PLUS+ TRAINING PROGRAM: Understanding Patents in Photonics

CARLES PUENTE BALIARDA

June 19, 2024 to June 20, 2024
10:00 to 18:00
Elements Room

To get ICFO researchers to understand the basics of the patent, to learn how to find, read and interpret patent documents and to get familiar with some basic patent writing techniques. Researchers will understand the value and role of patents in the technology ecosystem, will get familiar with the patent prosecution process and learn to manage paten information comfortably.

Dates:

? 19th of June, 14:30 - 18:00, Elements Room

? 20th of June, 10:00-13:00, Elements Room?

Target group:???This course is directed to to R&D researchers and staff without previous knowledge of the patent system.?

Available places: Limited places available?

Training content:

? A first session will be used to overview through several examples the basics of the pate t system, its motivation and social impact and its use in several technology corporations in t e telecom, electronics and photonics fields. The fundamental nature of a patent right will e introduced, explaining the impac of such a nature in the business dynamics. The general principles of patentability will be explained and the architecture of a patent document will be introduced, so participants et familiar in managing patent information. The aim of the next session of the course is to provide the participants with some basic practical knowledge concerning fundamen al patent-related issues, such as patent writing, scope of protection and patent prosecuti n. The goal is to enable researchers to become effective and proactive when participating in he process of patenting as a result of their R&D. This session will include a practical case: a r al patent in the photonics field will be handed-out to the researchers who will practice in writing some claims. Participants will be able to share their proposals which will be discus ed as a grou

Day #1?

Ecosystem - A technology and patent-based business model. IP business i telecoms/electronics: Apple and Samsung, Qualcomm, Rambus, Tessera, Nortel, Google. Th Fractus case. The MP3 case: Fraunhoffer/Thomson. Examples of a patent-based technolog

companies in Photonics (Rambus, Tessera). The essentials of the patent system: Why d patents exist? What is a patent? Patenting inventions vs. patenting products. The patent as technical document. The patent as a legal document. Social impact of patenting. The paten as a negative right. Impact of patents in business dynamics.?

General requirements for patentability. Exclusions from patentability. Patents as a source of knowledge: patent searches. The patent system worldwide: national filings and rules, pat nt cooperation treaty. Data structure of a patent and patent application document. Invent rs and Assignees. Filing, priority, publication and granting dates. Structure of a pat nt document. Example: a patent on an Erbium Doped Fiber Amplifier (EDFA). Pat nt specification and claims. Patent specification: background, summary of the inventi n, description of the preferred embodiments/best mode, list of figures, drawings and claim

Day #2?

Scope of protection and patent infringement.

? Claim structure: limiting features and scope of protection. Claim features and novelt . Independent and dependent claims. Claim hierarchy and protection level graphs. The oni n layer structure. Multidependency. Independent claims in the EPO and in the US. Structure f a claim: preamble, limiting features and the two-part form. Basic and special types of clai s (Markush, means plus function, product by process,..). Limiting words: ?comprising , ?including' vs. ?consisting of'. Support according to EPO and USPTO rules. Independent a d dependent claims: scope and validity. Claims as the skeleton of a patent specification. Cla m drafting session. Students will read a patent specification on a Photonics system (e.g. a compact disk system based on a laser diode) and prepare a set of independent and dependent claims. Three students will present simultaneously their claim proposals. The class will discuss the scope of protection of both sets and support according to the US and EPO perspectives.?

Trainer:

Prof. Carles Puente Baliarda?

Chief Scientist, co-founder, Fractus S.A.?

Professor, Barcelona-Tech (UPC)?

Prof. Carles Puente is a co-founder and director at Fractus S.A., where he has been in charg of technology and intellectual property portfolio development since 1999. As a CTO and IP director, he developed an antenna technology and patent portfolio which has been massivel adopted by the cell phone industry and licensed to 10 of the top cell phone OEMs worldwide Carles is a university professor at Barcelona Tech (UPC), where he is currently teachin graduate courses on technology and patent asset management.

? In 2013 he has been teaching patent management at the Executive Master in Technolo y Management of the University of Pennsylvania, a program sponsored by the Whart n business school. He has been an invited speaker in several industry/entrepreneurship foru

s including the Licensing Executive Society meeting in Barcelona (2012), the FINAVES meeti
g at IESE Business School (2012), the Mobile World Congress (2007), the REE by Stanfo
d University (2007), the European Venture Capital Association (2001) and the Internation
l Congress of the Forum for ICT Professionals (2001)

As a researcher and scientist, Carles and his team have been nominated to the Europ
an Inventor Award by the European Patent Office (2014), and awarded with the Technol
gy Pioneer award by the World Economic Forum (2005), the European Information Technol
gy Grand Prize by the European Commission (1998), the Premi Ciutat de Barcelona (1999)
nd Best Doctoral Thesis in Mobile Communications in Spain (1997). He is an inventor in
45 granted patents (including 83 US patents) within a set of 400 patent and patent applicati
ns worldwide, and has co-authored over 150 scientific papers in scientific journals
nd conference proceedings. He was an invited speaker at the Antennas and Propagat
on Millennium Conference in Davos (2000), the Gordon Research Conference on Fractals (19
8) and the Fractals in Engineering conference (1997). He holds a Ph.D. in Telecommunicatio
s Engineering from Barcelona Tech (UPC,1997), a M.Sc. from the University of Illinoi
at Urba
a- Champaign (1994), and a Telecom Engineer degree from Barcelona Tech (1992)

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