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## Open Data in science - technical and cultural aspects

*Saturday, 22 October 2005 09:00 (30 minutes)*

**Note:** Peter's slides are web-page-based and can be downloaded and then viewed from the file [communal.oai4/index.html](http://communal.oai4/index.html). It requires an SVG-enabled HTML viewer.

Research in STM fields routinely generates and requires large amounts of data in electronic form. The growth of scientific research using infrastructures such as the Grid, UK's eScience programme and cyber infrastructure requires the re-use, repurposing and dissemination of this information. Fields like bioinformatics, astronomy, physics, and earth/environmental sciences routinely use such data as primary research input. Much of this is now carried out by machines which harvest data from multiple sources in dynamic and iterative ways, validate, filter compute and republish it.

The current publication process and legal infrastructure is now a serious hindrance to this. Most STM data are never published and the re-usability of those that are is often unclear as authors and publishers give no explicit permission. However almost all authors intend that published data (non-copyrightable "facts") are for the re-use of and dissemination to the STM community and the world in general. Many publishers agree with this, but most do not actively support the effective publication of data, through disinterest or the lack of a viable business proves. Some, however, appear to assert ownership and control over factual data, debarring robots and charging for access.

The new technology offers enormous scope for different models for the publication and use of Open STM data and some will be demonstrated. To develop the necessary culture for this, SPARC has generously agreed to provide a discussion list (SPARC-OpenData) on which PM-R will be the first moderator.

PM-R home page: <http://wwmm.ch.cam.ac.uk>

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