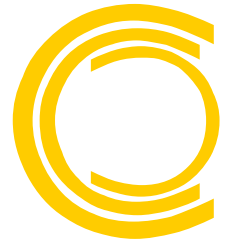




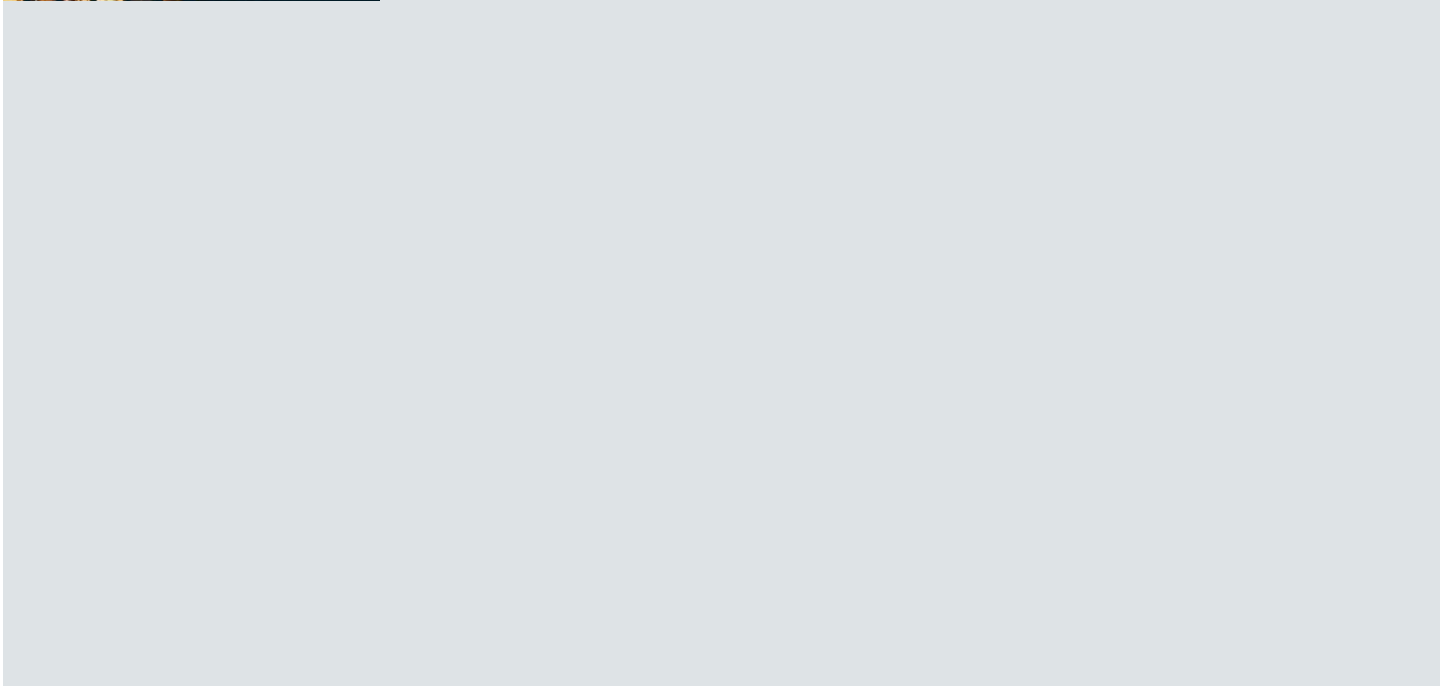
CUBICIBUD



# CONTROLLING CONNECTED DEVICES

Managing the IP risks associated with  
enabling connectivity in IoT devices

January 2016



# INFRINGEMENT OF SUPPORTED FEATURES RATHER THAN FEATURES USED

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The headlines are buzzing with excitement over the potential benefits of the “Internet of Things” (IoT), and how new services will be created when “things” are connected. Given the relative commoditised state of communications technology it is easy to perceive how all manner of products can be connected, allowing capture and real-time transfer of device or user data.

Whether that data can be turned into useful value creating insight is one of the big challenges for the IoT, but with the adoption of connectivity comes an additional complexity due to the exposure to the world of telecoms patents.

## The adoption of telecoms sector technologies by other sectors brings measure of hidden risks

Clients tell us that they don't want launch products with outstanding risks associated with the IP; yet at Cubicibuc we believe that it is impossible to develop modern, complex products without infringing IP.

What is vital to understand then is who owns that IP; what the owners might do with it; and how our clients can manage those risks.

However a hidden danger in this process is that patent infringement is based on the functionality supported / embedded in the device, not merely the functionality used in a deployed product.

Steps to understanding and managing IP risks in New Product Development:

1. Understand the product technology
2. Create an IP landscape of the technology
3. Develop an understanding of the IP owners' likely reactions to product launch
4. Determine the desired level of control with customers, suppliers, competitors and substitutors.
5. Build IP strategies, including risk management to achieve the desired business benefit

## Off-the-shelf integration of IP dangers

One of the most efficient routes to connectivity is embedding a standard off-the-shelf comms module into a product. This reduces a number of risks associated with a bespoke development, and is particularly attractive for companies looking to reduce time to market for connected variants of products.

The use of an off-the-shelf module means most of the complexity of integrating a wireless chipset and radio has been performed. The module will have been Type Approved (passed a set of standardised conformance tests) and simply requires connecting to an antenna, a power source and a data interface.

For example, an existing product with a wired or external communications interface can easily integrate a wireless module. Such minimal development effort enables real-time wireless data capture and transfer to centralised servers. This approach is attractive, and is often preferred for first generation IoT products.

However what might be seen as a simple route to adding a data connection to a product in fact additionally includes the full feature set of the wireless module. This exposes the device to patent claims from a range of players. If this is not well understood the device manufacturer may not have suitably understood the IP risk profile.

So for example, in the case of meeting the requirements for a low bandwidth data connection through the integration of an LTE compatible module, a device manufacturer is typically also including UMTS / 3G, GPRS and GSM compatibility. It is likely to also include profiles that support high data rates, multimedia functionality and possibly even voice services.

While the actual IoT device might not actually use any of these additional features within its deployed use cases, the fact that the wireless module supports these features means the product as a whole may be liable to claims of patent infringement.

## A matter of IP risk management

IoT device manufacturers need to understand the issues around IP exposure integrated into wireless solutions. Whether embedding an off-the-shelf device, or using a bespoke design, the underlying capabilities of the solution need to be understood.

Likewise the “small print” of agreements with module manufacturers needs to be understood, in terms of indemnities offered against third party patent claims and particularly standards essential patents.

Patent infringement insurance is available, and a thorough analysis of the potential exposure can be used to demonstrate a credible case to underwriters.

## Connecting with IP risks

Few industries have been immune from patent litigations, and there have already been examples of telecoms patent owners asserting assets against manufacturers of IoT devices which perhaps represents a new trend.

These issues occur at the intersection of IP law and competition law and the regulatory environment for patents is evolving, as are approaches to licensing and issues of FRAND and royalty setting.

Connectivity and convergence bring many benefits to a range of sectors, and IoT device manufacturers need to embrace the technology opportunities, but must do so with the right IP strategy plans in place to understand and manage the IP risks.



Cubicub Limited is an independent technical consulting firm specialising in matters relating to Intellectual Property.

Good IP management allows business to protect its competitive advantage; to generate returns on R&D investment and to secure investment and finance. Modern businesses neglect their IP assets at their risk as poor IP management gives away value and reduces barriers to entry for competitors compromising the organisation's capabilities.

To manage IP well business must adopt a combination of commercial, legal and technical expertise.

Cubicub supports its clients by:

1. providing confidential and independent technical services to evaluate IP assets
2. performing IP audits, patent mining and landscaping exercises
3. supporting commercial negotiation, licensing and litigations
4. providing independent technical expert reports

We work with businesses ranging from smaller start-ups to mature multinationals; from early stage invention capture through to exploitation and monetisation of IP assets.

To discuss how Cubicub's expertise can help your organisation manage and exploit IP, please contact us now: [info@cubicub.com](mailto:info@cubicub.com)

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