

## Customer Success Story Sound Choices LLC

### Problem

Sound Choices, a radiology service provider, was seeking a cost-effective collaboration process between consulting physicians to improve patient care.

### Solution

Sound Choices developed a process using the Mangomind Internet File Sharing Service that enables rapid, secure collaboration between consulting physicians. As a result, they are able to reduce the time it takes obstetricians to deliver diagnoses to patients from days to hours.

### About Sound Choices

Sound Choices LLC has been providing ultrasound services in the Houston area since 1997. Registered ultrasound technologists perform a myriad of diagnostic exams on state-of-the-art equipment in both outpatient imaging centers and obstetrical offices. All reports are interpreted by board-certified radiologists with ultrasound expertise.

## Sound Choices Uses the Mangomind<sup>SM</sup> Internet File Sharing Service to Improve Patient Care

*Mangomind enables secure collaboration on patient ultrasound images between radiologists and consulting physicians; reduces patient diagnosis time from days to hours.*

Sound Choices was seeking a cost-effective collaboration process between consulting physicians on ultrasound images and reports that would speed the time in which it took to perform the ultrasound and provide a report back to the primary care physician.

The typical collaboration process consisted of the following steps:

- (1) ultrasound imaging
- (2) transportation of image data to central printer
- (3) transportation of films to interpreting radiologist
- (4) dictation, report review and signing
- (5) transmission of reports to referring physicians

The entire manual process is slow and can take up to 5 days to complete the cycle and provide the pertinent medical information back to the obstetrician.

### Mangomind Improves Efficiency of Physician Collaboration and Patient Diagnoses

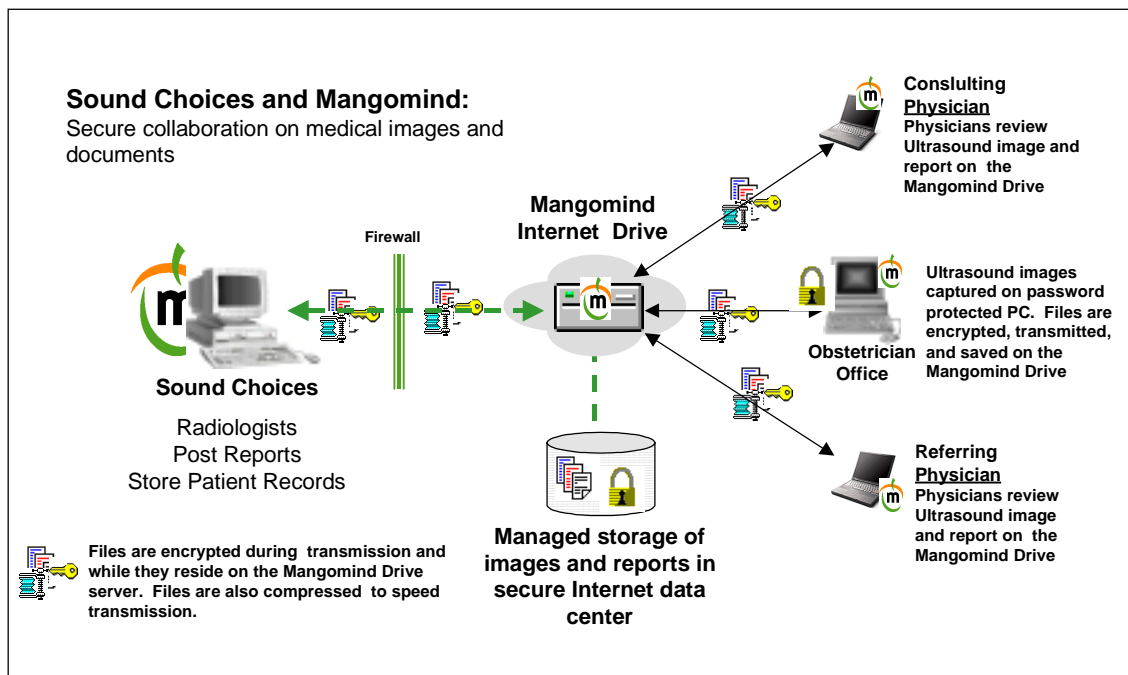
Using electronic imaging and a collaborative process based on Mangosoft's Mangomind Internet File Sharing Service, Dr. Randall A. Stenoien M.D., medical director of Sound Choices, has reduced the process time in delivering patient information to as little as 90 minutes. When necessary, Dr. Stenoien also uses Mangomind to post MPEG video of the ultrasound to provide near real-time evaluation from remote interpreting radiologists. The video enables near real-time feedback to the scanning technologist requesting additional views, as well as improves diagnostic capabilities when characterizing abnormalities (for example, a fetal cardiac anomaly). This process can also prevent the need for patients to return for additional imaging.

***“Our participating radiologists and doctors are very pleased with the Mangomind-based solution to help speed the turnaround on medical diagnoses and improve record keeping for medical information. It dramatically streamlines the entire process, and allows our customers to provide better care for their patients,” said Dr. Stenoien.***

### The Streamlined Process

Dr. Stenoien has installed PCs configured with a Mangomind Drive and a video capture system to directly transfer an Ultrasound image to the PC at each obstetrician's site. A typical ultrasound study consists of approximately 24 image captures, each approximately 300K in size and saved as a JPG. The total folder size with all of the JPG image files is typically over 2 MB.

Once the ultrasound images are captured, they are saved on the Mangomind Drive. The radiologist can quickly access the images from the Mangomind Drive, review, contact the obstetrician with his interpretation, and post a written report on the Mangomind Drive. If a second opinion is required, that physician also can access the Mangomind Drive to review the files online and speed their evaluation and comments. A secure messaging feature allows doctors to send an alert to participating doctors when new images are posted on the Mangomind Drive.



### More efficient alternative to email

Typically, it is inefficient to transfer electronic files in excess of 1 MB via email file attachment, because either the email client application won't accept a file that large, or the transfer will be time-consuming, or even crash the email system totally. Also, there is the risk of a virus when dealing with email attachments. Mangomind provides a secure, centralized storage where files can be accessed by participating physicians. Mangomind's file compression technology speeds the file transfer process and is not restricted by file size, so that even large image files can be efficiently transferred between remote individuals.

### State-of-the-art security ensures patient confidentiality

Unlike email, Mangomind provides the security required for confidential patient information to be securely transmitted and stored. Mangomind provides 128-bit encryption on the file during transmission as well as while it is stored on the Mangomind server. Mangomind also provides user authentication plus Windows NT access permissions on files and folders. Dr. Stenoien further places access permissions on the PCs housing the Mangomind Drive in order to prevent unauthorized access to the PC and provide an additional level of security. Additionally, software firewalls prevent unauthorized access via the Web.

### **Centralized Patient Records**

Sound Choices technicians and participating radiologists and physicians also use Mangomind to post reports and centralize a complete record trail for each patient. For archival purposes, all supporting patient records and images are temporarily saved centrally in a secure folder on the Mangomind Drive, simplifying retrieval and patient record audits. Mangomind also provides backup and retrieval services as well, to ensure records are never lost in case of problems.

Because Mangomind is Windows-based, technicians can easily write their reports and documentation in familiar Microsoft Office applications. Users of the Sound Choices' Mangomind Drive find it to be fast and very easy to use. None of the participants required special training to use Mangomind.

### **Mangomind Expansion**

Dr. Stenoien expects to expand usage of the Mangomind service to more sites and services, and expects to receive broad acceptance of the electronic process to speed and improve patient care.

***"We believe there is great potential for the Mangomind service to be used by physicians in remote locations around the globe to share medical data. Mangomind's PC to Server encryption/security meets the medical requirements for patient confidentiality", said Dr. Stenoien. "I will be working in Panama in the near future to establish a radiological telemedicine facility and I intend to employ Mangomind in concert with satellite Internet access."***

© Mangosoft Inc. 2005. All rights reserved.

*Mangomind and the Business Internet File Service are servicemarks, and Mangosoft is a trademark of Mangosoft Inc.*