

**Information on Search Strategy - Pilot phase (see OJ 2015, A86)**

The type of information contained in this sheet may change during the pilot for improving the usefulness of this new service.

Application Number

PCT/EP2018/065212

TITLE: ANOMALY DETECTION IN COMPUTER NETWORKS

APPLICANT: BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY

IPC CLASSIFICATION: H04L12/24, H04L12/26

EXAMINER: Koch, György

CONSULTED DATABASES: EPODOC, WPI, DOSYS, NPL, XPNPL, XPI3E, XPESP

CLASSIFICATION SYMBOLS DEFINING EXTENT OF THE SEARCH:

IPC:

CPC: H04L41/142, H04L41/5009, H04L43/04

FI/F-TERMS:

KEYWORDS OR OTHER ELEMENTS FEATURING THE INVENTION:

A method of anomaly detection for network traffic communicated by devices via a computer network, the method comprises the steps of clustering a set of time series, each time series including a plurality of time windows of data corresponding to network communication characteristics for a device, training an autoencoder for each cluster based on time series in the cluster, generating a set of reconstruction errors for each autoencoder based on testing the autoencoder with data from time windows of at least a subset of the time series, generating a probabilistic model of reconstruction errors for each autoencoder, and generating an aggregation of the probabilistic models for detecting reconstruction errors for a time series of data corresponding to network communication characteristics for a device as anomalous.