Web-Based Cardiovascular Interpretation – Anywhere, Anytime

Great technological advancements broaden the spectrum of the possible.

They change people's lives.

The Digisonics system is one such evolution – its remote reading capability simultaneously improves the quality of physicians' professional care *and* the quality of their personal lives. 47-year old Dr. Theodore Richard Lieux of Baton Rouge, Louisiana is one person who has experienced the benefits of Digisonics remote reading feature. He's an internist with an independent multispecialty group of 87 doctors, and he reads cardiology studies for the group. Dr. Lieux is married, he and his wife have four children ranging in age from 8 to 16 years, and it isn't always easy for him to balance competing family and professional responsibilities. On Friday afternoons, Dr. Lieux tries to break free of the clinic and devote himself to his children's activities. Unfortunately, it's very common for someone to come into the clinic that afternoon complaining of chest pain. The clinic administers a treadmill stress echo test and notifies Dr. Lieux, who might be watching a child's sporting event or theatrical performance. "I've always wondered why so many people get sick on Friday afternoons," he laments, but instead of admitting the patient or rushing back to the clinic, as he would have had to do in the past, Dr. Lieux finds a quiet spot and uses his laptop and cell phone combination to remotely log into the Digisonics system, read the test, write and proof a report, and pass it to the primary care physician. "Usually, I can get the results back to the clinic in ten or twenty minutes, which is about as fast as I'd be able to do it if I were actually in the clinic. If it's negative, we're 90% certain it's not a heart attack and that person doesn't need to be admitted. It keeps people out of the hospital, and that keeps costs down."

Professional responsibility covered, Dr. Lieux returns his attention to his child's event. The number of cardiology studies he reads varies greatly; backlogs sometimes accumulate. The Digisonics system allows him to leave his office at the end of a normal working day and spend time with his wife and children he wouldn't otherwise be able to enjoy. He gets up early and clears his backlog reading from home before his family wakes. Digisonics' remote reading capability has freed his family to travel. He's used the system to read studies from Yosemite National Park, Boston, Washington, DC, and Baltimore. He simply signs in remotely – with cell phone service or from a coffee shop, hotel room, or friend's house with high speed Internet access – reads the required studies, makes his reports, and passes the results to his fellow doctors in Louisiana. It's fast, efficient, and accurate, and "it improves the quality of my personal life and the quality of my patient care. Really, there is no compromise."

Incidentally, none of Digisonics' competitors deliver the full benefit of remote reading. Competitive systems require downloading the full study prior to reading –

impossibly slow if you're at a soccer game, and an annoying delay many hurried cardiologists won't weather regardless of the circumstances. Digisonics provides streaming image review; physicians can begin reading over the Internet as soon as they click a study, and all Digisonics features function remotely – analysis, electronic signatures, and instant distribution to all concerned parties.

Dr. George Rizk, a 52-year old cardiologist with a private practice in Prescott, Arizona, concurs with Dr. Lieux's assessment of the benefits of remote reading. On average, he reads ten studies a day. He tries to get through them before leaving his office, a task he isn't always able to accomplish. Without the Digisonics remote reading capability, he'd have to sacrifice family time and finish at the office. Now, he goes home at a reasonable hour, spends evenings with his wife and children, and catches up with his reading in his home office after the children are in bed.

Previous systems made it nearly impossible for him to take long vacations. Being absent for a week paralyzed his practice. "I have a busy schedule for studies and stress tests, and I just couldn't do them when I was away. The old system of FedEx videotape delivery and telephone dictation or cassettes and Dictaphones was a nightmare.

Now, I just sign in from wherever I am and do my reading. It's easy, it's fast, and it's less error prone. If a physician needs a study read while I'm out of town, I'm able to provide him with instantly responsive care."

Even more amazing are a pair of anecdotes from Dr. Kalyana Sundaram, of Cedar Valley Medical Specialists in Waterloo, Iowa, and Dr. Cem Nasuhoglu, one of the leading pediatric cardiologists in West Texas. Dr. Sundaram was in India recently and he kept up with his patient load from the other side of the world. Reading remotely via the Internet, he read and reported on more than 100 studies every day. Dr. Nasuhoglu's pediatric cardiology practice serves three hospitals and he loves the flexibility Digisonics adds to his life. Last summer, he was reading studies on a three week vacation with his wife and four children in the mountains of Turkey above the Mediterranean coast.

The bottom line is simple: easy, fast, flexible access to information improves patient care, it improves the quality of physicians' lives, and Digisonics delivers those benefits better than anybody else in the industry. "Remote reading is a blessing that helps patients and physicians," Dr. Rizk laughs, "but the person who loves it most is my wife."

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About Digisonics, Inc.

Digisonics has set the standard for image management and reporting software for more than 40 years – with the first review station, the first fully functional web-based system and the most configurable multi-modality reporting.

Rated Best in KLAS for Cardiology in 2008, 2009, 2010 , 2011 and 2012, Digisonics systems combine high-performance image analysis, professional reporting and a comprehensive clinical database. With a powerful PACS image archive, exceptional remote connectivity and a comprehensive suite of links to other systems, Digisonics provides the top choice for a full cardiovascular workflow solution.

OB/GYN Image Management & Structured Reporting

"It saves time and helps me do more. I have more time for patients, and that improves my care."

- Dr. Sayed El-Azeem

*O*bstetrics and gynecology is the most personal medical specialty. A family's hopes for their future lives are inextricably tied to their reproductive health. Pregnant women make significant sacrifices to improve their chances of delivering a healthy baby. Obstetricians and gynecologists are a crucial component of the process, their most fundamental job being to raise the probability that their patients will complete successful pregnancies.

One of the most powerful tools available to obstetricians and gynecologists is Digisonics OB-Windows/OB-View clinical reporting and image management system. Easily customizable to suit individual needs, it helps physicians and departments manage ultrasound images and data, determine accurate due dates, monitor fetal growth, generate clinical reports and consultation letters, and handle the administrative details of billing and prescriptions. Acting as a nexus of workflow control, Digisonics OB-Windows/OB-View greatly improves the efficiency of obstetrics and gynecology practices, helping them to increase their caseload while simultaneously improving the quality of their patient care.

In single-handed private practice at Mahoning Valley High Risk Obstetrics in Ohio, Dr. Sayed El-Azeem handles about 20 cases a day. He's been using Digisonics for 13 years, and he considers it indispensable. "Digisonics eliminates steps and improves productivity. It saves time and helps me do more. I have more time for patients, and that improves my care."

Another longstanding customer is Virginia's Carilion Clinic, where Donna Ingram is the ultrasound supervisor of four different obstetrics sites, two of which utilize the Digisonics software. She collaborates with a dozen obstetricians and gynecologists, 20 radiologists, and about 15 residents, and what she considers a key benefit of the Digisonics solution is the auto-population of ultrasound data, which saves tremendous time and labor and helps to eliminate human error. Prior to implementing Digisonics, nurses, techs, or physicians manually entered ultrasound data, and physicians used that data to manipulate growth wheels to determine due dates and monitor fetus development. Using Digisonics eliminated both nodes of human error. "Plus," she stressed, "my physicians love the consistent and standardized reports."

In Jacksonville, Florida, Dr. Francisco Gaudier is responsible for one of the busiest high-risk obstetrics practices in the United States. In 2009, his clinics administered more than 25,000 ultrasounds and generated a like number of associated reports, requiring a colossal amount of data and storage, all of

it handled by Digisonics. His practice doesn't see primary patients, only referrals, and they're complex cases. Through the years, he's created dozens of macros tailored to his specific needs. "The main reason we bought it was its customizability, what we could add to it based on our own needs," Dr. Gaudier explained. At the core of his Digisonics customization are the macros he's created for detailed, comprehensive consultation letters and the templates he's made for the various conditions his practice commonly sees – cardiac conditions, babies with developmental deficiencies, birth defects, etc. – all have standardized templates with specific treatment information, which saves tremendous amounts of time for his referring physicians. He raves about the quality of the consultation letters he's able to create with Digisonics. They're detailed and involved perfectly serving his needs, the needs of his patients, and their referring physicians. Very few things at his practice are dictated anymore, it taking just seconds to enter information directly into Digisonics, and he turns most cases around in a single day. Before, with dictation and transcription, it typically took more than a week (he no longer employs a full-time transcriber). "Digisonics is integral to my practice," he said.

Digisonics is an old-hand in the obstetrics and gynecology industry, with more than 400 systems installed worldwide, real systems operating in the real world, solving real problems. From an information technology perspective, having only one system to maintain in a practice is a huge boon, particularly given Digisonics commitment to top-quality technical support. Ms. Ingram, Dr. El-Azeem and Dr. Gaudier laud the quality of Digisonics customer relations, citing it as a major reason they've all stayed with the company for more than a decade. "Bottom line: they stand behind their product with good service and excellent technical support," Dr. El-Azeem explained, "They talk to you in person, like a person."

Dr. Gaudier doesn't think any other OB system offers the same range of benefits. Digisonics President and Chief Executive Officer Diana McSherry agreed, saying, "Yes, we're often a bit more expensive, but as a total package, we work hard to be the very best. Many customers come to us having already been burned buying cheaper systems. We'd like to help them get it right the first time." She smiled.

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The OB-View Image Management and Reporting System combines high-performance image analysis, PACS image archive, integrated clinical database, comprehensive fetal growth analysis and automated growth curves, and professional, concise reporting into one complete system. An additional OBLink interface provides autopopulatation of reports with patient demographics and measurements, saving data entry time and eliminating entry errors. Users will also have fully functional web-based access to their OB/GYN studies for image review and report editing via OB-View Net.

Pella Regional Health Center: Structured Reporting for Radiology


Alison Smith, DO

Ian Moore, IT Support Manager

DIGISONICS

Mastering the art of interpretation

Structured reporting is the standardization of the language and organization of patient reports. Implementing a structured reporting system enables facilities to dramatically improve the accuracy and clarity of their reports as well as overall report turnaround times. Of all the hospital departments, radiology has had the hardest time embracing structured reporting, one of the great advances of medicine's digital revolution. Although in fairness, radiology departments aren't wholly to blame—until recently, the awkward workflows of existing structured reporting systems overcomplicated radiologists' lives and the systems couldn't comprehensively manage the wide array of study types radiology routinely demands. Fortunately, that has changed. Digisonics, a Houston-based company that has provided cutting-edge image management and structured reporting solutions for 40 years, has delivered their DigiView Structured Reporting System for Radiology, an easy to use, comprehensive system that brings the full benefits of structured reporting to all radiology study types.

Among the first radiology departments to adopt Digisonics DigiView Structured Reporting System was the one at Pella Regional Health Center in Pella, Iowa. Doctors Lee Henry and Alison Smith lead the department. Pella is a rural hospital committed to providing top-quality care. Determined to deliver on that commitment, they strive to keep their department on the leading edge of technological innovation, and more than a year ago, the two doctors decided to digitally automate and standardize their workflow. Working with Ian Moore, Pella's IT Support Manager, they examined the alternatives and opted for Digisonics.
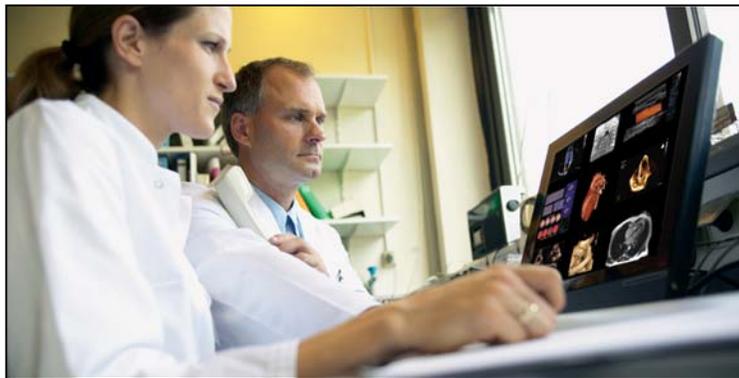
Doctor Smith has been using Digisonics DigiView Structured Reporting System for Radiology ever since, and she's delighted with the benefits that have accrued to her department. "This is a really sophisticated system, and Digisonics has driven improvement through our entire department," she explained. "It allows Dr. Henry and me to better manage the quality of our department output, and it improved the work of all of our sonographers. With Digisonics, our product is more consistent and of higher quality."

Among its many features, the Digisonics autopopulates biometry data that technicians formerly entered by hand, which completely eliminates one source of human input error and takes far less time. "Because the sonographers aren't entering data, it allows extra time to describe what they saw, and that has contributed to their learning on a case by case basis," explained Doctor Smith. "It has forced them to discuss topics to become consistent and standardize the quality of the reports they are responsible for.

"With Digisonics, we now have confidence that every report leaving our department looks the same in respect to high quality, and two radiologists putting out similar reports is a plus for our referring physicians. They don't have to get used to each of us doing things differently."

Doctor Smith appreciates the McKesson PACS integration with Digisonics, which "removed another node of human input error we used to have with sonographers," and the speed at which medical information flows. "The instant we digitally sign a Digisonics report, it automatically distributes to the patient's medical

record as well as the referring physician. Our turnaround time is usually within the same day. Often, our referring physicians get a professional report in just an hour or two, sometimes within minutes. I love that."

According to Doctor Smith, some radiology departments might be reluctant to adopt structured reporting because of the inherent difficulty of adapting to change, but her department experienced no major problems switching to the DigiView Structured Reporting System. "Our department adapted well," she said. "It took a couple of months to complete the transition, working on the front end to build up our macros, templates, and dictionaries, but after that, we were off to the races. Everyone is really comfortable with it now, and it has definitely raised the quality of our care."

Pella's IT Support Manager, Ian Moore, also thought the switch to Digisonics went smoothly. "Any 'go-live' has issues," he noted, "but they have above average customer service. When we needed it, we had three heads of department dialed into our system giving us instant feedback. Plus, they're good about releasing patches and moving the system forward.

"The big thing about Digisonics from my perspective is that they're an all-in-one solution," he said. "Digisonics is the first fully integrated system that includes cardiac, vascular, OB/GYN and general ultrasound. Nothing is left out. Digisonics integrates with our PACS, it's easy to use, with minimal clicks, a streamlined workflow, and best of all, with Digisonics, human input error goes out the window."

Doctor Smith agrees with Moore's thoughts about the importance of integration. "We wanted integration, and Digisonics provided it. Digisonics works well with McKesson without any extra manipulation. I access patient records and studies with just one click," she said.

Expounding on the benefits, IT Support Manager Ian Moore pointed out the "stored data element of structured reporting that's another big advantage. With Digisonics, all our studies and reports go into a database. You can query the database which is a big help with meaningful use regulations and helps us with our insurers, who know where to find everything we're doing. It's an institutional memory, and it's very powerful."

Pella Regional Health Center uses Digisonics remote capabilities to conduct ultrasound exams at a satellite clinic in Ottumwa, Iowa, about an hour away from the hospital. Moore coordinated the extension of services, and he's impressed with Digisonics remote performance. "As far as I can tell, there is absolutely no difference whatsoever between our onsite and offsite capabilities. They're exactly the same in Ottumwa as they are here in the hospital, and as a business, those remote capabilities allows us to expand our services easily should other opportunities arise. Nobody else can do that like Digisonics.

"For medicine, this stuff is a paradigm shift, it's in process right now, and I find it all pretty exciting," he concluded.

Looking back on the last year, Doctor Alison Smith has been very pleased with the impact the Digisonics radiology package has made on her department. "Structured reporting is about quality control, and it's the wave of the future, a vast improvement for the entire profession," she said, summing up her feelings. "Even though we're a rural hospital here at Pella, we have high intentions for our patients, and with Digisonics, I'd like to think we're on par with anybody in the country."

About Digisonics, Inc.

Digisonics provides top-rated clinical image management and structured reporting systems for cardiovascular (CVIS), radiology, and obstetrics & gynecology. Digisonics structured reporting solutions combine high performance image review workstations, a powerful PACS image archive, an integrated clinical database, comprehensive analysis capabilities and highly configurable reporting for multiple modalities. Key applications are complemented with interfaces to information systems and 3rd party vendors, providing facilities with a seamless, efficient clinical workflow.