



THE  
**le@rning**  
FEDERATION

schools online curriculum content initiative

# UNLOCKING IP

## Maximising the volume of accessible digital content

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**VERSION:** 1.0

**DATE:** TUESDAY, 30 MAY 2006

**DOCUMENT:** MAXIMISEVOLUMEDIGITALCONTENT\_V1

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## 1 Executive summary

As The Le@rning Federation ([www.thelearningfederation.edu.au](http://www.thelearningfederation.edu.au)) continues to develop and procure digital content for schools in Australia and New Zealand, issues associated with the management of intellectual property (IP) continue to challenge the type of content that can be made readily available to schools.

Although managing IP rights has proved complex, the reasons for maximising the amount of digitised content available to schools in Australia and New Zealand are quite simple.

Teachers and students require flexible access to a range of digital content unhindered by the risk of infringing copyright. With a pool of digital content readily accessible, teachers' and students' time can be devoted to teaching and learning rather than discovering appropriate content.

With more content available under favourable terms, appropriately teachers have more choice to incorporate digital materials into the classroom. With effective IP rights management in place, copyright owners are proving willing to make previously inaccessible IP available to schools.

In matters of IP, The Le@rning Federation (TLF) has adopted a rights communication approach rather than one of enforcement. Importantly, the risk of infringing copyright is minimised for schools because TLF ensures a minimum set of rights are secured for content at the outset. A standard agreed vocabulary for describing what is and isn't permissible is applied and carefully communicated via a number of mechanisms. TLF calls this approach its 'licensing regime'.

Critical facets of TLF's IP strategy have now been successfully implemented, with a large volume of digital content currently available to school systems with copyright issues accounted for. Licences are in place with peak education bodies; internal processes, policies and information systems to support the approach have been implemented, and licence terms are being communicated to end users. Although now technically possible, providing rights in a format that can be read by a machine remains restricted by patents covering use of Digital Rights Expression Languages (DREs). This currently hinders the automation of rights enabled content by downstream technology systems.

Challenges for unlocking IP will continue in the future and, as TLF moves into its third phase (2006-2008), sustainability is a strong impetus in order to ensure schools continue to have access to a large pool of digital resources in years to come. Operating with this focus, mechanisms are being implemented for education systems to share and trade derivatives of TLF content domestically and internationally. It is in these ways that the national pool of digital content will continue to grow and that educational currency will be maintained. Notably, there are IP management issues associated with the development of derivative works. With new layers of copyright ownership arising with the creation of derivatives, layered rights will need to be tracked effectively.

Another challenge will be sharing content across education sectors (such as across the Australian Vocational Education and Training and Higher Education sectors), where it is educationally and technically appropriate to do so. Sharing content across sectors will lead to the intersection of different licensing regimes and this highlights the need for greater integration.

There is no doubt that IP rights and the growth of the licensing regime will continue to be a challenge in the third phase of the Initiative. TLF will continue to implement licensing approaches which leverage the highest value return for shareholders and, where possible, seek to simplify current arrangements to provide shareholders with access to content with the minimum possible usage restrictions.

## 2 Background

### 2.1 What is The Le@rning Federation?

The Le@rning Federation is a project that employs emerging technologies to encourage student learning and support teachers in Australian and New Zealand schools. TLF is an initiative of the state, territory and federal governments of Australia and New Zealand and is managed by a joint venture of Curriculum Corporation ([www.curriculum.edu.au](http://www.curriculum.edu.au)) and **education.au limited** ([www.educationau.edu.au](http://www.educationau.edu.au)).

TLF develops and brokers high-quality online curriculum content for years P-10 in two formats: interactive multimedia learning objects and digital resources. These materials are designed to engage students and are made freely available to all schools in Australia and New Zealand.

TLF has adopted a learning object model for its online interactive content. Learning objects are chunks of digital material - for example graphics, text, audio, animation, interactive tools - specifically designed to engage and motivate student learning. TLF learning objects are based on the most recent research into how children learn and how teachers can facilitate learning. They provide opportunities for multimodal learning not normally possible in the standard classroom because of complexity, safety, time or cost.

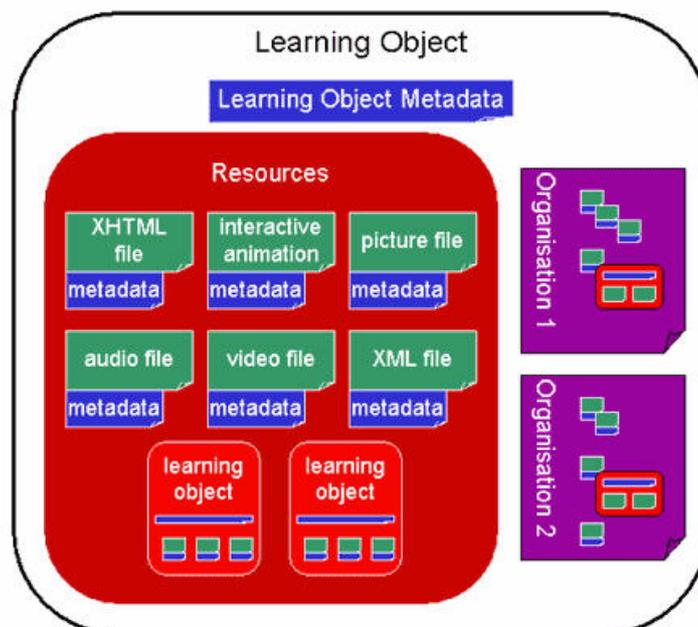


FIGURE 1 - LEARNING OBJECT MODEL

In addition to interactive learning objects, TLF also makes available digital resources. A digital resource consists of a single item, such as, a section of moving image footage; an image of a document, line drawing, painting, or map; a photograph; an audio file of a song or broadcast; or a set of items. Each item can be presented in template form for teacher selection, which includes a description, an interpretation of its educational value and acknowledgement of its source.

TLF also plays an important specification-setting function for schools online curriculum content in Australia and New Zealand. It is committed to support existing international and national standards and to develop agreed specifications where necessary to meet particular needs of the Australian and New Zealand education community.

### 2.2 Creating and brokering varying 'types' of IP

TLF educational materials are licensed in from the 'outside world' and/or created for the Initiative.

In overview, different types of TLF educational materials include the following IP:

- Learning objects developed 'from scratch' where copyright vests entirely in TLF;
- Learning objects where there is a combination of TLF copyright (TLF content) and third party copyright works (non-TLF content) which have been licensed;
- Learning objects where the copyright vests entirely in a third party. This content is licensed in and made available through TLF's distribution chain;
- Digitised content, where copyright is held by a third party (i.e. a cultural institution) is licensed in<sup>1</sup> and made available as a digital resource; and
- Non-digitised content, where copyright is held by a third party, and is licensed in, is digitised and made available as a digital resource. This content has not been previously publicly available.

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<sup>1</sup> A licence agreement executed between TLF and a third party copyright owner to copy, use, develop, supply and sub-license their work.

### 3 Managing IP for maximum access

The aim of most organisations which own or license copyright is to respect the rights of third parties and to minimise the risks associated with copyright infringement. TLF's approach focuses on managing IP rights through a combination of business rules, business processes, technology systems, and legal documentation. It relies on sharing responsibility throughout the distribution chain for managing rights, managing access to content, and communication of rights<sup>2</sup>.

The strategy, which is based on comprehensive legal advice, concentrates on declaring rather than enforcing rights, as this has technology implications that cannot be feasibly implemented within the school education environment.

Key elements of the strategy (shown in **Figure 2**) include:

- negotiation and agreement of up-front licences for all content with peak organisations within the education jurisdictions;
- business rules that specify all third party works licensed in by TLF must enable broad educational use, so they are capable of being licensed out<sup>3</sup> under the terms of the up-front licences in-so-far as possible;
- clearly defined processes and the use of in-house technology systems to manage the IP rights, licences and distribution of rights-enabled content to ensure TLF complies with licence terms and accurate information is delivered to jurisdictions and end-users;
- multiple methods for licensees and end users to access clearly articulated terms of use for content including:
  - 'conditions of use' made available with distributed content;
  - online access to rights information for Licensee's that do not have information systems in place to manage IP rights;
  - the provision of rights information that is machine readable, both within a content package, and independent of the content;
  - the provision of a version of CRISP software to school education jurisdictions to support and demonstrate the management of content licensed in from a third party
- clear identification of copyright and moral rights information both for TLF works and third party works. These are handled via:
  - acknowledgements located in proximity to the third party work within the content; and
  - metadata that identifies the licensors of third party works, should jurisdictions wish to seek usage rights in excess of broad educational use; and
- agreements with education systems and sectors to provide controlled access to content, appropriately manage copyright works and include IP rights education in professional development programs for content administrators and teachers.

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<sup>2</sup> *Approach to Managing Intellectual Property Rights*, available from <http://www.thelearningfederation.edu.au/> under TLF documents > Feasibility and planning

<sup>3</sup> A licence agreement executed between TLF and a licensee, usually a peak education body, to copy, use, develop, supply and/or sublicense content distributed by TLF

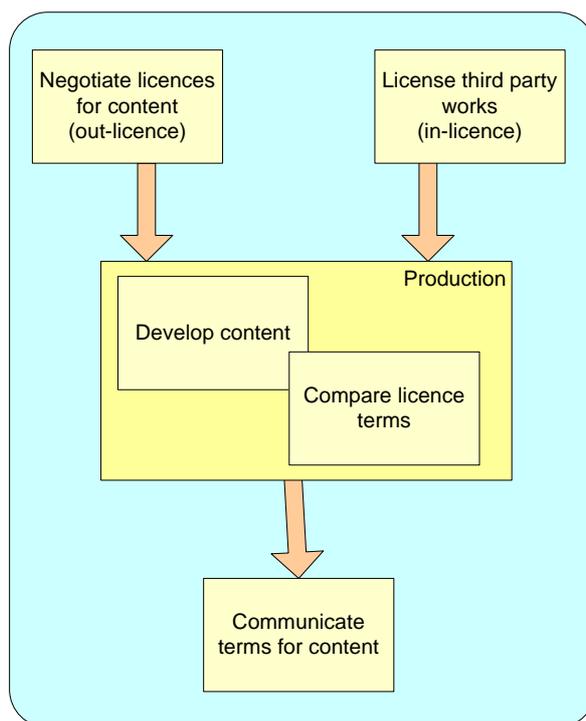


FIGURE 2 - TLF LICENSING REGIME

In most rights management systems existing today it is possible for a user to purposefully and illegally go outside the normal and permitted use of content. This is difficult to prevent as there is often a way to maliciously circumvent protective technology and to find a way to infringe copyright. TLF's approach endeavours to ensure that:

- anticipated normal use of content by teachers is permitted under the terms of the licence;
- where content is used within the terms of the licence, no legal risk exists for TLF or education systems and sectors; and
- unwitting copyright infringement is minimised due to provision of accessible and clear information to end users.

### 3.1 Negotiating agreements with education systems

TLF is required to license content to any group (Licensee) that is a separate legal entity. There are a series of licences in TLF's licensing regime, with the primary licences being those for the education systems and sectors for non-commercial educational use. Licences are enacted with peak organisations, such as state education systems, state independent school associations, diocese, teacher professional associations or universities, as a manual and 'paper' process.

This licensing, in most cases, has occurred prior to producing the content. This means that, at the time of licensing, it is not possible to know the exact terms that will actually be secured for the third party content that is incorporated into a learning object or resource. Consequently, the licences for third party content make provision for varying the terms of the licence at the point of publishing and distributing the content. These terms that broaden or narrow the licence terms are known as 'special conditions'<sup>4</sup>. Typically, the expiry date and development rights are the terms that are varied.

<sup>4</sup> The application of special conditions was agreed with school education jurisdictions during the development of the licensing regime to enable jurisdictions to license broad distribution rights for content up-front, but still allow TLF some flexibility to license third party content on different terms, subject to the third party content meeting certain criteria. This is in recognition that some third parties are unwilling to grant the ideal terms sought by TLF.

A vocabulary for describing the rights for a licence was developed and is used consistently across all TLF licences, both for licensing content in from a third party and for licensing content out to licensees. Use of a standard vocabulary has enabled a consistent approach to licensing and brokering content ensuring that a common understanding of terms is understood throughout the content distribution chain. This vocabulary has provided the basis for the development of information systems to support the approach.

### **3.2 Business process and information systems**

Currently around 3500 items of content have been licensed, from over 300 different parties under 500 licences, for use in learning objects and digital resources. From 30 June 2006 it is envisaged that around 4,500 learning objects and digital resources will be in distribution by TLF and that this volume will continue to increase throughout the third phase of the Initiative.

TLF has successfully implemented business processes which are supported by two internally developed information systems: CRISP (Content and Rights Information System Project); and the Exchange (TLF's content repository and quality management system). The responsibilities for managing different business components have been divided between the systems.

CRISP provides functionality to record all parties associated with a piece of intellectual property (IP) that has been licensed in from a third party supplier, including licensees, licensors, and contributors. The licence conditions captured for an item of content will include what sublicensing rights TLF can pass on to licensees (education systems). Every piece of content licensed in by TLF is able to be associated with a number of licences, each of which may have different licence conditions. Similarly, how each piece of content is used in a learning object or digital resource can be captured.

Information entered into CRISP is then passed to the Exchange in the form of IP records (non-TLF IP). This information is included with IP records (TLF-IP) for content developed by TLF, where appropriate. For a learning object or digital resource, the rights associated with any third party content used within the item are then compared to the appropriate licence conditions previously agreed to with the licensee. This enables any special conditions related to the specific learning object or digital resource to be determined and communicated to the licensee.

Consolidated rights information is then passed to jurisdictions in three ways: (1) through an online service accessible by jurisdictions from the Exchange; (2) with the item of content downloaded by a licensee via the 'conditions of use' document; and (3) external to the content in a machine readable format for use within a downstream IP management system.

The IP distribution chain is shown in **Figure 3**.

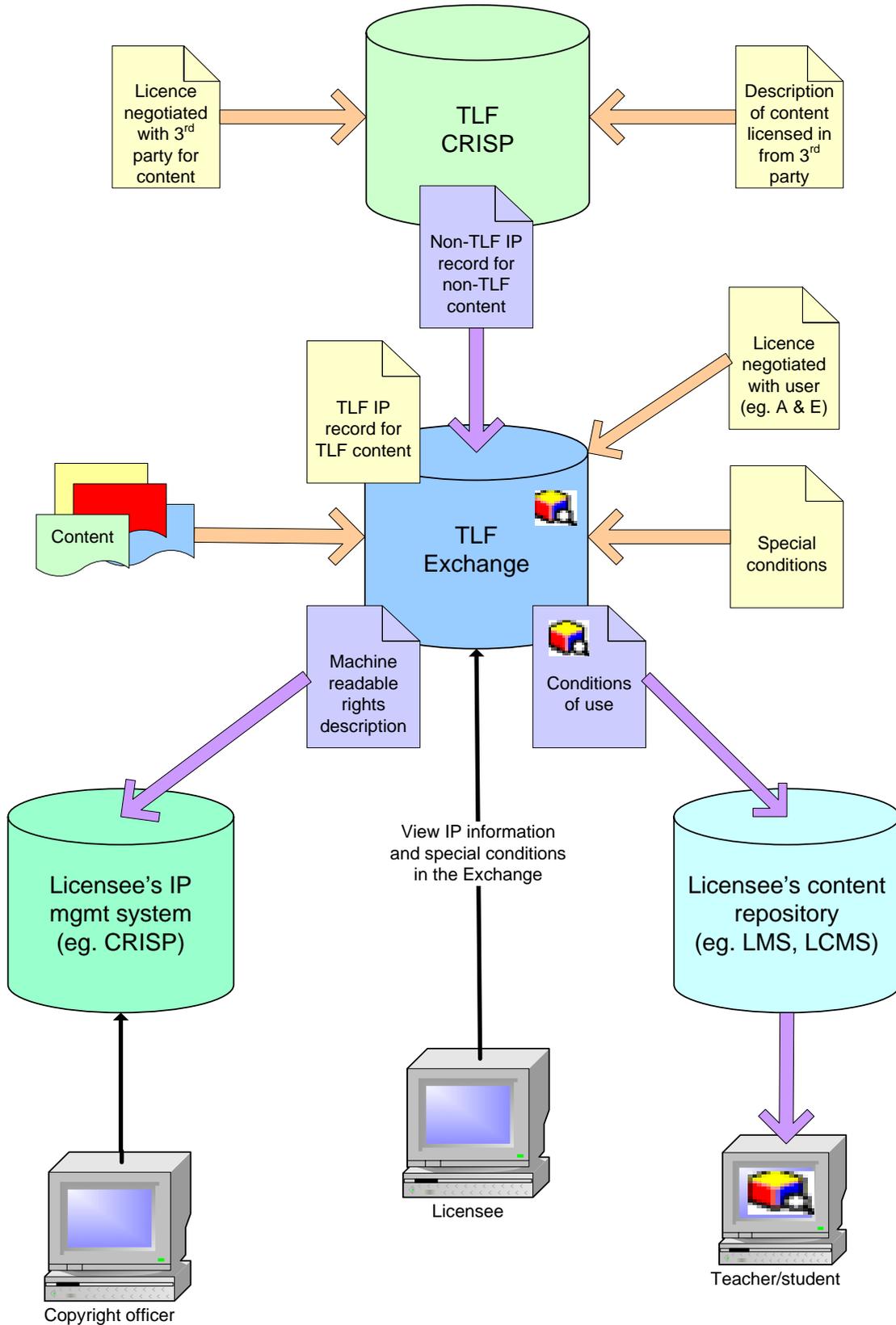


FIGURE 3 - IP DISTRIBUTION CHAIN

As information relating to third party content is required to verify that licensing out of learning objects or resource is permitted, these systems communicate with each other via a web service. This strategy was introduced to the Unlocking IP conference in 2004<sup>5</sup>.

### 3.3 Supporting user self management of IP rights

The approach taken by TLF places school education systems in Australia and New Zealand in a position to utilise licensed content for their own purposes. To this end they need to be in a position to manage the rights associated with the content licensed to them. TLF is providing assistance to educational institutions to self manage their rights for customising content and then sharing or trading the materials with others.

CRISP has recently been upgraded and made available to education jurisdictions (shown in **Figure 3** as the *Licensee's IP management system*). This upgrade has enabled the multi-layered IP licensed to them by TLF to be imported into the system. CRISP will import the rights document created by the Exchange to enable jurisdictions to manage their own licensed content, demonstrating how the rights document could potentially be imported into an existing IP management system.

To assist jurisdictions with track rights, and therefore help position them for sharing and trading content with others, CRISP enables information about two types of on-developed content to be managed:

- Derivatives of TLF-licensed content can be tracked, with any derivatives created by the jurisdiction linked to the original licensed item. Rights information for the original content is captured and there is also the capacity for any new rights associated with the derivative work to be recorded; and
- Products utilising licensed content can also be tracked. For example, a jurisdiction may wish to capture information about lesson plans or courses that use licensed in content. Each item of licensed content can carry information about the product in which it is used, enabling easy access to the rights for this content.

TLF utilises the Exchange for tracking rights information about content it has developed and also for managing complex licensing out activities related to the provision of content. The upgraded version of CRISP provided to jurisdictions is a system for entering rights; specifically recording these for on-developed TLF content. It was not developed to handle the actual sharing or trading of content. Another important task identified for the future is determining what, if any, TLF support is required for these activities.

### 3.4 Communicating terms of use

Licence terms are described in three documents targeted at different audiences. This document model is similar to those used by other well-known licensing regimes such as AShareNet and Creative Commons. The documents are:

- **Legal document** – this is the full legal licence. It describes terms for acquiring and using the content in detail, including full details of warranties and indemnities. It is the primary document of agreement. It takes the form of a paper document that is signed by a peak body.
- **Plain English document** – this is the 'conditions of use'. It is primarily targeted at end-users (such as teachers) and delivered with the content as an html document, so that it operates cross-platform, only requiring a browser to be viewed. It provides a paraphrasing of the main rights contained within the legal document, or combination of legal documents, applying to the item of content and describes that use of content is not subject to Copyright Agency Limited payments. It is intended for broader human consumption than the legal document.

<sup>5</sup> *Licensing multiple layers of Intellectual Property to the school sector*: Nigel Ward and Nicky Pitkanen, The Learning Federation, <http://www.cyberlawcentre.org/unlocking-ip2004/programme.html>

- **Rights document** – this is a document that is capable of being read by a machine. It describes the legal document (or combination of documents applying to an item of content and, where applicable, each sub-licence for third party content) using machine readable encoding (XML). It is supported by a vocabulary (corresponding to the terms defined for TLF licences) that gives the terms meaning.

Although it is now technically possible to provide a rights document within the content package, or as a standalone document that references the content, due to current patents surrounding the use of Digital Rights Expression Languages (DREs) TLF continues to investigate licensing arrangements that enable this solution to be implemented without risk to stakeholders of patent infringement.

## 4 Maximising access to third party works

TLF's approach to managing IP has had a large impact on the amount of digital content now available to schools. Why? While many cultural institutions are aware of the wealth of content in their care, TLF has provided the opportunity to make it widely available to schools. This has included assisting with the digitisation of content and increasing discoverability of the content through use of educational metadata. More importantly, satisfaction that moral rights and copyright information is adequately captured and communicated throughout a secure content distribution chain increases the confidence of copyright owners and creators that end users will attribute their works.

In addition, by securing licences from copyright owners on the educational institutions' behalf, teachers' rights to use materials are extended beyond provisions (such as Part VB) of the Copyright Act. Copyright Agency Limited recently confirmed that content made available by TLF will be a specific exemption from the electronic use survey in schools. This exemption recognises that TLF secures licences which ensure copyright owners give permission for educational use.

Although there has been significant overhead in IP rights management process development, contract negotiations and system development by TLF, the cost of each school education jurisdiction within Australia and New Zealand undertaking this task individually<sup>6</sup> would not allow the same volume to be made available to schools throughout ANZ.

Significantly, TLF has undertaken partner projects with:

- Art Gallery of South Australia
- Betty Horne - Photo album
- CSIRO Entomology
- History Trust of South Australia
- John Curtin Prime Ministerial Library
- National Archives of Australia
- National Film and Sound Archive
- National Library of Australia
- National Trust of Australia (WA)
- Powerhouse Museum
- Te Papa Museum, New Zealand

Due to the success of these arrangements, negotiations are now taking place to digitise and distribute further content through TLF with:

- Australian Museum
- Museum Victoria
- National Archives of Australia
- National Gallery of Australia

Extant content - learning objects where the copyright vests entirely in a third party - is being distributed via TLF distribution mechanisms from:

- Open IT, Tasmanian Department of Education
- Prism, Victorian Department of Education
- Utah State University

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<sup>6</sup> *Online Curriculum Content Investment Agreement 2006-08*, available from <http://www.thelearningfederation.edu.au/> under TLF documents > Feasibility and planning

TLF's work unlocking IP has also enabled institutions with different distribution models to take advantage of these learnings to make other content available. An example of this is Curriculum Corporation's joint project with the Australian Film Commission to include educational information with their soon to be publicly available film archives.

An important task identified for the future is to find ways to assist institutions to unlock their own IP. It is hoped that this task will also assist with the sustainability of accessible digital content for schools.

#### 4.1 Balancing ease of use with meeting copyright requirements

One of the many challenges in ensuring useability of content has been finding the balance for the end user so that their experience is not deteriorated due to unwieldy copyright requirements. To overcome this challenge, TLF needed to identify the end user groups, as each group has specific needs to achieving optimal access.

The groups identified included: teachers; students; education institutions; and content developers (which can include any of the previously mentioned groups). Each user profile has a different level of IP knowledge and a different approach to accessing/using content. Each user group has entrenched practices that cannot be ignored.

For example, it is vital to acknowledge teacher behaviours in relation to copyright and to therefore make it as easy as possible for teachers to practice non-infringing behaviour. Provision of accessible and clear information to teachers and students minimises the chance of unwitting copyright infringement. This is achieved through acknowledgement statements on the actual page of the content that identifies third party items and their owners, discreetly placed so as not to detract from the learning experience.

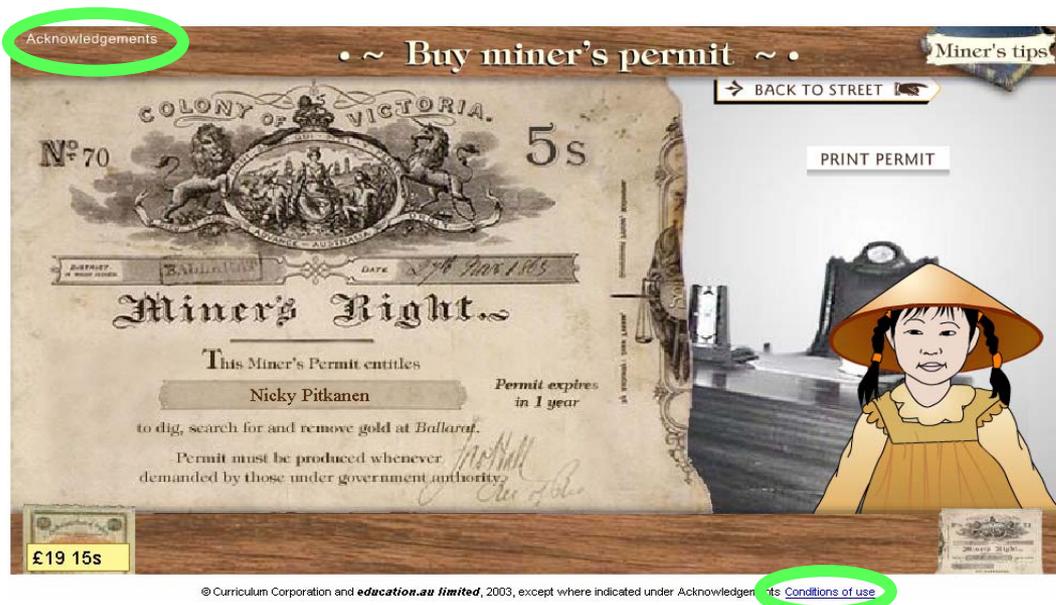


FIGURE 4 – CONTENT SHOWING ATTRIBUTED THIRD PARTY WORKS

As TLF encourage education institutions and some savvy teachers to develop derivatives of distributed content, an understanding is being reached, through on-going communication, that IP rights are both taken into consideration and managed throughout the content's lifecycle. TLF requires in its licensing regime that acknowledgement of third party materials, communication of adequate rights, and identification of copyright owners is maintained. The regime also requires that derivatives are supplied back to the national schools community for maximum benefit.

## 4.2 The tasks ahead

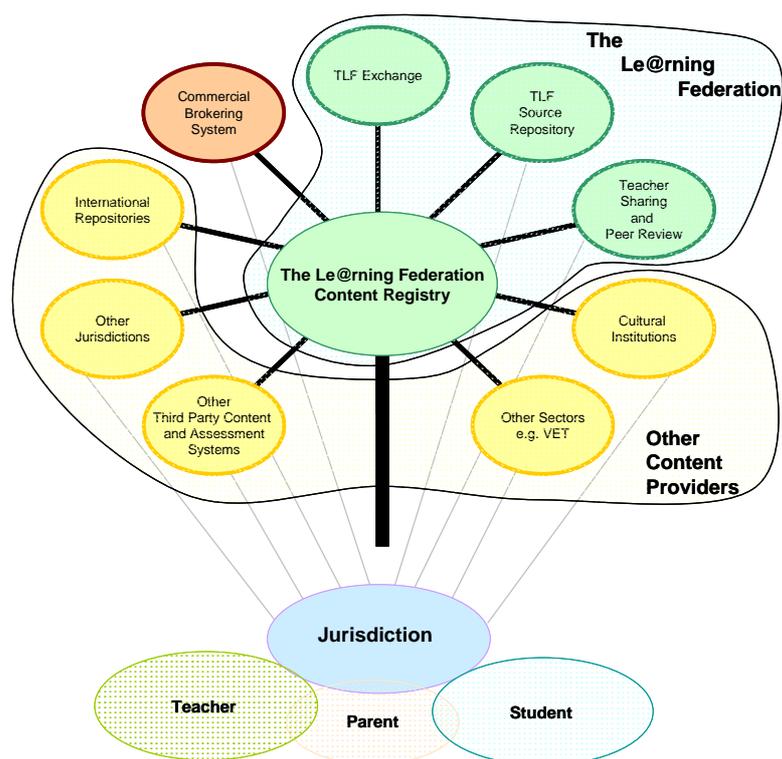
In May 2005, the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) endorsed a proposal to further invest in TLF for 2006-2008 with a specific set of targets. These include: a further 4000 items of online content; a framework, standards and structure for the sharing of online curriculum and to enable sharing and peer-reviewing of content developed by teachers; arrangements with vendors to support distribution and use of content; and support for a local education digital content industry<sup>7</sup>.

These goals bring their own challenges for unlocking IP in the third phase of the Initiative, especially considering the possible sources of content identified in the draft project plan:

- **Education systems and sectors** - Digital content developed by school education jurisdictions, the Vocational Education and Training and Higher Education sectors that is educationally and technically appropriate, will be sought for possible inclusion in the content pool.
- **Teachers** - Mechanisms to support sharing teacher developed content and peer reviews will be developed. This content could include learning sequences using existing online content, assessment tasks or possibly small interactive multimedia learning objects. The Le@rning Federation will work closely with school education jurisdictions to determine what constitutes feasible teacher-initiated content and the most appropriate models for content contribution and sharing.
- **Private and public content producers** - Content across a range of curriculum areas, not limited to the agreed priority areas for development of new content, will be sought through licensing and exchanges from local and international public and private providers. It will be selected on the basis of its technical and pedagogical soundness and value for money.
- **Cultural and community agencies** - Digital resources will continue to be procured in partnership with an increasingly broad range of national, state and regional cultural and public institutions for use by teachers and students in classrooms. Relationships between these local cultural and public institutions and education jurisdictions will be encouraged.

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<sup>7</sup> The Le@rning Federation Phase Three Plan, 2006-2008, available from <http://www.thelearningfederation.edu.au/> under TLF documents > Feasibility and planning



**FIGURE 5 - SHARING CONTENT ACROSS SCHOOL EDUCATION JURISDICTIONS**

The approved plan for the third phase of the Initiative states that creation of a sustainable TLF is a fundamental challenge for the next triennium. TLF will work with school education jurisdictions towards sustained development and sharing of content through national policy agreements on IP sharing and maintenance of agreed interoperability standards.

Tasks to achieve this end are beginning to be identified and challenges include:

- the development of enhanced frameworks for sharing/trading foremostly TLF education materials and derivatives domestically, and potentially internationally. Sharing content developed by school education jurisdictions, or between education sectors is being encouraged so will also need to be taken into consideration;
- determining how content derivatives, with the additional rights that arise, are best tracked as they move through different education systems and beyond. This will involve identifying content beyond its current distribution chain to ensure IP rights are maintained;
- supporting discoverability of copyright cleared content for schools, especially as the amount of available content increases. The plethora of digital content already available only makes the ability to discover the 'right' content, the first time, more important to the end-user;
- other licensing regimes, and if they can be utilised to maximise the content available to Australian and New Zealand schools. For example, the National Educational Access Licence (NEALS) presents new opportunities for sharing digital content between jurisdictions.
- how to support cultural institutions best to unlock their own IP for educational purposes; and
- how changes to the Copyright Act may affect the current TLF licensing regime, including the changes making content more readily available for educational purposes.

## 5 In summary

The Le@rning Federation has continued to work on the implementation of IP rights management throughout the course of first two phases of the Initiative. To date, TLF has:

- developed a licensing regime including a standard vocabulary for expressing rights;
- implemented processes and workflows within the organisation to operationalise the approach;
- implemented technology systems to support and automate internal aspects of IP management;
- implemented support for jurisdictions to access their rights information online;
- implemented the technical capability to provide machine readable expression of rights, awaiting resolution of potential patent issues;
- released a development version of CRISP software to school education jurisdictions to support and demonstrate the management of content licensed in from a third party; and
- continued to liaise with jurisdictions on many aspects of managing IP.

TLF plans to continue implementation of the strategy for supporting jurisdictions rights information needs with the next steps being:

- enhancing current distribution frameworks to enable sharing and exchanging content domestically and internationally;
- investigating and implementing a method for uniquely identifying content; and
- creating and implementing a strategy for tracking derivatives of TLF distributed content.