

User Data Services for Internet Based Spacecraft Applications

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Abstract—The Consultative Committee for Space Data Systems (CCSDS) is an international organization of national space agencies that is organized to promote the interchange of space related information. CCSDS is branching out to provide new standards to enhanced reuse of spacecraft equipment and software onboard of a spacecraft. This effort is know as Spacecraft Onboard Interface (SOIF). SOIF expects that these standards will be well used within the space community, and that they will be based on the well-known Internet protocols. This presentation will review the present state of the SOIF standards from the perspective of the user. In short, we will look at the services that are being proposed for SOIF. These services include a Command and Data Acquisition Service, a Time Distribution Service, an Instrument & Subsystem Interface Service, a Message Transfer Service, and a File Transfer Service. All of these services will be based on the assumption that they are implemented over Internet or Internet-like protocols. This presentation will describe each of these services, and describe how they may be used. This presentation will also speculate on how using these standards may change the way in which users interface to and interact with the spacecraft.