



Koala is a data-collection system for TinyOS. Sensor nodes periodically sample their sensors, delta-compress the data, and store it to external flash. Periodically, a basestation PC is used to wake up the nodes, establish multi-hop paths to them, and retrieve the buffered data.

This distribution also integrates the Phoenix time reconstruction algorithm. Sensor nodes periodically exchange time-state information. After data is collected, this information can be used to map measurements (timestamped in node-local time) to a global timeframe (provided by a GPS or PC clock).

(Koala photo by [Erik Veland](#) )

The source code for the Koala data collection system is available via git from

```
git clone git://git.hinrg.cs.jhu.edu/git/koala
```

You can browse the repository [here](#) . This repository includes the core tinyos 2.x distribution, the Koala sensing node software, basestation node software, python download scripts, data upload application, and a template SQL Server database. Setup instructions can be found under the apps/Koala directory in this repository. Please note that the SQL Server databases make this a rather hefty download.