

Good morning.

My name is Philippe Aigrain. I am the CEO of a small company, the Society for Public Information Spaces. I am a software scientist, but today, I will speak to you as someone involved in policy debates around intellectual rights for many years.

I want to share with you 4 ideas about what is at stake when we discuss patents and patentability. Hopefully, it will also provide some directions that WIPO could try to pursue, if its member states and staff find appropriate.

The 4 ideas fit on one slide, though each could be the subject of a full conference:

1. Information and informational techniques are different in nature from physical device and process technology
2. Due to that, one can have a sensible patent policy only by limits on subject matter. Generic patentability criteria do not suffice.
3. The real effects of patents show only in the long run, notably when they are enforced in all significant markets
4. In many situations, informational techniques and physical technology coexist in a given product. In these situations it is particularly essential that patents are not granted for the informational components.

When I say that information and informational techniques (software but also genetics even when it is embodied in cells, seeds, or crops) are different in nature from physical device and process technology, I do not speak in general, which would be stating the obvious. I speak very precisely about whether there is a case for granting patents, and what is the effect of granting them. Promoters of a « patents fit every domain » approach will tell you that we have gone through this with every technical change, that patents always found their proper application to these new domains, that informational technology is just yet another technical change. Well, every who cares to know knows that the latter is wrong, and the former doubtful.

Software and informational artefacts enable a reduction of transactions costs in cooperation and reuse that is so important, that models of production characterised by the free exchange and usage of information become much more productive. Even when restrictive rights and contracts are made part of the picture, copyright-based approaches have proven to be infinitely better for innovation and its dissemination than strongly restrictive rights such as patents. I won't elaborate on this, because this fact has been described and proven over and over. The demonstration can be found in Yochai Benkler's Coase's Penguin paper, it was reiterated in the talk of Volker Grassmuck yesterday, and in another domain it is splendidly embodied in John Sulston's and Georgina Ferry's Common Thread book. By the way, do you know of any refutation ? I don't, and I have still have to meet a true present day software practitioner who thinks that patents are useful for software innovation..

I want to develop another aspect, which is overlooked in its importance: what happens when strong property mechanisms are put in place on essential informational resources. Well, it produces a new type of industry, whose business is no longer in products or services, but in monopoly rents, whose research is dimensioned and targeted by the amount of these monopoly rents, and the objective of maintaining and extending them. There is nothing more attractive for investors and shareholders than monopoly rents. It is almost

impossible to resist. These new industries are characterised by profit margins above 30% for pure information monopolists and in the 20-25% for mixed industry oligopolists. The first company of this type was to my knowledge the seed manufacturer Pioneer, created by Henry Wallace and its pals in the 1920s, an interesting prefiguration of the type of interpenetration of state and corporations that we tend to consider as typical of our times. Pioneer is still there, as the biggest world seed producer, though only a subsidiary of Dupont. I don't need to tell you who are the other examples of informational oligopolies of today: you know them. Each one of them is powerful, financially and in political influence, but is also a colossus with clay feet, and the clay feet are the patent monopolies. We could live with that in a world where each company would have its own source of funding, and just work on defining a posteriori correctives such as compulsory licenses and competition redress. But we are not in this world. We are in the world of globalized financial flows and profit optimisation. As a result, the mere existence of this absurd reference point set by informational property businesses is wrecking the full economy and the basic fabric of society. « Normal » industries and services have to survive by either faking their accounts, spending in advance their future, their employees' future or the planet's future, or begging for some protection. In addition, intellectual property licensing and cross-licensing has become one of the major schemes of tax minimisation (or worse). So please, don't believe that the effects of an unreasonable extension of patentability are just localised or domain-specific. These are issues that bear on the future of our economies and our societies.

Let's now jump to the substantive patent debates. When patent scope has been extended to cover an undue domain – say software, information processing, or gene sequences – in a given area, people later try to limit damage by tuning the system. In addition those who believe in the one-size-fits-all approach claim that any dysfunction will be removed by tuning generic patentability criteria to a given domain. Well it does not work, and it won't work. It does not work in the US where despite efforts at raising “quality” the number of granted informational patents still grows exponentially. It does not work at the European Patent Office where the number of informational patents granted in contradiction with the European Patent Convention grows exponentially despite 9 to 10 years of examination backlog¹. So please, let's not go too far and make the cost of return of reason huge. Let's work on defining a decent patentability perimeter. Nothing in TRIPS 27.1 forbids it, except the self-interested blindness with which some have chosen to interpret its provisions. We can start now.

One difficult aspect of debating the legal framework for intellectual rights is that its true effects are visible in their full breadth only in the long run. This is connected to time constants in some of the dependencies between legal changes and actual practice. For instance the effects of treaty level change on actual practice in one country can take 15 years (we have not seen most of the TRIPS effects yet). But there is also another reason, that specifically applies to patents. Their strongest effects -for instance complete disconnection between production costs and pricing- show up only when patents apply to every significant market. For instance, the real effects of patentability of molecules, whatever one thinks of them, did start to show only from the 1970s, after 130 years, because before that, there were still major markets that ignored them in all or part. It means that we have seen nothing of the effects of software and information patents for instance, in terms of litigation, monopoly rents, innovation slowdown, lost opportunities in development; and burden for

¹ EPO acknowledges 6 to 7 years backlog for the category “computer and telecommunications” which is the Newspeak name for what is now in majority software and information processing. My own measures point to 9 to 10 years for software-related patents.

free expression and cooperation, because there is still an uncertainty on their validity in Europe. It means also that it is not too late to stop the madness.

Finally, some of you may have wondered why I described as informational some industries where the final product is definitely physical, such as seeds. For many years, I have tried to understand why these industries exhibited some properties similar to pure information industries. I truly understood it when reading a paper by Jean-Pierre Berlan² about the seed industry and its history. He described modern seed manufacturers as selling floppy disks, the seeds being only carriers of a more or less homogeneous genetic information, with a number of copy protection mechanisms, and other biological interface elements. In other terms he showed that first through hybrids and vegetal varieties patents, and later through GMOs and gene sequence patents, they had been able to separate a monopolised reproduction element from the production. That tells us a lot about software and whether one would want to grant patents on embedded software.

Many people, including people whom I respect in the industry, tell us: "Of course we don't want to monopolise the generic information processing methods that every one uses, but you can't refuse that we patent software that runs into our physical systems devices, devices that we have always patented in their principles". Today the consumer electronics, IT peripherals and telecommunication handsets industry may have many flaws, such as being under excessive control from centralised media and publishing, or exploiting network effects to retain control of segmented markets. But there are still "normal" industries. Prices of their devices still bear some relation with their development and production costs. Give them embedded software patents in any form, and they will turn themselves into monopoly rent seekers. It will be bad enough that we have one more set of them. But there will be worse. Like most, their monopoly can only exist when no neighbouring alternative can exist. And the one alternative they will go after to cash on their monopolies will be open general purpose computers and networks.

Information and its tools, when they can be freely used, are today's instruments of the free creative enquiry, of human cooperation, of knowledge and culture. Of all what WIPO and its predecessors were set about to serve. So please, dear WIPO, stand for it, and do all your possible to limit the scope of patents to where it serves the common good.

2 Jean-Pierre Berlan, Quelle politique semencière (which seed policy?), <http://perso.wanadoo.fr/jpe.berlan/articles/oc1.html#fnB1>