# Measuring IP protection in the IT sector

In 2006 the Stockholm Network revealed which jurisdictions offer IP owners the best protection for their IT innovations. **Meir Pugatch** explains how they fare three years on

One of the most fundamental problems in public discussions about Europe's IP policies is the shortage of information about what make a good IP environment that is relevant to Europe's high tech industries in general, and to the IT sector in particular.

To that end, in 2006 the Stockholm Network developed an innovative statistical index aimed at measuring the strength of intellectual property rights in the IT sector in different countries. The Stockholm Network has now updated the index for 2008-09.

The IP-IT Index positions countries' IP environments relevant to the IT industry on a mathematical scale of 0 to 4. It factors in 14 IT-related IP components, covering the term of exclusivity; scope and coverage of essential components; strength of exclusivity; and enforcement.

## Going up, going down

The updated Index demonstrates an improvement in the strength of IP rights in several countries, particularly with regards to the term of protection and the extent of enforcement. Specifically, the EU has increased the duration of copyright from 50 to 70 years. In addition, Singapore, France, Sweden, the UK, Brazil and Japan have all seen a decline in piracy rates, with France experiencing an especially marked drop.

However, the US is still found to have the strongest level of IP protection (3.92) and, despite its improved piracy rates, the EU continues to have the weakest (2.55).

Breaking it down, some key policies that are particularly lacking at the EU level include the failure to harmonise the patentability of software-related inventions (today, different countries in Europe have different practices in this field, although most countries do allow for this type of activity to take place). Government procurement policies increasingly seek to favour software and standards that are based on open-source, as opposed to software and standards that are based on the protection of IP rights. In recent years, the EU has adopted and shaped policies that seek to establish the supremacy of competition rules over IP. Europe also has a relatively high level of piracy compared to other countries and markets.

On the first point, the Enlarged Board of Appeal of the European Patent Office is now reviewing policies that seek to clarify the conditions for exclusion from patentability of computer programs under Article 52 of the European Patent

## One-minute read

Three years ago, the Stockholm Network began to assess the degree of IP protection afforded to the IT sector in key markets around the world. The aim of the project was to inject more objectivity into debates about the strength of intellectual property rights as they affect the high tech and IT sector. The project's authors did this by developing an innovative statistical index. The Stockholm Network has now updated the index for 2008-09.

It concludes that the US still offers the highest level of protection, while the EU has the weakest. However, some countries and regions have made big improvements over the past three years: the EU has extended the duration of copyright from 50 to 70 years, while Singapore, France, Sweden, the UK, Brazil and Japan have all seen a decline in piracy rates.

## Table 1: Scores

| Countries/ region | Term of exclusivity | Scope and coverage of essential components | Strength of exclusivity | Enforcement | Total |
|---|---|---|---|---|---|
| **US** | 1.00 | 1.00 | 1.00 | 0.92 | 3.92 |
| **Singapore** | 0.89 | 1.00 | 1.00 | 0.85 | 3.74 |
| **France** | 0.89 | 0.80 | 0.80 | 1.18 | 3.67 |
| **Sweden** | 0.89 | 0.80 | 0.80 | 0.90 | 3.39 |
| **Germany** | 0.89 | 0.80 | 0.80 | 0.89 | 3.38 |
| **Norway** | 0.89 | 0.80 | 0.80 | 0.88 | 3.37 |
| **UK** | 0.81 | 0.80 | 0.80 | 0.90 | 3.31 |
| **Brazil** | 0.61 | 0.80 | 0.80 | 0.76 | 2.97 |
| **Japan** | 0.81 | 0.80 | 0.40 | 0.91 | 2.92 |
| **EU** | 0.89 | 0.40 | 0.40 | 0.86 | 2.55 |

## Table 2: Sub-categories explained

| Category | Sub-categories | Weight (%) |
|---|---|---|
| **Term of exclusivity (total 25%)** | Term of patent protection | 40% |
| | Term of software copyright protection | 40% |
| | Term of protection of topographies of semiconductor products | 20% |
| **Total** | | 100% |
| **Scope and coverage of essential components (total 25%)** | Patentability of computer-implemented inventions | 40% |
| | Legislation that allows for the active use of digital rights management (DRMs) | 20% |
| | Database protection (either via copyrights or via sui-generis rights) | 20% |
| | Complete ban on parallel imports without the IP owner's consent | 20% |
| **Total** | | 100% |
| **Strength of exclusivity (total 25%)** | Restrictions on the use of compulsory licences in copyrighted & patented products (use of the essential facilities doctrine is restricted to exceptional cases and refusal to supply an IP right is not treated as an abuse as such) | 40% |
| | Clear limitations on the principle of fair use based on the Berne three-step test | 40% |
| | Government procurement policies are not biased towards standards based on open-source and/or do not discriminate against the use of proprietary standards | 20% |
| **Total** | | 100% |
| **Enforcement (total 25%)** | Level of piracy rates (based on BSA figures) | 40% |
| | Effective civil and procedural remedies (injunctions, damages for injuries, destruction of infringed and counterfeited goods) | 20% |
| | Effective criminal procedures, including the possibility of imprisonment | 20% |
| | Dedicated policing actions against piracy and counterfeiting | 20% |
| **Total** | | 100% |

Convention. While such clarifications are indeed important one needs to be very careful not to create a situation in which vital technological advances in the computing domain would be excluded from patentability.

While the score of the EU is disappointing it is certainly not surprising. Formally, the EU has recognised the importance of innovation to its economic future, including the need to protect IP rights. But while the past decade has been filled with grand plans, such as the Lisbon Agenda and other follow-on strategies that seek to improve the EU's IP environment (such as the case of the computer-implemented inventions directive), the EU has yet to catch up with its major trading partners.

As a result of its findings, the Stockholm Network now calls for the EU to do more to address its IP environment to meet the Lisbon Agenda goals.

## Methodology

The IP-IT Index measures four major categories: term of exclusivity; scope and coverage of essential components; strength of exclusivity; and enforcement. Each category is further divided into sub-categories (see Table 1).

### Calculations

Each category is scored between 0 and 1. The cumulative score of the Index ranges between 0 and 4. Each category includes sub-categories of a binary nature, i.e. each category is assigned either the value of 0 – if the particular IP component does not exist in a given country – or 1 – if the component does exist.

The category entitled term of exclusivity is calculated numerically. This is done by dividing the actual term of exclusivity of each sub-category by the maximum existing baseline of that category (see Table 2). For example, the baseline of the maximum copyright term is 95 years (in the US). Therefore, the numerical formula for this sub-category is "n years of copyright term/95". Piracy rates are also calculated numerically. They are based on the Business Software Alliance (BSA) and IDC Global Software annual studies on global piracy in the software sector.

### Weights

Based on previous indices (the Ginarte Park Index in particular, known as the GP index), it is assumed that the four major categories of this Index should have an equal weighting. Therefore, the weight of each category equals 25% (and in total 100%). Within each category, the Index applies two different weights, which reflect the relative importance of each component. Weights are applied according to the following criteria:

- **Core component**: a component that is fundamental to the existence of an IT-IP regime in a given country – weight equals 40% or more.
- **Significant component**: a component that greatly contributes to the level of an IT-IP regime in a given country – weight equals 20%.

## Strengths of the Index

First, and most importantly, the new IP-IT Index provides a more sector-specific tool for measuring national IP environments relevant to the IT sector.

Existing IP indices tend to focus on the national protection of IP rights as a whole, without making a distinction between different fields of technology. This means that there may be cases in which a weakness in the level of pharmaceutical IP protection (and, at times, several IP deficiencies) is overlooked in terms of measurement.

The IT-IP Index provides a more accurate way of measuring the level of IT-related IP protection in a given country.

Secondly, the new IT-IP Index expands beyond patents and

copyrights. This is important because, traditionally, the IT sector is usually associated with copyright. However, the growing challenges facing the commercialisation of IT products in different markets today require a much wider set of IP factors. It is important both to identify these factors and to measure their contribution to the overall level of IT-related IP protection in a given country.

Third, the new IT-IP Index enables both policy makers and corporate officials to compare and evaluate the level of IT-related IP protection in different countries. Moreover, since the Index is numeric by nature (as it is based on the Ginarte Park Index – a well-known IP index that measures the strength of patent rights in different countries) it will be best utilised when sampling as many countries as possible. The ability to compare a large sample of countries is further strengthened by the ability to measure the strength of national IP regimes over different points of time, thereby identifying national protection trends.

## Weaknesses of the Index

The issue of discretionary weighting (although confined to two groups, as explained above) makes the Index more arbitrary compared to other indices such as the GP index. The choice here is between applying an equal weight to each sub-category (which reduces the risk of discretion but makes the Index quite illogical, as some sub-categories are clearly more important than others) and applying weights that are based on subjective estimates. Between these two alternatives, the latter seems more appropriate, yet the risk of discretion remains in the sense that opinions can vary about the relative weight of each sub-category.

Also, given that the Index breaks new ground with regards to the protection of IT-related IP rights, it is possible that the 14 indicators above do not fully represent the entire IT spectrum. One suggestion is to measure the time it takes to obtain a patent in a given country. Another suggestion is to include elements that are related to trade marks.

Nevertheless, it is also likely that the above indicators provide a fairly comprehensive picture of the status of IT-related IP protection in a given country. Naturally the Index can be, and should be, refined and improved in the future.


Meir Pugatch