

Utilizing DICOM Structured Reports with PowerScribe 360

Utilizing the detailed measurement information contained in a DICOM Structured Report (SR) is an effective way to reduce data entry errors and streamline reporting workflows for dictation applications. In particular, Corepoint Integration Engine can extract the structured measurement data from DICOM SR and feed PowerScribe 360 with an HL7 V2 order message to automate the population of these measurements in a dictated report.

In a typical radiology environment, the dictation application receives information about an exam via HL7 v2 demographic and order messages that originate from a RIS. This data is normally limited to items that are known before the exam is performed such as patient information, the procedure code/description, and the reason for the exam.

Certain radiology studies such as pregnancy and carotid ultrasound exams require many detailed measurements to be included in the text of the report. Typically, these measurements must be manually entered into the dictation application, which slows the reporting workflow and introduces the potential for error.

Through the use of templates and custom fields in the dictation application, the radiologist's workflow can be streamlined, but these features alone do not

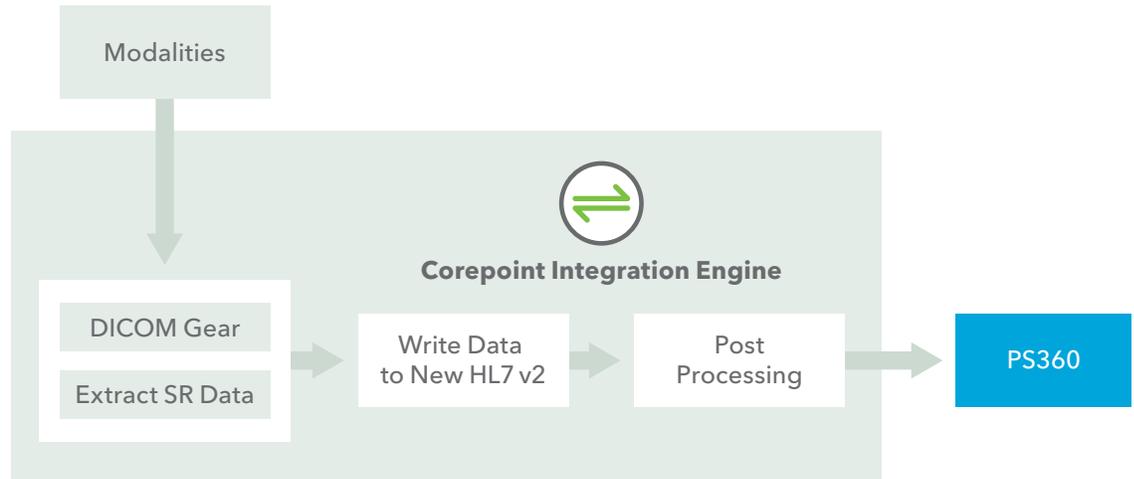
eliminate the need for manual entry of the detailed measurements. Using only standard HL7 order interfaces, the measurement data is simply not available to be fed into the dictation application's templates and custom fields. This is where the DICOM structured report (SR) message comes into play.

Some imaging modality equipment can send a DICOM SR that, among other data, contains patient and general exam information as well as the detailed measurements that were acquired during the exam. The challenge then becomes receiving the DICOM SR, transforming the desired information into an HL7 v2 order message and delivering the order message to the dictation application.

Corepoint Integration Engine, through its DICOM functionality, solves this problem. Corepoint Integration Engine allows for parsing the DICOM SR data and making it available for use while populating an HL7 V2 order message. This HL7 V2 order message, when used in conjunction with the dictation application's templates and custom fields, automates the entry of detailed measurements into the report.

“Structured reporting and data-driven workflows—especially in RIS/HIS systems—are clearly the future of health-care. Unfortunately, most vendors have to be dragged into it kicking and screaming. Corepoint empowers us by making us less reliant on those vendors.”

SCOTT ADAIR | North State Radiology



Real-world scenarios

Using Corepoint Integration Engine’s DICOM Gear to receive DICOM SR messages, Scott Adair at **North State Radiology** developed logic to parse the structured report and create an HL7 v2 order message that is sent to PowerScribe 360, which is illustrated above.

The OBX segments in the HL7 order message are interpreted by PowerScribe 360 as custom fields, which allow for automatic population of dictated measurement data. Configurable duplicate measurement validation and unit conversion are a key part of this action list and a major reason why other SR parsers were not pursued.

Radiology Consultants of Iowa (RCI) learned of the workflow developed at North State Radiology and was able to utilize the same SR parsing action list in their environment. Because RCI had already established their own Powerscribe 360 custom fields, a post-processing action list was required to perform conversions on the custom fields that are dynamically produced from the SR. RCI’s post-processing logic also performs some custom unit conversions and duplicate measurement handling before sending the message to PowerScribe 360.

“The power of PS360 isn’t voice recognition, it’s structured reporting. The problem is getting the data necessary for that structured report into the systems that need it. Corepoint sits at the communications crossroads for all of our systems, so we often find ourselves ‘Corepoint patching’—using it to fix the shortcomings in workflow and applications.

“When we found other DICOM SR mining applications to be lacking in customization and control, we turned to Corepoint to develop our own solution. My only regret is that Corepoint has become a buzzword for our radiologists whenever they want something.”

SCOTT ADAIR | North State Radiology

“This is what really makes Corepoint stand out from other products. I haven’t seen one that allows for custom-built intelligence. What we were able to do using action list logic to remove duplicate measurements is huge. The other products just spit out the measurements and they are all cluttering the report. The action list processing allowed us to include only the pertinent measurements. Very cool.”

JEFF AHRENDSEN | Radiology Consultants of Iowa