Draper’s Current Vision Navigation Efforts for Space Applications

Author: Stephen Steffes

Abstract

Target relative navigation has always been important for landing, docking and proximity operations and is becoming increasingly more important for the approach and orbit flight phases. Draper recognizes the importance of accurate navigation for future deep space applications and has a number of active efforts to develop solutions for these hard problems. Our efforts are split into three domains: analysis of navigation architecture and infrastructure concepts, development of the critical onboard algorithms that flow from the architecture definition, design of the critical navigation hardware components that flow from the architecture definition as part of the infrastructure buildup. This presentation discusses our efforts in each of these domains and our plans for the future.