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APPLYING SPACE LAW TO CYBER: AI - A CHALLENGE TO OST'S ARTICLE VI "CONTINUING SUPERVISION?"

Abstract

This paper will review the legal issues arising from increasingly autonomous AI spacecraft capabilities, especially in view of the 2019 Long Term Sustainability (LTS) Guidelines and the Outer Space Treaty's Article VI requirement for "continuing supervision by the appropriate State Party to the Treaty." Space exploration and the challenge of communicating with distant robotic probes, in some cases hours distant at the speed of light, has fostered autonomous capabilities in a wide range of technological disciplines: propulsion, communications, power systems, and perhaps most crucially, increasingly sophisticated software programs that approach what some designate as "artificial intelligence" (AI). Autonomous vehicles already operating on land, sea, and air, mirror similar transformations in space. Just as earthbound AI-driven autonomous vehicles have spawned a plethora of legal issues reflecting liability, ethics, and security concerns, space vehicles will also face increasing scrutiny as AI capabilities potentially loosen their real-time cyber links to their human operators and owners.