


GTARC

 GERMAN TURKISH
 ADVANCED RESEARCH CENTRE FOR ICT


A Scalable Middleware Approach for Holistic Networking of IoT



Following the global interconnection of people and services through the Internet, the concept of the "Internet of Things" (IoT) has been on the rise with the ambition to digitalize and interconnect everyday objects in many domains of life and work. The great potential of this ambition lies in the holistic networking of the involved entities, i.e., the ability of any device to interact with any other device.

On the other hand, the increasing number and variety of devices or sensors in the growing IoT world makes it ever more complex to realize and manage such holistic interconnection systems. Available IoT solutions are mostly developed for either small sized platforms or for specific scenarios with a predefined set of sensors or devices, and they are far from providing the dynamic scaling and adaptability required to realize the added value of IoT holistic networking.

CHARIOT proposes an IoT middleware framework that aims to address the aforementioned issues to highlight the added value of the holistic networking of IoT. Main challenges are the interoperability of all entities, representation of various actors ranging from simple sensors to complex devices to humans, a logical orchestration of all services, and learning ability for its entities. Furthermore, easy development and deployment of services are additional important aspects to make the system more modular and therefore more adaptable. CHARIOT enables stakeholders to represent various devices, develop efficient and dynamic services, as well as implement novel applications extracting the added value from the holistic networking provided by the IoT middleware.

PROJECT OVERVIEW

PROJECT TITLE

CHARIOT - A Scalable Holistic Middleware Approach for the Internet of Things

WHAT IS IT ABOUT?

CHARIOT project envisions a scalable, dynamic and flexible middleware that creates added value for a holistic IoT network by offering stakeholders the opportunity to interconnect various devices, applications and services within the IoT domain.

RUN-TIME

from 01/11/2016 to 31/10/2019

CONTACT

Dr. Fikret Sivrikaya
 E-MAIL fikret.sivrikaya@gt-arc.com
 PHONE +49 (0) 30-314 74010

BUZZWORDS

Middleware, Runtime Environment, Internet Of Things, Autonomous Systems, Semantic Services, Service Orchestration

URL



www.gt-arc.com

SPONSOR



Federal Ministry
 of Education
 and Research