

Presentation title: Genome Browsers and the 'Galaxy' workflow tool

Date: Tuesday 5 July 2011

Abstract:

Genome browsers are important tools for visualisation and analyses of genomic data. I will review some leading genome browsers including the UCSC genome browser, ENSEMBL, GBrowse, IGV and others, and describe some of the major datasets they provide including ENCODE project data at UCSC and 1000genomes data at ENSEMBL. I will review some of the data analysis tools such as the Table Browser provided by the UCSC, which enables visualisation and comparison of user-provided data. I will then demonstrate the Galaxy workflow system which enables development of complex workflows and is especially useful for processing NGS data and can provide a more user-friendly interface to HPC systems. Finally I will review some of the technologies 'under the hood' of the UCSC browser and Galaxy, and the cloud computing and data storage initiatives that will provide these systems for Australian researchers in 2012 and beyond.