

Wireless, Aerospace & Satellite Communications

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Laser Communication

Laser communication has been postulated on since the early 1970s however it has taken until the past 5-10 years to make any significant contribution to lasers or optical communication. This is largely since RF communication became so easily available and inexpensive to employ. The increase in demand for greater throughput and bandwidth for things like: steaming video or hyperspectral imaging requirements, has really pushed laser communication to become a necessity for a variety of applications, but especially so for deep space communication. Laser communication benefits include overcoming shortfalls in bandwidth and throughput, it all but eliminates the limitations associated with specific frequency usage, and it can often be manufactured in a way to save on weight and power requirements for communication system. All that being said there are several issues that optical communication/laser systems must overcome as the technology matures; this includes: pointing stabilization and long-range usage where RF communication might still be the best solution. Regardless it is clear that in order to continue to progress and explore deep space laser communication technologies are required.

Biography

Major Pace has completed a Bachelor of Science Degree in Systems Engineering Management from the United States Air Force Academy and a Masters Degree in Aeronautical Science from Embry Riddle Aeronautical University. He is currently enrolled as a student at Naval Postgraduate school (NPS) and has completed a certificate in Nuclear Command and Control Communications (NC3). Maj Pace is currently serving as the Assistant Director of Operations and U-2 Instructor pilot, for the 1st Expeditionary Reconnaissance Squadron

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