

## iSeismograph User Guide

### 1. Overview

iSeismograph is a telepresence-demonstration and education tool built on top of RDV and Data Turbine. It takes advantage of the in-board video-camera and 3-axis accelerometer built into all new Apple MacBook products to provide a telepresence experience often referred to as 'Data Turbine in a Can.'

### 2. Introduction

All Macintosh laptop computers today are equipped with a 3-axis accelerometer and iSight video camera. This functionality has been built into Macs for a number of purposes, geared to both the user and the proper functioning of the Macbook itself. What is special about this functionality is that it can also be accessed through software to provide the same data to third-party applications, including iSeismograph.

In many cases, software designed to interact through the Internet to computers far away are called clients while the computers they communicate with are called servers. Many times these servers provide data to the client that comes from other computers equally far away. This is also how NEESit Telepresence Tools are designed.

This is a valuable design paradigm, but can often make the concept of Telepresence and the potential it offers to both researchers and students hard to demonstrate. What iSeismograph offers is a sample Telepresence Tools installation with the client, the server, and the data-gathering software all on a single machine, with a pre-defined client configuration.

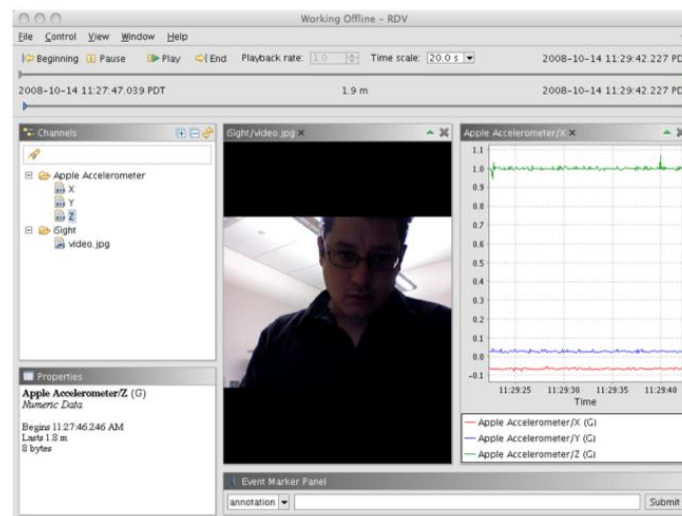


FIGURE 1: SCREENSHOT OF RDV DISPLAYING LIVE DATA

This allows one to interactively demonstrate NEESit Telepresence Tools anywhere, without an Internet connection or additional computer resources. Moreover, it provides a relatively inexpensive seismographic tool (with video capture and playback) suitable for educational purposes in engineering classrooms, etc. Simply install and start iSeismograph, place the Macbook on any table or other surface, and shake. Or use iSeismograph to record your classroom experiments, it's all up to you.

### 3. Limitations

This software, as it has been currently shipped, is for educational and demonstration purposes only. Proper calibration of the accelerometer, and a few other issues need to be resolved in order to make iSeismograph a scientific software instrument.

#### 4. Installation

iSeismograph installs easily on any Macbook or Macbook Pro. A single click on the installation jar file will immediately bring up an install wizard to guide you through the process. iSeismograph is also fully self-contained, and requires no external Data Turbine or RDV installation; the software can be removed by simply dragging the Application/iSeismograph folder in the trash. The disk footprint of an installation without recorded data is eleven megabytes.

Thus, any Macbook or Macbook Pro can become an on-demand iSeismograph, creating a valuable educational and Data Turbine demonstration tool.

#### 5. Using iSeismograph

iSeismograph behaves as a regular RDV client. As such, for a detailed tutorial using RDV, please refer to the [RDV 2.0 User Guide](#).

#### 6. Access to the Source Code

The current version of the source code is available at: <http://svn.nees.org/svn/telepresence/iSeismograph>