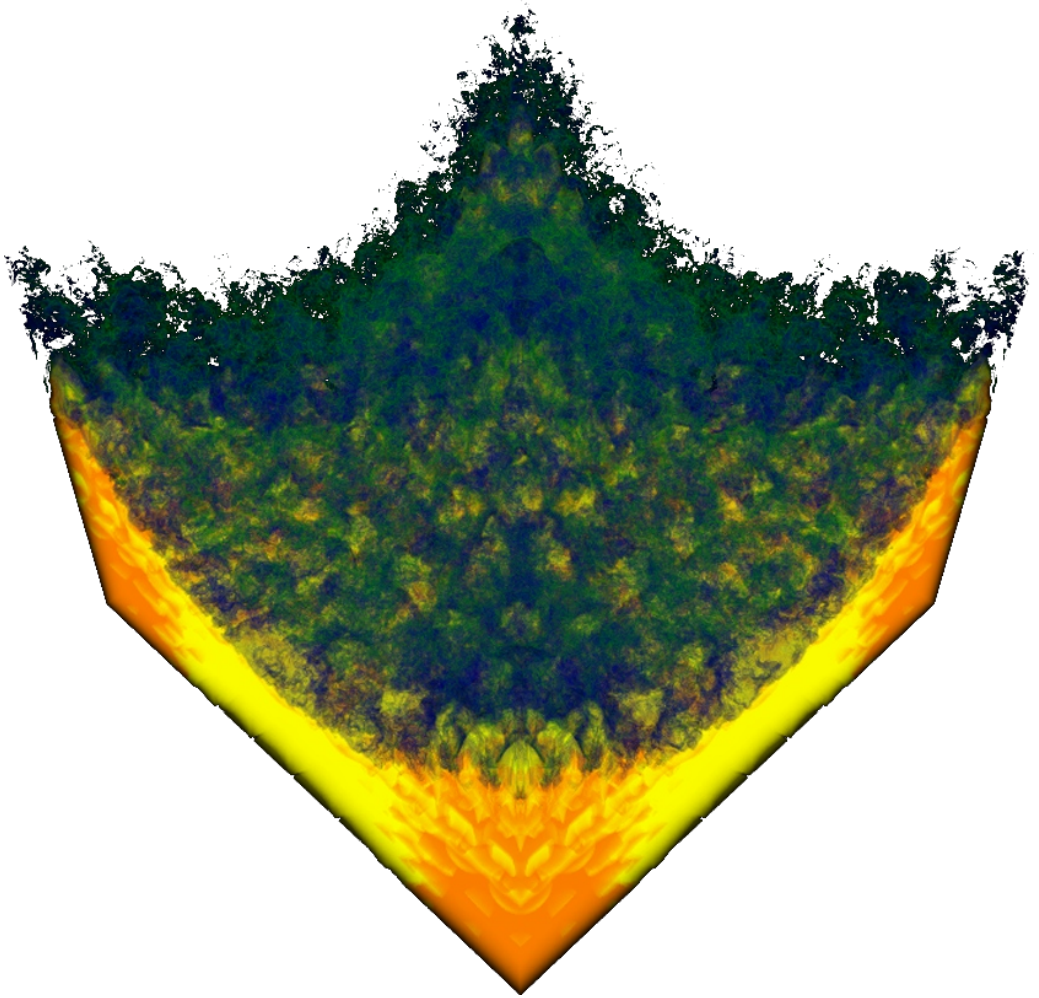
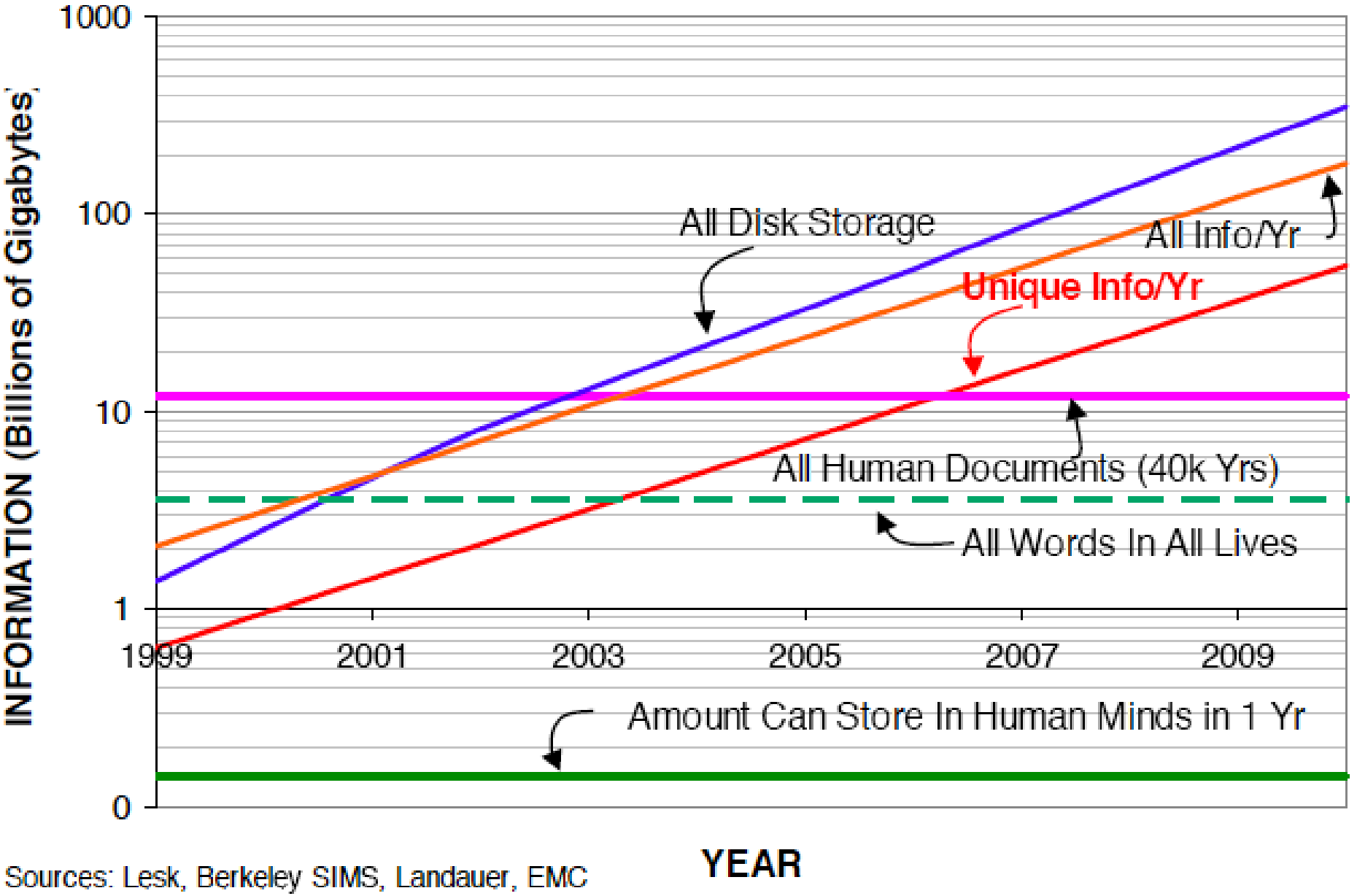
Freeprocessing: In-transit Data Processing

Growth of Data

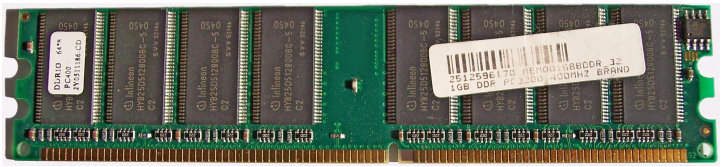


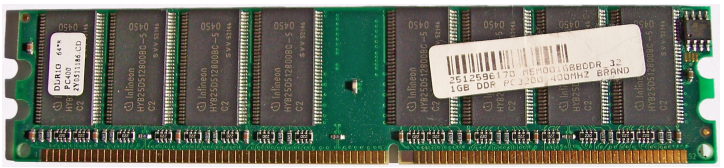
Growth of Data



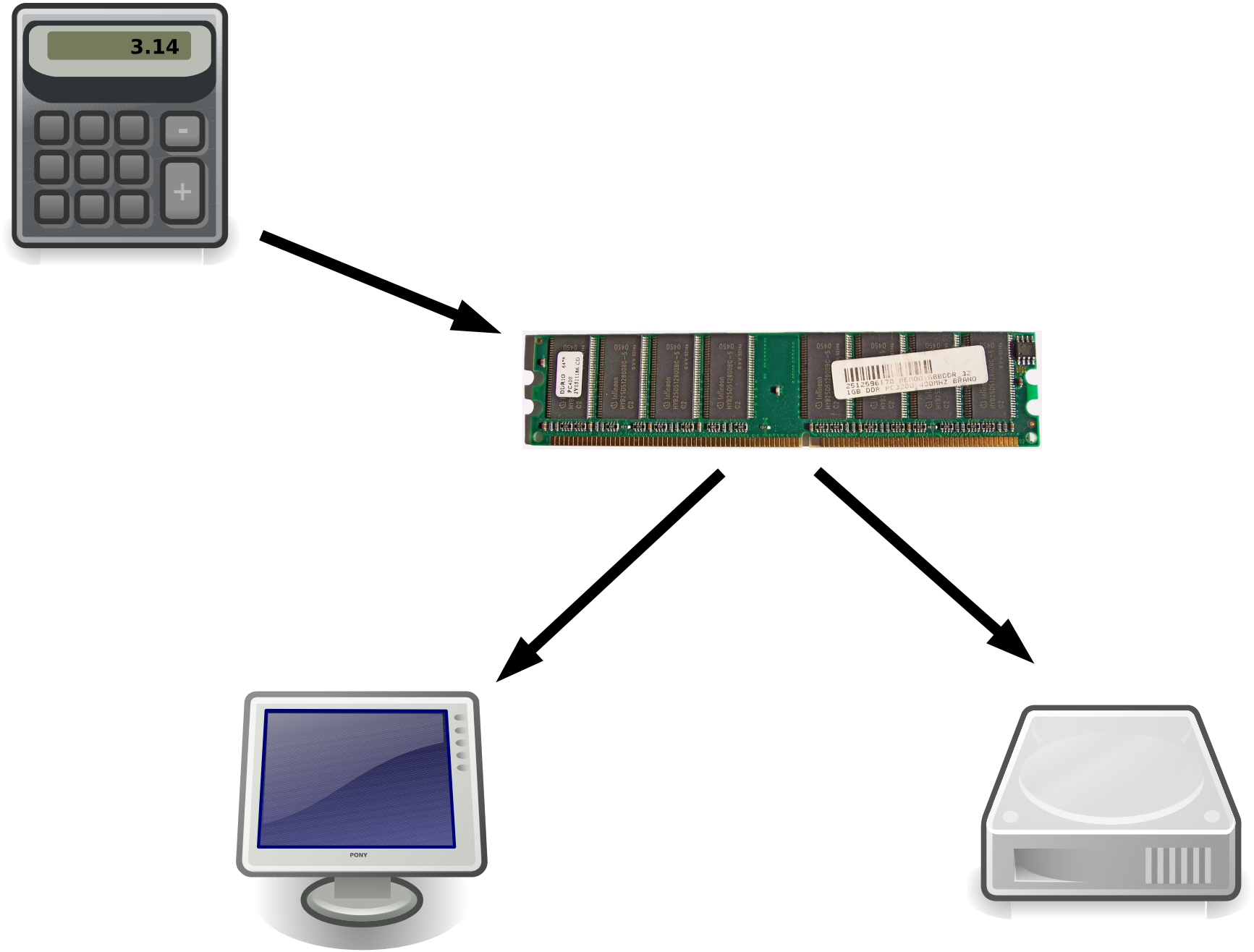
Sources: Lesk, Berkeley SIMS, Landauer, EMC


3.14






PONY


3.14
PONY

Build visit *overview*

visitusers.org/index.php?title=Build_visit_overview

article | discussion | edit | history

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Build visit overview

Visit can now be built automatically using the build_visit script on many Linux, MacOS X, and AIX platforms (more to come). The build_visit script ta

- Modify the Visit source code.
- Run a parallel compute engine. Building a parallel version of Visit on your system allows you to configure Visit so it uses your MPI library, avoidin
- Create your own Visit plugins. Building Visit on your system ensures that it is built with the same C++ compiler that you will use to develop your p

systems. We also recommend using the build_visit script on your system if you plan to:

Contents [hide]

Running build_visit

[edit]

Build_visit has both a Command-Line Interface (CLI) and a Graphical User Interface (GUI). That's also some environment variables that can influen

Background

[edit]

The Visit build process is quite complex, there are several very large external libraries with are required before the Visit build can even be attempted. required a substantial number of changed to the Kitware source in order to function correctly, the third party libraries are unchanged from their distrib conveniently copied into the Visit web site https://wci.llnl.gov/codes/visit/3rd_party/ as well as the SVN site svn+ssh://portal-auth.ner

he user and build the user desired combination of Visit features entirely under-the-covers. With maybe the exception of VTK version 5.0 library, which as open source, so is only available as in the Visit binary distributions. The specific versions of the the external libraries used have been however newer versions of the libraries should work equally well.

Required 3rd-party libraries

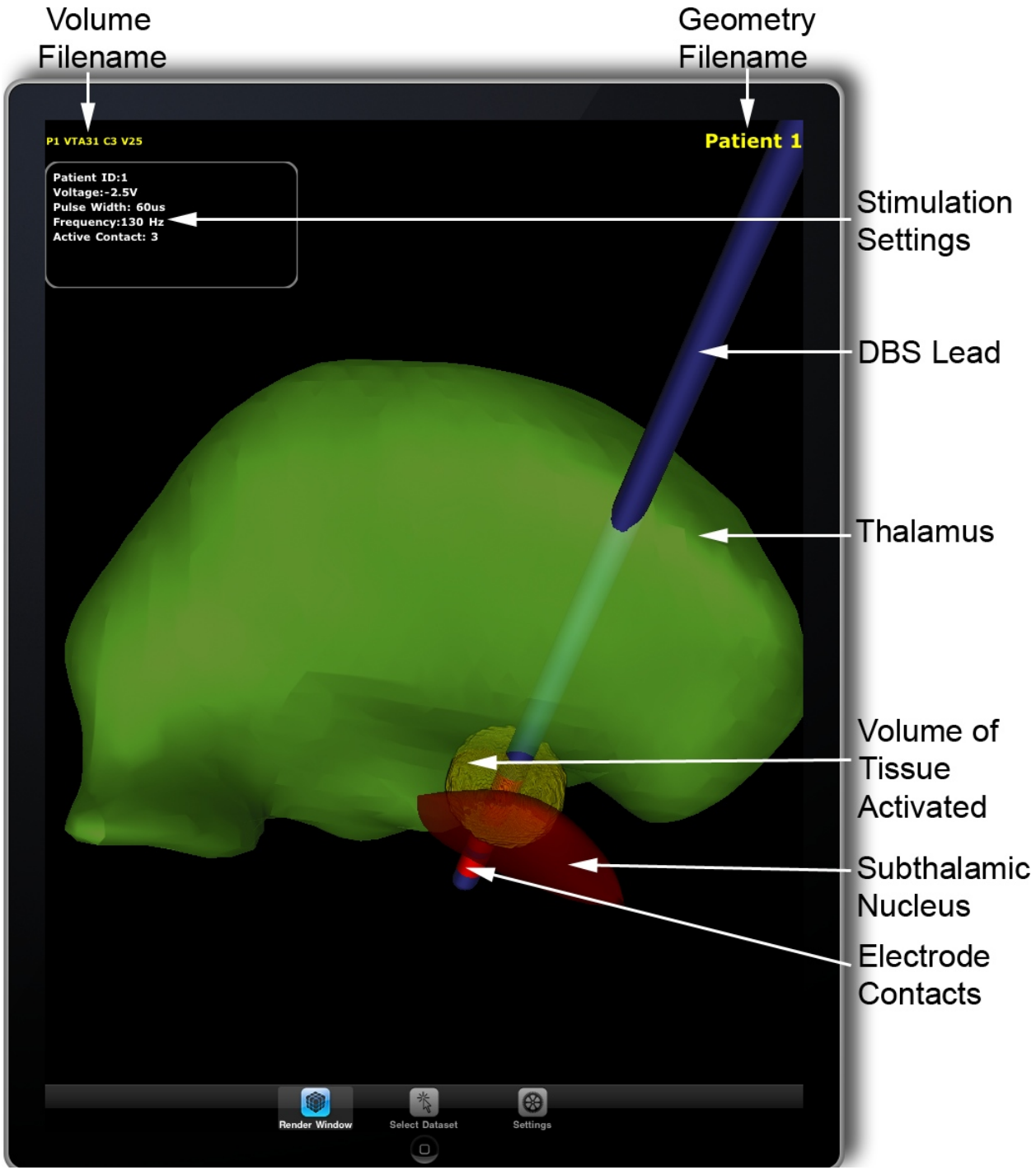
[edit]

The following table contains the required external libraries, the default version number used by build_visit, and in the order that they are being built

Library	Version	Description	For More Information
Mesa	6.4.2	3-D Graphics Library	http://www.mesa3d.org/
Mesa	5.0 (Linux only)		
Qt	3.3.8	GUI Toolkit	http://www.trolltech.com
CMake	2.4.5	Make file generation	http://www.cmake.org
VTK	5.0.0c	Visualization Toolkit	http://www.kitware.com
Python	2.5	Scripting Language	http://www.python.org
Silo	4.6.1	File I/O library	https://wci.llnl.gov/codes/visit/3rd_party/silo-4.6.1.tar.gz

Yeah, I figured that I would end up with visit-writer, alas. It's just that it requires a full-blown installation of VisIt, and that's been painful to setup.

– Chris Aug 9 '09
(StackOverflow)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Geometry Filename
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Voltage:-2.5V
Pulse Width: 60us
Frequency:130 Hz
Active Contact: 3
Stimulation Settings
DBS Lead
Thalamus
Volume of Tissue Activated
Subthalamic Nucleus
Electrode Contacts
Render Window
Select Dataset
Settings

“Google to results”

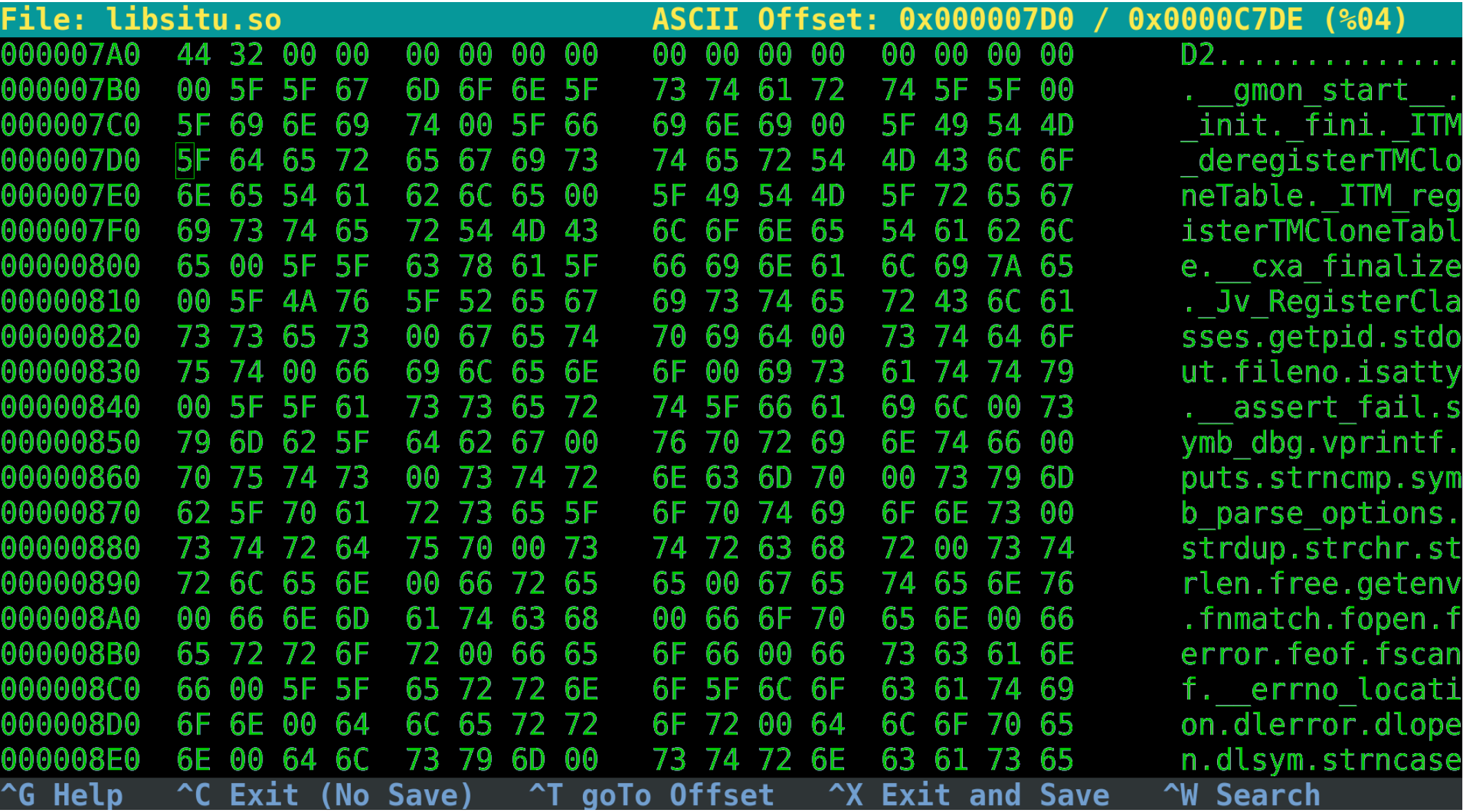
- Metric for ease of use

Goals

- Vis/analysis without disk I/O
- *Simplicity*
  - Few code modifications
  - No CS experts on simulation team
  - Fast turnaround
  - Few external dependencies
  - → Easy to use with “our” sim


Thanks: Wikipedia User:Llez

Binary Instrumentation

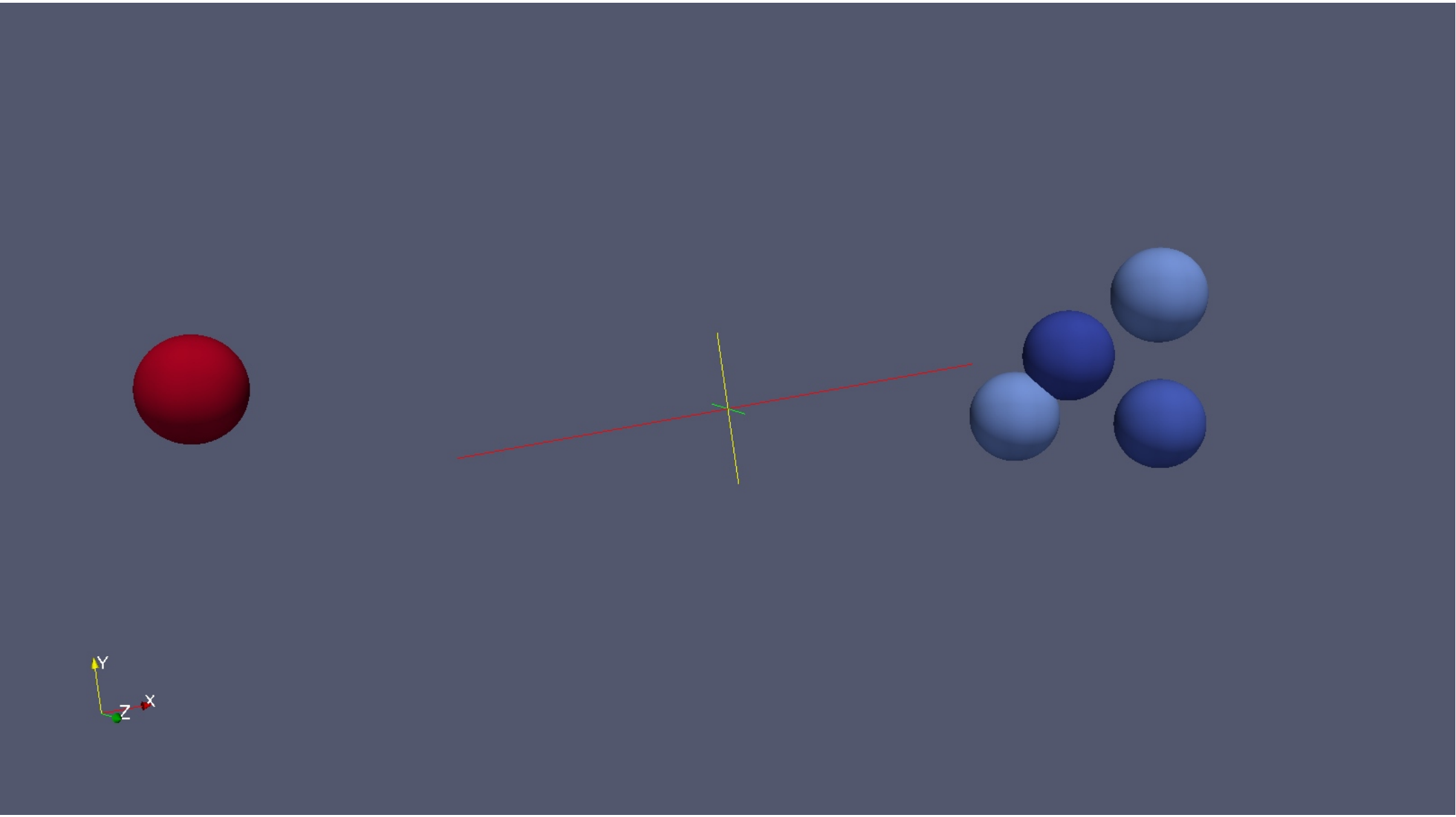


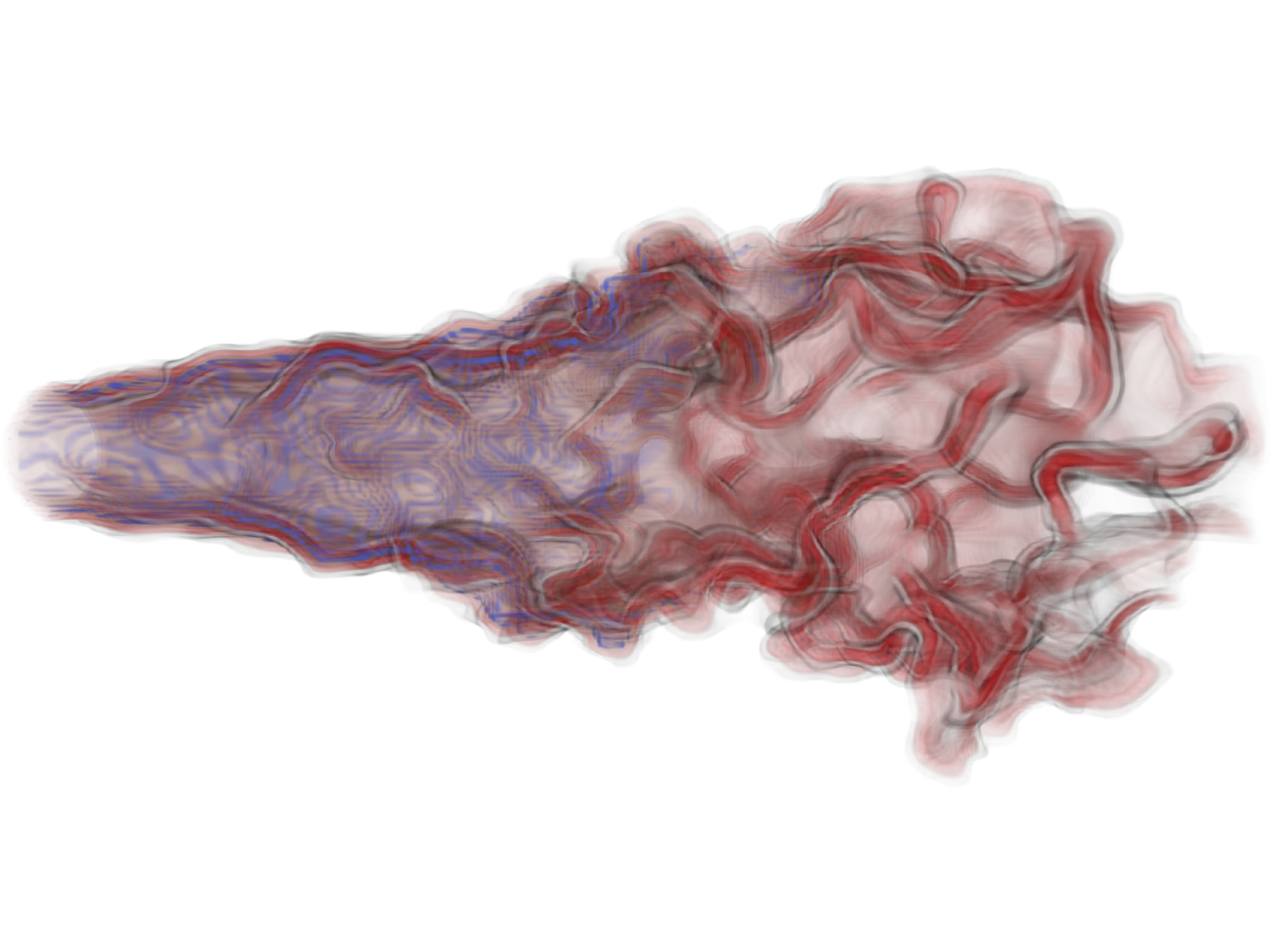
Advantages

- “Google to results”: 10 minutes
- *No* code modifications!
- Novel uses

?

N-Body





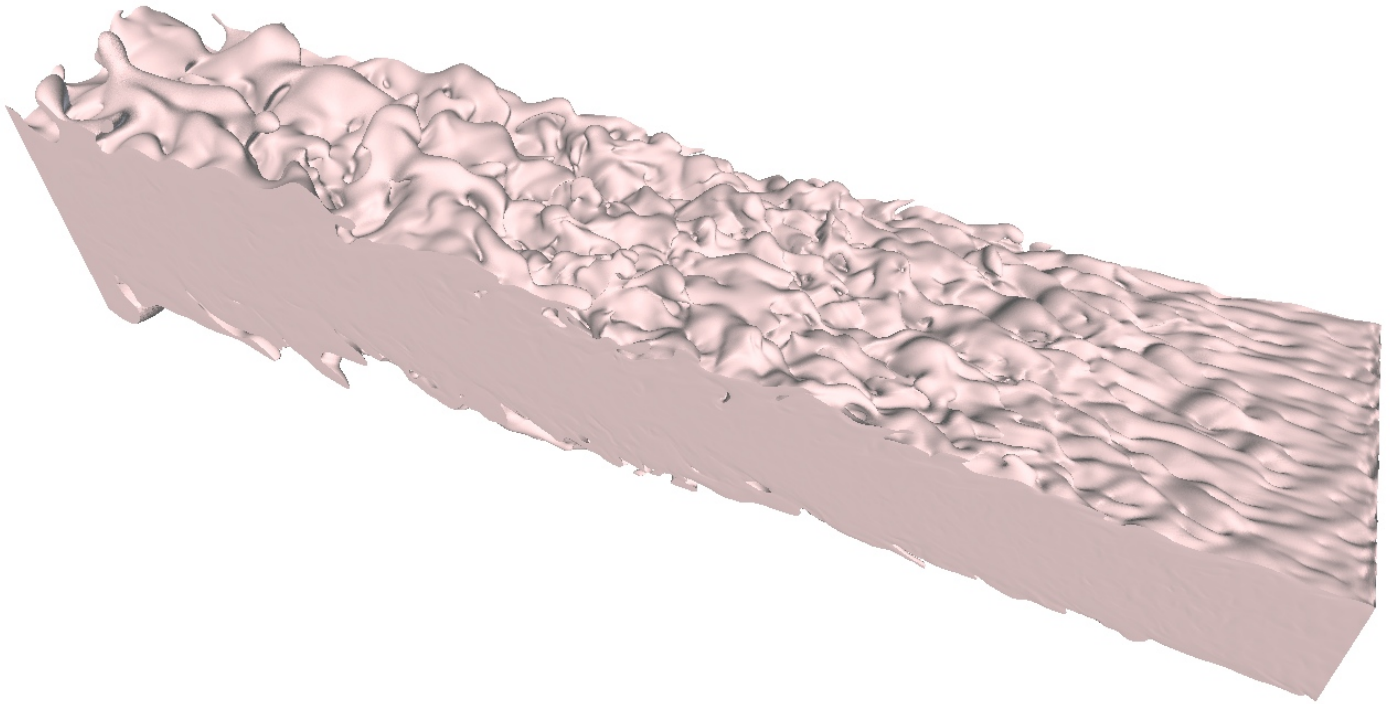


Image Credits

- Wikipedia User:Llez, User:Mysid, User:Lobsterbake, User:Someone35
- Tango project