

# CUSTOMER SPOTLIGHT



## VISAGE 7 THIN CLIENT STREAMING TECHNOLOGY OPTIMIZES REPORTING INDEPENDENT OF PLACE AND TIME.

### THE CHALLENGE

Mammograaf Radioloogikliniik provides imaging services for Tallinn and, through trailers, across Estonia. It required a powerful imaging solution to optimize visualization and reporting workflows, and to enhance interaction with referring physicians – for both PCs and Macs.

A further challenge was added when its co-founder moved to Eastbourne, 80km south of London, which meant that the image distribution and reporting functionality had to be made available via standard Internet connection between Estonia and the UK.

### THE SOLUTION

Visage developed a client supporting Mac users, in addition to its Windows-based client software. Today, on-site staff as well as users in mobile units can use PCs as well as Macs as full-featured radiological workstations. This also extends to radiologist working remotely, and referrers at their home locations. Visage 7 is used to access 2D, 3D, and 4D studies without having to download files. In addition, the solution meets Mammograaf's needs of linking directly to PACS solutions from a variety of vendors, as well as flexibility regarding the subsequent integration of modalities and customization of protocols.



## MAMMOGRAAF RADIOLOGIAKLIINIK

The Mammograaf imaging center in Tallinn began operations in February 1994. Its initial focus was on breast cancer screening services; and about ten years ago, MRI was added to serve the referring orthopaedics. The imaging solution from Visage has enabled the center to optimize its reporting workflows and to set up a teleradiology environment working with Eastbourne.

The center was “strongly involved in the development of breast cancer screening in Estonia, which started nine years ago and has been quite well organized during the past five years”, explained co-founder Dr. Theo Raudsepp. Overall, about 12,000 clients are cared for every year; screening

activities encompass 2,500 clients annually, and 7,000 MRI exams are carried out every year. Images of less than 2,000 patients are read for other hospitals.

Mammograaf operates a mammography trailer offering breast cancer screening services to the rural areas for about eight months during the year. And, approximately five years ago, mobile MRI service was launched by the center, to support the hospitals in Tallinn and, in particular, the regions outside the capital. In the beginning, a unit was loaned from Finland; after a year, the center decided in favour of an investment in its own MRI unit.

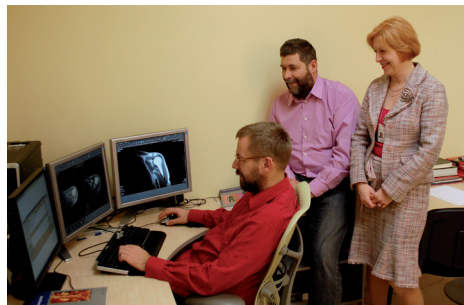
## State-of-the-Art 3D PACS for Mammograaf

The solution from Visage has been in use at Mammograaf for about six years. The center switched from “e-film” freeware to Visage because that solution was more comprehensive and better suited to the needs than other systems. “The support and co-operation with the Visage PACS was at the time, and still is, very good”, added Dr. Raudsepp; “this was a key factor in the decision favouring this solution which is produced within the EU and carries the CE mark – also played an important role for us”. Visage allows efficient viewing, processing, and archiving of very large amounts of images, including thin slice volumetric data from CT, MR, and further modalities.

Initially, 2D clients were used, and the switchover to 3D clients took place across the center around three years ago. Those are now used principally inside the clinic, whereas 2D is in use where Internet comes into play. Dr. Raudsepp: “Initially, setting up the 3D protocols was not really easy; with the active support from the vendor, we managed to achieve that task rather conveniently; in addition, Visage carried out all the customization features we asked them to implement, including porting the system to Mac OS.” Today, the system can be accessed from a Mac, via the Internet Explorer, or from a PC as required – this flexibility is

highly welcomed at the center. Apart from this, the infrastructure environment is rather mainstream at Mammograaf, the radiologist went on to explain; there are no special requirements.

The distribution of images from the MRI truck as well as from the mammography truck to the imaging center is done mostly via DSL connections and a VPN tunnel; connections from local hospitals to the center can also be used seamlessly.



After images are read, the reports are sent to the various referrers, and in most cases they end up together with the relevant images directly in the different PACS solutions operated by them. Efficiency is very high, thanks to the use of the system from Visage, and Dr Raudsepp is highly satisfied with this situation.



### The “UK Connection”

The radiologist and his wife had decided to move to Eastbourne because they considered it a challenge at the time to go and work outside the country. They selected the United Kingdom for reasons of language and adaptability to the culture. Dr Raudsepp considered it a further challenge to manage the company from the UK capital – putting existing workflows at Mammograaf to a test, with the existing staff, and with the transmission of image data. The solution from Visage enables the radiologist to work via teleradiology.



After office hours, Dr. Raudsepp logs into the Tallinn server from his location in Eastbourne to read images from various modalities for an average of 20 cases each night. Again, an Internet connection is used to link up with the server in Tallinn, using a VPN tunnel – with no technical problems. “Data privacy regulations require the VPN, which slows down the transfer of data only to a minor extent”, explained Dr. Raudsepp, “so the influence on our workflows is minimal”.

After a year now of managing, and working together with, Mammograaf in Estonia from Eastbourne, the radiologist finds this situation “quite normal”. Approximately 75-80% of the radiologist’s capacity goes into work for a London care provider, and the rest is done for Estonia. The radiologist even tried to work within the teleradiology setup and the Visage system during time he spent in Vanuatu, a small Island near the Australian coast; that test was also successful.

### The System Shows Clear Benefits

The experience of working with Visage 7 – comparing it other vendors they previously used – is that Visage is more user-friendly and convenient, and caters optimally for the needs of the center and its workflow requirements. “The images, in particular the 3D images, have a very high quality”, added Dr. Raudsepp; “the system is faster in comparison, and it gives us flexibility – we can access images from any computer, and choose from a variety of protocols. Furthermore, we appreciate the intensive support offered by this vendor, e.g. in cases where modalities need to be integrated or individualized protocols are required.” Referrers appreciate receiving the report together with the images.

Thanks to these many benefits, acceptance for the system is very high from staff at Mammograaf Radioloogikliniek and the founder who is now based in the UK. Future perspectives of working with the solution from Visage, said Dr. Raudsepp, might include even more advanced applications for 3D MRI and the use of iPads.

“The support and co-operation with the Visage PACS was at the time, and still is, very good...”

Dr. Theo Raudsepp,  
Mammograaf Radioloogikliniek



### MAMMOGRAAF RADIOLOGIA- KLIINIK / IMAGING CENTRE

- Opened: 1994
- Founders: Drs. Theo Raudsepp and Peeter Raudvere
- Location: Tallinn
- Activities: Mammography, MR services, CT and CR services
- Additional Mobile Services:  
1 Mammography Truck, 1 MR Truck



## CONNECTING ESTONIA AND THE UK



Visage 7 allows Drs. Raudsepp to review and report images scanned in Tallinn, Estonia from their home office in Eastbourne, UK.

### VISAGE 7 – THE SOLUTION AT A GLANCE

- Universal Viewer: One thin client application for reading everything from plain film to cardiac CT.
- Native Thin Slice and 3D Processing: Seamlessly integrated multi-planar reformatting, volume rendering, and volumetric analysis.
- Advanced Clinical Applications: CT/MR angiography, cardiac CT, neuroradiology, oncology, and many more.
- Distributed Workflow and Archiving: Instant, unified remote access to multiple locations without replicating data.
- Native Windows and Mac Client: Windows and Mac users seamlessly integrated into a single workflow and IT platform.
- Scalability Made Easy: The fully scalable distributed thin client architecture makes it easy to add more modalities, users, and locations.

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