



IHE-RO 2007

RT Objects Integration

Bruce Curran

Assistant Professor / University of Michigan



RT Objects Integration Profile

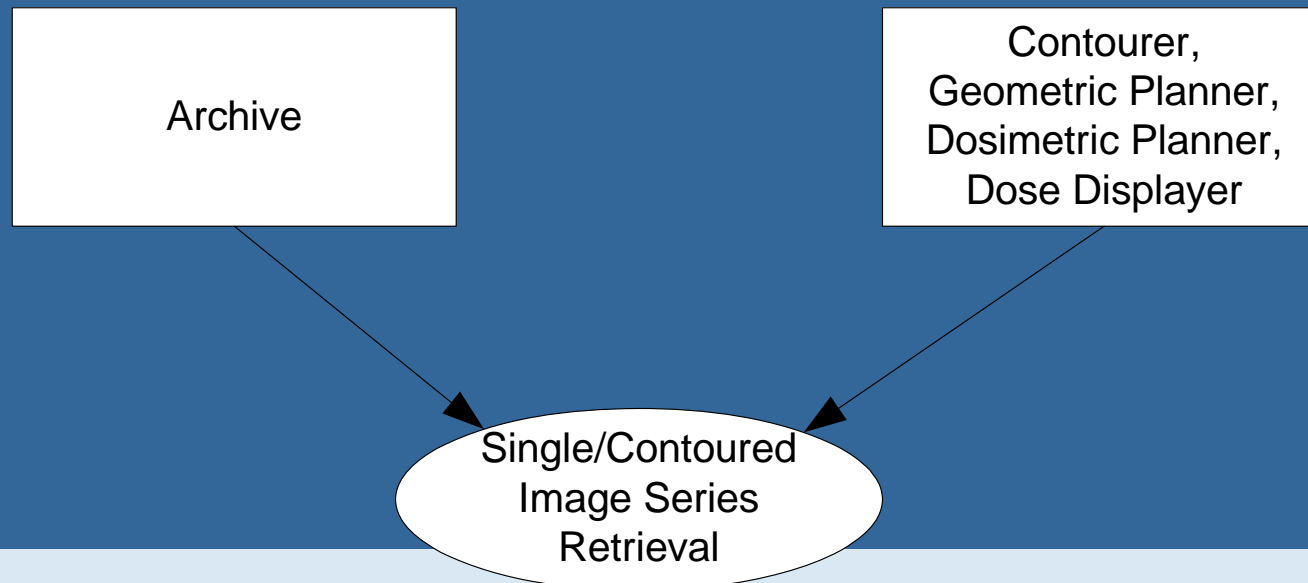
The integration profile for 2007 involves the flow of DICOM images and treatment planning data, from CT scan through dose display, for 3D conformal, external beam radiation therapy. The emphasis for this first Integration Profile is on reducing ambiguity and facilitating basic interoperability in the exchange of DICOM RT objects.

Integration Profile Transactions

- **Single/Contoured Image Series Retrieve**
- **Structure Set Storage**
- **Geometric Plan Storage**
- **Dosimetric Plan Storage**
- **Dose Storage**
- **Multi-Series Image Retrieve**
- **Structure Set Retrieve**
- **Geometric Plan Retrieve**
- **Dosimetric Plan Retrieve**
- **Dose Retrieve**
- **Resampled/ Combined CT Series Storage**

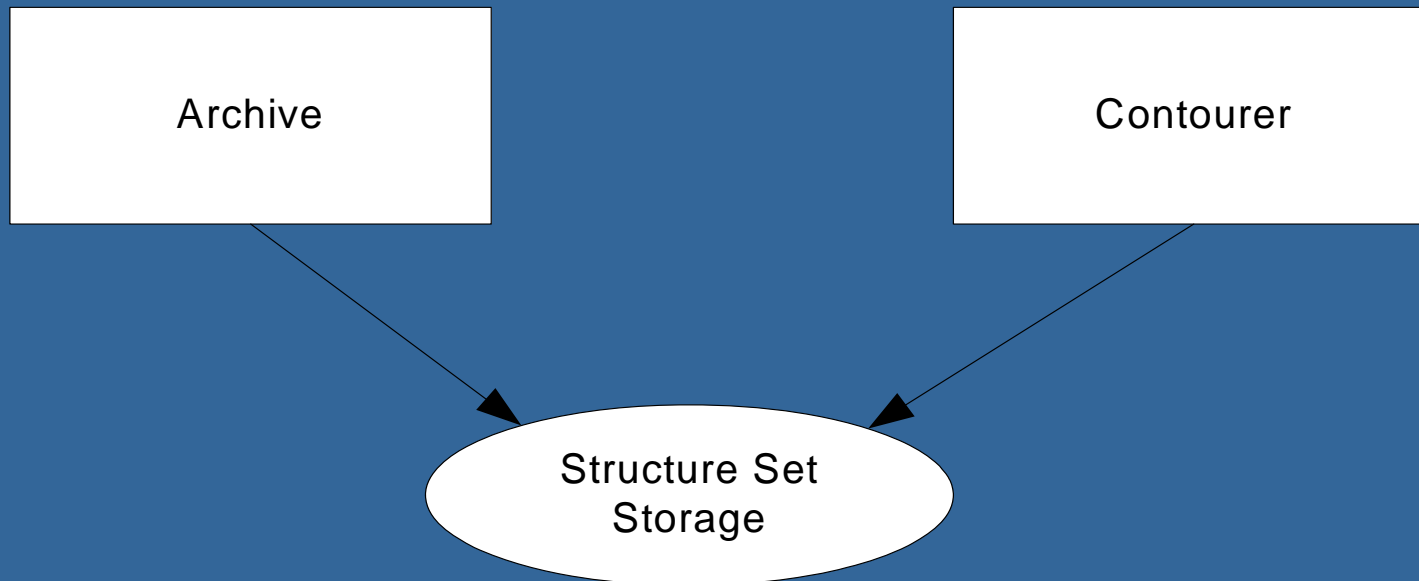
Single/Contoured Image Series Retrieval

- In the Single/Contoured Image Series Retrieve transaction, the Archive sends a series of CT-Images to the *Contourer*, *Geometric Planner*, *Dosimetric Planner* or *Dose Displayer*.



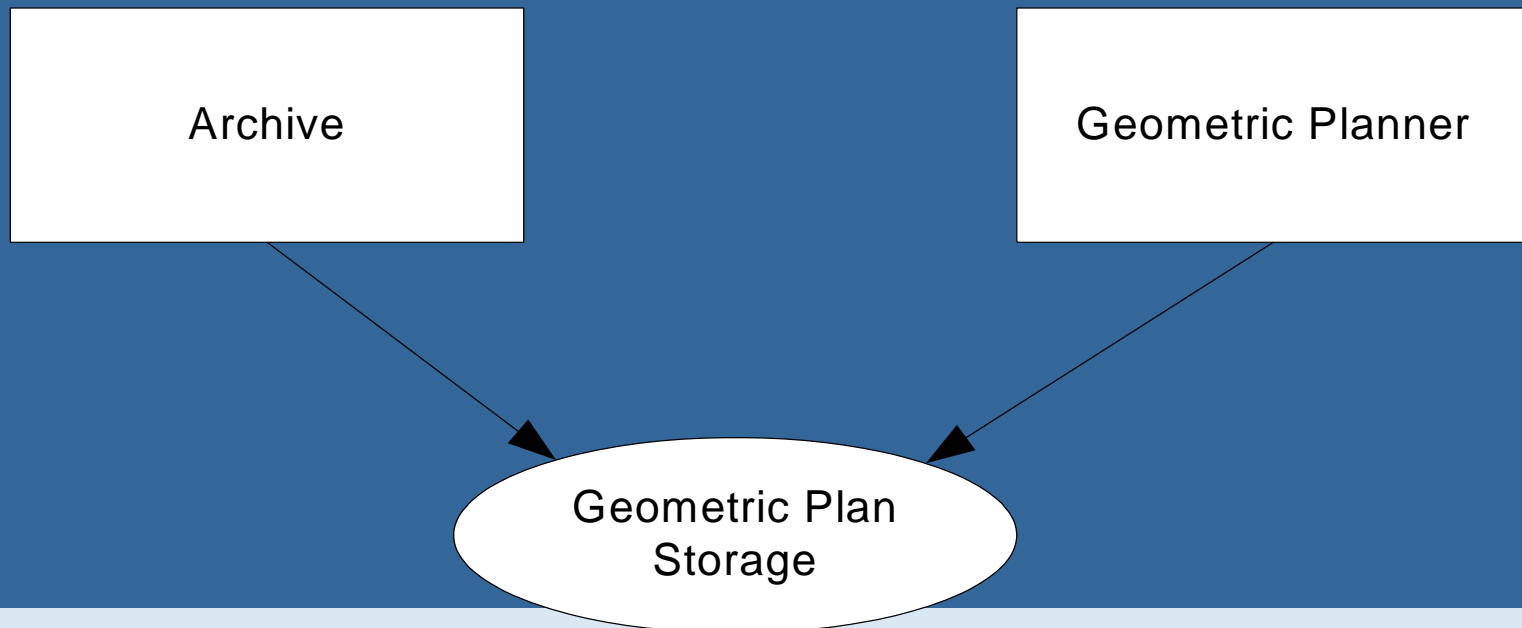
Structure Set Storage

- In the Structure Set Storage Transaction, the *Contourer* stores a Structure Set on an Archive to make it available.



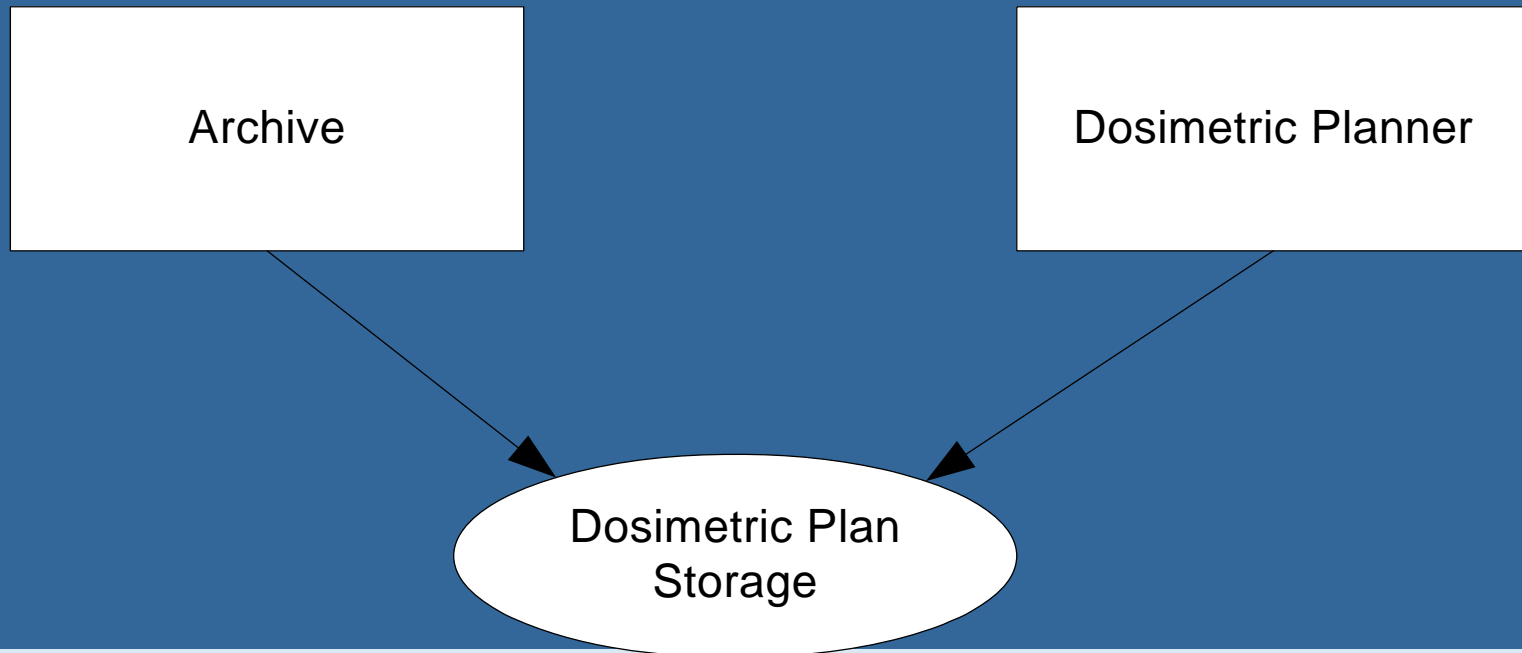
Geometric Plan Storage

- In the *Geometric Plan Storage* transaction, the *Geometric Planner* sends the newly created *Geometric Plan* to the Archive.



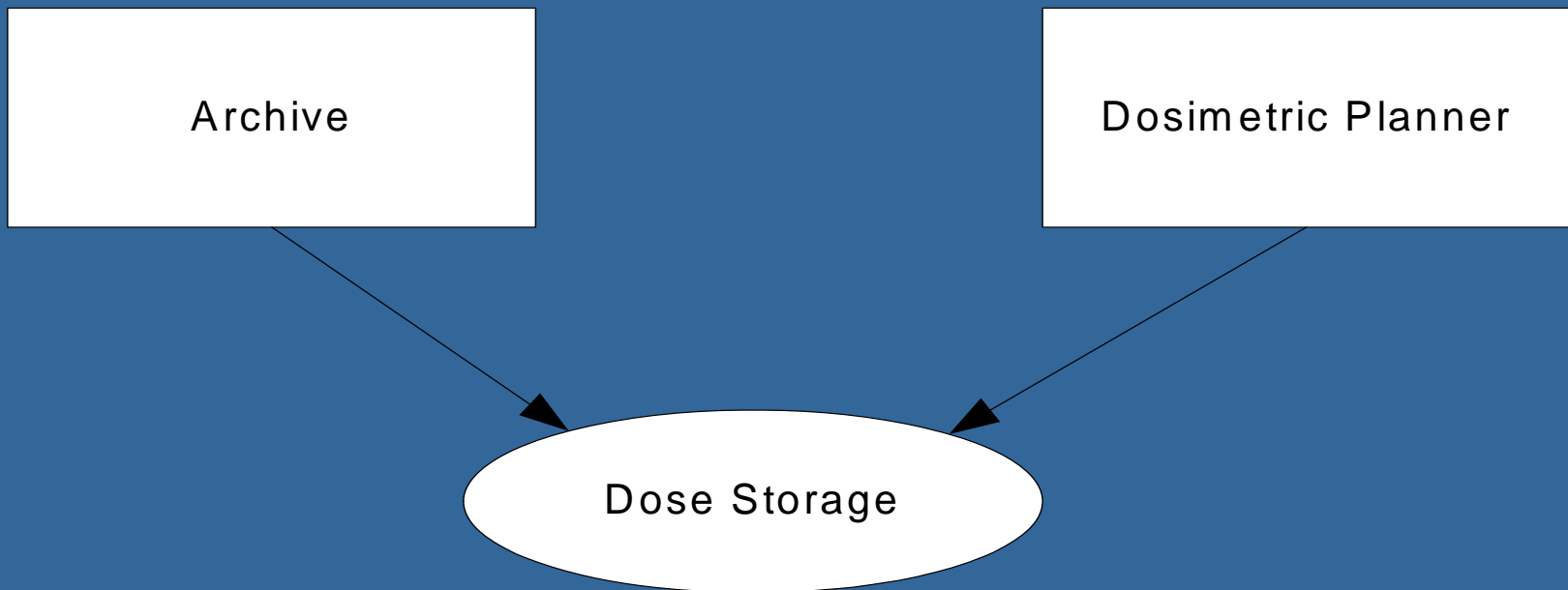
Dosimetric Plan Storage

- In this transaction, the *Dosimetric Planner* sends the plan containing the references to the structure set to the Archive.



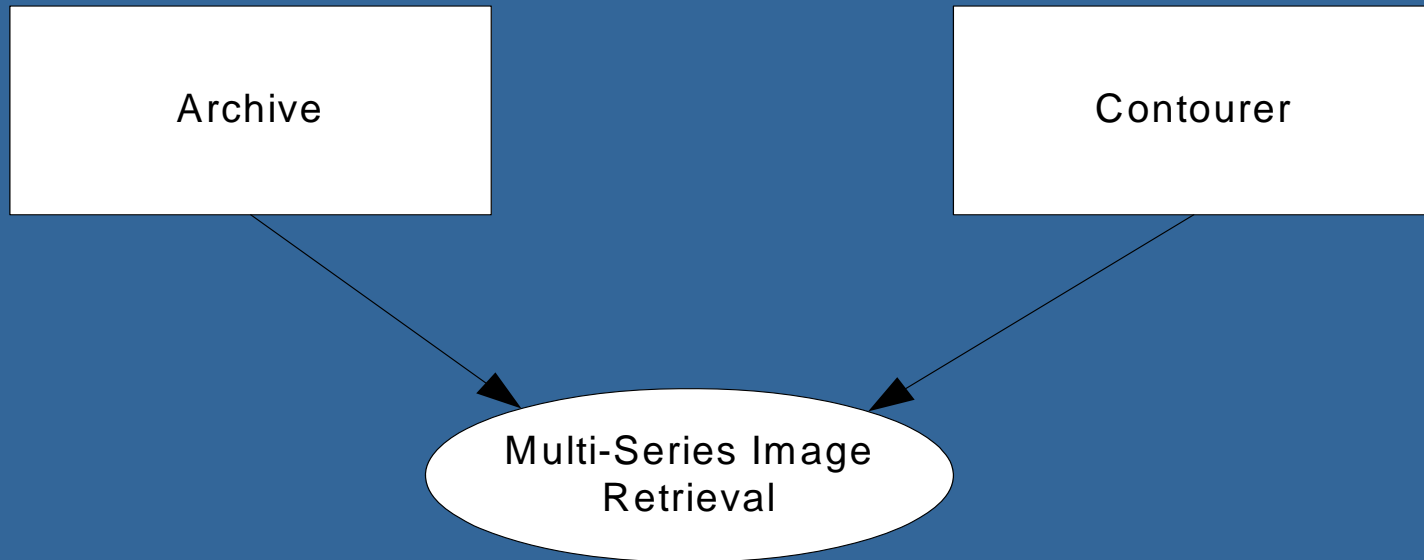
Dose Storage

- In the Dose Storage transaction, the Dose planner sends the newly created Dose to the Archive.



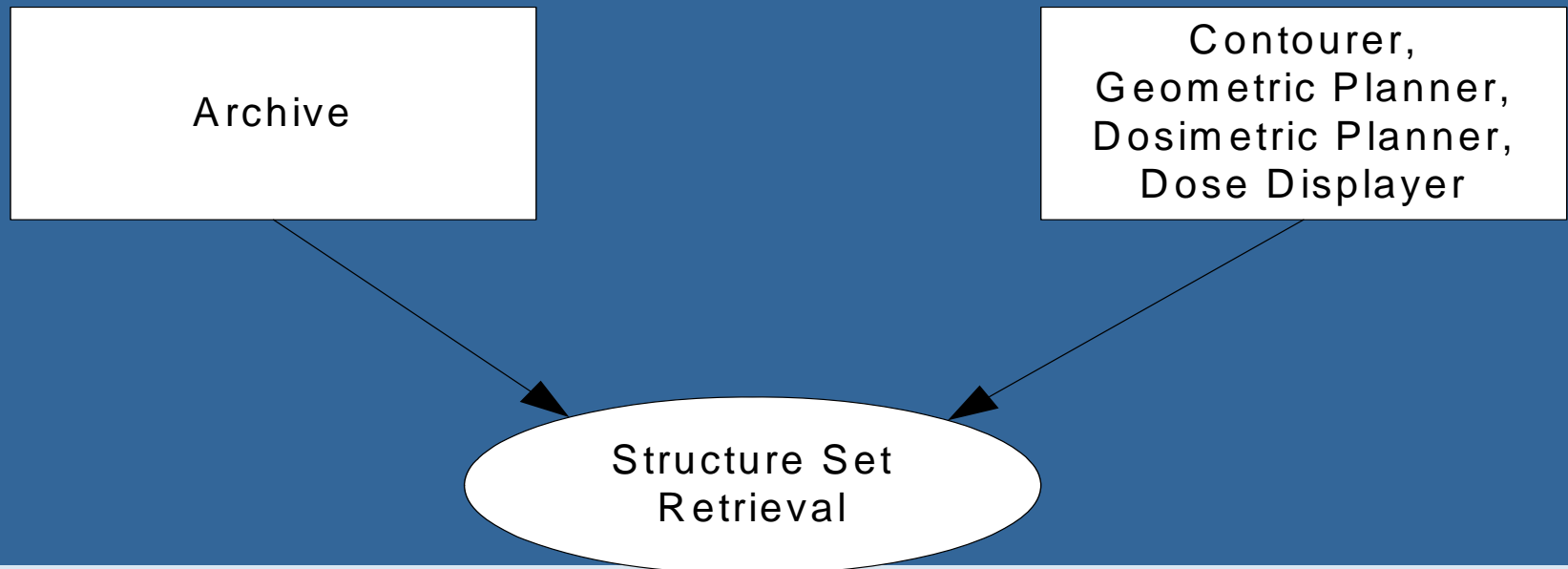
Multi-Series Image Retrieve

- In the Multi-Series Image Retrieve Transaction, the Archive stores CT Images from multiple series (but a single study) on a *Contourer* to make these Images available for contouring.



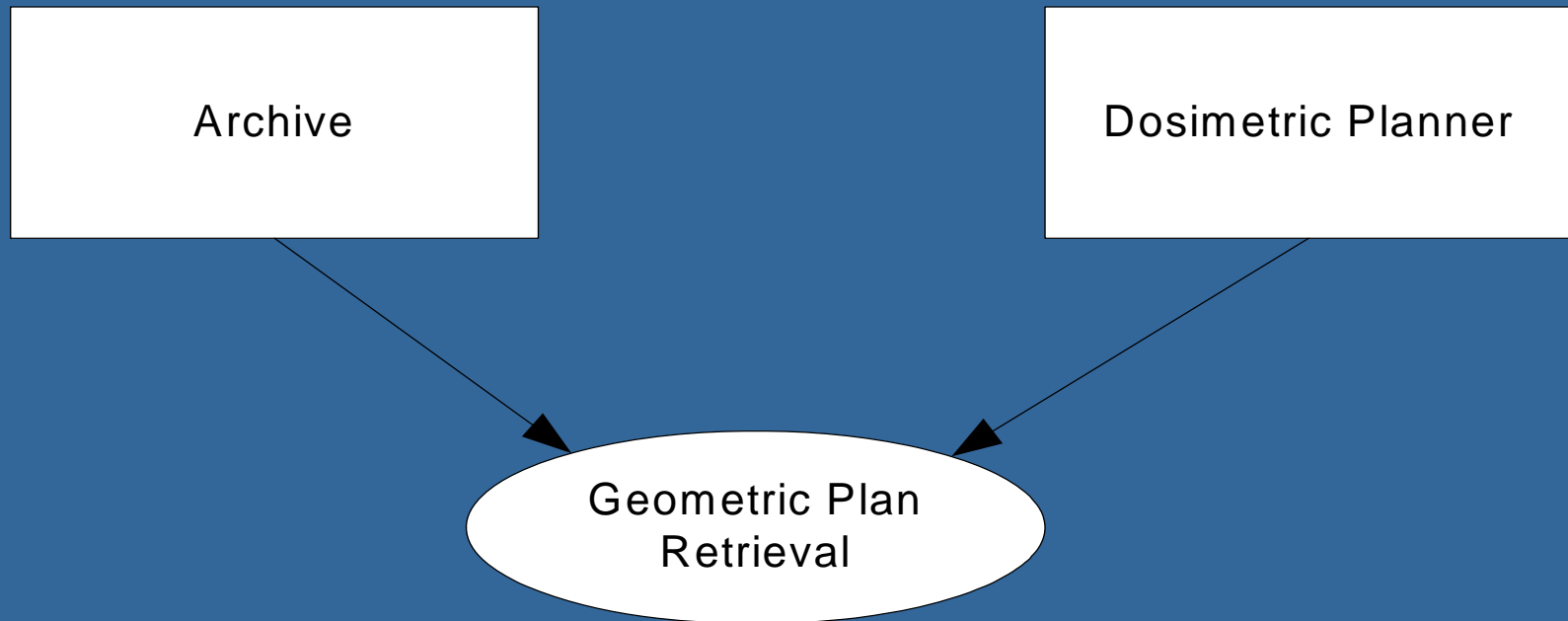
Structure Set Retrieval

- In the Structure Set Retrieval Transaction, the Archiver stores a Structure Set on a *Contourer, Geometric Planner, Dosimetric Planner, or Dose Displayer*.



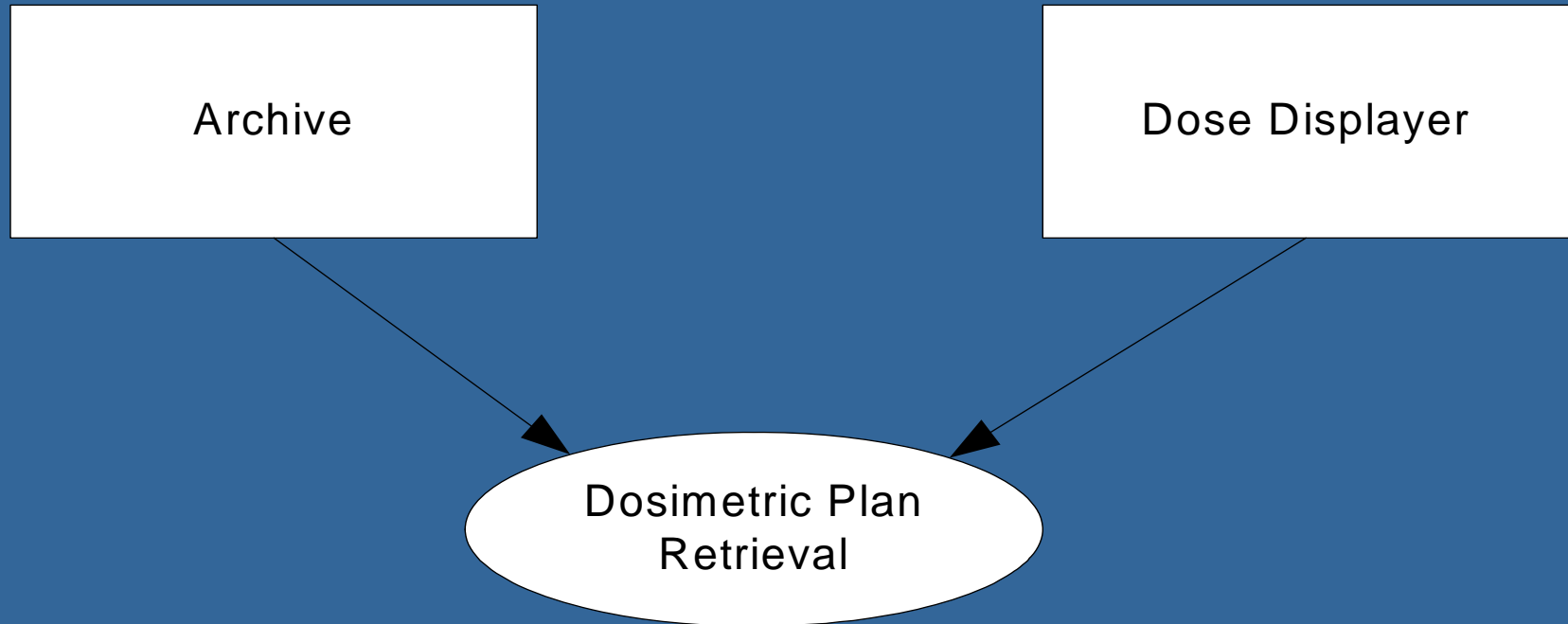
Geometric Plan Retrieve

- In the *Geometric Plan* Retrieve Transaction, the requested *Geometric Plan* is transferred from the Archive to the *Dosimetric Planner*.



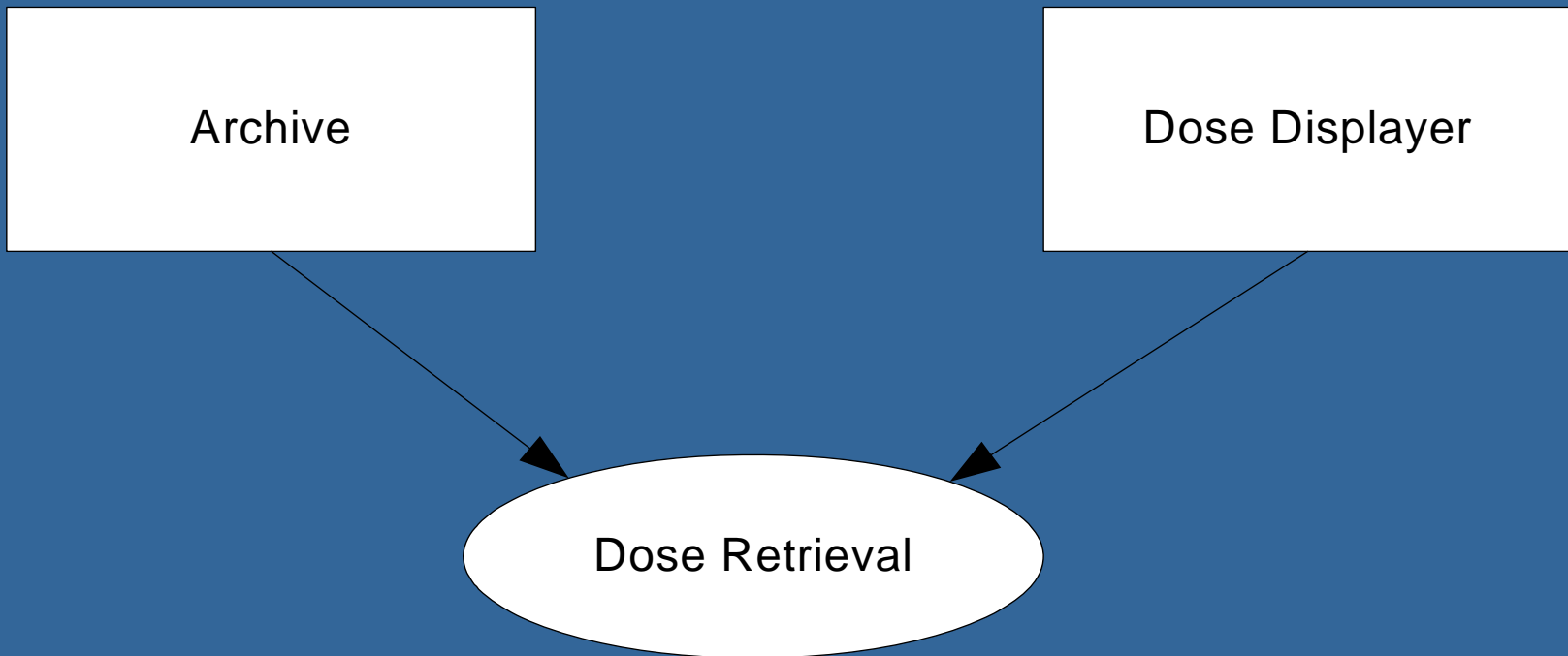
Dosimetric Plan Retrieve

- In this transaction, the dose displayer retrieves the plan containing the references to the structure set to the Archive.



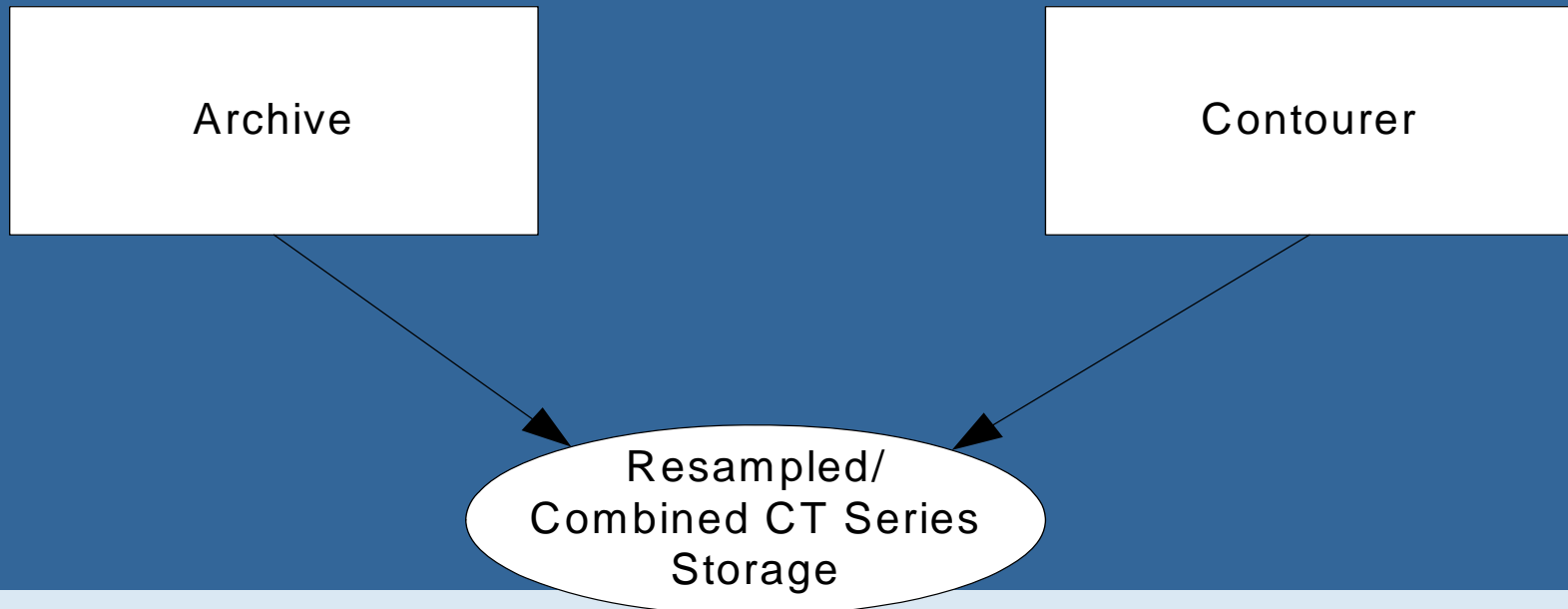
Dose Retrieve

- In the Dose Retrieve Transaction, the requested Dose is transferred from the Archive to the Dose Displayer.



Resampled/Combined CT Series Storage

- In the Resampled/Combined CT Series Storage Transaction, the *Contourer* stores CT Images which have been combined or resampled into a single series on the Archive.



Profile Testing Participants 2006



Informal Connectathon 2006

- 25+ participants, 9 Vendors, 10+ systems
- 95+ monitored test cases



Informal Connectathon 2006



Informal Connectathon 2006



Informal Connectathon 2006



IHE-RO 2006 Connectathon





WWW.IHE.NET