

Kings College London lecture series, 10 February 2012

Access and Interoperability

Ladies and gentlemen, good afternoon.

I begin of course with the standard disclaimer that the views expressed are personal and do not necessarily represent the views of the European Commission.

I mean that very seriously. These views are my own; please do not read this as a policy shift in DG Competition, or an indicator of likely future cases. It is not.

This is a work in progress; the conclusions are tentative, and I welcome all comments and criticisms.

I want to talk about refusal to supply and I want to distinguish between two different scenarios: access to a thing and interoperability with a thing.

I want to discuss how competition law, telecoms regulation and copyright law in both the EU and the US address these - I argue - differing issues of access and interoperability.

The primary focus is the refusal to supply doctrine, often referred to - I think unhelpfully - as the essential facilities doctrine. I am going to propose a nuance, a twist to that doctrine. A twist that would make some - I stress some - refusal to supply cases markedly easier to bring.

It would be fair to say that this is not the change that the majority of critics of the refusal to supply doctrine are looking for.

There are two underlying points that I take to be axiomatic that I don't intend to illustrate still less argue:

- first, consumer welfare maximisation is an objective of antitrust and (the relevant parts of) IP and telecoms regulation.
- second, law should be consistent across different areas to the extent that the same objective is pursued. If telecoms legislation says that a particular practice is welfare maximising, antitrust law should not lightly reach contradictory conclusions.

My talk will proceed as follows.

I will first look at some cases that show that a dominant company can infringe Article 102 - or Section 2 of the Sherman Act - by the way it designs its products, and that it can be compelled to design its products in a particular way.

The characterisation of this infringement is unclear - it could be seen as predation or bundling depending on the case - but the cases contain standard abuse analysis of market power and consumer harm.

Then I will look at refusal to supply cases in the EU and US. Here I will show that a dominant company can infringe Article 102 by a failure to disclose some particular aspects of the design of its products and can be compelled to disclose those aspects. In the EU this requires indispensability, effective elimination of competition and a new product; in the US it is potentially unlawful but will rarely be so.

I will draw a distinction between a refusal to supply access to a product and refusal to supply information necessary to allow interoperability with that product, a distinction that is not currently drawn in antitrust law. I will illustrate this distinction with examples from telecoms regulation and copyright law - again drawing on both EU and US law.

Finally, I will note that that distinction is not currently recognised by the competition rules.

I also conclude that product design and refusal to supply interoperability information cases raise similar concerns about incentives to innovate, but that similarity is also not currently recognised. In making this last point, I will also say a few words about the basics of Article 102; what has to be shown; and the value and use of legal tests...

The background to all of this is Article 102 of the EU Treaty, and its counterpart provision in the US, section 2 of the Sherman Act. For the purposes of today's talk I'm going to assume that they are fundamentally comparable provisions, albeit that the caselaw in the two jurisdictions diverges in some cases.

Before we move to the first section, on product design, I want to run through my understanding of how we think about Article 102 and abuses. We tend to be concerned by several issues in parallel:

- Is there market power?
- Is there consumer harm from the particular conduct in the particular case?
- Are there consumer benefits (efficiencies) from the particular conduct?
- What should the rule and remedy be in relation to that conduct?
- What impact on consumer welfare would that rule and remedy have in the particular case - Is the disease worse than the cure today? - and in cases more generally in the long term.

Often, when looking at consumer welfare in the longer term, we will want to look at incentives to invest and to innovate.

Then thinking about these things we try and create legal tests that fit particular patterns of behaviour - tests for bundling, predation, rebates or refusal to supply. This can sometimes lead to problems.

So, first, a dominant company can infringe Article 102 by the way it designs its products.

Now the overall thesis is clearly of particular relevance to information industries. So in deciding how best to start the discussion, I wanted an appropriately modern, high tech example. I decided on bananas, and the 1978 United Brands case.

I want to focus on the abuse. United Brands imposed a number of restrictions on its distributors that prevented parallel trade in bananas. That allowed it to segment, unlawfully, the European market.

A few years ago I was discussing with a colleague whether the competition rules could / should intervene in product design issues.

We started discussing the example of United Brands. What if technical design of the product could achieve the same object, rendering these contractual restrictions unnecessary?

What if United Brands, instead of imposing contractual restrictions, designed a banana that detected when it crossed a national border, and exploded. An idea ahead of its time, I'm sure you will agree.

This became the exploding banana hypothesis.

Assuming market definition and dominance, would the design of such a banana be abusive?

A silly example admittedly, but not, I think, markedly different from - for example - DVD region coding which prevents a DVD designed for one region being used in another, or conditioning a streaming video service on geolocation via IP address (Netflix, BBC iPlayer) This is not to say that any of these are unlawful; these are just examples of product designs that are rather more envisageable than exploding bananas.

Although the expression of this idea was perhaps novel, the idea itself was not. The term used in the US literature in the 1970s & 80s was Predatory Innovation.

"Even genuine innovations- new products that in some ways are superior to existing products in the eyes of both engineers and consumers - are in some circumstances anticompetitive', Ordoover & Willig, "An Economic Definition of Predation: Pricing and Product Innovation', 91 Yale LJ 8, (1981);

The opposing view was set out by P. Areeda & D. Turner, in their Antitrust Law treatise and also in J. Gregory Sidak, "Debunking Predatory Innovation', Columbia L Rev, Vol 83, No 5, pp 1121-49, June 1983.

This concept of predation is of course not the narrow one of selling at a loss, but the broader one of engaging in strategic behaviour that incurs costs (here the costs of a product redesign) against the hope of foreclosure.

Leaving aside for the moment the legal formulation, the starting point should be a recognition on the facts that in practice a company can design its products in a way that would have the same effect as other conduct (conduct which, for example, the competition rules would prohibit).

Let's compare two cases: the EU case in Hilti from 1991 and the US *Bard v M3* case from 1998:

Hilti made nail guns. (As you can see we are narrowing down quite quickly to the technological theme of today's lecture.) The Commission, upheld by the Court, found Hilti to have abused its dominance in nail guns by tying the sale of those guns to the use of its own nails. Specifically Hilti did this by refusing to honour the

guarantee of its nail guns if the guns had been used with nails from other manufacturers.

This, the Commission and Court found, was unlawful tying under Article 102.

The US Bard case, a US jury trial upheld on appeal, and decided about seven years after the EU Hilti case, is similar.

But instead of making nail guns and nails, Bard made a surgical gun, and hypodermic needles for use in that gun. And instead of refusing to honour the guarantee, Bard redesigned its gun so that it no longer worked with competitor's needles.

In Hilti, a nail gun which would not be guaranteed if it were used with competitors' nails.

In Bard, a surgical gun that was designed not to work with competitors' needles.

The redesign of the gun replaced the need for conduct tying the needles to the gun.

At trial they found internal evidence from Bard that admitted there were no efficiencies - no benefits from the redesign of the surgical gun. The only purpose of the redesign was to make the product incompatible with the needles of its competitors. Bard was found to have violated Section 2 of the Sherman Act.

So product design can replace other conduct and can have the same anti-competitive effects. Effects which a US court was prepared to condemn.

There are of course some rather more prominent cases involving product design: several involving Microsoft are more directly related to the technological theme of this lecture: first in the US with the browser litigation, and then the second and third in the EU with the media player and then the browser.

Having investigated some practices of Microsoft's in the first years of the 1990s, the Department of Justice entered a consent decree with Microsoft in 1995.

The consent decree prohibited the tying of the sale of other products to Windows, though it provided an exception for "integrated" products.

This prohibited Microsoft from taking two wholly separate products and selling them as a bundle, but it did allow them to create a single combined product, integrating the functionality of two or more different ones.

As later developments showed, this gave Microsoft an incentive to make product design decisions that integrated additional products as deeply as possible.

That is a problem. As the US Court of Appeals said in the context of the later Microsoft / Internet Explorer case:

"As a general rule, courts are properly very skeptical about claims that competition has been harmed by a dominant firm's product design changes"

The real fight began with the US browser case. The history of the case is well known. Microsoft responded to the launch of Netscape Navigator by building Internet Explorer into Windows, making it impossible to remove the browser.

Microsoft's conduct took several forms.

- * They intermingled the code, with some code being common to functions of both Windows and Internet Explorer;
- * They took Internet Explorer out of the Add/Remove Programs utility, and
- * They discouraged computer manufacturers from including rival web browsers preinstalled on their machines.

This prompted the US Department of Justice to bring a further case against Microsoft. The DOJ initially brought it under the 1995 consent decree but they lost - the Court ruling that the Windows / IE bundle was an "integrated product" and therefore exempt from the bundling prohibition in that consent decree.

So the DOJ then started a new Sherman Act case. The District Court found against Microsoft and, dramatically, ordered Microsoft to be broken up.

Microsoft appealed to the Court of Appeal which upheld only part of the District Court's findings, and overturned and/or remanded others. I want to focus here on those parts of the District Court findings that the Court of Appeal upheld, because, from the perspective of product design, the US Court of Appeal made several notable findings:

First, the Court of Appeal upheld District Court condemnation of the exclusion of Internet Explorer from the "Add/Remove Programs" utility in Windows 98, a change which "significantly" reduced the usage share of rival browsers, "not by making Microsoft's own browser more attractive to consumers but, rather, by discouraging OEMs from distributing rival products".

Second, the Court of Appeal upheld the District Court's finding of illegality in respect of the co-mingling of Internet Explorer and operating system code, preventing OEMs from removing Internet Explorer and thereby deterring them from installing competing browsers.

Microsoft adduced no pro-competitive justification for these practices.

We all know that the allegation of unlawful bundling of IE and Windows did not fare so well - the Department of Justice and the District Court had applied a traditional per se analysis - Jefferson Parish: are there two products? Are they bundled? That's illegal. The Court of Appeal rightly found per se analysis inappropriate for a case such as this - one of technical tying - requiring instead an analysis of effects.

Leaving that to one side for the moment, the above two findings of unlawful conduct - the Add/Remove programs design and the comingling of code - are in themselves remarkable, going to the heart of Microsoft's product design choices in creating Windows.

A couple of points to note here:

* First, these are not "named" abuses in the sense of tying / bundling - save for the broad and fairly generic abuse of monopolisation.

* Second, the level of intrusion into the conduct of a dominant company is very high.

When the European Commission brought its own tying / bundling case against Microsoft, it had clearly learned from the Department of Justice's mis-steps.

The Commission's 2004 decision had two parts: the one that concerns us for the moment is the condemnation of the unlawful tying of Windows Media Player into Windows.

It was a very similar case in many respects to the browser case. The harm alleged was both strengthening the existing dominance on the operating system market, and leveraging of that dominance onto related markets through the tying of Windows Media Player.

Competitors to Windows Media Player were no longer competing against the media player, but against the bundle of Windows and the Media Player. Potential broadcasters deciding the format in which they would broadcast on the Internet were influenced by the ubiquity of Windows Media Player as much as they were influenced by its technological capabilities.

Now on the basis of this description you can probably already see the potential harm to competition - how can anyone compete with that? - But also the potential benefits to consumers - having a pre-installed media player grows the size of the market by making the use of media players much easier.

You can analyse this as a tying arrangement, but it would not make sense to prohibit this - technical tying - without some analysis of the harm and the benefits.

So when the European Commission looked at this in 2004, it did so on the basis of a rule for tying which was very similar to that set down by the US Court of Appeals: looking at whether there were separate products, separate demand and harm to competition resulting from the tie. This approach was of course upheld by the General Court in 2007.

The evidence showed that the benefits resulting from the tie could be obtained through less harmful means. It was not necessary to integrate so tightly Windows Media Player into Windows.

The evidence of harm was relatively clear. No one could compete. The integration of Windows Media Player into Windows was therefore abusive.

In its later browser case - which was substantially the same form of analysis but in relation to the web browser rather than the media player - the European Commission imposed a different remedy - a choice screen.

This is rather different to the earlier EU unbundling remedy and more similar to the US's add/remove programs remedy - save that the choice screen is active; it sits up in front of the consumer and requires a choice to be made. The US's remedy was purely passive - the functionality to remove IE was there, if a consumer had the incentive and ability to look for it and use it. (In passing: the later EU remedy was

more consistent with a behavioural economics model of consumer behaviour than a classical economics one.)

Again, note that this case - based on tying, or rather technical tying - led to a relatively intrusive remedy.

The last product design case I want to mention - very briefly - is the Federal Trade Commission's 2010 settlement with Intel. Now it's important to note that this case was brought under both Section 2 and Section 5 of the Sherman Act, and is a settlement. As a settlement under Section 5 it can't be regarded as an authoritative precedent, but it is illustrative.

Intel makes both central processing units - CPUs - and graphics processing units - GPUS. The two products work together inside a computer. You can use Intel CPUs with third party GPUs and vice versa. One allegation was that Intel designed its products to degrade the performance of competitor products.

Note: not an allegation that Intel designed its products so that they would work better with other Intel products, but that they designed their products so that they would work less well with other products.

The FTC brought a case, and entered into a settlement.

That settlement provided that Intel should not introduce any design that degraded a competitor's performance and which did not improve an Intel product.

Although this aspect of the settlement is relatively far-reaching in that it imposes the burden on Intel to demonstrate compliance with the Order, the test that it applies is one favourable to Intel: rather than a balancing test, comparing the degradation of performance of a competing product to the actual improvements to the Intel product, it applies instead a "no efficiencies' test: changes in Intel's product design will only breach the Order if they both degrade a competitor product and produce no "actual benefit' to Intel's products. It is perhaps doubtful that this formulation, more lenient towards the monopolist company, is in line with the US Court of Appeals ruling in Microsoft, discussed above.

That said, it's an interesting case.

So courts and competition authorities intervene in product design decisions, not lightly, but on a showing of market power and negative effects.

The US Court of Appeals in the Microsoft browser case indicated that a balancing test was appropriate for the bundling case, but for the other aspects of the case where it upheld liability Microsoft had adduced no efficiencies arguments.

In the EU, the cases brought were where the Commission had found no efficiencies on the merits, although the language is clearly that of a balancing test.

What's also noteworthy is the different ways you can look at the same conduct - product design. Monopolisation? Tying or bundling? Predation?

Whatever the formulation, the legal test applied contrasts with that used in refusal to supply cases, and I'd like to turn to refusal to supply now.

In this area, antitrust authorities and courts are much less willing to intervene - an unwillingness most marked in the US, shown by the Trinko case in the US Supreme Court.

Trinko was a claim by a law firm based in New York against the local telecoms infrastructure operator, Verizon. Under the 1996 Telecoms Act, local telecoms operators such as Verizon were obliged to provide certain services to competing telecoms companies, such as AT&T, from whom Trinko purchased telecoms services.

Following complaints to the Federal Communications Commission that Verizon was not adequately providing one of these services - operations support systems ("OSS")- the FCC and Verizon entered into a consent decree whereby Verizon would improve its provision of OSS in the future.

Trinko, as a customer of AT&T, sued Verizon immediately following the consent decree, alleging loss to its business as a result of the degraded service provided by AT&T, which was in turn due to the breach by Verizon of its obligations to supply AT&T with certain services.

Trinko alleged that that breach was not only a breach of the 1996 Telecoms Act, but was also a breach of s 2 of the Sherman Act, a charge which would entitle

Trinko to treble damages. The Supreme Court was unimpressed with Trinko's claim.

Recognizing that a right to refusal to deal with other firms is not unqualified: "Under certain circumstances, a refusal to cooperate with rivals can constitute anticompetitive conduct and violate §2.' the Court expressed great caution about the extent of any exception: "We have been very cautious in recognizing such exceptions, because of the uncertain virtue of forced sharing and the difficulty of identifying and remedying anti- competitive conduct by a single firm.'

Justice Scalia writing for the majority highlighted three reasons why a refusal to supply should not give rise to antitrust liability:

First, mandated access, "may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities'; [note that this puts US antitrust in conflict with US telecoms law - the telecoms law mandated a duty to deal because - I would argue - the legislator believed that this in the particular circumstances would enhance consumer welfare; the judiciary denied an antitrust duty to deal for the same facts and for the same reason.]

Second, mandated access "requires antitrust courts to act as central planners';

Third, "compelling negotiation between competitors may facilitate the supreme evil of antitrust: collusion' . [again putting antitrust law in conflict with telecoms regulation on the facts of the particular case]

Now there are a lot of problems with Trinko, but the above considerations are valid ones of principle, and its unwillingness to countenance much in the way of refusal to supply likely accurately reflects the state of US law.

EU law is more accommodating, but the test is still relatively strict.

Beginning with Magill, moving through Bronner, IMS and most recently Microsoft, the European Courts have established a relatively stable set of preconditions

- the refusal relates to a product or service indispensable to the exercise of a particular activity on a neighbouring market; . . .
- the refusal is of such a kind as to exclude any effective competition on that neighbouring market; . . .

- the refusal prevents the appearance of a new product for which there is potential consumer demand.

Now Eleanor Fox has criticised this as a legal test as it essentially just repeats the facts of the Magill cases - the first case in which the test was formulated. It's also notable that it effectively changes the intervention threshold compared to other Article 102 cases. Generally for predation, bundling, or rebates cases, the intervention threshold is one of dominance - dominance plus consumer harm will tend to equal abuse.

Here though we have the - I think undeniably higher - threshold of indispensability, exclusion of effective competition and "new product".

In itself I don't find that problematic. There are certainly many types of cases - Bronner strikes me as the best example out of the EU precedents - where the level of intrusion and risks of antitrust interference are both high, and the threshold for intervention should similarly be high.

But the difficulty with the test overall is that it doesn't distinguish between a situation like that of Bronner - rivalrous access to a facility depriving the owner of the use of that facility - and that of Microsoft - non-rivalrous access to information that allows interoperability with a facility.

To explain this distinction better, I want to say a little about telecoms regulation and copyright law.

First, telecoms.

Telecoms, historically, has been characterised by two different forms of market failure, and each has been and remains regulated.

There isn't time today to go into the details of this, so let me provide the Hollywood version.

The first market failure is a problem of natural monopoly in the local loop. Laying a cable between London and Edinburgh is expensive, but that's as nothing compared to the costs of building a network that extends to every house, flat and office in the country. Local infrastructure was historically a natural monopoly - and even now is likely still a monopoly activity in some rural areas and at best a close oligopoly elsewhere.

In Hollywood terms, this is the Highlander problem - there can be only one.

This is why EU and US telecoms regulation both provided for mandated third party access to local infrastructure - unbundled local loops in the jargon. In effect, to the network of the former incumbent only.

(The argument over mandated access to the former incumbent operator's network gets more complicated when you get second, and sometimes third and fourth network operators. The inevitable argument is then that this access to the incumbent network is no longer justified. Let's leave that to one side for the moment. My argument is not about whether access should continue to be mandated - though I think it should - my argument is rather that this distinction between access regulation and interoperability regulation is an important one.)

Note that this form of telecoms access is most closely analogous to Bronner - rivalrous access to a facility in order to use that facility to compete with the facility owner.

But telecoms has a separate problem, related to its network effects.

This is the second market failure problem that, to continue the Hollywood theme, you might call the Ghostbusters Problem. Why? Because if you own the only telephone in the world, who you gonna call? More importantly, if you own a startup telecoms company that doesn't have interconnection agreements with any other telecoms company, who are your customers going to call?

This is a network effect. In addition to how much people like the service for its own characteristics, their willingness to pay will also increase, the more other people are using it. The product becomes more valuable (up to certain limits), the more people use it. A phone network that connects 10 people is more valuable than a network that only connects 2. A network that connects 100 is even more valuable still.

People are prepared to pay more for the service, the more other people are using it. (This applies most obviously to substitutable services but also applies to complements.)

As a result, markets where network effects are important risk tipping towards monopoly.

In most European countries, we were faced with telecoms monopolies for most of the 20th century because our governments gave state monopolies to the telcos. In the US, though, AT&T never had a state monopoly - it gained - if that is the right word - organically. Helped by the fact that it had no obligation to interconnect with its competing telecoms operators.

If two networks are of comparable size, then interconnection may seem sensible to both; if one is significantly larger than the other, then the larger network may see the long term foreclosure benefits of denial of interconnection as greater than the benefits to its customers of being able to call customers on the other network.

That, rather simplified, is how AT&T got and maintained its monopoly.

And this is why telecoms laws on both sides of the Atlantic now mandate interconnection.

But notably, this applies to all parties, no matter how big or small.

So telecoms regulation distinguishes between access - essentially applied where there is market power - and interconnection - applied to all operators.

This differing treatment of I argue differing situations contrasts markedly with the competition rules which would treat refusals to supply access and refusals to interconnect in the same way - using the Magill criteria.

You may perhaps think that the specific characteristics of telecommunications make these poor analogies for the application of the competition rules.

First I'd note that the competition rules apply to the telecommunications sector. If a competition authority was faced with two requests - refusal to supply access to an unbundled local loop and refusal to interconnect - then under present case law the legal analysis would be the same. Intervention only with indispensability, elimination of competition and a new product.

But second I'd note that it isn't just telecoms regulation that draws this distinction.

Copyright law does as well.

The 1991 Council Directive on the legal protection of computer programs extended copyright protection to software. The Directive sought to harmonise national laws not by creating a new sui generis intellectual property right for software but rather by bringing software into the field of copyright protection and to include as few software-specific provisions as possible. In 2009, it was replaced by a European Parliament and Council Directive, Article 2 of which (unchanged from the original) explicitly provides that

"Ideas and principles which underlie any element of a computer program, including those which underlie its interfaces, are not protected by copyright under this Directive'.

This was a much discussed provision in the Directive, with the original Commission proposal suggesting that sometimes interface information might not constitute 'ideas and principles' and might therefore be protectable. Third parties raised antitrust concerns that dominant companies might use copyright protection over interfaces as a means of limiting market entry of interoperable products. This led to amendments to the Commission's proposal with the adopted text making clear that interface information is not subject to copyright protection.

However, making clear that interface information is not protected by copyright is of limited use if the information remains a trade secret. Articles 5 and 6 therefore provide a means whereby the interface information can be derived - through studying and reverse engineering - acts which, again, will not infringe the original copyright.

This explicit carve out of interface information from the scope of the Software Directive may be seen as establishing a principle of EU law that interface information deserves only limited protection⁶ that the balance of efficiencies lies in affording limited or no protection to it.

The position under US copyright law is similar.

US courts have recognized that an essentially arbitrary selection of code numbers in telephone call controllers was insufficiently original to qualify for copyright protection,⁷ 2 - Mittel, 124 F.3d at 1366. - although not all cases have reached the same conclusion⁸ . Atari Games Corp v Nintendo of America 975 F.2d 832, 840 (Fed. Cir. 1992).

The Lotus v Borland case is particularly interesting.

Borland had entered the spreadsheet market with its Quattro Pro spreadsheet, sporting a menu system that lent heavily on the then market leader, Lotus 123. Lotus sued, and won. The District Court ruling was reversed on appeal, □ the appeal ruling being upheld by a split Supreme Court. □

The Court of Appeals found that the menu system was a "method of operation" and hence not copyrightable:

In the words of Boudin J, concurring, "A new menu may be a creative work, but over time its importance may come to reside more in the investment that has been made by users in learning the menu and in building their own mini-programs "macros" in reliance upon the menu.'

Boudin J's concurrence in the Lotus case raises an interesting issue when it comes to antitrust analysis: in some circumstances, customers may derive the most value from a particularly well designed interface; in others, customers may derive more value from the product to which the interface is a gateway; in still others, customers may derive more value from the network effects that a standardized interface affords them.

So we have seen both in telecoms regulation and copyright law that the law in both the EU and the US draws a distinction between a product itself, and the right to interoperate with a product.

In telecoms, the right of access to a network is possible, but only on proof of market power; the right to interconnect with a network is possible for any operator.

In intellectual property law, the rights of a copyright owner to the copyrighted product are well protected, but they tend not to extend to information related to interoperability with that copyrighted product.

Antitrust law, as I have noted above, seems to make no such distinction, a point made clearly in the second part of the European Commission's 2004 Microsoft decision. The first part dealt with the media player; the second, interoperability between client PCs and work group server PCs.

Client pcs need to operate with work group server PCs.

Microsoft initially disclosed the interoperability information that servers needed to interoperate with its Windows client PCs, but later limited that disclosure once it had designs of its own on the server market.

The Commission decided - and the Court agreed - that the interoperability information was indispensable for a company seeking to build a work group server. Microsoft's failure to disclose interoperability information that allowed the work group server operating systems to interoperate with client PC operating systems was found to have favoured Microsoft's own work group server operating system product, and risked an elimination of all competition to Microsoft on the work group server operating system market.

Looking at the case as a whole, perhaps one of the more damaging facts for Microsoft was its initial supply of the information, and its degrading and refusal to supply once its market share increased. (This would even seem to be relevant factor for Justice Scalia, per his remarks in *Trinko*.)

It is difficult to speculate whether the case would have been different if there had not been this pattern of behaviour by Microsoft. Certainly the legal test employed by the European Commission and upheld by the Court was that relevant to "refusal to supply"; it did not seek to use a lesser test on the basis that supply had in effect been withdrawn. The European Commission's enforcement priorities document on Article 102 has the same approach.

More importantly for today's argument, however, nor did the test vary on the basis that what was requested was not a licence to use / redistribute the Windows client operating system, but was rather the disclosure of information necessary to allow interoperability with Windows.

The test used by the Commission and upheld by the then General Court was again essentially the Magill test: indispensability, elimination of effective competition and a new product.

The General Court ruling was criticised by some in that it was perceived as a weakening of the indispensability test: it was not necessary: to demonstrate that all competition on the market would be eliminated.

What matters, for the purpose of establishing an infringement of Article [102], is that the refusal at issue is liable to, or is likely to, eliminate all effective competition on the market. It must be made clear that the fact that the competitors

of the dominant undertaking retain a marginal presence in certain niches on the market cannot suffice to substantiate the existence of such competition."226

It continued that:

"Microsoft's refusal has the consequence that its competitors' products are confined to marginal positions or even made unprofitable. The fact that there may be marginal competition between operators on the market cannot therefore invalidate the Commission's argument that all effective competition was at risk of being eliminated on that market."227

Now I think that finding was justified: given the characteristics of the market, lack of compatibility with the Windows client PC platform would render the chances of success on the market negligible.

What is striking is that the privileged position of interoperability in telecoms and in copyright is nowhere to be found in antitrust discussions.

This position looks odd compared to those other bodies of law, but it also looks odd compared to other areas of Article 102, in particular the product design issues that I discussed earlier.

We have intervention in the design of a product on the showing of consumer harm;

We have intervention in refusal to supply only on the showing of the Magill criteria - and in the US not even then;

We have telecoms regulation that distinguishes markedly between access and interconnection;

We have intellectual property law that provides strong protection to a copyrighted product, but little or no protection to information necessary to interoperate with that product.

So what is the solution.

First, I think we have to look more carefully at interoperability (Microsoft-style) cases as opposed to access (Bronner-style) cases, and ask rather more pertinent questions than the overly generic Magill conditions.

Is the supply requested rivalrous or non-rivalrous? In interoperability cases it will usually be non-rivalrous, where the consequences of mandated access on the dominant company will tend to be less.

Will it allow the requester to provide substitutable or complementary products? (Interoperability cases may be either, but complementarity cases will have a lesser risk of reduced innovation incentives.)

What is the consumer demand? Is demand for a particularly well designed interface, or for the product underlying that interface, or the network of users of the product? Looked at another way, what is the relationship between the request and the product as a whole? If, for example, the networking protocols used to communicate between two products are largely trivial applications of existing knowledge - as essentially the Monitoring Trustee found in the remedy phase of the Commission's 2004 interoperability decision - then the negative consequences of mandated access are difficult to see.

Is this a market characterised by network effects? What is the impact on demand for the dominant company's product - will it increase?

What will the ongoing relationship between dominant company and requesting party be? Is there a genuine risk of collusion facilitated by the mandated supply?

The Magill test assumes negative consequences of mandated supply and therefore sets a very high bar before the test can be fulfilled. The above questions highlight, I think, that there can be circumstances where the negative consequences of mandated supply will be significantly lower, and where the Magill test is disproportionate.

I would also conclude with a more general point on the use of legal tests for the analysis of abusive behaviour.

Let us look again at the relationship between these refusal to supply cases and the product design cases. Because the product design cases don't entail mandated supply they have rather been treated as traditional 102 cases (or Section 2 cases). But the level of intervention in forcing a company to redesign its products could have just as negative an effect on innovation as mandated supply. Yet courts on both sides of the Atlantic have had no particular difficulty in mandating redesigns - albeit with appropriate deference to product design decisions that have been made.

I think this has been because product design can more easily be fitted into one of the more traditional and well established categories of abusive behaviour - tying, bundling or predation. And it doesn't immediately fall into the hot button category of refusal to supply.

But this only highlights the danger of frameworks. In the days of antitrust enforcement that predated serious economic analysis, frameworks were a necessary means of structuring legal rules. Today, however, the only legal rule is supposed to be an analysis of consumer harm. Frameworks still provide a useful structure for analysis, but risk leading us astray.

We should look at the evidence.

Just as with the upward pricing pressure and market definition discussion in the US, it is important not to let frameworks get in the way of analysing what it is that we're supposed to be analysing: the impact on consumer welfare of the allegedly abusive conduct and the antitrust intervention. In applying a one-size-fits-all approach to refusals to supply, I submit that we have done just that.