

# Interplanetary Networking Special Interest Group Pilot Projects Working Group - PWG

## The Interplanetary Internet

Communications in the New Space Age IPNSIG PWG Nexus Talk, Utica College, Friday, Oct 29<sup>th</sup> at 3:30 PM EST Register Here:

https://zoom.us/meeting/register/tJwrcOGhqzspHdbV9xBTQU3\_wfYDRR5Mbqfr

#### **Brief of the Event**

The Interplanetary Networking Special Interest Group IPNSIG with the participation of members of the Pilot Projects Working Group PWG, will present to the Utica College community in this Nexus talk, the challenges of communication in Space, the resolutions being developed to these challenges and the opportunities in new Space Exploration. Utica College is an active player on the endeavor of building an Interplanetary Internet. The panel will be open to questions from the audience.

#### Introduction

Presentation of Speakers

Dr. Ronny Bull - Utica College - IPNSIG PWG - IETF - Adirondack IT Solutions, LLC

### The Interplanetary Internet and the Interplanetary Networking Special Interest Group

Space communications and their application to communicate Earth and Space

How space communications are important for the community

Space medical records and the Earth connection as a use case

The Solar System Internet

Oscar Garcia - Pilot Projects Working Group Lead - IPNSIG - Digital Health Information Network

#### The Interplanetary Internet DTN technology applied in the Arctic

The Saami community in challenging environments using Space technologies

Dr. Samo Grasic - Luleå University of Technology - Dálvvadis Economical Association Sweden

#### **Basics of Space Communications**

Factors that affect communications

Distance and disruptions

How space is segmented

Networking in space

Concept of the bundle protocol

Dr. Alberto Montilla - IPNSIG - PWG - Spatiam Corporation

### The contribution of Utica College to the Interplanetary Internet development

Today's developments and future steps

Dr. Ronny Bull - Utica College - IPNSIG PWG IETF - Adirondack IT Solutions, LLC

www.ipnsig.org



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## **Speakers**



Oscar Garcia presented the first Medical Record System for Space Exploration during STINT 2020. He has received the Award of the World Summit on the Information Society in Digital Health for Argentina in 2005. Mr. Garcia has been in computer programming and information systems technologies since 1983. He was the local host of ICANN in Mar del Plata, Argentina. He has been a lecturer for public and private institutions over the years and was appointed to participate in State Missions for Information Technology. Mr. Garcia is a member of the Board of IPNSIG where he chairs the Pilot Project Working Group. He is also chairman of Sister Cities Mar del Plata and has been a Karate teacher for 25 years affiliated to Shorin Ryu Karate Do

International in Middle Island, New York. Mr. Garcia has Argentine and Spanish citizenships adding to the global scope of IPNSIG



**Dr. Alberto Montilla** is a product executive and a space enthusiast. He is a Founding Board Member of SPATIAM CORPORATION, a business with the mission of creating the interplanetary Internet. An IPNSIG member since 2014, Alberto accumulates extensive experience in building new businesses around technology and products. He led product management at Cisco for 15 years and currently works as Director of Product Management at Twilio, the leading Cloud Communications Platform. Alberto Montilla holds a Doctor of Networking Engineering degree from the Universidad Carlos III de Madrid, and an MBA from the Instituto de Estudios Bursátiles. He is a technology advisor of early-stage startups and in his personal time, he enjoys family and friends, sports and technology.



**Dr. Ronny L. Bull** is an Associate Professor of Computer Science at Utica College, and serves as an active member on the Internet Society Interplanetary Networking Special Interest Group's Pilot Projects. Working Group (IPNSIG PWG), as well as the Internet Engineering Task Force (IETF) - Delay and Disruption Tolerant Networking and Mobile Ad-Hoc Networking working groups. Dr. Bull is also the Owner and Chief Scientist of Adirondack IT Solutions, LLC a small local IT Consulting and Research firm located in Utica NY, as well as the Owner and Chief Aquaculture Scientist for Bull Reef Aquaculture, a family run coral farming business that provides aquacultured coral specimens for the Marine Aquarium Hobby and Scientific Research. Dr. Bull received his Ph.D. in Computer Science from Clarkson University.



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Since 2016 **Samo Grasic** has worked at Dálvvadis economical association in Sweden, where he designs and develops a Nomatrack LoRa-DTN (Delay Tolerant Network) platform that is tailor-made for reindeer herding purposes in remote Arctic environments. He is a member of the IPNSIG and co-author of the PRoPHET routing protocol (RFC 6693). Samo Grasic received his PhD in 2014 from Luleå University of Technology, Department of Gender and Innovation. He focuses on the development and deployment of the ICT infrastructure DTN for sparsely populated Arctic regions. His interests include routing

in computer networks, energy harvesting, low power systems, software and hardware development, as well as embedded systems. He is also interested in the social and economical aspects of ICT deployments. Prior to his academic career, Samo worked for more than six years in the industry, developing hardware and software components for meteorological and radiological systems.