Divario CR Systems *vet*

Digital X-ray with familiar cassette handling

Divario CR-T2 *vet* for standard X-ray examinations and
Divario CR-Tm *vet* for special examinations of small objects with extra high resolution (up to 50 µm)

Extremely fast desktop unit
with a maximum throughput of **73 cassettes** per hour

CR desktop unit **Divario CR-T2** *vet* and **Divario CR-Tm** *vet*

Approx.
39 kg
Dimensions:
56 x 54 x 39.2 cm

Divario CR-T2*vet* Divario CR-Tm*vet*

Compact desktop units with high throughput for excellent X-ray images

The **Divario CR-T2***vet* and **Divario CR-Tm***vet* are CR desktop systems with a maximum processing capacity of 73 cassettes per hour. In this high-speed mode (5 pixel/mm), the throughput is increased by almost 70 % compared to previous CR systems. The **Divario** is easy to operate, reduces patients' waiting time and increases the efficiency of the examination process. The desktop system, available in an unobtrusive compact design, can be placed wherever space is limited – on a desk or a shelf. In addition the **Divario CR-Tm***vet* version offers images with a superb resolution of 50 µm (mammography resolution) e.g. for cat or dog paws etc.

Together with the professional image acquisition software ***dicom****PACS*®***DX-R***, the CR system offers all necessary image processing tools. The solution can be adapted to fit specific clinical purposes. It is also ideal as a secondary or backup system where there is already a DR or CR in place.

The ***dicom****PACS*®***DX-R*** software in particular allows quick and easy working. Special emphasis was placed on maximum image quality and maximum flexibility. For example, the included professional image processing software ***dicom****PACS*®***DX-R*** can be adapted very easily to the doctor's specific wishes or requirements for each X-ray examination. The user is not limited to the selection of „pre-set" standards. This functionality provides the best possible image quality in accordance with the doctor's needs.

The creation of the best possible images, however, also requires the correct setup of the X-ray unit and the correct positioning of the patient. To help the X-ray assistant with this task, a multimedia radiographic positioning guide for each examination has been integrated directly into the system. It allows the user to verify, prior to taking the X-ray how to correctly set up the X-ray image. Even videos on the positoning of a patient etc. are included. This guide removes the need for radiographers to consult tables, reference books or external software programmes.

CR desktop unit **Divario CR-T2***vet* and **Divario CR-Tm***vet*

Highlights

All the benefits of the **Divario CR-T***vet* at a glance

- Space-saving desktop unit, for shelf space and racks (floor space 0.30 m²)
- Stable high-quality images
- Very high resolution of 50 µm for small objects such as cat or dog paws
- Maximum processing capacity of 73 cassettes (18 x 24cm) per hour
- Also for mobile use

Image plate cassettes for high image quality

For **Divario CR-T2** following cassette formats are available:

IP cassette type CC:

- 35 x 43 cm (14" x 17")
- 35 x 35 cm (14" x 14")
- 24 x 30 cm (10" x 12")
- 18 x 24 cm (8" x 10")
- 15 x 30 cm (6" x 12")

For **Divario CR-Tm** following cassette formats and types are available:

IP cassette type CH:

- 24 x 30 cm (10" x 12")
- 18 x 24 cm (8" x 10")

IP cassette type CC:

- 35 x 43 cm (14" x 17")
- 35 x 35 cm (14" x 14")
- 24 x 30 cm (10" x 12")
- 18 x 24 cm (8" x 10")
- 15 x 30 cm (6" x 12")

Software

Benefits of the professional ***dicom**PACS*®***DX-R*** X-ray acquisition software

- Modern graphical user interface (GUI) adaptable to almost **any language**
- **Touchscreen** operation - to ensure quick and efficient work and a smooth workflow
- Capture of patient data via **DICOM Worklist, BDT/GDT, HL7** or other protocols - data may also be captured manually
- Use of **DICOM Procedure Codes** for the transfer of all relevant examination data directly from the connected patient management system (HIS/RIS)
- **Freely configurable** body parts with more than **200 projections** and numerous possible adjustments in **veterinary medicine** already included
- Safe and fast **registration of emergency patients**
- Allows the user to **switch between examinations** of a patient, for instance to avoid having to re-position the patient frequently
- Allows the user to **subsequently add images** to an examination, even after that examination has already been completed
- Special tools for veterinary medicine, such as an extra dialog box for patient and owner data, integrated **MMP and hip dysplasia measuring, special image filters, TPLO, TTP, Buchanan's Vertebral Heart Score, distraction index, multi generator operation** for alternating between mobile and stationary systems and much more…
- Entry of recurring **examination procedures as macros**, e.g. pre-purchase examination for horses
- **Fully integrated radiographic positioning guide** for each examination in veterinary medicine incl. comprehensive notes, photos and correct X-ray images
- Facilitates the use in the dental area, e.g. by means of RVG tooth sensor or dental CR system
- The digital X-ray system can be controlled via **wireless remote control** (e.g. iPod, iPad or similar) including display of the work list, image preview and much more

Benefits of flexible image acquisition

- Integration of various **flat panels, tooth sensors and CR systems** (also dental systems) by different manufacturers
- The **configurable generator interface** enables the user to control X-ray generators or X-ray systems by different manufacturers, delivering the generator settings directly from the software
- Option for the **parallel operation of a flat panel and a CR system** included in the standard package. The user has the choice to take the next image with either the flat panel or the integrated CR system. This flexibility also provides an **excellent emergency concept** in case of a defect flat panel.
- Integration of **dose area product meters** (DAP) - the readings are saved directly to the relevant image
- **AEC** (Automatic Exposure Control) and **ARP** (Anatomical Programmed Radiography) allow the user to **automatically adjust all X-ray options** for each projection with an option to subsequently edit the image manually
- Electronic X-ray log

Operation

of the acquisition software

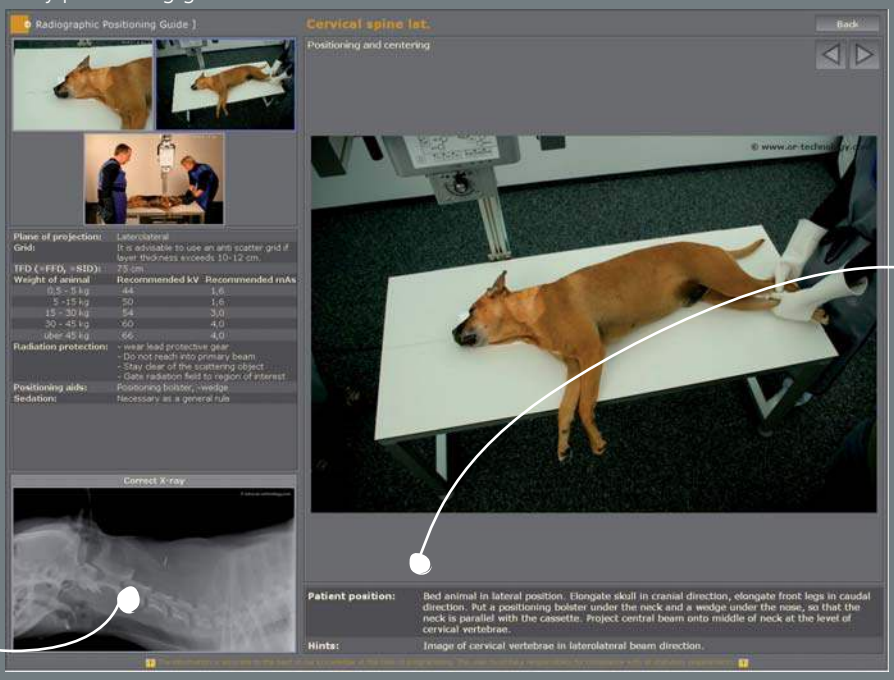
A single click opens the X-ray positioning guide for horses, dogs and cats

Job planning

Diagram for planning a specific X-ray job

Switch to planning X-ray jobs for cats, horses or small animals/ exotic animals

X-ray positioning guide



Provides numerous hints on patient positioning, central ray, tips and tricks, common mistakes etc.

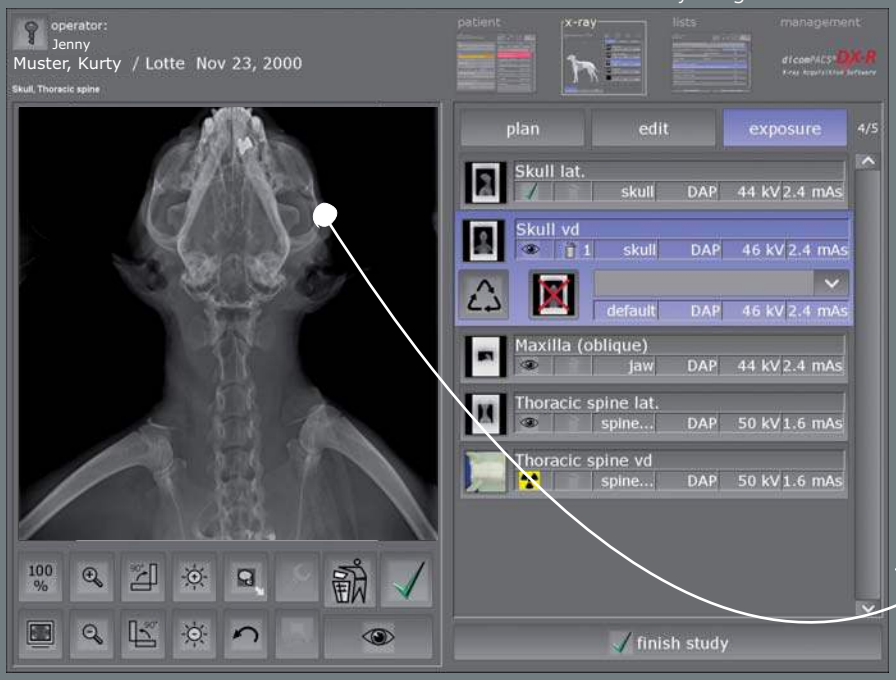
Shows an image of a correct X-ray examination

- user friendly graphic interface
- intuitive operation by touchscreen

Generator control

The generator panel displays all values and settings (kVp, mAs, focus etc.) recommended for a specific examination

Preview of the X-ray image and worklist



Preview of the current X-ray image

Image processing

Automatic image processing for optimal quality

- Perfect images at all times - generally **no adjustment** required
- Integrated software for **automatic image optimisation**
- Professional, **adaptable image processing** for each individual examination to obtain best possible image settings for the needs of each customer
- Due to specially developed processes, the image processing allows the user to **vary the X-ray settings on a large scale** while the image quality remains virtually the same (**possibility of reducing the dosage**)
- **Bones and soft tissue** in one image - this enables the user to significantly improve his diagnosis
- **Details of bones and microstructures are very easy to recognise**
- Noise suppression
- **Black mask** (automatic shutters)
- Automatic **removal of grid lines** when using fixed grids

*Exposure with **standard** image processing*

*Exposure with **dicom**PACS® **DX-R** image processing*

Image diagnostic

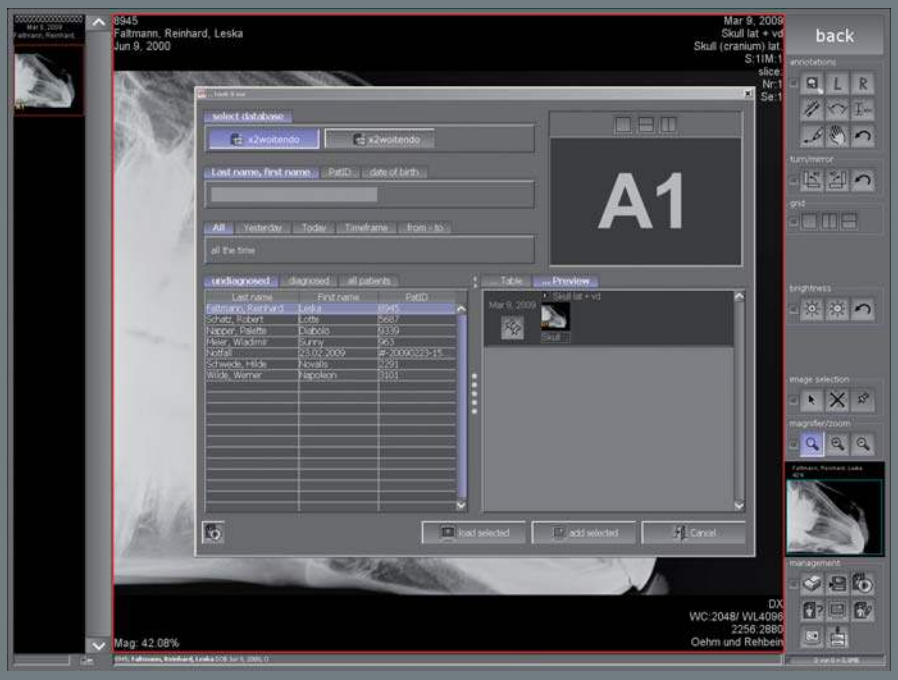
at the highest stage

- Completely integrated ***dicom**PACS*® **Viewer for image diagnosis**, further processing and storage of images in a SQL database incl. image manipulations, export options, layout adjustments, freely configurable user interface and much more
- Stepless **zoom, PAN, magnifyer, ROI, crop, rotate, mirror** etc.
- Insertion of **image annotations**, e.g. free texts, arrows, ellipses etc.
- **Measuring** of distances, angles, areas and density
- Adjustment of window/level options and **gamma correction**, sharpening filters, noise suppression

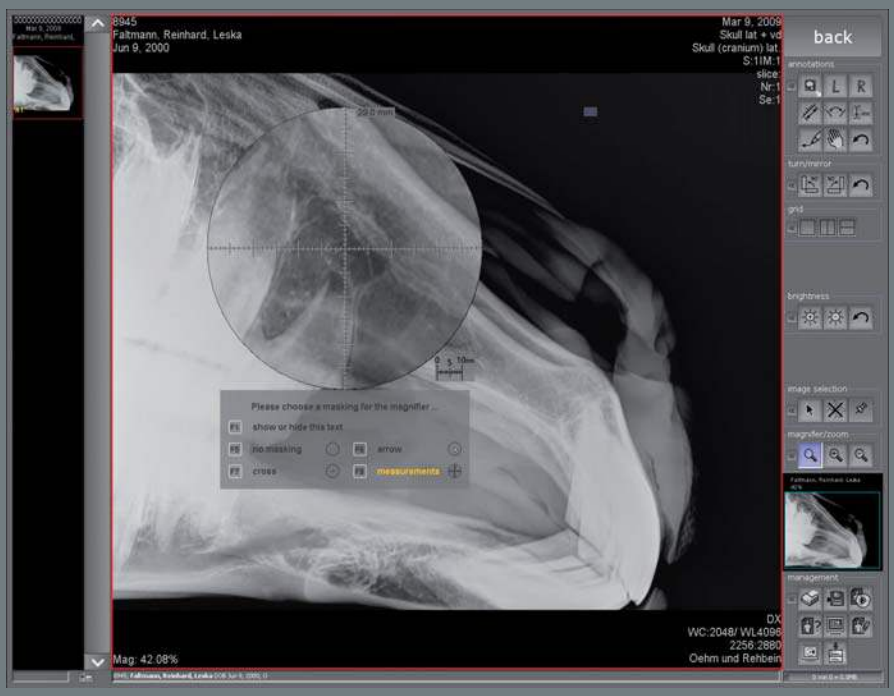
- Provides many additional tools: **MMP, TPLO, TTA, Buchanan's Vertebral Heart Score, distraction index, HD measurements, integrated capturing of diagnostic reports** etc.
- Printing of images both on Windows printers and laser imagers
- Creation of **DICOM patient CDs** with free **Web viewer**
- **Export of images** to JPEG, TIFF, BMP and DICOM formats
- Easily upgradable to the professional, **integrated image management system** (PACS)

Integrated professional viewer

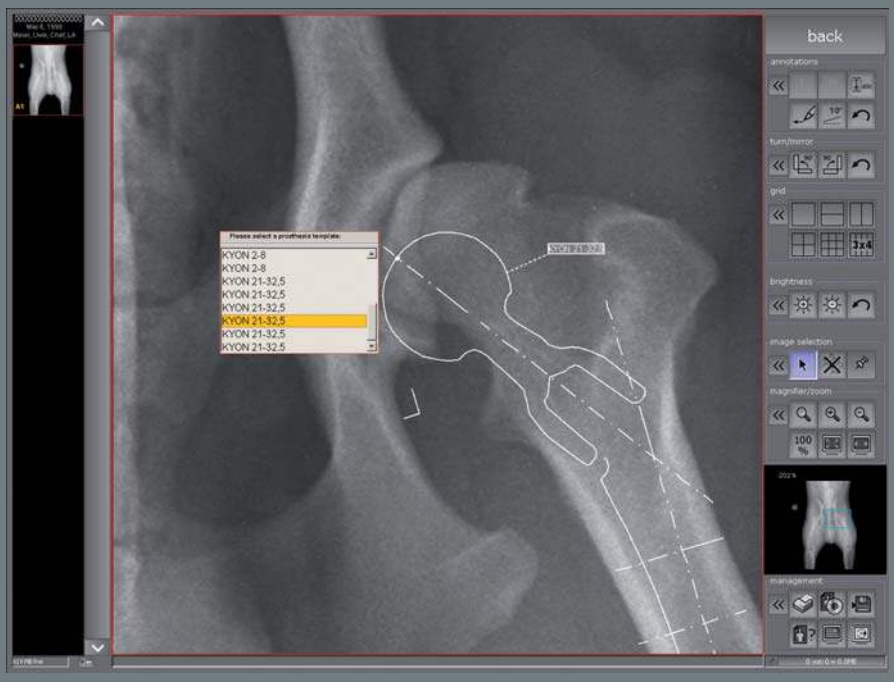
Completely integrated ***dicom**PACS*® viewer for image diagnosis.



Comprehensive search tools enable the comparison of X-ray examinations of one or more patients.



Useful tools such as the configurable measuring magnifier make diagnosis much easier.



An integrated prosthesis documentation module provides preoperative planning (optional).

Features

Special functions for digital X-ray imaging

Digital X-ray images have the advantage that exact measurements can be taken at the monitor and the image quality can be improved by a number of manipulations. ***dicom****PACS*®***vet*** offers some special functions.

Modified Maquet Procedure (MMP)
The MMP is a method of measurement for dogs with a cruciate ligament disorder, in which the distance for the placement of the MMP Wedge is determined.

Pre-operative planning with the prosthesis documentation module
This module allows the user to plan and document an operation. After activating this function, the active image is displayed in its original film-identical size. The prosthesis template is displayed in the image as an annotation, or the existing prosthesis template films are overlaid on the monitor.

TTA (Tibial Tuberosity Advancement) measuring tool
The TTA measuring technique is used to apply the translated length measurements at the tuberositas tibiae in dogs.

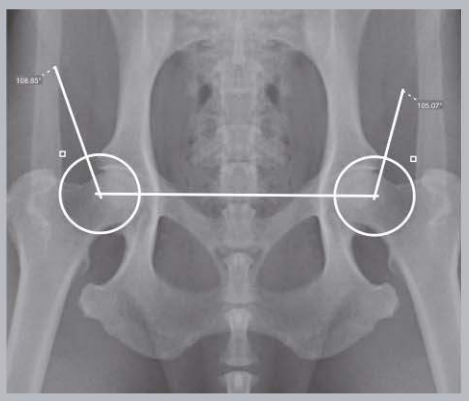
HD measuring technique for dogs
dicom*PACS*®***vet*** provides a special tool to guarantee very fast and reliable determination of the Norberg angle, including documentation. One click suffices to insert all relevant lines and angles into the image, where they can then be positioned as required.

TPLO (Tibial Plateau Leveling Osteotomy) measuring tool
It serves to theoretically optimise the existing slope of the tibial plateau in domestic dogs.

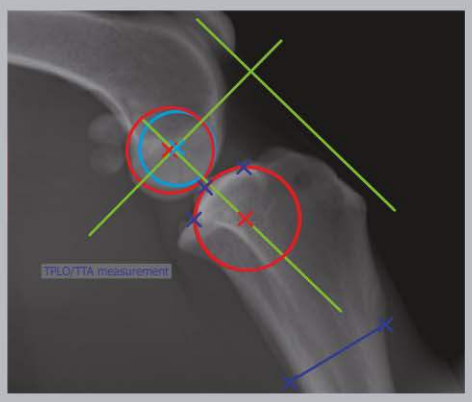
Measuring the distraction index
This measuring tool serves to determine the displacement of the femoral head from the joint socket of the hip joint in dogs.

Buchanan's Vertebral Heart Score
This annotation is a simple and reliable method to determine the size of the heart. It has been designed specifically for cats and dogs. The height and width of the heart are put into relation to the individual animal's vertebral body width. Therefore, racial distinctions are brought to bear on the examinations results.

MMP (Modified Maquet Procedure)

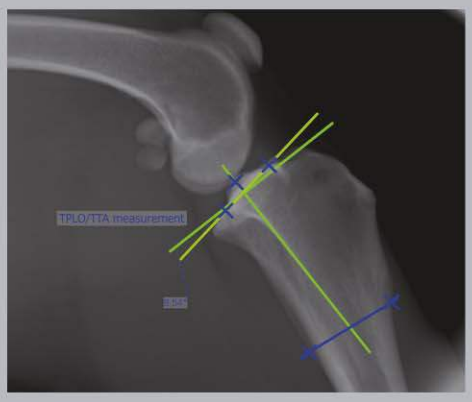


HD measuring technique for dogs

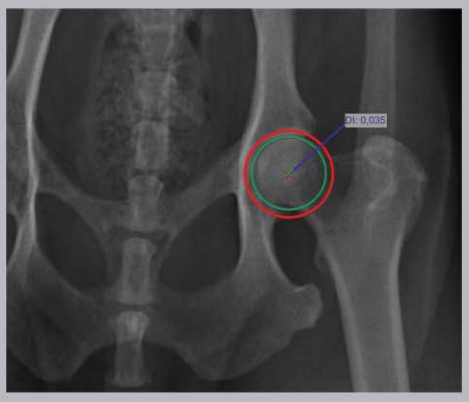


TTA measuring tool

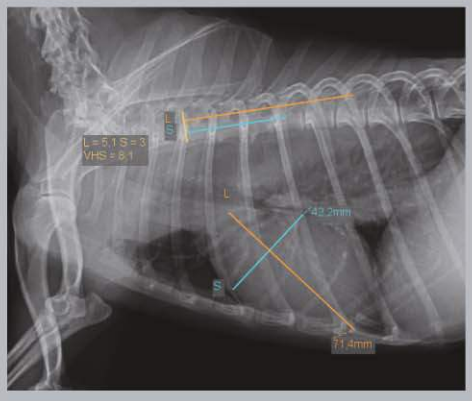
Special filter for the optimization of bones and soft parts



TPLO measuring tool



Measuring the distraction index



Buchanan's Vertebral Heart Score

Integrated prosthesis documentation module

Mobile

Browser based viewer ***dicom**PACS*®***MobileView*** for mobile and stationary devices (optional)

The web-based viewer ***dicom**PACS*®***MobileView*** counts among the many extension modules of ***dicom**PACS*®***vet*** diagnostic software. As a virtually independent browser, it allows the viewing of image material on mobile devices also outside a veterinary clinic or a practice. The vets staff can access all image material from the ***dicom**PACS*®***vet*** system worldwide via a network connection.

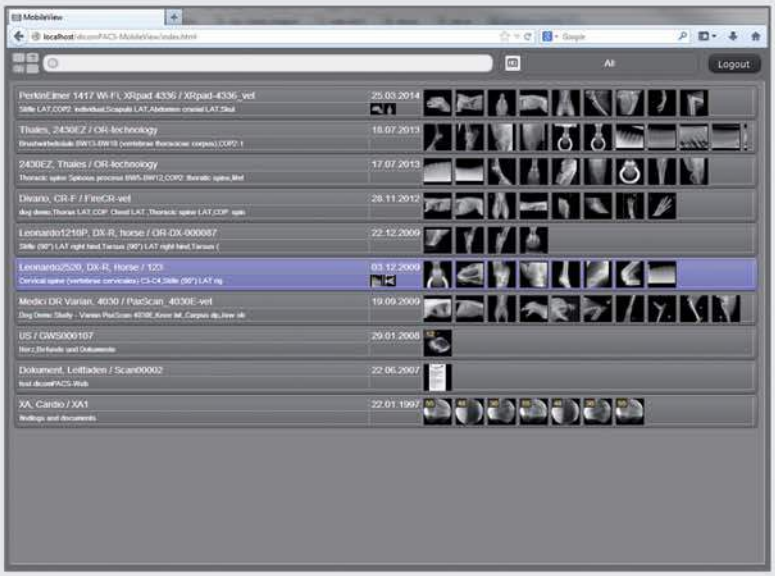
In addition to mere diagnostic evaluation of images, the ***dicom**PACS*®***MobileView*** viewer allows diagnostic reports to be captured and exported. Documents may be attached and exchanged. All diagnostic reports of a patient are always displayed. Individual diagnostic reports of a patient may be selected for exporting and formatted.

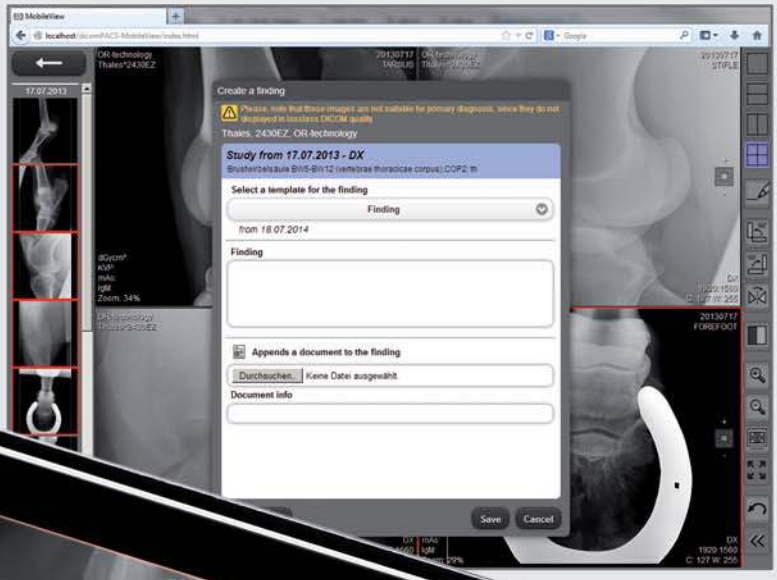
Since the ***dicom**PACS*®***MobileView*** viewer can be used anywhere, it has a wide range of applications, allowing, for instance, the patient's further treatment to be discussed in the consulting room straight after the X-ray was taken. The mobile viewer is also a very helpful instrument in the operating room for orientation purposes.

dicom**PACS*®MobileView*** can be installed in addition to existing ***dicom**PACS*®***vet*** diagnostic modules (diagnostic workstations). It is irrelevant whether the ***dicom**PACS*®***MobileView*** software is used on a network PC (pure viewing workstation) or/ and on a mobile device. Worldwide access to all image material is available via a network connection, e.g. VPN access via the internet, of the used mobile device to the central ***dicom**PACS*®***vet*** system in the office or clinic.

The main advantages at a glance:

- High flexibility through the use within various internet browsers, including Microsoft Internet Explorer, Mozilla Firefox, Google Chrome, Safari 5, Safari for iPad and Android browser
- Intuitive operation
- Supports the multi-touch operating technology (e.g. zoom in and out with two-fingers)
- Supports full screen mode
- Allows accessing the ***dicom**PACS*®***DX-R*** or ***dicom**PACS*®***vet*** database without any additional modules
- Allows playing series (e.g. ultrasound)
- High loading speed with modern streaming technology





Features of
dicom**PACS®**MobileView

The web-based viewer offers an important range of functions of a professional PACS viewer:

- Draw annotations
- Measurements
- Registration of diagnostic findings
- Attach documents
- Draw lines and arrows (multi-coloured)
- Compare images in different grids
- Adjust brightness/ contrast
- Flip and rotate images
- Adjust brightness / contrast
- Invert, zoom in / out
- Full screen, fit image
- PAN
- Scroll through image series
- Cine loop for multi frame series and CT/ MRI
- Export images and documents
- Print images and documents

Cloud based

Cloud based telecommunication solution and data archiving for images, documents and diagnostic evaluations for stationary and mobile applications

The technical enhancements of imaging solutions simplifies the diagnostic work of the vet thanks to high quality images and also allows higher data volume. This data flood must not only be processed but also archived for the long term, in accordance with the appropriate compliance standards.

With ***ORCA*** (Oehm and Rehbein Cloud Archiving), OR Technology has developed a cost effective, cloud based option for long term archiving of data and images for animal hospitals and practices. At the same time, ***ORCA*** serves as a platform for communication with external partners or pet owners, such as horse owners. With ***ORCA***, images and diagnostic reports can be exchanged with colleagues, specialists and staff. It can even be used as an easy means to forward image data to patients.

Cloud based solution *ORCA*

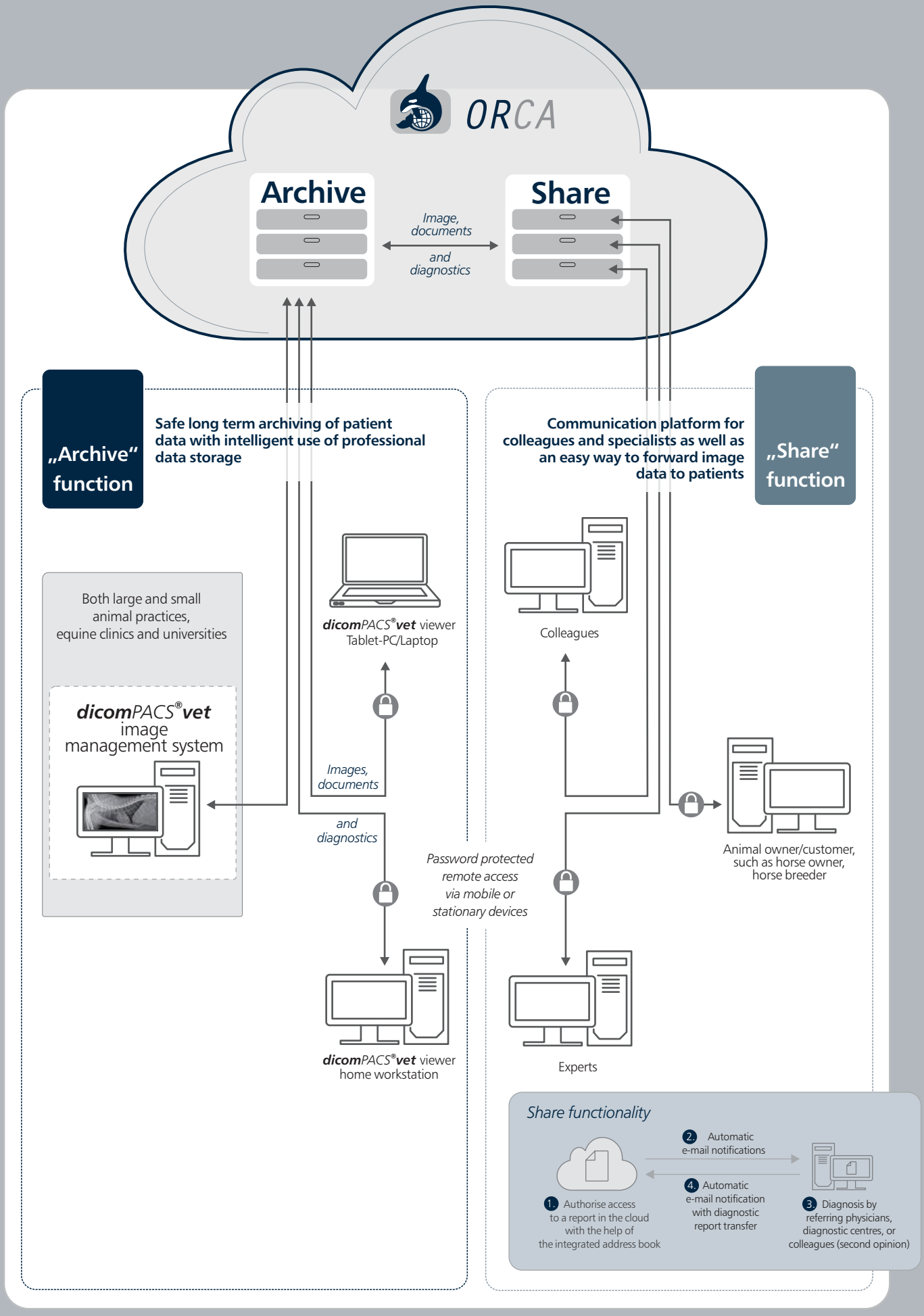
Even for state of the art practices and hospitals, the rapidly rising data flood of digital images, diagnostic reports and other documents is becoming increasingly challenging. Current legislation demands safe and long-term storage of patient data which generally requires investing in expensive hardware infrastructure as well as maintenance and corresponding staff costs.

To this end, we developed the ***ORCA*** Cloud archiving solution, thus paving the way for cost-effective and safe Cloud-based data archiving in veterinary practices and veterinary clinics. ***ORCA*** offers two application options:

→ ***ORCA Archive***: Safe, long-term archiving of patient data with intelligent usage of internal databases

→ ***ORCA Share***: Communication platform (exchange of images and diagnostic reports) with experts and colleagues or as an easy way to forward image data to animal owner/customer (an alternative to creating patient CDs)

Data is **exclusively** archived on European servers with the relevant safety certificates.


ORCA
Archive
Share
Image, documents and diagnostics
„Archive“ function
Safe long term archiving of patient data with intelligent use of professional data storage
Communication platform for colleagues and specialists as well as an easy way to forward image data to patients
„Share“ function
Both large and small animal practices, equine clinics and universities
dicomPACS®vet image management system
dicomPACS®vet viewer Tablet-PC/Laptop
Images, documents and diagnostics
dicomPACS®vet viewer home workstation
Colleagues
Animal owner/customer, such as horse owner, horse breeder
Password protected remote access via mobile or stationary devices
Experts
Share functionality
1. Authorise access to a report in the cloud with the help of the integrated address book
2. Automatic e-mail notifications
3. Diagnosis by referring physicians, diagnostic centres, or colleagues (second opinion)
4. Automatic e-mail notification with diagnostic report transfer

ORCA

Benefits of Cloud based telecommunication solution and data archiving

Minimal expenditure

ORCA does not require investing in expensive infrastructure such as server and data cables.

Scalability

The amount of memory required when using ***ORCA*** is determined by the demand.

Long-term security

ORCA archives data on many individual European servers in professional and air-conditioned data centres. Server technology is continuously updated.

Accessibility

ORCA stands out by being highly accessible. Since data is saved with multiple redundancy, ORCA guarantees more continuity than a mere server solution.

Environmentally friendly

ORCA is sustainable – through the optimised use of resources and their distribution.

Location-independent

ORCA guarantees access to archived patient data - worldwide.

Simplicity

ORCA allows easy access to data from any computer – from your place of work, from the comfort of your home or from any other computer or Tablet PC.

Stress-free

ORCA deals with everything – no need to struggle with loose network cables, removed hard drives or software problems.

Annotations
Distance
Angle
Line
Text
Arrow
Edit
Remove
Show/Hide
Clear all
Findings
Findings
More studies
R

Scope of delivery

The Divario CR-T *vet* include the following components as standard:

Components

CR unit for table

Cassette sizes type CC: 35 x 43cm (14" x 17"), 35 x 35cm (14" x 14"), 24 x 30cm (10" x 12"), 18 x 24cm (8" x 10"), 15 x 30cm (6" x 12")
Processing Capacity Up to 73 IPs/hr. (18 x 24 cm)
Reading Specification: 10 Pixel/mm, 5 Pixel/mm
Dimensions (H x W x D): 560 x 540 x 392mm (22"x 21"x 15")
Weight: 39 kg (861lbs.)
Operating conditions:
- Temperature: 15-30°C
- Humidity: 15 -80%RH (No dew condensation)
- Atmospheric pressure: 750-1060 hPa

Power Supply Conditions: Single phase 50-60Hz AC120-240V ±10% 1.9A (max)

*Additional specifications for **Divario CR-Tm** vet with mammography compatibility:*
Resolution: 50 µm

*In addition to the standard cassettes are available for **Divario CR-Tm** vet following*
IP cassettes type CH: 24 x 30 cm (10" x 12")
18 x 24 cm (8" x 10")

Divario CR-T2 *vet*

Divario CR-Tm *vet*

CR cassettes

All common cassette sizes are available:
- *included for **Divario CR-T2** vet: 1 x 35 cm x 43 cm*
- *included for **Divario CR-Tm** vet: 1 x 35 cm x 43 cm*

Other formats and quantities available optionally

Divario CR-T software package

*with **dicom**PACS®**DX-R**, the professional console software with modern graphic user interface with generator control, integrated X-ray positioning guide and basic software modules:*
- ***dicom**PACS®**DX-R** DICOM Send SCU incl. MPPS and Storage Commitment*
- ***dicom**PACS®**DX-R** DICOM Worklist SCU + **dicom**PACS® Connect*
- ***dicom**PACS®**DX-R** DICOM Patient CD*
- ***dicom**PACS®**DX-R** Cognition Optimised Processing*

Optional components:

dicom**PACS®**DX-R controle console

Operating console (two options available), MS Windows 8 Professional, hardware stress test, software pre-installation, system checked and ready to use

- *Option 1: Archive and diagnostic station**
- *Option 2: Notebook**

Investment protection

If you wish to create your X-ray images with a flat panel system (DR = direct radiography) at a later stage, you only have to exchange the **Divario** CR system for a flat panel. ***dicom**PACS*®***DX-R*** is already designed to implement such a connection. You will not need to purchase new software or to get used to a new user interface.
This is what we call investment protection.

Built-in flexibility!

The ***dicom**PACS*®***DX-R*** software already includes all functions necessary to store X-ray images and provide them to other workstations as a standard feature. Other workstations in your practice's network may load these images directly and display them. This requires just one "***dicom**PACS*® Diagnostic Module Standard" (optional extra) per workstation. Of course, the images can also be sent to an existing PACS system.

Version 001_09_2015

Vet portfolio

Overview - products of OR Technology

Medici DR Systems *vet*

DR retrofits - digital upgrade set for existing X-ray systems incl. ***dicom**PACS®**DX-R*** acquisition software, available for stationary and mobile X-ray machines

Leonardo DR Systems *vet*

DR suitcases - compact suitcase solutions for portable X-ray incl. ***dicom**PACS®**DX-R*** acquisition software

Amadeo X-ray Systems *vet*

Complete digital X-ray systems (incl. stand, Bucky, generator, flat panel etc. and incl. ***dicom**PACS®**DX-R*** acquisition software), mobile X-ray solutions as well as portable X-ray solutions

Divario CR Systems *vet*

CR solutions - CR systems for digital X-ray with cassettes incl. ***dicom**PACS®**DX-R*** acquisition software

X-ray Accessories

Accessories for X-ray
e.g. radiation protection walls, gloves

dicomPACS® vet

Image management (PACS) - comprises acquisition, processing, diagnosis, transfer and archiving of image material

ORCA

Cloud based archive solution - safe, long-term archiving of patient data with intelligent usage of internal databases communication platform with colleagues and specialists and transfer of image data to patients

dicomPACS® DX-R
X-ray Acquisition Software

X-ray acquisition software [only for OEMs] - acquisition and diagnostic software for X-ray images from flat panels or CR systems

OR Technology
Digital X-ray and
Imaging Solutions

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