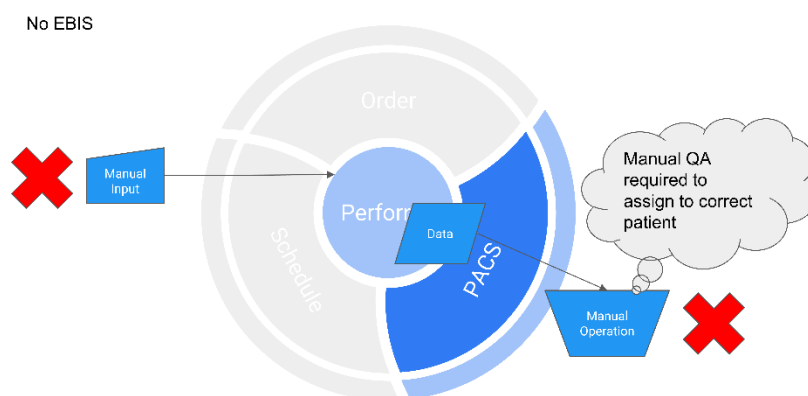In the age of digital information in medicine, it is of paramount importance to ensure proper linking of medical tests performed from various sources and assign them to the correct patient medical records. Failure to comply with digital workflow procedures impairs the ability to retrieve information when necessary. This may lead to repetition of procedures and waste of expensive computing and human resources.

The process can be roughly divided into two stages: the stage of acquisition of the instrument itself during the execution of the medical procedures, acquisition of measurements and images, and the stage of storing and processing the data in the information systems.

Intelligent selection of appropriate standards enables better and successful integration.

Two common workflows are considered, Scheduled Workflow (SWF) and Encounter Based Workflow (EBIW). The selection between them depends on the performed medical examination type, the organization work processes and the IT infrastructure available to the organization.
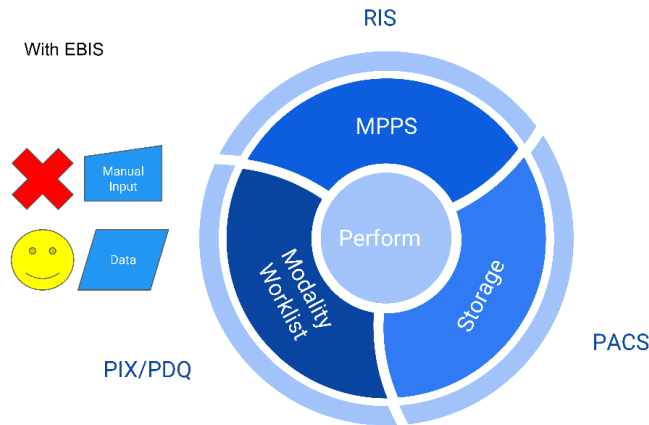
SWF is common and well established while EBIW still present major difficulties.
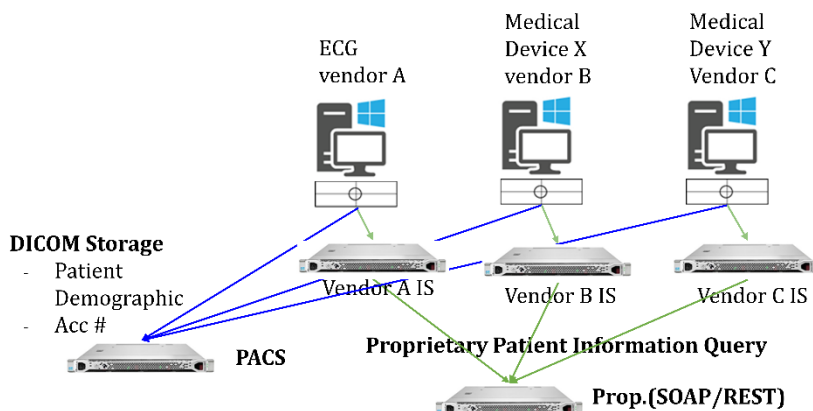
The Problem

EBIW (AKA "order-less", "Point-Of-Care Imaging") represents many of the diagnostic procedures, a medical device generates and stores information in the PACS, but the process does not have a pre-created order and schedule from the RIS. The result is that the device cannot use the Modality Worklist service. The following figure demonstrates the integration gap between medical devices and the standards supported by the Medical Devices and by the hospital information system.
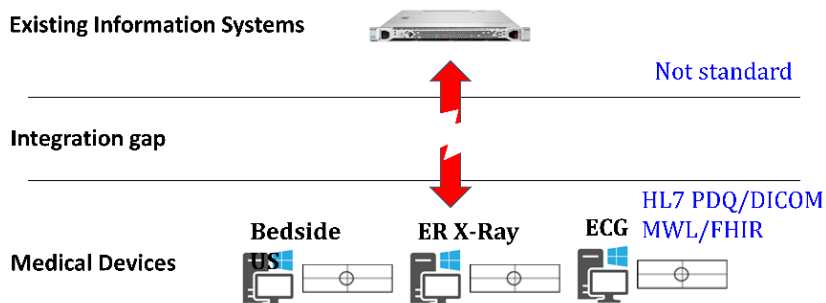
Proliferation of vendor specific IS

Many times this gap is closed by adding vendor specific information systems for interfacing with the Master Patient Index (EMPI or PIX) and for providing access to the results. This leads to unnecessary proliferation of information systems and their related costs.

Yet another issue that every one of these systems are asked to overcome is the lack of mandatory data attributes, (e.g. accession number) due to the lack of a real order and schedule transactions. As a result, every vendor has to undergo site specific expensive integration phase.
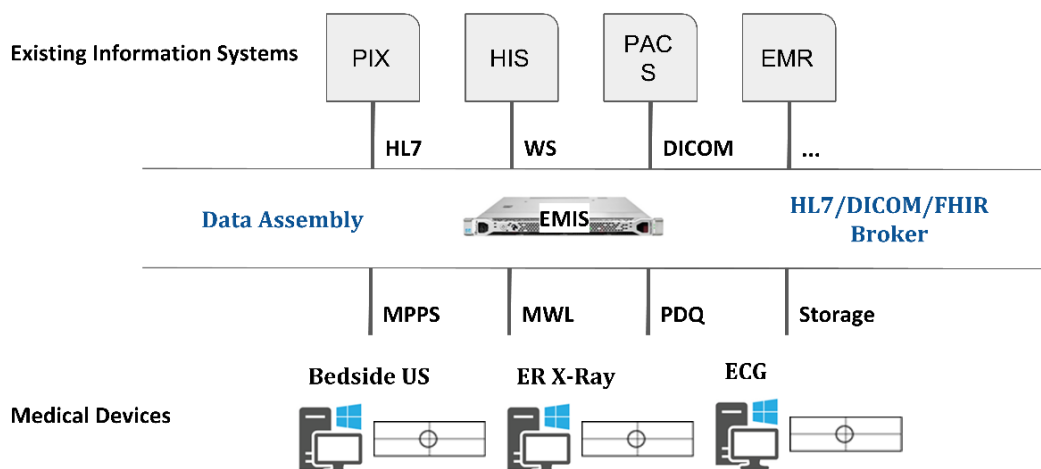
Not to mention the overhead on PACS admins that are constantly chasing lost data and and stitching it in using manual procedures.

The problems are:

- Images are not available to the medical care team,
- Repetition of procedures,
- Endless and every increasing QA and PACS Admin efforts,
- Siloization of imaging data, results and PHI

The Solution: EMIS

Encounter Management Information System (EMIS) provides all the information services to the medical device and the performing physician during the encounter. The system is integrated with the enterprise and department information systems (i.e. EMR, PIX, RIS, HIS), orchestrating the process and makes sure that no data is lost and that the encounter is properly managed. At the end of the encounter the EMIS verifies that all the results are reported, stored and available for further processing and that the encounter is fully documented.

Realizing an EMIS

H.R.Z. offers EMIS solutions based on our products for healthcare integration HL7Kit 2018 on the server side and MODALIZER products family on the device itself and with specific integration through our professional services into the customer's information system.

EMIS ROI

- Ensure correct filing of encounter based imaging results,
- Minimize patient misidentification,
- Reduce Q/A efforts,
- Shorten new medical device technology deployment times,
- Reduce integration costs.

For additional information contact us: sales@roniza.com

About H.R.Z.

H.R.Z. Software services LTD develops innovative Medical Imaging and Healthcare IT software solutions. H.R.Z. DICOM® and HL7® solutions shortens development and deployment cycles resulting in significant saving.
We offer validated, documented, field tested, proven technology for Medical Device Manufacturers, Hospitals and Medical Imaging Clinics.
Our products are installed worldwide both as OEM and as end product solutions.

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