Universal Viewer Version 8 Data Sheet

A single enterprise viewer

Introduction

GE Healthcare's Universal Viewer delivers a powerful, unified workspace for clinicians. It brings together intelligent tools, enhanced usability and integrated advanced visualization and artificial intelligence applications[1]. Universal Viewer helps to increase efficiency and simplify information access with a single application for 2D, basic 3D, and advanced image analysis applications, thus enabling holistic radiology, cardiology, oncology, and other specialty workflows. Universal Viewer is designed to support enterprise deployments enabling full radiology solutions integrated with the GE Enterprise Archive, simplifying image management and bringing both cross-enterprise deployments to meet the increasing need for flexibility for today's healthcare organizations.

Scalable

Universal Viewer provides an enterprise imaging solution with the flexibility to meet your organization's needs. Depending on your budget and plan, the solution can be implemented as a full enterprise solution, or as a departmental solution.

Organizations trust Solutions for Enterprise Imaging because GE Healthcare delivers high-quality service, reliability, and technology innovation, while preparing for the challenges of the future.

Federated Data Access

Enhanced usability and access
Works the way you do.

Universal Viewer's web-based architecture provides radiologists, referring physicians, and other clinicians access to the same application and tools from virtually any location, on campus, at home, at the clinic or in the office. This includes advanced post-processing capabilities such as reviewing large data sets from clinical practice desktops.

Universal Viewer provides security and preference settings to define external user privileges, enhancing the security of patient data. Universal Viewer's flexible architecture allows for tight connectivity with various third party products such as RIS, CVIS, and EMR systems for one-click access to images.

Access to historical studies
### Seamless reach across institutions and archives.

Universal Viewer can stream studies directly from the enterprise archive as the DICOM repository and provides flexible, enterprise workflows based on the archive configurations to provide seamless access to patient exams located on other local and remote PACS.

Access to EMR Notes
Provides relevant patient clinical content in context to aid diagnosis.

The Universal Viewer Imaging Related Clinical Context (IRCC) embeds EMR notes in the workflow to display relevant patient clinical information in context so clinicians obtain a more complete picture of the patient to more quickly reach a confident diagnosis.

Cross Enterprise Services (XES)
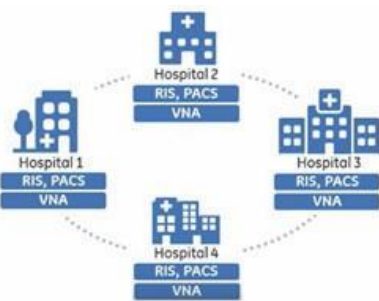
In today's complex healthcare environment, patients often seek care at multiple points of service. This may result in a patient's imaging data being stored in different DICOM sources, possibly with different patient identifiers. Cross Enterprise Services (XES) provides access to the patients' historical imaging data from across affiliated organizations by improving access to remote studies, matching patients across sites. This allows for users to launch remote images side-by-side with local images. XES provides an extensive patient history at the time of diagnosis, helping to enhance the quality of the report and to reduce redundant imaging studies.

Improving Workflow

Smart Reading Protocols

Learns the way you like to work to save you time in setting up exams.

Smart Reading Protocol (SRP) represents different way for radiologists to create hanging protocols and improve image set-up efficiency. Using machine learning, SRP makes inferences and hanging recommendations based on user patterns and preferences for hanging protocol.

Display AI generated content

- Universal viewer displays AI generated images in the native viewer as part of Radiologists' normal reading and reporting workflow. AI generated content[1] such as localization of clinical conditions on images, visual aid with measurements, advanced quantification on clinical conditions etc. can be configured to hang as part of users' hanging protocols in the Universal Viewer, to enable a unified user experience with AI workflows.

Adaptive Streaming Engine

Doesn't keep you waiting.

The adaptive streaming engine optimizes the user experience by anticipating and prioritizing the study content that a user will display next. It adjusts for network conditions, device compute power, and image compression to achieve the most efficient image delivery.

Advanced Visualization

Universal Viewer provides an enhanced user experience for advanced visualization. It offers a single source for post-processing applications for MIP/MPR, PET-CT, vessel analysis, automated bone removal, integrated registration, and oncology qualification. This decreases the need to log into multiple applications and retrieve images for comparison from standalone "mini PACS" systems, allowing radiologists and clinicians to read exams more efficiently. This also helps increase IT productivity by reducing requests for DICOM resends and image moves between systems.

The starting point for the enhanced visualization solution is the 3D Advantage package: a broad portfolio of high-performance analysis tools, onto which additional specialized applications can be added. Additional information on each of the advanced applications is available in the individual product data sheets.

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[1]AI generated content is provided by the 3rd Party or GE AI algorithms that are integrated

Improving Workflow

Workflow Manager

Adapts to your workflow
to work the way you do.

Unified workspace for Rad and
Tech

Workflow Manager is the workflow and worklist component of Universal Viewer that is designed to organize, prioritize, and view work for radiologists and radiology-technologist users. Workflow Manager simplifies workflow experience by providing access to clinical information and images along with connectivity to third party reporting systems. It is extremely flexible, allowing radiologists and radiology technologists to adapt their workflow to meet their specific needs. This can include managing multiple states and quickly jumping between patients and studies, building custom-worklists on the fly, accessing full-suite of technologist tools for exam management and exception handling. Users can also specify worklist favorites, prioritize worklists based on AI findings, save exams for conference and teaching, and create reports that can be associated with exams to be reused for multiple studies.

Key features of Workflow Manager include:

- Prioritize worklists based on AI findings

- Powerful Cross-enterprise search that allows searching for patient exams across the enterprise and view exams without moving data to local storage.

- Auto-advance exams in the worklist

- Save exams into folders for future reference/teaching/conference

- Intuitive, highly-customizable workspace – Create custom work lists and worklist templates on the fly; Add/Remove data elements in worklists; pin favorite worklists

- Perform Academic Workflows between Resident/Fellow and Attending Radiologists to interpret exams.

- Unlimited interrupted workflow support – allows users to interrupt and resume exams with a single mouse click

- Ability to associate exams in Workflow Manager or in PowerScribe (bi directional), to create a single report for the associated exams

- Rich comparison workflows – access local/remote comparison exams seamlessly

- Support confidential patient workflow

- Contains full suite of admin/technologist tools for exam management (Exam split, Merge, Edit), exception handling, document scanning, exam assignments to users and custom-exam prioritization.

- Open desktop integration – standards based tools provide connectivity to external applications to support both in-bound and out-bound launch of third party products from the Universal Viewer.

Breast Imaging Capabilities

Universal Viewer provides native access to breast imaging workflows and tools to support screening and diagnostic workflows and the display of multi-vendor images. The breast imaging capabilities provide the radiologist with access to and the ability to read all image types available for the patient on the same workstation, helping reduce the need to maintain separate, stand-alone workstations and separate specialized systems. Image types supported include mammography, tomosynthesis, breast MR, breast ultrasound, and Contrast Enhanced Spectral Mammography (CESM) with support for IHE profiles for mammography and tomosynthesis images. Non-breast images available in the system can be displayed to help provide more information on the patient. Universal Viewer allows users to view all image types to help enhance diagnosis and treatment recommendations.

UX Designed to maximize your workflow:

- Stable scaling algorithms to scale images the same size, even across vendors

- Enhances the speed of your read with prior and current image layouts for quick comparisons, intuitive 3D tomo scrolling, quadrant zoom and zoom+pan combined mouse action

- Display of Case Score and Certainty values for CAD based AI algorithms[2]

- Breast Imaging specific toolbar

- Can program mouse for per user preferences

- Overlays are user customizable

- Supports color monitors

- Reports can be shown on screen

- Tracking of seen and unseen images

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[2] iCAD ProFound AI

Key Features

**Universal Viewer - core
Viewer capabilities**

Large number of standard and optional tools available to all users are available
in Universal Viewer based on exam type and configurable user preferences.

- Automatic, adaptive display sizing

- Easy arrangement of images using
  improved SNAP!™ tool

- Fully configurable Graphical User
  Interface with mouse controlled
  icons, menus, and keyboard
  shortcuts

- Automatic Image
  Synchronization

- Image registration with support for
  multi-modality (CT, MR, PET)
  synchronization

- Native MIP/MPR tool launched
  directly from preferred hanging
  protocol (HP) and in Smart
  Reading Protocols (SRP)

- Native PET/CT with ability to
  apply

- SUV units to all viewports

- Hangs up to 9 comparison studies
  when the primary study is
  opened.

Intended Use

Universal Viewer is a software application that displays medical image data and associated clinical reports to aid in diagnosis for healthcare professionals. It performs operations relating to the transfer, storage, display and measurement of image data.

Typical users of this system are authorized healthcare professionals.

Mammography images may only be interpreted using a monitor compliant with requirements of local regulations and must meet other technical specifications reviewed and accepted by the local regulatory agencies.

Lossy compressed mammographic images and digitized film screen images should not be reviewed for primary image interpretations with use of the Universal Viewer.