

SHORT TERM SCIENTIFIC MISSION (STSM) – SCIENTIFIC REPORT

The STSM applicant submits this report for approval to the STSM coordinator

Action number: CA15127

STSM title: Protection of wireless mesh network traffic against weather-induced link disruptions

STSM start and end date: 09/02/2020 to 23/02/2020

Grantee name: Michal Pioro

PURPOSE OF THE STSM/

(max. 500 words)

The purpose of the STSM was to prepare a draft of a research paper on protection of wireless mesh network traffic against weather-induced link disruptions. The paper will be submitted to the internationally recognized journal IEEE Access.

DESCRIPTION OF WORK CARRIED OUT DURING THE STSM

(max. 500 words)

During the STSM the following work was carried out:

- (a) The paper layout and contents were discussed and specified. The tentative title of the paper is as follows: “Max-Min Fair Traffic Recovery in Wireless Mesh Networks under Adverse Weather Conditions”.
- (b) Two drafts of technical sections were written: one describing the elements of the max-min fairness theory, and the second describing the proposed mathematical model for network optimization including the c-set generation technique embedded in the max-min fair optimization algorithm.
- (c) The result section was planned, especially in the context of attenuation modelling in wireless mesh networks. .

DESCRIPTION OF THE MAIN RESULTS OBTAINED

(max. 500 words)

The major results achieved during the STSM correspond to items (a)-(c) described above, and form a solid

base for preparing a submission of the paper in question to IEEE Access.

FUTURE COLLABORATIONS (if applicable)

(max. 500 words)

The collaboration of prof. Michal Pioro (the STSM applicant) with Lund University in the field of resilient wireless networks optimization will continue after the RECODIS COST Action is completed.