

# HIMSS 2014 keeps radiology connected

Cristen Bolan, MS

As healthcare networks build the infrastructure for greater connectivity, they are laying the groundwork for a new model in radiology workflow. Radiologists have already begun to adapt their workflows to meet requirements for Meaningful Use objectives and to implement the ICD-10 procedure coding system. Additionally, they are leveraging analytics for structured reporting and using cloud-based technologies to enable enterprise imaging.

In this month's *Technology Trends*, we hear from the experts at HIMSS about how the organization is supporting radiologists in meeting the requirements of these new initiatives. Additionally, we provide you with a glimpse of some of the key technologies designed to enhance workflow efficiency and impact patient care, which you can expect to see on the exhibit hall floor at the 2014 HIMSS 2014 Conference and Exhibition, February 23-27, in Orlando, FL.

**Applied Radiology (AR):** *Many specialists (radiologists and radiation oncologists) find Meaningful Use (MU) requirements cumbersome, and are questioning if it will truly impact the quality of care. How is HIMSS supporting specialists with the MU initiative?*



**Pat Wise, Vice President, Healthcare Information Systems:** Providers are deeply involved in reconfiguring workflow to meet the criteria of MU. HIMSS offers a variety of tools and resources available to all clinicians that provide insight into best practices, change management, and workflow. As specialists move from a paper-based record to EHRs they ensure that their patients will benefit from coordinated care. The consult from cardiology will be available to the patient's primary care provider, the oncologist will understand the cardiologist's concerns regarding therapeutic approach, and the radiologist will have context when reviewing a chest x-ray.

**AR:** *What are some of the ways that HIMSS is supporting hospitals and other types of healthcare facilities in implementing the ICD-10 procedure coding system?*



**Lisa Gallagher, Vice President, Technology Solutions:** HIMSS has an ongoing effort to create and continually update a "toolkit" of resources on ICD-10 implementation called the "HIMSS ICD-10 Playbook." HIMSS co-sponsored (with WEDI) an ICD-10 Pilot Program for coding last year and has recently published related materials in the "HIMSS ICD-10 Playbook," including the Pilot Results report, redacted medical records used for the coding exercises, and the related answer keys. HIMSS has ongoing ICD-10 webinars, ICD-10 Forum events, and will have an ICD-10 Pre-Conference Symposium at this year's HIMSS Annual Conference.

*AR: How is HIMSS educating healthcare facilities on optimizing analytics to improve quality of care and operate more efficiently?*



**John Hoyt, Executive Vice President, HIMSS Analytics:** HIMSS Analytics has created the C&BI Maturity Model in conjunction with our partner, IIA (International Institute for Analytics). Concurrently, under leadership from Mary Griskewicz, HIMSS has launched the C&BI community with over 6,011 members. HIMSS Analytics has educated the community on the model and has begun applying the model's measuring capability to healthcare organizations to help them ascertain their analytic prowess relative to other healthcare and non-healthcare organizations.

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**Mary Griskewicz, Senior Director, Healthcare Information Systems:** Our community offers opportunities to obtain practical knowledge and guidance to help you turn data into action. We share tools, resources, and best practices about data use and management solutions that are efficient, effective, and measurable.

*AR: What are some of the key take-aways for specialists attending the HIMSS 2014 Annual Conference?*



**Joyce Sensmeier, Vice President, Informatics:** Radiologists can learn strategies for image sharing as demonstrated in the Interoperability Showcase and presented at the Interoperability Explosion workshop. Enjoy networking opportunities with colleagues including the Physicians Reception & Physician Networking Breakfast. Of course, all clinicians can visit the exhibit floor to see innovative new imaging technologies.



Users can create, collaborate, exchange, and manage a patient's multidisciplinary visual medical history with the AGFA ICIS View screen via the EHR.

## New technologies on the HIMSS 2014 exhibit hall floor

### Agfa HealthCare (3549)

Agfa is highlighting enhancements to ICIS View, a core facet of its ICIS workflow-centric imaging services platform for providing secure access to multidisciplinary image information through the EHR. Agfa HealthCare's ICIS simplifies the CIO's challenge of managing the disparate, siloed image data spread across the healthcare enterprise into a modular, incrementally scalable platform and project. With ICIS, any clinician within a health system can create, collaborate, exchange, and manage a patient's multi-disciplinary visual medical history using the clinical context of the EHR.

With ICIS View clinicians and other stakeholders can access patient imaging data from any PACS or VNA, using a single viewer, to support patient care continuity and clinical productivity. ICIS enables multispecialty imaging devices to contribute to a comprehensive health record, with significantly reduced IT complexity.

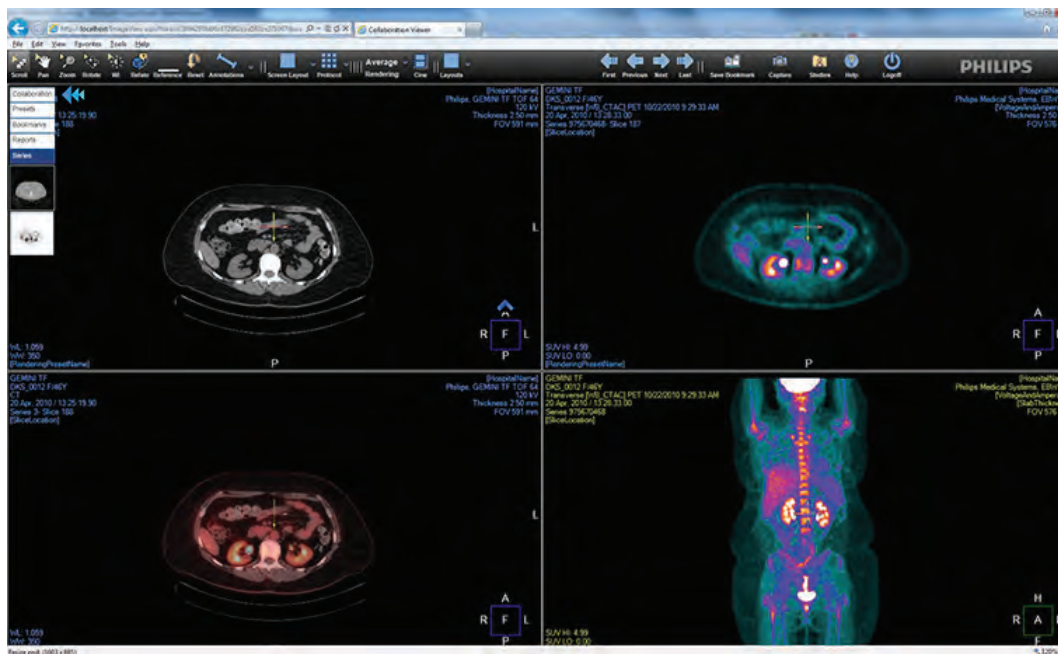
### Bayer Healthcare (3594)

Bayer Healthcare IT highlight is its Certegra® Workstation. As the cornerstone of the Certegra®

Informatics Platform, it is a CT Contrast Dose Management™ Solution. The Workstation establishes interconnectivity with and between the scanner, injector, PACS, RIS, and radiology reporting system. Data captured is centrally mobilized and made available for improved outcomes and productivity throughout the chain of care. The workstation serves as the clinician's single interface to improve compliance and patient care, enabling modality work list connectivity, point-of-care data capture, a new P3T® 2.0 (Personalized Patient Care) software environment, and interconnectivity with hospital IT systems, including PACS, RIS, and speech reporting systems.

Bayer will also feature Radimetrics eXposure Radiation Dose Management (RDM) software in addition to Bayer's existing contrast-focused dose management solution. The addition of radiation tracking to Bayer's existing contrast-focused dose management solution allows healthcare professionals throughout the entire radiology workflow to track, monitor and manage each patient's radiation and contrast dose. The expanded portfolio enables reliable, automated radiation and contrast-dose information administration and provides tools that





*NilRead is Claron's zero footprint viewer that supports PET-CT and PET-MR fusion, enhanced MR, and other advanced protocols.*

support patient safety management and regulatory reporting requirements while improving quality assurance. The eXposure product integrates with existing PACS/ RIS solutions.

### **Bracco Diagnostics (8157)**

Bracco Diagnostics will highlight NEXO, an advanced server-based decision support system for patient care and contrast management. It connects to RIS and PACS, and records patient specific injection data. NEXO connects to multiple CT injectors, supporting remote multi-injector control, and automatically captures and sends injection reports to PACS. NEXO retrieves patient's past records and provides more efficient protocol management allowing users to customize protocols on a Web-based platform. This enables clinicians to standardize and monitor quality of care. It records key performance indicators to enhance decision-making, improve compliance and add value to the enterprise.

### **BRIT Systems (1711)**

BRIT Systems will demonstrate Roentgen Works Version 2.2, designed to enhance clinical communication and collaboration with enhanced image sharing functionality. Roentgen Works is the company's 100% browser-based platform for enterprise PACS/RIS, including a vendor neutral archive, cloud-based storage and image sharing, and critical results reporting.

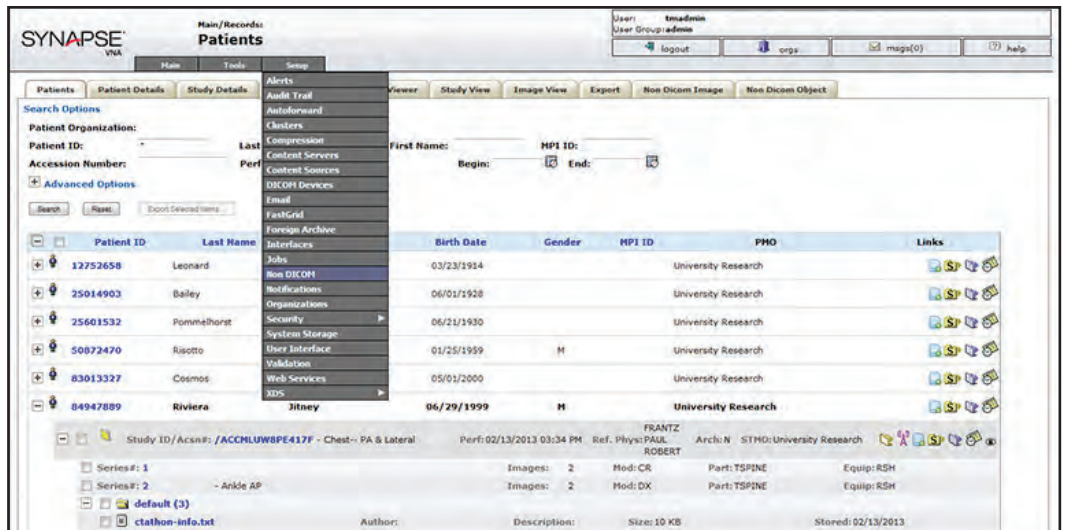
Roentgen Works 2.2 provides the ability to generate QR codes in reports that link to the study's images. With the increasing use of mobile devices, such as iPads, to view medical images and information, the QR codes provide a quick, simple and secure link to the DICOM study for use by patients or physicians.

A new Upload Request tool allows users to send out an email link to others so they may easily upload studies or reports via the Roentgen Cloud. For example, a radiologist can submit a request to have a comparison study uploaded or a hospital can request a remote facility to upload a new study. The studies can be uploaded with the proper patient ID in the requesting system, saving steps, and times compared with importing CDs. The Download for CD tool has been enhanced to optionally include a viewer and password, and now users can burn their own CDs or DVD's to hand to patients.

Additionally, there is a user notification alert system in Roentgen Works. Clinicians can email and/or text a message to another clinician to alert them of a new study, status of a current study, or critical result findings.

### **Claron Technology (5476)**

Claron Technology will feature NilRead, newly FDA-cleared for diagnostic use. NilRead is a no compromise zero footprint fully interactive diagnostic viewer. It contains all the features



Synapse VNA by FUJIFILM Medical Systems enhances image management and streamlines workflow.

of NilShare but it has been extended for advanced imaging functionalities. It supports full fidelity imaging, either permanent or on demand depending on site/user configuration. This allows fluid diagnostic use regardless of the technical limitation imposed by bandwidth and latency. Nil-Read support ambient light device verification for mobile devices to assess if the lighting conditions are compatible with a diagnostic read. It includes a full rule-based system that allows creating site or user-specific hanging protocols. The display “on demand” feature is a timeline of the relevant priors for a specific patient. The priors can be from any of the multiple DICOM archives or from a remote XDS-I source. NilRead supports advanced protocols including PET-CT and PET-MR fusion, and enhanced MR. It also includes segmentation protocols for more advanced 3D analysis visualization and provides multi-monitor configurations. It offers a large set of measurements, including line, area, angular and pixel-based measurements.

### Dell Healthcare & Life Sciences (5264)

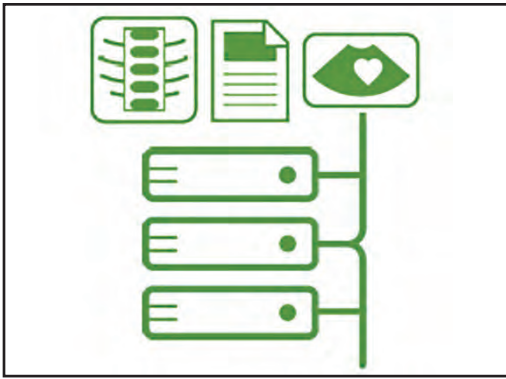
Dell will feature its Dell Unified Clinical Archive (UCA). The Dell UCA integrates with leading PACS systems and has 3 components. First, the Clinical Data Management layer aggregates patient data from all PACS, HIS, and specialized imaging applications. It offers a choice of multiple VNA software partners to best meet your requirements and needs. The Clinical Archival layer features on-premise and cloud deployment picture archive options that can be used independently or as a hybrid, ensuring disaster recovery and instant scalability. Third

is the Clinical Collaboration Portal, designed to allow easy access, secure sharing and integration of clinical data across a variety of platforms in a patient-centric repository. This facilitates both image integration in EHRs and image sharing through a Health Information Exchange (HIE).

### Elekta (3503)

Elekta will highlight new features on its radiation oncology information management system. To satisfy the need among radiation and medical oncology practices for greater sophistication in information management systems, Elekta will demonstrate a number of new features in its MOSAIQ® Oncology Information System (OIS). Notably, Elekta will highlight new functionality for Meaningful Use Stage 2. For MOSAIQ users in the United States, Elekta will demonstrate a wealth of new functionality to satisfy Meaningful Use Stage 2 requirements, including ePrescribing, Patient Portal, Immunizations Interface and Clinical Quality Measures Interface, among several other modules.

MOSAIQ is a comprehensive OIS that centralizes traditional radiation oncology, particle therapy and medical oncology patient data into a single user interface, accessible by multidisciplinary teams across multiple locations. MOSAIQ provides oncology staff access to the underlying clinical and administrative data, improving both clinical care and operational efficiency. Visitors to Elekta booth #3503 will learn how MOSAIQ integrates with a varied array of hospital systems, treatment devices and imaging systems, increasing accessibility to critical data anytime by remote users on various platforms. MOSAIQ captures



*McKesson Enterprise Image Repository simplifies enterprise-wide access to image information with a single point of distribution for image data.*

the entire patient chart in a common database that users can customize, allowing radiation oncologists and medical oncologists to coordinate care for complex cases.

#### **FUJIFILM Medical Systems USA (4074)**

FUJIFILM's Synapse VNA, a patient-centric vendor neutral archive (VNA) technology that catalogs and maintains the data in a patient centric model allowing a single access point for EHRs and other systems. Synapse VNA will enhance image management, streamline workflow, reduce costs and, most importantly, improve patient care. It can be implemented within any environment and offers data access and availability. The archive allows sharing and consolidation of the storage and provides secure access across all authorized users. Synapse VNA provides a unified viewing experience for the VNA DICOM and non-DICOM data.

The VNA is part of the Synapse Portfolio, which unifies data from the PACS, RIS, cardiovascular, VNA and cloud services, and organizes it by patient, in one system.

#### **GE Healthcare (1003)**

GE Healthcare is focusing on several Centricity solutions. These include Centricity Perinatal, a departmental clinical information system that integrates fetal surveillance and documentation to help healthcare organizations deliver their best care to every mother and baby. Centricity Perinatal – Connect is an add-on module to Centricity Perinatal. Delivering a new level of workflow interoperability, the Centricity Perinatal – Connect module integrates perinatal information in context with other clinical data on one screen. This enables clinicians to see their critical perinatal information and enterprise EHR

clinical data all at the same time—helping them to make faster, more informed decisions, and enhance the overall workflow and patient care.

Centricity Perioperative is the business and clinical OR management solution that drives cost savings and quality care of the surgical patient, allowing customers to make data-driven clinical and business decisions, and optimize their critical resources through connected workflows. Centricity Perioperative delivers integrated perioperative-centric inventory and is part of the GE surgery solution.

Centricity Perioperative Anesthesia is the Anesthesia Information Management System (AIMS) that can optimize clinical and financial outcomes in anesthesia allowing customers to make data-driven clinical and business decisions through connected and intelligent workflows.

GE will feature its Centricity 360 provides real-time secure sharing of critical medical data. Leveraging the Industrial Internet to better impact patient outcomes, Centricity 360, a GE PREDICTIVITY solution, streamlines clinical collaboration among unaffiliated caregivers and patients to help reduce duplicate testing avoid unnecessary patient transfers and lower diagnostic imaging distribution costs.

The Centricity Clinical Archive (CCA) is GE's CCA VNA that leverages industry standards like DICOM, IHE, HL7 and EMPI to help providers unify patient images and documents in a standard format across departments, enterprise and regions. This helps lower cost of information management and provides a single point of contact for a more comprehensive patient jacket.

#### **Hitachi Data Systems (1511)**

Hitachi will highlight the Hitachi Clinical Repository (HCR), a VNA with the ability to aggregate all digital medical images, electronic health and medical records, and the associated metadata related to patient care. HCR leverages data from existing departmental PACS, as well as existing hospital information systems. It answers the challenge of consolidating and integrating multiple imaging departments into a single, searchable and sharable image repository.

#### **lifeIMAGE (2009)**

lifeIMAGE will feature LILA (lifeIMAGE Local App), which its Distribute CD is a Web-based CD uploading feature that uploads and enables exam viewing throughout your organization, providing more time for doctors to see





Merge Healthcare's iConnect Network allows hospitals, providers, and imaging centers to exchange imaging information electronically with community physicians that are connected to Health Information Exchanges (HIE) or EHR networks.

patients. It provides a single viewer for all outside exams on any type of desktop computer without downloading any software. Exams don't need to be pushed to PACS to be viewable by colleagues, yet clinicians can request that exams be pushed to PACS.

Also on display is ReferralBox, a secure, cloud-transfer service for imaging providers to send exam information before patients reach the hospital or clinic. Physicians can evaluate referral imaging before confirming outpatient appointments, letting them select patients that match their expertise. LILA users can provide one-time use, temporary credentials to users who need to send images on an ad-hoc basis, or provide persistent credentials for frequent senders. Sending sites do not need to install an app to send transfer images.

LifeIMAGE is also highlighting OutBox, a CD-free method for receiving results, it's designed to help increase referral volume. OutBox delivers exams and results to referring physicians electronically, in real-time, and it gives your referring physicians one place to view all of their exams.

### **McKesson (1365)**

McKesson will feature advanced radiology solutions with image analysis options that help improve clinical care by integrating diagnostic imaging into an EHR.

The company will demonstrate the McKesson Enterprise Image Repository solution, which archives and manages image data on behalf of the systems with which it interfaces. It provides

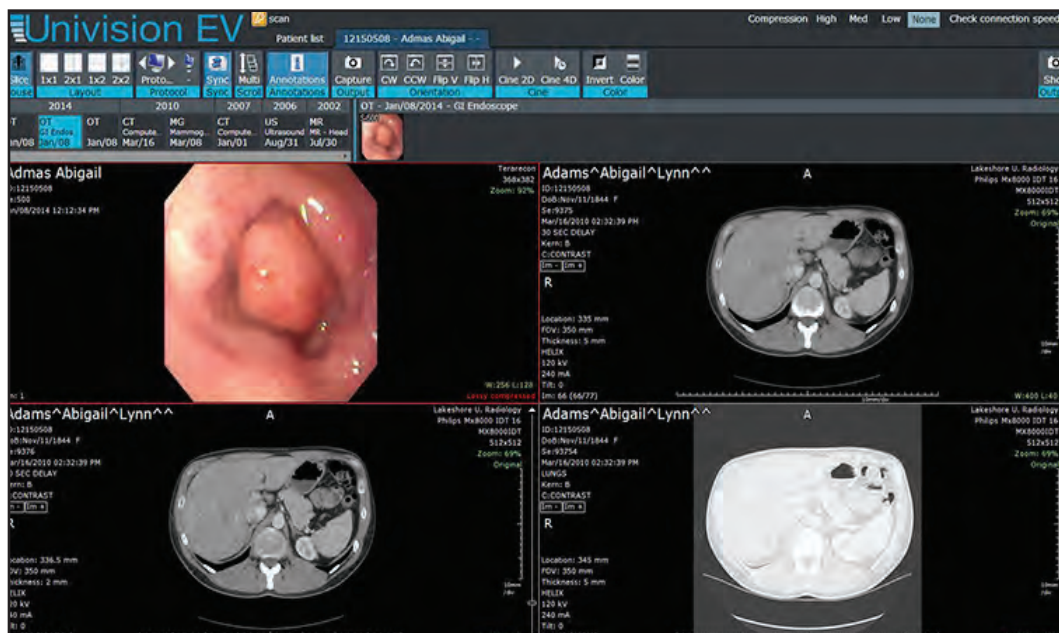
a common archive that reduces the escalating, image-management-related expenditures, including hardware and operating costs, through system consolidation. While also supporting image data sharing between disparate healthcare enterprises or systems, where such sharing is permitted, McKesson's solutions for radiology assist customers in meeting today's challenges with new technology that is designed for easy deployment on multiple devices and in multiple locations, which contributes to a lower cost of ownership and a faster adoption of the technology. Our radiology solutions are created to suit various user needs, from a complex radiologist-reporting cockpit to clinical reference viewers and workflows. The solutions are optimized for network performance that may result in faster launch time and faster time to load the first image.

The McKesson Enterprise Image Clinical Reference Viewer, a zero-footprint, browser-agnostic viewer allows physicians to access reports and images from a variety of mobile devices. It provides a simplified and intuitive workflow available on a variety of desktops and mobile devices that will help reduce training, increase end user satisfaction, and enable fast adoption by referring physicians.

### **MedWeb (1949)**

MedWeb will showcase several solutions, including Medweb RIS/PACS, Medweb's Collage, and Medweb SmartConsult Telemedicine.

The Medweb RIS/PACS is a single database RIS/PACS solution with diagnostic tools,



TeraMedica's Evercore Univision EV, a zero-footprint, multimodality enterprise viewer supports a full spectrum of patient images and data.

reporting, storage, and direct HL7 messaging engine provides a complete and simple to use turnkey solution. The Medweb RIS makes it possible for you to complete patient registration, order, and scheduling. Medweb RIS/PACS includes a RIS/PACS single server/database solution, integrated 3D Web-based viewer, multimodality viewer, including digital mammography and echo cardiograms, advanced security and image routing, and patented medical image distribution with integrated tools in a Web browser.

Medweb's Collage, which simultaneously streams high-resolution data and video, such as medical images or ultrasound video in real-time to a fully integrated user interface over a single Internet connection. Medweb Collage allows users to share a viewer for clinical collaboration or training that is open on a case. Medweb Collage also enables users to stream data from a laptop or tablet computer to a single screen, high-definition system.

In addition, Medweb Collage fully integrates with the Medweb Hand-held Telemedicine Kit, an all-in-one set of digitally enabled peripheral devices in a small case about the size and weight of a laptop computer enabling mobile caregivers to conduct and document a full patient consult while maximizing portability.

Also on display is Medweb SmartConsult Telemedicine (store and forward) solution, an integrated medical imaging, information management, and security system with user-friendly

interfaces customized specifically for a variety of medical subspecialties, including radiology, orthopedics, dermatology, ophthalmology, wound care, stroke evaluation, dentistry, psychiatry and general exams. These all include workflow management/store and forward capabilities. Our solutions can be easily integrated with existing EMR, HIS and RIS systems, and meet U.S. standards for HIPAA compliance.

This Web-based telemedicine technology provides instant communication between doctors, specialists, and patients in remote locations, at clinics in urban areas, or within incarcerated populations. Having a number of installations throughout the military, Medweb's solutions are "battle tested" and are required to be stable, fast, reliable, secure, and flexible. The system works in suboptimal conditions, such as locations with intermittent power and communications.

### Merge Healthcare (5551)

Merge Healthcare will showcase a variety of solutions at HIMSS, including an advanced imaging network for HIE to help healthcare organizations meet MU stage 2 imaging requirements and interoperability needs.

Merge's iConnect Network and iConnect Access enable users to achieve interoperability with secure and electronic access and exchange of images and other patient information.

iConnect Network allows hospitals, providers and imaging centers to exchange imaging





Users on different devices may access the functionality in VitreaView by Vital Images through multiple systems, including the Web or via EHR portals.

information electronically with community physicians that are connected to HIEs or EHR networks, such as the Surescripts Clinical Network Services (CNS).

iConnect Access allows users to view images wherever and whenever needed without requiring a software download, provides access to patient images across your enterprise in support of Accountable Care Organization guidelines, limits risk of denied reimbursement for duplicate tests by delivering images at the point of care, and delivers images in real-time and avoids scheduling delays.

### ***Nuance Communications (3765)***

Nuance Communications will show its speech recognition tool, the next generation PowerScribe 360 platform, designed to enable a quality, data-driven approach to radiology reporting for radiology groups, hospitals, and healthcare systems. This version of the PowerScribe 360 platform is built on the same technology as Dragon Medical 12, includes the automated integration of DICOM Structured Report data, such as radiation dose, ultrasound measurements, and other important clinical information, which accelerates the delivery of a thorough report. In addition, new features are designed to make it easier for radiologists to

monitor and manage their workloads, and expand current mobile capabilities so that referring clinicians are able to review reports on-the-go.

### ***Philips Healthcare (7245)***

The featured solutions at the Philips Healthcare booth will include IntelliSpace PACS Anywhere, an image and report viewer based on Philips' IntelliSpace PACS 4.4. IntelliSpace PACS 4.4 is a unique image management solution that allows any physician in the hospital to access full fidelity images within 3 seconds. The IntelliSpace PACS Anywhere viewer is designed to support remote users, or users requiring a solution that can be utilized on multiple platforms, such as laptops and mobile devices. It does not require installation of additional software and therefore will be an easy-to-use solution that expands physician access to patient information, images and reports for communication and collaboration.

Philips will also show the IntelliVue Mobile Caregiver app designed to deliver near real-time data from Philips IntelliVue patient monitoring systems directly to the clinician's smart phone or tablet. With this mobile app, IntelliVue customers will be able to access patient monitoring information anywhere—in or out of the hospital,

allowing them to more quickly make informed decisions on patient care.

### ***Siemens Healthcare (3165)***

Siemens is showing its latest version of syngo.plaza (VB10), Siemens' agile picture archiving and communications system (PACS) and reading software, which provides tools to support users in achieving a fast, efficient reading workflow. The solution offers high-throughput reading with rapid image loading. Because syngo.plaza integrates seamlessly with Siemens' syngo.via 3D routine and advanced visualization software, users can tap into the potential of syngo — accessing its applications through a common interface. In addition, the modular, scalable design is now tuned to deployment in large, multihospital ACO's and for keeping costs down by using COTS IT building blocks while leaving room for future growth. (VB10 is not yet available in USA).

### ***TeraMedica (3843)***

TeraMedica introduces Evercore Univision EV, a zero-footprint, multi-modality enterprise viewer supporting a full spectrum of patient images and data, both DICOM and non-DICOM. Univision EV meets a wide range of clinical needs by providing a robust toolset. Through next generation integration with TeraMedica's Evercore VNA, a comprehensive patient view is delivered using a browser-based, scalable solution supporting all devices in the enterprise, including iOS and Android mobile devices.

### ***TeraRecon (1683)***

TeraRecon will unveil iNteract+ at HIMSS, a new breed of image viewer called "Ingeniously Informed." iNteract+ combines standards-based HIE protocols and imaging interoperability technologies to deliver a more efficient clinical experience. Universal viewing solutions incorporate the associated clinical content automatically and interactively. The image sharing solutions include

a comprehensive physician portal and powerful medical image viewer. The iNteract+ solutions include iNteract+ iEMV, which provides a complete solution for DICOM, non-DICOM and non-radiology image viewing with powerful clinical content management. iNteract+ iReview provides a complete diagnostic radiology review environment that enhances clinical context, and iNteract+ iShare provides a complete physician sharing portal with clinical content sharing and physician referral workflow. Ingeniously Informed Imaging is achieved via combined application of IHE, HL7, and DICOM.

### ***Vital Images (1677)***

Vital Images will feature VitreaView, a software-only platform that is a zero download, zero footprint, browser and operating system independent solution. VitreaView helps physicians view images (DICOM and non-DICOM) from disparate databases across the enterprise. In addition, VitreaView provides physicians with easy-to-use, Web-based access to role-specific, patient-centric views of imaging history. VitreaView is designed for flexible deployment and leverages industry standards. It is also scalable, fault tolerant, and can be fully virtualized. Users on different devices may access the functionality in VitreaView through multiple systems, including the Web or via EMR, EHR or portals.

### ***Viztek (4388)***

Viztek will be showcasing a new, completely web-based EHR. The Viztek EHR will have no requirements for client-based software, while maintaining full, advanced viewing features. Compatible with any operating system, the platform offers the benefit of integrating all software modules from Viztek, and can also work with any vendors' applications and offer supplementary components such as: EHR, EMR, Billing, PACS, specialty viewers and tools, including mammography, tomosynthesis and PET/CT, practice management, radiology scheduling and reporting.