INTERNET OF SPACE THINGS: CHALLENGES AND SOLUTIONS







JOIN ZOOM MEETING

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Presenter

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DR. MOHAMMED ATIQUZZAMAN OBTAINED HIS M.S. AND PH.D. IN ELECTRICAL ENGINEERINGAND ELECTRONICS FROM THE UNIVERSITY OF MANCHESTER (UK) IN 1984 AND 1987, RESPECTIVELY. HE CURRENTLY HOLDS THE EDITH J KINNEY GAYLORD PRESIDENTIAL PROFESSORSHIP IN THE SCHOOL OF COMPUTER SCIENCE AT THE UNIVERSITY OF OKLAHOMA.

DR. ATIQUZZAMAN RECEIVED IEEE COMMUNICATION SOCIETY'S FRED W. ELLERSICK PRIZE, IEEE DISTINGUISHED TECHNICAL ACHIEVEMENT AWARD, IEEE SATELLITE COMMUNICATIONS TECHNICAL CONTRIBUTION AWARD, AND NASA GROUP ACHIEVEMENT AWARD FOR "OUTSTANDING WORK TO FURTHER NASA GLENN RESEARCH CENTER'S EFFORT IN THE AREA OF ADVANCED COMMUNICATIONS/AIR TRAFFIC MANAGEMENT'S FIBER OPTIC SIGNAL DISTRIBUTION FOR AERONAUTICAL COMMUNICATIONS" PROJECT. HE IS THE CO-AUTHOR OF THE BOOK "PERFORMANCE OF TCP/IP OVER ATM NETWORKS" AND HAS OVER 350 REFEREED PUBLICATIONS.



Abstract

DATA COMMUNICATIONS BETWEEN EARTH AND DEVICES ON SPACECRAFT, SUCH AS SATELLITES, HAVE TRADITIONALLY BEEN CARRIED OUT THROUGH DEDICATED LINKS. SHARED LINKS USING INTERNET PROTOCOL-BASED COMMUNICATION OFFERS A NUMBER OF ADVANTAGES OVER DEDICATED LINKS. THE MOVEMENT OF DEVICES ON SPACECRAFTS HOWEVER GIVES RISE TO MOBILITY MANAGEMENT ISSUES.

DISCUSS VARIOUS MOBILITY THIS TALK WHI MANAGEMENT SOLUTIONS FOR EXTENDING THE INTERNET CONNECTION TO SPACE THINGS ON SPACECRAFT. THE TALK WITH PROVIDE AN OVERVIEW OF NETWORK LAYER BASED SOLUTION BEING DEVELOPED TASK FORCE AND COMPARE ENGINEERING INTERNET TRANSPORT LAYER BASED SOLUTION THAT HAVE BEEN DEVELOPED AT NATIONAL UNIVERSITY OF OKLAHOMA IN CONJUNCTION WITH **AERONAUTICS AND SPACE ADMINISTRATION. NETWORK IN MOTION IS** AN EXTENSION OF THE HOST MOBILITY PROTOCOLS FOR MANAGING THE MOBILITY OF NETWORKS WHICH ARE IN MOTION. SUCH AS THOSE AIRPLANES AND TRAINS. THE APPLICATION OF NETWORKS MOTION WILL BE ILLUSTRATED FOR BOTH TERRESTRIAL AND SPACE ENVIRONMENTS.

