Guillaume **Habault**

Ph.D. · Telecommunication and Internet of Things

30 A rue Louis Guilloux, 35000, RENNES, FRANCE

(+33) 6-45-17-77-09 | guillaume.habault@gmail.com | guillaume-habault-62171023

"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*

Editor for IMT Massive Open Online Course (MOOC) on Digital Fabrication — *Feb. 2017 - present*

- Review and enhance content of existing MOOCs.
- Set up lab works to complete online courses.
- Develop a MOOC focusing on understanding energy principle via Digital Fabrication.

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.

⇒ Rewarded

- 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.

TEACHING

- Participated in the development of a teaching application in python – used to support network courses.
- Prepared and supervised practical lab works and undergraduate courses for a total of 250 hours of service.
- Supervised final year students projects and interns.
- Organized a research seminar with Keio University.
- Prepared, organized and gave UPnP lectures for professional training.

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.