

# Patent information in a changing world: Perspectives from a major patent office

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## Abstract

The patent information field is in a state of flux, caused by new tools and changing habits and philosophies. In this article a number of major issues arising from this situation are discussed, some ways in which the EPO is responding are described, and some ideas on future developments provided.

Patents are increasingly rated as valuable assets, but is patent information, and especially bibliographic patent information, being treated with the same meticulousness as in the past? More people are searching than ever before. But are they squeezing out the information professional? What effect will the IPC reform, the arrival of XML and other developments have? By focussing on completeness, timeliness and correctness, can patent offices make a contribution to alleviate the situation?

The author concludes that, more than ever before, it is important that expert patent information professionals ensure that their views and needs are communicated to both initial data suppliers, mainly patent offices, and to commercial database suppliers and hosts.

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## 1. Introduction

In March 2004, Ursula Schoch-Grübler of BASF Aktiengesellschaft gave a keynote speech at the IPI-Confex event in Portugal; this speech also formed the basis for an article in this journal [1]. It was a speech that made a lasting impact on those who heard it and that summed up what many patent information experts were thinking; and it sounded some loud alarm bells across the profession.

In this paper, which has largely been derived from a presentation I gave at IPI-Confex one year later, I would

like to reflect on her remarks and put my thoughts to you on what is happening to the patent information market. What Ursula Schoch-Grübler said in 2004 was worrying for some of her audience. I was worried too—and my personal view is that the set of problems she described are a reflection of developments taking place on a global scale. I have previously set out my view of some broad considerations in the development of patent information over the next 25 years, and the need for caution in making predictions [2].

She spoke of “maggots in the garden of paradise”—my feeling is that the maggots pale into insignificance compared to the dramatic effects of a phenomenon like global warming. I shall explain this in more detail in this paper and conclude that experts in the field, like the readers of *World Patent Information*, have a greater duty

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than ever before to exert their influence on the moulding of tomorrow's patent information products and services.

## 2. What was said last year?

So what was it that Ursula Schoch-Grübler said? As I understand it, her main message was essentially that we are in paradise compared to the old days. We have more data, more sophisticated search tools and lower prices. But unfortunately, despite all the developments, our patent information garden is not really paradise at all—it is infested with maggots . . .

The first maggot is globalisation. Globalisation has led to the situation that there is nowhere on earth that patent searchers can afford to ignore any more—they need *global* information, even from places where the data is unfamiliar and the language incomprehensible. The second maggot is the data itself, which is getting more complex, resulting in a need for more highly structured full text and sophisticated content retrieval tools. And as the number of hits for an average search continues to grow, relevance checking of results is getting more and more important. A third maggot lurking in the garden, according to Ursula Schoch-Grübler, is a drift away from in-house products towards web-based ones, which not all users see as being a particularly positive development, because of the difficulties that it causes in merging internal and external information.

Ursula Schoch-Grübler suggested some things that in her view need to happen if we are to have a hope of eradicating the maggots. For example, patent offices should not only capture text but also chemical structures; and users should have access to tools for highlighting and clustering results, and for graphical presentation. She also observed that demand is growing for a neutral platform for education and training.

## 3. What is the EPO's role?

It is worth using a few lines of this paper to summarise what I see as the EPO's role in the area of patent information. Our policy itself has remained stable for over fifteen years: we provide all the public data we have available to anyone who wants it. The data is provided in raw form at marginal cost. In addition, we make our data available to end-users via [esp@cenet](mailto:esp@cenet)<sup>®</sup> and other products, such as our CD-ROMs and DVDs. We do not add value to our data—as has been stated so often in the past: that is a task for the commercial sector. The policy is very clear on these main issues, while allowing us the freedom to adapt our patent information products and services to the changing technical environment.

Lastly, an essential principle of our policy is that of equal treatment. No company or sector can expect special conditions from us.

In practice, this policy means that we have a duty to publish all the non-confidential information we have. We provide access to the data by offering basic search tools, which in the case of [esp@cenet](mailto:esp@cenet)<sup>®</sup> are generally free of charge. Now, many readers of this paper will say in reaction to that that there is no such thing as a free lunch, and that in our field there is no such thing as free patent information. There is always someone who has to pay, they will mutter, and if a patent office is providing patent information free of charge then the person paying is the patent applicant. My answer is that that is right, at least to a certain extent, and that it has happened that way by design.

One of the fundamentals of the patent system is the deal between the inventor and the patent granting authority that the invention will be disclosed to the public. Publication costs are therefore quite rightly covered by the fees paid by the applicant. In many cases, it is in the applicant's interest to reveal as little detail about his invention as possible. This is however not in the spirit of the patent system, so it is our duty as a public service to see that the deal is respected and to do what we can to make the details of the invention public.

I would even go so far as saying that we all need constantly to bear in mind the balance between the interests of the public for full and clear disclosure and those of the applicant, who often wishes to be as vague as possible when disclosing. Maybe the balance is shifting as more people have access to patent information and maybe we need to discuss whether more could be done in this area. I would in any case encourage open debate.

What we in any event strive to do is to produce data of the highest possible quality. Echoing the words of Ms. Schoch-Grübler, our criteria for high quality are *completeness*, *timeliness* and *correctness*. I might add that where data delivery to information providers is concerned ease of use is also a must.

## 4. Pest control or coping with major climate change—an ailing information profession?

This brings me to the core message of the paper: global warming creates an environment which is the ideal breeding ground for new maggots.

What I wish to put my finger on with this question is the fact that we are all part of a changing world. The internet has not just changed patent information, it has changed our entire society. Under these circumstances we must assess how high the walls around our garden are and how much they protect us from what is happening all around us. We must judge where we realistically can cling on to old values and where we

have no choice but to adapt to the changing environment.

The image of a maggot-ridden garden can apply to many aspects of life at present, be it politics, economics or technology. If we look at technology in general, we observe that goods and the services are undergoing constant change, and are often subject to extremely complicated pricing, which is not easy to understand.

Techno-freaks charged with the development of products pack them full with fancy features which—due to the absence of training either on the customers' side or the techno-freaks' side—fail to be used, but which nevertheless drive development process.

There is a general attitude that “everything” can be learned in a short while and, with it, a tendency to value less the expertise offered by a specialist. This phenomenon is noticeable in everyday situations such as dealing with salespersons or going to a simple repair shop. And of course, the product developers have their “patent” solution ready for the disappearance of experts: we need “self-explanatory” products, they say!

We can observe a similar phenomenon with information. We have permanent access to news channels on our laptops and our handhelds, but the news itself is less reliable than in times when hot metal letter printing was the preferred medium. We are having to get used to journalists who no longer double check their information and are more happy sometimes transmitting rumours than facts. Speed and quantity are clearly winning the battle with completeness and correctness.

Expanding on my image of global warming I would like to point out that one important factor stimulating climate change is sometimes short-sighted shareholder value thinking. The need to cut costs is moving industries from continent to continent, bringing to an end services like those of skilled craftsmen and local suppliers. These services are gone and they will not come back, as is the quality of certain goods.

Patent information, which is so dependent on new technologies and their standards, has been profoundly affected by these changes.

For some time there has been a steady erosion in expertise in our area and, in fact, across all information science professions. We hear of companies closing their information departments; our list of “top users” is dwindling; specialist trade fairs for information (e.g., Cominfo, IdT, Online) are no longer attracting large numbers of visitors; and some patent libraries are struggling.

What is happening is that the number of users is growing, but that the average level of expertise is falling. The comparison might be far-fetched, but there is a parallel development in air travel. There are no longer any first class seats on European flights, but more people than ever are travelling by air, and they do it using discount flights. The corollary? Opening up new possibili-

ties for more people leads us to neglect the special requirements of the few.

But then maybe it is better to have 1000 amateurs using patent information than ten super experts. I do however ask myself if searches are being carried out with the same meticulousness as before. My feeling is that they are not, although I might be over-generalising and the searchers reading this might well constitute an exception. On the positive side, I think that we are observing a gradual increase in the expertise of these “amateurs”—the enquiries put to our helpdesk are in any event far less trivial than a few years ago.

As an aside, I note that patent information is slowly attracting more attention from financial experts. Their view is different, whole portfolios are rated, very little time is invested in detailed analysis of one document. Our next step will be to put patent information in context for business managers—a new member of staff is joining the EPO in 2005 with a precise remit to focus on how patent information is being used or could be used in a business environment.

## 5. What is being lost? Can we compensate for it?

I would like to return now to the issue of falling levels of expertise. Under the circumstances I have described, the experts who remain are in a special position. They are the only ones who can judge what is being lost through this evolution, and what is being gained.

Only true experts have the experience to know the steps necessary to counteract the loss, and to know if it is worth doing so. But that is no easy task. We have established that there is a risk of some “dumbing down” of patent information. On the other hand, it would be wrong to condemn the new technologies driving this because they also bring advantages for the experts, for example, in giving us the means to attain new levels of completeness, timeliness and correctness.

## 6. Are we maintaining “completeness, timeliness, correctness”?

New technologies allow us to set new goals in data handling and raise our standards. Better communications technologies and more powerful computers mean that we can achieve higher levels of completeness, timeliness and correctness than ever before.

In terms of completeness, we have managed to increase the number of countries in the INPADOC bibliographic database from 56 to 74 over the last decade and in the legal status database from 12 to 44. We are constantly working on filling the gaps that exist and on extending coverage. The data for PCT entry in the national phase is a project of particular importance to

us and we will continue to put a priority on that aspect of our work. Technology is also allowing us to create bigger databases, and to handle the data they contain. Until recently, for example, we kept the Patent Abstracts of Japan in a separate database in [esp@cenet](mailto:esp@cenet) because of the volume of data. But since March 2005, the Japanese abstract data has been merged into the worldwide data because it is now technically reasonable to do so.

Timeliness, of course, is an area where new technologies have led to impressive improvements. We can now provide patent documents via [esp@cenet](mailto:esp@cenet) on the day of publication—this currently applies to EP, DE, FR and GB documents and we are working on extending this list. Our [esp@cenet](mailto:esp@cenet) and Register Plus services are all updated daily; and we make our data available to commercial providers via FTP on the day of publication, which speeds up things for them too.

For correctness, we are able to exploit powerful automated checking systems to carry out more than a million corrections a year to our data.

There are good reasons to expect ongoing improvements in all these areas as technologies evolve.

## 7. Some specific developments to watch

In 2005, three very specific developments are particularly significant. They are:

- The IPC reform.
- XML and WIPO ST.36.
- MIMOSA retrieval software with its new internet functionalities.

Each of these is happening because of new technologies.

The IPC reform was initiated in response to a need for a system more adapted to today's electronic environment. Through it, more documents will be better classified. They will be classified more consistently in a more harmonised and timely way; and it will be possible to reclassify them as technical fields change over time. This is a tremendous step forward for the professional searcher. But it does mean that patent offices and commercial vendors are having a tough time to be ready for the launch on 1st January 2006. EPIDOS News has been carrying regular articles on the IPC reform ever since the start of 2004. We have already held seminars for commercial vendors on the changes that can be expected to EPO data and these will continue.

All database providers, be they patent offices or commercial companies, will have to take decisions on how to adapt their products to the new IPC. There has rarely been a time when users' opinions have been so important or appreciated as now, as we take those decisions.

XML is a technology that is reshaping data exchange throughout the world, and bringing with it new possibilities for searching and handling data. For patent people, the new WIPO ST.36 will pave the way for XML to sweep through our field. ST.36 is an AGREED, OPEN STANDARD. AGREED means that a high degree of harmonisation will be possible. The EPO, USPTO and JPO have already stated they will use ST.36, and work is going on with WIPO, the EPO member states and other WIPO member states to get them on board too. OPEN means that the data formats are public and that even in 50 years, it will be possible to decipher old data stored in ST.36. And STANDARD tells us that the data will be readable without the need for special programs for each data supplier—for example, Microsoft Office 2003 can read XML files easily.

A less well-known recent development is the new version, Version 5, of our MIMOSA retrieval software. For the first time, you can now use MIMOSA to access databases over the internet. Currently, we have loaded all European abstracts and the full text of recently published European patent applicants on a server. Search and retrieval is faster than any other internet service that I have ever seen and there is the additional benefit of the full search functionality offered by MIMOSA.

One further development that I did not mention in my original list is the new EPO publications server. It was launched in January 2005 and offers free online access to full European patent documents. It replaces the paper copy as the legally authoritative source of European patents and patent applications.

## 8. Conclusion

The aim of this paper was to give readers my vision for patent information. What I have said so far is perhaps more of a description of the current situation than a vision for the future, so it is time to come to the point.

My vision for patent information in Europe is one where patent information is used, and understood throughout the innovative process. It is one where patents appear on the syllabus of every technical university course. In my vision, complete, timely and correct patent information is available free of charge via the internet. Comprehensive training is available in the form of e-learning and the new European Patent Academy becomes a leading training institution in patent matters.

Meanwhile, unlike the airlines, the market for first class tickets continues to exist. These "first class" users place high demands on us and push us and the commercial vendors to new limits which become tomorrow's minimum standards for *all* users. In my vision, global warming is not a natural disaster, because the gardening experts discuss how to tend to the garden under the new conditions and find solutions to see that the garden

flourishes. I do not believe we ever manage to destroy all the maggots—but finding a few maggots when we turn over stones, reminds us that we cannot be complacent.

My conclusion is that a lot is happening at the moment, and while the number of total users of patent information is growing, the number of top experts is, at best, stagnating. As with many other markets, it is, however, the top experts who drive for quality, often competing with the budget user, who is prepared to sacrifice quality in order to get a lower price. What the budget users often fail to realise is that the quality they have—for a lower price—came about because years earlier an expert user fought for it, and was prepared to pay for it. Over time, yesterday’s “exceptional” level becomes today’s minimum standard and everyone benefits.

We rely on our power users to set us new limits and to invest what it takes. We all have a responsibility to see to it that quality is not sacrificed through short-term, cost-based thinking. In closing, I echo the words of Ursula Schoch-Grübler: *stand up and make your opinions known to us at the EPO, to other patent offices, and to the commercial vendors.*

## References

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**Wolfgang Pilch** started in 1970 as an examiner in the Austrian Patent Office responsible for computer hardware and sound recording. He was involved in the feasibility study for the creation of an international centre to support the technical needs of the PCT. This study led to the offer from Austria to create INPADOC. In 1974 he became technical director of this centre and stayed there until 1990 when INPADOC was incorporated into the EPO.

He worked until 1995 as a director in the EPO, worked then until 2003 in the Austrian Patent Office, and then returned to the EPO where he is now principal director for patent information in Vienna.

**Daniel Shalloe** studied Mechanical Engineering at Imperial College in London, joining the EPO as a search examiner in 1989, two years after graduation. In 1991, he moved to the newly formed “Principal Directorate Patent Information” at the EPO’s Vienna office, where he has been working as chief editor of the EPO’s patent information magazine, EPIDOS News, and organiser of the annual EPO Patent Information Conference ever since.