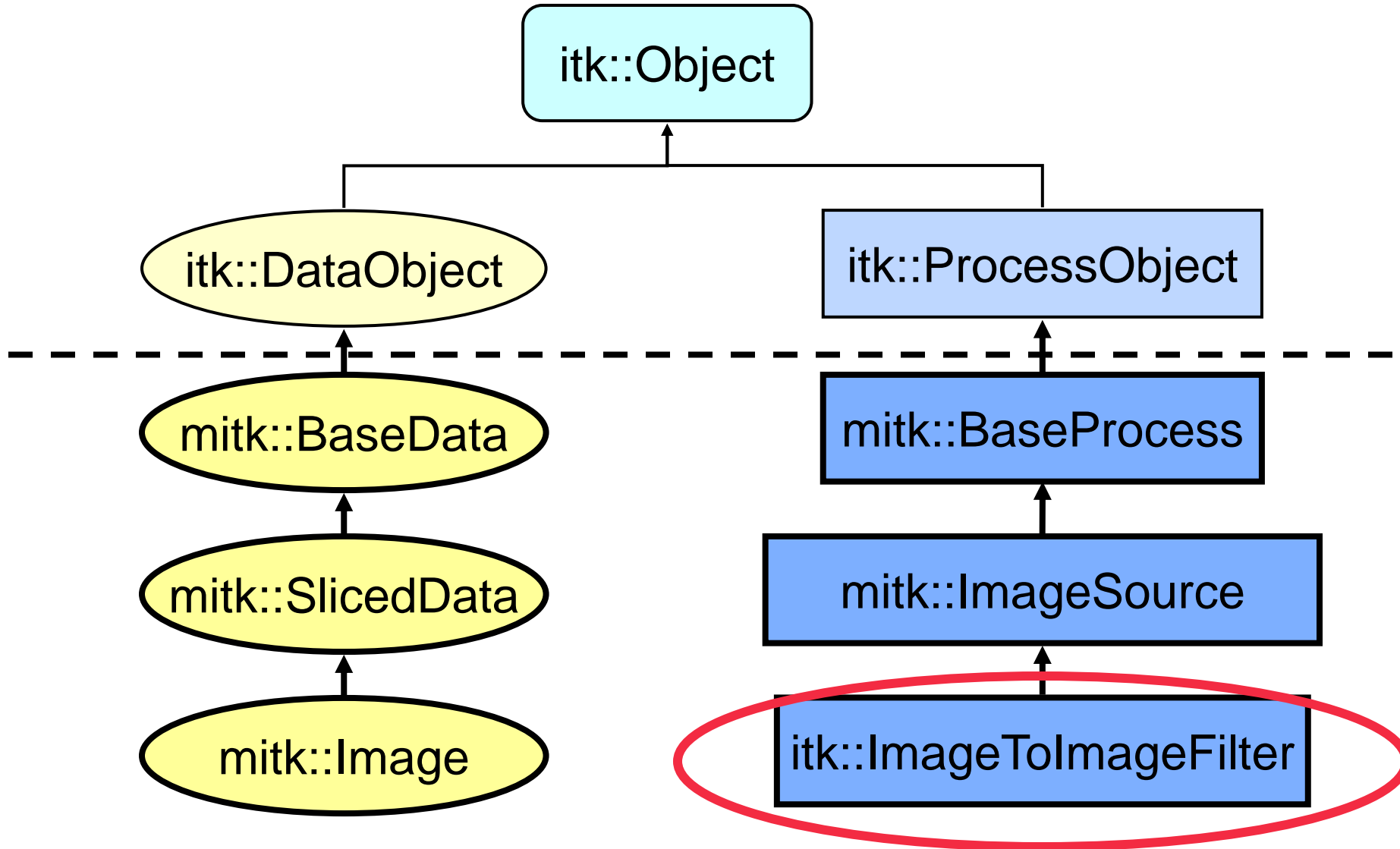


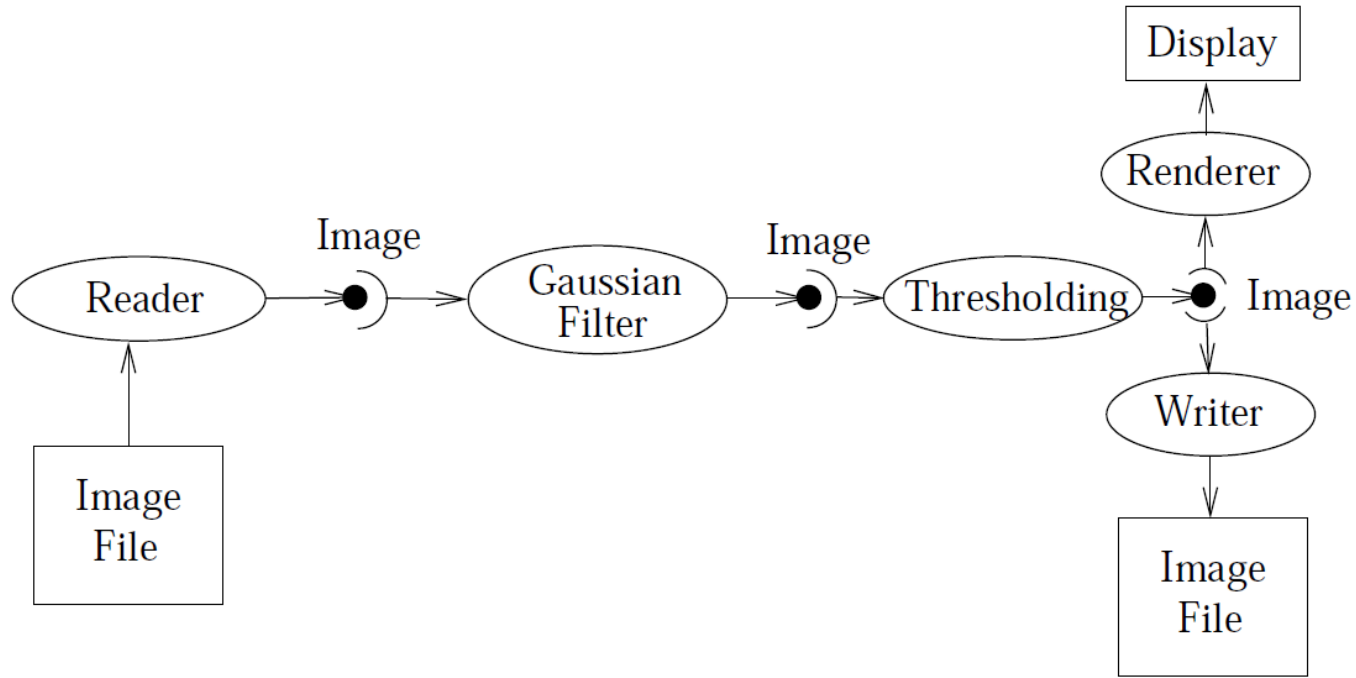
*Medical Imaging Interaction Toolkit*

## **Filter in MITK**

Thomas Kilgus



# Typical MITK/ITK Filter Pipeline



Input Filter  
(„Source“)

→ Filter → Filter → Filter → ...

Output Filter  
(„Mapper“)

- 0. Create the MITK class
- 1. Choose the base class
  - ImageToImageFilter, ImageToPointSetFilter, PathToPathFilter, ...
- 2. Identify & implement required methods
  - GenerateOutputInformation(), GenerateInputRequestedRegion(),...
- 3. Use existing ITK Filters
  - (If not possible: write your own ITK Filter)
- 4. Implement the „ProcessImage“ method
  - A templated method encapsulating ITK code from MITK code
- 5. Call the „ProcessImage“ method by means of the AccessByITK macro

- What is already out there?
  - ITK documentation: various filters and other features (Threading etc.)
  - MITK documentation: some filters, AccessByITK macro, base classes