

# Rethinking Science Data Archive Systems to Improve Usability

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Planetary science data archives are created with the primary goal of preserving data for future study. In addition to data, varying amounts of supporting documentation are included in the archives to ensure long term usability.

In the 1980s, these archives were collections of files following a standard format. Late in that decade and into the 1990s, simple search forms were developed to allow finer grain selection of data. Up to the mid 1990s, data search engines were at the forefront of Internet-based services technology and at or ahead of the standard user's computer ability. Interface improvements stalled at this time, though, because archives were viewed as passive, static data holdings.

Since that time, new techniques and technologies in other areas of daily computing have had two distinct impacts: users have become more sophisticated in their ability and more demanding of the interface. The distance between the data archives and the science user has continually shortened. Even though usability has improved due to additional supporting data and documentation within the archives, the critical link between the data and the user has become stagnant.

To correct for this disconnect, data archivists must think beyond their traditional boundaries to understand the needs of their customers and to deliver useful and usable products. In short, archivists must think of themselves as marketers and sellers of a service-oriented business product. This is a challenging task, because of the increased scope of such an undertaking. Ideally, the archivist will provide a means for their user community to interact through the use of forums or social media in a meaningful and non-trivial manner. Consideration must be given to the way users currently interact with computer systems, such as expected behaviours of web site elements. Despite the resources needed to create such a system, it is necessary that data archivists take this step in order to avoid becoming inconsequential to their community.

This talk discusses the historical approach to planetary science archives and presents ideas for how the archiving approach might be adapted and restructured to meet the needs and expectations of current and future users.

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