

ITKv4 - The Next Generation

What is new in ITKv4

Insight Software Consortium

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ITKv4

10 Years Old

\$ 5 Million

ARRA Funds

1.5 Years

Next 10 Years

Apache 2.0 License

Patented Directory
Removed

New Software Process

• Git

- Git
- Gerrit

- Git
- Gerrit
- cdash@home

- Git
- Gerrit
- cdash@home
- Improved Testing Data

Modern C++

- Visual Studio 6.0, 7.0

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- Borland 5.5

- Visual Studio 6.0, 7.0
- Borland 5.5
- Sun CC < 5.9

- Visual Studio 6.0, 7.0
- Borland 5.5
- Sun CC < 5.9
- SGI CC

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- MWORKS

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- Cygwin

- Visual Studio 6.0, 7.0
- Borland 5.5
- Sun CC < 5.9
- SGI CC
- MWORKS
- Cygwin
- GCC < 3.4

64 Bits

- Since 2008

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- In Windows 64bits:
unsigned long is 32bits

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unsigned long is 32bits
- Use typedef !

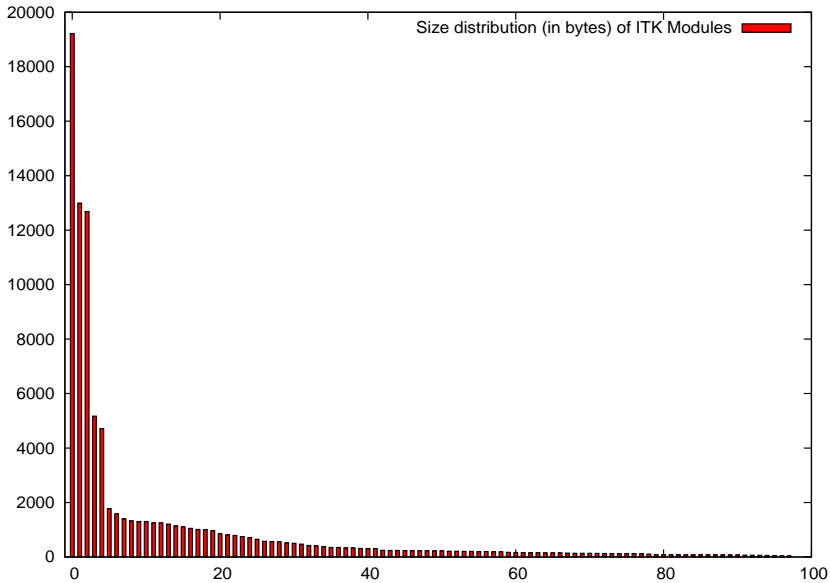
- Since 2008
- In Windows 64bits:
unsigned long is 32bits
- Use typedef !
- ITK_USE_64BITS_IDS

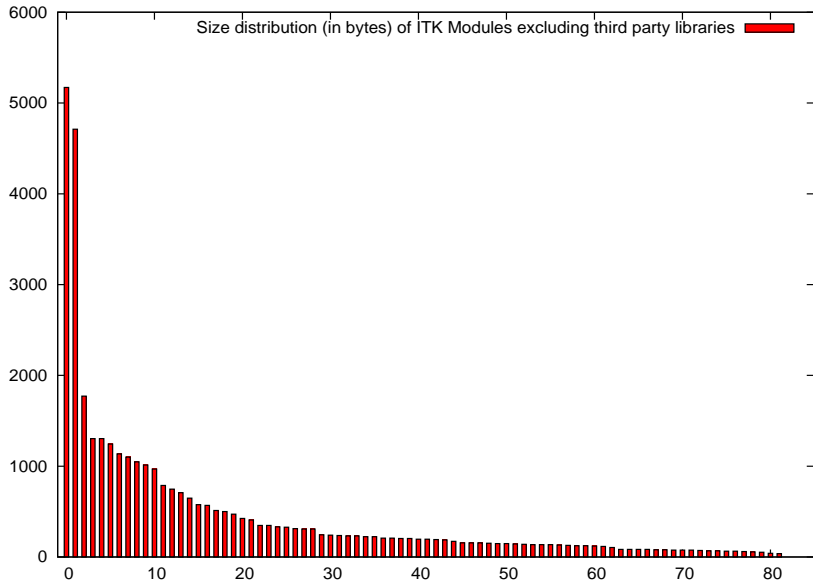
Modularization

- 98 Modules

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- Groups

- 98 Modules
- Groups
- External Modules





Statistics Framework

DICOM

- GDCM 2.0

- GDCM 2.0
- Query / Retrieve

- GDCM 2.0
- Query / Retrieve
- RT Struct

FEM Refactoring

- Code Clean up

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- Removed subversive pointers

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- FEM IO

Level Sets Refactoring

- Generalization for Images and Meshes

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- Modular Terms

Image Registration Refactoring

- Composite Transform

- Composite Transform
- Symmetric Registration

- Composite Transform
- Symmetric Registration
- Transforms IO

Registration Parameter Tunning

GPU

- GPU Module

- GPU Module
- GPU Image

- GPU Module
- GPU Image
- GPU ImageToImageFilter

- GPU Module
- GPU Image
- GPU ImageToImageFilter
- Factories

SimpleTK

- Hiding Templates

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- Smarter IO

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- Procedural Programming

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- Procedural Programming
- Easier Wrapping

- Hiding Templates
- Smarter IO
- Procedural Programming
- Easier Wrapping
- Binary Distribution

New Fields

- Microscopy

- Microscopy
- Video

- Microscopy
- Video
- Remote Sensing

Video Bridge

- OpenCV

- OpenCV
- VXL

- OpenCV
- VXL
- Video Filters

Video Grabber

- Laparoscopy

- Laparoscopy
- Ultrasound

Microscopy

- Deconvolution

- Deconvolution
- Denoising

- Deconvolution
- Denoising
- Color correction

- Deconvolution
- Denoising
- Color correction
- Colocalization

- Deconvolution
- Denoising
- Color correction
- Colocalization
- File Formats

Large Images

- JPEG 2000

- JPEG 2000
- Tiling

- JPEG 2000
- Tiling
- HDF5

- JPEG 2000
- Tiling
- HDF5
- Multi-Resolution Levels

Insight Journal

- Git Backend

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- Virtual Appliances

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- Virtual Appliances
- CDE

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- Virtual Appliances
- CDE
- Reproducible Research

Migration Guide

<http://ij.itk.org/itkfaq>

Live Long
and
Prosper !