ImagEDC – an open source, web services based EDC tool for imaging trials

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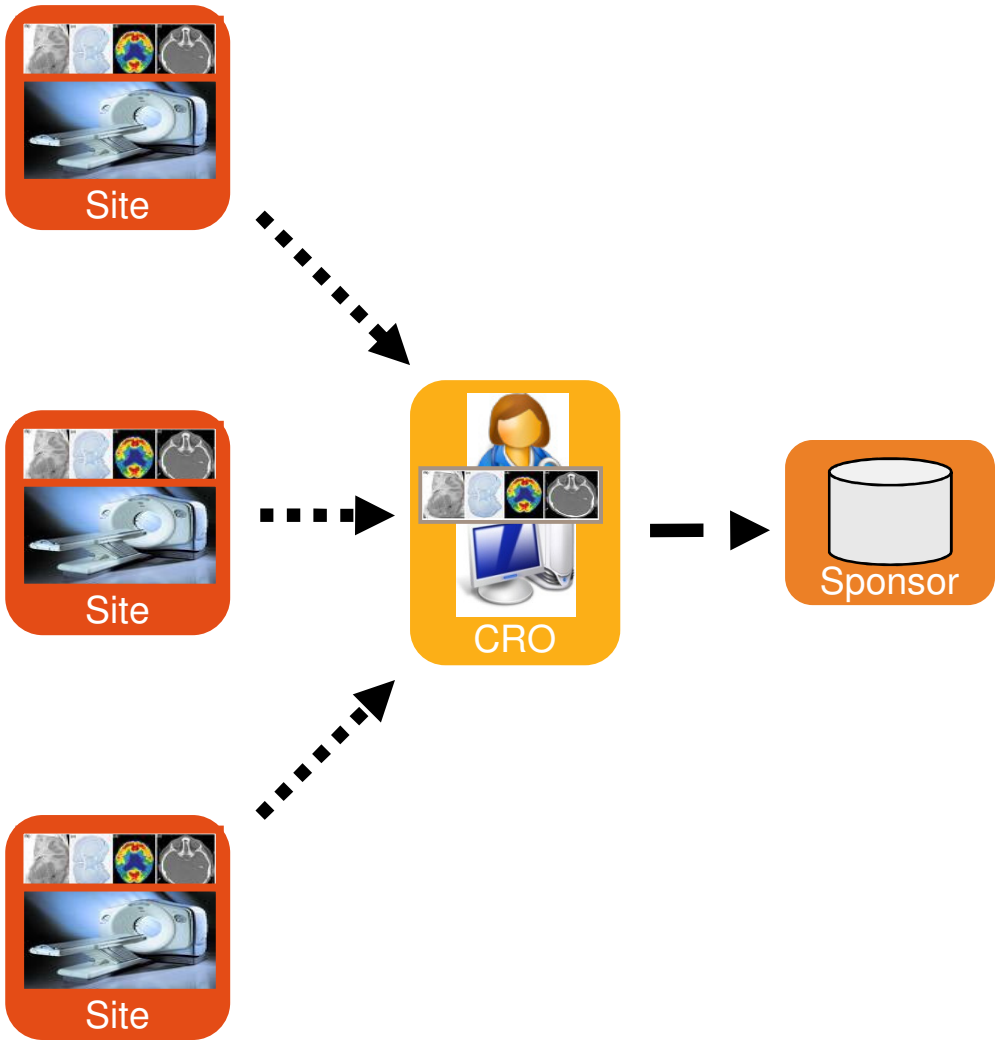
What is ImagEDC?

- An open source reference implementation of an electronic data capture tool and a web services model for image exchange in clinical trials.

What does that mean?

- Business landscape
- Vision
- Action and outcome

Imaging trial process



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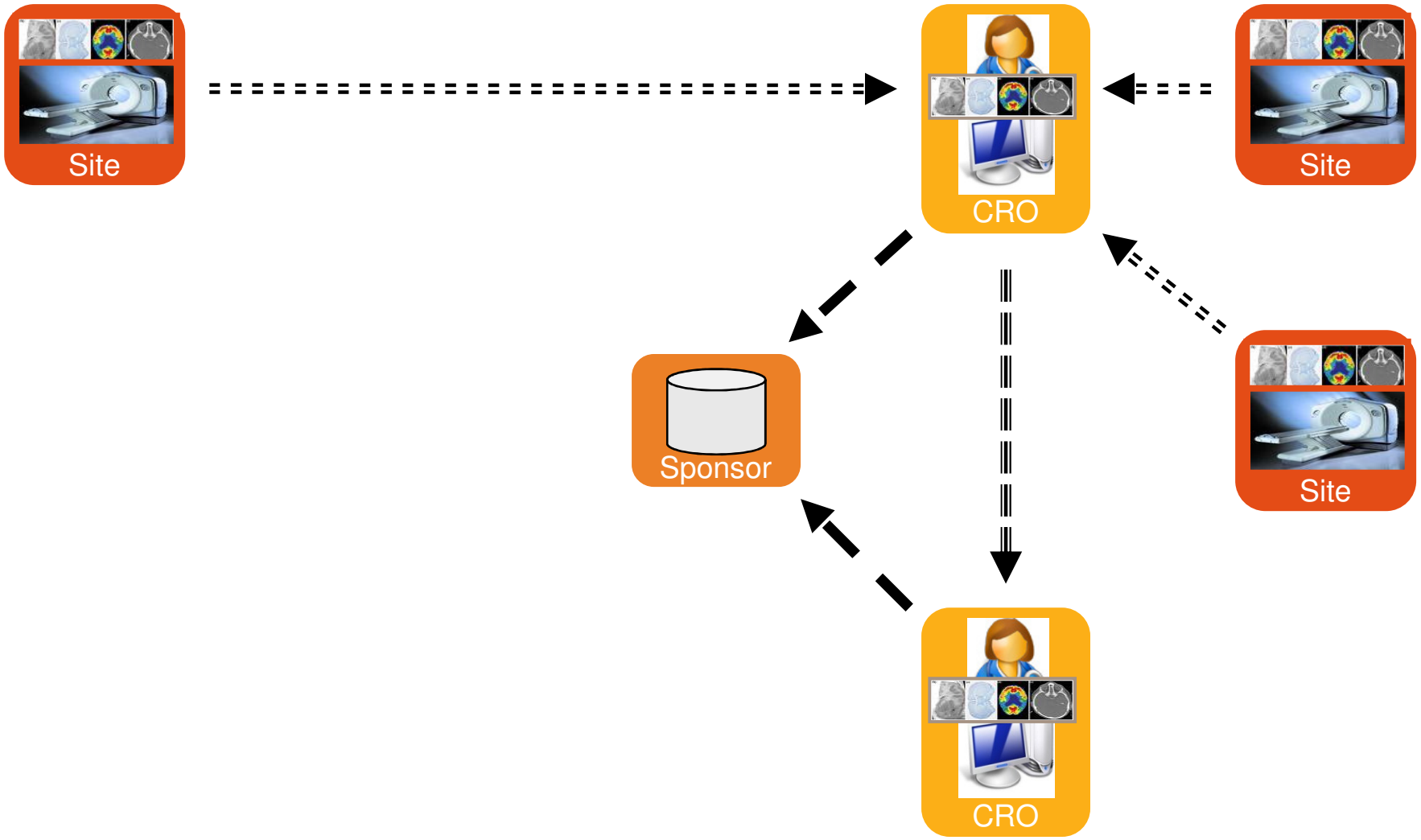
Another one



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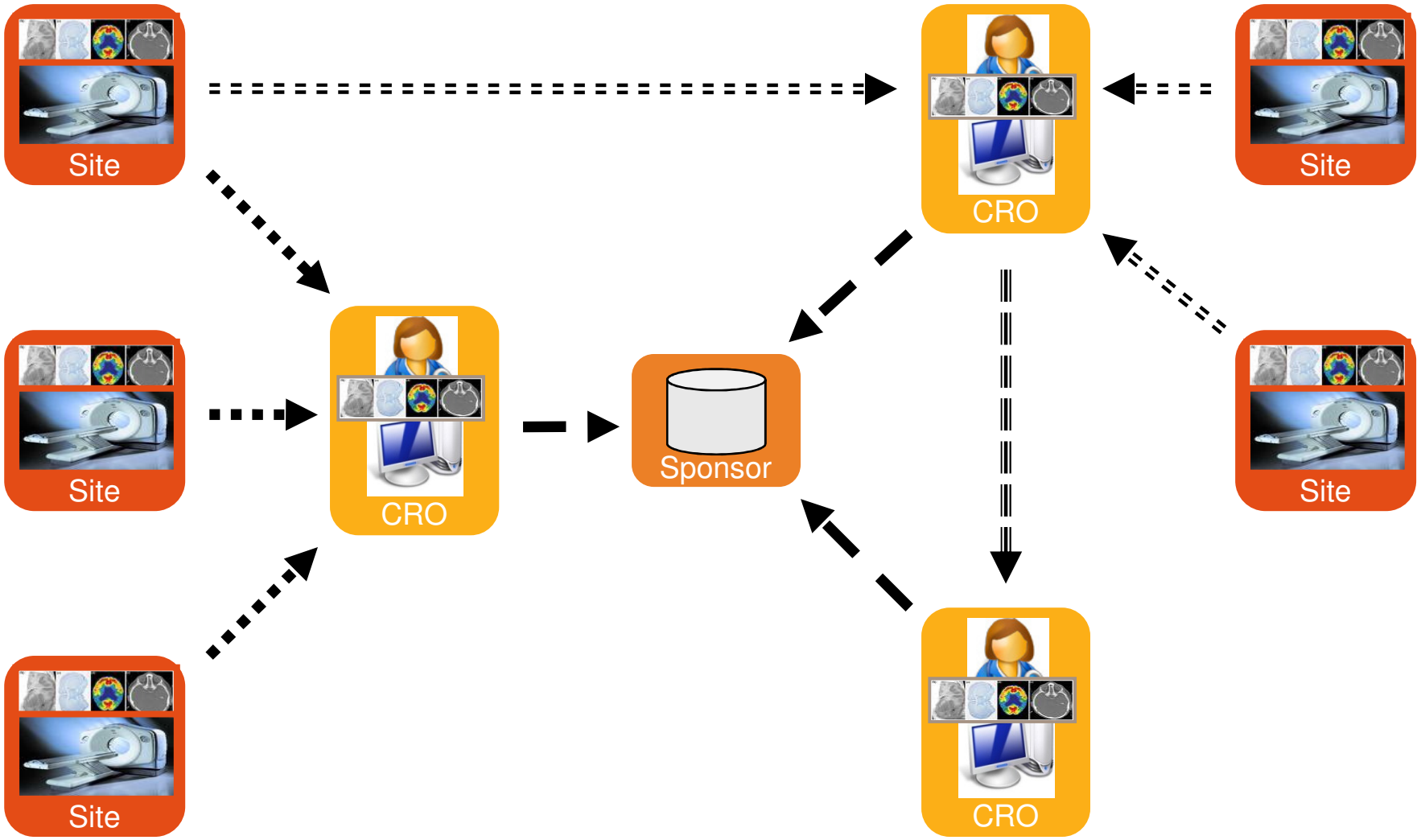
All together



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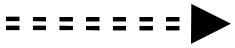
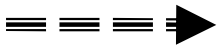
Transfer mechanism

Courier

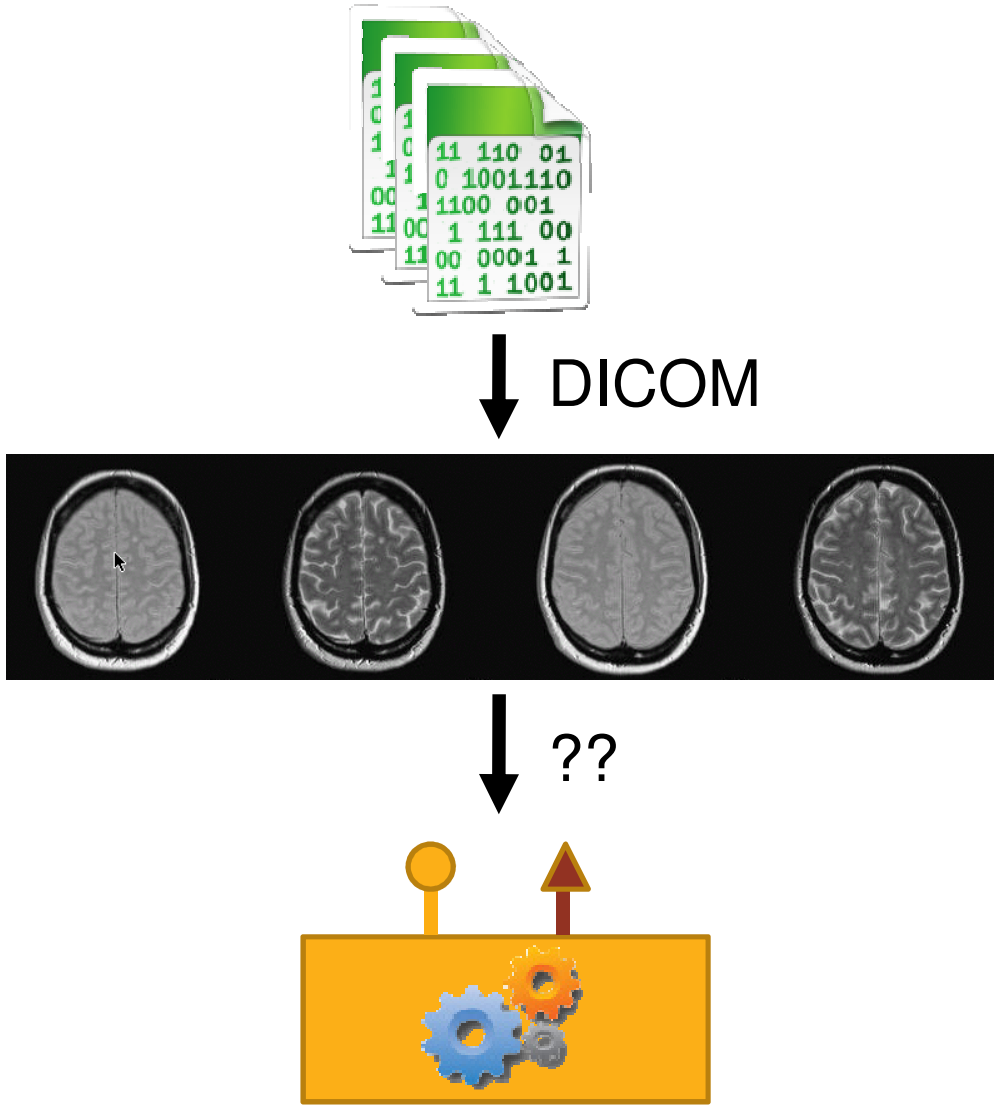


SFTP



Proprietary tool

Business object



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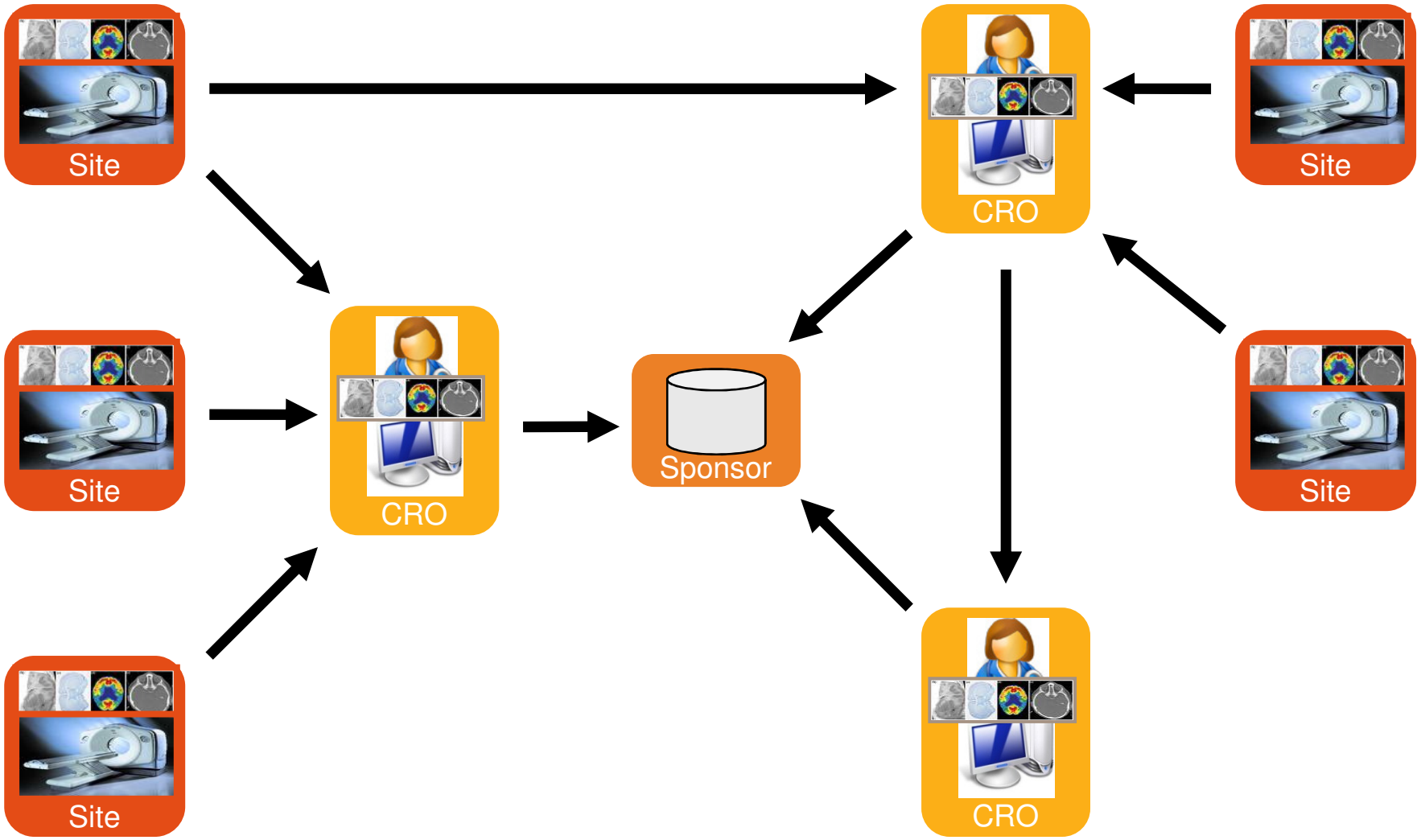
Imaging trial process

- Not standardized
- Distributed across vendors
- Manual data exchanges
- How can we best automate this in a reusable way?

Vision



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Service oriented architecture

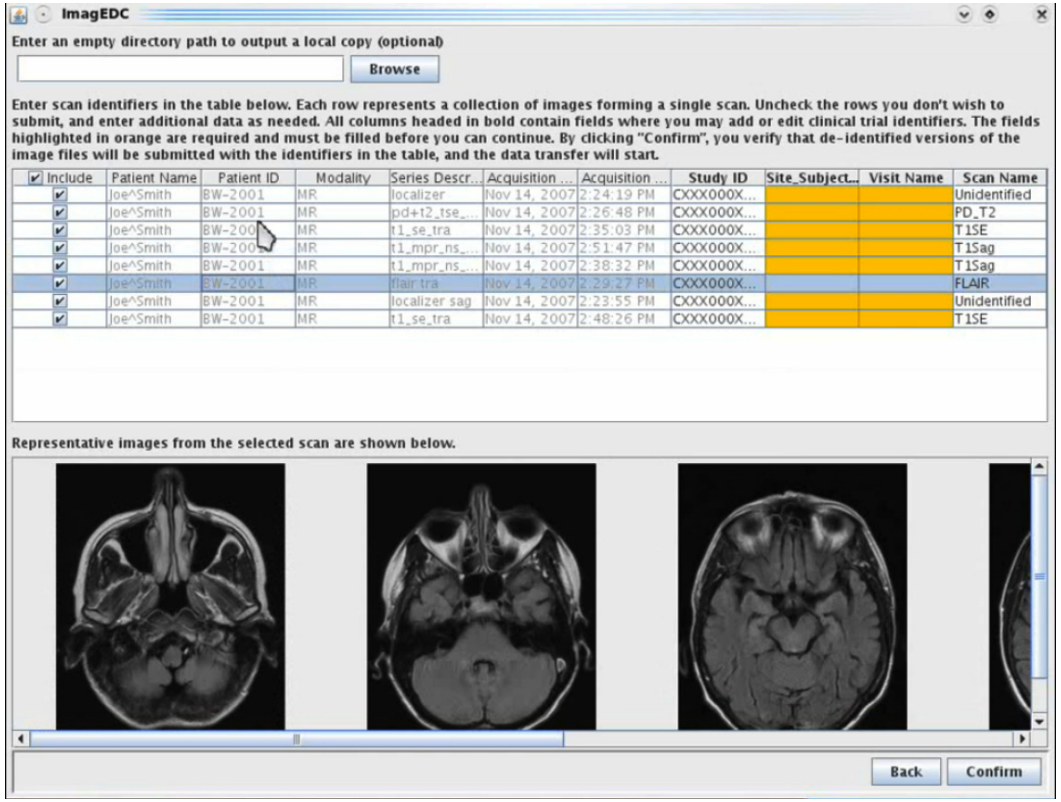
- Our vision is to achieve a service oriented architecture for image trials across organizations, where data exchanges are mediated by web services and data objects are clearly described by the service APIs.

Where to start

- The scope of the end vision is too large for one project or organization to achieve.
- We need to solve one use case and build from there. Our project goals need to include:
  - Shared use case
  - Leverage community
  - Working product
  - Open source
- We selected the EDC, or site to CRO transfer use case due to its high use and well defined requirements.

Product Implementation

- Consists of client and server applications.
- The client is a Java Web Start tool which implements the standard site technician workflow:
  - De-identification
  - Metadata entry
  - Transmission



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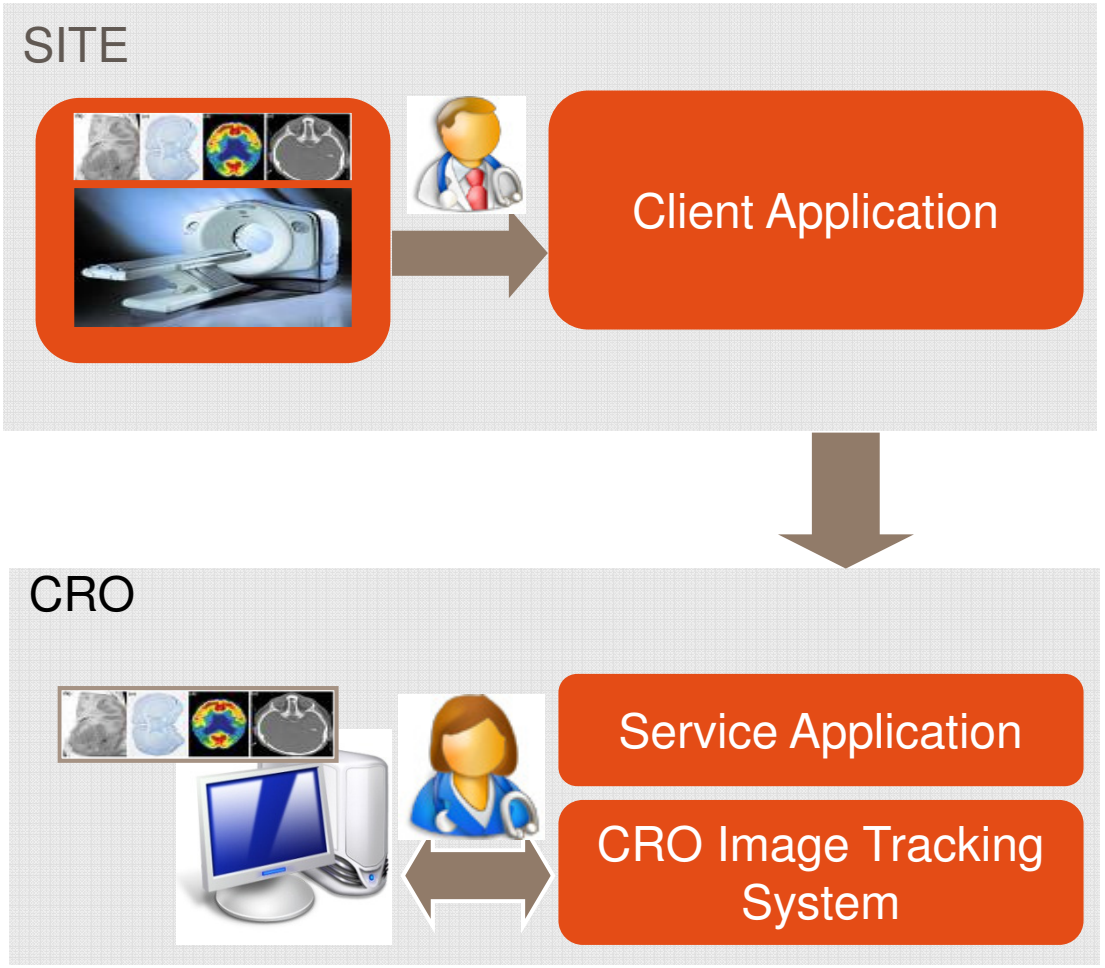
Architecture

- The client is the image sender.
- The server is the receiver. It's a reference implementation with an API for plugging into one's own backend system.



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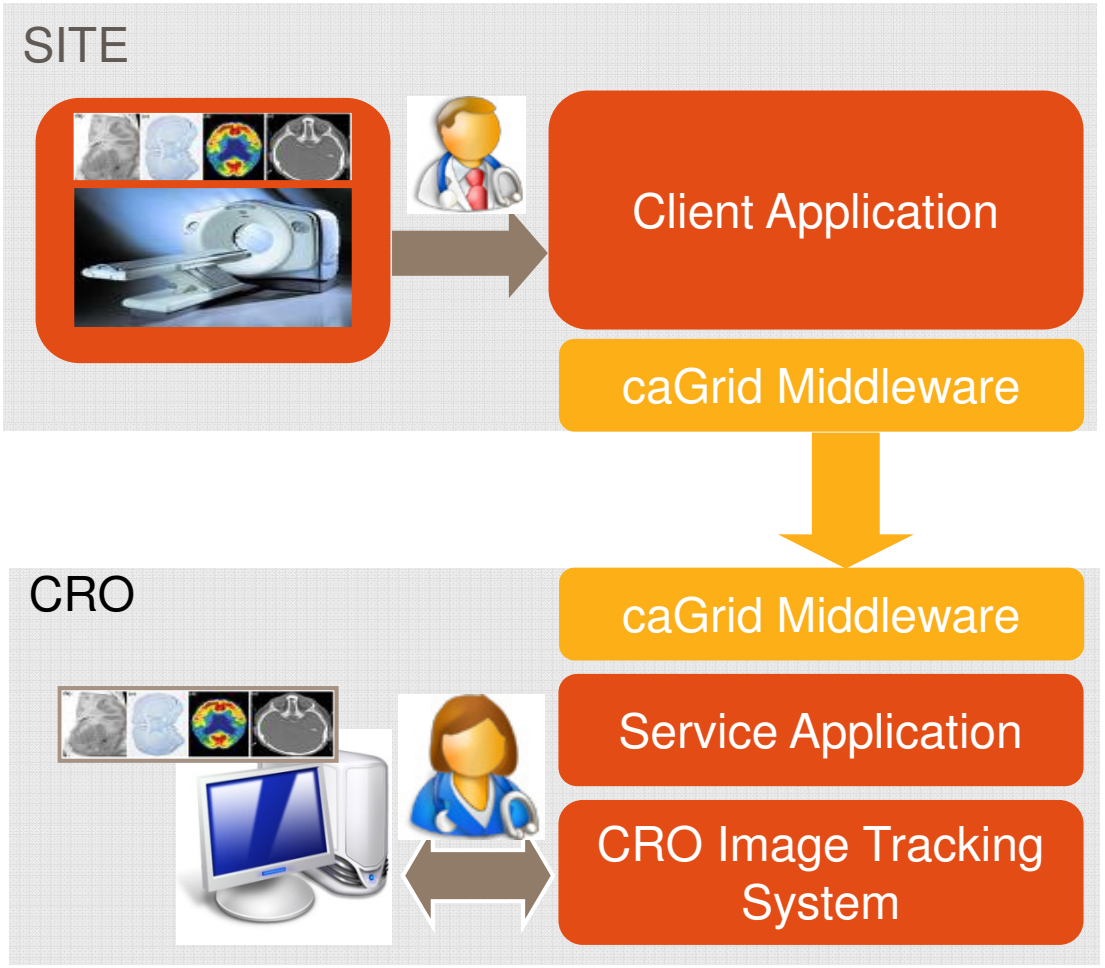
caGrid transport

- An open source middleware product providing a web services and grid platform for application developers
- Provided by the Cancer Biomedical Informatics Grid®, an initiative of the NCI to enable sharing of data and research tools across institutions



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Open Source

- New BSD License – one of the least restrictive license models
- Code and documentation available at http://imagedc.googlecode.com

In use

- We have a pilot underway with a CRO who has taken the tool, validated and deployed it, and will be operating it production for a clinical trial with us.

Outcome

- The ImagEDC tool is not unique in its functionality
- What it brings is
  - Web services architecture for image exchange
  - Potential to leverage additional services and tools from the caGrid framework and community
  - Open source license and distribution model
- A first step toward the SOA vision
- Stefan Baumann and Kenneth Buetow presenting on the Novartis and NCI collaboration Thursday at 11:30 in the Drug Discovery Informatics track.