



**PRESS**

## FOR IMMEDIATE RELEASE:

### The semiconductor industry, an attractive playground for patent trolls

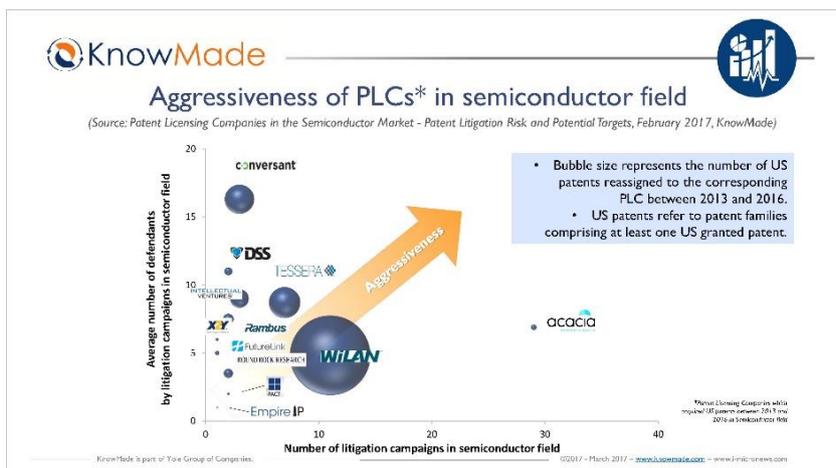
Patent Licensing Companies in the Semiconductor Market - Patent Litigation Risk and Potential Targets report – KnowMade – February 2017

**Sophia Antipolis, France – March 28, 2017:** “WiLAN is probably the major threat to semiconductor companies”, announces **Nicolas Baron, CEO & co-founder of KnowMade**. Indeed, during 2015, this PLC<sup>1</sup> (or patent troll) acquired lot of patents from semiconductor companies including Infineon Technologies/Qimonda, Freescale and more. The company also filed patent litigations involving these assets several months later. The KnowMade’s patent litigation risk analysis titled [Patent Licensing Companies in the Semiconductor Market](#) does not augur a secure future for semiconductor companies: WiLAN continues its aggressive strategy against leaders of this sector and many semiconductor players are in their sights: Apple, HP, Micron, Amkor Technology, Cypress, Nanya...

KnowMade is part of Yole Group of Companies including [Yole Développement](#) (Yole), [System Plus Consulting](#), [PISEO](#) and [Blumorpho](#). KnowMade and Yole are combining their expertise to provide to their network a comprehensive understanding of the “More than Moore” industry with a technology, market and patent approach. In particular KnowMade’s analysts have developed a dedicated methodology to understand the competitive landscape, follow technology trends and highlight business opportunities and threats.

Thanks to detailed information related to the patent landscape, they perform valuable strategic analyses and technology evaluation.

Many industrial companies, all along the supply chain, from IDMs<sup>2</sup> to OSATs<sup>3</sup> including equipment and materials suppliers are potential targets for PLCs. With its patent trolls’ analysis, KnowMade is



<sup>1</sup> PLC : Patent Licensing Companies

<sup>2</sup> IDM : Integrated Device Manufacturer

<sup>3</sup> OSAT : Outsourced Semiconductor Assembly and Test Providers

offering a detailed description of the status of patent litigations within the semiconductor ecosystem. Who are the leading patent trolls? Who represent the biggest threat? Which semiconductor technologies are already been involved in patent litigation? Patent trolls are coming out of the woods...

*“PLCs will increasingly extract cash from the semiconductor industry”*, confirms **Dr Fleur Thissandier, Patent & Technology Analyst from KnowMade.**

PLCs are non-operating companies concentrated on creating the majority of their income from licensing patents to or litigating against operating companies suspected to infringe their patent rights. PLCs commonly acquire their patents from other companies, and then monetize them via aggressive patent litigation. Some PLCs such as Tessera have R&D activities in order to generate their own patents, and they monetize them by licensing.

According to RPX Corporation, NPEs<sup>4</sup> cost operating companies an estimated US\$12.2 billion in both legal fees and other legal costs and settlement or judgment amounts in 2014. PLCs operate in fields with high probability of patent infringement, mainly in USA, where litigation damages are much higher than in Europe or Asia. In a patent infringement action, the potential sales volume plays a major role for assessing the damage award. Thus, the PLCs come into action when the market has reached a critical size and target companies have made irreversible investments.

Patent litigation risk tends to increase as new technologies emerge, or as existing technologies combine to create new products and services. The convergence of technologies in the semiconductor field leads to an increase in patent litigation in that sector. The semiconductor industry brings together all ingredients to appeal to PLCs. These include strong consolidation, with many M&A<sup>5</sup>, numerous patents for sale from bankrupt companies and M&A, complex patented inventions, the colossal amount of products embedding semiconductor devices, big companies, and a lot of money. All companies designing, manufacturing or marketing semiconductor-based products are potential targets for PLCs' next patent litigation.

In its patent trolls report, KnowMade's analysts reveal the most aggressive PLCs in the semiconductor field, their recent patent acquisitions, and their potential targets for future patent litigation.

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<sup>4</sup> NPE : Non-practicing Entities NPE includes Patent Trolls (named Patent Licensing Companies in the present report), Universities and Research Institutions, individual inventors and Non-Competing Entities (operating companies asserting patents outside their areas of products or services).

<sup>5</sup> M&A : Mergers & Acquisitions

According to KnowMade report, Acacia Research, WiLAN and Conversant IP Management are the most aggressive PLCs in the semiconductor area:

- Polaris Innovation and North Star Innovations (WiLAN wholly owned subsidiaries) started to litigate patents acquired from Freescale and Infineon Technologies the same year. They should pursue their strategy the next few years.
- Acacia Research has today a lower number of semiconductor patents compared to WiLAN. But the company files the highest number of patent litigation campaigns with a relatively high number of defendants. And according to KnowMade's analysts, they could continue to file numerous campaigns within next years.
- Tessera, DSS Technology Management, Conversant IP Management and Intellectual Ventures are also key players in this field.

*“More than 2,880 semiconductor-related US patents have been acquired by PLCs since 2013”*, comments **Dr Audrey Bastard, Patent & Technology Analyst from KnowMade**. Now, it is a critical time to assess the patent litigation risks and know the potential targets related to these recent patent acquisitions...

A detailed description of KnowMade patent analysis is available on [i-micronew.com, manufacturing report section](https://micronew.com/manufacturing-report-section).



### About [Patent Licensing Companies in the Semiconductor Market - Patent Litigation Risk and Potential Targets](#) report:

*The semiconductor industry has all the attributes that appeal to patent licensing companies (PLCs): Are you in their sights?*

Authors:

**Dr Nicolas Baron** is CEO and co-founder of KnowMade. He leads the Physics Department. He holds a PhD in Physics from the University of Nice Sophia-Antipolis, and a Master of Intellectual Property Strategies and Innovation from the European Institute for Enterprise and Intellectual Property (IEEPI Strasbourg), France.

[nicolas.baron@knowmade.fr](mailto:nicolas.baron@knowmade.fr)

**Dr Audrey Bastard** works for KnowMade in the field of Microelectronics and Compound Semiconductors. She holds a PhD in Physics from National Polytechnic Institute of Grenoble, France in collaboration with STMicroelectronics, CEA-Leti and CEMES Toulouse. She also holds a Materials Engineering Degree from the Superior Engineering School of Luminy, Marseille, France.

**Dr Fleur Thissandier** works for KnowMade in the field of Microelectronics and Chemistry. She holds a PhD in Chemistry of Materials and Electrochemistry from CEA/INAC, Grenoble, France. She also holds a Chemistry and Engineering Degree from the Superior National School of Chemistry (ENSCM), Montpellier, France

#### Companies cited in the report:

Acacia Research, Conversant IP Management, DSS Technology Management, Future Link Systems, Intellectual Ventures, Mosaid, PACT XPP Technologies, Rambus, Round Rock Research, Tessaera, WiLAN, X2Y Attenuators 3M, Advanced Micro Devices, Advanced Semiconductor Engineering, Alpha & Omega Semiconductor, Altera, American PCS Communications, Amkor Technology, Analog Devices, Aplus Flash Technology, Apple, Applied Materials, Aptina Imaging, AT&T, Attopsemi Technology, AU Optronics, Avalanche Technology, Blackberry, BOE Technology, Bridge Semiconductor, Broadcom, Canon, Carl Zeiss, Chipmos Technologies, and many more...

#### About KnowMade – [www.knowmade.com](http://www.knowmade.com)

Specialized in analysis of patents and scientific information, Knowmade provides Technology Intelligence and IP strategy consulting services. The company is supporting R&D organizations, industrial companies and investors worldwide in their business development by offering them a deep understanding of the technology trends and their IP environment. Knowmade operates in the following industrial sectors: Microelectronics & Optoelectronics, Compound Semiconductors, IC Manufacturing, Advanced Packaging, Power Electronics, RF Devices, MEMS Sensors & Actuators, Photonics, Micro & Nanotechnology, Biotechnology, Pharmaceuticals, Medical Devices and Agri-Food.

Knowmade performs prior art search, patent landscape analysis, scientific literature analysis, patent valuation and freedom-to-operate analysis. In parallel the company proposes litigation/licensing support, technology scouting and IP watch service. Knowmade's analysts combine their technical and patent expertise by using powerful analytics tools and proprietary methodologies to deliver relevant patent analyses and scientific reviews.

#### Yole Développement – [www.yole.fr](http://www.yole.fr)

Founded in 1998, Yole Développement has grown to become a group of companies providing marketing, technology and strategy consulting, media and corporate finance services. With a strong focus on emerging applications using silicon and/or micro manufacturing, the Yole Développement group has expanded to include more than 50 collaborators worldwide covering MEMS, Compound Semiconductors, LED, Displays, Image Sensors, Optoelectronics, Microfluidics & Medical, Advanced Packaging, Manufacturing, Nanomaterials, Power Electronics and Batteries & Energy Management.

The “More than Moore” company Yole, along with its partners System Plus Consulting, Blumorpho and KnowMade, support industrial companies, investors and R&D organizations worldwide to help them understand markets and follow technology trends to grow their business.

- Consulting & Financial Services: Jean-Christophe Eloy ([eloy@yole.fr](mailto:eloy@yole.fr))
- Reports: David Jourdan ([jourdan@yole.fr](mailto:jourdan@yole.fr))
- Press Relations & Corporate Communication: Sandrine Leroy ([leroy@yole.fr](mailto:leroy@yole.fr))