

# Open Archives and Intellectual Property: incompatible world views?

*A report for the Open Archives Forum by Mark Bide, Rightscom*

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<b>Abstract</b>	This paper discusses the relationship between open archives and Intellectual Property. There is ultimately no conflict between Open Archives and Intellectual Property – but open archives must work within the framework of Intellectual Property law as outlined here.
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## Executive Summary

- This paper was commissioned by UKOLN on behalf of the Open Archives Forum, to discuss the relationship between the Open Archives Initiative and Intellectual Property.
- There is considerable confusion over the nature of the Open Archives Initiative and the open access movement, which confuses much of the discussion surrounding OAI. So far as possible, we try to distinguish between these in the paper, although both are discussed.
- Many of the issues which this raises have as much to do with commercial considerations as with legal ones, and it is inevitable that there should be some cross over between these different perspectives since “the content industry” is dependent on copyright for the security of its business model.
- Intellectual property is an essentially utilitarian concept, designed to maximise the value of creative effort for society as a whole as well as for individual creators.
- Intellectual property is governed by national law, drawn up in accordance with international conventions and treaties.
- National law has two distinctively different traditions: the continental European tradition is based on the “*droit d’auteur*”, the inalienable right of the creator over the creation; the Anglo-Saxon tradition is more explicitly commercial, seeing copyright as predominantly a property right, something that can be traded. These differences in outlook sometimes lead to substantially different attitudes to Intellectual Property issues, although the difference in their practical impact is relatively limited.
- Copyright provides creators with an exclusive right to control the copying and publication of their work for a limited period of time. This right may be assigned or licensed to others.
- Moral rights provide additional rights to creators, including the right to be identified as the creator of a work, and the right to object to derogatory treatment of the work; moral rights carry significantly different weight in different national legislative frameworks.
- All copyright legislation includes certain limited exceptions. These must (under international treaty) pass a “three step test” which ensures that the exceptions do not unduly interfere with the normal exercise of the creator’s rights. Exceptions are normally limited by a test of “substantiality” which cannot be objectively measured.
- Additional rights exist in many countries to protect databases which may not be protected by copyright law because they exhibit insufficient creativity.

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- The development of the global network has not altered the law of copyright – all existing legislation applies equally to content on the network as elsewhere. However, new legislation has been necessary to reflect changed circumstances, creating new exceptions to copyright and new protections for copyright owners.
- Because of the ease with which intellectual property can be copied and distributed over the network, some owners of intellectual property rights believe that the law is not able to provide sufficient protection and are seeking to develop and implement technical measures to protect their content.
- Some believe that there can be no effective technological measures for the protection of copyright, and that other ways will have to be found to compensate owners for casual copying. In some countries, this includes the introduction of levies on either copying equipment or media.
- The existence of the network is also encouraging the development of new ways of licensing intellectual property, based on the “open software” model. These licences selectively assert creators’ rights under copyright law, but permit users wide licence to copy and distribute without payment.
- Individual items of metadata may not be protected by copyright, to the extent that they are simply facts intrinsic to the resources that they describe. However, metadata records which include elements of significant creativity – including abstracts – may be “works” in their own right and protected by copyright. Collections of metadata may be covered by database right, even if the metadata records themselves are not covered by copyright.
- The resources described by the metadata are likely themselves also to be subject to copyright protection, unless they have passed into the public domain because of their age. Our focus in this report is on academic journal articles, since these are the main subject of current Open Archives activity.
- Although it might be assumed that academic institutions would in general own copyright in journal articles (the normal rule for employers whose employees create intellectual property), it is custom and practice, and often explicit in employment contracts, that academics retain rights in journal articles. We believe this is highly unlikely to change to any great extent in the foreseeable future.
- Journal publishers have traditionally insisted on a full assignment of rights in articles that they publish. However, many are now content to accept an exclusive licence to publish. However, an exclusive licence may be just as restrictive as an assignment.
- Many journal publishers do not seek (at least at the present time) to restrict authors from posting copies of journal articles (either

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before or after formal publication) to the eprint archives. However, authors should ensure that they have an explicit understanding of the rights and the contractual situation, which may be complex.

- Those who manage eprint servers are publishers, and will need to be aware of their responsibilities as such. This implies that they should ensure that they received proper warranties that an author has the right to post an eprint of a paper.
- Non-textual resources are more complicated than text resources from the point of view of rights clearance and ownership; the owners of the rights in these resources are often much more rigorous about their enforcement. Repositories that include non-textual materials will have to be very careful to ensure that they do not infringe any rights.
- It is clear that authors' attitudes to questions of intellectual property and Open Archives are substantially coloured by the value that they seek from publication (which is not directly monetary). Their behaviour indicates that, even in those disciplines where Open Archives have been long established, formal publication in the peer reviewed literature remains essential. This is always likely to mean giving up some rights over the content.
- Publishers' current attitudes to the Open Archives Initiative have been much affected by the confusion between the Open Archives Initiative and the open access movement. It is hardly surprising that publishers show little enthusiasm for what is often openly portrayed to them as an attempt to undermine their business.
- It would be equally unsurprising if academic institutions did not favour a mechanism which might make the acquisition of journals content less expensive (or indeed anything else). This is the other side of the coin. However, they will have to take on considerable responsibilities if they are themselves to become publishers on a large scale.
- We recommend that those involved as data providers and service providers in the OAI model should develop mechanisms to make explicit their understanding of the use to which harvested metadata will be put.
- To this end, we recommend that metadata harvested under the OAI protocol should include information about the permitted uses of the metadata itself and the rights and permissions status of the resource which it describes.
- We believe that those operating eprint archives – or any other online resource repository – will need to take their responsibility as publishers seriously. This will include developing “notice and takedown” procedures for dealing with situations when notice is given of alleged infringements of copyright.

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- There is ultimately no conflict between Open Archives and Intellectual Property – but Open Archives exist within the framework of Intellectual Property law, and would be advised to recognise this in the way that they operate.

## Introduction

The spread of ubiquitous network computing presents an increasing range of challenges to conventional attitudes and approaches to Intellectual Property.

- Barriers to “publishing” have dropped dramatically – tens of millions of new “publishers”<sup>1</sup> have arrived on the scene in less than ten years, as the potential of the World Wide Web has been harnessed to allow any organisation (and indeed any individual) to make information public to a world-wide audience, with access to only very limited resources and technical expertise
- In the same way, the technical and commercial barriers to republishing and redistribution have more-or-less evaporated – and the casual dissemination of “perfect” copies of content originally created and published by other people has become commonplace (even if frequently deprecated)
- The global reach of the network breaks down the historic territorial structure of law and jurisdiction as it applies to Intellectual Property, a structure which was often reflected in the way in which intellectual property rights were traditionally managed

The subject of this paper is not the generality of the challenge posed to Intellectual Property by the network. Rather our present concern will be to consider the intersection between the Open Archives Initiative and Intellectual Property.

To some extent, at least, our understanding of this subject must be dependent on reaching a common understanding of what “Open Archives” are intended to be.<sup>2</sup>

At its simplest, the Open Archives Initiative can be seen as a project to develop a set of technical protocols for the harvesting and aggregation of well-formed descriptive information (commonly called “metadata”) about resources. The fundamental proposition is that, by harvesting this metadata (from many “data providers”) and by developing services (principally, but not exclusively, to aid the “discovery” of the resources by users), Open Archive “service providers” can provide an online service that is of value to both the suppliers and users of resources, by connecting one to the other. In this model, the resources themselves may

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<sup>1</sup> The term “publisher” here is drawn very broadly, to mean “someone who makes content available to the public”; where a more specific meaning of the term is intended, that will be made explicit by the context.

<sup>2</sup> To the outsider, one of the more confusing aspects of the initiative may be the use of the word “archive” in the title, which may seem to imply some relationship with long term resource preservation. As we understand it, there appears to be no implication in any aspect of the Open Archive Initiative that OA services are making any commitment to pursue strategies for preservation for the that they may harvest or for the resources to which that metadata refers (although that does not, of course, preclude this possibility). Similarly, there is some confusion over the meaning of the word “open”: to some it simply means accessible, to others it means “free”.

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be digital or physical; and access to the resources is not necessarily itself “open”.

This promises the provision, relatively simply and inexpensively, of discovery services operating over a pre-selected set of resources – perhaps for a specific discipline. Technical compliance with the protocols for metadata provision and harvesting is not onerous for either data or service providers. The selectivity comes through a decision making process on the part of both data provider and service provider, the former to make metadata available and the latter to collect it from a specific class of data providers.

The collection and aggregation of metadata in this way facilitates the development of new publishing initiatives, providing potential gateways to information resources that might otherwise be largely invisible in the over-crowded environment of an ever-growing World Wide Web. The Open Archives Initiative thus has a second aspect – as a facilitator of institutionally-based resource repositories, particularly encouraging individual Higher Education Institutions to become the publishers of the work of their own academic staff (and perhaps also their students). The Open Archives Initiative provides a mechanism for what is effectively co-operative marketing of the content of these repositories.

What is to be published on these repositories? This is where the argument for Open Archives moves onto slightly different territory. For some proponents, at least, the thrust of the Open Archives Initiative is to support the development of open access eprint archives. These are specifically aimed at the primary research literature, conventionally published in peer-reviewed journals. Open Archives are seen as providing a mechanism in which papers published in the peer-reviewed literature can be published on the network in parallel with conventional publication, and thus made available for free access by scholars on a global basis. This eprint publication may be undertaken either before (preprint) or after (postprint) formal publication; and what is published in e-print form may be identical to the article as it is formally published, or it may be an earlier version of the formally published article.<sup>3</sup> Archives may be aggregated collections of information by discipline, or may be aggregated by institution, with the resource aggregation being achieved through metadata aggregation (with links out to the distributed resources).

The Open Archives Initiative may therefore be seen as forming an integral part of the “open access” movement for “Free Online Scholarship” (FOS). The proposition of FOS is that the work of academic authors should be made available free at the point of use to academic users anywhere in the world. The Open Archives Initiative is therefore seen not only as facilitating discovery of resources but also as providing infrastructure for the free and open access to those resources.

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<sup>3</sup> It may, for example, be published as a pre-print before peer review.

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Clearly, at this point, the issues have as much to do with commercial and economic factors as they do with Intellectual Property. Certainly, it is those commercial considerations that will help to shape attitudes towards the Open Archives Initiative, both on the part of those businesses which depend on Intellectual Property Rights to support their business model – and of those who are looking for a change in these structures.

## Intellectual Property – the background

### What is Intellectual Property?

In order to ensure that we are all starting from the same basic understanding and vocabulary, this section provides a very high level summary of Intellectual Property law and how its provisions are changed by the development of the global network. It cannot be comprehensive, but is intended to touch on those issues to which we will need to refer back in later parts of the paper.

What is the purpose for which Intellectual Property is protected at all? It is (to use a definition which underlines the utilitarian nature of copyright law) “to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries”.<sup>4</sup> This encapsulates the more-or-less universal understanding of the purpose for which Intellectual Property is protected: to maintain an environment in which creators will continue to create for the good of society as a whole as well as for themselves – and in which they will not keep their creations to themselves, but allow other people to have access to them, so that others can build on what has gone before.

As the title of the Copyright Designs and Patents Act 1988<sup>5</sup> implies, the definition of Intellectual Property goes beyond copyright, encompassing the protection of design and invention as well as creative “works”. However, the focus of this document will largely be on copyright and the rights related to it (including moral rights and, in a somewhat different category, the “*sui generis*”<sup>6</sup> database protection right).

It is important to underline at this point that, although significant harmonisation in provisions have been brought about through (for example) accession to the Berne Convention,<sup>7</sup> the Universal Copyright Convention,<sup>8</sup> and the recent European Directive,<sup>9</sup> copyright legislation is

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<sup>4</sup>Article 1, Section 8 of the *US Constitution*

<sup>5</sup> Usually referred to as CDPA. This is the UK’s most recent comprehensive copyright legislation, although it has subsequently been substantially amended (to incorporate the database right, for example)..

<sup>6</sup> “Of its own type”

<sup>7</sup> *The Berne Convention for the Protection of Literary and Artistic Works* available at [www.wipo.int/clea/docs/en/wo/wo001en.htm](http://www.wipo.int/clea/docs/en/wo/wo001en.htm); see also the 1996 *WIPO Copyright Treaty* available at [www.wipo.int/clea/docs/en/wo/wo033en.htm](http://www.wipo.int/clea/docs/en/wo/wo033en.htm).

<sup>8</sup> See [www.unesco.org/culture/laws/copyright/html\\_eng/page1.shtml](http://www.unesco.org/culture/laws/copyright/html_eng/page1.shtml)

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national, and there are significant differences in detail between countries (even within the European Union). In what follows, we must inevitably generalise but will attempt to identify specific issues where differences between different national frameworks may need to be recognised.

In the Anglo Saxon tradition, copyright is seen primarily as an economic good – a property that the owner can trade and therefore can benefit from in some tangible way. The Continental European tradition starts from a somewhat different position, stressing first the moral imperative of the act of creation itself, the absolute right of the creator to control the destiny of that which they have created (and to protect their own integrity and reputation as creators). This is something akin to a basic human right, the "*droit d'auteur*". Although ultimately the difference between these two philosophical approaches may have a limited impact on the practical application of Intellectual Property law, it does create some differences in attitude which can cause confusion if not fully respected.<sup>10</sup>

### WHO OWNS COPYRIGHT?

Copyright gives the creators of Intellectual Property an exclusive right to control how and whether their work is copied, published or adapted. This right normally lasts for 70 years after the death of the creator;<sup>11</sup> after this, works pass into the public domain and are no longer protected. Under UK law,<sup>12</sup> in the case of works "made by an employee in the course of his employment, the employer is the first owner of any copyright in the work subject to any agreement to the contrary". For obvious reasons, this may be significant in the case of the writing of academic authors.

US copyright law is drawn somewhat more broadly to go beyond employment to all "work for hire": "In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author for purposes of this title, and, unless the parties have expressly agreed otherwise in a written instrument signed by them, owns all of the rights comprised in the copyright."<sup>13</sup>

Creators can assign ownership in their copyrights to third parties, or can license them; both assignments and licences can be drawn as broadly or narrowly as the parties to the agreement choose (licences, for example, can be exclusive or non-exclusive as to a specific right or territory). To be legally binding, assignments and *exclusive* licences must be made in writing. If rights are assigned, the assignee becomes the owner of the rights, in the same position as the creator. Under UK Law, if rights are

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<sup>9</sup> Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, available at [www.eurorights.org/eudmca/CopyrightDirective.html](http://www.eurorights.org/eudmca/CopyrightDirective.html)

<sup>10</sup> It also explains why the formal recognition of the moral rights of authors came late to UK law (in CDPA 1988) as UK law was brought more into line with Continental Europe.

<sup>11</sup> To be precise, seventy years from the end of the year in which the author dies.

<sup>12</sup> CDPA §11 (2)

<sup>13</sup> US Copyright Act §201 (b) (see [www.copyright.gov/title17/index.html](http://www.copyright.gov/title17/index.html))

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licensed *on an exclusive basis*, the licensee has the same rights and remedies against infringement as the owner.

### MORAL RIGHTS

Moral rights legislation grants to creators rights of “paternity” (the right to be identified as the author of a work)<sup>14</sup> and “integrity” (the right to prevent “derogatory treatment” of the work, which essentially protects works from unauthorised adaptation, even when the author is no longer the copyright owner). In UK law, these rights are explicitly seen as protecting the “honour and reputation” of the creator rather than any right attaching specifically to the act of creation.

In UK law, moral rights have a much weaker effect than is typical of their European equivalent; under some European codes,<sup>15</sup> moral rights are inalienable, which is explicitly not the case in UK law where integrity rights can be waived and the right of paternity must be explicitly asserted. US Federal law recognises moral rights only in very limited classes of work (not including literary texts).

Under UK law, moral rights cannot be assigned by the author to anyone else (although they may be bequeathed on the author’s death).

### EXCEPTIONS TO COPYRIGHT

In order to ensure that copyright fulfils its utilitarian purpose, boundaries are placed on the exercise of the owner’s rights. One of these is its limited “term” (now 70 years from the death of the author, recently extended from 50 years). However, all national copyright laws identify exceptions to copyright; these exceptions to the exclusive right are expected under the Berne Convention to pass the so called “three step” test. This proposes that limitations or exceptions to creators’ exclusive rights must pass all parts of the following test:

- (1) that they are confined to certain special cases;
- (2) that these cases must not conflict with the normal exploitation of a work;
- (3) and that these cases must not unreasonably prejudice the legitimate interests of the right holder.

Even though all exceptions should pass this test, different national legislative frameworks differ very considerably in terms of the scope of exceptions made to copyright.

In UK law, much depends on the interpretation of what represents “a substantial part” of a work. So long as what is copied is not “substantial”, *parts* of works can be copied without infringing copyright for a number of purposes including criticism and review, and private study and research.

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<sup>14</sup> Under UK Law, this right must be specifically asserted: CDPA §77 (1).

<sup>15</sup> And in other legislative civil codes that are modelled on – in Latin America, for example.

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Under the terms of “library privilege”, a librarian can make copies on behalf of a library customer for the same purposes.

The same sort of rules apply to commercial republication of parts of a copyright work; however, it may be very difficult to decide how extensive a quotation has to be before it is considered sufficiently substantial to require the permission of the copyright owner to be sought (and therefore possibly paid for). Although there are some quantitative guidelines, the key question of “substantiality” is qualitative and ultimately can (as is so often the case with matters related to copyright) only be decided by a court.

### DATABASE RIGHTS

Traditionally, under UK law, the content of directories (and by analogy of online databases) was protected under copyright law. “Sweat of the brow” was regarded as sufficient to justify the granting of a copyright, even if the content itself was not in any sense creative. However, much of Europe did not recognise this kind of content as protectable by copyright legislation, since most such arrangements of lists of facts fail to pass the crucial “creativity” test which is the bedrock of *droit d’auteur*.

Nevertheless, it was seen as necessary to protect investment in the straightforward process of compilation of non-copyrightable facts; and in 1996 the European Union issued a Directive on the *sui generis* right for the protection of databases; this came into UK law in 1998 and was adopted at much the same time throughout Europe.<sup>16</sup>

Without reference to the copyright status of the underlying content, this legislation protects databases<sup>17</sup> from reuse or “unfair extraction”;<sup>18</sup> this is specifically to protect the investment in the process of gathering, aggregation and presentation. The protection has a much shorter term than copyright (fifteen years) but this is renewed in the event that the database is subject to “substantial change resulting from the accumulation of successive additions, deletions or alterations...” This implies that any database that continues to be actively maintained can probably be regarded as protected in perpetuity. It is also worth noting that, unusually for Intellectual Property legislation, European database protection applies only to databases that are “made” in Europe. At least in part this might be interpreted as being because no reciprocal database protection has been enacted in the US.

In the US, where until 1991 it has been accepted that all directories were protected by copyright,<sup>19</sup> attempts to introduce equivalent database

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<sup>16</sup> Statutory Instrument 1997 No. 3032 *The Copyright and Rights in Databases Regulations 1997*  
[www.hmso.gov.uk/si/si1997/1973032.htm](http://www.hmso.gov.uk/si/si1997/1973032.htm)

<sup>17</sup> Defined in such a way as to include any systematic arrangement of information; it need not necessarily be digital.

<sup>18</sup> Subject, as might be expected, to a “substantiality” test.

<sup>19</sup> In the US in 1991, the Supreme Court ruled (*Feist Publications v. Rural Telephone Service Co*) that a compilation work such as a database must contain a minimum level of creativity in order to be protected by copyright. Assuming that the database is itself simply a collection of non-copyright facts,

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protection met substantial opposition on the basis that the legislation might damage academic freedom. Databases that meet the minimum requirement for creativity (through, for example, selection or arrangement of information) continue to be covered by copyright; others are now generally protected by “shrink-wrap” or “click through”<sup>20</sup> licences under contract law.<sup>21</sup>

It is perhaps important to stress that many databases probably do meet the criteria necessary to grant them full copyright protection. It is only listings of facts with no editorial selectivity and with only obvious presentation (for example, an alphabetical listing) that fail to meet these minimum standards.

### A NOTE ON RIGHTS IN “INDIGENOUS CULTURE”

It is worth noting briefly here a movement that is gaining ground in certain parts of the world which seeks to gain control over rights to “indigenous culture”, “traditional knowledge” or folklore. This movement is taken very seriously by the World Intellectual Property Organisation (WIPO) which has an extensive website on the subject.<sup>22</sup>

To some extent, at least, this is a defensive stance to prevent others from exploiting traditional knowledge, by taking things out of the public domain (for example, by patenting traditional medicines). However, there is also a movement to develop collective, active rights of exploitation. This could be challenging to implement in law, not only because of the collective nature of the ownership of the rights but also because of their enduring nature – almost by definition, the protection of “traditional knowledge” cannot have a “term” like copyright.

### Copyright and the network

What impact has the emergence of the global network had on the core concepts of Intellectual Property? The answer is (in essence) “very little”. The fact that a work is published on the World Wide Web does nothing to invalidate any of the rules relating to copyright or moral rights. However, publishing on the Internet may be held to imply a licence for at least *some* activities like linking to a home page (unless there are specific contract terms to the contrary).<sup>23</sup> At the same time, copyright law clearly becomes more difficult to enforce, and some new definitions of rights have been seen as necessary.

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it is copyrightable only if the facts have been “selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship”; a simple alphabetical listing is insufficient. See [www.bitlaw.com/copyright/database.html#Feist](http://www.bitlaw.com/copyright/database.html#Feist)

<sup>20</sup> “Shrink wrap” licences are those which we have become used to on software – where you are informed that, by opening the packaging, you are accepting the terms of the licence. The equivalent in the online world is the “click through” licence, where you have to formally accept the terms of a licence before accessing content by “clicking” on an acceptance of the licence terms.

<sup>21</sup> A claim that the terms of shrink wrap licences should be pre-empted (and therefore potentially invalidated) by the US Copyright Act was rejected on appeal in the US in 1996.

<sup>22</sup> See [www.wipo.int/globalissues/index.html](http://www.wipo.int/globalissues/index.html)

<sup>23</sup> Although see [www.intellectual-property.gov.uk/std/faq/copyright/IMPLIED\\_COPY\\_LICENSE.HTM](http://www.intellectual-property.gov.uk/std/faq/copyright/IMPLIED_COPY_LICENSE.HTM)

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Responding to these difficulties, the World Intellectual Property Organisation (WIPO) agreed new Treaties in 1996, which led to the United States Congress passing the Digital Millennium Copyright Act (DMCA 1998)<sup>24</sup> and the European Parliament has issued a new Directive.<sup>25</sup> The European Directive is currently being enacted in national law throughout Europe – in the UK, at the time of writing the draft text amending CDPA is out for public consultation.<sup>26</sup>

For present purposes, the most significant changes are probably those that relate to technical protection of copyright. Technology designed to breach technological protection mechanisms becomes illegal, as does the removal of “rights management information”.

Some public interest advocates have expressed considerable concerns about these provisions. In response, various measures are currently being proposed in the US to make technological circumvention legal in support of activities that are legal under copyright legislation (in other words, to prevent copyright owners from extending their rights by technological means when the law does not grant them those rights).

It can be anticipated that the copyright owners will fight this vigorously, arguing that in providing mechanisms that allow consumers to circumvent technological protection when they have a legitimate right to do so will equally provide them with mechanisms that allow them to make copies that are *not* permitted under “fair use” terms. A major part of the problem lies in the fact that whether or not making a copy is or is not a “fair use” is determined by the *context* within which the person is making the copy – something which technology may be entirely unable to determine.

The same new legislation in both Europe and the US has introduced a new exception to copyright to ensure that transient digital copies made incidental to network transmission are not of themselves infringing. This relieves Internet Service Providers (ISPs) of some potential liabilities; however, other legislation (so far as Europe is concerned, under the provisions of the eCommerce Directive)<sup>27</sup> gives ISPs the responsibility to have in place procedures for “notice and takedown”. These give copyright owners a process for informing an ISP that content on a website that they are hosting is infringing; the ISP must then remove the content, or become liable for contributory infringement.

Again, public interest advocates<sup>28</sup> have argued strongly against notice and takedown, on the basis that it may be applied to stifle free speech and,

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<sup>24</sup> See [www.copyright.gov/legislation/dmca.pdf](http://www.copyright.gov/legislation/dmca.pdf) for a summary.

<sup>25</sup> *Directive 2001/29/EC* op. cit.

<sup>26</sup> See [www.patent.gov.uk/about/consultations/eccopyright/index.htm](http://www.patent.gov.uk/about/consultations/eccopyright/index.htm)

<sup>27</sup> *Directive 2000/31/EC of The European Parliament and of The Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market*; see [europa.eu.int/eur-lex/pri/en/oj/dat/2000/l\\_178/l\\_17820000717en00010016.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2000/l_178/l_17820000717en00010016.pdf)

<sup>28</sup> See, for example, [www.chillingeffects.org](http://www.chillingeffects.org).

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because it is “self regulation”, is not subject to the usual checks and balances of legal process.

In the meantime, the significance of the Database Directive for the Internet has recently been underlined in Denmark, where a case was successfully brought to prohibit “deep linking” into Web sites without permission.<sup>29</sup> This was held to be an “unfair extraction” under the terms of the Database Directive (which makes the ruling of more than simply local interest in Denmark itself). Previous cases on “deep linking” have generally been based on domestic law and have had their primary basis in commercial concepts such as “passing off” or “unfair competition” – or on trademark violation. This has proved easier to sustain where the content from another site has been misleadingly “framed” in ways which make it difficult for the user to understand that they have been linked to another site.

Deep linking in itself has been held to be a breach of copyright law in France.

### Protection of Intellectual Property on the network

No doubt people have been breaching other people’s copyright since the concept was first introduced into law<sup>30</sup> – and no doubt they will go on doing so. Systematic piracy of printed products continues to be a problem in various parts of the world, where either there is inadequate protection or the protection is inadequately enforced.<sup>31</sup>

What has happened over the last half century is that technologies have come into common use that have progressively made casual copying of copyright material much easier. Some casual uses (and some not so casual uses) are held to be “fair use” and therefore do not represent breaches of copyright. Others – for example, as in the case of Napster, running an extensive file sharing network to facilitate the sharing of music files – have been found to be infringing.

Although traditional remedies exist to protect copyright through the courts, and new regulatory ones have been introduced (like notice and takedown), many copyright owners and controllers are unconvinced that these will be sufficient to protect their vital interests. This view may be

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<sup>29</sup> For a report of the case see [www.wired.com/news/politics/0,1283,53697,00.html](http://www.wired.com/news/politics/0,1283,53697,00.html)

<sup>30</sup> The UK’s 1709 *Statute of Anne* is recognised as the first copyright legislation in the world to recognise author’s rights and to set a term on copyright, although rights in publication had previously been enforced under common law.

<sup>31</sup> The use of “inadequate” in this sentence is clearly rather loaded. Many of the places where piracy is rife are developing countries where it is argued that books are essential to education and that people cannot afford to pay the prices that are demanded for books from the developed world. This is clearly a very complex issue, and is paralleled by concerns about pharmaceutical patents and their impact on public health. The relationship between development and intellectual property is explored in a recent report commissioned by the UK government *Integrating Intellectual Property Rights and Development Policy* September 2002 (see [www.iprcommission.org/](http://www.iprcommission.org/)). Commercial publishers have been sensitive to these issues; for example, medical journal publishers have joined a network making research information (1500 journals) available to developing countries either free or at much reduced rates, depending on their per capita GDP (for details of this initiative, see [www.healthinternetwork.org/](http://www.healthinternetwork.org/)).

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seen as being given additional credibility by the difficulties currently being faced by the music industry, which is convinced that falling sales are a direct consequence of large scale music file sharing between consumers who represent its primary market place.

### TECHNICAL MEASURES FOR “DIGITAL RIGHTS MANAGEMENT”

While the record labels and the movie makers may be working hard at enforcing their rights through regulatory and quasi regulatory actions,<sup>32</sup> it seems likely that technical mechanisms to enforce rights will need to be introduced if the present shape of the content industry is to be maintained.<sup>33</sup> If these technological mechanisms do come into widespread use, it is *prima facie* unlikely that they will make any distinction between different media types – media convergence on the network is a reality: “a stream of bits is a stream of bits” whether it represents text, music or audiovisual content, or indeed software – or a mixture of these.

A potential solution to digital piracy lies in the development of a “digital rights management” infrastructure. Digital rights management (DRM), as usually described, is in reality something of a misnomer. The technology that is commonly proposed as comprising “DRM” is, in reality, primarily about digital *access permission enforcement*. Content is delivered to consumers<sup>34</sup> in a form in which technology is used to enforce the terms under which they can have access to the content (and what they can do with the content once they have accessed it). So, the content may be “wrapped” in a secure digital container which means that the consumer can (for example) open it only on a single device. If it is a text file, the technology may allow the consumer to read it on screen, but not to print it (or to cut and paste extracts).

But this, what we might choose to call the “digital management of rights”, is only part of the story. In order for this to be implemented satisfactorily, there will be a requirement for a complete underpinning infrastructure of identification and description (of the content, the parties to transactions in the content, and the nature of the transactions themselves). This is a much broader requirement for what we might choose to call the “management of digital rights”, and extends all the way from creator to consumer.

Here we are certainly talking about both rights and permissions, because the granting of permissions flows from the rights holder by virtue of the rights they hold – and within this complete chain, rights may indeed be

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<sup>32</sup> See, for example, [www.riaa.org/News\\_Story.cfm?id=575](http://www.riaa.org/News_Story.cfm?id=575)

<sup>33</sup> While most of the running in this area is being made by the entertainment industries – particularly recorded music and movies – it was reported in *The Bookseller* on 18 October 2002 that renewed concern has recently been expressed about the impact of digital piracy on books at the UK Publishers Association annual conference on book piracy. “Sooner or later there is going to be an explosion” according to Ronnie Williams, PA Chief Executive. The concern here is primarily about educational markets.

<sup>34</sup> “Consumer” is a poor term in this context, in that users of content typically do not in fact consume anything – after use, the content is still there. However, the term “user” is also unsatisfactory, so we will stay with consumer for present purposes.

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assigned or licensed. If this process is to be managed using information technology, then we need to find ways in which machines can interoperate with one another – and that means standards.

There are, of course, different ways in which standards can be developed and enforced. One is for a single technology provider to so dominate the space that they can develop and impose a single standard. However, we believe that the scope of the requirement for digital rights and permissions management makes such a “single vendor” solution look relatively unlikely to emerge. Instead, significant efforts are going into the development of international standards.

Probably the most significant of these standards efforts are playing out in the MPEG-21 Forum.<sup>35</sup> Here, work is underway to develop two of the absolutely essential elements of the rights management infrastructure: a “rights data dictionary” (RDD) and a “rights expression language” (REL).

The former provides the semantics and the latter the syntax to allow different applications within the information chain to communicate unambiguously. The MPEG-21 RDD (which, if approved, will form Part 6 of the MPEG-21 standard, ISO 21000) is based on a development of the work of the <indecs> project, which explored the requirements for extensible, flexible and interoperable metadata in the network environment.<sup>36</sup> The MPEG-21 REL (to be Part 5 of the MPEG-21 standard) is based on ContentGuard XrML (eXtensible Rights Mark-up Language).<sup>37</sup>

Perhaps significantly, the Open eBook Forum,<sup>38</sup> the trade standards body formed to create technical standards for ebooks, has also recently “selected XrML as a foundation rights expression language for developing detailed material in its Rights Grammar specification”.

While the establishment of a standard language (syntax and semantics) for the expression of rights is only one piece of the standards infrastructure required to underpin the management of rights and permissions on the Internet, it is a very significant development. If machines are to be able to communicate rights management descriptions, a lingua franca is essential (whether those rights are to be enforced by technology or simply by adherence to the law).

It is also worth noting that some parts of the content industry are calling for the imposition of legally mandated standards for all aspects of network rights management, including the technical enforcement measures themselves. Others believe that such technical enforcement should be left

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<sup>35</sup> See [mpeg.telecomitalia.com](http://mpeg.telecomitalia.com)

<sup>36</sup> See [www.indecs.org](http://www.indecs.org) for more information about the original <indecs> project.

<sup>37</sup> See [www.contentguard.com](http://www.contentguard.com).

<sup>38</sup> See [www.openebook.org/](http://www.openebook.org/)

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to the market and that only the underlying infrastructure should be standardised.<sup>39</sup>

### ALTERNATIVES TO TECHNOLOGICAL MECHANISMS FOR RIGHTS ENFORCEMENT

If technology is not to be harnessed to manage intellectual property on the network, then what are the alternatives?

It is certainly arguable that any content that is readable on a computer can and will be copied – indeed this proposition was advanced very strongly earlier this year by Marc Andreessen, the founder of Netscape.<sup>40</sup> However, if this is the case, then it is indeed hard to imagine that the current economic and commercial structure of copyright can survive, at least for large sectors of the content industry. That being the case, those who depend on intellectual property for their livelihoods – whether as creators or as intermediaries – had better find very different business models from those on which they have traditionally depended.

In this context, it may be interesting to note that the publishers of journals seem (so far at least) to be managing the migration to the online environment with only the simplest of “DRM” mechanisms – user name and password authentication. This is not necessarily unsustainable in the long term, because it can be argued that the value in “a journal” lies in far more than access to an individual paper, and that the only way in which the value could be challenged is by copying and making available the complete content of the “database” that is a journal. This makes casual multiple copying of individual journal articles largely irrelevant – and indeed publishers are increasingly “bundling” many copying permissions with their digital licences to institutions. Similarly, the fact that their core customers are institutions rather than individuals makes enforcement of legal constraints much easier,<sup>41</sup> and much can be dealt with by explicit licence rather than relying on (possibly differing) interpretations of copyright law.

On the other hand some, including many publishers, continue to believe that the printed book (and even the printed journal) is so fundamentally isolated from the threat of digital replacement that we do not need to be unduly concerned about network piracy (and therefore about digital rights management). People will always prefer to buy and read print-on-paper, and the printed book provides convenience and emotional value that cannot be replaced by digital technology. Digital use is, and will remain, a

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<sup>39</sup> For a policy statement on standards in this space from within the publishing industry, see the UK Publishers Association guideline document “Digital Rights Management - three point policy” available under “Guidelines” on the PA website [www.publishers.org.uk](http://www.publishers.org.uk)

<sup>40</sup> See [www.siliconvalley.com/mld/siliconvalley/3031836.htm](http://www.siliconvalley.com/mld/siliconvalley/3031836.htm) for a report of Andreessen’s keynote address to the National Association of Broadcasters convention, in which he said that the entertainment industry need look no further than the software industry’s own expensive, failed attempts at encryption to realize it is ineffective at stopping piracy. “If a computer can see it, display it and play it – it can copy it.”

<sup>41</sup> There are fewer customers, and they are easier to locate; institutions and commercial organisations are also susceptible to considerable embarrassment if discovered to be infringing copyright in a systematic way, something that is generally not true of individuals.

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sideshow and minimal amounts of digital piracy can be dealt with as they arise. While it is certainly the case that, for the time being, digital piracy is not the immediate worry for publishers that it is for the record labels, we doubt that this can be sustained in the medium to long term – it seems to us to depend on a view that device technology will not advance and equally that readers' attitudes will not change as a generation brought up on computer technology reaches adulthood. However, it is also true to say that change may be faster to happen in some academic disciplines than in other.

Another mechanism is used in some countries to provide indirect compensation to rights owners for copying – the machine or media levy. This is primarily used to compensate for private copying (which in other countries may be viewed as fair use, or entirely disregarded). In these countries, charges (which can be seen effectively as taxes) are levied on either copying equipment – photocopiers or recording devices – or on the media onto which the copies are made – blank tapes, photocopier paper. In some countries, substantial lobbying efforts are being made to extend this approach to levies on computer equipment and media (including hard disks and writable optical media).

Money collected through levy schemes is distributed to creators and rights owners by the copyright collecting societies. The process for distribution is not uniform between different countries, and may depend centrally on a series of subjective judgements regarding the "cultural value" of different media types and genres of content.

While levy schemes are seen as an entirely natural part of the copyright management scene in those countries where they are long-established, they are frequently viewed with something approaching total incredulity in more mercantilist economies like the US<sup>42</sup> and the UK. The use of levy schemes offers some real advantage to rights owners, in terms of providing a revenue from copying that would take place anyway, but would otherwise be totally uncompensated.<sup>43</sup> However, there must be a real possibility that, on the Internet, copying compensated by levy schemes could become the primary mechanism for Intellectual Property distribution, in which case the entire creative process would be supported by what is essentially a taxation-based system.

There is one final thought on the question of maintaining control over Intellectual Property that may be worth mentioning here – the use of Trade Marks. In the computer games industry, for example, far more attention is paid to protecting the Trade Marks associated with a game than with protecting the copyright in the code. The real value lies in the brand rather than the content (although, of course, building the brand is

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<sup>42</sup> Although in fact one small levy scheme – on DAT tape – does exist in the USA. Because of the very limited impact that this recording medium has had on the consumer market, this levy is often overlooked.

<sup>43</sup> This is the key role of copyright collecting societies: the collective licensing of activities that are not realistically licensable on any other basis because of what would otherwise be unacceptably high transaction costs.

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in part dependent on the quality of the content). Some parts of the publishing industry also recognise the value of Trade Marking brands. There has been a recent flurry of press excitement on the Trade Marking of a new “Harry Potter” title (a number of Harry Potter titles have been Trade Marked, apparently as part of a policy of deliberate confusion of the press).<sup>44</sup> The value of brand with respect to Intellectual Property (and the potential to use Trade Mark law to protect it) should not be underestimated.

### ALTERNATIVES TO ENFORCING COPYRIGHT

Finally in this section, we should also note movements that seek to work (as their proponents might characterise it) “with the grain” of the Internet, to make content widely available to anyone who wishes to use it, on “open licence” terms.

It has always, of course, been possible not to assert one’s copyrights and to allow people to copy one’s creations freely (by simply reserving no rights at all, and effectively placing one’s work into the public domain). But this may have unexpected effects; other people may be then able to make use of your creations in ways that you do not approve (including, for example, making money out of selling them). Creators may prefer to maintain some control over their work.

There are various ways of doing this. It is not unusual to find content on websites clearly marked with a copyright notice, but with a statement to the effect that the document can be freely copied and distributed *as long as it is not altered in any way*. In effect, the copyright owner is making an assertion of their moral rights (and hoping that these will be respected) while allowing as many copies of the content to be made as anyone wants to make.

In many circumstances, this may make very good commercial sense. There are tens of millions of authors and publishers on the World Wide Web for whom publishing is a means to an end, not an end in itself. The value that they receive from their publishing may not be immediately financial – although the fact that they perceive that they are receiving value from their publishing activities cannot be doubted.<sup>45</sup> “Network effect” economics value ubiquity over scarcity; the more copies of something that are distributed to others, the more valuable your creation. This type of value is, though, sometimes difficult to realise in direct financial terms.<sup>46</sup>

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<sup>44</sup> For more on this story, see:

[story.news.yahoo.com/news?tmpl=story&ncid=579&e=2&cid=638&u=/nm/20021021/en\\_nm/leisure\\_potter\\_dc](http://story.news.yahoo.com/news?tmpl=story&ncid=579&e=2&cid=638&u=/nm/20021021/en_nm/leisure_potter_dc)

<sup>45</sup> “Value” in this sense has many components – it may simply be the personal gratification of making their own opinions available to others.

<sup>46</sup> Although by no means impossible. Microsoft is a possibly the most prominent beneficiary of the network effect, in the ubiquity both of its operating systems and its Office applications software. There can be little doubt that infringing copies contributed to that value. However, it is notable that Microsoft is now implementing much more stringent copy protection (a policy which on the basis of its recent financial performance appears to be paying off).

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There are more elaborate ways of approaching this issue. The “Copyleft” movement started in the free distribution of software. Creators of this software were happy enough to give it away to anyone who wanted it – but were unhappy at the possibility that someone could take part of their code, incorporate it into something else and then place more restrictive terms on its further distribution. This led to the development of the Copyleft licence, which has now been drafted in a way that allows it to be applied to any kind of Intellectual Property.<sup>47</sup> The licence allows free distribution and modification, but asserts respect for moral rights and lays down terms for further distribution.

A more recent development in this area is the “Creative Commons”, a not-for-profit corporation that is now supported by Stanford Law School.<sup>48</sup> Acknowledging its debt to the “Copyleft” movement, the Creative Commons is currently drafting licences it characterises as a “commons deed”, which will allow authors and other creators to place content on the Internet with a series of (human readable) symbols that indicate the licence terms under which copying is permitted (covering attribution, redistribution and alteration).

Both the Copyleft licence and the Commons Deed can be seen as having their feet firmly planted in the ground of copyright, in their selective assertion of creator’s rights. It is rare indeed to find a creator who is not concerned in any way with the integrity of their own creations, even if they are willing to denounce any direct economic interest or (as is the case with many of those in the Creative Commons movement) actively encouraging new forms of collaborative creation.

## Intellectual Property and Open Archives

### Intellectual Property and Metadata

Is an item of metadata (description of a resource, rather than the resource itself) subject to copyright legislation? To the extent that it is simply a “fact”, the answer to this question must be “no” (there is, for example, no copyright in titles although, as we have already seen, it is perfectly possible to Trade Mark a title). However, when does a complete metadata record become a work in its own right? It would appear to need to pass a test of creativity which would imply something beyond simply recording a set of facts about the resource described which are themselves intrinsic to the content. There can be little doubt, for example, that a qualitative review of the resource would itself represent a “work” and would be subject to copyright; it is, unlikely, though that a single subject classification (although subjective) would be found to be copyright.

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<sup>47</sup> See for example, the Design Science Licence (DSL) at [www.dsl.org/copyleft/dsl.txt](http://www.dsl.org/copyleft/dsl.txt). For an article that lays out the history of the copyleft movement (and some of its pros and cons) see Graham Lawson’s “The Great Giveaway” *New Scientist* 31 January 2002, available under the DSL licence from [www.newscientist.com/hottopics/copyleft/copyleftart.jsp](http://www.newscientist.com/hottopics/copyleft/copyleftart.jsp).

<sup>48</sup> See [www.creativecommons.org](http://www.creativecommons.org).

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However, a collection of metadata records, even if each element and each record is not individually protected, is undoubtedly subject to database protection in Europe (and subject to rules relating to unfair extraction and use).<sup>49</sup> The creation of a database of metadata records through harvesting without the permission of the original owner of those records would appear to be a breach of the database right of the owner, although a metadata owner who made available metadata to be harvested in accordance with the OAI protocol (and without making any restrictions on that process explicit) might reasonably be assumed to have issued an implied licence for its reuse.

Journal article abstracts provide a special case, particularly under UK law. UK law<sup>50</sup> provides a specific exception to copyright for the copying and republishing of the abstract *that is published with the original article* (which may be the author's original abstract or one written by the publisher). What is perhaps most interesting about this exception for our purpose is that it makes clear that there is a specific copyright in the abstract itself separate from the copyright in the article.<sup>51</sup>

It would appear to us that anyone offering metadata records for harvesting ("data providers" in OAI terms) would be well advised to make the licence terms on which they are offering those records for harvesting entirely explicit (preferably in both human-readable and machine-readable form); in the same way, those harvesting that data ("service providers") would be well advised to maintain this licence terms information at the individual record level. This would avoid any ambiguity. The question of machine readable "rights and permissions" metadata is a subject to which we will return.

Service providers who have aggregated data can claim protection for their own efforts in collection (should they wish to do so) either through the *sui generis* database right in Europe or (perhaps more effectively on the global scale) through a "click through" licence. Even if their intention is to allow anyone to do anything with the database (which may of course not be possible if any conditions on reuse have been placed on the underlying metadata by its originators), they would be similarly well advised to avoid ambiguity by making terms and conditions of use explicit.

### Intellectual Property and Resources

If an archive includes copies of resources themselves, rather than just descriptions of them, the copyright status of those resources is likely to be clearer cut than that of their metadata. At some point, in the case of most imaginable resources, *someone* will have owned the copyright at the point

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<sup>49</sup> The selection and arrangement of the facts might also make the collection copyrightable.

<sup>50</sup> This rather curious – even anomalous – exception can be found in CDPA §60. The exception applies only to *scientific and technical* abstracts (in other words, not to abstracts in the humanities and possibly not even to medicine), and is subject to the absence of a certified licensing scheme. Publishers in the UK have discussed developing such a licensing scheme in the past, but have generally felt it would serve no adequately useful purpose.

<sup>51</sup> CDPA §60 (1) "...it is not an infringement of copyright in the abstract, or in the article..."

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of creation, and that copyright will still exist unless it has been specifically waived, or the work has passed out of copyright by virtue of its age.<sup>52</sup>

We will focus here on content created by academics, particularly journal articles, since we believe this is likely to be of greatest interest to our audience. However, the same general principles apply to all content, and it should be possible to apply the same analysis to any type of content.

### WHO OWNS INTELLECTUAL PROPERTY RIGHTS IN THE OUTPUT OF ACADEMICS?

The question of ownership of the IP rights of academics is one of the more contentious issues facing Higher Education. Under the terms of CIPA (and the similar terms of US copyright legislation), by default it would certainly appear that in the case of works made “in the course of employment”, the copyright would pass to the employer (the Institution). However, by custom and practice (and in some cases by quite specific exemption in contracts of employment),<sup>53</sup> most academic institutions do not exercise this right with respect to copyrights<sup>54</sup> in journal articles or in textbooks.<sup>55</sup>

As Universities create more of their own “courseware”, particularly for distance learning, the difficulty of multiple and divided ownership<sup>56</sup> of the content becomes steadily less and less supportable (particularly when academics change posts from one institution to another). Universities which create a substantial amount of courseware (such as the Open University in the UK) are careful to ensure that the copyright status of that content is explicit.

However, with respect to the content that is of most interest to Open Archives Initiative – primary research articles – we would regard it as highly unlikely that Universities would succeed (in the short term, at least) in taking control over their copyrights (even should they wish to do so, which must be doubtful).

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<sup>52</sup> In other words, seventy years have passed since the death of the author.

<sup>53</sup> It has been argued that academics do not write “in the course of employment” but create content in their spare time.

<sup>54</sup> The situation with respect to patents is often rather more complex, but falls outside the scope of this article. For those who are interested in institutional policies with respect to Intellectual Property right, a useful resource linking to the policies of a range of US universities can be found at [www.inform.umd.edu/copyown/policies/index.html](http://www.inform.umd.edu/copyown/policies/index.html) (although we found a number of dead links from this page).

<sup>55</sup> It is interesting to note that the changes to Intellectual Property policy recently proposed by Cambridge University make little change in this: “The University will not claim ownership of copyright in normal academic forms of publication, including books, articles, and lecture notes, or other similar works generated by staff, unless those works have been commissioned by a sponsor or by the University.” There is significant dissent being voiced to the changes being proposed, on a number of different grounds: see [www.cl.cam.ac.uk/~rja14/ccf.html](http://www.cl.cam.ac.uk/~rja14/ccf.html)

<sup>56</sup> This is, of course, one of the enduring problems with rights management – that it is relatively unusual for any one individual to own or control *all* the rights associated with a given creation. There is not only the question of joint authorship, but also, for example, the use of someone else’s copyrights (an illustration, for example, reproduced from elsewhere).

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For the purposes of this article, therefore, we will assume that copyrights in all academic articles are owned and controlled from the outset by their authors, and will continue to be so.<sup>57</sup>

### **RIGHTS IN ACADEMIC JOURNAL ARTICLES**

Traditionally, the publishers of academic journals have sought a full assignment of copyright in articles prior to publication.<sup>58</sup> However, a growing number of publishers will now accept an exclusive licence to publish rather than a full assignment of rights.<sup>59</sup>

The differences between an assignment of copyright and an exclusive licence to publish may be almost entirely insignificant, particularly if the exclusive licence does not allow the author to do things which may be permitted under an assignment. An exclusive licence can be just as restrictive as any assignment of copyright (although there is clearly an emotional attachment to “ownership”). And even those who look for full assignment may be relatively liberal in the activities that authors are subsequently permitted.<sup>60</sup>

It is always the case, of course, that any agreement (whether an assignment or a licence) between an author and a publisher is freely entered into. Authors cannot be forced to sign an agreement under which they are unwilling to be published (although the alternative may be that they cannot find a publisher). Equally, publishers cannot be forced to sign an agreement under which they are unwilling to publish (although the alternative may be that they cannot find authors). Although this is not the place for an extended discussion of the nature and purpose of the scholarly communication process, we must nevertheless recognise that the pressure on academic authors to publish (and to publish in high profile journals) may lead them to sign agreements that they otherwise might not.

What rights must an author have in order to be able to publish an eprint of an article (either before or after conventional publication)? Ideally, any agreement between author and publisher should be entirely explicit with respect to what is expected and allowed of each party. If the agreement is not explicit, then whatever either party does must remain ambiguous.

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<sup>57</sup> We are aware that this position may not be uniform on a global basis, and that some HEIs may be seriously considering enforcing ownership in the rights in the journal articles written by their employees.

<sup>58</sup> Some publishers request an assignment of rights even *before* they have agreed to publish the article. This seems a surprising practice.

<sup>59</sup> For a standard form of licence promoted by the Association of Learned and Professional Society Publishers (ALPSP), see [www.alpsp.org/grantli.pdf](http://www.alpsp.org/grantli.pdf). Some aspects of this licence have been criticised by proponents of Open Archives as expressing ambiguity towards authors' rights to archive.

<sup>60</sup> See, for example, the interview with Derk Haank, CEO of Elsevier Science by Richard Poynder “Not pleading poverty” *Information Today* April 1, 2002. “[As an author] you can put your paper on your own Web site if you want. The only thing we insist on is that if we publish your article you don't publish it in a Springer or Wiley journal, too. In fact, I believe we have the most liberal copyright policy available.”

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Can an author post a copy of an article to an eprint archive without an explicit agreement with their publisher? The answer to this can only be “it depends”.

As far as *preprint* archives are concerned, there is a strong likelihood that the author will have posted a preprint before submitting the paper for publication. Some publishers will not accept for publication a paper that has already been published elsewhere. Does publication in a preprint archive constitute publication? In the sense that “publication” means “making available to the public” we can only conclude that it does. However, whether any publishers still regard preprint publishing as automatically disbaring subsequent publication of a formal version of the same paper we would very much doubt (at least in those disciplines where preprint archives have had very high take up and visibility).

If the author subsequently assigns copyright, or signs an exclusive licence to publish, what affect does this have on the previously “published” version? This situation is really quite complex, and we cannot be certain what the view of a court would be. Are the preprint version and the published version substantially the same work?<sup>61</sup> The answer to that question seems likely to be “yes”. Does assignment of the copyright of a later version of “the same work” automatically assign copyrights in earlier versions? The answer here is almost certainly “no”, although some publishers certainly make it an explicit condition of assignment that preprints are taken down (and that condition should be enforceable by contract, rather than depending on the copyright status of the preprint).

As far as postprint articles are concerned, the situation is somewhat more straightforward. If copyright has been assigned, or licensed, good practice will ensure that the author knows whether the publisher will permit republication of a postprint in an eprint archive. If the assignment or licence is silent on this issue, it would be wise for the author to get explicit permission. On the whole, most publishers seem *at this time* to be willing to grant authors the right to reuse their journal articles in any way they (the authors) may see fit short of formal republication, certainly within their own institution or on their own personal website.

### THE POSITION OF THE EPRINT ARCHIVE ITSELF

From the point of view of those running eprint archives, whether preprint or postprint, we believe that they would be well advised to follow good publishing practice (since publishers is undoubtedly what they are) and ensure that they have explicit agreements with authors themselves. These should include (for example) warranties on the part of the author that they are not breaching any third party agreement – or copyright – by

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<sup>61</sup> It is important to stress that the copyright is in the work. Simply making a few simple alterations to that work does not mean that (although a new work has been created) the copyright in the original work has not been breached. Otherwise, we could all take a published work created by someone else, make a few small alterations and republish it. This is, of course, the basis for many assertions of plagiarism; particularly in music, such copying may be made unconsciously (but remains a breach of copyright for all that).

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posting the eprint. This would also ensure that authors explicitly accepted the terms under which the content is being made available to others.

What is required could probably be achieved by using a simple “click through” agreement as part of the submission process. This would certainly reduce any copyright risk that the eprint archive itself might be running. Eprint archives may also need to be prepared to respond to “notice and take down” processes were an allegation of breach of copyright to be made.

### NON-TEXT RESOURCES

In view of the increasing convergence between different media types, it is probably helpful to make one or two observations about media other than text – and particularly music and audiovisual resources, where rights in *performances* become a live issue.

There are typically many more people involved in the ownership of rights related to a piece of recorded music than in a piece of text, for example. There are not only the performers, but also those who made arrangements for the recording to be made – and those who own the rights in the music being recorded (the composer and/or his or her publisher). Many of these rights are administered on behalf of their owners by copyright collecting societies, to whom the specific rights may have been assigned, or exclusive or non-exclusive rights to administer may have been granted.

The same is true in audiovisual media – and the situation gets even more complicated if (for example) recorded music is included in the soundtrack. Anyone building and maintaining an archive of audio or audiovisual resources will need to be particularly careful to ensure that all the rights of all the relevant rights owners are properly understood and respected. As with text rights, there is nothing to stop a performer placing a specific performance into the public domain (or allowing it to be copied freely); however, the performer (for example) cannot waive the rights of the composer (unless they are one and the same person) and may in any case be restricted from doing so by their agreement with a record company.

Although the situation may generally appear to be not quite so complicated when it comes to graphical resources (photographs, illustrations), there are many possible pitfalls – and the owners of rights can be particularly active in ensuring that they are properly observed. This creates a lot of difficulties because (for example) rights ownership in photographs can be extremely hard to trace.<sup>62</sup> “Best endeavours” are not sufficient.

Open Archives which plan to be repositories of non-textual material will need to be particularly careful to ensure that their holdings do not infringe any rights.

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<sup>62</sup> This is without taking into account problems such as that presented by photographs of pieces of modern art, which may require four entirely separate permissions...

## Attitudes of stakeholders to Intellectual Property and Open Archives

We have been unable within the time allowed for the preparation of this paper to conduct anything other than anecdotal attitudinal research among the various stakeholders. However, we can comment briefly on some attitudes, based both on what we know and on what has been published elsewhere.<sup>63</sup>

### Academic authors

Some research has recently been undertaken into author attitudes to eprint archiving,<sup>64</sup> and this confirms that the authors with the greatest experience of posting papers to arXiv,<sup>65</sup> the long-established eprint archive covering physics and mathematics, have few concerns about intellectual property issues, either with respect to copyright or to plagiarism. In contrast, authors who submit postprints to Cogprints<sup>66</sup> at Southampton University (UK), established in 1997 to archive postprints in psychology, neuroscience, linguistics, computer science, philosophy and biology, seem to have some concerns about copyright issues (which the researcher characterises as “unnecessary”).

Although the total number of respondents who commented on copyright issues is low, the responses that were received are generally hostile to the existing copyright practice of journal publishers. However, we would interpret the overall findings as indicating that most academic authors do not think a great deal about intellectual property issues – and this is much as we would expect it to be. Intellectual property is not generally in the forefront of most peoples’ minds; it is simply part of the environment within which we operate.

It is particularly unsurprising that this should be the case for authors of the primary research literature, since their copyrights do not directly provide them with economic benefit (in that they are not paid a fee or a royalty in return for publication). It can certainly be argued that they would stand to benefit (as both creators and users of the literature) from “network effect” distribution – in other words, that ubiquity of their papers would bring greater value than the scarcity which is created by enforcement of copyright.<sup>67</sup>

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<sup>63</sup> The RoMEO project ([www.lboro.ac.uk/departments/ls/disresearch/romeo/index.html](http://www.lboro.ac.uk/departments/ls/disresearch/romeo/index.html)), funded by the Joint Information Systems Committee (JISC) of the Higher Education Funding Councils in the UK, is undertaking an extensive round of attitudinal and quantitative research into Open Archives among the different stakeholders, and expects to make results of this research available during the first half of 2003. The author of this paper is a member of the Advisory Board of RoMEO; unfortunately, not even preliminary results of the research are available at the time of writing.

<sup>64</sup> See Hunt, C (2001) Archive User Survey at [www.eprints.org/results/](http://www.eprints.org/results/)

<sup>65</sup> [xxx.arxiv.cornell.edu](http://xxx.arxiv.cornell.edu)

<sup>66</sup> <http://cogprints.soton.ac.uk>

<sup>67</sup> In a sense, this ubiquity value is confirmed by the value placed on Citation Index – the more frequently a paper is cited, the higher its value to the author.

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However, for the time being at least, many judgements that are made of academic researchers – by potential employers and by research funders – are based on publication in the branded, peer-reviewed literature. For as long as this is the case, most authors' attitudes to the Open Archives are likely to be equivocal – they will be less important to them than formal publication.

### Attitudes of publishers of the primary literature

This paper is not the place for a rehearsal of the arguments about Open Archives and publishing business models which has been extensively discussed elsewhere.<sup>68</sup>

However, there is no doubt that journal publishers (as businesses) to some extent at least see themselves as being in the firing line of aspects of the open access movement; certainly, some of the proponents of the open access movement<sup>69</sup> see Open Archives as a solution to “the journals problem”<sup>70</sup> – but in solving this problem, at least one group of publishers perceives a risk that “scholarly communities will be ill-served by an initiative which promotes systematic institutional archiving of journal content without having in place a viable alternative economic model to fund publication of that content”.<sup>71</sup> These publishers, primarily from the not-for-profit sector, believe that if open archives were to work in the way that some envisage, they could undermine the economic base of the journals publishing industry, on which the open access movement is (at least for the time being) ultimately dependent to provide the process by which papers become “accepted” into the literature, and through which quality control is exercised.<sup>72</sup>

The confusion between the open access movement and the Open Archives Initiative is considerable, and it can hardly be surprising that publishers' attitudes to Open Archives are being shaped by these arguments.

At least one publisher is already actively participating in the Open Archives Initiatives. Institute of Physics Publishing – IoPP – is already making metadata available for harvesting in accordance with the OAI protocol. Indeed, most publishers now appear to believe that distributing their metadata<sup>73</sup> as widely as possible – to wherever it will be used for search purposes – can only be useful if it brings those seeking for content

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<sup>68</sup> For active discussion of some of these issues, readers could do worse than to follow some of the threads on the *September 1998 American Scientist Forum* email list, with can be found at <http://listserver.sigmaxi.org/sc/wa.exe?A0=september98-forum&D=0&F=1>

<sup>69</sup> See, for example, the Budapest Open Access Initiative [www.soros.org/openaccess/](http://www.soros.org/openaccess/)

<sup>70</sup> The “journals problem” may be described as the squeeze caused between the escalating cost of subscribing to the primary literature (through increases in both price and volume) and static or declining academic library budgets.

<sup>71</sup> *The ‘Budapest Manifesto’ – response from the Association of Learned and Professional Publishers (ALPSP)* no date; available from [www.alpsp.org/budapest0202.pdf](http://www.alpsp.org/budapest0202.pdf)

<sup>72</sup> This is not to suggest that there are not other ways in which this quality control might be achieved.

<sup>73</sup> A minority of primary publishers remain concerned about keeping control over access to their abstracts.

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back to the publisher's own online resources. Anyone wishing to sell something must set out their stall; and publishers understand the significance of compliance with standards in this respect. Will more publishers follow where IoPP is leading? That will ultimately depend on a balance of commercial considerations: do the services based on OAI metadata harvesting drive more traffic to their content – and how does the value of this compare with the cost of compliance with the OAI metadata protocol? The answer to this question is unlikely to be known until such services get beyond the experimental stage; and publishers are currently more concerned with providing metadata to other standards (in the case of journals, the CrossRef metadata standard has been widely adopted) than with following every possible development.

The development of tools such as Paracite,<sup>74</sup> which enable multiple copies of “the same” resource to be found through a single search, may make publishers a good deal more wary of collaboration. If “the appropriate copy”<sup>75</sup> of a resource is always a free one – then supplying metadata to aid the discovery of what is essentially a directly competing source of supply (even if that source of supply is “the genuine article”) can hardly be seen as making good business sense.

In the long run, if the Open Archives Initiative is successful, and open access repositories of resources become an embedded part of the scholarly communication landscape, rather than (as they are today) a curiosity the effects of which are largely limited to a single discipline, then we can expect that all publishers will sit up and take proper notice. This *could* imply the complete change in business model that is seen (by some at least) as “the solution to the journals problem” – a switch from payment for demand to payment for supply, payment not by readers (or their proxies) but by authors (or their proxies).<sup>76</sup> But the effects of such a migration are not entirely predictable, and may not be entirely benign. Author-subsidised publication is always likely to raise questions about the objective quality of the resources in the minds of readers, even if these are entirely unjustified.

In the meantime, we would predict that most publishers are likely to watch and wait.

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<sup>74</sup> See [paracite.ecs.soton.ac.uk](http://paracite.ecs.soton.ac.uk)

<sup>75</sup> Much effort is being put into resolving what is known as the “appropriate copy” problem. If a researcher at an institution locates a resource to which she wishes to gain access, and there are several different possible sources on the network for the resource (for example, several different document suppliers), how can the researcher be automatically guided to “the appropriate copy”?

<sup>76</sup> The major commercial proponent of this approach is BioMed Central ([www.biomedcentral.com](http://www.biomedcentral.com)), which, over a short time span, has established a pool of journal titles in the life sciences. These are free to access but charge \$500 per accepted article for publication. BioMed Central journals take a licence granting them “first publication” rights, but (subject only to ensuring that their branding is firmly associated with the article whenever it appears) are happy to have the paper as widely distributed as possible. Some commercial publishers doubt the long-term viability of the BioMed Central business model.

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### **Secondary publishers**

The publishers of secondary services related to the literature – abstracting and indexing services and similar aggregators of disparate information – have a particular position with respect to the development of the Open Archives Initiative which, it seems to us, is commonly overlooked. To the extent that their business model depends simply on gathering and aggregating information that will increasingly be available to anyone – the metadata intrinsic to resources for example – it is clear that their future livelihood must be at some risk.

However, secondary publishers consistently argue that their role is much more than this. They not only aggregate information, they add value to it in quite specific ways.<sup>77</sup> Certainly, this value has been perceived as sufficient to put the secondary publishers at the heart of the scholarly communication process.

Secondary publishers may find the OAI metadata harvesting protocol of considerable assistance to them, if metadata becomes available to facilitate access to resources that are otherwise hard to find (in other words, content that does *not* appear in the peer reviewed literature). They do not see non-commercial OAI service providers as likely to provide them with serious competition in the short term at least, because creating added value in discovery services is not trivial.

At the same time, secondary publishers (many of whom are also primary publishers – and all of whom have a symbiotic relationship with primary publishers) are unlikely to undertake any action which is seriously likely to impede the existing commercial model of the primary journal publishers.

### **Academic Institutions**

Academic institutions have a complex relationship with Open Archives and the open access movement:

- As employers of many of the authors of primary journal articles (as well as many of the members of the editorial boards and the peer reviewers) – and the source of the funds used to undertake the research reported in the articles
- As purchasers of the journals themselves, in print or electronic form
- As potential publishers or re-publishers of the output of their own academic staff – or of a more broadly based “subject” repository

We have already discussed the role of institutions as employers in relation to Intellectual Property (see page 23).

As purchasers of journals, it is self evident that, given the choice, academic institutions would like to spend less on acquiring information (as with

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<sup>77</sup> For example, to the extent that an A&I service creates its own abstracts rather than simply reproducing the original abstract, these abstracts would not be covered by the “abstracts” exception in CDPA.

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anything and anyone else). There is undeniably an added edge to this because of their role as employer of many of the authors of the papers.<sup>78</sup>

So, should Universities become the publishers of the research output of their own academics (or others)? Many Universities are well established as publishers (for example, the two longest established publishers in the UK). There is no reason why they should not continue to be active publishers of academic content in the network era; indeed the relatively low cost of entry into network publishing makes that ambition a relatively easy one to achieve. However, they will be constrained by the law of copyright in exactly the same way as any other publisher is constrained, and will need to be careful with compliance if they are not to be embarrassed by infringement.

## **Some tentative conclusions**

The era of the global network is still in its infancy, and it is extremely difficult to predict how a number of issues will play out as the network becomes more mature. It is, of course, possible that the most apocalyptic of visions of the future of Intellectual Property will come to pass.

There are two extremes to this dystopia, depending on which “side” of the argument you find yourself. One is a world in which all “content” is locked up by its owners and made inaccessible – where the simplest of activities, like lending someone a book, becomes criminalised.<sup>79</sup> The other is a world where the whole concept of Intellectual Property is simply overwhelmed by the ease with which content can be copied and redistributed on the network – and those who depend financially on the protection of copyright in creating and disseminating content have to find some other way of earning their living.

We would suggest that, in all likelihood, neither of these extremes will ultimately be realised. The future will be a compromise, somewhere in the middle, although the loudest voices today are to be heard – as might be expected – from the farthest margins.

And, in the meantime, what of Open Archives? If by this we mean open access repositories of scholarly resources, available to all free at the point of use, whether these are successful will ultimately depend in the first instance on the attitude of authors rather than users. It is those who create rather than those who consume who control the scholarly communication process; if authors continue to believe that formal publication in the literature is what they want, and continue to be willing to give up some or all their rights over their content in order to achieve this – then the current mechanisms of scholarly publishing are likely to

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<sup>78</sup> We have not separately considered the role of research funders; this is a stakeholder group who may also be seen as having an entirely legitimate interest in the issue.

<sup>79</sup> See Richard Stallman’s article “The Right to Read”, originally published in *Communications of the ACM* February 1997 **40** No 2; available with an authors note updated in 2002 from [www.gnu.org/philosophy/right-to-read.html](http://www.gnu.org/philosophy/right-to-read.html)

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continue, albeit with alterations and additions as market conditions themselves change.

There is also a complex relationship with readers. Readers will have to find the services provided through Open Archives useful and worthwhile if they are to be used. It is the market that will decide through their behaviour.

The only significant model we have for this is the community which uses arXiv – and, so far at least, the message is that (for this community) Open Archives have proved a useful *adjunct* to the published literature rather than a replacement for it. ArXiv is heavily used – but so is the equivalent paid for research literature.

Open Archives (metadata) services are in the same position – first, will metadata providers deliver make their metadata available? Yes, if they want to drive traffic, and the services prove themselves capable of creating sufficient value to cover the cost of compliance. Will the services become an established part of the scholarly communication landscape? Again, ultimately the market will decide.

In the meantime, what should the Open Archives Initiative do with respect to Intellectual Property issues? We would recommend that the following should be considered by the Open Archives Forum as activities which need to be undertaken:

- Open Archives (meta)data providers should provide explicit information about the uses to which they are comfortable that any metadata harvested from them can be put. Such information should be made available in both human readable and machine readable form. The development of a machine-readable form of this “permissions metadata” is probably not a very complex task, since the number of different alternative modes of use is probably limited.<sup>80</sup>
- Similarly, data providers should provide explicit rights and permissions data relating to the resources that are identified in the metadata. This might include a copyright notice relating to the resource, and information about the terms of access to the resource. Again, these should ideally be in a standardised, machine readable form; this could be a somewhat greater challenge, since the terms of access might themselves be more complex (for example, “free if your institution is a subscriber; pay per view if not”).
- Any metadata scheme used in Open Archives should be extended as appropriate, to allow the inclusion of rights and permissions data relating to the metadata itself (“meta-metadata”) and the resource described and identified by the metadata.

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<sup>80</sup> Such a set of metadata permission values is a primary deliverable of the RoMEO project (op cit).

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- It would clearly protect both data providers and service providers from misunderstanding and disagreement if an explicit form of licence were developed between them and formed the basis of their interaction. This could be entirely standardised.
- Those seeking to run Open Archive repositories, providing access to content (on any basis, whether free or paid for) would be well advised to ensure that their position (as publishers, which is what they are) is not compromised. With this in mind, we would strongly recommend that they put in place a standardised form of licence with the authors who post their content to the archive, warranting (for example) that the author is the copyright holder (or has the copyright holder's permission to post the content). Such licences will need to consider (for example) the position of an author who changes their post.
- At the same time, such repositories will need to have in place processes for dealing with "notice and takedown" procedures, if claims are made that the content which they are hosting is infringing of someone else's rights.

There is ultimately no conflict between Open Archives and Intellectual Property – but Open Archives exist within the framework of Intellectual Property law, and would be advised to recognise this in the way that they operate.