## Manufacturer Disclosure Statement for Medical Device Security – MDS²

### DEVICE DESCRIPTION

<table>
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<td>FUJIFILM SonoSite, Inc.</td>
<td>D17567 Rev. C</td>
<td>October, 2017</td>
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<td>Device Model</td>
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<tr>
<td>Patient Data Archival Software (PDAS)</td>
<td></td>
<td></td>
<td>August, 2015</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Company Name</strong></th>
<th><strong>Manufacturer Contact Information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>FUJIFILM SonoSite</td>
<td>FUJIFILM SonoSite Technical Support</td>
</tr>
<tr>
<td></td>
<td>Phone: 877-657-8118</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:ffss-service@fujifilm.com">ffss-service@fujifilm.com</a></td>
</tr>
</tbody>
</table>

#### Intended use of device in network-connected environment:

Ultrasound archiving system providing an automated mechanism for storing images, video clips and reports generated on DICOM compliant systems.

### MANAGEMENT OF PRIVATE DATA

> Refer to Section 2.3.2 of this standard for the proper interpretation of information requested in this form.

<table>
<thead>
<tr>
<th>Note #</th>
<th>Yes, No, N/A, or See Note</th>
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#### A Can this device display, transmit, or maintain private data (including electronic Protected Health Information [ePHI])?

- Yes

#### B Types of private data elements that can be maintained by the device:

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- B.1 Demographic (e.g., name, address, location, unique identification number)?
  - Yes

- B.2 Medical record (e.g., medical record #, account #, test or treatment date, device identification number)?
  - Yes

- B.3 Diagnostic/therapeutic (e.g., photo/radiograph, test results, or physiologic data with identifying characteristics)?
  - Yes

- B.4 Open, unstructured text entered by device user/operator?
  - Yes

- B.5 Biometric data?
  - N/A

- B.6 Personal financial information?
  - No

#### C Maintaining private data - Can the device:

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- C.1 Maintain private data temporarily in volatile memory (i.e., until cleared by power-off or reset)?
  - Yes

- C.2 Store private data persistently on local media?
  - Yes

- C.3 Import/export private data with other systems?
  - Yes

- C.4 Maintain private data during power service interruptions?
  - Yes

#### D Mechanisms used for the transmitting, importing/exporting of private data – Can the device:

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- D.1 Display private data (e.g., video display, etc.)?
  - Yes

- D.2 Generate hardcopy reports or images containing private data?
  - Yes

- D.3 Retrieve private data from or record private data to removable media (e.g., disk, DVD, CD-ROM, tape, CF/SD card, memory stick, etc.)?
  - Yes

- D.4 Transmit/receive or import/export private data via dedicated cable connection (e.g., IEEE 1073, serial port, USB, FireWire, etc.)?
  - Yes

- D.5 Transmit/receive private data via a wired network connection (e.g., LAN, WAN, VPN, intranet, Internet, etc.)?
  - No

- D.6 Transmit/receive private data via an integrated wireless network connection (e.g., WiFi, Bluetooth, infrared, etc.)?
  - Yes

- D.7 Import private data via scanning?
  - Yes

- D.8 Other?
  - No

#### Management of Private Data notes:

1. PHI stored and displayed by PDAS originates on DICOM compliant ultrasound systems.
2. Data may be shared with EMR/EHR or PACS systems

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### SECURITY CAPABILITIES

Refer to Section 2.3.2 of this standard for the proper interpretation of information requested in this form.

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#### AUTOMATIC LOGOFF (ALOF)

The device’s ability to prevent access and misuse by unauthorized users if device is left idle for a period of time.

1-1 Can the device be configured to force reauthorization of logged-in user(s) after a predetermined length of inactivity (e.g., auto-logoff, session lock, password protected screen saver)?

1-1.1 Is the length of inactivity time before auto-logoff/session lock user or administrator configurable? (Indicate time [fixed or configurable range] in notes.)

1-1.2 Can auto-logoff/session lock be manually invoked (e.g., via a shortcut key or proximity sensor, etc.) by the user?

1) The PDAS application runs as a service on the host PC. The application must run continuously.

#### AUDIT CONTROLS (AUDT)

The ability to reliably audit activity on the device.

2-1 Can the medical device create an audit trail?

2-2 Indicate which of the following events are recorded in the audit log:

- 2-2.1 Login/logout
- 2-2.2 Display/presentation of data
- 2-2.3 Creation/modification/deletion of data
- 2-2.4 Import/export of data from removable media
- 2-2.5 Receipt/transmission of data from/to external (e.g., network) connection
  - 2-2.5.1 Remote service activity
- 2-2.6 Other events? (describe in the notes section)

2) Audit functions only provides information on ultrasound studies that have failed during the archive process.

#### AUTHORIZATION (AUTH)

The ability of the device to determine the authorization of users.

3-1 Can the device prevent access to unauthorized users through user login requirements or other mechanism?

3-2 Can users be assigned different privilege levels within an application based on ‘roles’ (e.g., guests, regular users, power users, administrators, etc.)?

3-3 Can the device owner/operator obtain unrestricted administrative privileges (e.g., access operating system or application via local root or admin account)?

1) User authorization only provided for access to the the PDAS administrative function. No login is required for normal operation of the system.
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4 CONFIGURATION OF SECURITY FEATURES (CNFS)

The ability to configure/re-configure device security capabilities to meet users’ needs.

4-1 Can the device owner/operator reconfigure product security capabilities?

   Yes 1

CNFS notes:

1) System owner/administrator can limit those ultrasounds that communicate with PDAS.

5 CYBER SECURITY PRODUCT UPGRADES (CSUP)

The ability of on-site service staff, remote service staff, or authorized customer staff to install/upgrade device’s security patches.

5-1 Can relevant OS and device security patches be applied to the device as they become available?

   Yes 1

5-1-1 Can security patches or other software be installed remotely?

   N/A __

CSUP notes:

1) PDAS software resides on a server owned and managed by the customer. Installation of system updates or patches may impact the functionality of the PDAS application.

6 HEALTH DATA DE-IDENTIFICATION (DIDT)

The ability of the device to directly remove information that allows identification of a person.

6-1 Does the device provide an integral capability to de-identify private data?

   No __

DIDT notes:

7 DATA BACKUP AND DISASTER RECOVERY (DTBK)

The ability to recover after damage or destruction of device data, hardware, or software.

7-1 Does the device have an integral data backup capability (i.e., backup to remote storage or removable media such as tape, disk)?

   No 1

DTBK notes:

1. All data stored by PDAS is expected to be backed up and managed according to best practices in place at the owners facility.

8 EMERGENCY ACCESS (EMRG)

The ability of device users to access private data in case of an emergency situation that requires immediate access to stored private data.

8-1 Does the device incorporate an emergency access ("break-glass") feature?

   No __

EMRG notes:

9 HEALTH DATA INTEGRITY AND AUTHENTICITY (IGAU)

How the device ensures that data processed by the device has not been altered or destroyed in an unauthorized manner and is from the originator.

9-1 Does the device ensure the integrity of stored data with implicit or explicit error detection/correction technology?

   No __

IGAU notes:

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### 10 MALWARE DETECTION/PROTECTION (MLDP)

The ability of the device to effectively prevent, detect and remove malicious software (malware).

- **10-1**: Does the device support the use of anti-malware software (or other anti-malware mechanism)?
  - Yes 1
- **10-1.1**: Can the user independently re-configure anti-malware settings?
  - Yes 1
- **10-1.2**: Does notification of malware detection occur in the device user interface?
  - No 2
- **10-1.3**: Can only manufacturer-authorized persons repair systems when malware has been detected?
  - No

**MLDP notes:**
- 1) PDAS is installed on a PC-based server provided by the customer. Anti-malware and anti-virus software installations and regular updates are recommended, based on customer's IT policies.
- 2) The application user interface does not provide notification. This will only happen at the system level of the PC hosting the application.

### 11 NODE AUTHENTICATION (NAUT)

The ability of the device to authenticate communication partners/nodes.

- **11-1**: Does the device provide/support any means of node authentication that assures both the sender and the recipient of data are known to each other and are authorized to receive transferred information?
  - Yes 1

**NAUT notes:**
- 1) All ultrasound devices intended to archive images and data to PDAS must be identified prior to images and data being archived.

### 12 PERSON AUTHENTICATION (PAUT)

Ability of the device to authenticate users

- **12-1**: Does the device support user/operator-specific username(s) and password(s) for at least one user?
  - No 1
- **12-1.1**: Does the device support unique user/operator-specific IDs and passwords for multiple users?
  - No
- **12-2**: Can the device be configured to authenticate users through an external authentication service (e.g., MS Active Directory, NDS, LDAP, etc.)?
  - No
- **12-3**: Can the device be configured to lock out a user after a certain number of unsuccessful logon attempts?
  - No
- **12-4**: Can default passwords be changed at/prior to installation?
  - No
- **12-5**: Are any shared user IDs used in this system?
  - No
- **12-6**: Can the device be configured to enforce creation of user account passwords that meet established complexity rules?
  - No
- **12-7**: Can the device be configured so that account passwords expire periodically?
  - No

**PAUT notes:**
- 1) PDAS operates as a service. No user accounts are required or supported.

### 13 PHYSICAL LOCKS (PLOK)

Physical locks can prevent unauthorized users with physical access to the device from compromising the integrity and confidentiality of private data stored on the device or on removable media.

- **13-1**: Are all device components maintaining private data (other than removable media) physically secure (i.e., cannot remove without tools)?
  - N/A

**PLOK notes:**
- 1) PDAS is installed on a PC-based server provided by the customer. Anti-malware and anti-virus software installations and regular updates are recommended, based on customer's IT policies.
14 ROADMAP FOR THIRD PARTY COMPONENTS IN DEVICE LIFE CYCLE (RDMP)

Manufacturer’s plans for security support of 3rd party components within device life cycle.

14-1 In the notes section, list the provided or required (separately purchased and/or delivered) operating system(s) - including version number(s).

Yes 1

14-2 Is a list of other third party applications provided by the manufacturer available?

Yes 1

1) Windows 7 & Windows 8

RDMP notes:

15 SYSTEM AND APPLICATION HARDENING (SAHD)
The device’s resistance to cyber attacks and malware.

15-1 Does the device employ any hardening measures? Please indicate in the notes the level of conformance to any industry-recognized hardening standards.

N/A

15-2 Does the device employ any mechanism (e.g., release-specific hash key, checksums, etc.) to ensure the installed program/update is the manufacturer-authorized program or software update?

N/A

15-3 Does the device have external communication capability (e.g., network, modem, etc.)?

Yes 1

15-4 Does the file system allow the implementation of file-level access controls (e.g., New Technology File System (NTFS) for MS Windows platforms)?

No

15-5 Are all accounts which are not required for the intended use of the device disabled or deleted, for both users and applications?

N/A

15-6 Are all shared resources (e.g., file shares) which are not required for the intended use of the device, disabled?

N/A

15-7 Are all communication ports which are not required for the intended use of the device closed/disabled?

N/A

15-8 Are all services (e.g., telnet, file transfer protocol [FTP], internet information server [IIS], etc.), which are not required for the intended use of the device deleted/disabled?

Yes

15-9 Are all applications (COTS applications as well as OS-included applications, e.g., MS Internet Explorer, etc.) which are not required for the intended use of the device deleted/disabled?

N/A

15-10 Can the device boot from uncontrolled or removable media (i.e., a source other than an internal drive or memory component)?

No

15-11 Can software or hardware not authorized by the device manufacturer be installed on the device without the use of tools?

No

1) PDAS communicates with DICOM enabled ultrasound systems over ethernet using a single specified port.

SAHD notes:

16 SECURITY GUIDANCE (SGUD)
The availability of security guidance for operator and administrator of the system and manufacturer sales and service.

16-1 Are security-related features documented for the device user?

Yes

16-2 Are instructions available for device/media sanitization (i.e., instructions for how to achieve the permanent deletion of personal or other sensitive data)?

Yes

SGUD notes:

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### 17 HEALTH DATA STORAGE CONFIDENTIALITY (STCF)

The ability of the **device** to ensure unauthorized access does not compromise the integrity and confidentiality of **private data** stored on **device** or **removable media**.

17-1 Can the **device** encrypt data at rest?  

<table>
<thead>
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<tr>
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STCF notes:  
1) Encryption is a function of the configuration and storage media chosen by the customer

### 18 TRANSMISSION CONFIDENTIALITY (TXCF)

The ability of the **device** to ensure the confidentiality of transmitted **private data**.

18-1 Can **private data** be transmitted only via a point-to-point dedicated cable?  

<table>
<thead>
<tr>
<th>No</th>
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</table>

18-2 Is **private data** encrypted prior to transmission via a network or **removable media**? (If yes, indicate in the notes which encryption standard is implemented.)  

<table>
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<tr>
<th>No</th>
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18-3 Is **private data** transmission restricted to a fixed list of network destinations?  

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<tr>
<th>Yes</th>
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TXCF notes:

### 19 TRANSMISSION INTEGRITY (TXIG)

The ability of the **device** to ensure the integrity of transmitted **private data**.

19-1 Does the **device** support any mechanism intended to ensure data is not modified during transmission? (If yes, describe in the notes how this is achieved.)  

<table>
<thead>
<tr>
<th>No</th>
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TXIG notes:

### 20 OTHER SECURITY CONSIDERATIONS (OTHR)

Additional security considerations/notes regarding **medical device** security.

20-1 Can the **device** be serviced remotely?  

<table>
<thead>
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20-2 Can the **device** restrict remote access to/from specified devices or **users** or network locations (e.g., specific IP addresses)?  

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<th>N/A</th>
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20-2.1 Can the **device** be configured to require the local **user** to accept or initiate remote access?  

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