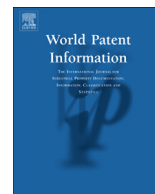




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# World Patent Information

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## Editorial



Michael Blackman

“Discovery consists of seeing what everybody has seen and thinking what nobody has thought.”<sup>1</sup>

### 1. Editors' final final farewell

Because of the extended procedures in appointing our successors as editors, and to ensure a smooth handover, David and I have continued beyond the completion, at the end of last December, of our previous agreements with the Publishers for much longer than we had anticipated. Hence, the long farewell!

However, all is now set fair for the new, younger editors to take over shortly. As noted previously, David and I are confident that they will bring new perspectives, contacts and ideas to their roles and take the journal forward successfully.

They will inherit the journal in good health – this issue is a bumper one for example – and there are also a large number of articles currently in the referee review and author revision stages which are moving forward for Volume 38 etc under their auspices. Please do continue to contribute with articles, ideas and advice in support of their efforts, as so many of you have done with David and me over the years.

So this really is the last farewell, as David and I move on to other interests and challenges from the beginning of July. All the very best and it has been great to work with you all!

### 2. Article Based Publication (ABP)

This change to the publication system for Elsevier's journals was foreshadowed and briefly explained in my editorial in issue 35(3). As this current editorial was being finalised (May 2014), ABP is now being implemented for World Patent Information. In practice, what was Issue 1 of Volume 36 has been re-designated as just 'Volume 36'. The most recent issue to be provided on ScienceDirect has

recently appeared and, rather than in the past being designated as Issue 2 of Volume 36, has been designated as Volume 37. I understand that the remaining two issues for 2014 will appear as Volumes 38 (the present issue) and 39 respectively. Each volume will gradually build up over the usual quarterly period as each article or other item is finalised for publication. For further information on this change please contact the new editors.

### 3. Vertical farming

This potentially major change in the practice and technology of farming has recently been highlighted [1]. It contrasts with conventional farming, using large areas of land and subject to the vagaries of the weather, water supplies and disease, by growing plants in a closed, controlled environment within a building and typically arranging the plants in racks set one above another. As well as eliminating almost all of the problems of disease and adverse weather, vertical farming can be close to, or within, urban areas and thus significantly reduce the costs and environmental damage involved in transporting produce from the countryside to the urban community. Additionally, the buildings housing the vertical farms can be purpose-built but may also be redundant buildings adapted for this new use. While not always yet competitive in price when conventional open farming encounters favourable conditions, vertical farming offers reliability and consistency of product at all times. And with further technological improvements and inventions, for example to more fully automate the farm and to reduce the cost of artificial light, vertical farming may have a bright and relatively environmentally friendly future.

Naturally there are already plenty of published patent applications and patents in this field. Examples include a vertical farm including automatic water feeding, adjusting the moisture level in the soil, supplementary lighting and uniform cooling, primarily for cultivating plants in flower pots, from Hsiao-An Chang in WO2013063739A1. In another example, a vertical farm seeks to combine the growing of crops with the production of biofuel, food, biomass to achieve carbon sequestering, and biomass electric power generation, from Glen James Pettibone in US2011131876A1.

### 4. Personal

We were pleased to hear that Stephen Boyer has received the 2014 IPI Award. As noted by Lucy Akers at the Award ceremony, his work fundamentally changed access to patent information globally in providing a very large database with a supporting technical architecture that accommodated massive levels of access. His work has also provided the stimulus for the creation of many other later digital libraries by commercial and governmental agencies. More recently, he initiated a collaboration of pharmaceutical industry

<sup>1</sup> Albert von Szent-Györgyi (1893–1986): Irving Good (Ed.). *The Scientist Speculates*. (1962).

leaders and international governmental organizations to enhance the access and curation of scientific information. A detailed account of his achievements and the award itself are included in a separate patent report in this issue. Congratulations, Stephen, particularly as a coauthor of two articles in this journal [2,3]!

Announced at this year's PIUG Annual Conference by PIUG Chair Susanne Hantos – and kindly passed on to us by Board member Edlyn Simmons – Yun Yun Yang, Thomas Klose and Jonathan Lippy at Bristol–Myers Squibb have received the 2nd Stu Kaback Business Impact Award for their collaborative patent analysis work, using text analytics and data visualization, on kinase selectivity assessment. We are pleased to add our congratulations on this achievement of course, especially as Yun Yun Yang and Thomas Klose have contributed to this journal previously as authors [4,5], and all three are coauthors of an article based on aspects of this recent work submitted here – well done!

## 5. Main articles

The result of research to provide an integrated federated system for patent search, PerFedPat, is described by Michail Salampasis and Allan Hanbury. They explain, for example, the need for and characteristics of such a system that brings together multiple online patent resources, supplies a common single query search tool, and can integrate multiple additional search tools.

With the objective of finding the determinants of Canadian worldwide patenting, Rashid Nikzad maps Canadian worldwide patent applications into industry classifications, then uses a modified gravity model to analyse these applications.

In the active field of patent valuation, Grid Thoma's article proposes a patent value composite index using a selection of standard indicators, employing factor analysis to compute the index, and certain post-grant data to test the robustness of the resulting index data.

In a case study of the exploitation of university patents in The Netherlands, Peter van Dongen, Jos Winnink, and Robert Tijssen report on a survey using extensive matching techniques for identifying university inventors and corresponding patents, with analysis of the resulting use in the business of a wide range of commercial organisations.

In their article on the role of essential patents as knowledge input for future R&D, Byeongwoo Kang and Kazuyuki Motohashi explore the relationship between standards, essential patents related thereto, and innovation activities.

Gabriel Marcuzzo do Canto Cavalheiro, Luiz Antonio Joia and Ada Cristina Gonçalves analyse the effect on patenting in Brazil, especially by the most prominent multinational companies in the field there, following the announcement of the discovery of major oil and gas reserves in the pre-salt layer of rocks in that country.

Dara Ajay and Abhay Sangamwar provide an analysis of patent trends – national and international – of in-force patents of CSIR (India) over the years 2000 to 2011.

The float method for manufacturing flat glass, one of the greatest process inventions of the twentieth century, is described, its patents analysed, and its historical context explored in an article by Marcio Luis Ferreira Nascimento.

The maintenance and expiry data for a sample of Taiwanese utility models was analysed by subject matter areas, using IPC sections, in an article by Rain Chen, Chia-Ling Feng and Kun-Wei Chen.

## 6. Short communication

In a short communication by Ruchi Sharma and Akriti Jain, the results of a study on the publications and patents of 347 universities and technical institutes in India are presented, which show

the need for an increased activity in patenting by Indian academic institutions.

## 7. Future articles

Amongst the many articles submitted recently and now passing through the referee review and editorial stages, subjects covered include knowledge dissemination patterns in the information retrieval industry: a case study for automatic classification techniques, current trends in the publication of free intellectual property information on the World Wide Web, leveraging text analytics in patent analysis to empower business decisions, the challenge of the English language for patent searchers, towards content-oriented patent document processing: intelligent patent analysis and summarization, evolution of the patent information world - challenges of yesterday, today and tomorrow, supporting SMEs' IP capabilities: impact study of INPI pre-diagnosis through the use of the AIDA approach, Joseph Brahmah – engineer, inventor and prolific patentee, identifying patent conflicts: TRIZ-Led patent mapping, technological monitoring of cyclodextrin – world panorama, the Canadian Patent Examiner Continuous Training Program, coal – parent of the industrial revolution in Great Britain, patent landscape analysis: a methodology in need of harmonized standards of disclosure, South Asian Intellectual Property Knowledge Network, and roots and development of intellectual property management research: a bibliometric review.

## 8. Penultimately...of pot Ash and pearl Ash...

Some early specifications are a delight, not only for their tendency to conciseness, but also for the wording and printing. The single-page, first US patent, X000001 of 1790 to Samuel Hopkins for a process of making pot Ash and pearl Ash, signed by George Washington (and also available on the USPTO site), is a lovely example.

"Whereas Samuel Hopkins of the City of Philadelphia and State of Pennsylvania hath discovered an Improvement, not known or used before, such Discovery, in the making of Pot ash and Pearl ash by a new Apparatus and Process, that is to say, in the making of Pearl ash 1st by burning the raw ashes in a furnace, 2nd by dissolving and boiling them when so burnt in Water, 3rd by drawing off and settling the Ley, and 4th by boiling the Ley into salts which then are the true Pearl ash; and also in the making of Pot ash by fluxing the Pearl ash so made as aforesaid; which Operation of burning the raw ashes in a Furnace, preparatory to their Dissolution and boiling in Water, is new, leaves little residuum; and produces a much greater Quantity of Salt. These are therefore in pursuance of the Act, entitled "An Act to promote the Progress of useful Arts", to grant to the said Samuel Hopkins, his Heirs, Administrators and Assigns, for the Term of fourteen Years, the sole and exclusive Right and Liberty of using and vending to others the said Discovery, of burning the raw Ashes previous to their being dissolved and boiled in Water, according to the true Intent and Meaning of the Act aforesaid. In Testimony whereof I have caused these Letters to be made patent, and the Seal of the United States to be hereunto affixed. Given under my Hand at the City of New York this thirty first Day of July in the Year of our Lord one thousand seven hundred & Ninety."

## 9. And finally metal mining: pie-in-the-sky or down-to-earth?

The high price of some rare metals has prompted many innovative proposals that are rather outside the conventional envelope of, for instance, developing better mining techniques to make poor

quality or inaccessible ore economically viable or improving methods of recovering such metals from used, discarded products. Already mentioned in an earlier editorial [6] is the idea of mining asteroids in space or of capturing them to mine their metal content nearer home. With my long interest in geology and awareness of the drastic effects that chunks of space debris have had on our planet over countless millions of years, I am perhaps not surprisingly more than a little wary of interfering with the status quo in space in this way!

A literally more down-to-earth possible solution has started to emerge as a result of observations many years ago that the conventional wisdom that plants do not grow well on ground heavily contaminated with metals might not always be the case, with some plants positively thriving in such environments [7]. If those metal-loving plants could be identified, improved and grown on such heavily contaminated ground, with subsequent harvesting and economic recovery of the metals from the leaves and stems of these plants, then this new source could make a real contribution. This concept – dubbed phytomining – has been slow to take off, but there is currently some renewed interest. Amongst patents in this field, those that use the phytomining terminology are mostly in the names of pioneers Rufus Chaney and Alan Baker, such as WO0028093A1 which relates to recovering metals, especially nickel and cobalt, by adjusting the soil pH for ‘hyperaccumulator’ plants in appropriate land areas and then extracting the metals from the metal rich foliage and stems. It reports that many plants were tested and lists those that are most suitable as potential hyperaccumulators, while

focussing on various Alyssum plant species in the Brassicaceae family as the most promising.

Undoubtedly the electronics industry’s need for reliable supplies of rare metals that are key components in the very many electronic devices that we rely on so heavily now will shape the ways that shortages of these metals from traditional sources are resolved, and in this context it may be interesting to follow the fate of asteroid- and phyto-mining!

## References

- [1] Marks P. Legume with a view. *New Sci* 18 January 2014;221. 2952, 17–18.
- [2] Spangler Scott, Ying Chen, Kreulen Jeffrey, Boyer Stephen, Griffin Thomas, Alba Alfredo, et al. Exploratory analytics on patent data sets using the SIMPLE platform. *World Pat Inform* 2011;33(4):328–39.
- [3] Smeets J, Boyer S. Networked patent information systems. *World Pat Inform* 1998;20(2):135–6.
- [4] Yang Yun Yun, Akers Lucy, Yang Cynthia Barcelon, Klose Thomas, Pavlek Shelley. Enhancing patent landscape analysis with visualization output. *World Pat Inform* 2010;32(3):203–20.
- [5] Yang Yun Yun, Akers Lucy, Klose Thomas, Yang Cynthia Barcelon. Text mining and visualization tools – impressions of emerging capabilities. *World Pat Inform* 2008;30(4):280–93.
- [6] Blackman M. Editorial. *World Pat Inform* 2014;36(1):1–2.
- [7] Moskvitch K. Good to grow. *New Sci* 22 March 2014;221. 2961, 47–49.

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Available online 10 June 2014