

SHORT TERM SCIENTIFIC MISSION (STSM) SCIENTIFIC REPORT

This report is submitted for approval by the STSM applicant to the STSM coordinator

Action number: CA15127

STSM title: Elaboration of taxonomy of resilient routing algorithms and techniques

STSM start and end date: 30/03/2019 to 05/04/2019

Grantee name: Ivan Ganchev

PURPOSE OF THE STSM:

The purpose of this STSM was to work on a taxonomy of algorithms and techniques for resilient routing, in general, and on the corresponding book chapter, in particular, with the aim of elaborating a comprehensive classification of resilient routing algorithms and techniques, and a suitable structure of the corresponding book chapter presenting it in the most attractive manner. This way the STSM contributed towards achieving a major milestone of the COST Action CA15127 "Resilient Communication Services Protecting End-User Applications from Disaster-based Failures (RECODIS)", which targets the preparation and publication of a book, planned for month 47 of the Action.

DESCRIPTION OF WORK CARRIED OUT DURING THE STSM

The following work was carried out during the STSM:

1. Preparation of an initial taxonomy of algorithms and techniques for resilient routing.
2. Enhancement of the taxonomy by the inclusion of new criteria and features.
3. Further elaboration and enrichment of the taxonomy by the inclusion of other algorithms and techniques for resilient routing.
4. Reaching a final structure of the elaborated taxonomy.
5. Agreeing on the structure of the corresponding chapter of the RECODIS book including the title, the draft content, and the maximum length of each chapter section.
6. Preparation of the initial content of the main chapter sections.

DESCRIPTION OF THE MAIN RESULTS OBTAINED

The main results obtained during this STSM could be described as follows:

1. Summarising the state-of-the-art outcomes in the area of resilient routing algorithms and techniques with the aim of presenting these in the most attractive way in the corresponding chapter 3.1 with a working title "Taxonomy of algorithms for resilient routing", which is currently under preparation within the Working Group 5 of the COST Action RECODIS for its upcoming book entitled "Guide to Disaster-resilient Communication Networks", which is to be published by Springer in the "Computer Communications and Networks" series in 2020.
2. Coming up with a good structure and a tutorial-like content of the book chapter reflecting the main purpose of the upcoming RECODIS book.

3. Elaboration of a plan for finalizing and completing the book chapter in order to meet the time schedule set for the book's preparation and publication.

FUTURE COLLABORATIONS (if applicable)

In general, this STSM will enforce the research cooperation between the Gdansk University of Technology (Poland) and the University of Limerick (Ireland), and may lead to future joint activities of common interest between these two institutions.

In particular, a near-future collaboration with the host was discussed during this STSM as regards working on and preparing a joint paper for publication in an open-access journal with an impact factor, based on the continuation and extension of the collaborative work done during the mission under the umbrella of the COST Action RECODIS.