPU which meet Federal air bag mounting requirements and docking stations providing the following capabilities:

3.9.2.1 Automatic connection to battery eliminator and recharging unit without disrupting the power to the computer.

3.9.2.2 Capability to connect to a mobile radio through an RS-232 connection.

3.9.2.3 Capability for connecting to a GPS receiver for automatic vehicle location information.

3.9.2.4 The mounting solution must include an adjustable interval auto switched power supply controller. The purpose for the device is to shut off power to the MDC and

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RF modem after a period of time (2, 4 or 6 hours), to prevent the car battery from being discharged.

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REQUIREMENT	RESPONSE INCLUDED IN PROPOSAL SECTION
1.3 Instructions to Proposers	
1.9 Response Format Guidelines	
1.9.1 Five (5) original printed copies of the complete proposal	
1.9.2 Two (2) original copies of the complete pricing/cost proposal in a separate sealed package	
1.9.3 3.5" disk(s) or CDROM with the complete proposal in Microsoft Word '97 or 2000 and Microsoft Excel '97 or 2000.	
1.9.4 3.5" disks or CDROM with the complete pricing/cost proposal in Microsoft Word '97 or 2000 and Microsoft Excel '97 or 2000 for Windows.	
1.20 Proposers Signature	
2.5 Project Timeline to include milestones in installation, interfaces, training and acceptance testing.	
2.6 Training is specified by the vendor as prescribed in this section	
3.1 Radio Infrastructure	
3.1.1 Coverage	
3.1 .1.1 Minimum Number of Antenna sites	
3.1 .1.2 Transmission Coverage including maps	
3.1 .1.2.1 Specified Roadway Coverage	
3.1.1.3, 3.1.1.4, 3.1.1.5 Potential Antenna Sites	
3.1.2 Proposed system transmission speed	
3.1.3 System Loading	
3.1.4 System Expansion (3.1.4.1, 3.1.4.2, 3.1.4.3)	
3.2 Technical Infrastructure	
3.2.1 Fail safe systems	
3.2.2 FCC Approval at time of installation	
3.2.3 UL minimum standards	
3.2.4 Equipment shall be rack mounted. Electronics must be solid state	
3.2.5 Equipment is defect free, new and meets Mil Specs where applicable	
3.2.6 Installation meets Motorola HVAC standards and earthquake standards	
3.2.7 Installation test sites	
3.2.8 Conformance to telephone company standards	
3.2.9 Required lease line specifications	
3.2.10 System is capable of growth and expansion	
3.2.11 Installation of coax and antennas	
3.2.12 System expandability capability	
3.2.13 Technical Merit and system design discussion and cost trade off	

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REQUIREMENT	RESPONSE INCLUDED IN PROPOSAL SECTION
3.2.14 Mean and cumulative frequency of inbound and outbound response times (included responses tosubsections3.2.14.1, 3.2.14.2, 3.2.14.3)	
3.2.15 Radio channel protocol supports single and network frequency design and auto roaming	
3.2.16 System access and contention technique	
3.2.17 radio channel protocol must allow for individual, group, and all call unit addressing.	
3.2.18 Radio Channel Protocol acknowledgement of transmissions	
3.2.19 Radio Channel Protocol incorporates error correction and detection	
3.3 Network Controller	
3.3.1 Network Controller described	
3.3.2 Network controller's ability to handle inbound and out bound messages	
3.3.3 Network controller's ability to handle 100,000 inbound and out bound messages per hour	
3.3.4 Network controller minimum functions (3.3.4.1 through 3.3.4.4)	
3.3.5 configuration and pricing information for a spare controller, or components sufficient to repair at the unit on site.	
3.4 In-car RF Modems	
3.4.1 Rugged construction and design	
3.4.2 MIL STD specifications	
3.4.3 Modem connects view RS232 port	
3.4.4 Modem operate on 12 volts DC and be able to handle current fluctuations from 10 to 17 volts DC	
3.4.5 System includes and external RF modem	
3.4.6 RF Modem diagnostic & configuration software and training shall be provided for County radio shop technicians.	
3.5 Radio Network Interface/Message Switch	
3.5.1 TCP/IP connection to NETCOM	
3.5.2 Provide message routing between MDCs	
3.5.3 Message reformatting	
3.5.4 Message store and forward	
3.5.5 Log messages	
3.56 Access validation	
3.5.7 Message statistics	
3.5.8 Log file	
3.5.9 Archive Capability	
3.6 Data Base Station/Controller	
3.6.1 Radio base station controller that is FCC compliant	

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REQUIREMENT	RESPONSE INCLUDED IN PROPOSAL SECTION
3.6.2 Radio base station controller operates full duplex	
3.6.3 Transistors, integrated circuits, and other solid-state silicon devices shall be used throughout to maximize the life expectancy of radio equipment in keeping with good engineering practice.	
3.6.4 The Data Base Stations shall meet or exceed all specified TIA/EIA 603 Standards	
3.6.5 The successful contractor will furnish one base station controller, or software equivalent for each and every base station provided in the system.	
3.6.8 The base station controller, or software equivalent will directly interface to the supplied base station and provide the conversion and control function of data signals between the terminals and the Network Controller	
3.6.7 Database functions as specified in sections 3.6.7.1 through 3.6.7.14	
3.7 System Software Specifications	
3.7.1 Real time messaging	
3.7.2 Return receipt capability	
3.7.3 Supports announcements	
3.7.4 Crime Computer Interface	
3.7.5 CAD/Records Interface	
3.7.6 Inquiry capability to the future RMS system	
3.7.7 The system shall have the capability to display photo images in either JPEG, GIF or TIF formats	
3.7.8 Interfaced to the CAD system	
3.7.9 Minimum functions as specified in sub sections 3.7.9.1 through 3.7.9.8	
3.7.10 Visual and audible tone when message is received	
3.7.11 API specification supplied	
3.7.12 Message and mail encryption	
3.7.12 Customized user privilege	
3.7.13 User Name and unit displayed at logon.	
3.8 Training, Warranty and Maintenance	
3.8.1 Technical system maintenance and diagnostic training	
3.8.2 Manuals at each location and 3 extra sets	
3.8.3 software required to maintain and operate the system will be provided as part of the system delivery.	
3.8.4 Warranty	
3.8.5 Optional Extended warranty	

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REQUIREMENT	RESPONSE INCLUDED IN PROPOSAL SECTION
3.9 In car hardware	
3.9.1 Hardware	
3.9.1 .1 Separate pricing for hardware and portables	
3.9.1.2 Four additional units	
3.9.1.3 Three different in-car solutions were provided	
3.9.1.4 Unit specifications	
3.9.2 Mountina specifications	
3.9.2.1 Automatic connection to batter eliminator	
3.9.2.2 capability to cnnect to a mobile radio throuah RS-232 connection	
3.9.2.3 Capabiliity for connecting GPS receiver	
3.9.2.4 adjustable interval auto switched power supply controller	