

Guillaume Habault

PH.D. · TELECOMMUNICATION AND INTERNET OF THINGS

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“Participate in Telecommunications leading innovations.”

Education

IMT Atlantique (ex. Télécom Bretagne)

Brest & Rennes, FRANCE

PH.D. IN COMPUTER SCIENCE & TELECOMMUNICATION

Oct. 2010 - Oct. 2014

MASTER OF SCIENCE IN MICROELECTRONICS, ARCHITECTURES, NETWORKS AND COMMUNICATION SYSTEMS

Sep. 2009 - Aug. 2010

MASTER WITH SPECIALIZATION IN SOFTWARE, SYSTEMS AND NETWORKS

Sep. 2005 - Aug. 2009

Experience

Institut Mines-Télécom

Paris, FRANCE

ICT ARCHITECT FOR THE EUROPEAN PROJECT “SMART ENERGY AWARE SYSTEMS (SEAS)”

Mar. 2015 - Jan. 2017

- Design an innovative ICT Architecture compliant with IoT technology and other standards and existing platforms.
- Implement a Proof-of-Concept to demonstrate its benefits.
- Implement use cases on top of this architecture to evaluate it in real scenario.

CISCO & Télécom Bretagne

Rennes, FRANCE

IPv6 FOR UNIVERSAL PLUG AND PLAY (UPnP)

Mar. 2010 - Aug. 2010

- Adapt UPnP standard to IPv6.
- Enhance an existing UPnP stack with IPv6 capabilities.
- Implement a security patent to prevent corrupted devices from interfering.

Orange Labs

Cesson-Sévigné, FRANCE

MOBILITY DEMONSTRATOR PERFORMANCE EVALUATION AND OPTIMIZATION

Mar. 2009 - Aug. 2009

- Integrate new devices to the demonstrator.
- Evaluate its performance and solve issues.
- Optimize time spent during handover.

HTC Europe Co. Ltd

Slough, UNITED-KINGDOM

COMMERCIALIZATION PRODUCT MANAGER & TECHNICAL MANAGER

Aug. 2007 - Jun. 2008

- Manage Smartphones roadmap and project delivery for UK and East-Europe.
- Set up and manage a full project for East-Europe market.
- Manage technical projects – Resolving issues and satisfying customers requirements.

NiCT

Tokyo, JAPAN

STUDY OF MICROSTRIP PATCH ANTENNAS

Jun. 2006 - Aug. 2006

Build and experiment patch antennas.

Extracurricular Activity

Manager and vice-president of Swedish Fit Rennes

Rennes, FRANCE

MANAGE AND COORDINATE A TEAM IN ORDER TO DEVELOP SWEDISH FIT

2014 - Present

- Gained expertise in promoting an activity in front of different organizations and audiences.
- Gained expertise in managing people from different domains.

President of ADER (Télécom Bretagne young researchers association)

Rennes, FRANCE

STIMULATE EXCHANGE BETWEEN RESEARCHERS & PROMOTE PHD TRAINING

2012 - 2014

- Proposed various activities on the campus (scientific, cultural and sport).
- Presented PhD assets to different audiences.
- Participated in the organization of a PhD workshop in 2012.

Research and Teaching Activities

PH.D. THESIS

Title **Service-based Networking applied to Machine-to-Machine Communications**

Director **Prof. Jean-Marie BONNIN**, Dr. Laurent TOUTAIN and Dr. Philippe BERTIN

SUMMARY

The network ecosystem offers a diversity of Access Networks (ANs) for devices to connect to. Currently, devices select the AN based on its physical characteristics. However, the best AN satisfying this selection may not be the most suitable one for all services. In addition, the arrival of new constrained devices with the Internet of Things requires that the connection process should be specified for them to benefit from this AN diversity. We proposed a generic, lightweight and service-based announcement mechanism, allowing any device to efficiently select, and so, connect to the best AN for each service. Our mechanism helps Service Providers announce their services on existing networks and helps devices filter ANs based on service availability. Both the impact and effectiveness of this mechanism has been studied on a Machine-to-Machine scenario using simulations and mathematical models.

RESEARCH

INTEREST

- Internet of Things – Architecture, Protocols, Applications and Implementations.
- Smart Grid – Energy management, coordination of production and consumption and interconnection of “energy actors”.
- Wireless Mobility and Multihoming – Handover management, Network selection.
- Intelligent Transport System – Efficient charging, Vehicle-to-Grid and Vehicle-to-Infrastructure.

ACHIEVEMENTS

- Set up a complete “nanogrid” at Télécom Bretagne – Photovoltaic panels, batteries and Electric Vehicle management. It includes tools and algorithms to automate and visualize both electricity consumption and production, as well as, manage and optimize them.
- Contributed to the enhancement of Wi2Me – an android research application collecting Wi-Fi statistics.

Qualifications and Languages

Competences Experienced in group work and group management, as well as leading projects.
Goods organizational skills.

Programming experience Python, Matlab, PHP, C, C++, Java, XML

Knowledge of Web Semantic (RDF, JSON, JSON-LD)

Simulation NS2, NS3

Telecommunication knowledge OSI and Network Architectures (Cellular, wired & wireless, M2M, IoT, REST)
Protocols (IP, UPnP, Mobile IP, CoAP, RIP, BGP, etc.)

Operating Systems GNU/Linux, Windows XP/7, Mac OSX, Android, Arduino, Raspberry

Languages French (Mother Tongue), English (Excellent), Japanese (Beginner), Spanish (Basic)

Others Microsoft Office, LaTeX, Open Office, Photoshop, Gimp, HTML

Hobbies

Sports **Aikido**, Swedish Fit (Coach) and Surf.

Others **Drawing**, Positive gaming, Board games and Create & restore wood objects.