

## Functional Requirements for **Digital Radiography System**

### For **VISN 15**

*This document highlights the technical specifications and services being requested by this VISN for consideration toward purchase of Digital Radiography Systems. Offerors under this proposal shall provide all equipment and accessories, installation services, training, and project management support.*

### **Objective:**

It is the intent of the VHA VISN 15 to conduct a consolidated, multi-facility purchase of Digital Radiography Systems. It is anticipated that these units will be installed at the following facilities: Kansas City VAMC (2), Columbia VAMC (2), Eastern Kansas HCS (1), Wichita VAMC (3), St. Louis VAMC (3), Poplar Bluff VAMC (1), Marion VAMC (2). However, VISN 15 reserves the right to alter quantities in its discretion.

### **Technical Requirements:**

#### **Generator Requirements:**

1. 80 kW, 3 phase generator
2. Radiographic kVp range is 40-150
3. Radiographic mA range 800 ma@ 100KVp

#### **Radiographic/Overhead tube Crane System**

1. Patient alignment system (laser alignment/positioning lights)
2. Pre-programmed exposure settings located on tube or in control room
3. Ability to change between table top, upright bucky and table bucky from tube head
4. Provide small and large focal spot information
5. Control handle
6. System motorization
7. Automatic tube positioning
8. Automatic collimation
9. Optional table and upright auto tracking package

#### **Control room Radiographic control panel**

1. 19" control room LCD monitor (minimum)
2. Auto HIS/RIS refresh package
3. Computer hard drive 300 GB or greater
4. Quality control tracking package
5. Operating system is Windows 7 or newer or other (Linux, Unix, etc...)
6. UPS for x-ray control/image memory
7. Automatic parameter selection
8. Ability to send images directly from the control panel. Not requiring a separate workstation.
9. Integrated DICOM structured dose reporting(if available/describe)
10. Optional dose tracking package
11. Optional bar code reader

#### **Fixed Wall Digital Detector Requirements:**

1. Detector size up to 17"x17"
2. Resolution – minimum 2.0 lp/mm
3. Tilting bucky
4. Height minimum – low enough to complete standing knee exams while patient is standing on the floor
5. Height maximum – high enough to complete AP C-spine exams while patient is standing on the floor

6. Ability to position detector in portrait or landscape mode.
7. Removable/adjustable patient handgrips.
8. Optional wall stand auto stitching package.
9. Optional patient stand

#### **Wireless Digital Detector Requirements:**

1. Detector size – minimum 14"x17"
2. Resolution – minimum 2.0 lp/mm
3. Detector will charge in bucky/holder
4. Weight Limit (w/battery installed) – maximum 11 lbs.
5. Wireless (not tethered to the system/table)
6. Wireless – compatible with 802.11b/g/n
7. FIPS 140-2 compliant
8. Describe maximum patient weight for weight bearing examinations.
9. Provide full coverage warranty for a minimum of one year
10. Charging station (*if required*)
11. Portrait and landscape orientation capable
12. Grid attachments
13. Optional table holder
14. Optional mobile holder

#### **Fixed Table Digital Detector Requirements:**

1. Detector size up to 17"x17"
2. Resolution – minimum 2.0 lp/mm
3. Optional table auto stitching package.

#### **Table Requirements:**

1. Static – 500 lbs patient weight limit (minimum)
2. Dynamic – 300 lbs patient weight limit (minimum)
3. Width of table – 80 cm (minimum)
4. Floating tabletop
5. Adjustable height
6. Auto centering option to exact middle while the table is vertical or horizontal positions
7. Table movement controls located table side.
8. Removable/adjustable patient handgrips.
9. Hands-free operation
10. Electromagnetic locking system

#### **Warranty and Service:**

1. VPN/Remote Access – The vendor shall provide, at no additional charge, any and all equipment service programs, such as remote diagnostics, during the warranty period. The vendor shall provide post-warranty remote diagnostic service program as an "Add Option" with the offer. The system shall provide Vendor Remote Diagnostics via VPN. Vendor shall utilize the VA national Site-to-Site VPN, or the vendor shall work with the Office of Cyber and Information Security and the VAMC Information Security Officer to establish a Client-Based VPN.
2. Service and Operator Manuals – The vendor shall provide the following documentation for the proposed system:
  - Two (2) copies of operator's instruction manuals per unit purchased

- Two (2) copies of complete technical service manuals including detailed troubleshooting guides, necessary diagnostic software, service keys, schematic diagrams, and parts lists
  - Two (2) copies of a system manager's manual outlining back-up procedures, managing privilege group limits, routine tasks, etc.
3. Warranty – The system and accessories shall be covered under the manufacturer's warranty, and shall include all parts and labor for one year following acceptance by the VAMC. The manufacturer's factory-trained field service personnel shall perform installation and maintenance during the warranty period. The warranty period shall not begin until after VAMC authorized personnel have accepted the products delivery, installation, and functionality.

## Training

1. On-site – Clinical applications during GO LIVE - **32 hours at a minimum**
2. Follow up applications training to be provided after technologists have hands-on experience with the system - within one year of installation to be determined by the station - **16 hours at a minimum**
3. Biomedical training package - Include all prerequisite classes, equivalent to what your OEM field service representatives receive. This training is to be provided within 18 months of installation. All service manuals, schematics, diagrams, diagnostic software, other special tools and hardware keys equivalent to what their OEM field service reps have available to diagnose, troubleshoot, repair and maintain the equipment. Travel including airfare, hotel and government rate per diems shall be included.
4. Quick notes – or reference guides to be provided during on-site training
5. Describe on-line or telephonic applications support and availability
6. Describe post-warranty technologist and physician training packages that are offered.

## Information to be provided by each vendor:

1. Provide detail information about the curriculum and length of the Biomedical Technical Training.
2. Provide brochures and spec sheets
3. Provide the following information about the wireless detector:
  - a. maintenance requirements
  - b. battery life/charging requirements/run time
  - c. drop policy (during warranty and post warranty)
  - d. cleaning instructions for the wireless detector
4. Typical drawings (to include minimum room size requirements)
5. DICOM conformance statement
6. Completed pre-procurement assessment form (6550) and MDS<sup>2</sup> document
7. Information about your companies support structure during the warranty period (i.e. a listing of Field Service Engineer locations and availability, support 800 phone number(s), remote support, etc.)

## Other Features:

Other value added features included in the vendor's proposal will be considered but not limited to:

1. Extended warranty.
2. hardware/upgrades,
3. additional training,
4. performance improvement and
5. process optimization consulting,
6. Price improvements based on volume purchase will be considered.
7. Describe any other value added items offered

## Trade-in – Please provide trade in and de-installation information

1. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: Philips  
Model: Digital Diagnost  
S/N: 40301  
Acq. Year: 2004  
EE# 73623  
Station: St. Louis VAMC
2. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: Philips  
Model: Digital Diagnost  
S/N: 702257  
Acq. Year: 2007  
EE# 86610  
Station: Wichita VAMC
3. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: GE  
Model: Dfinium 8000  
S/N: 00005  
Acq. Year: 2008  
EE# 92571  
Station: Wichita VAMC
4. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: Swissray  
Model: DDR Plus  
S/N: 10608  
Acq. Year: 2008  
EE# 109214  
Station: Kansas City VAMC
5. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: GE  
Model: Definium 8000  
S/N: 53481HL8  
Acq. Year: 2008  
EE# 96345  
Station: Columbia VAMC
6. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: GE  
Model: Definium 8000  
S/N: 1015975WK4  
Acq. Year: 2008  
EE# 98300  
Station: Kansas City VAMC
7. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: GE  
Model: Proteus XR/A Analog  
S/N: 1017426WK6  
Acq. Year: 2008  
EE# 97572  
Station: Wichita VAMC

8. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: Siemens  
Model: Axiom Multix M  
S/N: 1404  
Acq. Year: 2008  
EE# 98296  
Station: Eastern Kansas HCS
9. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: Philips  
Model: Digital Diagnost  
S/N: 10000073  
Acq. Year: 2008  
EE# 112513  
Station: St. Louis VAMC
10. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: GE  
Model: Definium 8000  
S/N: 54698HL6  
Acq. Year: 2008  
EE# 99135  
Station: Columbia VAMC
11. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: GE  
Model: Definium 8000  
S/N: 1693  
Acq. Year: 2008  
EE# 93208  
Station: Poplar Bluff VAMC
12. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: Philips  
Model: Digital Diagnost  
S/N: 90249  
Acq. Year: 2009  
EE# 100567  
Station: St. Louis VAMC
13. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: GE  
Model: Definium 8000  
S/N: 1016839WK3  
Acq. Year: 2008  
EE# 90142  
Station: Marion VAMC
14. Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).  
Manufacturer: GE  
Model: Definium 8000  
S/N: 9347M36  
Acq. Year: 2008  
EE# 94354  
Station: Marion VAMC