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A Generic Archive Protocol and an Implementation

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Archiving vast amounts of data has become a major part of every scientific space mission today. GRASP, the Generic Archive/Retrieval Services Protocol, addresses the question of how to archive the data collected in an environment where the underlying hardware archives may be rapidly changing.

GRASP is a device independent specification defining a set of functions for storing and retrieving data from an archive, as well as other support functions. GRASP is divided into two levels, the Transfer Interface, and the Action Interface. The Transfer Interface is computer/archive independent code while the Action interface contains code which is dedicated to each archive/computer addressed.

Implementations of the GRASP specification are currently available for DECstations running Ultrix, Sparcstations running SunOS, and microVAX/VAXstation 3100s. The underlying archive is assumed to function as a standard Unix or VMS file system. The code, written in C, is a single suite of files. Preprocessing commands define the machine unique code sections in the device interface. The implementation was written, to the greatest extent possible, using only ANSI standard C functions.