

**GOWERS REVIEW OF INTELLECTUAL PROPERTY
COVER SHEET FOR RESPONSES**

Contact details of respondent	
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Please indicate below which issues are covered by your response. Not all issues will be relevant to all respondents – please feel free to skip questions that are not relevant to you.

General Questions covered:	
How IP is awarded	Y
How IP is used	Y
How IP is licensed and exchanged	Y
How IP is challenged and enforced	Y

Specific Issues covered:	
Current term of protection on sound recordings and performers' rights	Y
Copyright exceptions – fair use and fair dealing	Y
Copyright – digital rights management	Y
Copyright – orphan works	Y
Copyright – licensing of public performances	N
Copyright – designated archive status	N
Patents – utility patents	Y
Pharmaceutical Supplementary Protection Certificates (SPCs)	N
Trade Marks – international issues	N
Designs – registered designs and unregistered design rights	Y
Legal sanctions on IP infringement	Y
Parallel Imports / International Exhaustion	N
Coherence between competition policy and IP policy	Y

Have you raised any other issues in your response? Y

Details of accompanying documents (Please continue on additional sheet if necessary)

Experience and problems in international standardisation - JPEG case study

Please TICK BOX if you DO NOT want your response posted on the Gowers Review website.

Initial note -

I find it concerning that sometimes within the questions asked, references to patents and IP seem to be treated as synonymous. They are not. My major concern as the long term chair of the committee responsible for developing the technical standards for still and moving image compression in the UK (and widely applied in the Internet, digital cameras, digital and satellite TV etc) is that of patents and patent abuse, and the majority of answers relate primarily to that topic. The questionnaire is however answered on my personal and company's opinions, rather than that of the committee.

Response on specific named issues

How IP is awarded

(a) Are there barriers to obtaining IP rights due to system complexity? What could be done to improve this situation?

Relating to patents

The complexity issue is related to that of overall costs. A key problem is the amount of work needed to understand existing patents in the field. These are often written in very differing language, and do not (at least to the layman) appear to define clearly what is claimed - some include claims of breath-taking wideness (and obviousness). The increased availability of patents through web based searching is an improvement - however this has been more than countered by the increased number of grants and patentability of minor or obvious inventions. It is common to come upon patents that appear to cover the same grounds. Far fewer patent grants, and improved quality in the grant process would help, however how to deal in retrospect with the current situation is far from obvious. Abandoning software patentability would also be a major step forward (although clearly not copyright and unregistered design legislation, which can already be used effectively to protect most software and IT hardware). I note with concern that the UKPO has recently allowed patenting of inventions which can only be carried out in software - recent examples include Java Bytecode by Sun. Our attached contribution on issues in JPEG standardization relates further to this issue.

(b) How easy is it to find out about obtaining IP rights? What could be done to improve awareness for businesses and innovators? Is there sufficient awareness of the need to protect IP internationally?

Relating to patents

It would be a lot easier if so many patents were not being granted! This question implies that increasing patentability, the number of patents, and awareness is a good thing. I would dispute that. Most companies (especially SMEs) that I am aware of are petrified of the entire patent process - they think it will be initiated as an attack by large companies, and will simply involve them in major expense and time spend, irrespective of their view of the rights of the situation, or any preliminary advice or opinion they obtain. It is not easy (impossible?) to file a patent without help from a patent agent, as a number of the issues involved are (a) not obvious and (b) the patent as written by a technologist is very different from the wide ranging claims drafted by the agent. SMEs compete on their ability to service customers in a timely and effective fashion - patents (and spending time and money studying patents) are unlikely to help these business goals. It may be feasible in some market sectors - however in Information and Communications Technology, and specifically in software, it is not.

(c) Are there barriers to obtaining UK IP rights on grounds of cost? What drives these costs?

Relating to patents

The briefing paper accompanying this survey already cites the costs of getting patents, which are outside the pockets of smaller SMEs already. It does not cover the costs of protecting patents, which are well outside the pockets of any SME, especially if the (important) US marketplace is involved. I am aware of instances of patents held by friends (in the US) that appear to be infringed by larger companies - they cannot afford to take these organizations on without risking their homes and jobs - even initial advice is too expensive to contemplate.

(d) How do these costs compare internationally in your organisation's experience?
No experience - as a matter of course and policy we publish rather than patent.

(e) Do you have any comments on the UK Patent Office fees structure for obtaining and renewing IP protection?

Does this question refer primarily to patents - if so it should say so. Copyright and patents are very often confused, and there is an increasing tendency to refer to patents as 'intellectual property' which many regard as a misnomer. These costs are insignificant when weighed against those of defending or prosecuting patent actions in court.

(f) Is lack of trust in the system a barrier? To what extent do you rely on other tools to bring innovation to the marketplace, such as being first to market, maintaining trade secrets, or using an open innovation model to generate value through reputation or network effects?

The issue is not a lack of trust in the system - it's simply that the current system is badly broken. Originally, as I understand it, a patent was offered to an individual to protect his livelihood, offering limited protection in exchange for disclosure to prevent an invention dying with its originator. For printed work, copyright allowed an author to redeem his work when it was no longer in publication. Now the rights of the 'publisher' seem to outweigh those of the creator, as electronic 'publication' can be deemed to last for ever, and it no longer means that you can assume to share, sell or otherwise handle work that could originally (for example in a hard copy form) be owned by an individual. Large corporations with deep pockets own this world - not the small inventor, as some would have us believe - a complete reversal of the original intent of the patent system, I would suggest. As a small technical software house, we use an open innovation model - it used to serve us well. Now the wide range of things that are being allowed to be patented, and the financial rewards for specialist and large organizations of so doing are a barrier to any form of technical development by SMEs, in my opinion. In addition, legal action over patents is a refined weapon in the armory of most large organizations.

(g) Are there specific barriers to obtaining IP rights in your sector?

Relating to patents

The sheer number of patents that exist, and the minutiae of detail that they patent. We work in an area where there are certainly tens (and probably hundreds) of thousands of patents. It is becoming exponentially expensive in time and money terms to look at patents in a detailed technical manner. A specific barrier is the international nature of IT products and services, especially those using the Internet. The patent system is in essence national - even covering business

process in the US, for example. As it is difficult, or even impossible, to prevent national access to Internet based service offerings, the net effect is that all possible IP holders need to be considered.

(h) Are there specific barriers to obtaining IP rights for small businesses or individuals?

Relating to patents

See above. The costs are already prohibitive before their enforcement is considered. If only far fewer high quality patents on issues of considerable novelty were patentable, the situation might revert. It is however unclear as to how the current situation could be reversed. Patents last far too long in IT - 17 or 20 years, when the life cycle of a product may only be less than a year.

(i) How well does the national system for awarding IP, administered by the Patent Office perform? How well do the international and European systems work?

Relating to patents

Limited experience - however note previous comments. I find the EPO system more useful (although prohibitively expensive), and do not see a need within Europe for any national systems which seem to me to add costs with little benefit. I personally see little or no substantive difference between our market here in the UK and in Europe.

2. How IP is used

(a) What types of IP does your organisation use and why?

We do not feel the need to use more than simple asserted copyright on our software publications. As a matter of policy we do not patent ideas, but disclose them - however we time our disclosure to our commercial benefit for obvious reasons. We have not used trademarks, although we thought the costs of acquisition high when we looked into them.

(b) To what extent do you seek multiple overlapping forms of IP protection?

Not at all

(c) To what extent are these decisions influenced by sector-specific considerations?

Very much so - in our opinion software is protected by its quality, creativity and support. There is no need to do more than stand on one's reputation.

(d) How does your company value its IP? Are there problems with raising finance against intangible assets based on IP? What improvements could be made in this area?

We would value our IP if approached with a view to acquisition, but otherwise we regard it as misleading to our investors to claim more than the goodwill and time spend in research and development activities as meaningful IP. Much of our IP is locked up in the intellect of the various members of staff. We have not attempted to raise finance based on our IP, and would hope that any investor would like at more than 'intangible assets' - issues of support quality, staff skills, and tangible assets.

(e) To what extent does the term of IP rights at the margin affect investment decisions?

Don't understand the question (nor does Google return a useful answer!). If it means does IP last too long in the fast moving IT arena then the answer is surely yes.

(f) How well does the UK IP system promote innovation?

It is a disincentive. Prior to the current environment in which universities and other researchers seek to patent everything, reputations were made through publication. This was a relatively fast process, and is now immediate, and allows many others to build collaboratively some complex systems. Innovation is now masked and hidden under the delaying and non-disclosing patent system - the inevitable result is that countries which pay less attention to patents and more to product development and enhancement such as China and Taiwan win out. I regard the threat of increasing dominance of the patent system as one of the largest contributors to the decline in motivation and creativity in this country.

(g) To what extent does your organisation make use of other methods used by Government to encourage innovation, such as public funding?

We try, with mixed success. In the last 14 years we have won several awards, including 2 DTI demonstrators and been involved in 6 European funded projects, the last two independently judged as 'exemplary' (all part funded). Increasingly, we are being asked in these innovations to try and develop patents and other forms of IP as a condition of entrance, we suspect following lobbying from the Patent Office and other patent proponents. This is in conflict with our policy and makes application more difficult.

(h) Are data on the use of patents and other forms of IP useful as a means of measuring innovation?

No - they may be a measure of its deterrence. Examples include the premium to enter the GSM market (rated in recent articles as at least 25% of product price in royalties as opposed for 7% for 'club' members).

(i) Do you have any evidence as to the static or dynamic costs that IP rights (as statutory monopolies) impose on the economy?

No.

(j) Have you encountered patents or other IP rights being used defensively, i.e. obtained not to develop products, but only to prevent others from doing so?

Under what circumstances do you consider this acceptable?

Please see attached evidence on JPEG and patents. During the patent process we have frequently found that patent holders are unwilling to grant patents on the internationally acceptable basis of 'free and non-discriminatory'. This can be for a variety of reasons - concern that the international standard will allow other into a narrow area that the patent holder is exploiting (or considering exploiting), an unwillingness to let a rival company into the specific market area, or even an unwillingness to discuss options. Considering the prime purpose of patents was to allow protected exploitation against disclosure of the trade secrets embodied in the patent, I would not consider this behavior to be acceptable in any circumstances. In some areas, such as pharmaceuticals and gene patents, this could be extremely disadvantageous. The advent of 'pure licensors' (See attached commentary on JPEG) is adding to this problems, as some of these organizations have been established simply to maximize financial revenues with no option for cross-licensing or other forms of licensing.

3. How IP is licensed and exchanged

(a) How easy is it to negotiate licences to use others' IP for commercial or non-profit purposes?

Relating to patents

We have licensed some technologies on rare occasions. These have all been through published licenses and were not problematic.

(b) What mechanisms do you use for finding potential licensing partners?

Relating to patents

Through web sites relating to international standards

(c) How easy is it to use others' IP for research purposes? Have you experienced difficulty around research exemptions?

Relating to patents

Never been a problem - other than knowing what is and isn't patented!

(d) Are there specific barriers to licensing in the main forms of IP currently used: patents, copyright, trade marks, and designs?

Relating to patents

Within the international standards arena, these are often licensed under so-called 'reasonable and non-discriminatory' terms. Just what is reasonable may not be the same for a large corporation and an SME - a one payment of 50,000\$ was cited for one patent recently, whilst others are based on a figure of 1-3% of product sales. Figures may be much higher in some markets (e.g. GSM as cited earlier). However many patents may need to be amalgamated for some multimedia services, and the totality could easily add up to more than the envisaged product profitability. As more and more patents are required for a single product, the patent holders are unwilling to offer any kind of reduction - the only hope are patent pools such as that offered by MPEG-LA for MPEG based technology for example. These however do not guarantee that all licensors will participate, and the rather cavalier attitude that some take make the establishment of the accurate pricing of a new product extremely difficult.

(e) Are there barriers to licensing IP on grounds of cost? What drives these costs?

Relating to patents

Yes - often. Simply evaluating patents that might apply is complex and expensive, and for most new IT products it could safely be assumed that many tens (and possibly hundreds) of patents could be deemed by their licensors to apply. These each apply to a very small part of a potential product, but licensing costs will not relate to their value in real world terms to the product. In addition, the costs of translation are prohibitive (and may be inaccurate unless appropriate and expensive skills are hired) from the many tens (or even hundreds) of patents that a detailed search will unearth in Japan and Korea (for example - presumably China is being encouraged to add to this burden) Large organizations have extensive and intricate cross-licensing arrangements to avoid problems. These act as a significant barrier to trade to all smaller companies. The only thing that prevents their exploitation is the high cost of litigation (and to some extent in the UK the relatively low chance of success). Reducing the cost of litigation might be seen by some as a solution, offering smaller companies the opportunity to capitalize on patents they hold. I think however that the effect would in fact be the opposite - it would allow the larger companies to take more often and

effective action against smaller companies (which they could not financially afford to defend), and would also allow the so-called 'pure licensors' and patent 'trolls' to follow suit. The only answer seems to me to reduce the size of awards to that which is reasonable - the actual development cost of the original patent, its value within a particular product, and the actions of the owner in exploiting the patent effectively should be major factors in any judgment.

(f) Are there specific barriers to licensing IP in your sector?

Relating to patents

Awareness, time to assess, quantity and cost.

(g) Does your organisation use methods to facilitate exchange of IP - such as crosslicensing or pooling IP rights with other firms or organisations?

Relating to patents

As we don't have patents as a matter of policy the question is not directly relevant. The only workable solutions we have seen in the area we work in is for patent pooling - however this needs to be effectively controlled to ensure that the pool is not dominated by a small number of key organizations (as might be surmised to be the case in mobile telephony for example). In addition there is at present no way to prove that a patent pool holds all relevant patents - organizations may and do stay outside pooling arrangements, presumably to maximize revenues and there have been cases (e.g. for UK TV set top boxes, as I understand it) where an mistaken assumption was made that paying a pool revenue was a sufficient requirement for entry into the marketplace.

(h) Are there specific barriers to licensing IP rights for small businesses or individuals - for example barriers to entry to patent pools?

Relating to patents

Yes - the one-off costs can be significant when weighed against royalty based fees for an SME. In addition, the documentation can be confusing - an assumption is easily made that the pool covers all patents that may be required, which is generally not true, and dissemination of the amount of information within the patents in the pool is time-consuming. I cannot envisage how an individual would ever have enough resource to be able to deal with the patent situation within the multimedia IT sector!

(i) Are there barriers to trade and exchange of IP internationally?

Relating to patents

Yes. IT services by their nature are international, not national. How revenues should be sub-divided is therefore very questionable.

(j) Does your organisation consider renewing patents using "licence of right" provisions in patent law (which entitle any person to a licence under your patent and reduce your renewal fees by half)?

Relating to patents

In theory, 'licence of right' provisions are available for all patents incorporated in British Standards. The suggestion that this has very specific licensing financial constraints apply is new to me - certainly licensors have never offered this option! Again - IT services are international - licensors tend to offer a specific licence which to my knowledge never mentions any licence of right issues. To the best of my knowledge, BSI fails to ensure that relevant licence of right statements are lodged with the UKPO for adopted international standards.

(k) What could be done to improve “licence of right” provisions and business awareness of them?

Relating to patents

Publicise and explain them (and make sure that all patents required by standards are automatically assigned a licence of right statement)? Of course this would require someone (such as the Patent Office) defining which patents were required to implement a specific standard. This is a very good idea, but I suspect exceedingly unlikely to happen. I have had very limited help from anyone (other than the EPO) in even looking at patents that might apply to the creation of international standards (as an editor for three such, and participant in many more).

(l) Do you have any experience of the compulsory licence provisions within current patent law? Are they effective? How could they be improved?

Relating to patents

No - again I would expect these to have been extensively discussed with those who are most affected - the editors and creators of international standards. They haven't.

4. How IP is challenged and enforced

(a) Are there specific problems with enforcing the main different forms of IP: patents, copyright, trade marks, and designs?

Relating to patents

The number of patents, the pockets of the company enforcing them, and simply understanding them after they have been drafted by a patent lawyer are all issues. I have many friends named as the inventor of a patented technique. Almost universally they tell me they don't recognize their invention from the description as drafted by a patent lawyer. This is of course deliberate - it sets the ground for legal argument and hence expense. A small company with patents cannot realistically expect to enforce them against a larger one - in general they can be threatened in a variety of ways - with cross litigation, loss of revenue from a major customer, even loss of job. Simply taking time and adding complexity to a challenge will stretch the cost of legal action way beyond what most SMEs would be willing to risk.

(b) Are there barriers to challenging infringement and enforcing your IP rights on grounds of cost? What drives these costs?

Relating to patents

Far too many minor patents. The apparent unwillingness of the patent system to accept publication or equipment functionality as prove of prior art, and its reliance on court cases to challenge validity, rather than pro-actively seeking industry feedback before grant. Only other patents seem to be acceptable in a self perpetuating system. The fees charged by lawyers in general and patent lawyers in particular are much greater than those chargeable by skilled practitioners in my field, and in general are met by both litigant and defendant. In addition any IT product designer has to consider a wide spectrum of different national patent legislations and infrastructures, which further adds to costs.

(c) To what extent does your organisation make use of other methods than litigation to resolve IP infringement cases, for example the Patent Office opinion

service, mediation services, Alternative Dispute Resolution, or the Copyright Tribunal?

Relating to patents

We would hope to avoid these - if necessary by ceasing production of a disputed product. Costs are likely to be lower.

(d) To what extent do you use IP litigation insurance? How effective is it?

Relating to patents

I asked for corporate cover against litigation in the US for the multimedia segment I work in. The ballpark estimates provided were of the order of 50% of my firm's annual turnover for realistic cover. It gave very limited cover. Others have had similar experience in seeking US litigation cover.

(e) Are there barriers to using such methods to settle IP disputes without recourse to litigation? How might they be removed?

Relating to patents

By reducing the number of patents, their area of applicability (for example refusing pure software patents) and ensuring that any standard publication from an internationally accredited standards body such as ISO or BSI can be implemented through a set of patents agreed, in advance, by a relevant patent office

(f) Are there specific barriers to challenging and enforcement of IP rights for small businesses or individuals?

Relating to patents

See above - enforcement (and challenging) is impractical in my opinion in the IT sector because of the number of patents granted, the life of products within the sector, the costs, the likelihood that a large corporation will simply ignore or delay/escalate proceedings to an uneconomic barrier. In addition European patents (unlike US patents) can apparently not be withdrawn once issued, even if a valid challenge comes to light.

(g) To what extent is the risk of litigation a factor in your organisation's investment in innovation?

Relating to patents

Extremely high. It is becoming almost impossible to innovate as so many patents exist on an international basis, as well as the differences between national and community systems.

(h) What are the principal barriers to efficient and successful challenge and enforcement internationally?

Same as those in (f) above, only with increased problems.

SPECIFIC ISSUES

• Current term of protection on sound recordings and performers' rights

Background: The Review will fulfil the Government's commitment to examine whether the current 50 year term of protection on sound recordings and performers' rights in sound recordings is appropriate, in the light of its extension to 95 years in a number of other jurisdictions.

(a) What are your views on this issue?

Personally I think the rights should be those of the creator, not the publisher. I believe 50 years is sufficient - after that historical interests should prevail.

(b) Is there evidence to show the impact that a change in term would have on investment, creativity, and consumer interests?

Very little as far as the (probably now dead) creator is concerned. I cannot think of another sector where a 50 year old investment is judged worthy of another extension without responsibility.

(c) Are you aware of the impact that different lengths of term have had on investment, creativity, and consumer interests in other countries?

Only the correspondence on DMCA in the USA - generally seeing it as a politically motivated and inhibiting piece of legislation.

(d) Are there alternative arrangements that could accompany an extension of term (e.g. licence of right for any extended term)?

Typically (as within a Patent Office consultation), this seems to assume that extension is a good thing. How about reducing the copyright period, especially for the fast changing digital media market?

(e) If term were to be extended, should it be extended retrospectively (for existing works) or solely for new creations?

New creations only. Retrospective unfairly gives a free benefit to creators that did not exist when they created the work.

• **Copyright exceptions - fair use / fair dealing**

(a) What are your views on the current exceptions in copyright law?

None

(b) Could more be done to clarify the various exceptions?

Possibly - more international harmonization.

(c) Are there other areas where copyright exceptions should apply?

Yes - I publish an archive of papers that are regarded as informative in the context of standardization and patent discovery / validation. As far as I can see copyright restrictions prevent me from making a number of documents available specifically for this purpose and copyright clearance is almost impossible where organizations have changed substantially or no longer exist. There should be an exemption for the publication and use of documents simply for the purpose of patent validation, establishment of prior art and similar tasks.

(d) Are the current exceptions adequate or in need of updating to reflect technological change? For example copyright law in the UK does not currently have a private "fair use" exception. Such an exception might allow individuals to copy music CDs onto their PC and MP3 player for their personal use. Should UK law include a statutory exception for "fair use"?

Yes - fair use should allow the use of material in an alternate form in a no less restrictive manner than the medium it substitutes, unless the new material has been created specifically for the new medium. The default should be that fair use applies unless the user has been evidentially made aware of the restrictions that apply - for example by signing a declaration before use.

(e) How would you see content owners being compensated for such use?

They wouldn't. I would no more expect to buy two copies of a song in electronic format than I would (say) a paperback and hardback copy of a book. This does not of course justify replication (piracy) of material, however new paradigms are needed (and almost certainly already patented!) which would require some key to be provided alongside the material to ensure its use only on one equipment at once.

(f) To what extent has technological change presented difficulties in use of copyrighted material in the field of education?

There are evidentially many more restrictions in place now than before, designed to prevent piracy of material. Unfortunately they also prevent proper dissemination as well.

(g) Are there issues concerning the archiving of material covered by copyright?

Yes - see above (c) - also the need to ensure in a secure and effective way that all licensed software (for an example) can be re-installed following a major incident (such as fire etc). Simply re-applying to all vendors (many of which may not exist or be trading) for the original (possibly outdated) work is not feasible. Material has therefore to be effectively archived to backup systems, often not in its original distribution format.

- **Copyright – digital rights management**

(a) Do you have a view on how the use of digital rights management technologies should be regulated?

One instance I am aware of is the use of encryption technology in some digital cameras, requiring the manufacturers own software to be used to post process the original (RAW) image to a standardized form (e.g. JPEG). This is unfortunate - as the software becomes outdated, and the base platforms on which it runs, the camera user will be left with no option to read his original (one assumes) works of art. Many millions of pounds were spent of the BBC Domesday Project - designed to last a 1000 years and provide a modern day equivalent to the Domesday book. All of this work has been wasted within a few decades by the simple fact that the technology under foot changed (dramatically) and as a result it is no longer possible to use or see this major educational work. Technology changes rapidly, but it should always be possible (and permitted) to take a work of art such as a recording or photo and re-render it in more modern technology or format (and the rights, tools and documentation provided to enable such reverse engineering). Heavily patented rights management systems seem likely to deprive creators and artists of this basic right, often without warning of the danger.

- **Copyright – orphan works**

(a) Have you experienced any difficulties in identifying the owners of copyright content when seeking permission to use that content?

This is the norm when handling archival technical documents. I am tempted to say 'always'.

(b) Do you have any suggestions on how this problem could be overcome?

A licence of right for certain (possibly registerable) uses such as historical archiving of material for a defined community.

- **Patents – utility models**

(a) Do you have a view on some sort of second tier patent system?

There are enough problems with the current proliferation of patents in my field (IT)! I think having only a second tier (simple system) which allowed patents of a more fundamental nature would be a good replacement for our current system.

(b) Has your organisation encountered problems in protecting its IP internationally where such systems exist?

No - because we protect our IP in other ways, as described previously.

• **Designs – registered designs and unregistered design rights**

(a) To what extent does your organisation rely on registered designs? And on unregistered design rights?

To a great extent on unregistered design rights

(b) To what extent does your organisation register its design at the European rather than national level?

Not at all

(c) To what extent does your organisation rely on the European unregistered design right rather than the national UK unregistered design right?

In Europe?

(d) Could the UK registered design be improved to work better alongside the European system?

No opinion

(e) Could the UK unregistered design right be simplified to work better alongside the European unregistered design right?

Almost certainly.

(f) Do you see a useful role for the UK unregistered design right alongside the European design right?

No

• **Legal sanctions on IP infringement**

(a) Are you aware of any inconsistencies or inadequacies in the way the law applies legal sanctions to infringement of different forms of IP or to different circumstances?

Yes - any form of patent litigation is generally too expensive for an SME to entertain. As a result it can be used by larger companies for a variety of purposes other than simple policing of its patents.

(b) For example, should criminal sanctions on online infringement be the same as those relating to physical infringement?

Don't know - however intent must be proven to be equitable in both cases for this to apply. This is difficult in an online context

• **Coherence between competition policy and IP policy**

(a) Has your organisation experienced any activity linked to IP rights that you regarded as unfair competition?

Yes - many times - see the attached submission on JPEG and standards. Patents are held as bargaining tools in this environment.

(b) How did you deal with this problem?

Through publicity, reproach, and the applicable rules of the relevant standards body.

(c) Was competition law effective at controlling this behavior?

No - but possibly anti-cartel legislation could be applied in some circumstances.

(d) Should competition law have a greater role to play in regulating IP?

Probably - although I am dubious how involving more lawyers in a problem partly created by a segment of the legal profession and in its direct financial interest is likely to be a solution. Ideally there would be less rather than more law.

(e) How would you see the system working?

I think that competition policy is more relevant and useful than IP policy. I would prefer to see the power of the IP community reduced from its dominant role in IT particularly.

Experience - JPEG, patents, and pro-active standardisation

Background

JPEG is commonly used to refer to one standard produced by the Joint Photographic Experts Group, after whom the acronym is named, IS 10918-1 | T.81. This standard by itself has been the key factor in the market development of many key areas including:

- The Internet, where it is the de facto standard for conventional photographic material. There are literally hundreds of millions of examples on the Web.
- Digital cameras, which use the standard to save of the order of ten times as many images on digital storage media. The industry is worth of the order of 20 billion dollars per annum.

JPEG and its relationship with patents makes an interesting case study of many of the problems and issues in the current system. As one of the initiators of the standard, originally used to enhance the videotex standards (where the UK were a key player), I can confirm the following from personal experience and, more recently, the creation of a 4000 document historical archive intended to help provide evidence for use in recent patent actions. Although ample evidence exists to substantiate the following claims/comments, they are however representative of personal opinion rather than my chairmanship of the UK JPEG and MPEG committees within BSI:

1. The JPEG standard was always intended to provide a baseline version for implementation that was unencumbered by patents. At the time it was first discussed (early 1980's) there were far fewer patents that needed examination to meet this need. Even this task was, however, challenging, partly because of the way in which patents are phrased by patent lawyers to try and achieve maximum coverage (often way beyond the scope envisaged by the original 'inventor'). For at least ten years after the publication this was viewed as successful, and no public claims of relevant patents were made.
2. Although the standard offered more than 40 techniques and technologies, many of which offered improvement in performance over the baseline version, the overwhelming adoption (more than 99% worldwide) has been of this baseline implementation, and this is widely viewed as resulting from the strong stance taken by the standards committee in trying for a version freely implementable without payment of patent royalties or fees.
3. At a late stage in the development of the standard, a very small technical change was introduced (which made of the order of 1-2% difference to the efficiency of the baseline compression technique defined, Huffman run length coding), itself a small part of the overall standard. This was done primarily to help compatibility with equipment used in videoconferencing being defined in CCITT at the time (H.261). This minor technique has subsequently become the subject of at least two public patent claims - both made many years after publication (and with clear evidence in retrospect that the claimants had considered the application of their patent to the standard at an earlier stage). Although difficult to quantify, the contentious part of the standard could and would undoubtedly have been modified if an awareness of the current claims existed at the time the standard was created. This is not an admission that the claims are in any way valid, as this can only be established by appropriate legal action within the correct legislature.
4. An alternative technique defined in the standard to allow for entropy coding of data, called arithmetic coding, required the licensing of three patent groups from IBM, Mitsubishi, and AT&T (now Lucent). Following pressure from the committee before this could be incorporated, the license fee for this was offered, and documented, at 3 single payments of \$5000 for a full product

license (per company), without royalty payment (total \$15,000). This offered of the order of 10-15% improvement - significantly more than the technical change discussed in (3) above. However, the 'free' solution was the one adopted by the digital imaging industry.

5. In July 2002, the JPEG committee became aware through a press release that Forgent in the USA were claiming a patent (USP 4,698,672) applied to JPEG, and that they had taken of the order of 20 million dollars in revenue, chiefly from Sony as a resultant of a joint 'mining' venture with a firm of US patent attorneys (no longer understood to be representing Forgent). From further discussion it appeared at that time that a separate German (and European / US / Japanese patent - in English as US 4901075) lodged by a Philips subsidiary (PKI), filed a week before the Forgent patent in Germany was also being used in Japan to make claims against some Japanese camera manufacturers. A claim on this patent (and its European equivalents) was lodged in courts in the US, Germany, Korea, France and the Netherlands (it is understood) in February 2006 against LG and Konica Minolta. It is understood that the Forgent patent application in Japan may have been refused partly because of the earlier filing date of the (believed similar) Philips patent. This shows the similarity and confusion between different national patent systems. It is likely that although (presumably) only one or other of the two patents might be claimed to apply to JPEG, organisations may decide to pay for licences from both rather than risk litigation costs escalating.
6. The Forgent patent claims apparently arose following examination of patents held by the company after their acquisition of a California company, Compression Labs Inc. (CLI). CLI during its existence are not believed to have made such a claim. To date Forgent claim to have received in excess of 100M\$ from licensing this one patent. This is believed to exceed substantially the amount paid by Forgent for the entire assets of CLI, and clearly does not represent in any way the cost in labour terms of staff working on the original subject matter within CLI. Its value represents simply the success of the international standard which they have waited for, for many years, and did not participate in.
7. Following quoted (and mis-quoted) worldwide commentary from the committee and myself personally, I received a letter from Forgent's solicitor which appeared to threaten me personally with (as I understood it) the creative tort in the US of 'patent libel'. I had to (at my personal expense) discuss this at length with UK specialist counsel who then replied on my behalf. I understood that patents have been used in a similar manner in the US to threaten at least one US colleague who worked on JPEG, in an attempt to have him removed from his job at a large corporation.
8. With my assistance, the JPEG committee helped to establish a historical archive of original documentation to assist companies faced with these patent claims. A 'Common Interest Group' was set up with many major players working together to oppose the Forgent claims. There is now substantial evidence and counterclaims being made on many grounds, and the whole situation is due to start trial in March 2006 in the US in a 'Markman' hearing in Northern California (the original litigation was started in Texas, and then continued in Delaware). A partial history of this, together with claims and counterclaims is/was available at <http://www.forgent.com/ip/672cases.shtml>. The cost of this action alone is understood to be many millions of dollar - a number of smaller companies have settled out of court rather than meet the extremely high costs of an action like this. It will take number of years probably to resolve - in the meantime high levels of uncertainty seem destined to concern the entire digital imaging industry.

9. In the case of Philips patent claims against JPEG, my predecessor as chair of the UK counterpart of MPEG and JPEG was an employee of Philips Research in the UK. The British Standard version of JPEG (IS/IEC 10918-1) would have been signed off for publication by him, following its agreement 'without comments' at a BSI meeting chaired by his colleague (also from Philips). This was published in 1994, and Philips are noted as a contributor in the pages of the standard. Despite this involvement, to date Philips are not believed to have lodged appropriate patent statements (as their membership of these standards committees should require) with either of the two bodies standardising JPEG, ISO and ITU-T. This shows the nature of the problems faced by standardisers.

I feel that this experience shows the difficulty in creating international (and national) standards pro-actively, which in many cases is an essential component (particularly in ICT service developments such as mobile phone, multimedia services, surveillance, biometrics, and many other key work areas). Whilst the job was difficult 25 years ago when we started this kind of standardisation, in my (and many of my friends) opinion it is now virtually impossible. As an example, a simple broad patent search by the Japanese National Standards Body found over 4000 potentially relevant patents in 4 companies in Japan alone, and a similar figure in the USA when looking at the basics for the new JPEG 2000 coding standard. Within JPEG we have negotiated fee and royalty free licensing for a baseline version of JPEG 2000 with over 20 companies (before the standard was published), but the concern is that, as with the original JPEG standard, many more potential patent holders may not be declaring their hand, and are prepared to wait a decade or more until the standard's success is self-evident.

A possible way forward

One solution (in fact as far as I can see the only solution to this predicament!) is for national and international standards (from organisations such as BSI, ISO, IEC, ECMA, W3C and ITU) to have special status. These organisations publish their proposals publicly with a substantive comment period (6 months or more is typical). If organisations holding relevant patents were forced to examine their patent holdings, then make a claim against a clause by clause analysis of the standard, which the relevant standard's body could analyse before deciding to either accept the claim, or work around it, most of the problem (and much of the necessary and replicated work) would go away. This would particularly true if the patent holder had to publish their licensing terms as well at this stage (most standards require reasonable and non-discriminatory access - this is very difficult to prove in the heavily cross-licensed world of patents). Legislation could then assert that any patent holder failing to lodge such a statement in the proper format by the due date was deemed to have allowed a license and royalty free license for the use of their patent in association with the relevant standard. This has the following advantages:

- It makes the patent holder assert their patent claims against a well published and public document in a timely manner
- It forces the patent holder to state specifically how and where they seem a public document infringing their patent rights
- It gives the standards body the opportunity to change the standard to avoid the use of specific patents, and ideally allows potential implementers to see what costs are associated with a new standard
- It prevents potential patent holders sitting on the fence, waiting to cash in on a standard's success (for example if its use is mandated by statute)
- It allows the standards creators to spend more time developing the technical quality of the standard, instead of digging through patent documents written in many differing styles

Current threats to standardisation activities

The real threat however to the creation of far-reaching technical standards consists of three main areas, (as well as that of the very large number of patents being granted) that might need analysis:

- The increasing ability of patent creators to patent even the most trivial of changes, many of which would be obvious to anyone practiced in the art. This criterion is increasingly being overlooked by patent examiners, and in some areas, particularly that of software patents, has resulted in it being impossible to create a major technical development without creating a situation where some out of the wide range of potential patent holders could challenge the implementation. When the challenger is a large and well resourced multinational (or a firm of contingency based patent lawyers), and the developer is an SME, there is only one possible outcome, given the high costs of legal action in this area. Any claims that patents 'benefit' the SME should be examined in this context!
- The threat of the 'pure licensor'. There are a number of companies being set up, such as "Intellectual Venture"s for example, purely to exploit patent (or some might suggest, the patent system). From Intellectual Ventures welcome page : *"Intellectual Ventures is an invention company. We conceive and patent our own inventions in-house through a world-renowned staff of internal and external scientists and engineers. We also acquire and license patented inventions from other inventors around the world. Our network of invention sources includes: large and small businesses, governments, academia, and individual inventors. These inventions span a diverse range of technologies including: software, semiconductors, wireless, consumer electronics, networking, lasers, biotechnology, and medical devices. Our current focus is on developing our invention portfolio. Over time, we intend to market our portfolio on a broad and non-exclusive basis through a variety of channels including spin-out companies."* In some cases, these have very significant patent portfolios from a wide variety of sources - often large corporations who had little or no intent of exploiting the patents assigned to the licensor. These patent holders are very well funded, and can effectively hold smaller innovative corporations to ransom by demanding substantial fees, with no possible option for cross-licensing (or opportunity to embarrass a large multinational by unwanted publicity). Some universities and research institutions are similarly capable of this one-sided action - however the main difference seen in recent years is the increasing aggression of the patent holders, the amount of funds they hold to take action with, and the potential size of the rewards. These are very far removed from the originally idea of patents, preventing an idea dieing with its originator, and allowing him/her therefore to exploit it during his lifetime in exchange for its disclosure.
- The inability of standards body to deal with patent-related issues. Although some organisations (such as W3C and more recently ECMA) have attempted to deal with the sort of problems outlined above, the making of international standards is a complex, time-consuming process, funded normally by the companies participating in it. In general the organisations supervising the process have limited interest and skills in the patent area, and certainly do not have the resources to address the issue effectively. It is impossible to do more than note the claims or potential claims of some patent holders (which is generally all that can be done). This leaves a situation where it can benefit a large patent holder to not take part, or even to promote their patented technology without disclosure. Whilst legally it may be possible to take action against deliberate deception through the courts, this is not an avenue open to many, and can be exceedingly difficult to prove in any event - event the

punishments if proven are probably far from discouraging to the offender. The rewards are huge - I have already mentioned the multi-billion dollar digital camera business - the same is true for any commodity items such as mobile telephones, PDAs, set top boxes, video recorders and so on, where the establishment of international standards has been the key to the market.