DataTurbine and HPWREN

Paul Hubbard
Cyberinfrastructure Lab for Environmental Observing Systems
Science R&D
SDSC/UCSD
Outline

• What is DataTurbine?
• Activities with HPWREN
• Current status and plans
• Open-source DataTurbine initiative
What is DataTurbine?

• DataTurbine is an open source, Java based network ring buffer for all sorts of data. You can use memory + disk for the ring, and it runs on almost any JVM.

• The basic division of work looks like this:
Marketing image
More about DataTurbine

• Sources can have multiple channels, with varied types - numeric (e.g. sensors), video, audio, text, binary blobs.

• We have a variety of sources and sinks, developed in-house, from the original vendor Creare and also community contributed.
HPWREN deployment
RDV: Our best DataTurbine client

RDV is the Real-time Data Viewer, written by Jason Hanley at SUNY Buffalo for NEES. It’s plugin-based Java, handles time series, X vs Y, FFTs, audio, video, TiVO-style navigation, per-channel metadata, events and more.
You can also view data via the web

Data, converted to graphs by the PNG plugin
Future plans

• We have NSF (SDCI) funds to improve, extend and enhance DataTurbine over the next two years, and other funds to support a variety of deployments.

• Plan to
  • Add triggered video data (iQeye, Axis)
  • Web display
  • Continue collaboration with HPWREN
Where to learn more

- Code, documentation, screenshots, FAQ, wiki and more are all available at
  - [http://dataturbine.org/](http://dataturbine.org/)
- Thank you!