

# Work Package 3

IT Infrastructure

*KIT*

Architecture

*KIT, UCA*

Tomo

*KIT*

Lamino

*UCA*

Algebraic

*SCI*

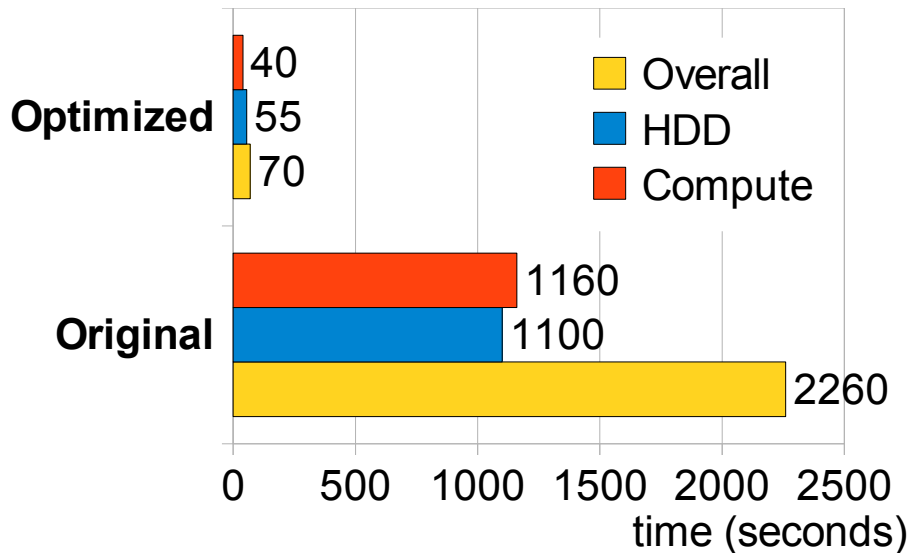
Filters

*All*

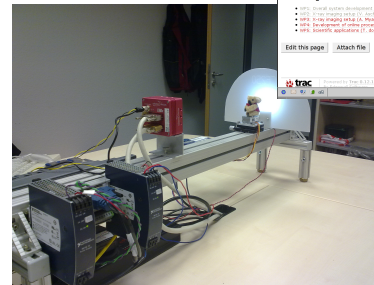
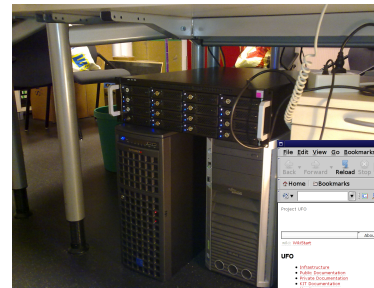
GUI

*TPU*

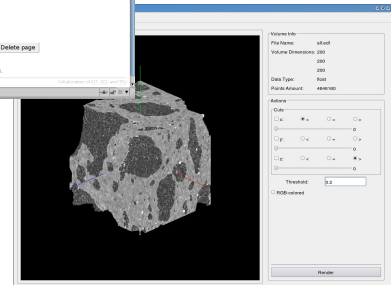
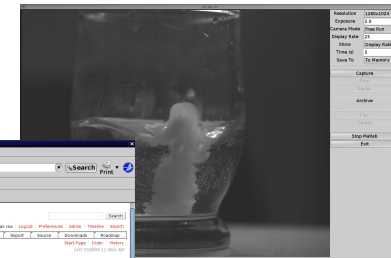
## Tomographic Reconstruction



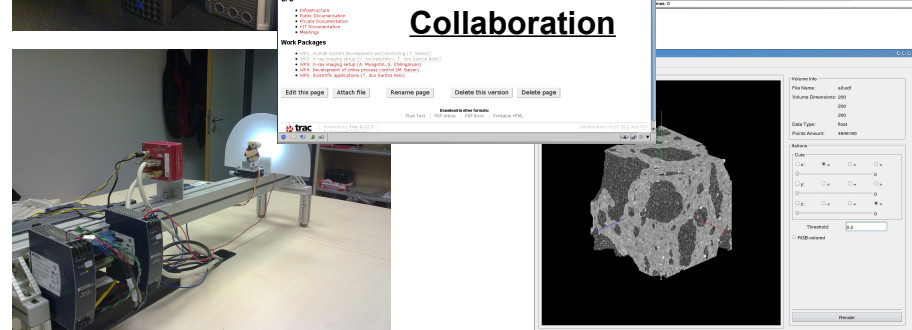
## Infrastructure



## GUI

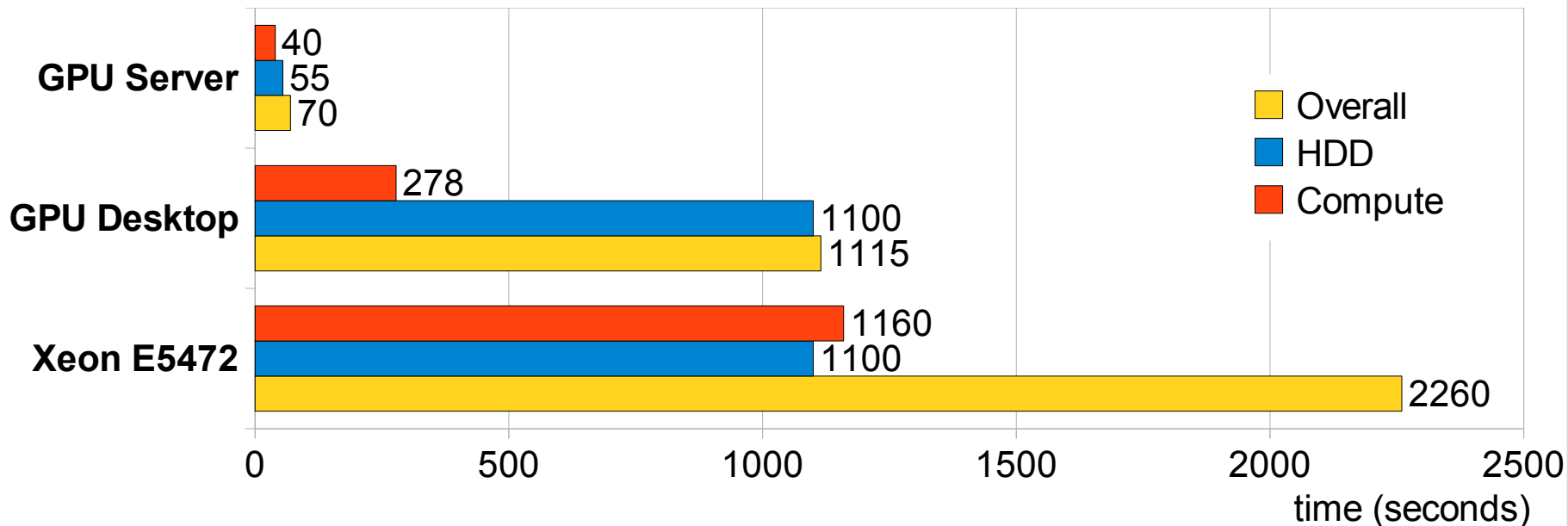


### Collaboration



# Tomographic Performance

	Xeon Server	GPU Desktop	GPU Server
Type of Computation	CPU / Xeon E5472 8 core, 3 GHz	<b>GeForce GTX 280</b> <b>1 core</b>	<b>2 x GTX295 + 2 x GTX480</b> <b>6 cores</b>
CPU	2 x Xeon E5472	Core2 E6300	2 x Xeon E5540
Memory	16GB DDR3	4GB DDR2	96GB DDR3
HDD	WDC5000AACS	WDC5000AACS	<b>2 x Intel X25-E / Raid-0</b>
Price	5500\$ (2000\$ CPU)	1000\$ (400\$ GPU)	9000\$ (2000\$ GPU, 800\$ SSD)
Software	SuSe 11.2, CUDA 3.0, MKL 10.2.1, gcc4.4 -O3 -march=nocona -mfpmath=sse		



# UFO Server



## SuperMicro 7046GT-TRF (Dual Intel 5520 Chipset)

CPU: 2 x Xeon X5650 ( total 12 cores at 2.66 Ghz)

GPUs: 2 x GTX 580

Memory: 96 GB / 12 DDR3 slots (192GB max)

PCIe 2.0 x16: 4 (full speed),

PCIe 2.0 x4: 2 (in x16 slots); PCIe 1.0 x4: (in x8 slot)

Max Peak Performance (Nvidia): 7.15 TFlops / 2.5 Tflops

PCIe 2 x16 (8 GB/s): GTX 580

PCIe 2 x16 (8 GB/s): GTX 580

PCIe 2 x16 (8 GB/s): Free

PCIe 2 x16 (8 GB/s): Free

PCIe 2 x4 (2 GB/s): 10 GBit Net

PCIe 2 x4 (2 GB/s): Areca Raid

PCIe 1 x4 (1 GB/s): Frame Grabber

~ 5.7 GB/s  
measured



4 x C300  
1250 MB/s max



CameraLink Interface  
800 MB/s



1.2 GB/s HDD  
1.4 GB/s SSD

