

DR 400	Type 5420	SB No. 63
DR 600	Type 5530	SB No. 82
DX-D 100	Type 5410	SB No. 102
DX-D 100 Wireless	Type 5411	SB No. 117
DX-D 300	Type 8207	SB No. 105
DX-D 400	Type 5420	SB No. 75
DX-D 500	Type 8206	SB No. 60
DX-D 600	Type 5430	SB No. 119
DR Retrofit	Type 5400	SB No. 66
DR Mobile Retrofit	Type 5590	SB No. 23
	_	. ID 00000 115

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Service Bulletin

Revised Information: Only a DR Generator Sync Box with Ethernet connection to NX can use firmware 4.0.

MUSICA Acquisition Workstation software NX 3.0.20.00 with XRDI 19.0, ASC 5.0 and RFBC 2.0 released

Task

Timing	Category	Scope
	O Apply at all sites	Problem Record:
Next service as agreed with	Apply at affected sites as listed below	PRB0057670 PRB0059576 PRB0059103 PRB0059614 PRB0059183 PRB0059861
customer	Optional to improve functionality of product	PRB0059519 PRB0059999 PRB0059937

Task Tracking

After completion of your task the following entry in your Service Report is required:

* Insert the document number into the field "Comment" (SMS form). See also section 7 Appendix – Explanation of task codes.

Purpose of this document:

It announces the introduction of:

- MUSICA Acquisition Workstation software NX 3.0.20.00 (abbreviated "NX 20.00")
- XRDI 19.0 (X-Ray Device Interface)
- ASC 5.0 (Agfa Soft Console)
- RFBC 2.0 (Retrofit Box Controller Software) in combination with RFBF 4.0 (Retrofit Box Firmware) – both applicable for the DR Generator Sync Box (using Ethernet connection to NX).

Affected serial number(s) / batch: Upgrade to NX 20.00 (and install related software) at these sites which require the new features or where a solution for the described issues needs to be implemented.

The signatures on the approval page indicate the solutions described in this Service Bulletin have been reviewed and are NOT reportable because no actions are taken to reduce a "Risk to Health" according to our risk assessment process.

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Release date: 07-2018 DR 400 / DR 600 / DX-D 100 / DX-D 100 Wireless / DX-D 300 / DX-D 400 /

Agfa Company Confidential DX-D 500 / DX-D 600 / DR Retrofit / DR Mobile Retrofit Page 1 of 13

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Introduction 1

The MUSICA Acquisition Workstation software version NX 3.0.20.00 is released, together with the following related DR system components:

- XRDI 19.0
- ASC 5.0
- RFBC 2.0 in combination with firmware version 4.0 for the DR Generator Sync Box (only when using Ethernet connection to NX)

NX 3.0.20.00 is the successor of NX 3.0.9000.

Purpose of NX 3.0.20.00:

- Introduction of some new features. For details refer to NX 3.0.20.00 / NX 4.0.20.00 SB01, Document ID 60610545.
- Solution to some problem records. For details refer to section 1.1.

Purpose of XRDI 19.0, ASC 5.0 and RFBC 2.0:

- XRDI 19.0 and ASC 5.0 solve some problem records. For details refer to section 1.2 and 1.3.
- XRDI 19.0, ASC 5.0 and RFBC 2.0 introduce some new features and solve several minor software issues. For details refer to sections 1.4 to 1.6.



NOTE:

NX 3.0.20.00 becomes NX 4.0.20.00 when the NX MULTI FRAME IMAGING license for dynamic is enabled.

Dynamic imaging requires special hardware (high performance PC and detector for dynamic imaging) and is supported for DR 800 only.

NX 3.0.20.00 is abbreviated "NX 20.00" in this document.



IMPORTANT:

With DR Generator Sync Box firmware version 4.0 (RFBF 4.0.xxxx) the USB port is not supported any longer.

When using a DR Generator Sync Box with USB connection to NX, still RFBF 3.x has to be installed. Observe the compatibility to XRDI versions and USB/Ethernet connection in the compatibility matrix:

	DR Generator Sync Box		
XRDI	Connection	RFBC (controller software on NX *)	RFBF (firmware)
XRDI 14-19/19 SU	USB	1.0	3.0/3.1
XRDI 16-18	Ethernet	1.0	3.0/3.1
XRDI 19/19 SU	Ethernet	2.0	4.0

^{*} select USB or Ethernet during installation



IMPORTANT:

When upgrading to NX 20.00, the related DR components need to be upgraded, too.

- For systems with DR Generator Sync Box with Ethernet connection to NX:
 The installation of XRDI 19, ASC 5.0, RFBC 2.0 and RFBF 4.0 is required.
 - Install XRDI 19, ASC 5.0, and during installation of RFBC 2.0, select the Ethernet option.
 - Install RFBF 4.0.
- For systems with DR Generator Sync Box with USB connection to NX:
 DR Generator Sync Box has to be used with RFBF 3.x:
 - Install XRDI 19, ASC 5.0, and during installation of RFBC 2.0, select the USB option (then RFBC will not start on NX) or alternatively interrupt the installation of RFBC.

Do NOT install RFBF 4.0.

1.1 Solved Problem Records with NX 20.00

NX 20.00 is a solution for the following Problem Records:

1.1.1 NX goes in grace period after upgrade [PRB0057670]

Symptom

NX goes in grace period after software upgrade to NX 3.0.9000. The dongle is not recognized anymore in the license manager. The issue should appear very rarely, mainly at low performing hardware.

Cause

WibuKey software (= license dongle software) installation issue. The instruction to reboot the PC is sometimes issued before WibuKey software installation is finished.

Workaround A workaround to prevent the issue for upgrades to NX 3.0.9000 is described in NX 3.0.9000 SB01, Document ID <u>57096072</u>.

Solution For software upgrades to NX 3.0.20.00 the issue is solved.

1.1.2 Selected export images are not saved if keyboard is used for selection [PRB0059103]

Symptom Several ways exist to check / uncheck a checkbox in a user interface:

- 1. Use the mouse.
- 2. Use the arrow keys up/down to select the checkbox and space bar to check / uncheck.
- 3. On a touch screen, use the finger.

When using arrow keys and space bar, sometimes the selected images are not exported. This issue is reproducible in all NX versions.

Cause

When using the keyboard to select export images, there is not enough time to fully load all of the exposure data into memory. Although the user interface indicates that the session will be exported, internally nothing is setup to achieve this goal.

Workaround Use the mouse or finger (at touch screens) to select the export images.

When using the keyboard: Between selection of the row with the up/down keys and using the space bar wait until all images are displayed in the exposure pane.

Solution In NX 20.00 the issue is solved.

1.1.3 Images cannot be displayed on the PACS system due to mixed up shutter values [PRB0059519]

Symptom Images cannot be displayed on the PACS system, if the user edits the image, for example change from AP to PA, after the shutter has been applied.

The issue is present in all NX versions ≤ NX 3.0.9000 SU1.

Cause Shutter logic gets mixed-up when changing the exposure type after the shutter has been applied.

Workaround Possibility 1: Apply the shutter as last step in the image editing workflow.

Possibility 2: Open the shutter completely before editing of the image.

Solution The issue is solved in NX 20.00.

1.1.4 NX Viewer freezes when rejecting last image of a DR sequence [PRB0059614]

NX viewer freezes when rejecting the last image in a DR Sequence while its preview **Symptom**

image in being acquired.

There is no image loss. After restart of the NX Viewer all images are available. The issue is present in all NX versions that support the DR sequence workflow

 $(NX \ge 2.0.8700 / 3.0.8700)$.

Cause Software issue: NX Viewer gets into an endless loop.

Workaround Prevent the issue by not rejecting the image during the fast preview. This means, wait until

the final image has been processed.

If the issue occurs, restart the NX Viewer.

Solution The issue is solved in NX 20.00. There it is only possible to reject an image if the final

image has been processed.

1.1.5 CR FLFS auto-stitching fails with CR 15-X digitizer [PRB0059861]

Auto-stitching sporadically fails when performing a CR FLFS (Full Leg Full Spine) Symptom

workflow. The failure is independent of the stitch mode (grid / anatomic).

The issue happens with digitizers of the CR 10-X / CR 12-X / CR 15-X family (type 5151)

in combination with NX ≤ 3.0.9000 SU1.

Cause Software issue. Overscan behavior of the digitizers of the CR 10-X / CR 12-X / CR 15-X

family (type 5151) has been adapted, which leads to the side effect of failed CR FLFS

stitching on NX.

Workaround When automatic stitching fails, the user needs to stitch manually.

Solution The issue is solved in NX 20.00.

1.1.6 Increased anatomic FLFS stitching failures after upgrade to NX 3.0.9000 [PRB00599991

Only applicable for systems using DR FLFS:

The amount of auto-stitching failures of DR FLFS workflows increased after update to **Symptom**

NX 3.0.9000. The increase is experienced for the anatomic stitching mode only.

Cause Side effect of image processing improvements in NX 3.0.9000.

Solution The issue is solved in NX 20.00. Now anatomic stitching works the same way as it has

been implemented before NX 3.0.9000.

1.2 Solved Problem Records with ASC 5.0

1.2.1 Agfa soft console does not allow to change values [PRB0059576]

Symptom When the user opens the detector switch and does not select a detector, but waits, until

the detector switch closes automatically after 5 seconds, the Agfa soft console does not

work: It is not possible to change exposure values.

The issue is present at all DR systems with Agfa soft console, if more than one DR

detector is configured at the system.

Cause Software issue of Agfa soft console in combination with the detector switch.

Workaround Once again open the detector switch and select a detector.

Solution The issue is solved with ASC 5.0.

1.3 Solved Problem Records with XRDI 19.0

1.3.1 No exposure if prep button is released before exposure [PRB0059183]

Symptom

When the user releases the prep button, for example due to patient movement, and then presses the exposure button completely down for exposure, nothing happens: The exposure is not performed.

This issue is only present at DR systems where exposure is controlled by a DR Generator Sync Box.

Cause Software control issue of the DR Generator Sync Box.

Workaround Select the thumbnail once again before exposure.

Solution The issue is solved with XRDI 19.0.

1.3.2 Error MESS32 appears at some specific exposures [PRB0059937]

Symptom High dose exposures are aborted with error MESS32 in the following cases:

- 1. With some specific X-Ray tubes.
- 2. After copy exposure.
- 3. After image reject, and re-using this thumbnail for new exposure.

Cause

Software issue in XRDI 18.1 in combination with Sedecal Console 5.7 This combination is applicable for DX-D 100; DX-D 300 and DX-D 600 only.

Workaround Lower the dose in the exam tree, until MESS32 is not displayed anymore.

For symptom # 2 and #3, the user can create a new thumbnail instead of re-using an existing one.

Solution The issue is solved with XRDI 19.0.

1.4 New features and solved bugs with XRDI 19.0

New features:

- XRDI about box information. For details refer to Application Note "Functional Changes in NX 3.0.20.00 / NX 4.0.20.00", Document ID 60612057.
- DR detector rerouting. For details refer to Application Note "Functional Changes in NX 3.0.20.00 / NX 4.0.20.00", Document ID 60612057.

New features, only relevant for systems, which use the described options:

- Prepared for FLFS DR Retrofit.
- Prepared for DR Mammography Retrofit Systems.
- FLFS landscape: This increases the width of the FLFS image for portable detectors (fixed detectors do not distinguish portrait and landscape due to their quadratic size of 43 x 43 cm). The image length for Table FLFS exams is not affected. For Wallstand exams the maximum image length is reduced by approximately 10 cm.

Solved bugs:

- Changing from CR to DR results in max ms 3000.
- Battery messages appear of a non selected detector.
- Thumbnail deselection occurs due to panel disconnect [Automatic exposure test] and Thumbnail is deselected after changing modality position/thumbnail.
 With the new software, the detector will still go into sleep mode after 10 minutes but automatically recovers and no settings are lost.

1.5 New feature and solved bugs with ASC 5.0

New feature, only for DR 800:

Added user interface for dynamic imaging (dynamic soft console (DSC)).
 Required for DR 800 only.

Solved bugs:

- Collimator values in positioning pane is not filled in when selecting DR portable free exposure.
- Relevant only for systems using FLFS: During FLFS exam the post exposure
 parameters of the first FLFS exposure after exposure are not visible on DR 600 soft
 console and Tube Head Display.
- 1.6 New feature and solved bugs with RFBC 2.0 in combination with firmware version 4.0 for the DR Generator Sync Box

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This section is only applicable for systems that are using a DR Generator Sync Box.

New feature, for DR 800 only:

Added support to provide dynamic detector (Pixium RF4343 FL) synchronization.
 Required for DR 800 only.

Solved bugs:

- Sporadically the DR Generator Sync Box needs an additional reset to become ready.
- If the network connection to the access point is lost for a certain time frame, the detector can be exposed a second time, but first image did not arrive yet.



NOTE:

With XRDI 19 / 19 SU (and NX 20), the DR Generator Sync Box with Ethernet only can operate when RFBC 2.0+RFBF 4.0 is installed.

2 Prerequisites

SOFTWARE:

NX 20.00 Starterkit
 For details refer to NX 3.0.20.00 / NX 4.0.20.00 SB01, Document ID 60610545.

The NX 20.00 Starterkit includes the following software items (which are also separately available from the Agfa Meding Library):

- XRDI 19.0, Document ID 62208953
- ASC 5.0, Document ID <u>62208248</u>
- o RFBC 2.0, Document ID <u>62206522</u>
- RFBF 4.0, Document ID 62206950

Download the files from the global secure FTP server using an FTP client. For details see Service Information Bulletin "Global Secure FTP Server – Imaging Services Software Download", Document ID <u>36831163</u>.



DOCUMENTS:

- Download the NX 3.0.20.00 / NX 4.0.20.00 Service Manual, Document ID 60608525 from the Agfa Medimg Library:
 - Computed Radiography > MUISCA Acquisition Workstation > NX 3.0.20.00 / NX 4.0.20.00.
 - For additionally required documents refer to chapter 3 Installation Planning, which is part of the Service Manual.
- DR Generator Sync Box Service Manual, Document ID <u>48350901</u>

3 Instructions



REQUIRED TIME:

Approximately 1.5 hours

 Perform the upgrade to NX 20.00 and related software items as described in chapter 7 of the NX 3.0.20.00 / NX 4.0.20.00 - Service Manual, Document ID 60608525.

For systems with DR Generator Sync Box observe the following two cases during RFBC installation:

If a DR Generator Sync Box with **Ethernet** connection to NX is present in the system:

- (2) Install the RFBC 2.0 software (select **Ethernet** option) as described in the DR Generator Sync Box Service Manual, Document ID 48350901.
- (3) Perform the upgrade of the DR Generator Sync Box Firmware (RFBF) to version 4.0 as described in the readme.txt, which is part of the software ZIP file. Or follow the instructions in the DR Generator Sync Box Service Manual.

If a DR Generator Sync Box with **USB** connection to NX is present in the system:

(4) Install the RFBC 2.0 software (make sure to select **USB** option) or interrupt the installation.

Do NOT install RFBF 4.0 as it does not support USB connection any longer.



NOTE:

In case you installed the RFBF 4.0 by mistake on a DR Generator Sync Box using the USB connection:

(1) Re-install RFBF 3.1.x.

4 Verification

(1) Verify the upgrade as described in chapter 6 of the NX 3.0.20.00 / NX 4.0.20.00 - Service Manual, Document ID <u>60608525</u>.

5 Keywords

DR400, NX20

6 Version history

Version	Change	Date
1.0	Initial version	12-2017
2.0	Added information about RFBF 4.0 (Firmware for DR Generator Sync Box): From version 4.0 on, the firmware does not support the USB port of the box anymore. Therefore, RFBF 4.0 is only applicable for a DR Generator Sync Box using Ethernet connection. New task codes (now based on Document ID), see section 7	07-2018

7 Appendix – Explanation of task codes

The table shows the correlation of the task codes of version 1 and version 2 of this service bulletin.

System	Task code version 1	Task code version 2
DR 400	DD+DIS163.17E	
DR 600	DD+DIS162.17E	
DX-D 100 / DX-D 100 Wireless	DD+DIS164.17E	
DX-D 300	DD+DIS165.17E	62289415
DX-D 400	DD+DIS166.17E	02209413
DX-D 500	DD+DIS168.17E	
DX-D 600	DD+DIS167.17E	
DR Retrofit / DR Mobile Retrofit	DD+DIS169.17E	



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