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DIGITAL HUMAN-CENTERED INTERFACE DESIGN FOR A SHORT LEARNING CURVE ON
CRITICAL TELEMETRY SYSTEMS

Abstract

Critical telemetry systems in analog astronaut missions allow communication between astronauts and a Mission Control Center. These systems require digital interfaces that allow individuals to perform quick and timely actions or reactions to any situation that might arise during Extravehicular Activities (EVA) and/or regular Mission Activities. This paper describes the design, validation and implementation of a digital interface that was tested by analog astronauts and validated on the critical telemetry system Astro Casco (an Andes Aerospace product), taking the name of Astro Casco Receiver Interface. Thus, using a methodology that is based on User Experience (UX) principles, we understood and enhanced Human-Computer Interaction through validation meetings, heat maps, multivariable tests, A/B tests, and usability heuristics inspections. This interface minimizes the learning curve for reading data in telemetry systems, so their users have an effective and efficient way to interpret and understand data received during EVAs and regular Mission Activities.