Description of Work

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SEVENTH FRAMEWORK PROGRAMME

ICTs

INFORMATION AND COMMUNICATION TECHNOLOGIES

Grant agreement for: Large-scale integrating project

Annex I. - "Description of Work"

Project acronym: ACROSS

Project full title: Automatic Code Verification by Formal Analysis

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Abstract

Product Development is driven by stakeholder requirements. The larger the developed system, the harder it is to analyze and verify it. Software Projects are no exceptions. This project aims to show how the verification of huge software projects can be performed automatically against the given requirements.

The project spreads across multiple areas of main stream research. For formalizing the requirements a Natural Language Processing (NLP)

T artificial neural network, with a set of successful formal descriptions received from human-readable version of requirements and their formal description to learn the models of correctly implemented requirements; (II) a checker, which analyzes requirements' formal description and semantics, obtained by semantically analyzing the source code. The proposed solution checks if written code meets the requirements or not. In the end it makes a suggestion how to fix a code.

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