



NilRead Interpretation

True zero-footprint image viewing in any setting

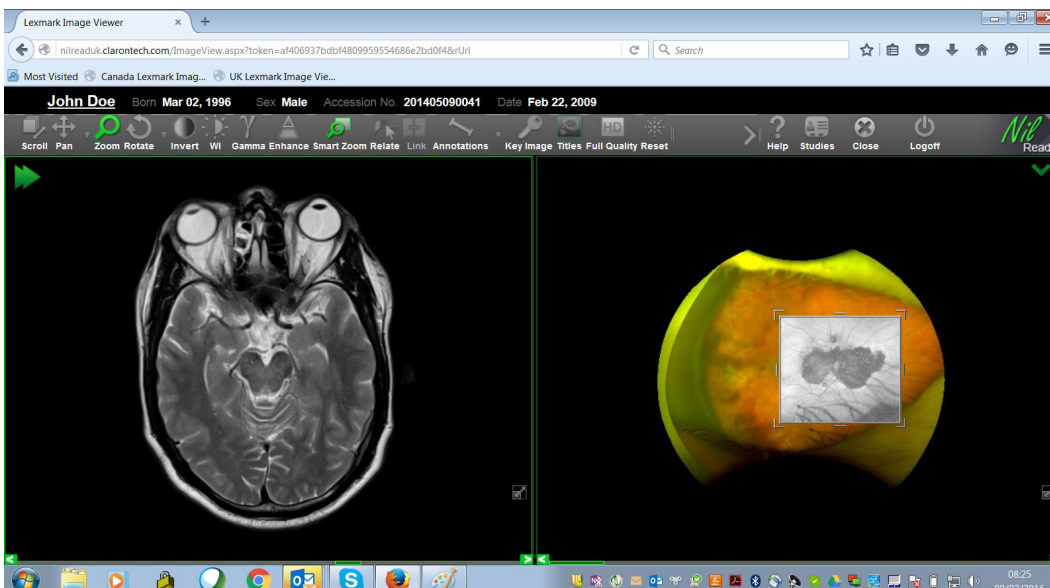
Medical imaging technology is racing forward at an unprecedented pace—but picture archiving and communications systems (PACS) often seem to finish last. Advanced fusion modalities, breast tomosynthesis, 3D angiography and more have opened important new avenues in patient care and pushed PACS capabilities to their limits.

At the same time, innovative image communication and remote reading solutions have become a priority to support today's plethora of unique business models. Flexible, real-time access to patient images, virtual diagnostic toolsets and advanced visualization on-the-fly can immediately bring the experienced eyes of a sub-specialist to a case across a hospital campus or the globe. Technologically enabled real-time physician collaboration and telehealth are also enhancing care. But often the results are reading rooms overcrowded with specialized imaging workstations, tangles of input devices and overloaded archives, adding significant workflow complications and expense.

The modern view—sophisticated, versatile, simple

In this modern environment where more can quickly become too much, Lexmark Healthcare believes the answer is less—less operational complexity, less maintenance and less associated costs. Introducing Lexmark NilRead Interpretation: a true zero-footprint, fully diagnostic viewer operating inside any standard web browser that enables sophisticated interactive image processing, viewing and distribution with no software installation or plug-ins.

From 3D volume rendering to curved planar reformatting, Lexmark NilRead Interpretation brings functionalities and toolsets that rival the most advanced PACS workstation to the radiologist's fingertips—creating a streamlined, consistent user experience throughout. It integrates seamlessly with virtually any vendor neutral archive (VNA) or PACS and supports rules-based exam viewing, user permissions and multi-monitor viewing.



The Lexmark NilRead Clinical Viewer displays both DICOM and non-DICOM data simultaneously with full diagnostic toolset capabilities.

With a CE-marked and FDA-approved diagnostic quality display, NilRead Interpretation becomes the focal point of a robust, best-of-breed, reconstructed PACS implementation optimized for any site's needs today and poised for the future. Centralized NilRead computing streamlines IT maintenance and infrastructure costs, while consolidating upgrades is mindful of a hospital's already strained IT infrastructure budget.

Automatically adapting to a mobile environment, Lexmark NilRead Interpretation also runs on any web-enabled smartphone or tablet for referential viewing. It provides true anywhere, anytime image access and enables cross-enterprise data sharing consults, trauma transfer and telehealth.

Robust, server-side rendering ensures ultra-fast speed, negating the need for powerful local workstations and viewing devices. And, enhanced security features means no protected health information (PHI) is locally stored on the viewing device.

For multi-specialty image access hospital-wide, the versatile NilRead family of viewers also supports a wide range of non-DICOM image formats. With full diagnostic toolsets, a hospital can image enable an EHR system to truly deliver a consistent, inclusive, enterprise-wide image viewing environment to all clinicians.

Key benefits

- ▶ Industry-leading, feature-rich image viewing in a browser-based environment that facilitates access, sharing and interoperability
- ▶ Industry-leading diagnostic toolsets for radiology and ophthalmology, fully available in a zero-footprint environment
- ▶ Focal point for a best-of-breed, decoupled PACS strategy that enhances hospital ownership of imaging assets and reduces reliance on PACS vendors
- ▶ Enhanced productivity through anywhere, anytime diagnostic quality images with a consistent interface and user experience
- ▶ Cost-effective system management based on zero-footprint, server-side architecture
- ▶ Sophisticated cross-enterprise image communication and powerful tools promote real-time, interactive collaboration facilitating second opinions and remote diagnoses
- ▶ Consistent user profiles and timely image communication tools with referring physicians promote streamlined, faster workflows and enhanced patient referrals
- ▶ Secure image display and management due to server-side image rendering that prevents residual PHI on the viewing device
- ▶ Simple, cost-effective path to a full enterprise-wide, patient-centric image management platform

The Lexmark NilRead family

Lexmark's industry leading web-based, pure zero-footprint solutions provide a universal platform for viewing medical images in any format across the enterprise and beyond. More than half of all U.S. hospitals benefit from Lexmark's deep experience in these and other healthcare enterprise solutions.

Three licensing options to meet your needs:

- ▶ **NilRead Interpretation:** Primary diagnostic solution with an advanced visualization toolset for a full range of 'ologies, including radiology and ophthalmology
- ▶ **NilRead Clinical:** Rich enterprise viewing solution for 2D image sets, includes some post processing tools such as basic MPR and 3D, as well as other measurement tools and native collaboration features
- ▶ **NilRead Core:** Standard enterprise solution for 2D image viewing, with essential clinical measurement tools to complement the EHR image strategy
- ▶ **NilRead Digital Pathology:** (Available only in Europe) Diagnostic solution for digital pathology built on the industry standard, DICOM for Pathology, featuring a pathology rendering engine with industry leading performance and display resolution

Key features

- ▶ Fully diagnostic image viewing on any high-resolution display and resident support for multi-monitor viewing, while maintaining pure zero-footprint client architecture
- ▶ Industry-leading image visualization with protocols that support PET-CT and PET-MR fusion, mammography, digital breast tomosynthesis, ophthalmology, enhanced MR and other advanced segmentation
- ▶ Enhanced functionality tools for other 'ologies, including laser blending and laterality segmentation for ophthalmology
- ▶ Support for 3D volume rendering, multi-planar reformatting, curved planar reformatting, vessel analysis and semi-automated vessel tracing
- ▶ Comprehensive pixel-based image measurement including line, area and angular
- ▶ Historical timelines of available relevant priors from any DICOM, XDS/XDSi, video and other non-DICOM image and related data archive in any location
- ▶ Rules-based hanging protocols supporting physician viewing preferences and departmental structure
- ▶ Menu configurability to support specialty/user preferences
- ▶ Supports Radiation Oncology with the viewing of therapy plans including the entire set of radiation therapy objects in 2D, MPR or 3D
- ▶ Includes zero-footprint web CD uploader and data QA masking editor to support image sharing with no desktop install required
- ▶ Support for advanced video operation for visible light specialties like gastroenterology and surgical including editing and reconciliation tools to trim, capture and extract multiple segments
- ▶ Compatibility with all major browsers using no resident software or plug-ins; integrates with any DICOM network, VNA and supports query/retrieve from DICOM nodes and XDS/XDSi repositories
- ▶ Referential viewing on smartphones, tablets and notebook computers
- ▶ Rich, native collaboration tools, including sending study links to peers/colleagues and a live, real-time, interactive collaborative tool that can be linked to Skype for Business
- ▶ Server-side rendering optimized for available bandwidth with no PHI locally cached on viewing device
- ▶ Multi-specialty image viewing with support for non-DICOM formats, including visible light images and video
- ▶ Consistent interface and architecture provides unified NilRead experience from referral viewing to full primary interpretation
- ▶ HIPAA compliant with the highest standard of web protocol security; optional authentication delegation to support existing in-house methods in use within an organization, such as single sign-on leveraging active directory and LDAP
- ▶ FDA 510(k) clearance for diagnostic viewing including mammography and digital breast tomosynthesis and non-diagnostic use on mobile devices; Health Canada approval for diagnostic use on workstations and mobile devices; CE Mark for sale in in the EU and listed on the Australian Register of Therapeutic Goods