

Support Letter for Mahdi BEN ALAYA application for vice-chair position of oneM2M TST group

1st July 2015

Dear oneM2M members,

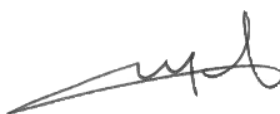
We are pleased to support the application of Mahdi BEN ALAYA for the vice-chair position of the oneM2M TST group.

Mahdi BEN ALAYA is involved in oneM2M activities since its creation. He is actively participating in the oneM2M TST group activities and contributes regularly to the "oneM2M TS-0013 Interoperability Testing". He contributed to "SmartM2M TS-103315: Interoperability Test Specification for ETSI M2M Primitives" and was involved in the technical preparation of the SmartM2M Plug tests held on September 2014 at Sophia Antipolis.

He is the co-founder and technical manager of the Eclipse OM2M project that provides a full open source implementation of both oneM2M and SmartM2M standards.

He actively participates to the oneM2M and SmartM2M showcases by developing several demonstrators. He is an outstanding IoT Solution Architect and oneM2M/SmartM2M expert. He is a distinguished PhD in computer science who successfully initiated and managed several R&D projects at LAAS-CNRS.

Sincerely yours



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Mahdi Ben Alaya

PhD at LAAS-CNRS.
IoT Solution Architect.
SmartM2M / oneM2M Standard Expert.
Eclipse OM2M Project Co-founder and
Technical Manager.

Age: 28 years old.
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Apt 49, 31400 Toulouse, France.
Phone : (+33) 06 71 93 90 45
Email : ben.alaya@laas.fr
Website: <http://om2m.org>

Education

2011 – 2015: Laboratory for Analysis and Architecture of Systems (LAAS-CNRS), Toulouse, France.

- PhD in computer science: "Towards Interoperability, Self-management and Scalability for M2M systems".

2007 – 2011: National School of Computer Sciences (ENSI), Tunisia.

- Research master degree in artificial intelligence and decision.
- Engineering diploma in computer science.

2005 – 2007: Undergraduate intensive courses in mathematics and physics (IPEIT), Tunis, Tunisia.

- National competitive examination for admission to the "Grandes Ecoles"

Professional Experiences

2011 – 2015: Phd and Research Engineer at LAAS-CNRS, Toulouse, France

- Eclipse OM2M: Standard-based service platform for M2M interoperability.(REST, JAVA, OSGi, CoAP, MQTT, Zigbee)
- FRAMESELF: Rule-based Autonomic Computing framework for M2M self-management. (Drools, SPARQL, SWRL)
- IoT-O: IoT Ontology model for an effective M2M semantic interoperability and reasoning.(RDF, OWL, SSN, DUL)
- OSCL: Content-based meshed network to enhance networking and data dissemination for M2M systems.(ICN, NDN)
- ADREAM Smart Building Mock-up demonstrator: M2M Home Automation and Smart Metering business cases.

April 2014 – September 2014: Expert at ETSI, Sophia Antipolis, France.

- Specification and development of interoperability tests for ETSI S architecture.
- Technical preparation and support for the Plugtest ETSI M2M event, September 2014.

September 2010 – February 2011: Master Internship at LAAS-CNRS, Toulouse, France.

- Software components self-configuration based on user profile and environments changes. (Android, OSGi, iPOJO)

February – June 2010: Engineering Internship at LAAS-CNRS, Toulouse, France.

- Deployment management service for dynamic e components installation on mobile devices. (Android, OSGi, WS*)
- LAAS public transport business case demonstrator for the ITEA2-USENET project. (Silver Achievement Award)

July – August 2009: Engineering Internship at CYNAPSYS, Ariana, Tunisia.

- Customer Relationship Management (CRM) marketing module.(JEE, Spring, Hibernate, JSF, IceFaces, AJAX)

February - Mai 2009: Software engineering project at ENSI, Manouba, Tunisia

- Web-based project management and collaboration platform. (JEE, JPA, Hibernate, EJB3, JSF, RichFaces, JFreeShart)

Projects Involvement

2013 – 2014: Eclipse OM2M (Open source standard-based M2M service platform), Eclipse project, IoT WG.

- Eclipse OM2M project co-founder and technical manager (<http://om2m.org>).
- Agile software development. Management of 9 engineering students and 4 master students.
- Continuous integration using Maven, Git, Gerrit, Jenkins, SonarQube, Nexus, and Bugzilla servers.

2010 – 2014: A2NETS (Autonomic Services in M2M Networks), ITEA2 European project:

- Scope: Define a horizontal M2M standard-based approach with autonomic computing capabilities
- Contribution: Interoperable architecture, service platform, and smart metering scenarios and demonstrator.

2010: USENET (Ubiquitous M2M Service Networks), ITEA2 European project:

- Scope: Define a generic M2M service concept for ubiquitous M2M service networks.
- Contribution: M2M commons requirements, components deployment, and public transport scenarios and demonstrator.

Demonstrations

IOT / M2M demonstrations

- Eclipse OM2M workshop at National Chiao Tung University (NCTU), Taipei Taiwan – 2015.
- OneM2M showcase, Nice, France – 2014
- ETSI M2M Workshops, Nice, France – 2012, 2013, and 2014.
- JavaOne Oracle Conference, San Francisco, USA – 2014.
- Eclipse Conference, San Francisco, USA – 2014.
- Eclipse IoT Day, Grenoble, France – 2014.
- IoT & M2M Spring School, Hammamet Tunisia – 2014.
- M2M innovation world congress, Nice France – 2013.
- ITEA2 & Artemis co-summits Ghent 2010, Helsinki 2011, Paris 2012, and Stockholm 2013.

Documentaries

- Smart building demonstration for the documentary television series "The World of tomorrow: Ambient intelligence".

Rewards

Google vulnerability reward program

- Received a reward from Google for qualifying vulnerabilities in a highly sensitive Google application.
- My name is listed in the Google Hall of Fame.

Publications

Standards specifications

- Contribution to SmartM2M TS 103315: Interoperability Test Specification for ETSI M2M Primitives.
- Contribution to SmartM2M TS 102 921: Correct re-targeting mechanism for the HTTP binding. 2015 (Ref: 33_009)
- Contribution to SmartM2M TS 102 921: Correct re-targeting mechanism for the CoAP binding. 2015 (Ref: 33_010
- Contribution to OneM2M ARC TS-0001: Collection pattern for OneM2M. 2014 (Ref: ARC-2014-1553)
- Contribution to OneM2M ARC TS-0001: REST API versioning for OneM2M. 2014 (Ref: ARC-2014-1592)
- Contributions to OneM2M TST TS-0013: 2015 (Refs: TST-2015-0041R02, TST-2015-0042, TST-2015-0033R01, TST-2015-0034R01, TST-2015-0035R01, TST-2015-0031R02, TST-2015-0032, TST-2015-0086R01, etc.)

International journals

- Ben Alaya M, Medjiah S, Monteil T, Drira K, Towards Semantic Data Interoperability in oneM2M Standard. IEEE Communications Magazine, IEEE, 2015 (Submitted)
- Grieco LA, Ben Alaya M, Monteil T, Drira K, Constrained Overlays with Faulty Links: Equilibrium, Stability, and Upper Bounds. IEEE Communications Letters, 2015.
- Grieco LA, Ben Alaya M, Monteil T, Drira K, A Dynamic Random Graph Model for Unstructured Network Overlays with Diameter Constraints. IEEE Transactions on Circuits and Systems TCAS II, 2014.
- Latvakoski J, Ben Alaya M, Ganem H, Jubeh B, Iivari A, Leguay J, Bosch J, Granqvist N, Towards Horizontal Architecture for Autonomic M2M Service Networks. MDPI Future Internet, 2014.
- Latvakoski J, Iivari A, Vitic P, Jubeh B, Ben Alaya M, Monteil T, and al, A Survey on Autonomic M2M Service Networks. MDPI Computers, 2014.
- Iivari A, Väisänen T, Ben Alaya M, Riipinen T, Monteil T, Harnessing XMPP for Machine-to-Machine Communications & Pervasive Applications. Journal of Communications Software and Systems, 2014.
- Ben Alaya M, Monteil T, FRAMESELF: an ontology-based framework for the self-management of machine-to-machine systems. WILEY Concurrency and Computation: Practice and Experience, Vol 25, September 2013.
- Gharbi, G. Ben Alaya, M. Diop, C. Exposito, E, AODA: An automatic and ontology-driven architecture for service-oriented and event-driven systems. International journal of collaborative enterprise, 2013.

International conferences

- Vogli E, Ben Alaya M, Monteil T, Grieco LA, Drira K, An efficient resource naming for enabling constrained devices in SmartM2M architecture. IEEE ICIT International Conference on Industrial Technology, 2015.

- Ben Alaya M, Banouar Y, Monteil T, Chassot C, Drira K. OM2M: Extensible ETSI-compliant M2M service platform with self-configuration capability. RAMCOM, Recent Advances on M2M comm. Hasselt, Belgium. June 2014.
- Grieco LA, Ben Alaya M, Monteil T, Drira K. Architecting Information Centric ETSI-M2M systems. IEEE International Conference on Pervasive Computing and Communications WIP. Budapest · Hungary · March 24-28 2014.
- Ben Alaya M, Matoussi S, Monteil T, Drira K. Autonomic computing system for self-management of machine-to-machine networks. ACM Self-IoT, international workshop on Self-aware internet of things. San Jose, USA, June 2013.
- Ben Alaya M, Monteil T. FRAMESELF: A Generic Context-Aware Autonomic Framework for Self-Management of Distributed Systems, IEEE WETICE, Enabling Technologies: Infrastructure for Collaborative Enterprises. June 2012.
- Ben Alaya M, Monteil T, Drira K. Autonomic framework based on semantic models for self-management of ubiquitous systems. ACM UbiComp 2012, Ubiquitous Computing. Pittsburgh, USA. September 2012.
- Gharbi G, Ben Alaya M, Diop C, Exposito E. An Autonomic and Ontology-Driven Architecture for Service-Oriented and Event-Driven Systems. IEEE WETICE, Enabling Technologies: Infrastructure for Collaborative Enterprises. June 2012.
- Ben Alaya M, Baudin V, Drira K. Dynamic Deployment of Collaborative Components in Service-Oriented Architectures. IEEE NOTERE, New Technologies of Distributed Systems. Paris, France. May 2011.

Magazines and newspapers

- "Le Monde, Science & Techno", "Robots and Humans, roommates in Toulouse", pp. 4-5, 06/01/2012.
- "Le Parisien", "Cameras and sensors everywhere", pp. 1-3 18/07/2012.
- "La Dépêche du midi", "Energy smart management via Machine-to-Machine communications, pp. 21, 14/10/2012.

Projects deliverables

- A2NETS WG2: Interoperable M2M System Architecture
 - D2.1 – State of the art of Interoperable M2M system Architecture. (2011)
 - D2.2 – M2M System Architecture Requirements. (2012)
 - D2.3 – Specification of Interoperable M2M System Architecture. (2012)
 - D2.4 – Interoperable Model of M2M System Architecture V1. (2013)
 - D2.5 – Final requirements and M2M architecture Model V2. (2014)
- A2NETS WG3: Horizontal M2M Service Platform
 - D3.1 – M2M service platform & framework requirements. (2012)
 - D3.2 – Specification of the M2M service platform & framework. (2012)
 - D3.3 – Design model of the M2M service platform & framework: Open service platform framework V1. (2013)
 - D3.4 – Design model of the M2M service platform & framework: Open service platform framework V2. (2014)
 - D3.5 – Final M2M service platform & framework results. (2014)
- A2NETS WG6: M2M business cases demonstrators and experiments
 - D6.1 – A2Nets business case experiments: scope and definition
 - D6.4 – Smart metering for green energy experiment: Initial specification. (2012)
 - D6.7 – Description and evaluation of combined A2Nets demonstrator. (2014)

Languages Skills

- Fluent French
- Fluent English
- Native Arabic.