

# Tomography with EDNA

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# Progress and Problems

- Being used at DLS
  - \_ Single plug-in
    - Very bespoke reconstruction code
  - \_ Very minimal integration
    - Communications with the GDA(Java)
  - \_ Properties
    - Defining these generically was virtually impossible.

# Main Issue

- Data Format
  - Many different formats for different programs.
  - With large data sets, conversions are not really feasible.
  - Hopefully standardisation across the Synchrotron community coming soon.

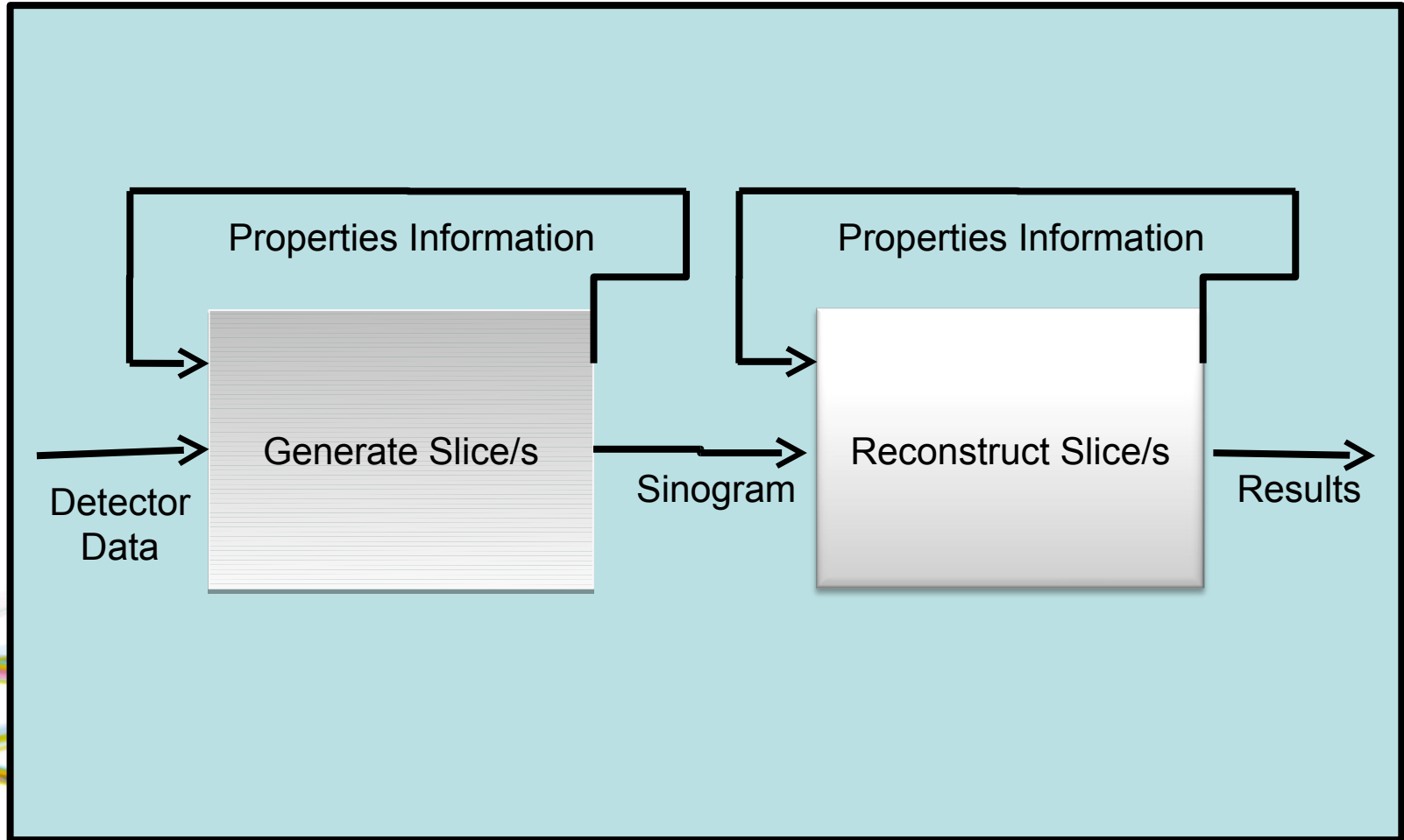
# Immediate Aims

- Identify standard distributable programs which can be used
  - \_ TomoJ
- Redefine the pipeline based on 2 simple execution plug-ins.
  - \_ Sinogram generation for n slices
  - \_ Reconstruction of n slices
- Identify a way of dealing with parameters

# Back to Basics - Use cases

- Reconstruct 1/n slices with
  - Multiple routines
  - Multiple parameters
- Reconstruct the whole thing
  - Single routine
  - Single parameter

# Pipeline Overview



# Plug-in Specifics

- Sinogram Generation
  - Should be designed to deal with a filling directory as standard.
- Reconstruction
  - Key need to deal well with parameters

# Parameters

- Tomography routines have different parameters
  - This doesn't matter to the main code
  - Just needs to be reproducible
  - Plug-ins could register their parameters with the control plug-in
  - This could make use of the new multiple inputs and outputs from the kernel



# Conclusions and Strategies

- Initial Tomography plug-in a good exercise, but needs reworking.
- Reduce the complexity of the internal plug-ins
- Add the complexity to the control plug-in
- Internal plug-ins can register their parameters with the control plugin