eUnity by MACH7

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The Mach7 eUnity Enterprise Diagnostic Viewer

Unifying all your images and solving your integration needs under one universal viewing platform

A visualization experience for every healthcare professional across your enterprise

CR25-06

Introduction - The Enterprise Imaging Integration Problem

Healthcare has undergone a fundamental shift over the past decade. It is no longer the case that a single department, like radiology, cardiology, or wound care provides care for the patient. Instead, healthcare professionals need an accurate and comprehensive view of a patient's medical history to develop the most well-informed patient care plan possible. This includes having access to all the relevant medical imaging in a patient's record. However, despite this need, most healthcare organizations are still structured such that individual departments have their own dedicated imaging and data storage systems. These are not typically integrated and thus do not provide a consolidated and holistic view of a patient's medical imaging history.

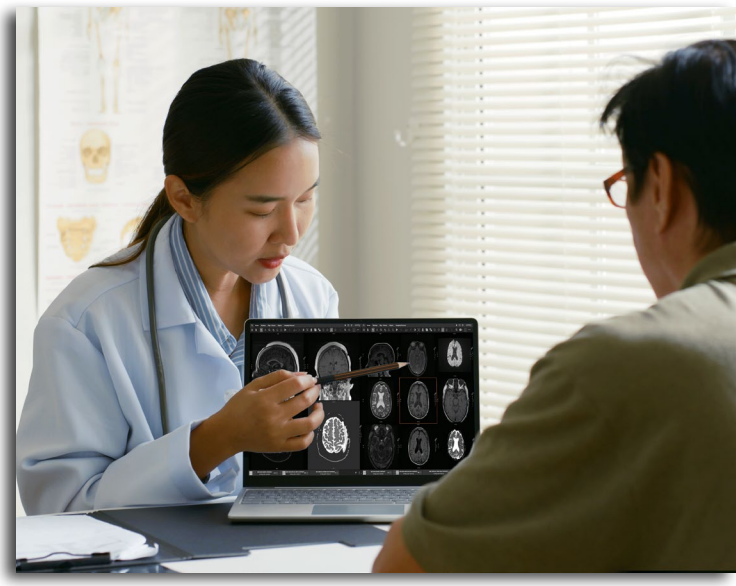
Consolidating image data from every modality in every system in every department can be an incredibly time-consuming and laborious task, especially for large hospital systems with multiple facilities and geographic locations. This aggregation process can add risk and potentially delay the delivery of patient care. Mergers and acquisitions add an additional layer of complexity, as healthcare providers must treat data unification as an ongoing process where there is no guarantee a repository will contain 100% of the data at any given time. However, these challenges can be addressed with a viewer that is capable of intelligently aggregating and displaying data from across the entire healthcare enterprise, independent of a centralized repository. Doing so ensures care providers can quickly access the data and images they need, improving their efficiency and diagnostic confidence. These effects can trickle down to patients, helping reduce their anxiety and frustration and resulting in better outcomes.

An Innovative Solution - Mach7's eUnity Enterprise Diagnostic Viewer

At Mach7, we recognize that the fundamental challenge to **Enterprise Imaging** is not overcoming a viewing problem; rather, it is in fact overcoming an integration problem. Viewing medical images once you have them is relatively easy; the difficulty is in acquiring the images in the first place. The **Mach7 eUnity Enterprise Diagnostic Viewer** was designed with a key assumption in mind: in practice, no single system contains all patient images. As a result, you need an imaging solution capable of querying multiple systems at the same time for relevant patient images.

This problem is twofold: first, you need a system capable of finding and federating all the relevant data you need; second, because of proprietary vendor platforms, not all imaging systems and data repositories structure data in the same manner. As a result, your system must be built with the capability to query data despite these differences in structure. Not all enterprise viewers can successfully solve this problem. However, the Mach7 eUnity Viewer solves this issue and so much more.

Why Integration Matters to Clinicians and Patients



The eUnity enterprise viewer provides the capability to integrate to disparate departmental systems and intelligently aggregate relevant patient records from all of them, creating a more holistic view of a patient's medical history. This directly impacts clinicians and patients in three main ways:

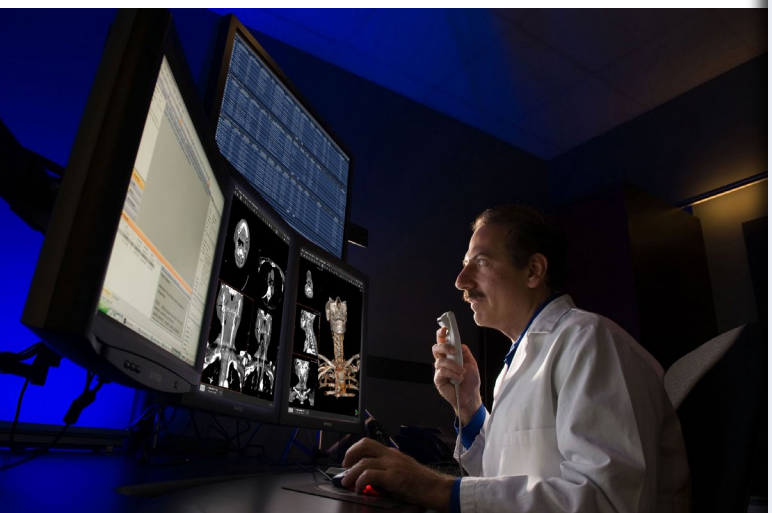
1. It can improve clinicians' efficiency in making decisions;
2. It can reduce time to patient diagnosis and treatment;
3. It can provide a greater degree of diagnostic confidence.

Why Integration Matters to Healthcare Organizations and IT Administrators

An enterprise viewer with the ability to intelligently aggregate patient records and medical images from different departmental systems and geographic locations provides tremendous value and allows healthcare organizations to leapfrog the work involved with consolidating usable data into a single repository - meaning you can get a more comprehensive view of a patient's imaging history *now.*

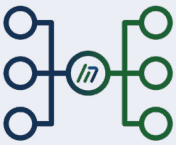
One of the greatest impediments to enabling enterprise-wide access to relevant images is **time.** It can take years to migrate and merge imaging data into a repository such as a vendor neutral archive (VNA). This is especially true for large multi-department, multi-site healthcare networks that may, in some cases, even span multiple regions, and is exacerbated by mergers & acquisitions (M&A) and the adoption of new modalities and technologies.

An enterprise viewer like **eUnity can provide the ability to integrate with and display images from the data silos across the enterprise without the need to first migrate and consolidate the data.** To the end user, this "virtual aggregation" can provide seamless, nearly instantaneous access to all relevant prior images - thus giving physicians the information they need to make the best, most well-informed treatment and care decisions for their patients and maximizing their outcomes.



Additional eUnity Features

Zero-Footprint HTML5 viewer at 100% diagnostic quality: eUnity is a vendor neutral zero-footprint universal viewer, capable of being launched through any modern, HTML5-enabled web browser. It does not require dedicated hardware. It is also 100% diagnostic quality, 100% of the time, even for enterprise and clinical use – this means that your entire healthcare network can use eUnity as their one, single viewer for all users, and can be infinitely scaled up or down in total number of users and in features available through privilege-controlled access – granting it the flexibility to serve the present and future needs of dynamic healthcare organizations.



Full integration with all front-end clinical systems: Mach7's open API provides users with a rich viewing experience - creating an integrated viewing platform that makes the best use of a patient's imaging data.

Access from anywhere and from most devices with HTML5 browsers: Patient care and services are increasingly administered in places other than a dedicated workplace (remote work). Care decisions happen beside the patient, and the care experience is more personalized and less structured than it used to be. eUnity gives you the freedom to access patient data from anywhere, anytime and from any device.* *(Refer to section on minimum requirements)*

Research and AI Test Platform: Mach7 has adopted new communication standards (DICOM SR Measurement Findings) and encourages AI vendors to adopt the same standards. This enables the use of a richer content type that can drive more benefit from AI algorithms (more than a simple screen capture or image overlay) and thus provide users with enhanced workflows. eUnity is built for the future and supports widespread adoption of AI and advanced clinical applications. AI algorithms and applications can be integrated seamlessly into the eUnity viewer thereby supporting and augmenting your existing clinical workflows without interrupting productivity or creating additional complexity.

Image Enablement for Downtime PACS: The flexibility of eUnity is such that it can be "promoted" from its primary role (acting as the enterprise viewer) to acting as a downtime PACS in case the main PACS goes offline, either scheduled or unscheduled. With relatively little effort, eUnity can be repurposed into being the main radiology diagnostic system until the "main" PACS can be returned to service. With eUnity, you do not need to invest in a separate downtime system, you've got one already.

Unite Your Imaging Today with eUnity

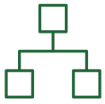
At Mach7 Technologies, our tagline is **"Independence through Innovation."** We pride ourselves on creating innovative solutions which enable exceptional patient care by empowering healthcare providers to make more informed decisions.

The **eUnity Enterprise Diagnostic Viewer** is built on the premise of delivering a universal viewer for all clinicians with role-based tools for referential viewing or primary reading.

A future proof platform that gives healthcare professionals the ability to acquire, access and view all images within a patient's imaging record in one unified visualization experience.

Intuitive, easily deployed, and reduces administrative overhead, thus allowing you to manage costs and gain immediate ROI.

A vendor neutral, independent design with flexibility that allows you to integrate to all your modalities and imaging systems.



Gives you the power to enact your custom workflows that are most important to your clinicians, thereby gaining efficiencies, improving productivity and enhancing patient care.

Access all relevant imaging data from across the enterprise - supporting better care decisions and improved patient outcomes.

Our experts are ready to show you how Mach7 can help you create a true enterprise imaging experience that supports your health initiatives.

Schedule a demo today at www.mach7t.com.

Contact Us Today

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Minimum Requirements for accessing eIFU provided with the device

Hardware Platform Requirements

Minimum requirements for web client for enterprise and cloud

When eUnity is used as an enterprise or cloud viewer, the following are minimum PC requirements:

Operating System	Windows 8/8.1, Windows 10, Windows 11, MacOS®X 10.14+ (Intel)
Supported browsers While eUnity stores no patient information on the client machine, we do recommend closing the browser when finished viewing images.	Safari® 16.3, Firefox 108, Chrome™ 108, Microsoft Edge 108
Hardware	• Modern x64 Consumer CPU • Intel® i3* or equivalent • 2+ Cores @ 1.5Ghz+ • 4096 MB of RAM • 512MB+ of graphics memory • 10Mbit or higher network speed • 4G/LTE+ (cell network speed)

*Mobile, or low voltage class CPUs require on-site validation to be performed by customer prior to use.

Note: Some default browser configurations are known to improperly handle the HTTP/1.1 no-store cache directive and cache information to the local disk. During site validation the enterprise browsers and configurations should be validated to ensure patient data is not unexpectedly cached.

Mobile Requirements

Mobile HTML

	iOS	Android™
Operating System	iOS 10+	Android™ 6+
Hardware	iPhone® 6+, iPad Air®+	Mobile devices that run Android™ OS 6.0 and up
Browser	**Supported:** Safari® 16.3 or newer, Firefox 108 or newer, Chome™ 108 or newer **Recommended*:** Chrome™ 108 or newer	**Supported:** Firefox 108 or newer, Chrome™ 108 or newer **Recommended*:** Chrome™ 108 or newer

*Chrome offers the most efficient memory management.