

COPYRIGHT MANAGEMENT IN THE WORLD OF LEARNING OBJECTS

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AEShareNet Ltd, a Company owned by the Ministers for Education & Training in Australia, was established in August 2000 and the website for online transaction of copyright licences went live on 27 February 2002. This highly innovative venture provides a standardised and yet flexible solution for managing copyright utilising an e-commerce business model.

This Case Study outlines the journey of moving copyright management online within the Australian vocational education and training (VET) sector, and highlights the emerging challenges which will influence AEShareNet's direction. The paper will also draw on themes from a recent overseas benchmarking study in Canada, United States, Europe and the United Kingdom. The current debate around Learning Objects, in particular, will propel the Company's infrastructure and capacity in new directions.

1 Introduction

The New Journey – Gestation Phase

The concept for the AEShareNet Model emerged from years of experience of managing copyright licences through the Australian Government Solicitor and various Commonwealth and State Government Departments. It was obvious that these licences could be standardised and offer considerable advantages to the vocational education sector. A National Project was approved in November 1998 based on recommendations of a Consultation Paper by Kaye Schofield & Associates for the AEShareNet concept¹.

An Establishment Advisory Group representing the Commonwealth and all States and Territory Governments spent two years formulating the AEShareNet Model; the underpinning legal framework; establishing a Company structure and gaining Ministerial approval for a Board of Directors.

Reflecting on the world as it was in 1998, online learning was not widespread and the Australian VET sector generally lived in a paper-based world. Students still attended traditional TAFE classes in colleges throughout the nation and email was not utilised as it is today. Work-place delivery was only just emerging as a major delivery option. Teachers printed out class notes and workbooks and many of these were in Word Perfect formats. There was no such term as 'learning objects', and 'repositories' were more than likely excel spreadsheets or purpose built databases. E-shopfronts had not yet taken off in the sector although they were gaining ground in some retail areas. While the AEShareNet Model was designed to cater for the online world, it also had to live in its current environment while being able to transition from paper to digital.

Copyright licensing was also not widespread at this time, except for the Commonwealth

Department of Employment & Youth Affairs, and State Departments who used licensing for offshore activities or niche commercial markets. Most of the public VET sector relied on the Copyright Agency Ltd “educational use” provision as a means of using “bits” of someone else’s endeavours.

2 Shifting Sands

The VET sector in Australia has been undergoing unprecedented change over the past decade; particularly as the National Training Reform Agenda introduced a move into a competitive tender process which encouraged entry of private training organisations into what used to be almost the exclusive domain of the public TAFE providers. This was an attempt to achieve efficiencies in the marketplace with industry driving the educational agenda.

This change was followed by a move away from curriculum models into a new national Framework – National Training Packages. These ‘framework’ documents depended on a training organisation’s capacity to develop training resources to ‘support’ their delivery. AEShareNet was, therefore, being created at a time where the need for sharing and collaboration had never been more important. Organisations quickly realised they would not have the capacity to develop the diverse range of student resources required without utilising the efforts of others in the same field. Licensing of materials would give new options and offer a range of additional benefits for conducting business within Australia, as a national framework makes it possible to ‘trade’ learning resources across state boundaries. Shortly, AEShareNet will have the capability to allow offshore clients to access Australian resources through the new ‘Associate’ registration and e-gate facility, thereby opening up a channel for global activity.

3 The Birth of a Ministerial Company

The Company, AEShareNet Limited, was born into a rapidly changing environment where Standards and protocols were emerging and the vocational education sector was trying to manage the balance between ‘public interest’ and commercial imperatives. Dot.com companies were proliferating across the globe and online learning was a topic of great debate within the education sectors.

Around this time, the wider business community was recognising that intellectual property could be given a commercial value and various systems were developing to both protect and manage internal assets. The VET Sector, while aware of this issue, was mainly concerned with protecting their assets in offshore environments and had not given much attention to management of resources within Australia.

4 The Objects of the Company

The core business of the company is online copyright licensing to encourage trading, sharing, re-purposing and in particular “to establish processes which are modern, simple, cheap, transparent, durable, rapid and effective and adapted to an online environment”². A further object is to “clarify uncertain ownership” which had become a major issue for the sector. It was not unusual to have to contact four or more copyright owners across Australia, and timeframes for finalising negotiations

ranged from one week to six months.

At the same time, there was a history of successful development of national resources (such as the national generic management skills modules and some ACTRAC projects). There are still some co-operative organisations formed in the relatively resource-rich past operating today. The National Heads of Business Studies (NHOBS) is one example. Thus, the value of a vehicle that could establish a set of protocols for collaboration was already recognised in the sector. Funding for the development of national resources declined over the same time frame, with much of the responsibility for resource development shifting to State and Territory Governments. This further underscored the need for some formal, widely accessible mechanism for management of intellectual property.

As the Company commenced its journey, it became obvious that its core functionality was interdependent on a range of other processes in the product development value chain. As publishing companies have known for years, new learning resources need to be managed and evaluated through a thorough end-to-end product development-type process to ensure their viability. Business decisions around pricing models, marketing avenues, quality assurance and publishing procedures all need to be factored into the process. The VET Sector, however, has been a long-term developer of resources mainly for internal consumption and there had not been any imperative to move into a commercial publishing arena. In the mid 1990s Ministers agreed that government training resources should be made available to the general community for the cost of distribution, which subsequently established a quality benchmark for new training organisations and also maximised efficiencies in the resource development phase.

Given government funding policies, the VET sector was encouraged to share its internal products with the private sector as part of its public interest responsibility, and at the same time looked for opportunities to add-value by offering high quality commercially viable products at marketplace rates. AEShareNet has become a catalyst to explore this tension, and although the primary focus is on the VET sector, AEShareNet functionality and relevance is cross-sectoral.

5. Need for a Cultural Change

The Company found, as did many other similar organisations, that copyright is often an area in which there is a “woeful ignorance” and many practices exposed organisations to the risk of litigation for a range of copyright infringements. In the United States, the National Initiative for a Networked Cultural Heritage (NINCH)³ Town Meetings emerged out of a need to commence a national awareness raising activity as a strategy to educate both educational and cultural communities about basic copyright laws and issues. These Town Meetings commenced in 1997 and the organisation has now broadened into an influential lobby group and advisor to government on intellectual property issues. Similarly, the AEShareNet Establishment Committee also found during the copyright clarification exercise, that the Australian environment mirrored the American experiences. Large numbers of educational resources could not be “copyright cleared” because of third party owned ‘objects’ inside the resources which were not able to be disseminated/traded into the wider community. Practices had to change!

The AShareNet Model provided a way forward, as it offered standardised copyright templates underpinned by an elegant legal framework; while ensuring there was flexibility to cater for individual needs. As part of the development of the technological infrastructure, a range of other developments needed to be considered which are outlined below.

6. AShareNet Technical Capacity

A number of technical design issues arose during the early development phase. These were:

- Standardised legal templates for the common copyright conditions
- Capacity for flexible licence conditions
- Agreement on a national metadata schema for cataloguing of resources
- A means of ensuring a consistent data-capture capacity

a) Standardised Legal Templates

Given the Australian Government Solicitor's extensive experience in developing copyright licences, four licence protocols were identified and these were registered as trademarks. The licence protocols were:

<u>AShareNet-U</u> U is for unrestricted usage	<u>AShareNet-P</u> P is for preserve the integrity of the material.	<u>AShareNet-S</u> S is for standard, core material	<u>AShareNet-C</u> C is for commercial material
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Full details on these licence protocols can be viewed on <http://www.aesharenet.com.au/resources/licenses/051fullcomp.asp>. The strength of the four trademarks is the extent to which they permit creation of Derivative materials, the extent of vetting and the provisions for ownership of copyright in those Derivatives. This particularly applies to Derivatives that fall into the category of Enhancements – an area where there is unexplored potential to maximise saving on costs of new resource development.

b) Flexible Licence Conditions

Invariably, organisations wish to create particular conditions for unique situations, and to cater for this need the AShareNet-C protocol allows the copyright owner to set and negotiate various changes in an online environment. During the data capture stage in the Local System, the copyright owner creates a 'Customisation Profile' for each desired set of conditions and associates one of these profiles with each material. The areas where negotiation can occur are; vetting, enhancements, supplementary, exploitation, purpose, beneficiaries and compilation. Useful background reading is available on Derivative Works and AShareNet.⁴

Members are also able to specify for each Profile whether negotiation with individual licences is required. If negotiation is not required, a licensee is able to obtain a licence on the spot electronically. If the owner specifies that negotiation is required, they can set individual conditions for each licence within the template of the AShareNet licence profile.

c) Metadata Schemas:

The technical committee was acutely aware of the need to try to utilise existing metadata schemas, partly because of a resourcing issue for maintenance and updating, but also the sector had already established a sound range of terminologies that had been negotiated over many years. The research process was interesting, in that AShareNet covered a wider range of products than any of the existing databases in the sector. Forty six 'Material Type' fields were allocated and these were then assigned to either a Broader Term or Narrower Term, allowing maximum capacity for fine granularity. The Broad Terms were:

Assessor Resource; Competency Standard; Curriculum; Learner Resource; Promotional Material; Professional Development; Research and Policy Material; Trainer Resource; Training package; Training Package Guide.

In developing the Material Registration Classification; to give the level of granularity required a number of values were determined as follows:

Format Type	from the Dublin Core Type list: Collection; Dataset; Image; Interactive resource; Software; Sound; Text.
Qualification Levels	across 17 possible levels from Training Program to Advanced Certificate
Subject Classifications	using three existing thesauruses (AVETMISS Discipline Groups, OZJAC Subject Thesaurus, VECED Thesaurus)
NTIS National Codes	for Courses, Training Packages, Qualifications and Units of Competency

While these combinations of cataloguing give considerable flexibility, when 'learning objects' launched into the arena there was some debate about which Material Type and Format were most appropriate, or whether it was timely to develop a new classification or whether the existing classifications offer enough flexibility.

d) Consistent Data Capture

Being a national initiative, the major challenge was to consider how data would be captured from a wide range of users across an even wider range of technologies. The business imperative was to achieve consistent data capture, an issue that has long plagued large national initiatives on an ongoing basis. The solution chosen was to develop a stand-alone 'Local System' which was developed by external contractors.

The Local System is primarily a data capture facility which can be installed on a stand-alone PC or installed onto a network drive. Standardised screens with capacity for drop-down boxes with set choices allow ease of entry. The users enter data on several separate functions:

- Material Registration: Description
 - Material Registration: Classification
 - Material Registration: Ownership and Licensing
 - Material Registration: Related Registrations
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Extensive features were built into the Local System, and documentation was provided to Members to assist them to import data into the Local System from existing tables, databases and spreadsheets without re-keying. Members are able to import data on either a one-off basis, or to maintain synchronisation between an existing database and the AEShareNet Local System.

This data can then be uploaded into the 'Central System' where the main functionality for licensing and transactions occur. Given the fine granularity of information collected on a particular resource, this ensures a specific outcome when using the Search engine and the Advanced Search capacity adds the capacity to target a very specific combination of fields.

Unexpectedly, but not surprisingly in hindsight, the Local System has proved to be a major attraction for AEShareNet Membership. Given the flexibility to add additional Custom Fields to the Local System, organisations have realised the value of creating their own internal Intellectual Property Asset Register. All internal resources can be captured in the Local database but only those 'flagged' as suitable for external licensing are uploaded into the AEShareNet Central System.⁵

7. Implementation Developments

During the initial implementation cycle, a number of contingency issues emerged:

- Client demand for a business model that provided a one-stop-shop capacity including an e-commerce capacity for payment of both licensing and purchase of product
- The need for a centralised point of contact for discovery and management of training resources
- Client confusion about why licensing is separate from purchase of the resource
- Demand to preview or evaluate a resource prior to purchase and/or licensing
- Levels of granularity required and definition of terminology around 'learning objects'
- The impact of evolving information and communication technologies (ICT) within the educational sector

a) One Stop Shop Capacity

The Board had discussions on whether the one-stop shop functionality was a suitable business model for the Company and took the initial decision that effort needed to be concentrated on licensing, the discovery function and the e-commerce facility. If you accept the need to provide a total solution to customers in a B2B e-commerce model, so training organisations can find, evaluate, preview, licence and purchase a product through a one-stop shop, then this changes the way the sector is currently able to operate and needs to be taken up as a sectoral consideration.

This issue was raised by the Company with the Australian National Training Authority, and a wider review is currently being undertaken on how the Australian VET Sector manages its Product Development Value Chain with the aim to develop a portal approach to access the range of functions involved.

The AShareNet Model has quickly become the largest Australian VET sector catalogue for discovery of training resources and is the only online facility for copyright licensing. The business model for payment for services and transactions has two components. Members operate through a 'clearance model' which reduces the number of day to day transactions and this is reconciled on a regular cycle (the current cycle is three monthly). The Associate registration, however, has an e-gate bank facility for online credit card transactions with an additional option of cheque payment where this is not feasible.

b) Centralised Point of contact for discovery and management of training resources.

Since the introduction of Training Packages within Australia, training organisations were keen to locate and access suitable resources to suit their need. A project was established to research this situation and recommend possible solutions. The outcome was an Online Guide to Flexible Learning Resources⁶ and the search tool on this website relies on the agreements between the catalogue owners and EdNA, and agreements between EdNA and AShareNet.

The agreements involve a standards-based approach to the cataloguing of learning resources... EdNA and AShareNet are establishing agreements to streamline the search for learning resources. If a register or catalogue owner has registered learning resources with AShareNet, then the learning resource will be discoverable by searching EdNA.

Interestingly, AShareNet's fine granularity of data classification coupled with an extensive search capacity has provided the sector with a centralised starting place for resource discovery.

d) Client Confusion around licensing versus supply of copies.

The relationship between supply of copies and licensing of copyright material often causes confusion. This may be attributable to the fact that, under some current marketing practices, a limited copyright licence may be granted in connection with the supply of a copy of the material. The two components of the transaction are "muddled" together and described as a "sale".

Under AShareNet it is essential to bear in mind that supply of material to a Licensee, is quite distinct from the grant of a copyright licence in respect of that material. There is a distinction between ownership of a physical copy and ownership of copyright in the material embodied in that copy, which is an abstraction. Put differently: there is a distinction between physical property and intellectual property. Copyright is the exclusive right to control certain acts or uses in relation to particular subject matter - notably the right to copy the material. Obtaining a physical copy of material does not grant a party a right to do copyright acts in respect of that material. If not expressly granted at the time of obtaining a physical copy of the material, a copyright licence must be obtained to allow the desired copyright acts in respect of that material.

AShareNet has been conceived primarily as a vehicle for transacting licences of copyright material, not for effecting supply. Thus the AShareNet Materials Database will not store the full text of the materials available for licensing from its Members.

To assist clients with a seamless service approach, the Company is working with Members to integrate these two functions and the site will always provide contact details for the member who puts this material in the database. If the member has provided a URL specific to this material the Material Registration page will also contain a link to the Members website containing additional information about this specific material. Some Members, in particular TAFE Frontiers, have maximised their marketing by using the Local System and integrating this with the AEShareNet functionality, providing the client with a truly integrated e-shopfront and licensing capacity.

e) Preview Facility for Resources

During this discussion, it has already been outlined that the AEShareNet Model was not designed as an integrated shopfront facility, or a repository for resources. However, internet users have been exposed to a wide range of online experiences where they 'can' preview materials prior to purchase and licensing. This functionality involves considerable effort and expense and has been targeted to be part of the pending ANTA Review.

As a point of comparison, Her Majesty's Stationery Office (HMSO) in London has developed a Click-Use Licence for a range of government material but they have not tried to integrate their licensing with supply and leave it to clients to obtain supply. Similarly, the Canadian Government has just launched a web service at the Frankfurt Book Fair, which was modelled on HMSO. They are now managing a database of over 100,000 free and priced government publications⁷.

f) Learning Objects and the granularity debate

When you commence the debate around managing content in a digital world, invariably you are faced with discussion around defining a learning object; metadata descriptors and how to store the digital object. While the debate has largely been managed by those working with the technologies; teachers are now coming in to influence the debate and to ensure sound pedagogical principles underpin developments. Has the question yet been asked about whether repositories are the issue or is it more about interoperability particularly in a country like Australia with a small population base?

At the same time, learning objects burst into the sector and became a hot topic. Excited by the flexibility of the internet and online opportunities, the concept of breaking a large course into small components emerged. Every teacher knows that it is normal practice to evaluate a piece of work and to "extract" small bits that might be useful for their next classroom activity. Teachers rarely pick up a product and use it in its entirety – they always want to add their own personal touch... and the appeal of learning objects is enticing. "I only want this diagram" or "I like that case study" or "if only I could change the example to..." are common teacher statements.

As demonstrated previously, the AEShareNet Model was designed to cater for any level of granularity – from entire courses to the smallest piece of information; however the Sector has not yet determined how they want to manage knowledge. AEShareNet is under pressure to provide a new range of metadata terms for learning objects and this has led onto a range of unexplored opportunities.

A project that is currently gaining considerable interest is the Collaborative Online Learning and Information Service Project (COLIS); a nationally funded project from the Australian Department of Education Science & Training. The appeal of this initiative is that it considers how the teacher wants to access and use knowledge and has integrated a rights management system to facilitate, track and ensure payment for the exchange of learning objects.⁸ Similarly, Columbia University have been utilising a home-grown Columbia University Analyzer⁹ for some years, with the main driving focus being a pedagogical approach to delivery of the learning, accompanied by a click-and-drag facility for faculty use at the time of developing their resource.

While initiatives like COLIS are continuing, nevertheless organisations are exploring the world of repositories, learning banks, electronic libraries and intranet storage options. Most organisations have captured their intellectual property in digital form and so have increased flexibility on how it is stored and used. Multi-functional devices with capacity for pdf storage and preview facilities are now an option and password access to preview materials on designated servers is growing.

Re-use and Re-Purposing of Content

For over a decade, Australia has been trying to encourage content developers to share and collaborate with the development of learning materials. But can you re-use materials from other sources asks Fritze¹⁰ do we need to say where he is from over and above the reference even though this is technically possible? Issues like sequencing, context, terminology and style all impact on how content can be easily re-packaged and many feel these factors have been underestimated.

g) Impact of Evolving ICT in Education

At the time of launching the AEShareNet initiative, the impact of the evolving digital economy was emerging. The World Intellectual Property Organisation (WIPO) released a survey of issues and suggested that the intellectual property issues are “driving” e-commerce models¹¹.

The WIPO Report quotes that internet traffic is doubling every six months and that data is now measured in petabits (1,000 trillion bits) with over 6700 languages in 228 countries now accessing the internet and the number of non-English speakers now utilising the internet at around one third of users. These figures fuel the debate around protection of intellectual property, particularly given the rise of e-commerce models.

Interest in rights management has never been higher given the large volume on intellectual property migrating onto the internet. This debate is accelerating as more and more ordinary devices expand their capacity for e-commerce transactions.

The rights management debate is now divided into two camps: those keen to lock up access to educational resources through various encryption mechanisms, compared to those who support wider access to information using Open Source models. A large number of vendors market software applications for digital rights management where the copyright owner can monitor usage of their material through keys, passwords, clearinghouses and business models. Likewise, the Open Source Movement favours free exchange of learning platforms accompanied by their source

codes. The Open knowledge Initiative, coming out of MIT and Stanford University is one of several key players in this movement.¹² AEShareNet is keen to pursue Open Source initiatives in the spirit of ensuring access to knowledge through fair dealing provisions continues, and networks are maximised to share and collaborate in the digital economy.

A number of other issues have emerged as implementation of AEShareNet has proceeded:

- Learning Objects need to be stored somewhere. Repositories or learning banks are still under consideration. There is no solid research that yet informs the process, and the question still needs to be asked: “Do repositories add value?”
- In Australia, where there are 8 States and Territories, and differences in policy for Commonwealth versus State/Territory approaches, is there justification for a single repository or is a portal approach with seamless links to State databases more appropriate?
- There is an active debate around the practice of meta-tagging. Globally this is recognised as a significant issue and the alternatives are still emerging.
- Are re-use and re-purposing of information really possible or is it more about taking a total product and utilising within a new context!

Whatever the answers to these questions, AEShareNet has a role in their resolution.

Summary

The evolving digital economy has propelled copyright management into the limelight, with intellectual property issues now driving development of e-commerce models. Given the large volume of intellectual property migrating onto the internet, the demand for rights management models is high.

AEShareNet is a concept well before its time, even at its embryonic stage. While still in implementation phase, the model has proved its capacity to meet user needs.

In this increasingly online world, there is an emerging need for a range of business models that cater for e-commerce functions and AEShareNet is well positioned to add value as the sector moves towards considering integrated systemic solutions. Debate has mainly concentrated on technological considerations and the need to update legislations, whereas there is now recognition that new business models may hold the key to moving forward.¹³

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