

Appendix 5 – Special Contract Requirements (continued)

- 2.1.9. Update: Hardware, software or firmware changes that are required to update, fix, or improve existing functionality of a system. An example of an update is changing from version 1.0 to version 1.1

Maintenance Service Hours of Operation	
Monday - Friday	0800 - 1700 (9 hrs)
Saturday	
Sunday	
Federal Holidays	

Response Times	
During PPM	4 hr on site or remote telemaintenance
Outside PPM	4 hr on site or remote telemaintenance

- 2.1.10. Upgrade: Hardware, software or firmware changes that provide additional features and functionality to an existing system. An example of an update is changing from version 1.0 to version 2.0

Table 3: Standard Maintenance Service Hours of Operation and Response Times for CONUS sites

NOTE: On a site specific basis, Contractors will be required to provide price quotes for Maintenance Service Hours of Operation and Response Times that vary from the Government's standard. Contractors are encouraged to include in their proposals alternate pricing for expanded service hours (e.g. second shift, weekends, include federal holidays, etc.) and other than standard response times (e.g. 2 hour on-site vs. 4 hour on-site). Response times for OCONUS sites will be specified on a site specific basis.

2.2 System Downtime Inclusions

2.2.1 System downtime shall be incurred by each of the following:

- Core System Failure.
- Composite of Component Failures.
- Composite of Incomplete Scheduled Calibration and Preventive Maintenance Service Actions.

2.2.2 System Downtime Due to Core System Failure:

System Downtime Due to Core System Failure shall commence upon Government notification of the core system failure to the designated Contractor service facility and shall end when all repairs are completed, all integrated system performance parameters are being met, and the system is available for clinical use.

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2.2.3 System Downtime Due to Composite of Component Failures: System

Downtime shall accrue when any of the following conditions are met:

- More than 30% of diagnostic workstations are experiencing component failure at a site with greater than four (4) diagnostic workstations.
- 50% or more of diagnostic workstations are experiencing component failure at a site with less than or equal to four (4) diagnostic workstations.
- More than 30% of review workstations are experiencing component failure at a site with greater than four (4) review workstations.
- 50% or more of review workstations are experiencing component failure at a site with less than or equal to four (4) review workstations.

- More than 30% of quality control workstations are experiencing component failure at a site with greater than four (4) quality control workstations.
- 50% or more of quality control workstations are experiencing component failure at a site with less than or equal to four (4) quality control workstations.
- More than 50% of Contractor provided modality/DIN-PACS interface devices and/or associations for any single connected modality type (e.g., CT) are experiencing component failure. (For example, if 3 CT scanners are each connected to DIN-PACS and interfaces to 2 of the 3 CT scanners are in failure, the system will be considered down.) This includes Contractor provided interfaces to Government furnished LAN/WANs.

2.2.4 System Downtime Due to Composite of Incomplete Scheduled Calibration and Preventive Maintenance Service Actions:

System downtime shall accrue during the period when more than 5% of Contractor prescribed preventive maintenance service actions are incomplete during any given quarter. System downtime shall commence upon Government notification of the incomplete preventive maintenance service actions to the designated Contractor service facility and shall end when all such preventive maintenance service actions have been completed and documented.

2.2.5 All downtime shall be accrued during the Principal Period of Maintenance only.

2.3 Downtime Exclusions

- 2.3.1 Planned system maintenance shall consist of mutually approved scheduled maintenance and installation of software, firmware or hardware upgrades and modifications. As such, planned system maintenance shall not be included in downtime calculations.
- 2.3.2 System or component failures due to operator abuse, natural disasters, acts of God, or other causes of system or component malfunction which are clearly beyond the control of the DIN-PACS Contractor shall not be included in downtime calculations.
- 2.3.3 If shared maintenance options B or C are exercised during the post-warranty period, downtime does not start until the Government has completed all first call and telemaintenance efforts and the Contractor has arrived on site.

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2.4 Uptime Calculation

- 2.4.1 Base time shall be defined as the total principal period of maintenance hours for the period being calculated less the total hours of planned maintenance that are performed during the principal period of maintenance.
- 2.4.2 Uptime shall be calculated using the following formula:

$$\text{UPTIME (\%)} = \frac{\text{BASE TIME} - \text{DOWNTIME}}{\text{BASE TIME}}$$

2.5 Uptime Requirements

- 2.5.1 During the first six months of warranty, the DIN-PACS shall maintain a monthly system uptime of at least 99%.
- 2.5.2 During the second six months of warranty, the DIN-PACS shall maintain a quarterly system uptime of at least 99%.
- 2.5.3 During all post-warranty maintenance service periods, the DIN-PACS shall maintain a quarterly system uptime of at least 99%.
- 2.5.4 During the warranty and post-warranty periods, each DIN-PACS component shall maintain an uptime of at least 80% for each consecutive 90 day period.

2.6 Warranty Extensions for Excessive System Downtime

- 2.6.1 Failure to maintain system uptime of at least 99% for any one month during the first six months of warranty shall result in an extension of the system warranty period by one month.
- 2.6.2 Failure to maintain system uptime of at least 99% for any one quarter during the second six months of the warranty shall result in an extension of the system warranty period by one quarter.

2.7 Warranty Component Replacement for Excessive Component Downtime

Failure to maintain component uptime of at least 80% for any consecutive 90 day period during the warranty shall result in the Government's option to call for the removal and/or replacement of the component(s) at the Contractor's expense.

2.8 Post-Warranty Maintenance Credits for Excessive System Downtime

2.8.1 Failure to maintain system uptime of at least 99 % for any one quarter during the post-warranty maintenance periods shall result in a credit to the Government applied to the following quarter's maintenance cost.

2.8.2 Maintenance cost credits shall be granted pursuant to the following maintenance credit schedule:

Quarterly System Uptime	Quarterly Cost Reduction
99.0% - 100%	0%
96.0% - 98.9%	3%
90.0% - 95.9%	5%
85.0% - 89.9%	10%
80.0% - 84.9%	15%
79.9 and below	20%

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2.9 Post-Warranty Component Replacement for Excessive Component Downtime

Failure to maintain component uptime of at least 80% for any consecutive 90 day period during the post-warranty period shall result in the Government's option to purchase a replacement for the component(s) on a prorated basis. The prorated cost of the replacement shall be equal to the CLIN price of the component cited in Section B, Schedule III times the appropriate percentage noted in the table below:

Post-Warranty Year in Which Component Fails to Meet Uptime Requirement	Percentage Cost of CLIN Price
1	12.5%
2	25%
3	37.5%
4	50%
5	62.5%
6	75%
7	87.5%
8	100%

2.10 Maintenance Support Resources

2.10.1 The Contractor shall provide maintenance support for all components of the system at each site.

2.10.2 All service shall be provided by factory trained, English speaking, technically qualified and authorized service personnel.

2.10.3 All tools, test equipment, parts and supplies necessary to maintain all components of the DIN-PACS system shall be the responsibility of the Contractor.

2.10.4 The Contractor shall provide a point of contact (POC) for each site for both hardware and software maintenance.

2.10.5 The site shall be able to contact the POC 24 hours a day by telephone or other direct communication (e.g. beeper).

3. Service Support

3.1 General

3.1.1 The size and complexity of the system shall dictate the level of service support required.

3.1.2 The Contractor shall submit a system administration/maintenance/operation plan as part of the deliverable under each delivery order placed against the Contract.

3.1.3 Maintenance plans shall include the following: number and skills of on-site maintenance staff, scheduled calibration and preventive maintenance program details, repair maintenance program details, archive system maintenance program details, database maintenance plan details, repair parts program details, technical support resources description, facilities requirements for

- maintenance, training, travel requirements, and telemaintenance program support.
- 3.1.4 On-site staff qualifications shall meet the requirements specified herein.
- 3.1.5 The Contractor shall make available for purchase by the Government all components or spare parts required to maintain the DIN-PACS. This shall be independent from any post warranty service support purchased by the Government for a specific site.

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3.2 On-site Facility Support

- 3.2.1 At fully integrated (networked) sites, the Contractor shall provide an option for full time on-site technical support for system maintenance, training and administration. This individual shall be referred to as the Contractor provided full time on-site system administrator.
- 3.2.2 When this option is chosen by the Government, such support shall be provided or made available on-site when the Contractor establishes initial operating capability (IOC) and remain on-site during the warranty period, including extensions.
- 3.2.3 Additional on-site support staff shall be dictated by the workload of each site.
- 3.2.4 Full time technical support shall be present on-site during the first shift of the radiology department and on call on second and third shifts.
- 3.2.5 The Contractor shall provide information pertinent to work qualifications, experience history and educational background for each member of the on-site technical support staff.
- 3.2.6 This information shall include copies of training certificates, or descriptions of training programs that demonstrate that the staff member possesses credentials, skills and abilities to provide the required functions.
- 3.2.7 On-site technical support shall include skills in system engineering, database management and technical systems analysis, including repair and maintenance. Typical staff skills required are described below.
- 3.2.8 ***On-site support persons will be required to comply with all site specific Government base and IT network access requirements to include, but not be limited to, National Agency Checks (NACs) and obtaining CAC cards.***

3.3 System Engineering

Facility support personnel shall be responsible for optimal operation of all computer components of the DIN-PACS, including databases, image transmission, and network operations for both LAN and WAN, interfaces to imaging modalities, image display systems and electronic image archives.

3.4 Database/Archive Management

- 3.4.1 Facility support personnel shall be responsible for all aspects of electronic image acquisition and archiving.
- 3.4.2 This individual shall assure that imagery is entered into storage and archive in the correct format that the proper association of images and exam data are created, and is readily available for physician review and diagnosis.
- 3.4.3 He/she shall demonstrate competence in the use of computers for data management, and in operation and diagnosis of a medical center image archive system.

3.5 Computer Technical Skills/Training

- 3.5.1 Facility support personnel shall be responsible for maintenance and training on the system.
- 3.5.2 This individual shall demonstrate competence in all aspects of computer systems maintenance and have a thorough understanding of electronic circuits and troubleshooting techniques.
- 3.5.3 Proficiency in the preventive maintenance, calibration and safety testing of image display workstations and associated equipment is required.
- 3.5.4 He/she shall be proficient in the operation of all components of the system, and fully capable of training others in the proper operation of the equipment.

Appendix 5 – Special Contract Requirements (continued)**3.6 Warranty Maintenance**

- 3.6.1 During the 12 month warranty period, the Contractor shall furnish maintenance service support that includes, as a minimum, preventive and corrective maintenance services for the DIN-PACS and all associated hardware, firmware and software, parts, labor, travel and expenses necessary to perform such services at no additional cost to the Government, except in those circumstances where maintenance or repair service is required as a direct result of abuse, misuse, misconduct or other gross or wilful damage done by the Government.
- 3.6.2 In those emergency situations when a core system component(s) is down and the Government places the call for corrective action to the Contractor within the Principal Period of Maintenance, the Contractor shall respond within the prescribed PPM response time and continue efforts to resolve the problem even though maintenance service may begin outside of the Principal Period of Maintenance (due to response time lag of the Contractor). In such instances, as long as the Government places the call to the Contractor within the PPM, the costs of all resulting maintenance services shall be included in the base contract warranty/maintenance price and shall NOT be billable at an additional cost to the Government.
- 3.6.3 Corrective maintenance outside of the principal period of maintenance is NOT covered under this contract. This maintenance may be requested by a specific site with that site establishing an appropriate contract vehicle or direct method of payment with the Contractor. Parts costs incurred during such maintenance calls shall be included in the base warranty/maintenance price and shall not be billed separately to a customer.
- 3.6.4 The Government representative will make formal notification of the problem by phone to the Contractor POC as soon as the problem is identified by the Government. Such notification will cause the response time and downtime measurements (if call is placed during the PPM) to commence.

3.7 Scheduled Services Maintenance Plan

- 3.7.1 Scheduled maintenance shall include the calibration, electrical safety testing and scheduled preventive services performed on the system equipment.
- 3.7.2 The Contractor shall furnish a scheduled maintenance plan/schedule for each installation.
- 3.7.3 To the maximum extent possible, scheduled maintenance shall be performed on individual components of the system so as not to affect the operation of the entire system.
- 3.7.4 The Contractor will perform any scheduled services which will result in system downtime at times outside of the Principal Period of Maintenance.
- 3.7.5 The Contractor will perform all other scheduled services which will NOT result in system downtime at times convenient to the Government.
- 3.7.6 The Contractor shall schedule and coordinate scheduled services and obtain approval of the schedule by the Government's representative at the site.
- 3.7.7 Service reports of all scheduled services performed shall be verified by the Government POC, maintained and turned over to the Government POC. The Contractor shall also provide service reports to the Contracting Officer upon request.

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- 3.7.8 The contractor shall maintain historical service records on each component of the system, which will be provided to the Government upon request.

3.8 Remote Diagnostics and Telemaintenance

- 3.8.1 It is highly desired that the Contractor demonstrate and provide system connectivity, diagnostic software and technical support services which utilizes the DoD DISA Business to Business (B2B) gateway for troubleshooting, repairing, and configuring DIN-PACS equipment.
- 3.8.2 The Business to Business (B2B) gateway shall be able to reach all central system components in the

DIN-PACS (i.e. servers, database, archive controller, archive devices, routers, and network management workstations) through a common (single) telecommunications access line.

3.8.3 Telemaintenance methods shall also include the use of telephonic contact with government site support staff and users.

3.9 Corrective Maintenance

3.9.1 The Contractor shall provide on-site and remote (via the DISA B2B Gateway) hardware, firmware and software corrective maintenance service for all component and system failures, to include software problem analysis, associated reprogramming and corrected software documentation.

3.9.2 The Contractor shall affect repairs in the most expedient manner with minimum interruption to the operation of the system.

3.9.3 Service reports of all repair services performed shall be maintained and turned over to the Government POC. The Contractor shall also provide service reports to the Contracting Officer upon request.

3.9.4 An emergency corrective maintenance call is defined as a failure of a component when no back up is available, or a failure of the system that prevents the site from accomplishing its normal workload with the remainder of the system.

3.9.5 Placement of such an emergency corrective maintenance call marks commencement of downtime and response time measurement.

3.9.6 Once a Contractor service representative begins to fulfill an emergency corrective maintenance action on a core system component(s) (either on-site or remotely), for all calls placed during the principal period of maintenance, the service representative shall continue efforts, at no additional charge to the Government, until all repairs are completed, all integrated system performance parameters are being met, and the system is available for clinical use.

3.10 Corrective maintenance outside of the principal period of maintenance is NOT covered under this contract. This maintenance may be requested by a specific site with that site establishing an appropriate contract vehicle or direct method of payment with the Contractor. Parts costs incurred during such maintenance calls shall be included in the base warranty/maintenance price and shall not be billed separately to a customer.

3.11 All other corrective maintenance calls that do not meet the requirements of the “emergency” call shall be defined as “routine” corrective maintenance calls.

3.12 The contractor shall maintain historical service records on each component of the system, which will be provided to the Government upon request.

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4. Response Time

4.1 **Response time is measured from the time the vendor is notified of a need for maintenance or support, until maintenance is started from a remote location or support personnel arrive on-site and begin actively working on the problem.**

4.2 Response time hours are defined in Table 3 for calls placed both during and outside the Principal Period of Maintenance.

4.3 The Contractor is required to provide a reliable POC for 24 hour service call notification. The Contractor maintenance POC shall provide a telephonic response of acknowledgment of receipt of an emergency call within 1 hour following notification. Failure of the POC to answer valid attempts of the Government to notify will result in the start of both downtime and response time.

5. Reports of Service

5.1 All reports of service (scheduled and corrective maintenance) shall be documented, validated by the Government POC, and provided to the appropriate on-site Government representative and filed with the equipment history file. Documentation will be provided in accordance with the appropriate Military Services policies and procedures.

5.2 As a minimum, the report shall include: (a) date and time notified, (b) date and time of arrival on-site,

(c) description of malfunction or service to be performed, (d) model number/serial number and location of the equipment, (e) time spent to repair, (f) parts used/replaced, and (g) parts cost, (h) description of service performed, (i) name of government POC, (j) name of Contractor service engineer, (k) telemaintenance methods used, if any, (l) designation of user error if appropriate.

5.3 Non-compliance with the documentation requirements specified herein may result in actions as deemed appropriate by the Contracting Officer.

6. Post-Warranty Maintenance

6.1 Contractor shall provide a maintenance program for each system installed for up to 5 option years following conclusion of the one year warranty.

6.2 During each 12 month post-warranty maintenance period, the Contractor shall furnish maintenance service support and user training that includes, as a minimum, scheduled and corrective maintenance services for the DIN-PACS and all associated hardware, firmware and software parts, labor, travel and expenses necessary to perform such services at no additional cost to the Government, except in those circumstances where maintenance or repair service is required as a direct result of abuse, misuse, misconduct or other gross or willful damage done by the Government.

6.3 All definitions and requirements as defined above for the warranty period shall apply during the post-warranty period unless exceptions are defined.

7. Online Help Desk.

7.1 Vendors shall provide customers with online access to a computer base help desk.

7.2 The Online Help Desk shall permit customers to request scheduled and unscheduled services, query historical data and generate reports.

7.3 The Online Help Desk shall provide real time information to include current status, total equipment down time, who initiated the service ticket, the original complaint, response time, the service technician, work performed, replacement parts and completion date and time.

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8. Maintenance Scope of Work Options

Contractor shall provide, at the option of each individual site, maintenance service plans that meet or exceed one of the following Scope of Work options:

Option A1.

- A. Under Option A1, the Contractor shall provide full-time on-site “Contractor provided personnel” as described herein
- B. The scope of services provided and requirements for system reliability for Option A1 shall be the same as required during the warranty period and includes all parts, labor, system hardware firmware and software changes, a full time on-site Contractor provided system administrator and periodic user training.
- C. The Government representative will make formal notification of the problem by phone to the Contractor POC. Such notification will cause the response time (see Table 3) and downtime measurements to commence.
- D. The Contractor shall provide software updates to installed system functionality at no additional cost to the Government.

Option A2.

- A. Under Option A2, there is **no** requirement for a full-time on-site Contractor provided system administrator.
- B. The scope of services provided and requirements for system reliability for Option A2 shall be the same as required during the warranty period and includes all parts, labor, system hardware firmware and software changes.
- C. The Government representative will make formal notification of the problem by phone to the Contractor POC. Such notification will cause the response time (see Table 3) and downtime measurements to

commence.

- D. The Contractor shall provide software updates to installed system functionality at no additional cost to the Government.

Option B.

- A. Under Option B, there is **no** requirement for a full-time on-site Contractor provided system administrator.
- B. The scope of services provided and requirements for system reliability for Option B shall provide for Government performed shared maintenance with the following provisions:
- (1) Government performs first call on all service calls;
 - (2) Government performs additional services under the guidance of telemaintenance;
 - (3) Government will provide all scheduled maintenance services for those components that are identified in the mutually agreed upon task allocation chart as a Government responsibility.
 - (4) Government purchases recommended supplies for all scheduled services that it performs;

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- (5) Contractor develops a maintenance allocation chart depicting the tasks for the Government and tasks for Contractor service. The final task allocations will be mutually agreed upon between the Contractor and the Government on a site specific basis;
- (6) Contractor provides factory level training for all services that the Government will be performing;
- (7) Contractor performs all remaining scheduled services and repairs with full provision of parts (including component spares), labor, and travel.
- (8) Contractor provides on-site support for the central system (core system) operation and maintenance only. The central system includes at a minimum, the archive devices, image server(s), image database computers, RIS, DIN-PACS/CHCS Interface, central network distribution devices and routers.
- (9) The Contractor shall provide software updates to installed system functionality at no additional cost to the Government.
- (10) Contractor responsibility for system uptime performance is reduced by the change in the calculation of DOWNTIME as defined below:

UPTIME (%) = BASE TIME - DOWNTIME

BASE TIME

Option B: Base Time is the same as in Option A1.

Downtime does not start until after the Government has completed all first call and telemaintenance efforts and the Contractor has arrived on-site*.

* The Contractor will be required to comply with the 1 hour telephonic response time and will have a maximum time of 12 hours to reach the site from the time that a new or unresolved system malfunction is determined as requiring on-site Contractor intervention. Facilities which may not be reachable within this time due to geographic location will be addressed on a site specific basis for longer response times and additional cost, if any, above and beyond that of the base 12 hour requirement.

9. Commercial Post Warranty Maintenance Plans

Contractors are encouraged to offer their normal, commercial maintenance service plans (based on their standard commercial maintenance service terms and conditions) in addition to the Government specified service options above. If such commercial plans are offered, the following shall be provided:

- The methodology, or process used by the Contractor to calculate the maintenance service price for a specific medical treatment facility (e.g. the price is calculated as a fixed percentage of the equipment cost.)
- A comparison of the Contractors standard commercial maintenance service terms and conditions and the Governments “Maintenance Scope of Work Options” specified in Section 8 above.
- Prior to award of each site specific delivery order, vendors will be required to submit firm, fixed price

post-warranty maintenance proposals for 5 option years. Pricing will normally be required each of the Government specified service options above, as well as any vendor commercial plan offerings.