Towards a Resource-Centric Data Network for Astronomy

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Over the past decade, astronomers have been using an increasingly larger number of web-based applications and archives to conduct their research. However, despite the early success in creating links across projects and data centers, the promise of a single integrated digital library environment supporting e-science in astronomy has proven elusive. While some of the issues hampering progress in this area are of technical nature, others are due to political and cultural issues which should be debated at the policy level if further rapid progress is to be made in this area. I will discuss some of the proposals that the NASA Astrophysics Data System project has put forth in order to improve its role as a central discovery portal for astronomers, focusing on those efforts which could benefit from an increased level of involvement from the community, namely the text-mining of astronomy research articles, the effort to expose astronomy resources as linked open data, and the indexing of observational metadata.