Speed Thrills

Without Speed You Can't, With Speed You Can

Visage Imaging ("Visage") recognizes that time is an incredibly precious commodity for radiologists. Healthcare relies on radiologists to deliver the most thorough interpretations, as quickly as possible, using the most advanced tools available. Most conventional solutions attempt to help radiologists achieve this optimal state, but in the end they typically fail because they slow the radiologist down. In reality, most radiologists are using disjointed digital tools pieced together to their legacy diagnostic workstations, with separate applications and user interfaces for this and that, running on decades-old technology that hasn't kept pace. With a next-generation architecture, Visage Imaging's Visage 7 Enterprise Imaging Platform is arguably the first solution to provide the necessary speed and power to break the status quo.

When the elegant technological combination of speed and clinical power come together, a truly magical clinical transformation occurs. Across the healthcare enterprise with the simplicity of a single diagnostic viewer, radiologists are able to immediately call up multi-display, multi-dimensional, multi-prior views of the most routine and complex cases in seconds. Priors are hung instantly whether they were acquired locally, at the hospital across town, or at the imaging center across the state line irrespective of the RIS/PACS used at those institutions.

> *Imagine….*radiologists in the reading room navigating a critical trauma case that just came in—they're paying close attention to the 3D volume rendering to check for fractures they might have otherwise missed if they were working off only the 2D scout image. They're able to deliver an opinion right away because they're not waiting for 3D secondary captures—the image presentation is exactly how they want to see it, and all of the data is at their fingertips.

> *Imagine….*at home, a radiologist is working the teleradiology shift, interpreting an emergent oncological case that just arrived on the worklist. In seconds, the complete case with priors and linked lesion workflow is available to the radiologist, on their Mac computer. The radiologist was able to quickly communicate the results of the interpretation, complete with a report of the time-based lesion analysis, with the on call physician.

*Imagine….*a patient presents through the emergency room of the local community hospital. The staff immediately institutes a stroke protocol, including CT and/or MR/MRA, with subsequent perfusion analysis. The institution's stroke expert is at the flagship academic medical center, and immediately is able to bring up the study to determine if there is an infarct or a bleed, despite not being onsite. Time is brain, and the patient is provided the best care due to rapid access to the study and advanced tools all on a single enterprise viewer.

But these sample use cases are not fiction, they are real and happening daily. Welcome to the new reality: *Visage Imaging is delivering what's next, now.*

Visage Imaging Visage 7 Enterprise Imaging Platform

Visage 7 is built on groundbreaking, exciting technology: amazingly fast, server-side rendered images streamed via an intelligent thin-client viewer. Radiologists have a customized, protocol-driven workflow to natively view 2D, 3D, 4D and advanced visualization imagery across a single desktop. Visage 7 is jaw dropping fast, and simply has to be experienced. Multiple 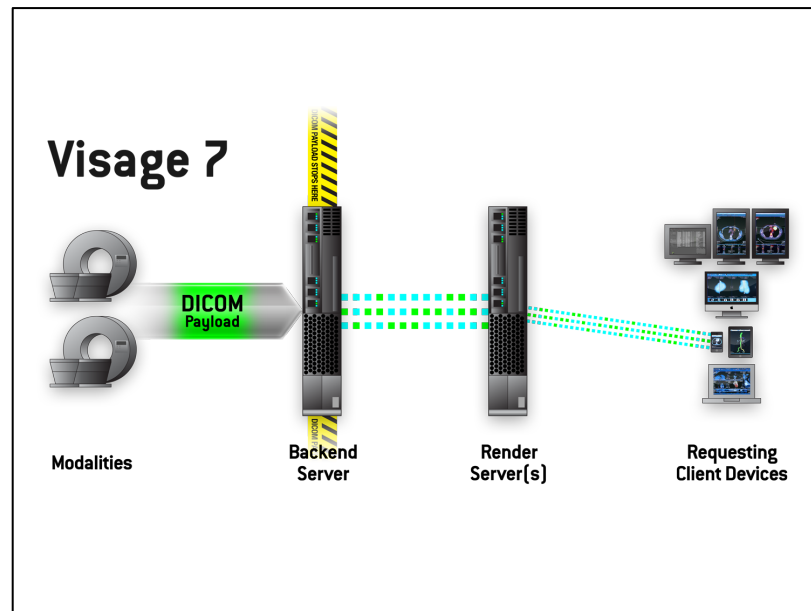displays. Protocol-driven. Multi-dimensional imagery. Current/prior(s) analysis. All images/volumes navigable. In seconds, near real-time, from any location in or out of the enterprise.

Visage 7 has inherent capabilities to process raw, thin-slice modality data due to server-side processing technology. All of the processing is done at the server, so technologists don't need to do extra processing at the modality console(s), and waste precious time away from their patients. Instead radiologists working with Visage 7 have all of the reconstructions and volume renderings immediately at their fingertips. This helps increase patient throughput, patient satisfaction, and the quality of interpretation. Visage is not attempting what some radiology insiders have called a 'barbaric approach', to integrate an advanced visualization server plus thin-client viewer to their standard diagnostic viewer, as some vendors have and will continue to try to do. Visage broke from the pack when Visage 7 was designed with native advanced visualization technology at the core. All the same code. All the same workflow. All the same technology. The end result is a Visage 7 solution that is amazingly fast and incredibly powerful, delivering a true breakthrough: an enterprise imaging solution for the most sophisticated, most challenging radiology providers.

Fast

Speed is critically important for everyone working in healthcare, whether it's IT managers, clinicians or radiologists. It does not make a difference if all users are on the high speed

LAN, or are distributed over the WAN with varying bandwidth, the performance of image delivery to end users will largely be comparable due to Visage 7's server-side processing, thin-client, image streaming model. User performance is also comparable across a wide variety of modalities (CR, US, NM, CT, MR, PET/CT, MG/FFDM, DBT) whether the imaging study is only a few images, for example, for a 2-3 image CR, or 4-6,000 images for a Cardiac CTA. Visage 7 is architected to support rising imaging growth without any pause in performance – compare this to legacy viewer approaches that struggle on growing imaging volumes, and continually have to tweak their system(s) to catch-up over and over and over again. Instead of playing catch-up with technology, today's best imaging institutions desire to stay ahead of the curve, powerfully setting their own path for the future.

Architecture and workflow of the Visage 7 Enterprise Imaging Platform
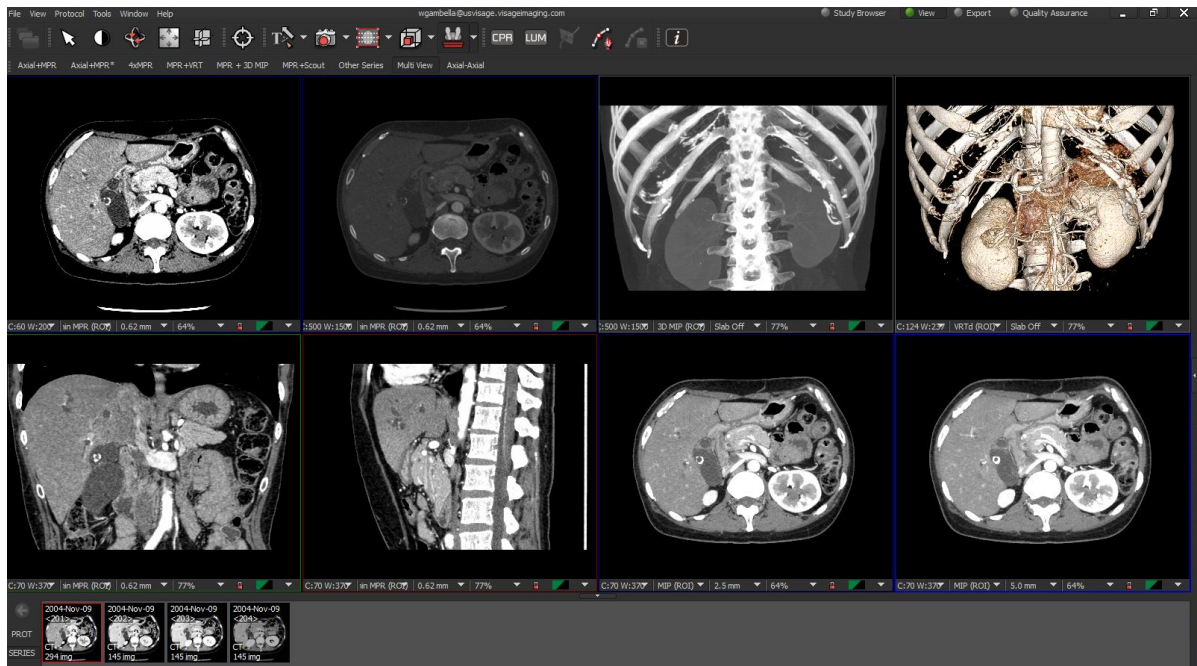
An equivalent end user experience is made possible due to Visage 7's intelligent streaming, which does not require moving complete DICOM payloads around the enterprise. A technically elegant solution, only the necessary image pixels are streamed to the requesting clients with all of the heavy lifting done at the Visage 7 server. This is dramatically different than the vast majority of viewers available today, representing a generational improvement in performance.

Powerful

In addition to performance, another competitive strength of Visage 7 lies in its' inherent clinical capabilities. Visage 7 is arguably the most powerful enterprise viewer available. Visage 7 provides sophisticated tools for all diagnostic imaging modalities, for anywhere access and interpretation. This includes all common diagnostic modalities; digital mammography, DBT and PET/CT; as well as (optional) advanced visualization modules for neurology, oncology, cardiology and vessel analysis.

The power of Visage 7 is downright transformative, delivering a revolution in patient care.

Visage 7 provides a more natural reading workflow for radiologists, with advanced visualization capabilities right on the desktop. This is the manifestation of domain expertise and technology forward solutions to dramatically improve care. It's all the same code, a singular system. This enables radiologists to tailor protocols to hang exactly what 2D images and 3D/advanced visualizations they want to see. All in the same desktop. At the same time. Without any additional mouse-clicks. In seconds Visage 7 renders the entire protocol for reading radiologists, maximizing the available image viewports with 2D and multi-dimensional imagery, regardless of the size of the imaging study.

Dual-panel, multi-view workup automatically presented via intelligent display protocol by Visage 7. Viewing layout provides axial reference data at the original slice thickness and original window level, a bony window at the original slice thickness, sagittal and coronal MPR reconstructions, additional axial data at variable slice thicknesses, volumetric VRT views in color and greyscale MIP, as well as a comparison axial view.

For a pertinent clinical example, consider how interpretation could be improved for rib fractures, if the 3D volume of the chest could be immediately interrogated within the protocol? Another pertinent example is having the ability to compare the coronals of the current versus the coronals of a prior, immediately within the protocol? And yet another example of the power of having reconstructed views immediately in the protocol is for renal tumor assessment, which is subtle and easy to miss without sophisticated capabilities at the fingertips of the radiologist. Up until now, radiologists have only had a 2D scout images to assist with interpretation. Imagine the improvement to care with a 3D volume acting as today's scout? One could equate the 2D scout view to an antiquated 'paper-map', and the 3D volume to a 'modern radiologist-powered GPS'. Additionally, sophisticated referring physicians (e.g., orthopedic surgeons, neurologists, oncologists, etc.) that require an optimal imaging experience can be given the necessary Visage 7 privileges to have the equivalent experience of radiologists, but more importantly, customized to their needs.

Enterprise Imaging

Visage 7 has a neutral design, optimized to co-exist and integrate with existing informatics infrastructure, such as local RIS, PACS, voice recognition, workflow solutions, EMR, VNA, HIE, etc. This enables Visage 7 to deliver a common, simplified enterprise workflow for all users across the distributed enterprise.

The end user experience using Visage 7 is optimized due to the flexibility of access—a common viewer for all users, customized with the tools and protocols required for the clinical need (e.g., radiologist, specialist, generalist); client choice (PC (Windows) or Mac (OS X)); minimal one-time client application download and no onerous download restrictions (e.g., no Java, Flash or ActiveX; no administrative rights; no browser restrictions, etc.). Visage 7's agnostic, technology forward architecture rises above that of other enterprise viewing solutions that were designed as core components of 'legacy PACS'. Stripping out the viewing technology from these solutions was never intended by their developers, and when integrated to VNA invariably results in less than optimal, inefficient solutions. In contrast, Visage 7 works with a broad spectrum of VNA vendors to provide an equivalent, truly optimal experience for even the most demanding imaging environments.

Visage 7's comprehensiveness also includes mobile access. The Visage Ease[i] offering enables users the convenience of image access on-the-go via their favorite iOS devices (iPad, iPhone). There are no requirements for separate servers to service mobile access needs, as all users whether they are local on the LAN, WAN or on their mobile devices, are all served by the same common server infrastructure. This simplifies IT management, as there is no distinction, no separate server farm for mobile users, or any users for that matter. All users are served by the same infrastructure. And with Visage's Protocol Handler, novel app-to-app integration is supported.

Visage Ease. Mobile imaging results access powered by Visage 7.

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Visage 7 also has the sophistication of enterprise-class IT systems, to include and support necessary technology for end user management, security, availability and enterprise scale. In addition to the necessary speed and clinical depth of the enterprise viewer, these are the other attributes that make Visage 7 a perfect fit for nearly any healthcare enterprise.

Summary

With speed, workflows once discounted as 'impossible', are suddenly not only possible, but probable. Visage 7 empowers radiologists to deliver on the promise of Radiology unlike nearly any other solution: to deliver the most thorough interpretation, as quickly as possible, using the most advanced tools available. A more natural way to read puts the most advanced imaging tools immediately in the hands of the radiologist, wherever they need them, helping to ensure that nothing is missed during interpretation.

This is what's next, now. **Visage 7 — Fast. Powerful. Enterprise Imaging**.

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[i] Note: Visage Ease is not a medical device and should not be used for diagnosis.

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