ITKv4
Image Interpretation Layer
ITK - IO

ImageIOBase
- NumberOfComponents
- IOComponentType
- IOPixelType

ConvertPixelBuffer
- Nested Switchs

Based on
- Input Number Of Components
- Vs
- Output Number Of Components

Image<T,N>

Buffer
Pixel and Component Types

- UNKNOWNPIXELTYPE
- SCALAR
- RGB
- RGBA
- OFFSET
- VECTOR
- POINT
- COVARIANTVECTOR
- SYMMETRICSECONDRANKTENSOR
- DIFFUSIONTENSOR3D
- COMPLEX
- FIXEDARRAY
- MATRIX

- UNKNOWNCOMPONENTTYPE
- UCHAR
- CHAR
- USHORT
- SHORT
- UINT
- INT
- ULONG
- LONG
- FLOAT
- DOUBLE
ITK - IO

ImageIOBase

NumberOfComponents

IOComponentType

IOPixelType

Interpretation Layer

User Provided Rules

Data Layout

Components

TimePoint

Dimensions

Resolutions

Buffer

Image<T,N>
ITK - IO

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Array of Images

< Time >

< Components >
ITK - IO

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Array of Images

< Time >
< Components >

Programmable at Run Time
ITK - IO

Array of Images

< Time >
< Components >

itk::ImageSet

Image Container

Delivers Images On Demand

Query Methods

Components
TimePoint
Dimensions
Resolutions

Image<T,N>

- Component K
- TimePoint P
- Region R
- Resolution L
Abstract Service

Array of Images

< Time >
< Components >

ITK - IO

Image<T,N>

- Component K
- TimePoint P
- Region R
- Resolution L
ITK - IO

Abstract Service

DICOM Server

- Component K
- TimePoint P
- Region R
- Resolution L

Array of Images

< Time >
< Components >

Image<T,N>
Abstract Service

Image<T,N>

● Component K
● TimePoint P
● Region R
● Resolution L

Image Database
Abstract Service

Image<T,N>

- Component K
- TimePoint P
- Region R
- Resolution L