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*See all of the articles on recent Printed Electronics technical breakthroughs...*

[IP Healthcheck](#)  
*Link to UK Intellectual Property Office IP Healthcheck service for self assessment*

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## More Top Tips for Protecting your IP Assets

Here are another 5 suggestions to ensure you are well protected and get the best value from your IP assets (see earlier newsletter No.5 for previous tips):

1. Develop an IP Strategy – this does not need to be complicated and can simply be a list of bullet points defining what your goals are for the short and long term. Having a strategy will allow you to communicate it effectively to your workforce and build it into your business plan and technology roadmaps.
2. Use the services of an IP specialist or attorney to help identify any legal aspects that vary from country to country when protecting your IP abroad.
3. Be aware of key dates for renewal of IP rights such as patents and trademarks. Also be aware of key dates for filing abroad, there is a 12 month window for patent filings outside your original country in order to keep your earliest priority date.
4. Regularly review your inventions and explore the scope for combining new technology and generating new IP to avoid being blocked in the future.
5. Consider taking out IP insurance – this can provide valuable cover for defending or asserting your IP rights.

## Understanding Patents - Part 5: Using Google Patent Search

If it has been a while since you last searched for patents using Google you are in for a treat. The most recent Google patents has been updated this year to provide some useful new features for searchers. The latest search page is [www.patents.google.com](http://www.patents.google.com) and it is now integrated with Google Scholar so that you can get both patent and non-patent literature appearing in searches. This is very useful for finding relevant prior art.

I like Google Patents for a broad overview of results in a particular field; it is useful to quickly get an idea of the number of patents involved and for a quick assessment of the classifications used. Google is continually adding to its database, it already has all the US patents and applications, has added the Canadian, European, WIPO, German and Chinese databases, these latter being also translated. Google warns that they cannot guarantee complete coverage and sometimes take a while to add the most recent applications and grants.

Type in a search term and see what pops up. Remember to use quotes if you want an exact phrase. Use the search fields on the left to refine your search. You can sort the results by relevancy or date and can group them by classification. Click on a document to view it and you will see a very useful summary box with information about the patent. There are links to find prior art, look at the citations, view similar documents, see legal status and many other fields, the amount of information does vary from country to country. Have fun!

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## Phil's Patent Picks

You may remember that I regularly post articles describing current patent applications that are particularly related to printed or plastic electronics. Here is an extract from a recent post on *Phil's Patent Picks*.

### **3D Printed Electronics – the next disruptive technology?**

A patent application published on the last day of 2014 could easily have gone unnoticed but I believe it could be one of the next major breakthroughs in printed electronics. The application has the title PRINTED THREE-DIMENSIONAL (3D) FUNCTIONAL PART AND METHOD OF MAKING and can be viewed by clicking on the link: WO2014209994. The technology has been developed in the Research labs of Professor Jennifer Lewis at Harvard University. The Lewis Lab team have been working for some years on multiple technologies including 3d printing, conductive inks for printed electronics, composite materials and micro-batteries. This patent application describes various embodiments of a 3D functional part, for example one of the paragraphs states:

A method of printing a 3D functional part comprises, according to another embodiment: forming one or more portions of a 3D structure using a 3D printing method; positioning at least one functional electronic device on an exposed surface of the one or more portions; and forming conductive interconnects to and from the at least one functional electronic device using a 3D printing method. The method may further comprise, in some embodiments, forming one or more additional portions of the 3D structure using a 3D printing method. The one or more additional portions of the 3D structure may at least partially cover the at least one functional electronic device.

The method uses a printer with at least 2 printheads so that you can co-print both a matrix material and a conductor. Electronic components can be manually inserted while the 3D printing operation is temporarily halted and then overprinted to embed the device. One of the advantages of a direct write printing action that can move in all three axes is that the functional electronic devices can be orientated at any angle in the 3d structure and the conductive filaments are not constrained to a planar pathway as is typical of PCB boards. The reader can refer to the patent application for more details of the materials for the matrix and the conductive inks but better still I refer you to the spin out company Voxel8 that plans to release this 3D printed electronics platform towards the end of 2015. The patent application has a priority date of 24 June 2013. This is an impressive time from filing the technology to a commercial device. The first announcement of the 3D printer was made at CES 2015 back in early January.

See the full article here: [blog post](#)

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Note: You are more than welcome to send the contents of this post to colleagues and friends; please forward it in its entirety, rather than "cut-and-paste".

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