Publishing and Alternative Licensing Models in South Africa

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Abstract:
New flexible copyright licensing practices offer a "some rights reserved" environment where rights holders can find a middle ground between "all rights reserved" on the one hand and the relinquishing of all rights into the public domain on the other. "Publishing and Alternative Licensing Models in Africa" (PALM Africa) explored how new licensing models could facilitate access and distribution of knowledge resources and learning materials in developing countries, especially in the African context. PALM South Africa brought together action research in the form of publishing demonstration projects, combined with an academic assessment. The emphasis was on collaborative efforts to find practical solutions. The study concluded that, while a number of participating publishers were keen to explore flexible licensing, there are many challenges and obstacles in the way of more widespread usage. The impact on access to and production of knowledge is therefore currently limited and greater impact is dependent on the extent to which these obstacles are removed. Business models that exploit this potential are not yet sufficiently evolved to convince commercial book publishers to embrace them whole-heartedly and their use is more likely to consist of a marginal exercise primarily aimed at marketing traditionally licensed material.

Keywords:
Copyright, Africa, Publishing, Knowledge

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Steve Kromberg
Cape Town, 29 March 2010
# Table of Contents

Executive Summary .................................................................................................................. 7

1 Introduction ........................................................................................................................... 12

2 Background and context .................................................................................................... 15
   2.1 The global context ........................................................................................................... 15
   2.2 The South African book publishing industry ............................................................... 17
   2.3 Internet access in South Africa .................................................................................... 19

3 Research question and study objectives ........................................................................... 20
   3.1 Research question ........................................................................................................ 20
   3.2 Objectives .................................................................................................................... 21

4 Research methodology ...................................................................................................... 22
   4.1 Action research ............................................................................................................ 22
   4.2 Outcome Mapping ....................................................................................................... 22

5 Business models using flexible licensing ......................................................................... 23
   5.1 Flexible licenses .......................................................................................................... 23
   5.2 The licenses ............................................................................................................... 23
      5.2.1 CC+ .................................................................................................................... 24
   5.3 Typology of business models ...................................................................................... 24
   5.4 Flexible licensing business models in South Africa .................................................. 25

6 Shifting attitudes towards flexible licensing ..................................................................... 26
   6.1 PALM presentations, seminars and workshops .......................................................... 26
   6.2 A Catalyst for change: The Publishing Workshop ..................................................... 30
   6.3 Lessons learned .......................................................................................................... 33

7 Analysis of PALM demonstration projects ...................................................................... 34
   7.1 Overview of demonstration projects ........................................................................... 34
   7.2 Commercial publishers ............................................................................................... 35
      7.2.1 Nasou/Via Afrika ............................................................................................... 35
      7.2.2 UCT Press /Juta ............................................................................................... 35
7.3 Research institutions ........................................................................................................... 36
  7.3.1 Institute for Poverty, Land and Agrarian Studies (PLAAS), UWC .............................. 36
  7.3.2 South African Institute for Distance Education (SAIDE) ........................................... 37
  7.3.3 Children’s Institute, University of Cape Town ............................................................ 38
7.4 Alternative and Development Publishers ........................................................................ 39
  7.4.1 Jive Media .................................................................................................................... 39
  7.4.2 Dave Chislett / Baobab ............................................................................................... 40
  7.4.3 Electric Book Works .................................................................................................... 40
7.5 Learning from the demonstration projects ....................................................................... 44

8 The last mile: Print on demand .......................................................................................... 45
  8.1 Why Print on demand ....................................................................................................... 45
    8.1.1 The potential and limitations of Print on demand .................................................... 45
  8.2 The two main categories of POD ................................................................................... 48
    8.2.1 Centralised Print on demand ..................................................................................... 48
    8.2.2 Distributed Print on demand ..................................................................................... 51
  8.3 The Paperight project ...................................................................................................... 54
    8.3.1 Content and licensing ............................................................................................... 55
    8.3.2 Copy shop participation and testing ........................................................................... 55
    8.3.3 Publisher and potential stakeholder interviews ....................................................... 57
    8.3.4 Key findings and recommendations ......................................................................... 57
  8.4 Print on demand: The way forward .............................................................................. 59

9 Obstacles to the use of flexible licensing ........................................................................... 59
  9.1.1 Technical obstacles ...................................................................................................... 60
  9.1.2 Economic obstacles ..................................................................................................... 60
  9.1.3 Subjective obstacles .................................................................................................... 60
  9.1.4 Capacity obstacles ...................................................................................................... 61

10 Recommendations ........................................................................................................... 61
  10.1 Educate the public ......................................................................................................... 61
  10.2 Educate publishers, experiment, create incentives and network ................................... 61
10.3 Support scholarly publishing and communication ................................................................. 61
10.4 Support sharing, availability, curation, dissemination and sales ........................................ 61
10.5 Support automated licensing systems .................................................................................. 62
10.6 Support infrastructure and digital platforms using open standards ..................................... 62
10.7 Encourage local caches ........................................................................................................ 62
10.8 Develop mobile and internet payment services .................................................................... 62
10.9 Develop local print on demand ........................................................................................... 62
11 Conclusion ............................................................................................................................... 63
11.1 The potential of flexible licensing ....................................................................................... 63
11.2 A paradigm shift .................................................................................................................. 63
11.3 Return on investment ........................................................................................................... 64
11.4 Measuring impact ................................................................................................................ 64

Appendix A: Map of potential, obstacles and recommendations .............................................. 65
Bibliography ................................................................................................................................... 67
Executive Summary

In early 2007, when the PALM project was initiated, digital technologies and the liberalisation of licensing regimes appeared to have the potential to open up access to knowledge in the digital age. At face value, new flexible copyright licensing practices offered a 'some rights reserved' environment where rights holders could safely find a middle ground between 'all rights reserved' on the one hand and the relinquishment of all rights into the public domain on the other.

International and, to a limited extent, South African publishers were experimenting with new models that allowed them to take advantage of new opportunities while still recovering their investments. At the same time, the increasing availability of free digital content on the Internet appeared to pose a medium-term threat to the conventional publishing business model, which relies on a highly restrictive licensing regime.

Given the challenges facing publishers and consumers in South Africa and across the continent, the IDRC and a number of its research partners decided that this potential required exploration. The resultant project was titled the Publishing and Alternative Licensing Models in Africa (PALM Africa). The project was to be run in South Africa and Uganda to provide a comparative perspective.

The project identified the need to see how these new models could facilitate access to and distribution of knowledge resources and learning materials in developing countries, especially in the African context where Internet connectivity is limited and effective distribution is a serious challenge.

PALM South Africa brought together action research in the form of publishing demonstration projects combined with an academic assessment. The emphasis was to be on collaborative efforts to find practical solutions.

The key research question the PALM SA project set out to explore was:

“How can flexible licenses, innovative publishing models and the use of ICTs enable African research institutions, development organisations and book publishing businesses to increase access to and production of knowledge and learning?”

The PALM South Africa project aimed to:

- build capacity in Africa to research and better understand the application of flexible licensing and the new challenges faced by the publishers;
- build the capacity of publishers to better understand and use alternative licensing and reflect on the adoption of new business models that take advantage of the digital environment;
- explore whether the various stakeholders in Africa are receptive to new perspectives and alternatives of access to learning materials in the digital environment;
explore whether and under which conditions flexible licensing regimes are suitable and can be applied in the context of developing countries, and

better understand the statutory and regulatory environments that would best support the application of liberal licensing practices.

Context

The South African mainstream commercial publishing industry has a number of characteristics that mitigate against the use of flexible licensing and innovative business models. The industry is dominated by school textbook publishing and the print model is not likely to be replaced in the foreseeable future. Outside of textbook publishing, there is a small leisure reading market, which has resulted in the slow organic take-off of online publishing. Digital devices such as ereaders are therefore not currently widely available in South Africa, although the availability of ebooks is steadily increasing.

In this context, conservative management dominates commercial publishing, restraining experimentation with intellectual property and the use of ICTs in dissemination. One key issue is territorial licensing, which limits the ability of global platforms such as Amazon to sell digital products outside of the USA and Europe. The academic and scholarly publishing sectors have seen the most significant changes with regard to flexible licensing and digital dissemination. Many South African universities are using online teaching and learning systems like Sakai, which encourage both digital dissemination and the use of open education resources. It is not a coincidence that at the outset of the PALM project, the only publisher actively using or experimenting with flexible licensing operated in this market segment.

A key factor influencing the potential of digital production and dissemination is access to the Internet. In 2009, there were 5.3 million Internet users in South Africa, up from 4.6 million in 2008, bringing penetration to 10%, according to World Wide Worx. The study estimated that South Africa should reach the six million mark by the end of 2010. This is significantly higher than the African average of 6.8%, but far below the 52% in Europe and 74% in the US.

On the other hand, South African mobile penetration by the end of 2008 had exceeded 100%, a total of 44.5 million customers. Clearly much depends on the extent to which mobile becomes widely used for access to the Internet. According to Google, one sixth of all Internet searches in South Africa are made on mobile devices, the highest ratio in the world. Although mobile Internet is receiving much attention and investment, it is not yet clear if this potential will be realised due to the relatively high cost of data, in the context of low disposable income, and the limitations of small mobile screens.

Overview of the study

Using an action research method, the PALM SA project informed a range of publishers about flexible licensing and its international uses, and encouraged debate about the potential in a South African context.

Following a number of presentations to publishers through the Publishers’ Association of South Africa, a
three-day workshop brought together a range of interested publishers to learn about and debate flexible licensing. Participants were invited to undertake demonstration projects that would explore the potential and viability of flexible licensing.

The publishers that attended the workshop included:

- eight conventional commercial book publishers;
- four alternative and development publishers, and
- three research organisations.

Of the 15 publishers represented at the workshop, ten offered to run demonstration projects. Of these, three were conventional commercial publishers, four were alternative and developmental publishers and three were research institutions. In addition, the Centre for Film and Media Studies at the University of Cape Town offered to develop Honours and Masters courses exploring open and flexible licensing.

The progress of the demonstration projects was tracked using online surveys, face-to-face meetings and telephone conferences. Where requested, the PALM SA team provided support to participating publishers. The progress was monitored using Outcome Mapping and Progress Markers, and converted into statistics. In sum, two commercial publishers implemented their projects, along with two alternative and developmental publishers and one research institution. This represented 50% of the demonstration projects and 33% of the publishers who attended the Publishing Workshop.

**Findings**

Tracking the demonstration projects which emerged through the process provided a number of key insights relevant to the research question. In addition, the PALM team continued to scan the broader industry for related developments.

The key findings of the research related to:

- the possible business models using flexible licensing in a rapidly changing South African publishing environment;
- the obstacles publishers face in using flexible licensing, and
- the potential of flexible licensing in South Africa to increase access to and participation in production of knowledge.

In sum, the team concluded that, while a number of participating publishers were keen to explore flexible licensing, there are many challenges and obstacles to more widespread usage. The impact on access to and production of knowledge is therefore currently limited, and greater impact is dependent on the extent to which these obstacles being removed. While roughly half of the demonstration projects used flexible licensing, substantial resources are required to ensure more widespread use.
The idea that the conflict between conventional licensing and open access can be resolved through the use of flexible licensing remains valid. However, while flexible licenses do potentially offer a means of increasing access to and participation in the creation of knowledge, a number of obstacles must be overcome to realise that potential.

Business models that exploit this potential are not yet sufficiently evolved to convince commercial book publishers to embrace them whole-heartedly. Their use is more likely to be in marginal exercises primarily aimed at marketing traditionally licensed material.

Publicly funded universities and research institutions offer the best potential for their use, although this sector is moving towards full open access, free to the consumer. This is a viable business model only because supply-side funding is available to the publishers.

**Potential, obstacles and recommendations**

The following table summarises and links potential, preconditions for achieving that potential and recommendations arising out of the PALM South Africa project.

<table>
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<tr>
<th>Potential</th>
<th>Obstacles</th>
<th>Recommendations</th>
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| Increase publishing using digital technology and flexible licensing | Increased adoption by publishers of emerging business models and technologies | Educate publishers about what is available and support experimentation  
Support academic and scholarly publishers as pioneers  
Network ICT businesses and developers with content producers  
Support availability of large-scale platforms facilitating curation, dissemination and sales of published products (reinvention is not economically efficient)  
Support efforts to simplify and automate licensing systems, permissions and royalty payments  
Develop and encourage financial incentives for publishers |
| Expand dissemination to new markets | Broader public access to Internet and ICTs  “Last Mile” mechanisms | Support roll-out of infrastructure and digital platforms using open standards  
Encourage existing international services to cache locally |
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<th>Increase public participation</th>
<th>Support development of widely available mobile and Internet payment services (especially those that include the unbanked)</th>
<th>Support development of local Print on demand technologies</th>
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<td>Wider public use of Internet and ICTs</td>
<td>Educate the public about what is available (tools, precedents, etc)</td>
<td>Improve discoverability of relevant resources through effective curation</td>
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<td>Improve discoverability of relevant resources through effective curation</td>
<td>Support academic and scholarly publishers as pioneers</td>
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<td>Support academic and scholarly publishers as pioneers</td>
<td>Identify and encourage simple ways to share content</td>
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<tr>
<td>Improve African participation in exchange and trade</td>
<td>Support development of local Print on demand technologies</td>
<td>Support availability of large-scale platforms facilitating curation, dissemination and sales of published products (reinvention is not economically efficient)</td>
</tr>
<tr>
<td>Authors informed about flexible licensing, and developed publishing capacity of academic and research institutions</td>
<td>Support efforts to simplify and automate licensing systems, permissions and royalty payments</td>
<td>Support development of widely available mobile and Internet payment services (especially those that include the unbanked)</td>
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<td>Identify and encourage simple ways to share content</td>
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Introduction

Yochai Benkler, in his seminal analysis written in 2006, The Wealth of Networks: How Social Production Transforms Markets and Freedom, argues that “a series of changes in the technologies, economic organisation, and social practices of production… has created new opportunities for how we make and exchange information, knowledge, and culture”. [Benkler, p.2]

Benkler goes on to suggest that these changes “have increased the role of non-market and non-proprietary production, both by individuals alone and by cooperative efforts in a wide range of loosely or tightly woven collaborations”.

The new information environment, he says, frees up individuals to “take a more active role than was possible in the industrial information economy of the twentieth century”.

This new freedom holds great practical promise: as a dimension of individual freedom; as a platform for better democratic participation; as a medium to foster a more critical and self-reflective culture; and, in an increasingly information dependent global economy, as a mechanism to achieve improvements in human development everywhere. The rise of greater scope for individual and cooperative non-market production of information and culture, however, threatens the incumbents of the industrial information economy [ibid.].

Within the print publishing industry, the increasing availability of free digital content on the Internet has posed a medium-term threat to the conventional print publishing business model that depended on a highly restrictive licensing regime.

The industrial information economy, Benkler argues, is fighting back and a battle is emerging over “the institutional ecology of the digital environment”. In this ongoing battle, “various laws and institutions… are being tugged and warped in efforts to tilt the playing field toward one way of doing things or the other”. For Benkler,

How these battles turn out over the next decade or so will likely have a significant effect on how we come to know what is going on in the world we occupy, and to what extent and in what forms we will be able — as autonomous individuals, as citizens, and as participants in cultures and communities — to affect how we and others see the world as it is and as it might be [ibid.].

In proposing the PALM project in 2007, Dr Frances Pinter suggested that “peace was breaking out” between the protagonists in the battle. “Flexible copyright licensing practices,” she argued, “offered a 'some rights reserved' environment where rights holders could safely find a middle ground between 'all rights reserved' on the one hand and the relinquishing of all rights into the public domain on the other” [PALM project proposal].
Pinter observed that new business models were emerging that allowed publishers to take advantage of flexible licensing and to exploit the new opportunities offered by digital technologies, while still recovering their investment. What was not so clear at the time was how this dynamic was playing itself out in Africa, and what potential flexible licensing offered to improve the production of and access to knowledge resources and learning materials in developing countries.

Africa has long faced serious challenges in acquiring, producing and distributing learning materials in sufficient quantities, at appropriate levels and of suitable quality to meet the needs of its people. The history of the issue is long and complicated and linked to the colonial legacy. In the 21st century, this problem is becoming more acute. Much of development rests upon raising the skills and knowledge base of each and every individual. Finding sustainable means of providing more learning materials is becoming ever more urgent.

Africa occupies a marginalised position in global knowledge output. Statistics published by UNESCO in 2000 showed that 72% of book exports worldwide come from North America, the United Kingdom and Western Europe. In Africa, the market is particularly badly skewed. According to research by the African Publishers’ Network, Africa consumes about 12% of all books produced in the world but contributes less than 3% to books read in the world. Even starker is the balance of content on the Internet. The African continent generates only 0.4% of global online content, and if South Africa’s contribution is excluded, the figure drops to a mere 0.02%.

Today, countries in Africa are searching to find their own ways of dealing with these issues. One area that merits attention is modernising and expanding local publishing capacity (of both the commercial and non-commercial kinds). Governments are increasingly becoming committed to promoting local languages and local knowledge while also adapting the 'best of the west' to fit local requirements. The advent of digitisation and the Internet provides unprecedented opportunities, and yet there are roadblocks that appear to prevent the full exploitation of the technology to achieve the desired educational goals. Restrictive copyright practices are perceived by some to be one such roadblock. This project explores whether more flexible licensing may contribute to more efficient and effective dissemination of knowledge.

Copyright law emerged 300 years ago to provide a balance between the rights of the creator and the rights of the public. Its original aim was to incentivise creators by ensuring appropriate recompense for creating the intellectual ‘property’, as it became known. Traditional copyright served well in an age where concentrations of capital were required to disseminate creative products. With digital distribution, however, it often acts as a barrier to effective distribution.

For several years now, some have seen the liberalisation of licensing regimes as a means of opening up access to knowledge in the digital age. This has proven especially popular for the young, who produce digitally transmitted culture and knowledge. Indeed, many different types of licenses have been created that try to cater for a number of needs, often conflicting, but usually in the spirit of opening up greater access. For
an incomplete (but long) list, see GNU-GPL’s review of over 100 flexible licenses at http://www.gnu.org/licenses/license-list.html. In many cases, creators are not only choosing new licenses to facilitate access for their audiences, but they are also finding new ways of reaping financial rewards for their creative outputs.

The formal publishing industry is itself trying to come to terms with the digital age and is experimenting with a number of new business models. This new disruptive digital technology is necessitating new approaches to copyright. Yet, today we still stand at the incubation stage of these new models, caution competing with boldness as the industry tries to find ways of recovering its investments. In the meantime, there is still the urgent need to see how these new models may facilitate access and distribution in developing countries.

Over the past few years, the worlds of open access, A2K/A2LM have clashed with traditional commercial publishing. These new movements have served a useful function in promoting new thinking on the issues. However, the questions surrounding sustainability still remain. And the solutions are likely to be different on either side of the digital divide. The open-access ‘free’ solutions in the North often rely upon the bedrock of wealthy economies and strong infrastructure whereas the same cannot be assumed in developing countries. Some have even argued that the knowledge divide may deepen as the South receives generous handouts of content from the global North, further stifling the South’s ability to develop and disseminate local knowledge. Developing countries are seeking solutions that take advantage of the knowledge resources of the North while at the same time grow capacity for the development of locally relevant learning materials by developing country publishers and institutions. Ideally, this process might also reveal ways of improving the knowledge flow in the other direction – from South to North – and, most importantly, from South to South.

Many studies that are under way are analysing the impact of open access initiatives, particularly on access to academic journals, around the world. There is a growing body of studies on Open Education Resources, with lively debate on how these could best help bridge the global knowledge divide. However, in an African context, in which access to Internet connectivity is very limited and the question of distribution of learning materials is a serious challenge, what is missing is research on how open access approaches could work in conjunction with local publishing in developing countries to improve access to learning materials. Little research is being carried out on how materials appearing with open licenses may impact on, and improve, the quality, availability and cost of other learning materials, especially in developing countries. Questions around how commercial and non-commercial publishing in developing countries may benefit from more flexible licensing practices need to be examined from a variety of perspectives that take into account the international publishing environment and the power relationships between foreign and domestic publishing.

It seemed that there were big questions to be answered here, and huge opportunities to explore. And it seemed that the potential might be even more significant in regions of the world that have hitherto been shoved in the margins of the great book of printed knowledge by geographic, political and economic factors.
Could flexible licensing unlock the doors to vast collections of human knowledge and creative endeavour – collections that are currently locked up in the vault of copyright and public domain works that are currently out of print? Could flexible licensing help create a pipeline that would enable almost instantaneous access to a wealth of cultural resources and knowledge that presently cannot travel across oceans and deserts, across borders, across language obstacles, across the chasm between the rich and the poor, the distances between the women of the world? Could books, research papers, songs, films and other creative works that gather dust in dingy rooms at last be found and read anywhere on the African continent and, indeed, anywhere in the world? Could the voices and imaginations of African citizens and scholars, farmers and oral poets fly freely across space and time, to claim their rightful place in the unfolding history of the world? And could this all happen while ensuring that the creators themselves receive the rewards that are due to them, perhaps even making it possible for the poet to leave her job as a seamstress in a sweat shop and earn a living weaving magical words instead? What could the impact be on transparency, good governance and citizen participation?

Will the Internet be remembered for further disadvantaging the women and children of Africa or for enabling them to have a say, to earn a living and create wealth, to exercise power and to claim human rights?

Inspired by the theoretical potential and a vision of the possible, the IDRC and a number of its research partners decided that these issues required research and exploration. The resultant project was titled “Publishing and Alternative Licensing Models in Africa” (PALM Africa).

The project was to be run simultaneously in South Africa (PALM South Africa) and Uganda (PALM Uganda), to provide a comparative perspective. It aimed to bring together action research in the form of publishing demonstration projects with an academic assessment. The primary emphasis was to be on collaborative efforts to find practical solutions: to explore whether, even in humble experimental ways, the theoretical potential could be translated into tangible examples of what could be achieved on a bigger scale and on a much larger stage.

**Background and context**

**The global context**

Despite the potential apparently offered by flexible licensing, peace has not in fact broken out in the two and a half years since the PALM investigation was initiated. Instead, the debates over free versus paid content have escalated, as print publishers of books and newspapers have grappled with declining revenues and increasing competition from more agile Internet content providers and aggregators.

Globally, fierce corporate battles have ensued, with Rupert Murdoch leading the charge in attempting to ensure that publications in the News Corporation group, and beyond, lock down their proprietary content and charge readers for accessing it. In addition to its film and television interests, the News Corporation group
owns book and newspaper publishing businesses. A brief summary of the arguments usefully highlights the key issues of the debate. In the next section, these issues will situated and examined in the context of South African publishing.

In a December 2009 speech to the US Federal Trade Commission, Murdoch set out his case:

Quality content is not free. In the future, good journalism will depend on the ability of a news organization to attract customers by providing news and information they are willing to pay for.... Technology makes it cheap and easy to distribute news for anyone with Internet access. But producing journalism is expensive....


The advertising-only business model is dead and cannot sustain print businesses. The move from print to online advertising has been accompanied by a decrease in spending, and massive competitive pressures driving prices down. Therefore content producers will have to construct new business models that increases non-advertising revenues from digital products.

While Murdoch’s views are gaining support, they are not shared by all media producers and commentators. The counter-argument is essentially that consumers have become used to getting information free, that there is an abundance of content available and that consumers will simply shift to other free sources if charged for content..

Arianna Huffington, of the successful new media business Huffington Post, argued at the same forum as Murdoch that his approach is short-sighted and self-defeating.

This is a Golden Age for news consumers who can surf the net, use search engines, access the best stories from around the world, and be able to comment, interact, and form communities. The value of having the world of information at your fingertips is beyond dispute.


Traditional publishers have misread the web and new media, she said, focussing on “consolidation, cost-cutting, and pleasing Wall Street (instead of) modernisation and pleasing their readers”. As a result they ended up on “the wrong side of the disruptive innovation the Internet and new media represent”. She cited statistics that claimed that, for example, there are more than 1 trillion web pages and 100,000 iPhone apps and that more text messages are sent each day than there are people on the planet.

She notes that more than 16 different payment schemes have been mooted, although few of these schemes have been successfully implemented so far.

New media organisations are also producing valuable content without setting up payment walls, including investigative journalism that will be far more attractive to online readers than paid-for content. A large
amount of content is being produced by the 'readers' themselves. Huffington points to increasing “reader participation” in content creation:

Citizen journalists can play a key role in investigative journalism. At the Huffington Post, they help shape our stories in multiple ways -- from whistle-blowing to combing through thousands of pages of bills and government documents to being part of our Bearing Witness 2.0 project, finding great stories from across the country that put flesh and blood on the statistics and consequences of our economic crisis....

Technology has enabled millions of consumers to shift their focus from passive observation to active participation – from couch potato to self-expression. Writing blogs, sending tweets, updating your Facebook page, editing photos, uploading videos, and making music are just a few of the active entertainment options now available.

These debates often obscure the fact that even the traditional print publishers often do give away content for free, and very few intend to charge for all content available online. They are more likely to use the “freemium” model to give away certain content for free, as a marketing exercise and to draw traffic, and then charging for “premium” content. While this is a hybrid model, it is not strictly speaking the same as “flexible licensing”, as many “freemium” approaches rely on traditional “all rights reserved” copyright, and while the publishers will allow free access to a limited range of content, they will not use a license that gives anyone permission to reproduce their content in any form.

Kevin Bloom, in a 2009 study of online business models being developed by three South African newspapers, shows that similar debates are taking place here among newspaper publishers here [Bloom 2009]. He reports that The Times, the Mail & Guardian and The Daily Dispatch, are all considering charging for content, although the specific business models to be used have not yet been decided on, as is the case with their international counterparts.

For discussion on the impact of these dynamics on book publishers specifically, see the PALM Africa comparative report.

The South African book publishing industry

Similar debates have taken place in the global book publishing industry and to a lesser extent within the South African industry, which has persisted with the traditional print model and conventional copyright. Little serious attention has been paid to the South African Book Publishing sector, and commercial publishers are notorious for keeping their strategies under wraps for fear of undermining their competitive advantage.

For this reason, alongside the PALM project, the Open Society Institute and the Shuttleworth Foundation commissioned a baseline study of the book publishing industry. This study, which became known as the
Publishing Matrix, reviewed the state of publishing in South African book and evaluated the extent to which the industry was leveraging the potential to increase access to knowledge resources and learning materials. The full Publishing Matrix can be viewed at: http://sapublishing.cet.uct.ac.za/

In addition, other recent surveys of the publishing industry, such as the annual PASA survey, were used to inform the PALM project's approach and methodology, as well as extensive consultation with industry role players.

What emerged is that the South African mainstream commercial book publishing industry has a number of characteristics that mitigate against the use of flexible licensing and innovative digital or online publishing. The industry is dominated by school textbook publishing, where the traditional print model is not likely to be abandoned in the foreseeable future, due to low levels of Internet penetration as well as major infrastructure limitations in the school system. Government controls the authorisation and procurement of the vast majority of school textbooks. In a parliamentary briefing on the Education Department and Education Budget and Strategic Plan for 2008/9, the director general of the Department of Education, Mr Duncan Hindle, stated that the government sees printed textbooks as a "non-negotiable" for the foreseeable future.


According to the most recent (2008) Publishers' Association of South Africa survey of the industry, the total turnover of book publishing was R3,457,976,845, of which the education sector accounts for 50.64%, trade publishing for 30.4% and academic publishing for 18.94%. In the education sub-sector 92.64% of all product is of local origin. The turnover derived from imported product in the trade sub-sector accounted for 55%, while only 11.37% of the total turnover of academic product is derived from the sale of imported product. Across the industry as a whole, locally published books accounted for R 2,444,979,251 (70.71%) of the total, imported books for R761,058,450 (22.01% of all books sold), locally produced “non-books” for R231,692,571 (6.70%), and imported “non-books” for R20,246,573 (0.59%).

It must be borne in mind, however, that these figures are distorted by the absence in this survey of some major academic international publishers and distributors who are not members of PASA. The percentage of imported books is probably higher than reflected here.

Outside of textbook publishing, there is a small leisure reading market. The South African Book Development Council National Survey into the Reading and Book Reading Behaviour of Adult South Africans (published in June 2007) reported that only “two out of five people” usually read fiction or non-fiction books. The survey also found that “those committed to reading are largely white affluent people”. In addition, “more than half of South African households” do not have any leisure books in their homes.

In 2008, locally produced leisure books (fiction and non-fiction) accounted for only 16.72% of the market, or just over R578 million. This small leisure reading market, along with low levels of Internet access, help explain the slow organic take-off of online trade book publishing in South Africa.
Many obstacles also exist that hinder easy and affordable licensing to secondary publishers in the global South. There are three directions of rights sales of interest here: North-to-South, South-to-North and South-to-South. In all three instances, the transaction costs are high for a number of reasons. They range from rights departments being unable to devote the time required to process applications, to fears of piracy. Royalties and fees payable on inexpensive or small editions simply may not be worth the time and trouble to process applications. Translations are an issue and even obtaining reading copies to evaluate for local suitability can be a problem.

Due to these territorial licensing regimes that drive a wedge between South Africa and the North, and to unfavourable economies of scale, digital devices such as ereaders have only recently become available in South Africa. Although online retailer Kalahari has recently begun offering ebooks for sale, it is unlikely that this will constitute more than a niche market among existing book users and, perhaps, in the academic and scholarly spheres.

In general, conservative management dominates commercial publishing, restraining experimentation with alternative licensing and business models, as well as limiting the use of ICTs in dissemination. A further constraint, which will be discussed further below, is territorial licensing, which limits the ability of global digital platforms such as Amazon to sell digital product outside of the USA and Europe.

Academic and scholarly publishing sectors have seen the most significant changes with regard to flexible licensing and digital dissemination. Many South African universities are using online teaching and learning systems, such as Sakai, which encourages digital storage and dissemination of educational resources. It is not by coincidence that at the outset of the PALM project, the only publisher actively using or experimenting with flexible licensing – the Human Sciences Research Council (HSRC) Press – operates in this market segment.

**Internet access in South Africa**

Although flexible licensing per se is not restricted to digital publishing, its potential is most effectively realised in an online environment. Internet access is a therefore frequently acknowledged as crucial factor influencing the potential of flexible licensing.

In 2009, there were 5,3 million Internet users in South Africa, up from 4,6 million in 2008 and bringing penetration to 10% of the total population, according to World Wide Worx. They estimate that South Africa should reach the six million mark by the end of 2010. This is significantly higher than the African average of 6,8%, but way off the 52% in Europe and 74% in the US, where digital publishing is beginning to threaten the traditional print model far more substantially. Bandwidth is still relatively expensive in South Africa and excludes the majority of working class people who can barely afford to purchase airtime for their prepaid mobile phones, let alone pay for broadband connection. By way of example, buying bandwidth from
Vodacom, for use on the 3G network, costs R189 per 500 megabytes.

It is worth noting, however, that the university sector has higher levels of connectivity and bandwidth, due to cooperative purchasing and projects such as the South African Tertiary Education and Research Network (TENET).

On the other hand, South African mobile penetration by the end of 2008 has reached a total of 44.5 million customers. Clearly much depends on the extent to which mobile becomes used to access the Internet.

According to Google, one sixth of all Internet searches in South Africa are made on mobile devices, the highest ratio in the world. Although mobile Internet is receiving much attention and investment, it is not yet clear if its potential will be realised, due to the relatively high cost of data, low disposable income and the technical limitations of older and cheaper handsets with small screens, clunky user interfaces and inadequate processing power.

It is clear that the main driver towards the use of mobile Internet is the cheap messaging platform MXit, which claims that it already has 9 million users in South Africa. (http://www.slideshare.net/ashaam.rabaney/the-mxit-presentation-study-stats-social-media-3180893 accessed 28 February 2010).

At the same time, most of the commercial and developmental organisations using mobile to expand their reach still use SMS as this is better suited to the widely available handsets and cheaper to operate. It is not clear how long it will take for mobile penetration to translate into Internet access but many obstacles will need to be overcome en route.

Research question and study objectives

Research question

PALM’s original research question was: “Can the adoption of more flexible licensing regimes contribute to improved publishing of learning materials in Africa?”

The study aimed to investigate:

- Whether current licensing practices help or hinder distribution of content, and
- Whether the adoption of flexible licensing practices can help streamline the publishing process, thereby potentially reducing costs and increasing access to learning materials.

The research question was refined in the course of the study as the team realised that the challenge in Africa extended beyond the need to improve access to knowledge to include the urgent need to increase participation in the global production of knowledge. It has long been urgent to identify ways of amplifying
the African voice, through developing the means for Africa to take its rightful place in the global dialogue.

The team became convinced that it was important to focus the project on knowledge resources as well as learning materials (which carry the implicit categorisation as textbook material). A broader definition was required to include a wider range of learning resources and other forms of creative content such as literature, music and visual images, which are important in the changing profile of what constitutes knowledge resources in the digital domain. For example, our investigations revealed the need for much wider access to African literature, across all levels of the education curriculum, as the canon of African literature is ironically not available to students in Africa. Equally, access to a wider range of African research output was perceived to be desirable.

The team also discovered that new forms of teaching and learning often utilise a range of multimedia products, especially when using social networking and social learning platforms and methods. At South African universities, new learning platforms (such as Vula, the learning management platform at the University of Cape Town, part of the international open source collaboration Sakai) combine text, images, blogs, podcasts, SMS (mobile text messages), discussion forums, chat rooms and teaching support materials seamlessly. An issue identified in the course of the PALM study was the potential for publishers to interface with this rich range of resources being developed in the universities and the challenges faced by conventional textbooks when university teaching and learning goes online in this way.

The research question was therefore revised to read:

"How can flexible licenses, innovative publishing models and the use of ICTs enable African research institutions, development organisations and book publishing businesses to increase access to and production of knowledge and learning?"

**Objectives**

The PALM South Africa project aimed to:

- Build capacity in Africa to research and better understand the application of flexible licensing and the new challenges faced by the publishers;
- Build the capacity of publishers to better understand and use alternative licensing and reflect on the adoption of new business models that take advantage of the new digital environment;
- Explore whether the various stakeholders in Africa are receptive to new perspectives and alternatives of access to learning materials in the digital environment;
- Explore whether and under which conditions flexible licensing regimes are suited and can be applied in the context of developing countries, and
- Better understand the statutory and regulatory environments that would best support the application of liberal licensing practices.
Research methodology

Action research

Action research aims to achieve knowledge construction through action and reflection. It involves an interactive process of inquiry that takes place in a collaborative context. Action research aims to identify underlying causes through an active process of theorising, data collection and analysis. This approach emphasises the ability of research to learn through addressing practical problems in defined situations.

“Participatory action research is not just research which it is hoped will be followed by action. It is action which is researched, changed and re-researched, within the research process, by its by participants” (Wadsworth, 1998).

Using an action research method, the PALM SA project informed a range of publishers about flexible licensing and its international uses and encouraged debate about the potential in a South African context. It then proceed to encourage participating publishers to experiment with flexible licensing in order to identify the ways in which its apparent potential can be realised in practical applications.

More specifically, the methods employed in the project included:

- Publishing baseline study
- Stakeholder seminars
- Questionnaires and surveys
- Publishing Workshop (capacity building and progress monitoring)
- Analysis of participant attitudes at stakeholder seminars and the Publishing Workshop
- Publishing demonstration projects and review
- Data and comparative analysis

The team used a six-month action and reflection cycle synched in with the production of interim reports for the IDRC.

Outcome Mapping

PALM SA used Outcome Mapping to plan, monitor and evaluate the project's progress. The team identified key Boundary Partners and Strategic Partners and designed a process that would allow for more substantial and in-depth engagement with these boundary partners. A map of expected outcomes was created for each category of Boundary Partners, which was used as a tool for tracking progress statistically and enabling ongoing reflection on and analyses of the project's achievements. To see how this was applied in practice, see Appendix B.
Business models using flexible licensing

Flexible licenses

Although there are many forms of “flexible” intellectual property licenses, the most commonly used are the range of license options incorporated under the Creative Commons system. Creative Commons licenses make it easy for owners of intellectual property to set legal conditions of use that provide for different options to the “all rights reserved” conditions that automatically apply. This provides for greater freedom and increased flexibility in the uses that can be made of content. The main options within a Creative Commons license are set out below (for more information, visit the Creative Commons website).

Attribution (BY)

The copyright owner lets others copy, distribute, display, and perform their copyrighted work – and derivative works based on it – but only if they give credit the way the owner requests.

Share Alike (SA)

The owner allows others to distribute derivative works only under a license identical to the license that governs their work.

Non-Commercial (NC)

The owner lets others copy, distribute, display, and perform their work – and derivative works based upon it – but for non-commercial purposes only.

No Derivative Works (ND)

The owner lets others copy, distribute, display, and perform only verbatim copies of their work, but not create derivative works based upon it.

The licenses

Selection of the various options results in the following licenses, as described on the Creative Commons website [http://creativecommons.org/about/licenses/ accessed 8 February 2010]

Abbreviations given in brackets.

Attribution (CC BY)

This license lets others distribute, remix, tweak, and build upon the work, even commercially, as long as they credit the author for the original creation. This is the most accommodating of licenses offered, in terms of what others can do with works licensed under Attribution.

Attribution Share Alike (CC BY-SA)

This license lets others remix, tweak, and build upon the work even for commercial reasons, as long as they credit the author and license their new creations under the identical terms. This license is often compared to
open source software licenses. All new works based on the original work will carry the same license, so any derivatives will also allow commercial use.

**Attribution No Derivatives (CC BY-ND)**

This license allows for redistribution, commercial and non-commercial, as long as it is passed along unchanged and in whole, with credit to the creator.

**Attribution Non-Commercial (CC BY-NC)**

This license lets others remix, tweak, and build upon the owner's work non-commercially, and although their new works must also acknowledge the owner and be non-commercial, they don’t have to license their derivative works on the same terms.

**Attribution Non-Commercial Share Alike (CC BY-NC-SA)**

This license lets others remix, tweak, and build upon the owner's work non-commercially, as long as they credit the owner and license their new creations under the identical terms. Others can download and redistribute the work just like the BY-NC-ND license, but they can also translate, make remixes, and produce new stories based on the work. All new work based on the work will carry the same license, so any derivatives must also be non-commercial in nature.

**Attribution Non-Commercial No Derivatives (CC BY-NC-ND)**

This license is the most restrictive of the six main licenses, allowing redistribution. This license is often called the “free advertising” license because it allows others to download the works and share them with others as long as they mention the owner and link back to them, but they can’t change them in any way or use them commercially.

**CC+**

CC+ is an innovative protocol that provides a simple way for users to get rights beyond the rights granted by a CC license. For example, a work's Creative Commons license might offer non-commercial rights. With CC+, the license can also provide a link by which a user might secure rights beyond non-commercial rights – most obviously commercial rights, but also additional permissions or services such as warranty, permission to use without attribution, or even access to performance or physical media. CC+ creates a simple way to move between the sharing and commercial economies. CC+ provides a lightweight standard around these best practices and is available for implementation immediately. [http://wiki.creativecommons.org/CCPlus, accessed 27 February 2010]

**Typology of business models**

Through desk research, consulting with local and international experts in the field, attending a number of
international conferences, seminars and trade shows, the PALM team developed a typology of flexible licensing business models being used in the rest of the world. Along with a range of examples, the typology was used as a catalyst for debate in workshops and presentations, and as inspiration for models participating publishers could use in their demonstration projects.

The following table sets out the various business models using flexible licensing or using conventional licensing in a way that enables free access to certain products, or versions of products, while generating revenue from other versions or products.

<table>
<thead>
<tr>
<th>Type</th>
<th>Free to consumer</th>
<th>Paid for by consumer</th>
<th>Other revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freemium</td>
<td>Downloads of samples or full text</td>
<td>Printed books</td>
<td>Advertising</td>
</tr>
<tr>
<td></td>
<td>Supplementary materials</td>
<td>Multimedia DVD / CD</td>
<td>Affiliate sales</td>
</tr>
<tr>
<td>Author pays</td>
<td>Downloads of full text</td>
<td>POD (print costs only)</td>
<td>Author pays costs</td>
</tr>
<tr>
<td>Open educational resources (OERs)</td>
<td>Course materials</td>
<td>Registration fees (lectures, accreditation, qualification)</td>
<td>Institutional funding</td>
</tr>
<tr>
<td>Open access</td>
<td>Downloads of full texts</td>
<td>Consumer POD (zero margin for author or publisher) May involve sales of printed books</td>
<td>Institutional funding Sponsorship Advertising Affiliate sales</td>
</tr>
</tbody>
</table>

**Flexible licensing business models in South Africa**

The Publishing Matrix baseline study had revealed that flexible licensing business models were rarely used in South African book publishing. As the same time, during the PALM Publishing Workshop, the PALM team established that both commercial and non-profit publishers give away for free certain content to either market or supplement their main revenue-generating publications. One participant estimated that the rand value of free product easily exceeds R80 million per annum in the schools education market alone. This is almost exclusively done for marketing purposes, although some publications are regarded as valuable supplementary materials. The publishers donate high volumes of books for marketing purposes and can provide teachers’ guides free of charge.

Few publishers gave away any rights in the process, and normally gave away print products only. In addition, the team found that while most publishers have embraced the Internet to a limited extent, primarily as a means of marketing their publications, few are using digital technologies for wider dissemination. Current practices do not therefore, strictly speaking, constitute flexible licensing. The Human Sciences Research Council (HSRC) Press is still the only example of an existing South Africa publisher that has been successfully using flexible licensing, even before the PALM SA project began, with an apparently viable business model.
The team also found that there are a substantial number of organisations working outside of the formal publishing sector. These tend to be public-interest focused, even when they are commercial, and much more likely to use open licenses in the sense of allowing free use of their online content.

**Shifting attitudes towards flexible licensing**

The PALM SA project, at its core, was an exercise in shifting the attitudes of publishers to flexible licensing and encouraging them to experiment.

**PALM presentations, seminars and workshops**

The original PALM project plan provided for stakeholder consultation to be undertaken in a single seminar delivered to up to 30 participants. In South Africa, however, for a number of reasons, this plan was reviewed at an early stage of the project.

Conducting an initial scan, a number of individual stakeholders were identified and interviewed, from members of the Western Cape Provincial Government, through the Chair of the African Publishers’ Network and other industry leaders, to small publishers, NGOs and publishing services companies. The PALM SA team was able to build up a comprehensive view of the range of potential players and partners in South Africa, publishers’ attitudes to, and use of, a variety of licensing models.

A strategic mapping exercise identified potential partners. This was informed by preliminary consultation with key stakeholders, and by an environmental scan based on our knowledge of the sector and literature review. The Publishing Matrix had demonstrated that very few existing publishers were familiar with flexible licensing and even fewer were actively using Creative Commons or other flexible licenses.

The team concluded that a single stakeholder consultation seminar could not sufficiently elicit the views and opinions of the wide variety of stakeholders that fall outside of the commercial book publishing industry, as well as the smaller industry players. The process with the most potential for success would be to first seek out project partners with the potential to deliver demonstration projects and to use these as case studies, and as catalysts to encourage behavioural change, rather than work through the major associations and policy makers.

Many commercial publishers are resistant to change and largely wedded to conventional print publishing models and traditional licensing. As digital technology improves and makes knowledge increasingly accessible, these publishers have become increasingly fearful of losing their market share.

Although there are serious problems with the provision of school textbooks in South Africa, this has less to do with the availability of content than with problems in distribution and provincial government capacity. The academic textbook market, however, showed potential for the use of flexible licensing for adaptations,
translations, and materials for the visually disabled. Innovative business models for small and specialist markets would have the potential for a high level of impact. Given that the Department of Science and Technology (DST) in South Africa is currently planning a substantial expansion of South Africa's research capacity, this is also an issue of national strategic importance. The DST has also been supporting the development of open access South African journals, in collaboration with the Academy of Science of South Africa in partnership with the SciELO digital platform in Brazil.

Through the consultation process, the team found that the smaller industry players and a wide range of non-formal publishers, authors, NGOs and research organisations were more willing to experiment with new licensing models and were most interested in expanding access to knowledge. These organisations were therefore useful partners in a project that seeks to transcend the limitations of the profit-driven focus of the larger commercial publishers in search of mainstream markets.

The team had originally planned to work in partnership with the South African Book Development Council (SABDC) as the organisation through which stakeholders would be engaged. The reasoning had to do with the fact that this organisation, supported by the Department of Arts and Culture (DAC), combined the big commercial players in the publishing sector with small and alternative publishers, authors and libraries in one association, closely linked with government. However, at the commencement of the PALM project, the SABDC was still in the process of renegotiating its structure and procedures with its stakeholders and was not ready to engage with a new project.

Although supportive of the PALM project, the South African Book Development Council (SABDC) was hesitant to host a PALM seminar at a time when the organisation was still finding its feet and was mediating the co-existence of big-company member organisations and the small publishers and authors.

Approaches to the industry associations revealed a mixture of hesitation and indifference, as PASA pleaded full agendas at their quarterly meetings. A further review of the different players in PASA revealed that members involved in the PASA Copyright Committee were most concerned to grapple with new international developments in digital media and alternative licensing.

Through a series of presentations, seminars and workshops with interested publishers, the PALM team were able to inform actively interested or simply curious publishers about flexible licensing and how it is being used internationally and in South Africa. This process culminated in a seminar run by the PALM team and hosted by the PASA Copyright Committee. The prospect of listening to Frances Pinter, an expert who could give insight into flexible licensing and into the thinking of the large international companies, appeared to provide the main mind-shift leading to agreement to host the seminar.

A baseline questionnaire was developed to assess the attitudes of participants. This was administered at the start of the seminar and analysed thereafter, in conjunction with the discussion during the seminar.

The purpose of the questionnaire was to:
- Obtain participants’ profiles;
- Gather baseline data on participants’ knowledge of their organisations’ current licensing models, and
- Gather baseline data on participants’ attitudes towards digital technologies.

All organisations present at the seminar had active online projects in progress. As expected, conventional publishers were most likely to use conventional licensing models, with the exception of the HSRC Press. Others were either using flexible licensing models, or publishing open access content without formal licensing arrangements.

Most participants envisaged the potential for more open access publishing in the future; with the exception of one conventional publisher and the representative of the Publishers Association of South Africa.

The graph below represents the respondents’ perceptions of the areas of publishing in which digital technologies could be most beneficial, combining all respondents’ ratings. Overall, respondents believed that all areas of publishing had something to gain from digital technologies (all means exceed 2.5). However, POD was considered to hold the most potential (M=4.3), while printing was believed to benefit the least (M=3.3).

The graph below represents the perceived severity of obstacles to the increased use of digital technologies, combining all respondents’ ratings. As evident in the graph, all listed barriers were perceived to be somewhat serious (all means exceed 2.5). On average, ITC infrastructure was considered to be the most serious (M=3.6), while government policy was believed to be the least serious barrier (M=2.75).
Initially, the team thought that change would come more readily from the alternative and developmental publishers than from conventional publishers. Small alternative businesses seemed to understand that they could benefit from sustainability models and licensing. They knew that they had issues and where the problems are. Some NGOs seem to believe that they do not have to think much about licensing as they are funded and do not need to generate a return on their intellectual property. Consequently, they do not yet see the potential it offers them. The tendency was to use an “all rights reserved” copyright notice and add a website notice that allowed open use of online content.

In the course of the seminar there was a visible shift in the attitude of a number of participants. A noticeable moment was when Frances Pinter made the point that the polarisation that has thus far marked discussions of traditional and open licensing is being resolved. A clear example of this is that ACAP (a tool that allows content holders to express rights permissions that are conducive to developing new online business models) and CC+ (a new CC initiative that allows further permissions information to be expressed within the metadata of the CC licenses) are being actively aligned by a joint team.

More fortuitously, Nasou/Via Afrika attended the seminar. The company is part of the South African multinational Naspers, a company that has a substantial investment in digital and broadcast media and whose then-CEO had recently come to realise the importance of alternative licensing in their digital businesses. In addition to publishers, the meeting was attended by employees from the digital publishing division. One commercial publisher suggested that he was open to establishing a pilot project in the school textbook market, which is traditionally very closed in terms of licensing and intellectual property. There appeared to have been a recognition of the fact that schools publishers produce a volume of support material that serves a marketing function rather than a commercial sales function and that the use of open licenses for products such as teacher support materials would act as a powerful marketing tool.
Finally, an important factor was that the team were able to bring together small and large companies and a publishing services organisation using open access strategies. The interaction between the different viewpoints of these participants made a further contribution towards shifts in participants’ attitudes.

Further evidence of these shifts came at a workshop held at the request of Juta, as a response to both the OpeningScholarship project and PALM Africa. The workshop was attended by the CEO of the company, the director of academic publishing and editors from the academic division. It was thus an unusual meeting – an in-depth encounter between a university and an academic publisher. In a lively exchange during a day-long workshop, it appeared that Juta had come some way in formulating a digital strategy. However, this strategy was built around the centrality of the company’s intellectual property and therefore focused primarily on conventional licensing. Equally, it emerged, as was the case with Nasou, that there was a major concern with competitive advantage and that commercial companies were thus unlikely to divulge their digital strategies.

Presentations made by OpeningScholarship and the PALM team, which tracked new licensing trends and new business models in the digital age, provided some impetus for Juta to rethink its strategy. However, it was the insight into case studies presented by lecturers using digital media in innovative ways that produced the most impact, something that the CEO explicitly acknowledged would inform their latest strategy-planning round. As Juta is the largest academic textbook publisher in the country, this is an important achievement and one that could have an impact.

The findings were that the multimedia and interactive materials being developed in the university were a considerable attraction for publishers, given the levels of expertise put into their production. This would not be affordable in the commercial context. Equally, the innovative teaching programmes that were being developed, using online simulations and primary resource materials, offered insights into a changing teaching and learning landscape.

Publishers would also need to grapple with the licensing implications of offering textbook content in this environment. The question was whether there would be a call for online textbook materials for incorporation into LMS such as Vula, and whether this presented a threat to or an opportunity for textbook publishers.

The outcome of these seminars and workshops could be measured in concrete behaviour change. However, the real value might well be in longer-term change, as the ideas exchanged are incorporated into corporate thinking.

A Catalyst for change: The Publishing Workshop

Eve Gray and Steve Kromberg hosted PALM’s first workshop for publishing-industry professionals on the 3rd and 4th November 2008 at the UCT Graduate School of Business. The Publishing Workshop, where flexible licensing was explained and debated by participants, brought together a range of interested publishers. In addition to a more detailed review of flexible licensing, the Publishing Workshop set out to:
- Brainstorm ways in which flexible licensing could improve access to and production of knowledge in South Africa;
- Identify ways in which South African publishers could use flexible licensing as part of their business models, and
- Encourage a range of publishers to actively experiment with flexible licensing to allow the research team to support their experiments and to track their experiences.

The workshop was attended by 18 participants from various facets of the South African publishing industry, as well as ten resource people, including academics and experts on business, alternate licensing and copyright law. For analytical purposes, participants were divided into the following categories:

**Alternative and Development Publishers**
- Jive Media
- Urban
- Electric Book Works
- Botsotso

**Commercial Publishers and Associations**
- Future Managers
- Oxford University Press SA
- Maskew Miller Longman
- UCT Press
- Juta & Co
- Nasou / Via Afrika
- PASA (Publishers’ Association of South Africa)
- ANFASA (Academic and Non-Fiction Authors Association of South Africa)

**Research Organisations**
- Children’s Institute, UCT
- SAIDE (South African Institute for Distance Education)
- PLAAS (The Programme for Land and Agrarian Studies)
- BAST (Basic Approaches to Social Trauma)
- Makerere University Business School, Uganda

**Resource People**
- Eve Gray, Creative R&D, PALM South Africa Lead Academic
- Steve Kromberg, Creative R&D, PALM South Africa Project Lead
- Adam Haupt, UCT Film and Media Studies
- Andrew Rens, The Shuttleworth Foundation
The Publishing Workshop was carefully designed to combine:

a) Substantial information sharing, education and debate about flexible licensing and its various applications in the information society, and

b) A space in which publishers could brainstorm ideas for demonstration projects that they could undertake in their working environments.

The workshop began with an exercise designed to challenge participants’ preconceptions of licensing by debating whether their organisations sold material or gave it away. Participants were invited to place themselves on an imaginary spectrum, with “Give Content Away” on the right hand side of the room and “Sell Content” on the left, with “Both Give and Sell” in the middle. Initially the commercial publishers stood on the left and the non-profit, public-benefit publishers stood on the right. The facilitators encouraged debate and argument. Eventually all participants ended up in the middle, realising that in fact no publisher sells everything and none give it all away. Some of the materials that were given away for free included research funded by the government and sponsored by donors, the contents of blogs and websites to generate interest in the site, added-value content supplemental materials such as teachers’ guides that can be used in conjunction with paid-for textbooks, and pilot content to test the viability of a new product or strategy.

It was noted that free content can generate interest and create a market for paid content. One participant commented that even though most publishers are in the business of selling textbooks, they nevertheless give out plenty of free material as part of their marketing strategy.

The discussion turned to the viability of a flexible licensing model, and concerns were raised about the viability of making profit and also about protecting authors’ intellectual properties (IPs).

It was agreed that while authors and publishers deserve to be recompensed for their work, to encourage future content production, the traditional royalty-based model is not the only viable business strategy. Furthermore, some authors make little profit from the Intellectual Property itself, but rather through subsidiary activities such as speaking engagements, conducting training and consultancies. Giving away free content brings attention to the author, and allows him or her to make a living.

The significant shift in attitudes facilitated by the Publishing Workshop was reflected in the fact that of the 15 publishers represented at the workshop, ten offered to run demonstration projects. Three were
conventional commercial publishers, four were alternative and developmental publishers and three were research institutions. Twelve participants (80%) planned to implement or contribute to a project developed during the workshop. Four participants (27%) said they would be updating an existing project or implementing additional alternative licensing aspects.

In addition, as a result of the involvement of Dr Adam Haupt in the PALM project, the Centre for Film and Media Studies at the University of Cape Town offered to develop an Honours and Masters course exploring open and flexible licensing, which was subsequently run in 2008 and 2009.

**Lessons learned**

The process of engaging South African publishers demonstrated to the PALM team how little understanding exists about flexible licensing and the significant resistance that exists, particularly among commercial publishers. The process of informing publishers about flexible licensing is one that requires significant resources and a multi-faceted approach.

In addition, the process demonstrated that the larger companies have complex internal structures and cultures that arise from a long history of conventional publishing. Introducing new directions in such companies requires significant strategic shifts, resource reallocation, internal organisational realignment, as well as a programme of education and culture change. Future attempts at further informing publishers about flexible licensing will require significant resources and a multi-faceted approach and internal change. Much of the PALM team's access to decision makers was facilitated by what can be termed change agents, who were inspired by the PALM presentations, seminars and workshops. These change agents, however, often have a long uphill battle to create the space for experimentation. One must conclude that while advocacy and engagement are important, the process of change will only be really made once the commercial interests of publishing companies are threatened by emerging business models. The work of internal change agents could help position companies better to respond to such situations more speedily and effectively.

It is clear from our engagement that few commercial publishers see any significant advantage in adopting flexible licensing, largely due to the lack of an obvious sustainable business model in the South African context. And one must concede that given the obstacles discussed in Section 9 of this report, it is difficult to disagree with them, especially with regard to the educational and trade sectors. On the other hand, academic and scholarly publishers are, on the whole, under significantly more pressure from their market to innovate and integrate their products into the increasingly dominant digital and Internet-based forms of communication and information exchange.

The team expected that new, alternative business models in publishing would be more likely to be developed by and gain momentum from the margins of the industry, in the form of either smaller, more flexible publishers or new businesses that are familiar with the digital economy and have the advantage of taking on
new approaches without having to undergo major organisational and cultural change. This was borne out to certain extent, in that these publishers were more open to learning and quicker to grasp the potential of alternative models. However, as will become clear from the analysis of the demonstration projects in the next section, these publishers face significant challenges of their own in exploiting that potential.

Analysis of PALM demonstration projects

The progress of the demonstration projects was tracked using online surveys, face-to-face meetings and telephone conferences. Where requested, support was provided by the PALM SA team to participating publishers. In sum, two commercial publishers implemented demonstration projects, along with two alternative and developmental publishers and one research institution, representing 50% of the demonstration projects and 33% of the publishers who attended the Publishing Workshop.

Overview of demonstration projects

Among the commercial publishers, UCT Press experimented with the HSRC Press “freemium” model by making an academic monograph available for free download on a CC license and its parent company Juta also made one book available online at the request of the IDRC, who sponsored the publication.

Of the four alternative and development publishers, three did not implement their demonstration projects, primarily due to time constraints and financial reasons which were in essence a reflection of the difficulty they faced in developing a sustainable business model. Two of the four did adopt flexible licensing for certain of their products and do give away content. The relevant publications, however, were essentially funded through contracts with government and development organisations, who were keen for the material to be publicly available.

Research organisations in the study proved keen to convert a number of their publications to CC licenses, realising that this is clearer and more effective than using conventional copyright statements, with little effort made to enforce their terms. Although these organisations do sell some of their print publications, the low pricing does not add significantly to their revenue streams. This is primarily because research organisations are funded entities, work for the public good and their objectives often include widespread dissemination of their published products. They believe that making these products available online for free removes obstacles to widespread distribution, along with highly subsidised print prices.

Of the business models experimented within the demonstration projects, the following two resulted in the actual publication of books or reports using flexible licensing:

- Freemium: Free download of books or book extracts and charging for same books in print
- Limited open access: Institutional or donor-funded free download and free or subsidised print editions using CC licenses (predominantly stipulating non-commercial use)

It is worth noting that while these two business models were already in use before the outset of the PALM project, the demonstration projects did encourage wider adoption of and experimentation with flexible licensing mechanisms.

An overarching theme that runs throughout the demonstrations projects is the lack of the capacity among project participants to implement experimental forms of publishing using unfamiliar technologies and emergent business models. The international economic recession has compounded this significantly, with budgets and staffing being cut back, as has the concomitant and increasingly pronounced failure of traditional business models, both internationally and locally, in the print publishing sector.

### 1.1 Commercial publishers

**Nasou/Via Afrika**

Publishing staff at Nasou/Via Afrika proved to be very interested in flexible licensing. At their request, two in-house workshops on innovation and the future of publishing were conducted by the PALM team. Senior management subsequently approved the use of flexible licenses for some of their educational material, and the making available of these materials for free download on the Paperight site. According to participants, their motivation was twofold. They wanted to ensure that support material normally distributed free alongside educational resources was more easily accessible. They also realised that wider access could have positive marketing spinoffs.

However, this never materialised due to a change in senior management and work pressure created by curriculum changes made by the Department of Education, taking up the full capacity of publishing staff.

Nevertheless, the fifteen participants from the company were very receptive to and inspired by the presentations. A bi-monthly discussion forum has been established to encourage innovation. Significantly, the PALM project has reached into the strategic planning activities of a very large multinational, with the potential to influence the delivery of learning materials by one of the larger educational publishers.

**UCT Press /Juta**

At the Publishing Workshop, an online forum was proposed by the participant from UCT Press, enabling academic content linked to a scholarly publishing list and made available with CC licenses. The forum, she envisaged, would be designed to generate discussion and feedback for reputation building and to result in the publication of selected content voted for by the community.
The project was ultimately deferred due to the process of long-term Juta strategy development. In addition, they encountered a number of concerns from academics they consulted. The first was that reviewers want hard copies. The UCT Press Board was also concerned about malicious use of the site, for example academics in the same field posting negative reviews online for competitive reasons rather than sound academic concerns.

The PALM project resulted in the posting of one flexibly licensed book on the UCT Press website. The book, Raw Life, New Hope by Fiona Ross is licensed under a Creative Commons Attribution – Non-Commercial – No Derivates license. This text is aimed at students, academics and practitioners in the social sciences, particularly anthropology, sociology and urban geography, policy makers, as well as a general readership.

Dr Fiona Ross is an Associate Professor in the Department of Social Anthropology at the University of Cape Town, and has written several books, including Bearing Witness: Women and the South African TRC, (2003, Pluto Press), and Houses Without Doors: Diffusing Domesticity in Die Bos, (1995, Human Sciences Research Council).

The PALM team provided assistance in selecting and posting a Creative Commons license on their website.

UCT Press is using this to experiment with the model and to see how it affects sales of the printed book. At the time of writing, UCT Press had not yet evaluated the impact of the experiment. A further CC-licensed collection of papers is planned.

The UCT Press participant reported that the PALM project had also given her an idea of how to treat certain books that would not be viable for a traditional print run but would be worthwhile to convert into PDF.

Juta Publishers, of which UCT Press is one imprint, has also been in negotiations with the IDRC for the co-publication of an IDRC report on African Copyright and Access to Knowledge as a flexibly licensed book in 2010.

In addition, UCT Press and Juta have actively been getting books scanned by Google and 476 books have already been placed online through Google Books. Extracts of out-of-print books can be viewed and ordered through Juta, which will produce them through Print on demand.

**Research institutions**

**Institute for Poverty, Land and Agrarian Studies (PLAAS), UWC**

The Institute for Poverty, Land and Agrarian Studies (PLAAS) is one of South Africa’s leading research and teaching centres, based at the University of the Western Cape. PLAAS has a reputation for high-quality research on land and agrarian reform, poverty, and natural resource management in South Africa and the southern African region. PLAAS also undertakes training, provides advisory, facilitation and evaluation
services and contributes substantially to national policy development. Like many other research institutions that aim to disseminate their research publications widely, PLAAS has faced challenges in achieving effective distribution.

The PLAAS participant envisaged a publishing strategy to extend the impact of this research and development agency, built on the foundation of flexible licensing. In order to base this strategy on the needs of their readers and contributors, PLAAS commissioned Creative R&D to conduct a survey of their readers.

The PALM team gave an in-house presentation on the survey outcomes and flexible licensing to the organisation's management, which has agreed that all future publications will be published using flexible (Creative Commons) licenses. The discussion demonstrated the challenges faced by publishers in converting previously published books to CC licenses, due to existing contracts with authors and, in some instances, co-publishers.

The implementation of the agreed policy has been hampered by ongoing IT problems at the University of the Western Cape, resulting in, inter alia, difficulties in using the Creative Commons website to generate appropriate licenses. Contracts with researchers and sub-contractors will also have to be amended. One flexibly licensed book, *Another Countryside*, was placed online for free download, although this is consistent with the organisation's practice prior to the PALM project.

Although the strategy is still a work in progress, it has created the potential for more effective publication and marketing, given support for publication by donors and capacity within universities to promote the output of their research groupings, using flexible licenses.

**South African Institute for Distance Education (SAIDE)**

The South African Institute for Distance Education aims to assist in the reconstruction of education and training in South Africa by promoting:

- Open learning principles;
- The use of quality distance education methods, and
- The appropriate use of technology.

SAIDE works with policy makers and educational organisations. SAIDE is running the “OER Africa” initiative which explores “how OER might contribute to the needs of Higher Education Institutions in Sub-Saharan Africa”. SAIDE use the Creative Commons license (Attribution) to distribute content freely on the OER Africa website.

OER Africa’s mission is:
To establish dynamic networks of African OER practitioners by connecting like-minded educators – teachers, academics, and trainers – to develop, share, and adapt OER to meet the education needs of African societies. By creating and sustaining human networks of collaboration – face-to-face and online – OER Africa will enable African educators and students to harness the power of OER, develop their capacity, and become integrated into the emerging global OER networks as active participants rather than passive consumers.

Due to the nature of SAIDE’s business the participant had a clear idea of flexible licensing prior to the workshop. SAIDE has been making PDFs available on their website since 2005.

The SAIDE participant proposed the publication of an open access peer reviewed set of conference proceedings, the first step towards the launching of a suite of online journals. The journals, it was hoped, would be strategically developed to address a gap in the market and to ensure accreditation, with a community space linked to the publications. This idea was shelved when SAIDE discovered that another institution was re-introducing their journal on a similar topic and invited SAIDE to collaborate.

However, contacts made at the workshop, especially with Andrew Rens of the Shuttleworth Foundation, were useful in helping SAIDE deal with subsequent licensing issues. They have been exploring republishing out-of-print resources that were co-published with a commercial publisher using conventional licensing.

SAIDE has also been converting videos into the correct file sizes for uploading to YouTube. A copyrighted resource was reversioned for this purpose. Their partner in this project retained full copyright of the original version but allowed SAIDE to introduce a Creative Commons license for the reworked resource which was a collaborative project across seven Higher Education Institutions.

**Children’s Institute, University of Cape Town**

The Children’s Institute proposed the use of a mixed licensing and business model for publishing their flagship publication, the South African Child Gauge was initially considered for the second half of 2009. A mixed business model was adopted for the publication. A certain number are made available for free to key academic and civil partner organisations, government and donors. Other copies are sold to cover production costs, with a small profit added.

In addition, all published works are made available for free on their website and they encourage relevant web portals to list and link through to these publications.

The Children’s Institute intends to register their website and all its content under a Creative Commons license (albeit the most restrictive version). This had not been executed due to the consideration that needs to be given to how to handle existing “all rights reserved” publications already linked online; the time it takes to address this issue and, more importantly, the need for buy-in amongst contributing authors and researchers to
accept CC licenses. Like many other organisations involved in demonstration projects, many other priorities demanding their staff’s attention and energy.

**Alternative and Development Publishers**

**Jive Media**

Jive Media decided to explore the possibility of creating a portal focusing on science popularisation, facilitating dissemination of popular versions of scientific research, creating access to scientific information for ordinary people and creating an interdisciplinary dialogue.

Jive Media believes that where learning materials have been paid for or supported financially, the outputs can and should be shared freely. Although their portal did not take off, they still believe that collaborative spaces in which creators can easily upload and share content will allow creators to reach far larger audiences.

Robert Inglis of Jive Media set out the impact of PALM SA on their publishing operations and practices:

PALM represents our first direct engagement with flexible licensing, having heard mention of "Creative Commons" some time prior. While we had been employing some of these ideas for some time, PALM provided the tools and the structure that would allow us to do it cheaply and easily – and explain it to our clients.

PALM also provided exposure to thinking about intellectual property (IP). Previously our knowledge in this arena was fairly sketchy and we have grown considerably in our understanding in this regard. The PALM workshop exposed us to a number of "new ways" in which practitioners are operating which was useful and inspiring. [Palm final survey]

Although the PALM team offered to subsidise the costs of developing a business plan, Jive Media subsequently reported that financial pressures as well as uncertainty around potential future sources of funding stalled the process. Although they did not make use of the funds committed, a number of useful links and breakthroughs in understanding were made.

Jive Media have begun to use flexible (CC) licenses for the publication of much of their material and received support from PALM in the development of appropriate contracts for their sub-contracted content producers (illustrators, writers, etc.) and their contracts with their clients.

Marketing proved to be the strongest reason to use flexible licensing. Since most of their media products are produced in "the public interest", their clients are “thrilled if they reach larger audiences” and Jive Media believes they can only gain by having more potential clients exposed to their work.

Jive Media decided to explore the possibility of creating a portal focusing on science popularisation,
facilitating dissemination of popular versions of scientific research, creating access to scientific information for ordinary people and creating an interdisciplinary dialogue. Ultimately, Jive Media lacked the capacity to develop the project beyond concept stage. Neither could they develop a financially sustainable business model for the website.

Given the importance of the popularisation of science as a way of meeting South Africa’s development challenges, the lessons learned from this interaction were important ones. There is government investment – particularly from the Department of Science and Technology – in producing popularisations, and publishers such as Jive Media have developed considerable skills in mediating such popularisation, in language levels, cultural specificity, and appropriate levels of illustration. These products are paid for from public or donor funders, print copies are made and distributed, and the publication is then often placed online. What is not done is the creation of follow-up marketing and flexible licensing to allow for the market to be extended and the impact of the public investment to be maximised beyond the initial target market.

A similar publisher, from the Storyteller Group, interviewed at the Cape Town Book Fair, made the point that an AIDS education comic, printed for 8 million people in one province, could be given a license for reprinting and low-cost sales in other provinces.

While the demonstration project did not come to fruition, this project nevertheless could provide the basis for further intervention in a development research initiative that could have considerable benefit in African countries.

**Dave Chislett / Baobab**

Dave Chislett, who had not been aware of flexible licensing prior to the Publishing Workshop, proposed a collaborative online community for posting and evaluating creative content. The proposed project would adopt commercial approaches using flexible licensing, possibly in collaboration with the Baobab literary journal. Due to lack of finance, capacity and other demands on his time, Dave Chislett withdrew from the demonstration project.

**Electric Book Works**

Electric Book Works was already involved in the publication of printed books and open access online materials in partnership with The Perinatal Education Programme (PEP), an initiative produced and run by the non-profit Perinatal Education Trust. Its central aim is to improve the breadth and quality of care given to pregnant women and their babies, notably in areas where health care services are lacking or rudimentary and with a special focus on southern Africa.

PEP produces a line of course materials that allow interested healthcare professionals to study aspects of
perinatal care. These materials are authored by a wide-ranging group of specialised doctors, ensuring the highest quality and accuracy. The three central philosophies of the courses are that they must be cheap, practical and, most importantly, must let learners take responsibility for and ownership of their own education.

PEP believes that this approach allows individuals to take pride in their personal achievements and encourages them to succeed. The courses can be taken by individuals or small groups and do not require teachers or travel. Upon completion, the course takers perform a self-examination and receive a certificate from PEP if they pass. The course materials are free for anyone to copy and spread, and a nominal fee is charged for the exam. Estimates suggest that over 60 000 health care workers have taken the course, though it is impossible to give a definite number as the materials are, by design, wide-spread.

PEP was initially run as a private hobby project by its creators. The first versions of the programme, printed by UCT Press, were large, heavy and unattractive tomes. Due to increasing time constraints, mounting postage fees and the expansion of the project into other subject areas (notably HIV), it became infeasible to continue running PEP in this way. Professor Dave Woods approached EBW to help him build a business model that embraced both the free spread of educational materials and a solid commercial plan. EBW's role included handling the book production process, shipping books and exams, administering the sale of exam numbers, and maintaining the material at online portals; the PEP team continued to research and refine the books' contents and developed new lines.

EBW reworked the courses into small, professionally-made course books with illustrations and attractive covers. Concurrently, the materials were made available online at various sources and could be obtained through print on demand services. In total, the books could be obtained from six different official sources - not counting the free spread of material through copying and lending. The free availability of the materials and the profit-generation originating from book and exam sales married the two key aspects of the new publishing project.

EBW Healthcare manages the production and distribution of the PEP learning materials, including administering the exams. Its website contains all the content from the courses in easy-to-browse categories and is accessible to anyone. The multiple-choice questions in the books, however, are not in the free, online version of the books. These MCQs are in the paid, printed editions or available for a fee of R50, along with access to a self-managed end-of-course exam (currently provided as an interactive PDF).

Visitors to the website come from 119 countries and total over 4300 unique visits between mid-January and mid-February 2010. In descending order, the most highest numbers of visitors are from South Africa, the USA, the UK, India, Canada and the Philippines, with other countries such as Botswana and Malaysia contributing a small percentage. The website allows learners to send electronic feedback and to ask questions, which are answered by the PEP team. Learners can also order the physical books directly from EBW, at a cost of between R100 and R200, depending on the thickness of the book. The books are also available for viewing on Scribd.com. The books, or chapters thereof, have been accessed online approximately 25000 times in total. EBW Healthcare has sold approximately 5000 print copies of books in
three years.

**What is the PEP flexible licensing model?**

PEP allows – and encourages – the free sharing and copying of the course materials it produces. Although the works are officially licensed under a standard copyright agreement, several conditions are explicitly stated. The material may be copied for free in whole or in part by anyone, provided that no changes are made to the work (to preserve the integrity of the information contained therein), that the material is not sold for profit, and that the authors are named and recognised. This freeform condition is, in practice, the equivalent of a Creative Commons Attribution – Non-Commercial – No Derivatives (BY-NC-ND) license.

**Why did PEP choose this licensing model?**

PEP's primary aim is to make learning materials available to everybody who needs them, so that learners can take charge of, and pride in, their own education. Healthcare skills development takes precedence over questions of commercial gain or intellectual property ownership for PEP. To achieve this, the material must be made available through many different, convenient channels and must be supported by a license that allows the desired spread through copying and sharing. PEP's main regional focus is on southern Africa, but is more than happy to allow the materials to spread worldwide.

Through a combination of owning the license to the materials and opening it to non-commercial uses, PEP can make them available in a variety of media, from printed books to online and via SMSes. This allows for the widest possible distribution and allows learners to find the most convenient solutions for themselves. A traditional fixed copyright license would undermine this process and prevent the desired spread of the learning materials, both locally and globally.

Rather than tie the programme to a university or medical institution, PEP was set up as an independent non-profit organisation for a number of reasons. First, universities often have stringent copyright ownership rules and may insist on claiming ownership over PEP's work. Second, institutional bureaucracy can be rigid and complex, hindering the easy flow of information. Third, the decentralised nature of the project's authorship takes the ego out of its production and prevents one author claiming dominant ownership over it. In addition, this allows the learners to feel that they have a sense of investment and ownership in PEP.

**How has the flexible licensing model worked for PEP?**

Using flexible licensing is critical to achieving PEP's aims of spreading learning materials freely and to a wide range of people. In this regard, the use of a copyright license with clear permissions has been very successful because it legalises and encourages the sharing of material. It also allows the material to be posted on a website, recorded as an audio book or sent as text messages. In addition, the sharing has acted as a form of word-of-mouth promotion for PEP: learners who use the programme can recommend and copy it for their colleagues, who may later choose to purchase the programmes for themselves or to pass them on. This personalised advertising is a powerful tool, enabled by the use of a flexible license.
Because anyone who wants to reuse the material in the PEP books may do so without asking for permission, it is very difficult to track all of the non-commercial uses of the material. However, some derivative uses have been permitted. PEP materials have spread not only through South Africa but also internationally, both to first world countries like the UK and Australia and to poorer ones, including Indonesia and neighbouring southern African nations like Malawi, Zimbabwe and Namibia. In many cases, this requires the material to be translated into the locally spoken language. Thus far, some of the texts are available in Spanish, used in Mexico, and Urdu. There are plans to create French and Portuguese versions for use in southern Africa, but accurate medical translations are expensive and require separate upkeep to the English versions. According to feedback from nurses, there is no demand for African language versions as they are generally taught in English.

How has the PEP flexible licensing model been embraced by EBW as a commercial publisher?

EBW seeks to provide nurses and students with access to a wide range of medical books and materials in a way that both encourages the spread of knowledge and is financially sustainable. The company wants to make vital knowledge resources easily available to everyone, regardless of location or finances.

EBW is experimenting with new business models that use flexible licenses, seeing how these licenses can both strengthen the product offered and generate a profit. EBW is also experimenting with new distribution models and platforms, especially online, to see whether the junction of flexible licensing and new media can be lucrative.

When PEP approached EBW with their range of learning materials, it was vital for PEP that the spirit of their licensing model be carried over. It was important for both parties that the material was at once free to access and share, but that it would also form the basis of a commercial model for the publisher. PEP approached the project as a business venture rather than merely a social outreach programme, and was insistent that EBW benefit financially from their cooperation. Though the material was initially licensed under a CC license, this was later removed for a standard copyright agreement that had the necessary permissions explicitly spelled out. This reversion was mostly due to the parties' unfamiliarity with CC; however, the current copyright is the practical equivalent of a flexible license.

Electric Book Works is very open to the idea of using flexible and open licensing on new material, especially where there is a concomitant generation of profit. The company is willing to distribute certain types of free content where there is a tangible social benefit, backing it up with additional paid-for content. EBW does this both for social-impact reasons and for commercial strategic ones (such as not wanting to compete with other commercial products over price or with abundant free content). Essentially, EBW wants to develop business models that charge not for the content itself but for related services or products, such as the ability to do an online exam, or the 'service' of providing a formally printed version of a book. EBW would also like to use the series in future Paperight pilot projects, which aim to let copy shops print out book content for users anywhere. For this, EBW will charge a small rights fee.

Choosing a CC license for PEP (and considering CCPlus)
There are two main operational issues that affect the PEP publications. Firstly, as the materials for the PEP courses are available through at least six avenues, including various online and physical means, keeping the materials up to date requires a lot of manual updating and correcting. Every version must be maintained separately, and all translations must be sourced and inserted by additional experts. The process is laborious and could allow errors to slip in. A solution to this is to use an aggregating content management tool like XML, which updates all online versions simultaneously. Secondly, it seems that two copyright regimes govern the materials in each PEP book - one for the free-to-copy lesson content, and another for the exams that must be ordered and paid for separately, and that may not be copied. This can lead to confusion for the learners and can make the process of obtaining the materials more complicated. If the copyright license was exchanged for a CC version, defining which parts fall under which conditions may add an additional lack of clarity.

**Learning from the demonstration projects**

As the PALM project progressed, the research team constantly evaluated the achievements and challenges experienced by publishers implementing demonstration projects. The PALM team endeavoured to provide support to the participating publishers. There was no direct correlation between the amount of support and the success of the project. The most substantial support, in terms of the team’s time and expertise, was given to a publisher which did not implement their demonstration project at all. Other demonstration projects worked quietly but resolutely, requested little support and achieved significant results.

There was clearly an issue in many participating organisations’ capacity to take on additional, essentially experimental work, even when offered resources and support. What seemed a simple task, at the outset, such as uploading the PDF of a book using a Creative Commons license, in fact turned out to be far more logistically, politically and technically complex, sometimes to the point where a number of participants who were highly motivated and experienced were eventually forced to abandon or substantially limit the scope of their demonstration projects.

By October 2009, it was becoming clear that a number of the demonstration projects were struggling to take off because of organisational capacity constraints, in terms of resources, skills, time and the lack of locally suitable platforms. In addition, it was clear from our ongoing analysis that digital delivery of books and other knowledge resources is radically limited in Africa by the digital divide.

The PALM SA team decided that an additional demonstration project was required to support those projects. The project would need to experiment with a platform that could potentially bridge this divide, as well as find a way of supporting organisations with limited technical capacity to convert documents to the required format and upload them to a platform that could enable their delivery to end-users. The answer seemed to lie somewhere in the field becoming known as print on demand. The PALM team wanted to explore the possibility of creating a solution whereby digital products were delivered via the Internet to a local printing facility, accessible to a wider cross section of the population than had access to the Internet.

The next section of this report reports on the PALM team’s exploration of Print on demand and the Paperight
project, which was developed as an experimental platform by Electric Book Works, with financial support from PALM.

**The last mile: Print on demand**

**Why Print on demand**

In South Africa and other developing countries, many educators and learners are dependent on printed learning materials, both because of lack of access to technology and because they lack the skills and knowledge to use digital products actively in the classroom.

It is possible that the rapid development and adoption of cheap laptops, ebook readers and other mobile devices may lead to a tipping point arriving sooner than many imagine. At the same time, it is unlikely that there will be a “big bang”, and the adoption of digital learning technologies will be uneven and messy, across space and time as well as across vertical and horizontal institutional cultures.

In the interim, ways of bridging the so-called “last mile” will be need to developed, as a means of realising the potential of digital technologies. The most obvious option in the South African context is Print on demand.

[The following discussion of Print on demand draws extensively on a study commissioned by The Shuttleworth Foundation and written by PALM SA team member Steve Kronberg, with substantial input from Arthur Attwell of Electric Book Works and Eve Gray, the PALM lead academic. The study was published online in July 2008. Copyright in the report is owned by The Shuttleworth Foundation and licensed under a Creative Commons license, with the conditions Attribution and Share Alike. The report can be viewed in full at:]

https://docs.google.com/Doc?docid=0AV1-TXmPf3o9ZG12ZnRwal80N2Y3OGRqNmdi&hl=en

**The potential and limitations of Print on demand**

In their pure digital form and in an ideal world, digital books have the potential to remove print from the equation, turning the chain into a loop and allowing consumption to feed back into origination. Removing print also theoretically removes the need for physical distribution, although digital content also requires sophisticated technological solutions for warehousing and distribution, including hardware and software platforms, networks and bandwidth. It is also worth noting at the outset that, even in digital form, content requires highly skilled labour to write and illustrate, to edit, to package and to distribute.

POD appears to offer solutions for a number of key problems in the production and dissemination of learning materials, especially on a continent with vast distances, relatively small markets and a supply chain often characterised by logistical failures.
In theory, POD’s potential lies in using digital technologies to:

- Distribute content directly to end-users
- Extend the life of publications
- Reduce investment cost and risks of new publications

At the same time, existing POD services and initiatives such as the Espresso Book Machine (EBM) have serious limitations in small and thinly spread markets, whereas in Africa copy shops are ubiquitous and possibly have huge, though untapped, potential.

Digital products are thought to have the potential to significantly reduce the price of educational materials, given that authoring and online content development can be collaborative and 'free', or flexibly licensed. However, as soon as print and distribution are introduced, the situation becomes more complex and more contentious, as a result of the investments required. Rather, in the manner of open source software, this would probably mean the introduction of the concept of paid-for services and value-add as commercial enhancements of the free resources. However, the complicating factor is that of licensing – the user would have to be sure that the products (and their component parts) were licensed for commercial use.

According to the South Africa Book Development Council study on the cost of books, the typical cost breakdown of the recommended retail price of an educational book (excluding VAT) is as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royalties</td>
<td>10.5%</td>
</tr>
<tr>
<td>Origination</td>
<td>13.5%</td>
</tr>
<tr>
<td>Publisher's overheads</td>
<td>29%</td>
</tr>
<tr>
<td>Printing, paper and binding</td>
<td>11.5%</td>
</tr>
<tr>
<td>Distribution (from publisher to retailer)</td>
<td>5.5%</td>
</tr>
<tr>
<td>Bookseller</td>
<td>30%</td>
</tr>
</tbody>
</table>


This breakdown assumes large print runs using conventional (offset-litho) printing technology. Shorter print runs result in the relative costs of printing rising significantly, while the costs of origination remain static. Many South African publishers, asked about POD, tend to complain about higher unit costs for print, meaning that they are not familiar with a changed business model in which significant costs are removed from the equation, offsetting the higher print costs of POD. These are:
Warehousing
Financing
Risk (of unsold books and returns)
Returns

Moreover, as publishers like Cambridge University Press found out, they could keep “long tail” books in print that would otherwise have been written off, substantially increasing their turnover. At the same time, publishers have not yet found it cost-effective to completely decentralise printing as the increased unit cost of reduced print runs often exceeds the costs of physical distribution. Decentralised forms of printing (including POD) often do not achieve the necessary standards of durability, which means the costs of printed textbooks cannot be spread over a number of years.

Another major consideration is the capital investment required to set up a decentralised operation, including the costs of acquiring and fitting suitable premises, purchasing and installing machinery (which would mostly be imported), developing management systems, integrating content management systems with the rest of the supply chain, training staff and marketing the facilities (in the face of significant industry inertia).

Detailed financial modelling and operational planning would be required to ensure that the facility runs at a sufficient capacity to amortise the costs. For example, most large POD facilities run 24 hours a day, seven days a week, aggregating books by paper type and size in order to keep the product line running almost nonstop, with highly automated systems ensuring a constant flow of product. For example, the PALM team visited the new Lightning Source factory in the United Kingdom, which, although it is only one third of the size of its US operation, needs to produce a million books per year to be commercially viable.

A key consideration is economies of scale. As is pointed out in the discussion below, POD is only cheaper per unit than conventional printing at volumes below approximately 700 units. POD suppliers are quick to point out that in fact one should consider the unit cost "per sale", rather than the unit costs of printing alone, as POD reduces costs elsewhere in the supply chain as well (such as warehousing).

According to research done for the Publishing Matrix, the average print volume for a core school textbook would be between 3 000 and 10 000 copies in its first year of production. Subsequent years are often done as "top-ups". Nationally, the more successful titles could sell over 30 000 copies. Some publishers, during curriculum implementation, exceeded the 100 000 mark for some of their best sellers and a few reached total sales of up to 150 000 copies. As publishers often receive staggered orders and are required to supply within specified deadlines, print orders for core textbooks are often for between 2 000 and 3 000 copies, still far above the level at which POD is commercially viable.

It is worth noting that the education authorities also order significant quantities of other printed material, such as teachers’ guides and library books.

Academic textbooks have a different profile: the print runs are much shorter, supply is predominantly through a highly consolidated retail industry and around 45% of the textbooks used in higher education are imported. For textbooks published by local publishers (generally targeted at the larger undergraduate
classes), top-selling titles might have print runs of above 5,000 copies, but the bulk of textbooks sell under 1,000 copies a year.

Higher-level imported textbooks – which are often very expensive – also sell in low volumes. The retail market is dominated by one bookselling chain, Van Schaik Bookshops, which has recently been sold by Naspers to AVUSA Holdings, a media conglomerate that includes the Sunday Times. There are complaints that the retailers under-stock to reduce their risk in what they see as a photocopy-ridden market, leading to access obstacles for students.

Another aspect of the higher education textbook market that is often overlooked is that 38% of the students in the country are registered with UNISA, which therefore dominates the sector. UNISA uses digital publishing on a large scale in its course material production unit.

This means that POD might, in the higher education sector, provide a rational model for what is essentially a short-run market and one in which the high price of difficult-to-source international books is a problem. However, it also needs to be borne in mind that higher education, with its relatively good connectivity levels, is the educational sector most likely to go fully digital in the relatively short term.

The two main categories of POD

There are two main categories of POD, which we term “Centralised” and “Distributed”. In "Centralised POD", books are printed at a central location and dispatched to publishers, retailers or directly to consumers. Distributed POD involves books being printed either at, or close to, the point of sale.

The technologies and business models of these two approaches are radically different, as is their potential usefulness in printing books and other digital products. This section explores the former, looking at major types within each category, and section 8.2.2 explores the latter.

Centralised Print on demand

Integrated POD and distribution

POD at its most sophisticated integrates the three key stages of the POD-based supply chain:

- Buyer’s purchase/selection
- Printing
- Delivery to buyer

The market leader by far here is Ingram, in their Lightning Source division. Ingram is one of the largest book distributors in the world (by far the largest in the US), and the Ingram catalogue provides a vast database of books that finds its way (often through world-leading book statistics company Nielsen Bookdata) to every significant book distributor in the world.

This puts Ingram in the enviable position where booksellers need their catalogue more than Ingram needs them. When content creators place their books with Lightning Source for POD distribution, Ingram is listed
on book databases as the supplier for those books. Orders from retailers for those books arrive at Ingram, are automatically routed to the most appropriate Lightning Source plant, where the books are printed and dispatched within 48 hours.

Lightning Source has only one real competitor in Booksurge, a company owned by Amazon. By being integrated with Amazon, Booksurge benefits from Amazon’s reach as a retailer in the same way Lightning Source benefits from the Ingram catalogue.

Their printing machinery is highly automated, allowing for books to be printed, trimmed, bound and ready for dispatch in a matter of minutes. (On only four printing lines, Lightning Source UK can produce approximately a million books a year.)

Simple ordering systems, all accessible online, allow publishers to order books and have them delivered directly to their customers in as little as four days internationally. They also have capacity for accepting returns from booksellers, which is a massive advantage in a bookselling industry that in general demands the right to return unsold stock. (The cost of the return is borne by the publisher or content creator.)

Leading POD printers can produce books in both paperback and hardback (cloth and caselined). Four-colour (CMYK) printing is usually available of inside pages, but is still very expensive (as much as five times the price of black text), and only viable for short books such as children’s picture books. Four-colour covers are the norm for all POD books, and colour print quality on covers in most cases is almost as good as the very best lithographic printing.

Pricing for content creators usually comprises a set-up cost per book and a per-copy print cost. The per-copy print cost usually comprises a once-off set-up fee plus a per-page rate. For example, at Lightning Source UK set-up per book costs GBP42. For most page sizes, the per-copy print cost is: GBP0.7 + 1p per page. (The US Lightning Source plant is slightly cheaper, but this is largely a function of current exchange rates.) The Booksurge (US) set-up fee is $39 (waived in 2008 as an incentive to attract clients), and per copy $0.85 + $0.012 per page. (These examples are for a book with black text and a colour cover.)

South Africa

Over the past three years, Media24 has been developing systems and facilities for a range of digital book services, including integrated sales and POD at its On the Dot warehouse in Cape Town. Most orders are generated on its Kalahari.net book-selling site. Basic POD, managed manually, is already up and running, and they expect to have a highly automated sale–print–dispatch system in place by the end of 2008.

Media24's Johann van Tonder has been actively promoting their forthcoming services to South African publishers for the last two years, and several publishers have already signed contracts to supply their content on the Media24 platform. This platform will provide not only POD order fulfilment, but also a digital library service to institutions, ebook sales, and services for repurposing content for handheld and other devices.

Media24's investment in the opportunities offered by digitised content is vast, and unlikely to be matched by any other company in Africa. Naturally, this creates a dilemma for Media24's publishing competitors: faced
with the growing need to distribute content digitally and for POD in particular, they will have to enter into partnerships with Media24 or seek their own, potentially expensive, POD distribution solutions. These competitors may create enough demand for other players in the POD chain to flourish, through the creation of new partnerships aimed at integrating sales, printing and delivery.

**Stand-alone POD**

There are many large POD companies that are essentially printers, and do not have an integrated distribution facility, and yet are large enough to provide centralised on-demand printing for a wide range of clients. Two of the most significant of these are Antony Rowe (UK) and Publidisa (plants in Spain, Mexico and Argentina). These POD companies warehouse content provided in PDF by content creators, and make it available for ordering by those content creators, for delivery to any address. While the order–sales–delivery chain is very efficient, it happens across organisations in partnership, and is not fully integrated. (For example, Publidisa in Spain prints many books ordered through Lulu.com, a leading author services company that uses Lightning Source, Antony Rowe, Publidisa and others to supply books to its clients worldwide.)

Many of these companies offer conversion-to-PDF services (including scanning from hard copy). Technically, they are as advanced as the biggest, fully integrated POD companies. They use high-end digital presses, and their print processes are highly automated. Their paper choices are also usually limited to two shades of uncoated paper, and cover finishes are usually limited to gloss (although Antony Rowe offers matt and gloss lamination as well). Binding is usually PUR, paperback and hardback books are available in a wide range of trim sizes, and all covers are in full colour.

They also offer a pricing model comprising a set-up cost and a per-copy print cost, though for very large clients the set-up cost is sometimes negotiable for setting up large lists of books. Set-up costs per book are variable. For instance, Antony Rowe (UK) charges a set-up fee of GBP95, and charges a print per copy cost of approx GBP6 per book – about 20% more than Lightning Source. Publidisa (Spain, Argentina, Mexico) pricing is the same or higher, depending more highly than Antony Rowe on quantity (the quality of their books has often been criticised).

**South Africa**

There are no direct equivalents yet in South Africa. Electric Book Works has been working with two local printers (mostly with Megadigital) on the feasibility of setting up a true POD supply chain in South Africa, but the per-copy print costs are still fractionally too high at quantities below 50 copies to be attractive to most content creators. This may change in as little as a year, however.

Interpak in Pietermaritzburg already has the facilities and business relationships required, but hasn't linked them together to form a quick, reliable supply chain yet. Interpak's per-copy pricing is very good, but perhaps 20% too high to attract mainstream publishers. Shumani (a Caxton company) in Cape Town is in a similar position, but try to recoup what is essentially a set-up fee on the first few copies, making them very
expensive (e.g. R1000 for a single copy of a 200-page book).

**Distributed Print on demand**

**Local POD**

Local POD suppliers offer short-run printing to clients in their region, seldom beyond their own country or even city. These companies do not offer conversion-to-PDF services, though some do try to help clients with getting such conversion done, since many of their clients are small content creators who lack the expertise to produce print-ready PDFs.

Local POD suppliers warehouse print-ready content, allowing for quick turnaround times for reorders. They use high-end digital presses (often as good as those in the biggest plants in the world), and have automated much of the printing process – usually excluding binding and trimming, which is often done manually. Given their small size, they are flexible enough to provide variable data printing, specialised papers, and labour-intensive finishing (e.g. drilling and die-cutting), which is often outsourced. They have basic postage and delivery facilities for delivery direct to their client's customers.

In most cases, durability and quality are excellent. These suppliers are very sensitive to paper costs, since they are usually too small to buy paper in large quantities, and reorder paper from local paper merchants on a regular basis.

**South Africa**

In South Africa, Interpak and Megadigital are good examples (Shumani and Paper Chefs may just fall into this category, but are still very expensive on runs below ten copies, where true print on demand must be viable). They are large and efficient enough, and produce work of a high enough quality, to attract a wide range of content creators that include mainstream publishers. In South Africa these printers print a range of specialised and small-run educational materials, especially teachers’ guides, legal publications, and advance promotional copies.

Their pricing models vary hugely. They often include a high set-up cost per book, usually included in the first short run, rather than explicitly charged as a set-up fee (e.g. Shumani). At Megadigital (probably the cheapest for their quality for runs below 10 copies), a 240×170mm textbook of 200 pages costs approximately R50 per copy from the first copy.

**Small digital printer**

Small digital printers offer very similar services to POD suppliers, but tend not to match them on quality and consistency.

Their basic digital presses for text are mostly high-quality photocopiers, and they usually have at least one digital colour press for covers and occasional colour pages. Colour reproduction quality varies according to
the machinery installed. The HP Indigo, which uses a miniature, fully electronic version of a lithographic printing process, is popular for colour work and for variable data printing.

Trimming and binding are manual, and often binding is outsourced, especially perfect binding. As a result the quality of binding is highly variable: binding outsourced to specialist book binders can be as good or better than that offered by more sophisticated POD suppliers, or far weaker and/or inconsistent. Finishing (e.g. cover lamination) is usually outsourced as well.

Most small digital printers have basic postage and delivery facilities, which is all manual and cannot benefit from any meaningful economies of scale.

For these digital printers, much of the machinery used in-house can be leased from copier companies (such as Xerox and Konica Minolta), so the initial capital investment required to start such a business is not prohibitively high for private entrepreneurs. Finishing equipment, however, must usually be purchased.

Pricing at digital printers is highly variable, usually depending on the degree to which finishing must be outsourced. Some digital printers (e.g. Digital Print Solutions in Cape Town) can print single copies for less than their larger POD-supplier competitors, but inconsistent quality or limited paper and finishing options mean they are not reliable options for mainstream publishers.

Nonetheless, they may offer the best value for money for books where finishing and consistency are not crucial (e.g. short-term training material, cheap study guides, instruction manuals, student readers, and even some textbooks). These printers will usually store all their clients’ work so that reprints are quick and simple. There is usually no per-book set-up cost.

**South Africa**

Local examples are Digital Print Solutions, C2 Digital, and DigitalBureau (all Cape Town).

**Espresso Book Machine**

The Espresso Book Machine is a printing and binding machine that produces in one process books stored digitally on its hard drive or network. A book can be selected from its installed catalogue and be printed and bound in approximately five minutes. The machine has been developed by On Demand Books (ODB) in the US, and has been available for purchase since early 2007. The size of a small room, the machine is intended for use in libraries and retail spaces, where books can be printed as they are needed on-site. So far, EBMs have been installed at several US university libraries and at Bibliotheca Alexandrina (Egypt). ODB has recently signed agreements to supply EBMs to Libri BoD (Books on Demand, Germany) and one to the Blackwell bookselling chain in the UK. The New Orleans Public Library is currently installing one.

The EBM comes with a library of public-domain books (from the Open Content Alliance repository, archive.org) and selected books from various digital warehouses (e.g. Lightning Source is offering publishers the option to have their books included on the EBM's catalogue and earn royalties accordingly, though those
The EBM has limited finishing options and paper choices, but ODB claims it can take a wide range of paper stocks. The choices available on any one EBM site will depend on the printer units installed with the machine (one machine can have several printers installed). Trim sizes are adjustable for each book printed, and the EBM can print books of between 40 and 550 pages. At this stage, the books all have black text and colour covers. The binding quality is said to be equivalent to good perfect binding.

Installation costs vary, depending on location and the printer units installed, but estimates vary between US$50,000 and US$100,000.

The machine only requires one minder, so staffing costs are low. For book pricing, ODB claims the machine can print for US$0.01 per page (which would be significantly cheaper for most books than most POD options currently available), but this is yet to be widely tested. As indicated by the early adopters for the EBM, it is particularly suited to educational and academic sites, largely because of the nature of its pre-installed catalogue.

South Africa

There are no EBMs installed in South Africa yet, though it is possible that demand in academic and/or library settings may be sufficient for a non-profit organisation to install one. Installation costs are likely to drop rapidly over next two years as the EBM 2.0 is developed. The EBM is potentially valuable in developing countries for library development programmes, where books could be produced centrally as they are needed at outlying libraries, allowing for gradual demand-based stocking of libraries. Steve Kromberg of the PALM team was contracted by The Shuttleworth Foundation to assist On Demand Books in conducting a feasibility study for a programme aiming to install three EBMs in Africa.

Read more about the EBM (and see a picture) at:

Copy shops

As modest as they are, copy shops remain a crucial part of content distribution. Colour and black printing is all photocopy based, and production manually driven. Finishing is limited to spiral binding (and similar), and occasionally perfect binding. There are usually no trimming facilities, and all printing is done on A4 paper, almost all of it white bond.

Materials printed in this way have a relatively short life span, both because of the quality of the binding, and because the A4 page size is large enough to be damaged easily when it is transported.

Networked photocopiers are more and more common, and these allow for printing from digital files opened on site. This means copy shops are often capable of turning digital files into low-quality books.

While copy shops are unlikely to be formally integrated into a POD supply chain, they may inadvertently
fulfil this role anyway. Many copy shops in urban areas also function as Internet cafes. Therefore, should a customer download a PDF in store and have it printed in the copy shop, that copy shop would be fulfilling the basic POD sale–print–deliver supply chain, albeit inadvertently. Therefore they should be considered a potentially valuable role player in decentralised POD distribution.

Per-copy book pricing at copy shops is highly variable, ranging from 30c to 60c per page – often comparable to large POD suppliers, though for a far lower quality book product. There are almost no economies of scale.

**South Africa**

Copy shops are very common in South Africa's major towns and cities.

**The Paperight project**

In response to the PALM team’s analysis and as a result of Electric Book Works’ own strategic thinking about their business model, EBW submitted a proposal to develop a “decentralised Print on demand (POD) Internet portal”, which would aim to facilitate the legal printing of both licensed and open content at photocopy shops. In essence, the portal would also provide an easy-to-use repository of products which, it was hoped, would make it easier for participating publishers to place their flexibly licensed materials online.

The Paperight project aimed to support the other demonstration projects and to explore the potential of what we have called distributed POD to turn any print/copy shop into a print on demand bookshop. The intention was to use a prototype Paperight website to test logistical and cost factors of downloading and printing book content in copy shops. In addition to EBW's own testing, they worked with a focus group at the Rosebank Methodist Church to produce a book written specifically from a series of lectures delivered during the pilot project.

The pilot's deliverables included:

- Getting the prototype Paperight.com site live, preparing PDF content and placing it on the site (including EBW books, Creative Commons works, and public domain works);
- Meeting copy shop managers to discuss the business case and operational issues;
- Testing download–print logistics and costs at a range of copy/print shops, and
- Interviewing publishers in South Africa and abroad to canvas attitudes to rights and operational issues.

The prototype site was created using a free, open-source content management system. This came with various constraints, but the prototype site did let us examine and test site usability issues, logistics and human processes in copy shop settings.

The Paperight Project, went through a pilot phase, using a prototype front end to test logistical and cost factors. In addition to internal testing, Electric Book Works worked with a test group at the Rosebank Methodist Church, compiling a series of lectures delivered during the pilot project into a book. The book was
made available through a conventional bookstore at a full retail price, from the church office at a discounted price and from the Paperight site, where it could be downloaded free of charge or printed at copy shops.

**Content and licensing**

EBW started with material developed by other PALM project participants. Unfortunately, EBW were unable to use this content, although the exercise provided invaluable lessons on rights and licensing issues, especially those around Creative Commons Non-Commercial licenses. A copy shop print-out of a CC Non-Commercial book would violate the non-commercial terms of the license. This means that much content published with a CC Non-Commercial license cannot, strictly speaking, be printed by a commercial print/copy shop, although only some rights holders would have intended that. (This problem with the use of the CC Non-Commercial licenses is the subject of an extensive research project undertaken in 2008 and 2009 by Creative Commons.)

For one large, commercial publisher, participation in the Paperight pilot was agreed to in principle by editorial staff, but ran aground when approval from senior management was needed. This may suggest that decision makers at commercial publishing companies are wary of or uninformed about the nature of digital distribution (especially the need to experiment), or that existing internal digital strategies, which are often in their infancy, preclude participation in any other initiatives.

EBW did include eight free healthcare books published by them and five books under open licenses (from Google Books, the Internet Archive and Creative Commons). The content included a range of PDF types and file sizes. Some were ideal for online delivery, and others were problematic, especially those created from scanned pages, where text was not searchable (because the files had not been OCR'd) or where a visible image layer remained in the PDF over OCR'd text. The main problem was file size, which increased both download costs and printing time (spooling/loading at the printer). A related problem was the quality of the image layer when printed. Many book content PDF files did not include a cover image as their first page, which made at-a-glance listing of books using thumbnail images unsatisfactory.

**Copy shop participation and testing**

Three copy shop managers, the regional managers of a large print/copy/courier company, and the manager of a large, innovative academic bookstore were interviewed about the project.

To copy shops, it was important that:

- Any service that increases print volume is welcomed, as long as it's quick and easy;
- A wide range of content is critical, or at least the right content for their local customers;
- There are clear opportunities for integration/partnership between Paperight and copy shops to provide further services, such as a service allowing customers to order book content online and have it delivered by a local copy shop;
- Content should not just include books, but other kind of documents that print/copy shops could print
and regular home printers could not (such as architectural plans or colour photographs), and

- Shop staff should not have to spend time helping customers if possible (at least not with buying or downloading content; only with printing).

EBW tested downloading and printing out, including checking costs, at various copy/print shop sites. Where possible, the book Adult HIV from the EBW Healthcare series was used to test and compare costs of acquiring, printing and finishing content.

- At some sites, Internet terminals are very basic, fairly old computers. This emphasised the need for a very simple web interface that will work well on low-end computers.

- It is very difficult for a person unfamiliar with computers and printers to select print settings (e.g. double-sided printing), especially at an unfamiliar workstation.

- Costs to a customer would often include Internet time, printing costs (including some wastage for mistakes), and binding (if desired).

- In some stores, the Internet terminals and large-scale printer-copiers are not networked. This makes it trickier for customers to download and print in one sitting, and they will then often need a flash drive or to email the printable file to another machine. This would also make it difficult to print files delivered with digital rights management (DRM) that ties a file to a particular identity or machine.

The average cost of printing out a book was more than 35% lower than the retail price of that book, but without a rights fee payable to the publisher. If this rights fee was 35% (or less) of the print-edition retail price, then books printed through Paperight at the test locations would cost the same (or less) than the conventional printed editions. This is a critical feature of the Paperight model: the product must cost the end user the same or less than purchasing a conventional print edition. This is critical because that is what a customer (and other stakeholders such as publishers and copy shops) will expect. The customer will often be less conscious of other value-adds, such as the availability of a wide range of content or the instant, on-demand nature of content delivery.

Key conclusions from the copy shop interviews and tests included:

- Clear, easily accessible guidance on setting up print options must be available on the final site.

- The final production price will vary widely from site to site, making it more important to recognise that users will print out only parts of books, and build in support (perhaps through third parties like Symtext and Bookriff) to sell chunks of books for lower prices.

For the focus group, EBW worked with a diverse group of attendees of a series of lectures at the Rosebank Methodist Church. A short book was produced from the text of the lectures, and attendees could choose to buy either the finished book at full retail price or have their own copy printed at a copy shop. EBW wanted to know how readily participants would switch to a different – though cheaper and more convenient – means of obtaining the recommended text.
The online version of the book was downloaded by 17 of the 42 people invited to participate, a response rate of 40%. Of these, 12 had attended the lectures given by the author. Almost all participants said they planned to print out the book: six indicated that they would do so straight away, nine stated they would do so at a later stage. Two said that they would never print the book out. The majority (14) downloaded the book from work. This may indicate that participants prefer to perform computer-related tasks in a work environment where such facilities (as well as good-quality printers) are generally readily available, that they only have Internet access (or better Internet access) at work, or even that they were responding immediately to email reminders that went to their work email addresses.

The Rosebank Methodist Church office sold around 80 copies of the physical, printed book (to the public as well as focus group participants). While most focus group participants who downloaded the ebook had not bought the official print edition, all four who did indicated that they planned on printing the ebook out later.

In summary, the desired outcome was met: participants from a variety of backgrounds successfully used the Paperight system to acquire both a digital and home-printed version of the test book. Almost all were eager to hear about future developments, suggesting that they would do so again.

**Publisher and potential stakeholder interviews**

During the pilot, Arthur Attwell had conversations and correspondence with a wide range of role players in the publishing industry about Paperight (listed in the full Paperight report).

The overwhelming majority of potential stakeholders were very enthusiastic about the Paperight model of distributed print on demand. The environmental advantages of Paperight (mainly, not shipping physical books) elicited a particularly strong positive reaction from those we spoke to, often stronger even than the social/educational or financial advantages.

Stakeholders with existing technologically adept content management systems immediately saw the potential for integration (e.g. the Copyright Clearance Center, who provide the Rightslink licensing service).

Potential stakeholders reacted very positively to the usefulness of Paperight as a portal back to their sites, through hyperlinks or through affiliate, book-specific advertising.

When concerns were raised, they were usually about potential cannibalisation of the "official print edition" market. It was necessary to emphasise that Paperight reaches markets not reached by official print editions, and that in those markets that do have good availability of official print editions, the usual value-adds of official print editions (aesthetics, bookseller curation, longevity, etc.) will sustain that market.

Many rights holders struggle to think about their books in terms of large, automated batches of content, preferring to think in title-by-title terms. This is a challenge for Paperight (and any service that aims to automate the management of thousands of titles), since publishers must understand the basics of en-masse automation in order to incorporate it into their distribution model.
Key findings and recommendations

Licensing issues

The Creative Commons Non-Commercial license can hinder distribution, since many forms of distribution require a financial transaction (and business model) at some point in the supply chain. Rights holders must be very sure about their reasons for using CC NC. If they are using CC NC to protect a commercial revenue stream, then using CC NC is a valid commercial strategy. If they are using CC NC to defend a principle (e.g. "this is free content, therefore no one should have to pay for it"), then CC NC is a bad choice, since it hinders distribution in practice. A CC Share Alike license is more appropriate. This should be emphasised whenever CC licenses are discussed.

Concerted efforts are needed to educate decision makers in content-related organisations (publishers, research organisations, universities, etc.) about the Internet's digital distribution opportunities, including how those relate to flexible licensing (e.g. searchability, fan-lit, etc.). This could be pursued at industry-body level, or left to those organisations to prioritise as the need becomes obvious internally. In the latter case, the concerted effort could be to make advice or advisors clearly available.

Content distribution services

Any successful content distribution service will have to actively investigate integration/partnership with existing organisations (e.g. print/copy shops, aggregators, licensing bodies) to provide value-adding services. Partnership is not only important to digital distribution, it's inherent to it. The service would need to include books as well as other forms of documents. The distinction between books and other kinds of documents will get more and more blurred (e.g. print/copy shops could print documents that regular home printers could not, such as architectural plans or colour photographs).

Shop staff should not have to spend time helping customers if possible (at least not with buying or downloading content; only with printing). The service must be simple enough for an Internet first-timer to use. We should provide clear, easily accessible guidance on setting up print options on the final site.

Internet terminals are often very basic, old computers. The service must have a very simple web interface that will work well on low-end computers.

Digital rights management may offer more challenges than opportunities. It is important to assess the real financial value and impact of using, integrating with or deploying DRM technology. Not using DRM may mean a smaller catalogue of content, while the costs of using DRM may exceed the sales made. A further consideration is that having a larger catalogue (including DRM content) may attract more customers, offsetting the costs of DRM even if those customers don't purchase the DRM content.

Rights holders must be encouraged to set rights fees at or below 25% of the retail price of a book. This is a rule of thumb. Much more data would be needed for a firm guideline.

The service must recognise that users will print out only parts of books, and build in support for this. Rights
holders must understand that digital content and distribution models must be designed for automation. Many rights holders struggle to think about their books in terms of large, automated batches of content, preferring to think in title-by-title terms.

The environmental advantages to any kind of digital distribution should always be made clear in addition to social and financial ones. The environmental advantages of Paperight elicited a particularly strong, positive emotional reaction from those we spoke to, often stronger even than the social/educational of financial advantages.

**Technical distribution of book files**

To enable real accessibility, it is still necessary to optimise file sizes. For example, we do not believe Paperight can use Internet Archive files for bandwidth reasons; Google Books files are slightly better, being smaller in file size.

Wherever it can be justified, effort should be made to human-check scanned, OCRd PDFs so that their image layers can be removed, reducing file size (and allowing for conversion to XML-based formats). Technological means, such as reCaptcha (now owned by Google), offer excellent solutions to the problems of OCR inaccuracy, and are a critical part of the development and accessibility of book content online.

For book content online, cover images are important for a user's organisation and recognition of book files. Where publishers have not included a cover image as their first page, a cataloguing or reading system should automatically create aesthetically pleasing, clearly readable cover image thumbnails. Services like Paperight could in future automatically template high-resolution cover design for end-user printouts.

**Print on demand: The way forward**

As can be seen from the highly technical discussion in this section of the current report, what started out as a simple idea – the use of POD to bridge the digital divide – turned out to be a complex task. This did not, however, serve to disillusion the PALM team. On the contrary, it also gave us an invaluable idea of the practical challenges that will be faced. Consequently, it provided us with the beginnings of a road map towards the effective use of flexible licensing in a way that maximises impact through ensuring that valuable content can reach parts of the world historically and currently marginalised in the information society.

In the following section, the project’s conclusions about flexible licensing are summarised into three categories:

- Potential
- Barriers
- Recommendations
Obstacles to the use of flexible licensing

Frances Pinter’s assertion that the battle referred to by Benkler could be resolved through the use of flexible licensing remains valid. However, our research demonstrated that while flexible licenses do potentially offer a means of increasing access to and participation in the creation of knowledge, a number of obstacles must be overcome for publishers to fully realise their potential.

At the heart of the obstacles we identified is the fact that existing business models demonstrably able to exploit this potential are not yet sufficiently evolved to convince commercial book publishers to embrace them whole-heartedly, and their use is more likely to consist of a marginal exercise primarily aimed at marketing traditionally licensed material. Publicly funded universities and research institutions offer the best potential for their use, although this sector is moving more in the direction of full open access, free to the consumer.

Underlying the absence of a viable business model is a range of further obstacles, summarised below in this section.

Technical obstacles

These include:

- Limited access to and affordability of ICTs and broadband;
- The lack of viable South African digital platforms of sufficient scale for widespread dissemination;
- The lack of easy-to-use and trusted online payment mechanisms, which makes it extremely difficult for innovative entrepreneurs to create revenue streams on the Internet, and
- The general challenges facing most multimedia content companies in producing content for mobile Internet, despite the widespread use of mobile, primarily due to the cost of mobile bandwidth, the nature of predominant mobile devices and lack of demand for such content in the mass market.

Economic obstacles

These include:

- Lack of financial investment by publishers;
- Unpredictable returns on investment, and
- Cost of bandwidth and ICTs.

Subjective obstacles

These include:
- Conservative management attitudes that prefer “the devil that you know” to taking risks on the largely unpredictable returns of new and experimental business models, and

- Organisational inertia, resulting from the difficulties inherent in re-engineering organisations around new business models.

### Capacity obstacles

These include:

- Difficulties both in creating new capacity and diverting human resources from existing production, mainly due to the recession and the demands of publishing for a rapidly and constantly changing education system.

### Recommendations

#### Educate the public

As simple as online services and content sharing may seem to those comfortable using the Internet, others may find it impossible to comprehend. Offline (e.g. printed, TV, radio) documentation on the basics of Internet use would be a concrete way to increase Internet penetration.

#### Educate publishers, experiment, create incentives and network

Conventional publishers are notoriously ignorant of new technologies and business models being adopted by start-ups and multimedia companies. The former can benefit from learning from the latter and the latter need quality content to populate their operations.

Innovative experiments with content sharing and flexible licensing are likely to emerge as entrepreneurial ventures by small, flexible, responsive organisations. The latter needs financial incentives to take these on, as do conventional publishers.

Embracing financial incentives may also mean actively discouraging license terms that seem open but in fact hinder commercially motivated distribution, such as the Creative Commons Non-Commercial license.

#### Support scholarly publishing and communication

It is clear from our research that the academic community is home to the most significant early adopters, and that their success is influencing other publishers to experiment. Academic institutions and publishers should therefore be encouraged to pioneer flexible licensing, with the intention of creating sustainable models that can be adopted by general and educational publishers. A key challenge and opportunity is the tangible erosion of the boundaries between “publishing” and “communication” taking place as interactive means of
teaching, research, knowledge creation and sharing evolve.

**Support sharing, availability, curation, dissemination and sales**

All the telecoms infrastructure and simple, large-scale content aggregation in the world will be meaningless without on-the-ground, locally relevant and accessible last-mile delivery mechanisms. At the same time, it may be more efficient to customise international platforms than to invent new ones for local application.

There are two sides to sharing content: storage and curation. Content should be stored in a standards-based, accessible manner. Separately, content needs to be curated: that is, good content needs help, whether by algorithm or human intervention, to float to the top of any discovery process. However, building custom in-house storage and sharing mechanisms, or using untested ones, can waste resources and limit integration opportunities.

**Support automated licensing systems**

Currently, licensing and royalty payment systems are predominantly controlled by publishers, are very diverse and are manually managed, making it very difficult to get permission to reproduce and disseminate licensed content. This applies to a large proportion of flexibly licensed content, as well as that licensed using conventional licensing.

**Support infrastructure and digital platforms using open standards**

Any digitisation programme should focus on using standards so that its content – or at least the metadata describing its content – can move automatically, en masse, and in an accessible manner.

**Encourage local caches**

Despite the arrival in the coming years of new fibre-optic cable into parts of South Africa, bandwidth may remain an obstacle for efficient use and development of Internet-based content sharing and commerce. Local caches/mirror servers for content and other resources (such as open source software) could reduce the time spent and bandwidth costs for businesses and individuals.

**Develop mobile and internet payment services**

Ecommerce has become so dominated by credit card-based transactions that it can seem the only way to make and take payments online. In Africa, credit card payments may not be as successful a payment mechanism as they have been in the developed world, given the large numbers of unbanked people on the continent and the difficulty of obtaining credit. Mobile payment systems that do not require credit cards or bank accounts are growing, and offer huge potential for new, easier ways to conduct online transactions.
Develop local print on demand

To reach people who do not have access to ICTs or existing print distribution networks, as well as those who require printed copies of publications, it is crucial to mobilise and use available infrastructure that can download and print material from African and international publishers.

2 Conclusion

The potential of flexible licensing

The PALM South Africa project demonstrated the significant difference between theoretical potential and the practical realisation of that potential. It also enhanced our understanding of what it might take to realise the potential of flexible licensing. Nevertheless, after the conclusion of the project, the team remained cautiously optimistic about the following potential benefits of more widespread adoption of flexible licensing, in combination with ICTs:

- Increased participation of African intellectuals, and the broader population, in the production of knowledge, and increased engagement in public debate about existing knowledge resources;
- Increased production and publishing of knowledge resources in Africa, and a significant increase in the number of commercial, alternative and non-profit organisations able to participate in publishing;
- Expanded dissemination of knowledge to markets previously “off the map” of most forms of publishing other than school textbooks, and
- Significant resolution of some of the previously intractable problems experienced in intra-African exchange of and trade in knowledge, as well as increased trade and exchange between Africa and the rest of the world.

The key question is to what extent the PALM SA project demonstrated this potential. Did the demonstration projects show that this potential can be realised? The simple answer is a qualified “Yes”. Yes, because the demonstration projects showed that publishers were far more willing than we expected to learn about and engage with alternative licensing models and new business models. A “qualified” yes, because the projects showed the extent of the challenges that need to be overcome to realise that potential in South Africa: to develop appropriate infrastructure, technologies, platforms, and systems that move substantially beyond the humble experiments inspired and generated through the PALM project.

A paradigm shift

The PALM team concluded that we should not underestimate the mental and psychological paradigm shift
required to effectively engage with new publishing and licensing models. From this point of view, the PALM SA project was seriously under-resourced, although it was never intended to be anything more than a limited hands-on experiment that could guide future, hopefully better-resourced and much more ambitious programmes and projects. As we found with most of the publishers, the level of support and active engagement required was substantial, especially as the change agents involved in the demonstration projects had to replicate the paradigm shift many of them reported achieving in the Publishing Workshop within their organisations. This is less challenging, though not easy, in very small, flat organisations, where the change agents were also the managers or had significant influence, and where these organisations were motivated by public benefit.

In larger, more complex, more commercially oriented organisations, even those with the best will in the world, harnessing the resources, time and technology to experiment proved to be too great a challenge.

Return on investment

In all cases, senior management needed to be convinced that flexible licensing is consistent with their overall strategy and that they would get an adequate return on their investment, whether that return is in a financial contribution, an effective marketing tool, increased public benefit through more effective dissemination of their knowledge resources, or through combining flexible licensing with other social media platforms so that they could actually enhance the value of their content to their audience, or increase public participation in and loyalty to their knowledge creation models and systems. Management also needed to be convinced that flexible licensing was consistent with their communication strategy.

The study also demonstrated that one cannot underestimate how deeply embedded conventional licensing and the concomitant business models are within organisational structures and processes, and just how powerful the legacy models are in shaping the way people think and act.

Measuring impact

Although not within the scope of the PALM project, what would be extremely useful is an in-depth analysis of the actual impact of the demonstration projects on increased access to and production of knowledge. As Outcome Mapping theory argues, establishing the impact at the level of the consumer, or the public, is at best guesswork. Not only is it difficult to measure the impact, but there are too many contributing factors to assign relative significance in terms of causation with any degree of accuracy. One proxy may be statistics relating to the number and origin of downloads of flexibly licensed content. This proved to be impossible to ascertain within the time-frame of the project.

Using Outcome Mapping, we defined the desired impact of our project as altering the behaviour of the participants from publishing organisations. A far as behaviour change is concerned, all of the publishers involved in demonstration projects reported that the process had added value to their work.
Appendix A: Map of potential, obstacles and recommendations

The following table summarises and maps potential, obstacles for achieving potential and recommendations arising out of the PALM South Africa project.

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<thead>
<tr>
<th>Potential</th>
<th>Obstacles</th>
<th>Recommendations</th>
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<tr>
<td>Increase publishing using digital technology</td>
<td>Increased adoption by publishers of emerging business models and technologies</td>
<td>Educate publishers about what is available and support experimentation</td>
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<tr>
<td>and flexible licensing</td>
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<td>Support academic and scholarly publishers as pioneers</td>
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<td></td>
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<td>Network ICT businesses and developers with content producers</td>
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<td></td>
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<td>Support availability of large-scale platforms facilitating curation, dissemination and sales of published products (reinventing is not economically efficient)</td>
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<td>Support efforts to simplify and automate licensing systems, permissions and royalty payments</td>
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<td>Develop and encourage financial incentives for publishers</td>
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<td>Expand dissemination to new markets</td>
<td>Broader public access to Internet and ICTs &quot;Last mile&quot; mechanisms</td>
<td>Support rollout of infrastructure and digital platforms using open standards</td>
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<td></td>
<td>that enable access beyond reach of ICTs</td>
<td>Encourage existing international services to cache locally</td>
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<td></td>
<td>Support development of widely available mobile and Internet payment services (especially those that include the unbanked)</td>
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<td></td>
<td></td>
<td>Support development of local print on demand technologies</td>
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<tr>
<td>Increase public participation</td>
<td>Wider public use of Internet and ICTs</td>
<td>Educate the public about what is available (tools, precedents, etc.)</td>
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<td></td>
<td>Improve discoverability of relevant resources through effective curation</td>
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<td>Support academic and scholarly publishers as pioneers</td>
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<td></td>
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<td>Identify and encourage simple ways to share content</td>
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<td>Improve African participation in exchange and trade</td>
<td>Support development of local print on demand technologies</td>
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Appendix B: Outcomes Mapping Progress Markers

See attached PDF
Appendix C: PALM South Africa Outputs

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