Overview of the NASA Docking System (NDS) and the International Docking System Standard (IDSS)

The NASA/JSC Engineering Directorate has been developing the technology for a Low Impact Docking System (LIDS) for many years. LIDS had been chosen to be the Constellation Program baseline. In February 2009, the International Space Station (ISS) Multilateral control Board (MCB) began an initiative to develop an International Docking System Standard (IDSS) to facilitate greater international cooperation in space and enable emergency crew rescue missions. Discussions as to whether the LIDS could be made compatible with the IDSS were under way.

With the cancellation of the Constellation Program, NASA made a policy decision to convert both of the docking ports on the United States On-orbit Segment (USOS) to IDSS ports and NASA moved the LIDS project under the ISS Program. LIDS was redesigned to become the NASA implementation of the emerging IDSS, and its name was changed to the NASA Docking System (NDS). The NDS design will be certified as a "black box" which can be integrated onto vehicles planning to dock to the ISS IDSS ports.

This presentation will discuss the evolution of the IDSS from both the LIDS and the Androgynous Peripheral Assembly System (APAS) and outline the interface requirements which are given in the IDSS Interface Definition Document (IDD). It also will give an overview of the current NDS design, and touch on ISS plans for converting its docking ports to be IDSS compliant.

The IDSS can be found at http://www.internationaldockingstandard.com, and information on the NDS at http://dockingstandard.jsc.nasa.gov.