Pablo Molinero

Ph.D. in Electrical Engineering

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FIELD OF INTEREST:

Traffic analysis and policy management for mobile and fixed broadband networks

CURRENT POSITION

02/10-Present Senior Specialist for Policy and Deep Packet Inspection (DPI), Ericsson Madrid, Spain

This role was held simultaneously with that of SPM for DPI. I have been working and often leading several strategic and complex areas in the fields of Policy and DPI to secure Ericsson's technology leadership in policy and DPI. A few of the areas are listed below:

- Design of the technical solution behind the Ericsson-Akamai strategic alliance that was announced by Ericsson CEO, Hans Vestberg, at MWC in Barcelona. SASN is playing a critical role in this alliance. This has required the interaction with multiple experts inside Ericsson
- Selection of the next generation platform for SASN
- Evangelist for Ericsson's position in policy management and traffic inspection both inside Ericsson (E/// BNET R&D Summit, PAIB Product Planning Meeting, DUIB Technology ext-MT) and outside (MWC in Barcelona, Light Reading Webinar, Broadband Traffic Management Conference)
- Participation in several DU/PDU strategy and innovation workshops
- Participated in the writing of two white papers (End-to-end Policy Control and Differentiated Mobile Broadband)
- Briefing with several external analysts in the matter of DPI and policy management
- Organized two workshops on DPI Performance to identify methods that would make DPI more efficient

EXPERIENCE

12/09-Present Strategic Product Manager (SPM) for DPI, Ericsson Madrid, Spain

Responsible for securing that Ericsson has a competitive and world leading position in the service awareness, policy enforcement and traffic inspection area. Responsible for the knowledge transfer across product managers for other Ericsson nodes and solutions (GGSN/MPG/EPG, SASN, MSER-BRAS). Responsible for coordination with other Ericsson nodes and solutions that make use of the traffic inspection and policy enforcement (SAPC, SACC). E///'s DPI engine is present in 146 operators, covering over 2.1B subscribers. I was responsible for the following aspects of traffic inspection and policy enforcement:

- technology strategy, and selection of best platform for traffic inspection
- technology transfer among traffic inspection nodes,
- technology roadmaps, and synchronization of product roadmaps,
- management of the R&D budget

6/08-11/09 Strategic Product Manager for SASN, Ericsson Madrid, Spain

Responsible for the Ericsson Service Aware Support Node (SASN) product: a node for traffic inspection, charging data generation and policy enforcement. During my time as SPM, SASN went from having 31 customer operators to 56, covering 630M subscribers. As SPM, I made sure that SASN has the right features in the first deployments of Fair Usage Policies for Mobile Broadband within Ericsson. I coordinated among SPMs for other Ericsson nodes and solutions (GGSN, MSER-BRAS, SACC, SAPC) in issues related to traffic inspection and policy enforcement. Responsible for the following aspects of SASN towards market and product development units:

- product strategies and marketing material,

- roadmaps and feedback collection,
- product profitability management,
- life cycle management,
- management of the R&D budget

4/04-5/08 **Senior Product Engineer/Product Manager,** Netspira Networks/Ericsson Madrid, Spain
Worked on the technical specification and technical presales of SASN, an advanced charging and control support node for the mobile core data networks. Release Manager for SASN R5. During this period, SASN went from just 5 customer operators to 31, covering 350M subscribers. Netspira Networks was a *startup* that was acquired in June 2005 by Ericsson. Ericsson is the market leader in service-aware charging and policy management for GPRS/UMTS/HSDPA/LTE networks.

7/03-3/04 **Senior Software Engineer,** Netspira Networks Madrid, Spain
Design and implementation of advanced support nodes for the core network of mobile Internet. These nodes are used to charge, route, control and classify data traffic based on the content type.

1/04-5/04 **Visiting Professor,** Saint Louis University Madrid, Spain
Part-time Professor in the Madrid program of *Introduction to Electrical Engineering*.

9/97-6/03 **Research and Teaching Assistantships,** Stanford University, Palo Alto, California
With Prof. Nick McKeown. I conducted research in high-performance networking: e.g., a system simulator for the Tiny-Tera (a 1 Tbps switch http://klamath.stanford.edu/tiny-tera/), a study of reliable multicast, Internet traffic analysis, and a comparison of circuit and packet switching in the Internet (http://klamath.stanford.edu/TCPSwitching/). During my stay at Stanford I also helped write a grant proposal that received $7.5M from NSF.

6/00-8/00 **Summer Associate,** McKinsey&Company Madrid, Spain
Did management consulting for an Internet Service Provider and a Satellite TV provider.

4/98-1/99 **Co-founder of Calendus Software,** Stanford University, Palo Alto, California
Developed a web- and email-based calendar system used by over 200 student organizations and departments at Stanford University (http://klamath.stanford.edu/~molinero/calendus/).

2/96-8/97 **Research Assistantship**, Stanford University, Palo Alto, California
With Prof. Fouad Tobagi. I studied protocol IEEE 802.1p GARP/GMRP for selective multicasting in LANs (http://klamath.stanford.edu/~molinero/papers/garp-gmrp-timers-1997.pdf).

6/97-9/97 **Development Intern**, 3Com Corp. Santa Clara, California
Designed and developed a videoconference gateway between LAN and ISDN networks.

6/96-9/96 **Development Intern,** Hewlett-Packard Laboratories Palo Alto, California
Designed and developed a Video-on-Demand system for streaming MPEG-1 videos.

10/94-7/95 **Research Assistant,** ETSIT, Systems, Signals and Radio Communications Dept. Madrid, Spain

8/93-12/93 **Research Intern,** Siemens AG, R&D Center Munich, Germany

7/92-8/92 **Development Intern,** Siemens AG, Mobile Communications Department Munich, Germany

7/91-8/91 **Software Intern,** Linde AG, Process Control Department Munich, Germany

AWARDS AND HONORS

9/95-6/97 Fellowship from the "Pedro Barrié de la Maza" Foundation of A Coruña, Spain.

11/94 **Spanish 2nd National Prize for graduating Telecommunications Engineers**, Education Ministry

5/92-1/94 Member of the *International Student Circle* of Siemens AG, a program for Engineering students

STUDIES

Stanford University Palo Alto, California

10/96-6/03 Ph.D. on high-performance networks. Advisor: Prof. Nick McKeown.

Thesis: *Circuit Switching in the Internet*. In the thesis, I studied the use of circuit and packet switching in the core of the Internet. I also proposed a network architecture, called TCP Switching, that integrates a circuit-switched backbone within a packet-switched Internet in an evolutionary manner. Finally, I also studied how to control the coarse circuits of an all-optical core. List of publications: http://klamath.stanford.edu/~molinero/papers/

9/95-6/96 Master of Science degree in Electrical Engineering.

"École Nationale Supérieure des Télécommunications" (ENST) Paris, France

9/92-7/94 French Advanced Telecommunications Engineer ("Ingénieur des Télécommunications")

"Escuela Técnica Sup. Ingenieros Telecomunicación" (ETSIT) Univ. Politécnica de Madrid, Spain

10/88-7/94 Spanish Advanced Telecommunications Engineer ("Ingeniero Superior de Telecomunicación")

This was a 6-year double-degree program involving studies at both graduate-level engineering institutes for telecommunications. Majors: computer networks and in design and architecture of computer systems.

"Universidad Nacional de Educación a Distancia" Madrid, Spain

8/90-5/95 "Licenciado" in Physics. Major: industrial physics.

LANGUAGES

Native Spanish speaker. Fluent in English and French. Working knowledge in German and Italian.

MISCELLANEOUS

Interest: Traveling, reading, cycling and swimming.

Founder of the Spanish Association at Stanford (http://www.stanford.edu/group/iberia/).