

# **AEShareNet**

*A case study in the use and production of open education  
resources and open source software*

*August 2006*

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## **.Background**

*AEShareNet* Limited (AESL) is a non-profit company (established by the Australian Ministers of Education and Training) which operates the *AEShareNet* (AESN) system. The *AEShareNet* system is a collaborative system to streamline the licensing of intellectual property so that Australian learning materials are developed, shared and adapted efficiently.<sup>1</sup>

AEShareNet provides an intermediary service for the reuse of educational materials. It provides a system where copyright owners can make their material available, and a system for educators and trainers to search for and negotiate copyright on material they wish to use. The AESN website has “Australia's largest catalogue of learning materials”,<sup>2</sup> and provides a search facility to potential users. Material available from the AESN website is contributed primarily by a small number of large producers of educational content, but also from individuals, enterprises, and smaller institutions.

All material administered by AESN is made available either under an ‘Instant’ licence, or under a mediated licence. The instant licences come in four varieties:

- Free for Education (FfE) – material is free to copy and use for educational purposes, but the owner retains copyright and prohibits the creation of substantially modified versions.
- Unlocked Content (U) – material may be freely copied, adapted, and used by anyone. Exact copies must retain the copyright owner’s original copyright statement and the licence, but modified statements must not include the original owner’s copyright statement.
- Share and Return (S) – material may be freely copied and modified, but modifications must be assigned to the original copyright owner.
- Preserve Integrity (P) – material may be freely copied, but modifications are not permitted.

Instant licences attach to the material and may immediately be used by anyone who complies with the licence terms. AESN also administers two types of mediated licences, where potential users must negotiate with the copyright owner, through the AESN online transaction system. AESN facilitates and manages the trade, and collects royalties or payments on behalf of the copyright owner as applicable. The two types of mediated licences are:

- Commercial Licence (C) – licences conditions are customised by the copyright owner and the needs of the potential user, and licence fees or royalties may be charged. Typical restrictions include limits on territory, time, price, and the ability to modify the work.
- End-user Licence (E) – materials are intended to be used by end-users on an as-is basis. An E Licence may be taken out by individuals to use the material themselves, or by an organisation to make available to other individuals (including students). This licence is suited to software or multiple purchases.

AESN was chosen for this case study because it is a major and steadily growing hub of institutional sharing of educational materials in Australia. It represents a large proportion of the market currently available for licensing of educational resources in Australia. AESN is the only online licensing provider across the Australian educational sector. There is still a small level of paper-based licensing in some institutions (typically for off-shore agreements), and many informal agreements and licences which are difficult to quantify, that AESN does not represent. In terms of formal agreements, however, AESN represents a clear majority of transactions.

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1 <http://www.aesharenet.com.au/whoAreWe/>

2 Ibid.

The AShareNet is accordingly extremely well placed to report on the sharing of educational resources in Australia. While AESN is neither a producer nor a user of educational resources or free software, it plays a direct role in facilitating the transfer of educational resources between educational institutions. Through this role, AESN is able to provide an accurate account of the way in which educational resources are developed and disseminated in Australia, and a unique insight into the obstacles which inhibit the use and production of open educational resources. It has also had a strong 'educational awareness' role to play in highlighting the benefit of an open content approach to sharing resources.

This report will address questions related to the production and use of open educational resources with reference to the Australian educational sector in a general manner, from the perspective of AShareNet in its role as mediator between users and developers of educational materials.

AShareNet was started pursuant to an ongoing discussion between the Australian Government Solicitors (AGS) and the Department of Education, Training and Youth Affairs (DETYA), which is now the Department of Education, Science and Training (DEST). DETYA was managing head copyright licences between the Australian Commonwealth and the States, and AGS felt that the copyright process could be streamlined and moved online to avoid duplication and increase efficiency. This streamlining process became a national project, and led to the formation of the company, AShareNet Limited, which is currently funded by subscriptions from the Commonwealth, States and Territories with additional support from National Project funds.

## **.Production of open education resources**

AShareNet plays a brokerage role between producers and users of educational content. AESN represents over 300 educational institutions in Australia, ranging from Vocational Education and Training (VET) institutions, large enterprises with in-house training, community based education providers, and the Australian universities – particularly those with VET offerings.

Within these groups, there are specialised content developers, whose core business is to develop educational product for students. Particularly, this includes a small number (between 4 and 6) Vocational Education institutions. Because these institutions specialise in the flexible delivery of educational material, they must develop their own product tailored to their student bases. These organisations then make their content available for licensing through AShareNet to other providers, or enter into agreements with off-shore institutions. The content produced by this small core of providers forms the basis of the greatest majority of educational resources available for sharing in Australia.

There is a smaller proportion of material made available by other copyright owners who encourage the licensing of their educational content, and a broad range of material from across other educators, but the majority of material is sourced from the small number of dedicated VET providers. The largest majority of educational institutions using the AESN system are users of copyright material, not producers.

Within the small portion of core content providers, the business services sector represents one of the highest content areas. It is estimated that approximately 80% of delivery occurs in the business, accounting, finances, administration, legal, and related courses, which, combined, only make up a small percentage of courses offered. The VET sector includes a wide range of niche market courses, for which either it is not practical to re-use existing material, or in which providers do not want to give up competitive advantage by making their material available for other providers to use.

A very high percentage of the educational material produced by Australian institutions is never released for other

educators to use, either freely or for a fee. This may occur for any number of reasons, but the three most commonly given are that:

1. inputs have rarely been checked and cleared for copyright infringement or other potential legal problems;
2. the materials form part of the competitive advantage of the educational institution, and releasing them would lessen that advantage; and
3. the materials are not of a high production quality, and not suitable for distribution past the individual or organisation for whom they were created.

### ***.Instant licences***

Of the material that is made available through AEShareNet, only about 15% is currently available under an instant licence, and can justifiably be called 'open'. The instant licences provide immediate permission for people to take the material and distribute it, but impose various restrictions on modifications and enhancements. The instant licences are based on the open content philosophy, but are not directly compatible with other open content or open source licences. The main uses of instant licences are for professional development materials, public information, implementation and course guides, and Commonwealth Government materials where the Commonwealth seeks widespread distribution. The core group of large content producers only release about 10% of their content under instant licences.

Of the instant licences, the Free for Education (FfE) licence is currently the most popular. This licence stipulates that the material is made available for educational use only, and prohibits modifications. Many producers of information are concerned about the integrity of their resources, and, while they are happy to allow unremunerated use by teachers, they do not wish to take the risk of having their works misrepresented or removed from their context by allowing modifications to be made. This is particularly the case with government and commercial producers, who produce resources as part of their unrelated business and use instant licences to provide an incidental resource to educators.

Many support materials for educational courses are made available under Share and Return (S) licences. While the courses themselves may be made available for licensing, the more attractive option is often to license the content guides and other associated material which are often released with the intention that they be built upon and modified. These materials are able to be released in this way because they do not form part of the accredited component of the course, and are not tied up under state legislation.

Tracking of the exact number of resources made available under instant licences is extremely difficult, primarily because the resources remain on the owner's website, and although there is a facility to catalogue these onto the AESN website, many are not registered through AESN. AESN has recently developed a search engine (using yahoo.com) to search for and locate product with an instant licence trademark. The lack of consistent metadata around the AESN trademark and copyright notice means that even with customised searches, it is very difficult to locate licensed material. A rough initial search locates approximately 17,000 objects licensed under the FfE licence, and several thousand each of the S, U, and P licences. Work is continuing with the UNSW Unlocking IP Project to refine the search to produce wider results.

## ***.Mediated licences***

The majority of educational materials made available for sharing through AEShareNet are released under a mediated licence. The licences, which are either Commercial (C) or End-User (E) licences, are transacted through an e-commerce system provided by AESN. In general, through its use of standard terms, the mediated system is quite quick for users and copyright owners to use, and royalties, where applicable, are issued as an invoice from AESN to the user for redistribution in a regular cycle. Because they can impose flexible restrictions, and can attract a licensing and/or product distribution fee, however, the mediated licences can not be considered to be 'open' (although they are based on open content principles).

Approximately 85% of producers of content in the AEShareNet system prefer the mediated licence concept. In general, the Australian Commonwealth leans towards using open instant licences, whilst the Australian States and private organisations lean towards mediated licences. The reasons for this preference for mediated licences can be roughly broken down into three main components: money, control, and identification.

Where an organisation can derive a profit from making its copyright material available for educational institutions to use, it often will attempt to do so. The majority of educational resources, however, are not high value resources, and the fees charged often cover little more than the cost of distribution, or quite small royalty streams. Distribution costs average in the AUD \$100-\$200 range, and royalty streams average approximately \$5 per item per student. The concern about return on investment for copyright materials leads copyright owners to prefer solutions where they are able to realise at least a small profit, rather than making their material, which they paid to develop as part of their business, available to others for free. This is often exacerbated by individual State and Territory procurement and commercialisation policies.

Because royalty payments are often quite small, the use of mediated licences is also strongly driven by a desire for either control of use, or identification of users. Copyright owners often use the mediated licences to ensure that the user will not engage in direct competition, by restricting the territory of licence grant, be it outside a locality, the state, or the country. Copyright owners are also motivated by the greater sense of security that the mediated licences provide; because they are individual contracts between the copyright owner and the user, there are no doubts as to their enforceability, and it is seen to be easier to ensure that the contract conditions are complied with. Finally, producers of educational content are often curious to understand who is using their content, and the one-to-one relationship provided by mediated licensing allows a much greater ability to track licences than those afforded through instant licensing. One particular concern that is expressed in regards to identification is the (sometimes justified) fear of off-shore clients repackaging an institution's product and selling it back to that institution.

## ***.Production of educational resources***

Production of educational resources in Australia generally falls into two categories. The first is on an individual level, where every teacher is a producer, and an educational publisher. Teachers increasingly have access to presentation software, multimedia systems, and Learning Management Systems. Teachers can and do produce reasonable quality resources for classroom delivery. This content, however, is often of too low production quality to be widely reused in other institutions. For large scale use, production usually occurs at an institutional level.

There is extremely limited institutional funding for content development. The Commonwealth Government no longer provides funding of this kind at any level. Only the largest educational institutions have the capacity to develop high quality product suitable for the wider marketplace. This explains why the majority of content available through the AEShareNet system is sourced from a small number of large VET institutions. The

remainder of high quality production is usually outsourced to specialist creators, who are reluctant to distribute their material in an open manner with the threat of directly undercutting their business model.

Material which is shared by educational organisations in Australia is accordingly either highly institutionalised, or done at a very informal and practically invisible level by individual educators. Most of the co-operation between educators in Australia seems to consist of informal networks of individual educators in particular industry areas (for example, agriculture or business), or specialist areas. Apart from informal sharing between members of fairly closed networks, teachers are generally reluctant to share the material they develop. Even though their material often builds on existing works, teachers tend to see content produced as their own work, and while they may be comfortable sharing to individual teachers in closed networks, are not likely to make their material available to a wider audience in an open manner.

Despite the fact that teacher-created content is often of a very high content standard, it is often not of publishable production quality. Further concerns arise in that this type of content has usually not been cleared for potential copyright infringement or other legal concerns. Even where grass-roots level sharing is encouraged by individual educators, much of it is curtailed by the reluctance of educational institutions to allow what they see as a risky exercise.

Due to the limited funding available, most educational institutions are now looking to minimise their expenditure for content creation. Because institutions can save approximately 60-80% on development costs by re-using content created by others, the AESN system is popular amongst a broad range of institutions. However, there has been little institutionalised discussion about the benefits of open educational resources; institutions are comfortable with small fee negotiated licences, and see no tangible benefits to the use or production of open content.

The process for understanding the value of information goods is just starting across Australian educational institutions and the Australian public sector; organisations and government are beginning to think of the reasons for keeping content closed, or the potential benefits of sharing. Part of the AESN charter is to educate organisations about copyright, and the value of copyright. In the next few years, it is expected that more organisations will decide to make their educational product available in an open manner. Before this can happen, however, simpler technologies and user-friendly environments must be developed, as well as commercialisation policies that do not counteract collaboration.

### ***.Quality assurance and metadata***

AEShareNet does not undertake any level of quality assurance with relation to content provided by other organisations and entered into the system. AESN does require a warranty of clear title from content owners, in order to ensure that users of the content will not be infringing third-party rights. It is left to the individual organisations to determine the quality of material submitted and used.

One of the biggest problems faced by users of the AESN system is that of locating material which has been released under an instant licence. Because AESN is often one of the first port of calls for educators seeking reusable content, the fact that it can only reliably index mediated licences places open material at an immediate disadvantage. This is being addressed through better search engines, but also through the encouragement of metadata standards. The VET sector in Australia has developed its own metadata standard based off an international standard, adapted to the Australian VET environment. This standard, called 'vetadata', is promising, but has only been completed and publicised recently and is currently just a set of guidelines for good practice.

Users of educational content in Australia are also often frustrated by the lack of compatibility between different technological systems and content. Particularly with regards to multimedia content, many organisations are finding that resources which would be useful are unusable due to fundamental incompatibilities in data formats. Finally, because there is no real Learning Management System (LMS) standard, many resources produced by one educational institution will not be able to be exported or imported easily into other systems. This means that much content in Australia is locked up not only because of a reluctance to share, but also because it is very difficult and costly to get material out of existing systems.

## **.Use of open education resources**

While there is a central repository or index for material released under the AESN instant licences, this is not widely used, as licensors simply attach the appropriate AESN trademark to any work they wish to release in an open manner. Most of the material licensed under an AESN instant licence is located on the webserver of the licensor or in hardcopy form, and owners find it costly to catalogue materials when there is no tangible benefit to themselves. While it is technically feasible to more accurately track the usage of AESN instant licensed open education resources (at least on the web), more funding is required to further develop appropriate search engines.

It is often very difficult for educators to find material released under one of the instant licences. Most users tend to have a rough idea of the main producers of content of the type they are looking for, and usually search on that basis. Educators usually search for the content first, not the licence – although there is an increasing trend for users to search for 'free' (zero cost) resources. Accordingly, most users of the AESN instant licences tend to be individual users who have stumbled across a resource with an AESN trademark. Recently, AESN has introduced a search engine, using Yahoo! technology, to allow users to search for both instant and mediated licences from their website. It is yet to be seen how this changes the searching habits of educators, but it is assumed that more people will use open resources as they become easier to find.

In the VET sector, finding and sharing of resources occurs primarily through word of mouth. Because the amount of open access material is still quite small, and also because educators aren't yet familiar the complexities of copyright and the benefits of using open access material, it is not surprising that most users discover material through their social and professional networks. For this reason, the industry areas that have a stronger tradition of bartering and sharing are generally more comfortable with the instant licences, and are better represented in their use. This applies particularly to the business services sector, again, and trades based training, each of whom have typically strong networking backgrounds.

Individual educators tend to prefer instant licences for their simplicity and the lack of a licence fee. Because there are no other steps that are needed beyond accessing the work in order to obtain permission, the instant licences are very convenient. Content is available instantly, and is available with the minimum of legal jargon or legal risks. It must be noted, however, that a significant proportion of educators may not fully understand the conditions imposed on their use by the instant licences.

Conversely, Institutions tend to prefer the extra security through the use of mediated licences, and are more comfortable in a scenario where educational product is obtained through traditional agreements. Because the AESN mediated agreements are standardised and require little interaction on the part of the licensor, and the licence fees are generally quite low, the system works quite smoothly. Accordingly, administrators in educational institutions often prefer the perceived security not only of obtaining permission, but of being reasonably assured that the licensor has clear title to give that permission. Although the instant licences include a warranty that the licensor has clear title, there is visibly less trust when dealing with a licence given by a potentially unknown person than with one who is an AESN member.

Practically, this means that some educators who would use open access material are discouraged from doing so by their institutions. This problem is further compounded by the fact that a high proportion of the teaching workforce is now casualised, with a high attrition rate. This makes it very difficult to have a consistent approach to sharing, and devalues the social networks which encourage sharing and reuse.

On an institutional level, there is a reluctance to share and use open access resources. Because most high quality productions are made available under commercial agreements only, there is a clear perception that open access materials are not of a usable quality. Institutions are also concerned about losing their competitive advantage, and tend not to engage in non-commercial sharing for this reason. Collaboration rarely occurs on an institutional level, but instead usually occurs in smaller industry areas, amongst a small number of similar institutions who offer similar courses. Materials which are shared in this way are rarely made available to the broader community.

## **.Conclusions**

AEShareNet is the first player into the educational marketplace in Australia offering a suite of options for managing an educational organisation's intellectual property. It provides a diversified licensing option by offering 4 Instant Licences based on open content principles, and 2 Mediated Licence options which allow owners to maintain more control and flexibility in meeting user requests. While there has been some movement towards providing educational materials under open access licences, most educational organisations in Australia continue to prefer closed licensing options, in the expectation that a closed model is the only way to derive revenue from licensing educational content.

There are significant technical obstacles to open education resources, particularly the difficulty of identifying and cataloguing resources and the development of easy to use interfaces and compatible exchange formats. While these technical barriers can be overcome, the real challenges lay in establishing unified nationally agreed policies on pricing and commercialisation principles. As most of the resources within the education sector are taxpayer funded, there remains a strong 'public interest' role for these to be made available as open content, rather than restrained under commercialisation policies. Unfortunately, the funding and commercialisation policies of educational institutions do not currently reflect this principle.

## **.Appendix – Details of interview**

The interview that forms the basis of this report was conducted in August 2006 with Carol Fripp, General Manager of AShareNet Limited.