

Questions on the European patent system

Interview with Munich innovation researcher and patent expert Professor Dietmar Harhoff

1. Patent developments

Patents are seen as "recipes for more innovation", essential for protecting intellectual property and an indicator of economic growth. Every year, the number of applications filed at the European Patent Office (EPO) continues to grow, rising from 79 000 in 1995 to 178 000 in 2004 (+ 125%).

Are all these extra filings actually new inventions?

Professor Harhoff: Very probably not; there is no totally reliable way of measuring the number of inventions in an economy. Even if patents were a yardstick, some inventions would still be used secretly by inventors or industry. Economists long believed that filings or – better still – granted patents were a fairly reliable measure of inventive activity. That is no longer the majority view, because too many patents are granted for marginal applications. In fact, economists are now increasingly critical of the patent system – or at least of one in which little or even no research can lead to large numbers of patents. Because in that case the system is no longer fulfilling its purpose, which is to provide incentives for more research and development.

Why is excessive growth in granted patents dangerous?

Professor Harhoff: Firstly, having lots of patents is a problem in itself. Every patent generates transaction costs, because anyone wanting to market a product has to "clear" it first to make sure it will not infringe anybody else's patents. These costs are incurred even if the product passes that test. Despite all the databases and new IT tools available, the proliferation of filings and patents is making the system increasingly opaque. This lack of transparency causes uncertainty. The economic costs are acceptable when extra innovation incentives generate significant benefits. But R & D in industry has not been growing at anything like the same rate as filings. I am not criticising industry: firms are competitors and cannot afford to have no patents if all their rivals are applying for them.

How has applicant behaviour changed over the last few years?

Professor Harhoff: Increasingly, applicants try to build up large patent portfolios to fend off litigation and create scope for their own innovation projects. Then there are those who deliberately abuse the system, e.g. by trying to cause uncertainty among their competitors. An application with more than 19 000 claims has gone too far; it's a blatant abuse of the system. But spectacular individual cases are only part of the problem: nowadays, even the average application has an increasing number of claims, and is getting longer and more complex. This has been convincingly shown in the book by Dominique Guellec and Bruno van Pottelsberghe, who as EPO chief economists know more about it than most. Examiners face not just more but also longer applications, and applicants who don't want to be disadvantaged have to play the game. I think this trend is driven very strongly by applicants from the USA, who are "leaders" in multiple claims and voluminous patents. We are witnessing a downward spiral which is increasingly harmful for quality. Patent agents produce more and more paper, examiners have longer and longer backlogs, and examination quality suffers. The resulting uncertainty benefits only a few. And we are moving further and further away from the patent system's real purpose – supporting innovation.

How can the quality of applications be improved?

Professor Harhoff: Appealing to applicants won't help – because if they don't join in they can lose out. But a code of conduct for patent agents would be very welcome. And you can also target incentives for applicants and professional representatives, e.g. by increasing fees for unduly complex filings. A number of sound proposals are on the table – from the European Parliament's Scientific Technology Options Assessment (STOA) unit, for example, and the Academic Advisory Council of the Ministry of Economics. But in my opinion, the European Patent Office itself has the most important job: many abusive practices by applicants can be stopped without actually amending the EPC. Possible measures include more scope for examiners, giving them greater credit for refusals when assessing their performance, creating incentives for early and rapid refusal of marginal applications and changing the fee structure so that abuse becomes expensive. In the USA, revised fees for "excess claims" have been very effective. I think the EPO should also target abuse of divisionals.

2. The job of examiner

For over a year, EPO examiners in Munich, The Hague and Berlin have been taking industrial action to maintain the high quality of European patents and have more time to spend on their dossiers. Professor Harhoff, your report looks very closely at examiners' work and analyses the steps involved, from filing up to grant of a patent.

Do you think the conditions under which European patents are granted are a threat to their quality?

Professor Harhoff: Let me make one thing clear: I am neither qualified nor inclined to comment on the dispute between union and management at the EPO. I don't know enough about their positions, and it would be quite wrong to take one side or another. On the quality issue, however, I do indeed believe that rapid filings growth has been detrimental to the quality of examination.

What are the weaknesses of current practice?

Professor Harhoff: Ultimately, too many patents are granted. That is an implicit signal to applicants that they should keep on filing marginal applications. So the downward spiral accelerates for want of enough clear signals from the Office aimed at those exploiting the system or filing marginal applications. And to correct one misconception: even if an examiner trims the application down during examination until only very narrow claims remain, that is still another patent which can create uncertainty and drives up information costs for all users. It may no longer be much use for protecting an innovation on the part of the applicant, but it can still be a weapon in a complex system. That has little to do with innovation, and it certainly doesn't help small businesses.

What changes would you like to see?

Professor Harhoff: The bar for granting patents should be raised, and possibilities for challenging them effectively in opposition proceedings should be improved. It's a little worrying that average EPO rates of grant have remained stable despite poorer-quality applications. Our Academic Advisory Council study suggested that the Office report regularly on examination quality and publish the findings of neutral reviews.

How do you think examiners' work should be assessed?

Professor Harhoff: Patent examiners must work objectively and neutrally. They must never feel indirectly pressurised to be kind to applicants. The examiner should feel a duty to his work and to society at large, not to some ill-conceived "customer friendliness" measured by how well the "customer" advances his own interests. This can easily happen when the real customer – society – is not around, whilst those who profit from patent privileges – the applicants – make themselves heard very loudly. An examiner who refuses an application for objective reasons helps to ensure that the system remains viable. Patents granted selectively, to high standards, help genuine inventors and innovators. So patent offices' internal processes should encourage examiners wanting to refuse a patent, for example by giving due recognition to the extra work involved.

3. Internal EPO structures

The Administrative Council runs the EPO together with the President. Most of its members work at national patent offices.

What effects does this combination of national and European offices have?

Professor Harhoff: It is undoubtedly good that the European Patent Organisation benefits from the experience of national institutions and experts. However, there are problems, on principle, with the fact that the EPC contracting states, or rather their national offices, profit financially from EPO-granted patents by virtue of their 50% share of the renewal fees, yet simultaneously would have to approve any measures leading to a greater focus on quality and thus to fewer patents. That is indeed an unsatisfactory situation requiring correction in the long term. The whole fee system is characterised by cross-subsidisation: expensive examination is partly financed by renewal fees. That of course creates incentives to grant as many patents as possible. The Academic Advisory Council report did in fact criticise this.

Do you share examiners' fears that the administrative structures of the EPO tend to give rise to decisions which are against its economic interests?

Professor Harhoff: For me, examiners' fears are not the point; nor will I be drawn on their disputes with the EPO management. And the EPO's economic interests are not the point either. Of course the Office must work efficiently, without budget crises disrupting its day-to-day work. But we must ensure that the EPO does not come to believe that generating more income is proof that it is doing a good job. The EPO is not subject to direct control by parliament or the European Commission, and therefore carries great responsibility. A policy of simply maximising its income would be mistaken. It is almost inevitable, however – and only human – for large organisations to develop such tendencies. If this happens, the EPO management must try and nip them in the bud.

What are your recommendations to the Administrative Council?

Professor Harhoff: Let me refer you again to those in the Academic Advisory Council's report. Its core finding was that more patents do not mean more innovation, and can indeed mean the opposite. The Administrative Council should help to get the grant rate down. Opportunistic behaviour by applicants exploiting the system must be penalised. It is important to start the reform process now; otherwise, in five or ten years' time, society will have to discuss whether Europe can still afford an escalating patent system.

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