

VidiView Enterprise Imaging - release brief v4.9

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Summary

Another important release of our medical image management system VidiView has been released! VidiView v4.9 – successor of v4.8 released back in January 2021. The focus in the v4.9 release revolves around

- [General] Quality improvements – on all levels
- [Feature] Support for IdP-based authentication using OpenID Connect
- [Feature] Support for new media formats
- [Feature] Support for a new, flexible way of mapping Dicom tags (fully customizable)
- [Feature] New toolkit for live examination collaboration
- [Improvement] Better support for equipment used during examinations
- [Maintenance] A new and improved configuration tool for the server
- [General] Preparation for the future!

Detailed information on most important updates

[General] Quality improvements – on all levels

To deliver the functionality and continuity our customers demand from a solution like VidiView, we've spent a lot of time and efforts in an overall, general quality improvement program during the R4.9 development process.

When we speak of quality – we address several areas, such as;

- **Design robustness** – is the design robust enough to deliver the functionality under real use-case circumstances?
- **Design fitness** – if the design fit to address or solve a specific need or problem?
- **Design test-ability** – to what extent is this design testable, and what does the result of these tests tell us?
- **Architectural fitness** – is the architecture suitable for the product or function?
- **Performance fitness** – does the design and architecture deliver the performance we need?

By addressing the above questions, we learn about shortcomings and lack of quality in our product and can effectively address it. Such an assessment should be done on a regular basis but is – due to lack of development resources, sometimes downvoted or downgrade.



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Our quality management system (ISO 13485-based and certified) has helped us uphold and structure this periodic review of internal finds, external reports and general technological changes that becomes known to us. We can now act and react in a more structured and effective way – prioritizing risk management and risk minimization in all aspects of the development process.

[Feature] Support for IdP-based authentication using OpenID Connect

To better facilitate special needs for authentication and authorization we've added a flexible and comprehensive support for authentication by the means of an external IdP and the OpenID Connect standard.

The implementation supports multiple IdP in the configuration as well as multiple configured claims per IdP.

This makes way for a very flexible setup in large enterprises with multi-level/multi-peer organizations – both in scenarios for login to the VidiView Client application as well as login to the VidiView Capture application.

The support might be especially valuable in designs where external organizations are invited to ingest images (by the use of VidiView Capture) to the image database for central review. This scenario is becoming increasingly asked for in regional setup all over the Nordic area.

[Feature] Support for new media formats

With this new version we introduce support for several new formats inside of VidiView. We now support

- **PDF-files** (storage only, opens in Windows-registered PDF-viewer)
- **Microsoft Word-files** (storage only, opens in Windows-registered Word-viewer)
- **MPEG2 video-files** (playback in VidiView Client-application supported)

The background here is the wish to import other, legacy archives with medical images into VidiView for future management and storage and with these imports comes to need to deal with common legacy image formats that include the above-mentioned formats.

We strongly recommend not to implement new storage strategies which includes these formats.

Another new media format that is supported from R4.9 and onwards is audio. We now support

- **WMA** (playback in VidiView Client-application supported)
- **MP3** (playback in VidiView Client-application supported)
- **AAC** (playback in VidiView Client-application supported)
- **WAV** (playback in VidiView Client-application supported)

This is the first release in which we support and allow audio-only playback. Our aim is to improve this audio playback in the coming versions with basic visualization and basic audio extractions features. This will likely prove useful for audio-based examinations such as those speech therapists do. Stay tuned for improvements in this area!

[Feature] Support for a new, flexible way of mapping Dicom tags (fully customizable)

As use of the VidiView solution for centralizing and managing fleets of 3rd party Dicom producing equipment is becoming increasingly popular we've added a new configuration and tag-mapping/morphing ability in the system.

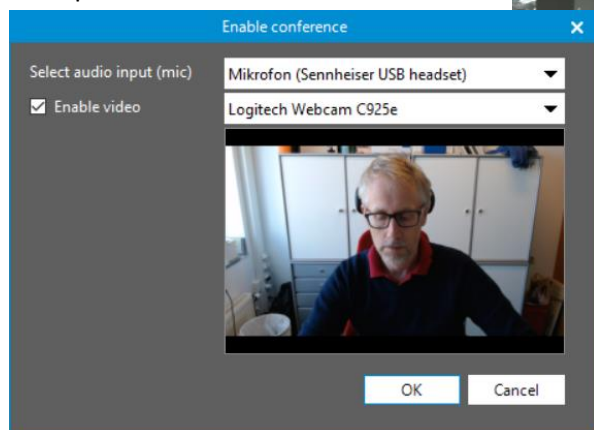
Many times, the quality and completeness of the Dicom data produced in stand-alone units of various kinds is unsatisfying. Tags might be missing (not configurable), tags might be incorrect, tags might have worklist data in object tags, etc. For all such locations it's now possible to wash and polish up this information on the way into VidiView – or on the way out of VidiView (depending on needs and design).

There is a full, logics feature-set to interpret and change based on rules and alternatives when importing the objects for a stringent, compliant and robust workflow when exporting the material onwards to VNA or PACS endpoints.

[Feature] New toolkit for live examination collaboration

For those users using the Conference toolkit new features including

Pointer (which can be used from both ends). The pointer is represented by an enlarged arrow in yellow, marked with the initials of the controlling party, to clearly indicate who is in control). The room pointer is marked with the room



name.

Video feedback (from the client webcam) is now visible in the room on the VidiView Controller screen (lower left corner). Once a session is initiated on the

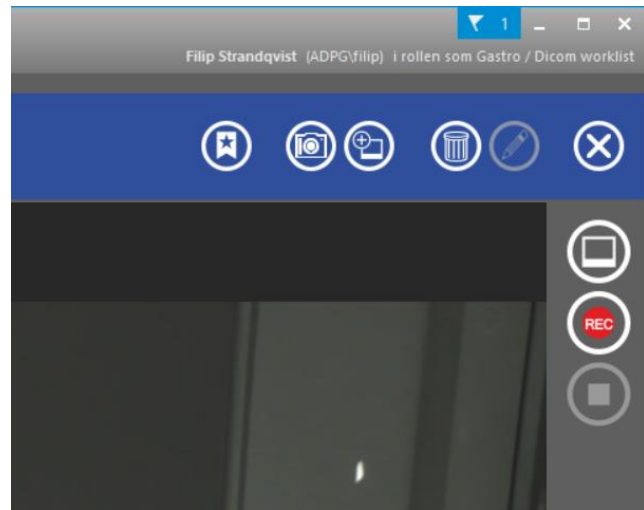
client a question about inputs (webcam and/or microphone) is now presenter, provided they exist.

Remote documentation (remote images and video recording) can be done in the study from the participating VidiView client end.

The above features have been added in an effort to offer old DigiLink users an alternative upgrade path.

The DigiLink product line has been discontinued for almost 5 years now and we've lacked a good alternative for users wanting to upgrade – till now!

With this release of VidiView they should be fine moving their old DigiLink workflows to the VidiView platform!



[Improvement] Better support for equipment used during examinations

Another asked for feature lately and with an ever-growing userbase in flexible endoscopy is equipment management. This feature set is getting more and more complete and, with this release, include;

- Possibility to select instrument during exam startup on controller
- Possibility to add new instrument during exam startup on controller
- Possibility to change instrument during an ongoing exam on controller
- Possibility to use keyboard or barcode scanner to select, add or change instrument
- Possibility to manage instruments more effectively in the department configuration
- Possibility to search for instruments used in a variety of combinations to quickly find patient groups treated with a specific instrument during a specific time period in the client application
- Possibility to create reports based on registered instruments data in the client application

For many users in the flexible endoscopy user base these functions have been asked for and needed. This update should facilitate most such needs.

[Maintenance] A new and improved configuration tool for the server

With the release of R4.8 we started to update and modernize the design of the VidiView Server Configuration Tool. This update was partly to address logistic and logical shortcomings in the old configuration tool where the order of which the config options was displayed was no longer logical.

Also partly to address the introduction of the new confirmation framework model that will be the foundation of our next generation VidiView R5.

In this release we've added a few more changes in the Server Configuration Tool

- Reverse lookup of user credentials for a department (new section on the department config)
- Better management of equipment used (updated section on the department config)
- Introduced a 'Find' feature in the user management section (good for large user bases)
- Some re-arrangements on what is displayed on what panel in the department config
- Introduced a higher granularity when it comes to module use. The user may now be given access to 'Use VidiView Capture', 'Use VidiView Client' (previously a default access) and 'Use VidiView WebView' (previously a default access if WebView was enabled).

Part of these changes are made in an attempt to prepare the product, the eco system and the system administrators for the coming update to VidiView R5 and the maintenance model of the new generation.

[General] Preparation for the future!

Since late 2019 we have designed a new architecture, planned and evaluated new technologies within our domain, examined and mapped current and predicted future customer needs and tried to forecast future imaging tech trends in the medical field.

All of these activities have been conducted in an effort to plan for and make up a foundation for the next generation of VidiView - VidiView R5.

Parallel with this work, our regulatory compliance work to align with the EU directive MDR (Medical Device Directive) is ongoing. Whatever work and effort put into the R5 project needs to be in line with MDR. A complex and sometimes unknown territory – please help us grow and get better in this field. Should you ever feel that the product lacks a certain risk assessment for any of it's feature and functions – **please let us know!**

What to expect in the coming release of VidiView?

In the first release of the new generation R5 we plan to introduce the following features

- Working with multiple studies of the same patient in parallel in a better, more convenient way making way for effective collaboration between client applications
- Brand new Dicom and HL7 stack
- New concept of study states
- New concept of study types
- Massive automation based on state and type
- Further developed conferencing and collaboration toolkit
- Further development in the anatomy (body) mapping toolkit



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The current, overall focus for the product development is heading towards user collaboration, specific workflow support and usability.



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