The African Digital Commons

A Participant's Guide, 2005

A conceptual map of the people, projects and processes that contribute to the development of shared, networked knowledge across the African continent.

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Foreword

One of the goals of the Commons-sense Project is to conduct research that helps equip African activists and decision-makers with the information they need to develop cutting-edge, relevant intellectual property policies and practices.

We decided to begin with a map – a map that hopefully presents a broad picture of how far we've already come in Africa towards the goal of achieving a "digital information commons", as well as providing some sense of how to grow it further. We have tried to chart the international, regional and national policies, players and movements that to some extent dictate the scope of the commons in Africa, and at the same time to outline some of the creative responses from people on the ground working towards the expansion of the commons in some way.

Because we wanted to get as extensive a picture as possible of who is already involved in digital commons activities throughout the continent, we decided to try to get people in Africa to represent themselves in the *Guide*. The technology we used was an online "wiki" which anyone, anywhere in the world could edit, amend, build on and improve. This *Guide*, then, is the offline version of a living "wiki" built by the people living and working on these issues in Africa.

We are hoping that the offline publishing of this *Guide* can become an annual event, where we take stock of how far we've come, how issues, policies and laws have changed, which new projects have begun, and what the impact has been on the ground and on the net – in terms of the growth of the African Digital Commons.

In time, we're hoping that the *Guide* will be used in classrooms and offices, by policy-makers and activists, educators and students, to raise awareness around the value of the commons to African innovation, education and creativity.

One last word of thanks must go to our colleagues at the LINK Centre for their support and advice, to Wits University Copyright Librarian Denise Nicholson for innumerable leads and contacts, to A2LM in Southern Africa project leader Achal Prabhala for editorial support, to the IDRC – especially Heloise Emdon and Steve Song – for their ongoing encouragement, and finally to the hard-working builders of the African Digital Commons who, in the face of many challenges, continue to inspire with their vision of a continent that is turning the corner in many ways.

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Introduction

As the writings of Lawrence Lessig and others cogently argue, the digital revolution is a decidedly double-edged phenomenon when it comes to openness and creativity.

On the one hand, the internet presents an historic opportunity for traditionally passive "users" of the media to become active participants in the construction of meaning and the publishing of creative and innovative works of expression and technological development. In a network where no one information provider is given priority over another, or where the power to publish is found at the "ends" of the network, rather than in the "middle" or the intermediaries, everyone with an internet connection can have instant access to a potential audience of billions from around the world. On the other hand, there is a significant move by the handful of traditional "publishers" to set up barriers that threaten the potential of the digital realm to level the playing field and create a truly universal medium for creative expression and technological transfer.

There is an aggressive pursuit of copyright protection and other intellectual property rights (IPR) protection by various "rights-holders." These rights-holders are often not the authors of creative works, but rather big firms who own the rights and aim to maximise their value. For these copyright rights-holders, digital technologies present clear challenges (e.g., how to control mass, high-quality reproduction of illegal DVDs?), while at the same time providing new tools to restrict use (e.g., digital rights management (DRM) tools on the internet).

Best-known are the battles around music and film reproduction, which are essentially battles around entertainment content. But the practice of copyright protection in the digital realm goes far beyond these areas and includes more "serious" types of copyrighted material, including software, academic journals and electronic databases of educational content. Battles over access to these knowledge resources get much less mainstream attention than the stories about clampdowns on "pirated" DVDs and peer-to-peer (p2p) music-sharing. Not much is said in the mainstream media about the struggles of people who wish to copy and share not for commercial gain but rather in order to further their ideas through greater public access to knowledge. There are thousands of librarians and educators who are not interested in getting their hands on a cheap copy of *Shrek 2* or *Kill Bill 1*, but who may want to be able to make free copies of portions of readings for students, to distribute their writings freely online, or to give their students access to research databases.

Digital technologies and international networks make it possible for a student or researcher to have access to unparalleled amounts of information on which to build and with which to innovate. The internet provides an opportunity to slash the costs of academic publishing, allowing academics, researchers and scholars to engage in a continual process of self-publishing and interactive editing. There is great excitement about these possibilities. But at the same time many of the opportunities afforded by new technologies are being limited by a system of copyright and parallel technical measures that emphasise only "protecting" and distributing content – a system and measures based on the concept of "all rights reserved" that allows publishers, even publishers of clear

public-interest content, to charge high fees, or impose highly restrictive conditions, for the use of such content. Thus, one finds that recent evolutions in digital applications, and in the networks over which digitised content flows, are offering up examples of both opening up and "privatising" of information/knowledge resources.

Public Domain

The global public information domain – or "information commons", as it is called in this *Guide* – at times seems to take on the character of a giant swimming jellyfish, alternately flaring open and shrinking as it travels through oceans of content. For every Napster-isation there seems to be a corresponding digital-rights-management-isation, for every GNU/Linux a Microsoft, for every on-line collaborative Wikipedia a giant multinational Bertelsmann publishing firm.

Many of the restrictions on access to online information – restrictions imposed by lawsuits, DRM and database licence fees – are imposed in the name of that quirky branch of intellectual property known as copyright. Most people would agree that copyright – control by the author/creator over copying and other uses of her work – is necessary to encourage and reward creators of valuable content. But it also seems true that the narrowness of public-interest exceptions to copyright rules, and the extremely long copyright terms that are now becoming the norm (up to 95 years in the United States) are going far beyond the original intention of copyright (the intention to reward creativity and stimulate innovation) and are potentially stifling the whole flow of knowledge and innovation at both global and national levels. (Lawrence Lessig's 2004 book, *Free Culture*, readable and downloadable for free at **http://free-culture.org/freecontent**, argues this point persuasively in the US context.)

It seems clear that for the digital information commons to grow and remain vital, there needs to be more "in-between" – more applications of digitisation, and of international digital networks, that balance the rights of publishers with those of the users, rather than prioritising one at the expense of the other. We're still arguing about the balances that need to be struck. Take, for instance, the Apple iTunes site which, at first glance, seems to benefit all parties: the listeners, record companies, creators, and Apple. Although Apple has shown us that people will pay for a legitimate music download service, many have deplored Apple's DRM technology that supports only its own iPod player as a playback device, and restricts customers to using the iTunes Music Store on Windows and Apple computers. In other cases, the in-betweens and new models are coming from artists or "techies" or university librarians or law professors who are breaking down conventional notions of how copyright, publishing and innovation are supposed to work. The Creative Commons (cc) flexible copyright licensing system is emerging as a successful in-between, allowing creators to adopt a "some rights reserved" approach to their works. When using a cc licence, the author or creator specifies which uses she will allow others to make of her work – commercial or non-commercial, allowing derivatives or not – and attaches the appropriate cc licence to the work, thus providing copyright clearance to certain uses up-front, as a tag or "welcome mat" to the file on the internet. A re-producer of Creative Commons-licensed materials need not hire a lawyer or waste time tracking down the creator – or the creator's corporate boss – to get permission to make a particular use of the work. The allowed, and not allowed, uses are clearly stated.

Meanwhile, the author does not give up his "moral rights" to the work, and is able to take action against misrepresentation of his creativity by others. The author is merely limiting his exclusivity rights, not giving them all away. This *Guide*, for example, is being published under a Creative Commons licence called the Creative Commons Attribution-ShareAlike 2.0 South Africa Licence**.** This licence enables others to re-publish the *Guide* on their own website, to use it in training materials – both on a commercial and non-commercial basis – to translate it and sell it, even to cut it up and make it into a poem, but only if the resulting derivatives are attributed to us and carry the same licensing conditions as the original.

The Creative Commons system, developed by Lawrence Lessig and others in the US, is premised on the idea that much of the information and creativity being kept out of the public domain on the grounds of copyright protection is actually of little or no commercial value, and is being held out of the public domain due merely to overzealous lawmakers. Disney Corp.'s battles to restrict commercial use of Mickey Mouse, and the record companies' desire to prevent unpaid distribution of Britney or J-Lo's latest confection, are having a chilling effect on all sorts of other content that is really only of interest or value to a few thousand people spread out across the globe. Creative Commons and this *Guide* are not about encouraging illegal re-publishing and use of Mickey or Britney. Commercialisation of these realms of culture, and companies' prosecution of "pirates" of this kind of material do not worry the drafters of this *Guide*. It is the restrictions on the use and re-use of important public information – information that should be in the public domain, in the digital information commons – that are worrying. It is one aim of this *Guide* to map the terrain of information and content applications that copyright should not be allowed to block from wide use and propagation.

Section 1: The Digital Information Commons: Mapping the Terrain

1.1: Information Commons

This whole *Guide* is premised on the notion that there is such a thing as a "digital information commons". The expression is a bit of a mouthful. The conceptual terrain underlying the expression is also a bit complicated. We need to look at inter-relationships between three important concepts – the notion of copyright, whose laws have moved farther and farther from the ideals of balance and public interest that characterised their beginnings; the trends towards digitisation and convergence that present both opportunities and threats in this critical period between the industrial and information ages; and the call for a renewal of the public domain, or information commons. There are separate *Guide* entries below for copyright and digitisation/convergence. This entry looks at the notion of the information commons.

First, there is the idea of the "commons". As the concept has evolved, it has come to be associated with the following basic conditions:
• That something in a commons should be "free" (in the sense that you don't have to be rich or a member of the elite to get access to it).
• That it should be built and maintained by the community acting together for the benefit of all, i.e. as distinct from private interests.
• That it needs to be of significant depth, breadth and variety if it is to have any value for the community as a whole.
• That it needs to be accessible – people need to know where to find it – in order for it to be constructive.
• That it should allow reuse and adaptation in order to progress the flow of knowledge and information.

The information commons is not a new concept – but only recently has it come to be threatened. As James Boyle writes (2003), there is a need for a new kind of "environmentalism" when it comes to public knowledge – a mapping out of what needs to be protected and propagated (this being one of the aims of this *Guide*). The original framers of copyright law, in early 18th Century England, decreed that at the end of a copyright term the creative work in question would enter the public domain, where it could be copied and "re-mixed" by anyone. There are also certain types of content that have historically never been subjected to copyright – e.g., certain government information – and that have immediately, upon creation, become part of the public domain. The public domain in this context can also be called an "information commons" – an adaptation of the notion of the traditional rural pastoral commons, which was a piece of land used and shared by a community to graze cattle or grow crops, with no one person or household directly owning the land. By sharing the land through a commons structure, the users had both rights and obligations – rights to use and obligations not to misuse.

At its base, the logic of the commons rests on the idea that shared ownership and management of a resource will allow for more productive and innovative use of that

resource, and that an essential societal resource should not be entirely subjected to market values and commodification. In the words of the American Library Association (ALA) Information Commons Project Working Group (ICWG), " … information has necessary uses that transcend the values of the marketplace and we accept that the marketplace alone cannot adequately meet the information needs that fall outside the realm of its value system" (ICWG, 2001). The ALA calls on libraries to play a central role in building the information commons, because libraries "embody and put into action fundamental values related to the accessibility of information". Other institutions the ICWG highlights include museums, archives, cultural centres, religious organisations, social service organisations, unions and public interest broadcasters (ICWG, 2001). The association warns of the need to guard against "a process of 'enclosure' or containment which is limiting or threatens to limit non-market access to information to a degree which is not consistent with our fundamental social values" (ICWG, 2001).

1.2: Copyright

You have an idea. You write it down – on a serviette, a till slip, your mother-in-law's wall. The moment that you write that idea down and give expression to it "in material form", a series of "copy rights" are assumed – one of which gives you, the author, the exclusive "right to copy" that expression for limited periods. If you want to make an award-winning novel out of your expression, you may want to give someone a licence to copy the work (usually your publisher), or you may even have to sign away copyright "ownership" to another party (also, usually, your publisher). Many company employment contracts, for example, include a clause that refers to the ceding of copyright to your employers so that they effectively own the rights to publish what you produce during the course of your employment. Copyright, when it was initially developed, referred solely to the copyright owner's right to copy or to authorise copies. Today, copyright refers to a larger bundle of rights of which the right to copy is but one, and others include the rights to:
• commercially sell the reproduced copies;
• adapt the work and generate a "derivative" work (e.g., a play based on a book, a translation into Braille for blind users, a foreign-language translation, an abridged version);
• distribute copies of the work (e.g., in book form, on CD or DVD);
• perform the work;
• display the work.

Users of a copyrighted work have to get permission or a licence from the copyright-owner – often in return for a fee – in order to be allowed to copy, adapt, distribute, perform or display the work. Works not subject to copyright (e.g., government documents) or works for which copyright has expired (e.g., Shakespeare's plays) are said to be in the public domain and thus can be reproduced, adapted, distributed, performed or displayed by anyone without that person having to seek permission or a licence. Copyright protection exists in nearly all "original" works that have some sort of fixed representation, e.g., writings, images, artworks, videotapes, musical works, sound recordings, motion pictures, computer programs. Copyright doesn't need to be registered in order for it to be in force – although some copyright holders publish a date in a copyright notice in order to avoid confusion about copyright terms.

Copyright as 'Intellectual Property'
According to the World Intellectual Property Organisation (WIPO), instances of "intellectual property" are "creations of the mind" (WIPO, 2005), and copyright is recognised as one of the three main types of intellectual property, the other two being trademarks and patents. There is currently a lively debate as to whether the term "intellectual property" should be used to refer to information and knowledge. Some, like Richard Stallman of the Free Software Foundation, believe that it is a mistake to use a physical property rights analogy to refer to information. It is another mistake, says Stallman, to refer to copyright, trademarks and patents as a common set of rights, since "lumping together disparate laws … [implies] that they are instances of a common principle, and that they function similarly" when, in fact, the laws of copyright, trademark and patent were "developed independently" and "are different in every detail as well as in their basic purposes and methods" (Stallman, 1995). Although less indignant than Stallman about mainstream use of the term "intellectual property", Lawrence Lessig agrees that it is important to recognise the distinction between intellectual property and other types of property. As Lessig points out, the "property of copyright is an odd kind of property" (2004: 83), because when you make use of an idea or an expression of an idea, the original property still exists, unlike if someone takes a pen out of your pocket. Unlike the pen in your pocket, the creative "intellectual property" to which copyright applies is not "excludable" meaning it doesn't become scarcer with use and my use of it doesn't limit your use of it. Information, unlike other forms of property, is therefore a "non-rivalrous" good. When this *Guide* makes use of the term "intellectual property", it does so with recognition of the fact that the term is contested and that there is a strong argument to suggest that "fruits of the mind" need to be distinguished from other types of property.

An Era of 'Perfect Control'
When the internet first arrived, many predicted that copyright would soon go into decline. Looking back through history, such types of predictions are not uncommon when new technology is introduced. Similar pronouncements were made at the advent of audio and video recorders. But according to Lessig, in his book *Code: And Other Laws of Cyberspace* (1999), rather than threaten the demise of copyright, digital technologies have actually helped copyright owners, enabling them to replace the "sufficient control" granted them by traditional, balanced copyright laws, with "perfect control". According to Lessig, the internet has enabled citizens' engagement with culture and copyrighted material to be perfectly regulated by "code" – a privatised enforcement of the law which is more effective for rights-holders than what the law and behavioral norms could previously achieve. In this era of "perfect control", fair use and anonymity are the values most threatened because, in the digital realm, no distinction (or allowance) is made for when one wants to copy for the purposes of personal study or research. In his book *Free Culture* (2004), Lessig continued to chart "the troubles the internet causes" – especially with regard to the impact upon "the way our culture gets made" (Lessig, 2004, xiv). Lessig charts the rise, via increasingly restrictive applications of copyright rules, of a "permission culture" in which only the powerful, or past creators, decide on access to culture and knowledge (Lessig, 2004, xvi).

Lessig unpacks some of the misconceptions that are perpetuated by copyright holders, such as the myth of "originality". He reminds us that much of what we take as original is actually "borrowed" or derived from something that came before it. For instance, Walt Disney's "creation", Mickey Mouse, first appeared in Disney's adaptation of a Buster Keaton film called 'Steamboat Bill Jr' (Lessig, 2004: 21). Back in Walt Disney's time in the United States of the 1920s, exclusive copyright control only lasted for around 30 years and only certain uses were restricted. After 30 years or less, the products of human cultural creativity entered the "lawyer-free zone" of the public domain (Lessig, 2004: 24). Today in the US, copyright terms of around 70-90 years, with much tougher conditions and enforcement, are the norm.

How did this come to be? How did human creativity and independent expression come to be nailed down so tightly, and even commodified like it is today? It wasn't always the case. For centuries, human beings did all sorts of creative and ingenious things without needing the comfort or guarantee of ownership.

A Brief History of Copyright
Copyright's curious history probably began in 1710 when the English Parliament enacted the Statute of St. Anne. Seen by many as the world's first copyright law, the Statute of St. Anne was an attempt by the government to balance the economic interests of England's booksellers (who also did the book-printing) with the interests of the reading public who, particularly in Scotland at the time, were quite keen on reading less expensive reprints churned out by rival "pirate" booksellers. Before the Statute of St. Anne, the British Crown had granted individual printers the copyright on works such as the *Bible*. Only a particular printer could publish the *Bible*, and if you wanted a copy you had to pay his price. The balance was struck in the statute by giving the bookseller, who first got hold of the rights to a book, an exclusive right to make copies for a period of between 14 and 28 years. The UK Parliament was careful only to provide a monopoly of limited duration, because Enlightenment values warned against allowing the spread of knowledge to be harmed by anti-competitive booksellers who were seen as "monopolists of the worst kind" (Lessig, 2004: 89).

Fast-forward 300 years to the early 21st Century and some people feel that a new Enlightenment may be upon us. The radical changes wrought by the widespread use of the printing press in the 1700s are now being extended exponentially by the proliferation of the internet and digital information. Anyone with a computer and an internet connection can be a book-distributor now, and with one double-click we can "publish" information for personal consumption on a computer monitor or in paper format. In strict technical terms, we make a digital copy of a file every time we browse a page on the internet. We, the former passive users of information, now publish and publish all day long. One can see how frightening this is to traditional publishers who have lived off their role as intermediaries for hundreds of years. And thus, in the same way that the English booksellers of the 17th Century sought to extend the length and exclusivity of their copyrights in order to maximise profit in the era of the printing press, so today we find the big media companies (publishers, film companies, music labels) seeking to extend their control over the ways in which the public consumes their media. The firms want exclusive rights for ever longer periods and they want to be able to exercise that control

in ever-more ingenious ways (e.g., DRM tools such as watermarking, and laws compelling internet service providers (ISPs) to release the identities of users thought to be violating copyright via peer-to-peer (p2p) networks).

Rights-holding firms would ideally like to have perpetual copyright (i.e., in perpetuity, forever), an idea rejected by the English House of Lords in 1774, in the Donaldson v. Beckett case, when the House of Lords rejected the English booksellers' claims to perpetual copyright, and, as Lessig puts it, "the public domain was born" (2004: 93). Today's rights-holders have also failed to secure perpetual copyright terms, but in some jurisdictions, such as the United States, copyright terms have been extended regularly during recent history. The US 1998 Sonny Bono Copyright Term Extension Act extended the duration of US copyrights by an extra 20 years, allowing a maximum term of the life of the author plus 70 years, or a term of between 75 and 95 years in the case of works with more than one author. There has been a clear legal creep into the public domain since the original 14-year term, renewable once for another 14 years, of the 1710 English Statute of St. Anne.

Lessig argues that huge amounts of what should be public domain information and culture are being kept in the private domain in an effort to protect the very small slice of culture that has long-lasting commercial value. "Forget Mickey Mouse," Lessig writes, " ... The real harm of term extension comes not from ... famous works. The real harm is to the works that are not famous, not commercially exploited, and no longer available as a result." (2004: 221) As James Boyle argues, "The 'loss' caused by copyright here rivals and exceeds any possible loss from 'piracy'" (2004: 6). Lawrence Liang (2004) notes the gradual shift in the focus of copyright over time. Copyright laws first emerged in Renaissance Europe as a means to regulate the printing industry. Then the focus fell on protecting the rights of authors and creators. Later, writes Liang, "with globalised capitalism, control over copyrighted works became centered in the hands of media corporations instead of authors and artists" (2004: 13). Liang concludes that "copyright laws over time have been transformed from their original purpose of regulating the publishing industry to instead regulating its customers, artists and audiences." (2004: 13)

Copyright in Africa
The notion of copyright, originally implemented in Africa by colonial powers, has always been controversial in the African context. Indigenous expressions of knowledge and culture have often been misappropriated based on the argument that they were in the public domain (and thus couldn't be protected by copyright) because they were 1) oral and unwritten and/or 2) owned collectively by a community rather than a legally-recognised entity. As is explained elsewhere in this *Guide*, efforts are being made to develop ways for traditional knowledge (TK), indigenous knowledge (IK) and traditional cultural expressions (TCEs) to be protected in a manner that is more appropriate and developmental than Western-originated copyright law.

1.3: Digitisation & Convergence
Digitisation is the process by which any kind of information (text, audio, video) is converted into binary digital codes (combinations of ones and zeroes, representing "ons"

and "offs"). This digital information can then be stored, compressed, copied or transferred over networks, all without loss of quality. Traditional analogue systems, which represent information as waved fluctuations in electrical current, represent different types of information with different frequencies or amplitudes (heights) of wave, and are much more susceptible than digital information to deterioration over time and distance. Thus, digitisation provides levels of quality, predictability, storage and transportability not possible with analogue systems. Linked to digitisation is the phenomenon known as technological convergence, which refers to the coming together of traditionally separate broadcast, telecommunications and IT platforms and channels. Once digitized, content can now be carried via a wide range of infrastructures, including traditional copper phone lines, wireless terrestrial and satellite broadcast systems, WiFi, fibre-optic cabling and cable TV lines.

Key enablers of technological convergence are the internet protocols, which break digital information into "packets", each of which is tagged in sequence so that no matter which route the packet takes it knows how to rearrange itself at the other end. Another key convergence protocol is the European Digital Video Broadcasting (DVB) standard, used by many international satellite TV broadcasters for direct-to-home (DTH) transmission. DVB transmissions can be sent both via satellite and via terrestrial transmission towers, and they can "multiplex" visuals, audio and text, all in one transmission. Meanwhile, many of the new services being offered through cell-phone handsets are being made possible by the General Packet Relay Service (GPRS), which allows cell-phones to use internet protocols and other packet-switched systems.

Technological convergence allows for convergence of content, e.g., internet data travelling alongside broadcast content on broadcasting platforms, or streaming video going along with voice over phone lines, or images traveling alongside voice to and from cellular phone handsets. The final element of convergence, spurred on by the technological and content convergences – and to some extent driving them – is corporate convergence. Corporate convergences occur when large information, entertainment, IT and communications firms merge or buy each other up in order to control several levels of the convergence value-chain (content creation, content aggregation and distribution), and in order to have multiple channels through which to re-use, re-package and cross-promote content.

Digitisation and convergence have greatly extended the reach of the information commons, allowing people to tap into large amounts of audio, visual and data content over any number of devices. But digitisation and convergence have also introduced new wrinkles into copyright law. The nature of digital files on a computer is such that when you open them up, you — in technical/code terms -- make a copy. Thus, technically, just opening a file can be construed as a copyright infringement. Copyright owners use this argument to support their imposition of DRM technologies to prevent unauthorised opening of files. For users, these blocking mechanisms can have the effect of restricting "fair dealing" or "fair use" rights (usage rights not requiring permission). Thus, digitisation and convergence are mixed blessings. They help grow the reach of the information commons, but they also scare the copyright-holders into imposing restrictions, and those very restrictions make use of digital applications.

Section 2: Global Players, Processes, Issues, Projects

2.1: WIPO

The World Intellectual Property Organisation (WIPO), which became part of the United Nations (UN) system in 1974, is, along with the WTO, the biggest international player in overseeing the regulation of intellectual property. The critique from the developing world is that WIPO – mandated to balance the rights of copyright owners with the rights of users – spends far too much time on the former. Rather than seeing to its mandate of encouraging technology transfer to developing countries and encouraging innovation with whatever means possible (not necessarily strict IP protection), WIPO has instead focused on growing enforcement of IP. This has led to the push for a WIPO Development Agenda and for an Access to Knowledge (A2K) Treaty, both of which are outlined in this *Guide.*

WIPO had its beginnings in the late 19th Century, with the Paris (1883) and Berne (1886) Conventions on intellectual property. The Paris Convention tried to provide international protection to patents, trademarks and industrial designs, while Berne sought to protect the rights of creators of artistic works (visual arts, literary works, music, etc.). Berne was thus a key early moment in the international standardisation of ideas around copyright. Two international secretariats were set up in the late 1800s to implement the Paris and Berne Conventions, and these two secretariats came together in 1893 in a grouping called BIRPI. BIRPI, which sounds more like something babies and drunks do a lot of, was the French acronym for the United International Bureau for the Protection of Intellectual Property. In 1960, BIRPI moved from Berne to Geneva to be closer to United Nations agencies, and in 1967, BIRPI changed its name to WIPO. Finally, after much re-jigging, WIPO became, in 1974, a specialised UN agency, a distinction it still carries today. WIPO is a member of the UN family, but an independent one, with its own governing body, budget, constitution and staff. It counts 182 nations as its members and administers 23 international treaties that are supposed to guide the behavior of these 182 nations. The following are some of the rules WIPO attempts to enforce with its member nations:

Rome 1961
The 1961 Rome Convention — the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations – provides international protection for record producers, performers and broadcasters. Producers are protected against unauthorised copying of their recordings, and have a right to payment for broadcast of their recordings, with exceptions.

Berne Amendment and 'Three-Step Test' 1967
The 1967 Stockholm Amendment of Berne introduced copyright "exceptions" – situations where copyright protection could be waived without permission being sought from the creator or copyright owner. The Stockholm decision applied to reproduction rights (copying), but not to other copyright-protected activities (sale, derivatives) and set

out what has come to be known as the "three-step test" for establishing whether an exception should be allowed. This test, contained in an amendment to Article 9.2 of the Berne Convention, stipulates that, in order to be exempted from normal copyright protection, a reproduction must:
• be for a specific purpose ("in certain special cases")
• "not conflict with a normal exploitation of the work"
• "not unreasonably prejudice the legitimate interests of the author"

Some might say this test is so vague as to be not very useful – or so vague as to be *extremely useful*. It certainly doesn't provide certainty, meaning that one's ability to have one's behaviour (copying) protected by such a test would probably depend on the quality of one's lawyer, which would often be a function of the depth of one's pockets. Intellectual property rules and lawyers have been enjoying a symbiotic relationship for several decades – a fact often stated most clearly by lawyers themselves. (Lawyer Lawrence Lessig's 2004 book *Free Culture* is full of lawyer-bashing!) This WIPO "three-step test" became even more important in 1995, when the WTO TRIPS agreement adopted an expanded version of the test, thus giving the notion of copyright exceptions power in the system of global trade rules. The three-step test provides some backing for the "fair use" and "fair dealing" provisions adopted in national legislation in many countries to allow for permission-free use of copyrighted materials for certain educational and personal research purposes, but for many activists, particularly in developing countries, it doesn't go far enough.

Phonograms 1971
The 1971 Geneva Convention for the Protection of Producers of Phonograms Against Unauthorised Duplication of their Phonograms (the wording of which certainly leaves nothing to chance!) was a response to the concerns of record companies about copying. This Convention created measures against unauthorised duplication of sound recordings and unauthorised import or distribution of such copies.

'Internet Treaties' 1996
The 1996 WIPO "Internet Treaties" were the World Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT). These treaties were a response to the growth in digital technologies and the concerns of the big content firms (in entertainment, publishing) about their loss of control over reproduction and commercial exploitation. The WCT Preamble talks of "the profound impact of the development and convergence of information and communication technologies on the creation and use of literary and artistic works", and the need to "clarify the interpretation of certain existing rules in order to provide adequate solutions to the questions raised by new economic, social, cultural and technological developments" (WIPO, 1996). Cynics will tell you that these words are a very polite way of saying that rights-holders must be allowed to *continue* to maximise profit in the digital era. But no WIPO-facilitated document would ever forget to talk of the need for balance, and thus, the WCT Preamble also talks of "the need to maintain a balance between the rights of authors and the larger public interest,

particularly education, research and access to information, as reflected in the Berne Convention" (WIPO, 1996). [1]

The Search for Balance
"Balance" is the recurring theme in the intellectual property treaties and debates of today, and a recurring theme in this *Guide*. Everyone seems to agree – or at least is willing to pretend to agree – that a balance must be found between the rights of users and the rights of creators/owners of copyrighted material. But there is much less agreement on the practicalities of how to achieve this balance. The years 2004 and 2005 saw some interesting moments in this tug-of-war between users and rights-owners, and between developing and developed nations.

2.2: Geneva Declaration on WIPO
The 2004 "Geneva Declaration on the Future of WIPO", developed by activists gathered for the October 2004 WIPO General Assembly, has since been signed by hundreds of individuals and organisations around the world. The declaration is posted in six languages on the website of the Consumer Project on Technology (CPTech), **http://www.cptech.org**, with an e-mail address for those wishing to send endorsements. The declaration begins with the line that "Humanity faces a global crisis in the governance of knowledge, technology and culture" and goes on to say that this crisis is evidenced in such things as:
• deaths caused by lack of access to essential medicines;
• undermining of development due to unequal access to education, knowledge and technology;
• high consumer cost and limited innovation engendered by anti-competitive behaviour on the part of IP rights-holders;
• barriers to "follow-on innovation" (derivate works) by creators;
• ownership concentration in IP industries that undermines diversity and democracy;
• technological measures in support of IP rights protection that "threaten core exceptions in copyright laws for disabled persons, libraries, educators, authors and consumers, and undermine privacy and freedom";
• lack of fairness in compensation of creators (individuals and communities);
• misappropriation of, and limiting access to, "social and public goods" that should be in the public domain.

The declaration goes on to remind WIPO of its mandate, since its inclusion in the UN family in 1974, to take "appropriate action to promote creative intellectual activity" and to ensure technology transfer to the developing world "in order to accelerate economic, social and cultural development" (Geneva Declaration, 2004). The declaration expresses support for the push by the governments of Argentina and Brazil for the WIPO General Assembly to adopt a Development Agenda.

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[1] To find out which treaties your country has signed up to, go to WIPO's treaty database at http://www.wipo.int/treaties/en/SearchForm.jsp?search_what=C. To find out which WIPO bodies your country belongs to, go to http://www.wipo.int/treaties/en/SearchForm.jsp?search_what=B

2.3: WIPO Development Agenda

Much to the satisfaction of the activists who had finalised the "Geneva Declaration on WIPO" just a few days earlier, the WIPO General Assembly agreed on October 4, 2004 to adopt the Argentina-Brazil "Proposal for the Establishment of a Development Agenda for WIPO" (sometimes referred to as "Item 12"). This led to the convening of three WIPO Intersessional Intergovernmental Meetings (IIMs) in Geneva on the Development Agenda in 2005, in April, June and July. Each of these gatherings drew significant interest and attendance by accredited NGOs.

The First IIM, April 2005

The first Intersessional Intergovernmental Meeting (IIM) in April 2005 dealt with proposals from member states on how WIPO should tackle the Development Agenda mandate adopted in 2004. Proposals were put forward by the US, the UK, Mexico, and the group of 14 countries dubbed the "Friends of Development" (FoD). This FoD group consists of: Argentina, Bolivia, Brazil, Cuba, Dominican Republic, Ecuador, Egypt, Iran, Kenya, Peru, Sierra Leone, South Africa, Tanzania and Venezuela. It was this FoD group of 14 that sponsored the original Development Agenda proposal approved by the WIPO General Assembly in October 2004, with Brazil-Argentina leading and the other 12 acting as co-sponsors. In its April 2005 proposal to the IIM, the FoD nations focused on four main themes:

• Governance & Accountability: A call for reform of WIPO's governance structure, in order to strengthen the role of member states in guiding WIPO's work; a call for establishment of an independent Evaluation and Research Office; and a call for measures to ensure wider participation by civil society and public interest groups in WIPO proceedings.

• Principles: A call for a set of proposed guiding principles, including greater member state involvement in WIPO work-planning, sustainable development impact assessments (DIAs) of new laws, broader stakeholder engagement, and stronger links to other international instruments including the UN Millennium Development Goals (MDGs).

• Appropriate Technical Assistance: A call for WIPO technical assistance programmes that foster "the technical capacity of countries to fully use in-built flexibilities in international agreements to advance national pro-development policies."

• Technology Transfer: A call for WIPO contribution to international discussion of what developed countries can do towards transfer of technology to developing countries.

The US proposal to this April 2005 IIM was, not surprisingly, much less radical, calling for a "partnership programme" in WIPO that would allow the body to undertake development concerns as part of technical assistance work rather than as a new agenda affecting overall WIPO functions (governance, principles work-planning, etc.). The UK's proposal was more developmental, touching on themes similar to those of the 2002 report of the UK Commission on Intellectual Property (CIPR), which had called on WIPO to ensure examination of the impact of its work on the needs of developing countries.

The Second IIM, June 2005

At the second IIM, held 20-22 June 2005, the FoD grouping reiterated the core components of its April 2005 proposal for the Development Agenda, while the US proposed consideration of an agenda that called for only minor reform at WIPO; in effect,

denying the need for a Development Agenda. The UK presented a submission that supported the US view.

Within the session, there was discussion about the much-contested call for WIPO to create an independent WIPO Research and Evaluation Office (WERO) that would be responsible for assessing the impact of WIPO's activities on development and reporting these directly to the General Assembly. Both the US and UK were against the creation of such an office, proposing that the existing body, the Permanent Committee on Cooperation for Development Related to Intellectual Property should rather deal with development issues. (The PCIPD is a technical cooperation body that meets once every two years and does not play an oversight role over the work of WIPO committees such as the patent or copyright committees.) The FoD rejected this proposal, stating that the PCIPD would be able to induce neither reform nor action around development issues. A further issue raised at this second IIM was the call for an amendment to WIPO's mandate so that it would conform more closely to United Nations humanitarian objectives. This issue remained unresolved. There was also a call, generally coming from the FoD, to include more civil society participation in WIPO discussions . Brazil suggested that, prior to creating proposals for new IP laws, public hearings should be held. This proposal was firmly rejected by the US.

This second IIM meeting ended inconclusively, but could be viewed as an important step towards meaningful debate regarding the Development Agenda.

The Third IIM, July 2005
The third IIM session, held 20-22 July, could not reach agreement amongst the member states on what recommendation should be made to the General Assembly. The final day of this session saw the member states take part in informal consultations prior to resuming the plenary session. Within the informal sessions, the majority of member states were in agreement to recommend to the General Assembly that the IIM process should be continued for an additional year, in order to continue exploration into a Development Agenda for WIPO. There were two countries that did not agree with this proposal, namely the US and Japan. The US reiterated its stance from the previous session held in June, which was supported by Japan, that the PCIPD should be utilised as the vehicle through which to address development issues, thus alleviating the need to continue with the IIMs. Despite the overwhelming majority view to put forward a recommendation to continue the IIMs for an additional year (only two countries did not agree), this could not be done because WIPO requires that its processes are continued through complete consensus. The 30 July report put to the General Assembly was that there was a failure to reach consensus, thus leaving the future of the Development Agenda uncertain.

WIPO General Assembly, 26 September to 5 October 2005
The WIPO annual General Assembly brings together the 182 member states of the organisation to review activities held over the past year, and to agree upon the organisation's agenda for the forthcoming year. The Development Agenda was one of the key issues at the 2005 General Assembly, along with the Broadcasting Treaty. On the matter of the Development Agenda, the General Assembly agreed to continue its efforts to "enhance the development dimension" through the creation of a Provisional

Committee "to take forward the IIM process to accelerate and complete the discussions on proposals relating to a WIPO Development Agenda and report with any recommendations to the General Assembly at its September 2006 session" (WIPO, 2005c). The work of the committee shall take the form of two week-long meetings scheduled to take place in Geneva in 2006. Included on the agenda of the meetings will be the original proposal submitted by Brazil and Argentina to the General Assembly in 2004.

2.4: The Broadcasting Treaty

The Broadcasting Treaty that was subjected to much discussion at the 2005 WIPO General Assembly is an expansion of the Rome Convention of 1961. Players within the broadcasting industry want an update of the Rome Convention so that it will be more reflective of technological innovation and change over the last 40 years, and thus the development of the treaty. The Broadcasting Treaty proposes that rights, similar to copyrights, be granted to broadcasters over the signals they use for transmission. Included in the treaty is the proposal to regulate internet transmissions for webcasting. The treaty is formally opposed by artists and a large number of public-interest NGOs, who believe that by creating rights and ownership issues around "signals", broadcasters would be able to control information that is neither owned nor created by them, thus encroaching on public domain rights and having a chilling effect on freedom of expression.

At the 2005 WIPO General Assembly, it was agreed that two additional meetings of the Standing Committee on Copyrights and Related Rights (SCCR) would be held during 2006 to finalise negotiations on the Broadcasting Treaty, which can then be adopted at a Diplomatic Conference in late 2006 or 2007. A diplomatic conference is convened when negotiators believe a treaty is ready for adoption. In an official WIPO press release following the assembly, it was stated that the General Assembly had "agreed to accelerate its work relating to the protection of broadcasting organisations to update international IP standards for broadcasting in the information age …". According to WIPO critic Robin Gross, attorney and Executive Director of IP Justice, an international civil liberties organisation that "promotes balanced intellectual property law", the assembly "…resisted pressure from the US and WIPO itself to immediately convene a Diplomatic Conference to begin treaty drafting". Regardless of whether one takes the view that the General Assembly valiantly delayed the treaty, or actively hastened it, there is no denying the possibility that the treaty will be adopted in late 2006 or early 2007.

2.5: Access to Knowledge (A2K) Treaty

The Argentina-Brazil Development Agenda proposal adopted by the WIPO General Assembly in October 2004 included a call for a Treaty on Access to Knowledge (A2K). In February 2005, an A2K Treaty meeting was convened in Geneva by CPTech, the Third World Network (TWN), and the International Federation of Library Associations and Institutions (IFLA). The roughly 60 intellectual property experts who gathered for this meeting worked with various proposals around the structure and content of a document that could eventually be negotiated as a full UN treaty. More than two dozen proposals were put out for consideration at the meeting, including proposals around:

• limitations and exceptions on patents, copyright and other intellectual property exclusivities;
• mechanisms to address abuses of exclusive rights, i.e., anti-competitive practices;
• new knowledge production models, including Free and Open Source Software (FOSS) and Open Access archives for publicly-funded research.

The A2K Treaty discussions have a strong human rights perspective, seeing access as the default position rather than the exception. Participants in the February 2005 discussion came from beyond the traditional "copyleft" circles, and included large private-sector Internet Service Providers (ISPs) such as Verizon and BellSouth, and technology companies such as IBM.

A second A2K Treaty discussion was held in May 2005 in London during a meeting of the intellectual property working group of the Trans-Atlantic Consumer Dialogue (TACD).

2.6: WTO TRIPS

It seems no tale of international economic intrigue is complete these days without a lead role for the brainchild of the GATT process in the 1980s and '90s: the World Trade Organisation (WTO). Among the WTO's founding set of agreements in 1995 was TRIPS, the Agreement on Trade-Related Aspects of Intellectual Property Rights. Negotiated during the GATT (General Agreement on Tariffs and Trade) talks of 1986-1994, TRIPS takes many of the provisions of the WIPO Berne Convention and other WIPO-administered treaties and gives them power at the level of the international trading system. Before WTO TRIPS, countries not seen to be obeying Berne and other WIPO treaties were only subjected to WIPO pressure. Now, under TRIPS, WTO panels can be called into the picture to remind countries much more strongly of their obligations.

TRIPS mandated a gradual adoption of its principles over an 11-year period starting in 1995, with developed countries expected to comply within a year, less-developed countries by 2000, and least-developed nations by the end of 2005. On patent protection, developing countries were given 10 years, until 1 January 2005, to harmonise with TRIPS. (This is why India, a large producer of generic drugs (non-brand-name versions of drugs still under patent protection) reworked its drug patent rules in late 2004 and early 2005.)

TRIPS Part 1 sets out the "national-treatment" commitment under which signatory nations must grant foreign rights-holders the same protection as national rights-holders. There is also a "most-favoured-nation" clause, meaning that if a signatory nation grants a certain advantage to a foreign rights-holder, that advantage must become available to all.

TRIPS Part 2 sets out the rules for "compulsory licensing" of generic manufacturers of still-patented drugs, and governmental use of patents without the authorisation of the patent owner. Compulsory licensing and "parallel importing" have emerged as key tools used by developing country governments to get cheaper access to HIV-AIDS drugs still under patent protection. Part 2 also has rules on protection of the "test data" submitted by firms to governments in order to obtain marketing approval for pharmaceutical or

agricultural chemicals. This test data issue was current in early 2005 in the context of the US free trade talks with Central America (the CAFTA talks), with Guatemala coming under pressure from the US to amend a law allowing the government to release test data results for essential medicines (IP Watch, 2005). TRIPS Part 2 also tackles anti-competitive behaviour, providing for consultations between governments, and remedies, when IP rights are exploited in a manner that adversely affects competition.

2.7: Exceptions via Berne & TRIPS

Much as TRIPS can be, and is, used as a vehicle by rich countries to force poorer nations to protect the lucrative property rights of big multinational companies, TRIPS also provides for important exceptions (situations where intellectual property rights can be waived), and it does so in a manner that is even broader than the exceptions provided for by WIPO's treaties. As detailed in the WIPO section of this *Guide*, a key exception procedure in the WIPO dispensation is the three-step test in Article 9.2 of the Berne Convention. This test, used for exceptions in copyright cases, asks:
• Is the exception for a specific purpose ("in certain special cases")?
• Does the exception "conflict with a normal exploitation of the work"?
• Does the exception "not unreasonably prejudice the legitimate interests of the author"?

But Berne's three-step test only applies to copyright, and only to the right of reproduction (not the right to sell, engage in distribution or develop derivative works). The TRIPS Agreement takes the exception a bit further, taking the three-step test and applying it to many more potential situations (De Vuyst et. al., 2003). TRIPS Article 13, dealing with copyright and related rights, essentially re-states the Berne three-step test, stipulating that signatory countries "shall confine limitations or exceptions to exclusive rights to certain special cases which do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder." But TRIPS Article 13 goes beyond Berne Article 9.2 because it applies not just to the right of reproduction, but to the full bundle of copyright rights.

De Vuyst *et. al.* (2003) and others argue that the TRIPS drafters clearly intended to balance the interests of the rights-holders with the interests of the public. Until now, the use of exception provisions in the realm of copyright has primarily been through the "fair dealing" and "fair use" provisions in many national copyright laws – exceptions allowing for limited copying, performance, display and distribution of works for educational and personal research uses, as well as for news coverage and criticism. But there is now an emerging view, represented to some extent in the Access to Knowledge (A2K) Treaty movement, that says educational materials need to be treated in the same way as "essential medicines" and that some of the strategies from the essential medicines and generic drugs movements need to be applied to production and distribution of educational materials. This view holds that TRIPS exceptions provide the latitude for national governments to practice compulsory licensing and parallel importing strategies for copyrighted materials, such as school texts.

2.8: Compulsory Licensing & Parallel Importing

Activists pushing for greater use of exceptions to copyright rules – particularly the exceptions to the rights for copying, adapting, distributing and teaching of educational materials – would like to see some approaches borrowed from the world of patented drugs. Patents are covered under a different section from copyright under WTO TRIPS, and the wording of the exception for patents is different. Thus, WTO discussions and decisions around patents are separate from those of copyright, subjected to a separate set of committees and processes. But education activists hope that some of the precedents set within the WTO TRIPS system around patents and essential drugs can find their way into national laws and regulations around copyright as it pertains to educational materials.

Several nations have already made use of the provisions called "compulsory licensing" and "parallel importing" to improve access to essential drugs in their countries. A compulsory licence is a government licence that enables entities other than the patent holder to copy patented products and processes. A competitor to the patent holder can then produce the patented product (e.g., a generic drug) or use a patented process in the making of another drug, under a government licence. The compulsory licence is a type of exception, allowed by TRIPS in cases where public interest objectives are clearly served. Compulsory licensing of generic HIV-AIDS drugs has been justified on the grounds that the prices charged for these drugs by the patent holders are too high for developing nation governments and individuals to afford.

In 2001, following the WTO Doha Ministerial Conference, ministers agreed that TRIPS should not prevent members from taking measures to protect the public health of their citizens. It was agreed that countries could manufacture generic versions of drugs developed before the 1995 introduction of TRIPS, and could produce newer drugs under compulsory licences. India is the world's biggest generic drug-maker, making both finished tablets and generic versions of individual ingredients. Brazil also has a very large generic drug industry, helping it to supply free antiretroviral (ARV) AIDS drugs to its people. Countries that don't have the manufacturing capacity to produce generics are able to use the TRIPS "paragraph 6" waiver, introduced to the TRIPS agreement in 2003, allowing for importation of generics produced in another nation. South Africa was the site of a major struggle around compulsory licensing in 2001, when 39 pharmaceutical firms took on the South African government over a law allowing easy production and importation of generics for use in anti-retroviral AIDS treatment. The companies eventually dropped the legal action, after international protest. One of the companies, GlaxoSmithKline, decided to grant a voluntary generic production licence for AIDS medicines to Aspen Pharmacare, a South African generics-maker (De Boer, 2005).

Another type of intellectual property exception allowed by TRIPS and already used in the area of pharmaceuticals is parallel importing, in which a developing country government purchases a name-brand, proprietary drug in a third country (not the importing developing country or the home country of the rights-holder/ manufacturer), in order to take advantage of a lower price.

2.9: 'TRIPS Plus'

The exceptions to intellectual property rights made possible by TRIPS and outlined in the previous sections of this *Guide* are under threat in some nations because governments are being pushed, in bilateral free trade agreement (FTA) talks with powerful traders such as the US and EU, to offer even greater protection, and fewer exceptions, than those provided by the TRIPS agreement. The expression "TRIPS Plus" has been coined to describe such FTA provisions that go beyond TRIPS in favour of rights-owners. The US government, primary purveyor of TRIPS Plus clauses in trade deals, justifies inclusion of these provisions on the grounds that some US intellectual property laws and regulations go well beyond TRIPS. Indeed, the US has in the past decade adopted some extremely restrictive laws.

2.10: United States
There are many who argue that the US intellectual property measures of the past decade have tilted the balance significantly in favour of rights-holders.

The 1997 'No Electronic Theft' Act made it illegal to distribute copied software over the internet. Under the old statutory scheme, people who intentionally distributed copied software over the internet did not face criminal penalties if they did not profit from their actions. This new Act was strongly backed by the software and entertainment industries but opposed by science and academic groups.

The 1998 Digital Millennium Copyright Act (DMCA) brought the US in line with the 1996 WIPO World Copyright Treaty (WCT) but went even further than WCT. The DMCA criminalises software hacking and outlaws the manufacture, sale or distribution of code-cracking devices. It also compels Internet Service Providers (ISPs) to remove any material from users' web sites that appears to constitute copyright infringement. The DMCA has caused great concern in the education community, and is seen as clearly TRIPS Plus, because of its strict protection of technological protection measures (TPMs). The DMCA bans not only the act of circumventing a TPM used by a copyright owner, but also any device, service or technology that can be used for circumvention — even if the intended use would not be a copyright infringement. One example is the US copyright exception that allows non-profit organisations to do Braille translations of books for blind users. The DMCA eliminates this exception for e-books that have TPM protection (Prabhala & Caine, 2005). Another concern with the DMCA is that it implicitly curbs the growth of the public domain by granting so much protection to TPMs. Works are supposed to be released into the public domain once their copyright terms expires, but current TPMs do not include expiry functions, thus potentially keeping materials out of the public domain in perpetuity. In general, the DMCA is seen by its critics as a definite setback for the copyright exceptions known as "fair dealing" (UK term) or "fair use" (US term) -- exceptions which allow copyright to be ignored in instances of copying and distribution (portions of books only, not entire books) for purposes of teaching, research or critical comment.

Another 1998 US statute, the Sonny Bono Copyright Term Extension Act, named after Cher's former musical sidekick, Sonny Bono (who apparently was very fond of both Cher and copyright protection), extended the duration of US copyrights by 20 years. Before this Act, copyrights lasted for the life of the author plus 50 years. Now copyrights

in the US last for the life of the author plus 70 years in the case of individual works, or 75 to 95 years in the case of works by more than one person.

2.11: UN Agencies

WIPO is not the only member of the United Nations (UN) family playing, or trying to play, a role in issues around intellectual property. Several others, including UNESCO, UNCTAD and the ITU, find themselves grappling with the IP debates. The 1948 UN Universal Declaration of Human Rights (UDHR) is ambiguous on intellectual property matters, thus providing ammunition for both sides of the IPR debate. UDHR Article 27 says that "Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits", and also that "Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author" (UN, 1948). Thus, Article 27 would seem to protect both one's right to "share in" the fruits of the community's creativity and one's right to enjoy "protection of" individual innovation and creativity -- meaning that both the intellectual property rights-holders and the information commons advocates can point to Article 27 as proving their point. Later, Article 29 of the UDHR says "Everyone has duties to the community in which alone the free and full development of his personality is possible", and "In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society" (UN, 1948). Thus, Article 29, while to some extent also a balancing article like Article 27, does seem clearly to call for the needs of communities to take precedence over the needs of individuals.

The UN Educational, Scientific and Cultural Organisation (UNESCO), with its cultural mandate, is directly involved in intellectual property matters, and is the custodian of the 1952 Universal Copyright Convention (UCC). UNESCO's programmes on copyright and intellectual property seek to stamp out what it calls "rampant piracy", while at the same time the agency is active in trying to secure protection of traditional knowledge (TK). On TK, UNESCO says it is aiming to "explore the most appropriate legal means of ensuring effective national protection of both aspects of this heritage: traditional artistic expressions and traditional knowledge, constantly in danger of dying out, of prejudicial distortion and unwanted economic exploitation" (UNESCO, 2005).

One copyright balancing model that UNESCO supports is collection societies, or reprographic rights organisations (RROs), which set and collect standardised royalty fees, and provide clarity on exemptions, on behalf of rights-holders. RROs are sometimes seen merely as proxies for the interests of large rights-holding industries (book publishers, recording companies), and while this may be true to some extent, one of the central motivations for the development of RROs – to provide a standardized, transparent interface between users and rights-holders – would seem to be a sound one. In 2000, UNESCO published a guide to the establishment of RROs, entitled *Guide to the Collective Administration of Authors' Rights* (Schepens, 2000). The introduction to the *Guide* sets out the delicate relationship between the rights of authors and of their communities: "Authors cannot isolate themselves. They must live in the community from

which they draw their inspiration. They will dip into the culture left by their ancestors. They will give back to the world what they took from it after they have added the stamp of their own personalities. There is interaction. That is why there must be limits to their absolute power. In order to preserve this balance, their exclusive right will be converted into a simple right to remuneration in certain cases" (Schepens, 2000: 13-14).

In the area of TK protection, a prominent UNESCO initiative is its "Convention on Cultural Diversity", the short name for the "Convention on the Protection of the Diversity of Cultural Contents and Artistic Expressions". UNESCO's 190 member states have been debating the contents of this convention since late 2003, based on discussions that began in the early 1980s. The central focus of the convention is the idea of keeping culture separate from other trade items – essentially preventing cultural items and expressions from being commodified. Such a convention would run directly against much of the approach of the WTO and agreements such as the General Agreement on Trade in Services (GATS). One outcome of such a convention would be protection of countries' rights to exclude their cultural policies, including media policy, from free trade rules. The drafters also hope the convention would compel governments to create rules to protect and promote remote cultures, unknown local artists and almost-extinct languages. Already, many countries insist on exclusions for culture in their trade deals. For instance, Canada's free trade agreement with the United States contains exemptions for certain measures that aim to support development of Canadian cultural industries. Countries such as the United States and India, which are both large exporters of cultural product via their film industries, are seen as some of the foes of a strongly-worded Convention on Cultural Diversity. Transnational media conglomerates are also opposing certain elements of the convention, especially those from the US, Europe and Japan (Held & McGrew, 2004; UNESCO, 2005a).

The UN Conference on Trade and Development (UNCTAD) has begun a drive to promote economic growth through creative endeavour in the developing world. At an UNCTAD ministerial conference in Sao Paulo in 2004, support for creativity in the developing world was identified as a means to generate new employment and trade opportunities. In April 2005, UNCTAD and the Brazilian Ministry of Culture hosted a forum entitled "Shaping an International Centre on Creative Industries (ICCI)" in the Brazilian city of Salvador do Bahia. Brazil has pledged to set up the ICCI, and the April 2005 meeting brought together a wide range of stakeholders to develop work programmes for this centre.

Another UN body, the International Telecommunication Union (ITU), has found itself in the thick of intellectual property discussions in recent years through its convening of the two-phase World Summit on the Information Society (WSIS) in Geneva 2003 and Tunis 2005. WSIS has so far proved a disappointment to many activists. The Geneva Summit Declaration of Principles (DoP) and Plan of Action (PoA) are widely regarded as being too watered-down and too noncommittal to be of much use in solving digital divide issues, including issues around culture and intellectual property. Nonetheless, the 2003 WSIS Geneva DoP does contain a strong statement in support of the public domain, in Paragraph 26, where it says "A rich public domain is an essential element for the growth of the Information Society, creating multiple benefits such as an educated public, new

jobs, innovation, business opportunities, and the advancement of sciences. Information in the public domain should be easily accessible to support the Information Society, and protected from misappropriation. Public institutions such as libraries and archives, museums, cultural collections and other community-based access points should be strengthened so as to promote the preservation of documentary records and free and equitable access to information" (UN, 2003).

Later in the WSIS Geneva DoP, Paragraph 53 highlights the need for linguistic diversity and local content in the digital environment: "The creation, dissemination and preservation of content in diverse languages and formats must be accorded high priority in building an inclusive Information Society, paying particular attention to the diversity of supply of creative work and due recognition of the rights of authors and artists. It is essential to promote the production of and accessibility to all content – educational, scientific, cultural or recreational – in diverse languages and formats. The development of local content suited to domestic or regional needs will encourage social and economic development and will stimulate participation of all stakeholders, including people living in rural, remote and marginal areas" (UN, 2003). Such paragraphs are seen by many activists as typical of the WSIS documents – saying all the right things but, frustratingly, not really providing any new ideas for how to make these things a reality.

2.12: UK CIPR
The UK Commission on Intellectual Property Rights (CIPR) was a pioneering attempt by a developed country to view intellectual property through a developmental lens.
Set up by the British government, the CIPR began its meetings in 2001, and issued a final report in September 2002. The Commission disbanded after its report, but its website still provides valuable statements of some of the logic that has come to underlie the WIPO Development Agenda and Access to Knowledge (A2K) Treaty processes.
http://www.iprcommission.org/home.html

2.13: APC & Soros-OSI
The founders of the Association for Progressive Communications (APC) were clued-in to the potential power of ICTs at a time when many of us still thought of computers as glorified typewriters. The APC's affiliates are ICT-focused non-profit groups around the world, in both developed and developing nations, and are often the pioneering internet service providers (ISPs) in their countries. The APC's mission calls for "A world in which all people have easy, equal and affordable access to the creative potential of ICTs to improve their lives and create more democratic and egalitarian societies" (APC, 2005). Among the APC's services are its Africa ICT Policy Monitor, **http://africa.rights.apc.org,** and the ItrainOnline project (a project of APC, Bellanet, the FAO, INASP, Oneworld and UNESCO).

Billionaire George Soros's Open Society Institute (OSI) and Soros Foundation Networks support a wide range of programmes, including the OSI Information Programme, **http://www.soros.org/initiatives/information,** which is playing a central role in the open access movement (*covered below in section 2.19*).

2.14: Librarians

Gone are the days of the librarian whose existence seemed a dusty one dominated by ensuring that books found their way back to the shelves. The librarian of today is in the vanguard of the digital information commons. At the international level, a key group is the International Federation of Library Associations and Institutions (IFLA). Founded in Scotland in 1927, IFLA aims to represent both libraries and their users, and has an estimated 1700 members in 150 countries. An important IFLA body is its Committee on Copyright and other Legal Matters (CLM), **http://www.ifla.org/III/clm/copyr.htm,** set up in 1997 to respond to the new copyright issues being raised by digital storage and networks. Other key librarian groupings include the American Library Association (ALA), the Electronic Information for Libraries consortium (Eifl) and the US Public Library of Science (PLoS).

2.15: Consumer Groups

A strong uniting force between developing-world and developed-world activism on intellectual property issues is the consumer movement. Some of the main players in the civil society "Geneva Declaration on WIPO" process of 2004 came from consumer groups, including a coalition called the Trans-Atlantic Consumer Dialogue (TACD), which has more than 60 members in North America and Europe. The TACD convened a meeting in Geneva in 2004 to look at the future of WIPO, and one of the outcomes of that meeting was work on the Geneva Declaration. In May 2005, the TACD hosted an A2K Treaty meeting in London. A central player in the TACD is the Consumer Project on Technology (CPTech), which was started in 1995 by American consumer advocate Ralph Nader. CPTech's main programme areas are intellectual property rights, health care, electronic commerce and competition policy. Meanwhile, the Consumer Institute for South Africa was the initiator of Access to Learning Materials (A2LM) in Southern Africa, a project looking at the impact of copyright on education delivery.

2.16: FOSS: Free & Open Source Software

Some of the most active information commons proponents come from the ranks of the techies, the people who understand how the digital collections of ones and zeros make things happen in our computers and over the networks. These people are far more than techies, of course. They are activists, with a strong grasp of legal and human rights issues. The Electronic Frontier Foundation (EFF), founded in San Francisco in 1990, came together to protest against the US Secret Service's heavy-handed treatment of a small book publisher in Texas. The EFF was formed by tech industry veterans in collaboration with Grateful Dead lyricist John Perry Barlow, and has remained a thorn in the side of US regulators and lawmakers ever since. Barlow is best known for his 1996 "Declaration of the Independence of Cyberspace" which begins as follows: "Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather" (Barlow, 1996).

But the EFF is recent history when compared to the pioneering online collaborative work of the GNU Project, founded in 1984 to develop free and open source software based on

the Linux kernel. The GNU Project's fundraising and advocacy arm, the Free Software Foundation, was founded in 1985 by the key person behind both of these initiatives, Richard Stallman. All Free Software Foundation software is distributed under the GNU General Public Licence, which grants the recipients of a computer program the following rights, or "freedoms":

• the freedom to run the program, for any purpose;
• the freedom to study how the program works, and modify it;
• the freedom to redistribute copies;
• the freedom to improve the program, and release the improvements to the public.

The best-known GNU product is Linux, an operating system initially developed as a hobby by a university student in Finland named Linus Torvalds. Torvalds started in 1991 and released the Linux kernel in 1994. This kernel, whose source code is freely available to anyone, has since been adapted into hundreds of different versions of the operating system. Stallman and Torvalds are two of the stars of the Free and Open Source Software (FOSS) movement, a movement which is central to discussions of intellectual property and copyright in the digital era. FOSS is a direct challenge to copyright because FOSS:
• provides free access – to both the software and the source code – to users, thus disregarding the standard proprietary model (paid licences without access to the source code) employed by Microsoft and other software firms;
• uses decentralised, collaborative modes in development of the software, thus providing an example of the power of creativity when ideas are shared openly rather than restricted by aggressive copyright protection.

Many of the philosophical underpinnings of the information commons movement and even of this *Guide* are linked to the FOSS movement: the digital, networked element; the open-collaboration method of creativity; the public "commons" approach to the dissemination of the products created; and the commons approach to the knowledge embedded within the products.

2.17: Lawyers

Just as the digital information commons movement needs plenty of techies who understand the law, it also relies on a fair number of lawyers who enjoy the tech. Two such lawyers are US law professors Lawrence Lessig (Stanford) and James Boyle (Duke). Lessig's name comes up in many places in this *Guide*, because of his writings on the chilling effect of copyright on creativity and cultural production in the digital era, and because of his work in the development of the Creative Commons open content flexible copyright licensing scheme. Boyle is another important analyst of the role of current copyright law in thwarting creativity and innovation, and his "Manifesto on WIPO and the Future of Intellectual Property" is a useful primer on the WIPO context (Boyle, 2004). Duke University Law School, where Boyle works, also hosts the Center for the Study of the Public Domain (CSPD), whose website, **http://www.law.duke.edu/cspd,** features a wide range of interesting resources, including a series of two-minute movies from a contest about the effects of IP on music and film.

2:18: Blogs & Wikis

Many of the people connected to the activist groupings covered in this *Guide* – librarians, consumer groups, FOSS proponents and lawyers – are also "bloggers"– keepers of weblogs. These online blogs, which mix the values of journal-keeping, journalism, gossip, investigation and a love of interaction and communication, are a valuable and entertaining source of information on, among other things, the information commons. Many blogs are acts of both form and content: they celebrate the digital information commons, while at the same time building it and using it. One of the best-known blogs, by Cory Doctorow, is called "Boing Boing: A Directory of Wonderful Things" at: **http://boingboing.net.**

Similar to blogging in their self-publishing ethic and part of the digital commons movement by virtue of their collaborative, shared spirit are wikis or online encyclopedias – written and edited by anyone who feels she or he has something to contribute. The best-known wiki is Wikipedia, at: **http://en.wikipedia.org**

2.19: Open Access

An important information commons concept to emerge in the past few years is "open access" scholarly communication — research outputs and knowledge resources made available via digital files accessible through the internet and electronic networks. February 2002 saw a key moment in this open access movement with the Budapest Open Access Initiative Statement, the product of a meeting in the Hungarian capital convened by the Open Society Institute (OSI). The Budapest Statement begins by saying that "An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the internet. The public good they make possible is the world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds. Removing access barriers to this literature will accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge" (OSI, 2002).

The Budapest Statement makes the claim that open access scholarly publications can be viable even without charging subscription or user fees, because they give "readers extraordinary power to find and make use of relevant literature" and they give "authors and their works vast and measurable new visibility, readership, and impact" (OSI, 2002). The statement argues that "new cost recovery models and financing mechanisms" can be found for online open access journals (OSI, 2002).

The statement delineates open access publishing in the following ways:
• such publications shall include both peer-reviewed journal articles and un-reviewed pre-prints put online for comment or to inform colleagues of research findings;
• users shall be able to download, copy, distribute, print, search, or link to the full texts;
• users shall also be able to "crawl" the articles for indexing, or to pass the articles on as data to software;
• the only limitations for the user shall be that the authors maintain control over the work

(i.e., no derivatives or adaptations by the user) and the author shall be properly acknowledged and cited in uses of the work.

The values of this Budapest Open Access Initiative Statement have since been reaffirmed by institutions and meetings around the world, including meetings of academics in the US, UK and Germany, WSIS, an OECD committee, the IFLA Governing Board and the UK CIPR.

There are two main types of open access publishing: open access journals and open access archives/repositories. An example of an open access journal is *First Monday*, **http://www.firstmonday.org**, established in 1996 as an entirely online peer-reviewed monthly journal with articles about the internet. *First Monday* says it has published more than 500 papers by nearly 700 authors in the more than 100 issues since its inception. In 2004, more than 800,000 users downloaded around 6 million *First Monday* articles. It is based at the University of Illinois in Chicago. Meanwhile, examples of open access archives/repositories include:
- The American Memory historical collections, **http://memory.loc.gov/ammem**, a project of the US Library of Congress that had, by 2003, digitised more than 7 million items from about 100 historical collections as part of the National Digital Library Program. Funding for this effort has come from both US Congress and from the private sector. Being publicly-funded, the Library of Congress does not, for the most part, own rights in its collections, and thus does not generally charge permission fees or require users to seek permission for use.
- The Internet Archive, **http://www.archive.org.**

DSpace software is one of the dominant players in the open access institutional repository movement. Jointly developed by MIT Libraries and Hewlett-Packard Labs and freely available as open source software, DSpace helps institutions capture, store, index, preserve and re-distribute their digitised research outputs. The Open Society Institute has developed a *Guide to Institutional Repository Software*, which aims to help institutions plan their digital repositories — including the policy, legal, educational, cultural, and technical components – and to choose the appropriate software: **http://www.soros.org/openaccess/pdf/OSI_Guide_to_IR_Software_v3.pdf**

The Cornell University DSpace Digital Repository is a typical example of a university repository using DSpace software. It is, as the site says "open for anyone at Cornell University as a place to capture, store, index, preserve and redistribute Cornell faculty, staff, student or organisational research materials in digital formats." The Massachussets Institute of Technology (MIT) has led the way not only in the development of repository software (DSpace) but also in making repositories of course materials available via open access. Through its OpenCourseWare project, MIT now has around 900 of its courses available online. Tufts University also has an OpenCourseWare project and the Rice University Connexions Project provides both short modules ("knowledge chunks" as it calls them) and full courses. Currently more than 80 Rice courses and more than 2,000 modules are available online. The Johns Hopkins University Bloomberg School of Public Health (JHSPH) has launched an OpenCourseWare (OCW) project, which provides

access to six of the school's most popular courses.

2.20: Open Content

Linked to the open access movement is "open content" where the user is given a wide range of explicit rights to use and even adapt online materials (writings, music, video etc.). The open content movement aims to break down the "all rights reserved" approach to information and creativity upheld by copyright law, with open content practitioners explicitly foregoing certain copyright rights in order to encourage collaboration and wider use/exposure for their works. The success of the Linux computer operating system, and of certain musicians and writers who gain wide exposure and economic opportunities through releasing their content via the internet for free use and adaptation, shows the potential power of the open content model. The best-known open content initiative is Creative Commons (although some of their licenses don't allow derivatives to be made), through which millions of creative works are now being made available, on a "some rights reserved" basis, on the internet.

Open Content Alliance
http://www.opencontentalliance.org

The Open Content Alliance (OCA) is administered by the Internet Archive and represents the collaborative efforts of a group of cultural, technology, nonprofit, and governmental organisations that are attempting to build a permanent archive of multilingual digitised text and multimedia content.

The OCA invites contributors to donate collections, services, facilities, tools and/or funding, as long as they agree to a set of principles regarding conditions for public access and reuse of collections in the archive. Some of the contributors to the OCA include Adobe Systems Incorporated, a number of universities from North America and Europe, HP Labs, the Internet Archive, O'Reilly Media, the Prelinger Archives and Yahoo!

2.21: Creative Commons (cc)

Creative Commons was launched at Stanford University in December, 2002, and its first project was to offer a set of copyright licences free for public use. The aim was to offer a simple way for authors and artists to express the freedoms they wanted their creativity to carry. The idea for the Creative Commons licences originated from the Free Software Foundation's GPL (General Public Licence), which uses copyright law to mark out the freedoms that should apply to a work.

But as Creative Commons founder, Lawrence Lessig, points out, there are differences between the problems that the Free Software Foundation was trying to solve in the 1980s and the issues being tackled by the Creative Commons project today. Lessig writes: "When Richard Stallman launched the Free Software Foundation just over 20 years ago, he was responding to something new in the world of software development. In his experience, software had been free, in the sense that the source code was freely accessible and could be freely modified. But by the early 1980s, this norm was changing.

Increasingly, software was proprietary, meaning the source code was hidden, and users were not free to understand or modify that source code. Stallman thus launched his movement to build a buttress against this trend, by developing a free operating system within which the freedoms he had known could continue ... The story with culture is somewhat different. We didn't begin with a world without proprietary culture. Instead, there has always been proprietary culture — meaning work protected by an exclusive right. And in my view at least, that's not a bad thing either. Artists need to eat. Authors, too. A system to secure rewards to the creative community is essential to inspiring at least some creative work ... [The aim of Creative Commons, therefore] is not to eliminate 'proprietary culture' as at least some in the Free Software Movement would like to eliminate proprietary software. Instead, we believed that by building a buttress of free culture (meaning culture that can be used freely at least for some important purposes), we could resist the trends that push the other way. Most importantly, the trend fueled by the race to 'digital rights management' (DRM) technologies."

A copyright-holder distributing content online under one of the Creative Commons licences allows non-commercial copying and sharing of the work, as long as he or she, as the author or creator, is given attribution. The different licences then allow even further usage rights to the user, depending on how "open" the copyright-holder wants the content to be. The licences specify conditions of use and re-use, including whether the user can make commercial use of the content, and/or make derivatives (for example translations or remixes). Also specified in each licence is whether the user must "share alike" (i.e., under the same terms) any derivatives or copies she or he makes of the work. Creative Commons licences make use of a three-layer interface:
- Commons Deed: A simple, plain-language summary of the license, complete with the relevant icons
- Legal Code: The fine print specified by the local legal fraternity
- Digital Code: A machine-readable translation of the licence that helps search engines and other applications identify your work by its terms of use

Creative Commons has even come up with a "developing nations licence" that allows derivatives of the licensed work to be made only in the developing world. According to Creative Commons, "The Developing Nations licence allows, for the first time, any copyright holder in the world to participate first-hand in reforming global information policy. The fact is that most of the world's population is simply priced out of developed nations' publishing output. To authors, that means an untapped readership. To economists, it means "deadweight loss". To human rights advocates and educators, it is a tragedy. The Developing Nations licence is designed to address all three concerns." (Creative Commons, 2005) Other tailor-made Creative Commons licences include:
- music sampling licences;
- the ccGNU GPL (Creative Commons-GNU General Public Licence);
- the Founder's Copyright licences;
- the Public domain licences.

The ultimate aim of the Creative Commons project is to increase the flow of content directly into the public domain, because, as Lessig writes, "Building a public domain is the first step to showing people how important that domain is to creativity and

innovation" (Lessig, 2004: 286). The usage of Creative Commons licences has grown dramatically. In the first year of operation, there were over 1 million link-backs to cc licences. At a year and a half, that number was over 1.8 million. At the end of year two, the number was about 5 million. At two and a half years (June 2005), the number was just over 12 million, and in October 2005, Yahoo! reported over 50 million link-backs to Creative Commons licences from around the world.

Section 3: African Players, Processes, Issues

3.1: OAPI & ARIPO

Before their independence in the 1960s, French African states had their intellectual property governed by French law, under the French National Patent Rights Institute (INPI). In 1962, 12 newly-independent states formed the African and Malagasy Patent Rights Authority (OAMPI), based on the Libreville Agreement. The Libreville Agreement called for uniform legislation and common administrative procedures for patent rights protection; a common authority to administer patent rights for all of the member states; and centralisation of procedures, so that a single patent issued granted rights in all member countries

The Libreville Agreement only covered patents, trademarks and industrial drawings or models, not copyright. Its 12 signatories were: Cameroon, Central African Republic, Congo, Côte d'Ivoire, Dahomey, Upper Volta, Gabon, Mauritania, Senegal, Chad, Malagasy Republic and Niger. The Malagasy Republic eventually withdrew and a new convention, the Bangui Convention, was signed in 1977, establishing the current Organisation Africaine de la Propriete Intellectuelle (OAPI), based in Yaounde, Cameroon, which has 16 members: Benin, Burkina Faso, Cameroon, Central Africa, Congo-Brazaville, Cote d'Ivoire, Equatorial Guinea, Gabon, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Senegal, Chad and Togo. The Bangui OAPI Agreement, revised in 1999, guides the current OAPI. OAPI's agreements are binding on all its member countries. **http://www.oapi.wipo.net**

The African Regional Industrial Property Organisation (ARIPO), based in Harare, has membership from several English-speaking African nations, and its origins are in an early 1970s seminar on patents and copyright in Nairobi, at which a call was made for a regional organisation on intellectual property. In 1973, the United Nations Economic Commission for Africa (UNECA) and WIPO drafted an agreement for creation of such an organisation, the Lusaka Agreement, which was adopted at a diplomatic conference in 1976. The original name of the body was ESARIPO, with UNECA and WIPO acting as a joint secretariat until 1981, when the organisation set up its own secretariat in Harare. In 1985, membership was opened to all African states who were members of UNECA or the Organisation of African Unity (OAU), and its name was changed to the present one, the African Regional Industrial Property Organisation (ARIPO). ARIPO was mainly established to pool the resources, human and financial, of its members in engaging with IPR issues. Current ARIPO members are drawn mostly from English-speaking East and Southern Africa, with the exception of South Africa. Unlike OAPI in West Africa, ARIPO's protocols are not binding on its members. ARIPO's primary work is in researching and registering patents for its member countries, without any direct role in copyright matters. **http://www.aripo.wipo.net**

3.2: UNECA

The UN Economic Commission for Africa (UNECA), headquartered in Addis Ababa, has had a strong presence since its inception in "information society" issues. It has been

active on a number of intellectual property and ICT for Development (ICT4D) fronts. The Africa Information Society Initiative (AISI) document of 1998 is a key one, and can be seen as having an impact on the information society components of the New Partnership for Africa's Development (NEPAD) plan, adopted by African states at the establishment of the African Union in 2001.

3.3: African Union & NEPAD

The Organisation of African Unity (OAU), precursor to the African Union, played a role in the formation of OAPI and in the drafting of model legislation for intellectual property. The establishment of the African Union to replace the OAU as the primary body representing the collective interests of the continent came about in 2001, and its central strategy and implementation plan is the New Partnership for Africa's Development (NEPAD). Among other things, the NEPAD document calls for:

- Africa "to increase her contribution to science, culture and technology" (Paragraph 16);
- "intensive use of ICTs" to "facilitate the integration of Africa into the new information society, using its cultural diversity as a leverage" (Para. 108);
- development of "local content software, based especially on Africa's cultural legacy" (Para. 110);
- ICTs to be "used to establish regional distance learning" (Para. 108);
- promoting "networks of specialised research and higher education institutions" (Para. 120);
- African nations to develop "networks among existing centres of excellence, especially through the Internet …" (Para. 146).

NEPAD Paragraph 144 specifically mentions the area of intellectual property and WIPO, saying that NEPAD leaders "will take urgent steps to ensure that indigenous knowledge is protected in Africa through appropriate legislation. They will also promote its protection at the international level, by working closely with the World Intellectual Property Organisation."

3.4: IPR Exceptions & Africa

The difficulty for African nations trying to take stands at the level of the WTO or WIPO, or in FTA talks with developed nations, is that, on top of their shortfalls in financial and human resources to take on the big players, African nations are faced with the reality that many of the prevailing notions and legalities that dominate contemporary intellectual property rights (IPR) discourse and rule-making do not suit the African context. This fact, along with the current domination of intellectual property rights ownership by non-African firms, can lead one to the pessimistic view that most African nations have nothing to gain and everything to lose from their participation in the prevailing Western-originated intellectual property dispensation. But from a less pessimistic perspective, one can point to some of the existing flexibilities and exceptions in the intellectual property system from which African nations may on some occasions be able to benefit. The South African government was able to force the hand of international pharmaceutical companies through a move to implement TRIPS-sanctioned exceptions on the import and manufacture of life-saving drugs. And many bodies, including the UK Commission on

Intellectual Property Rights (CIPR), assert that TRIPS exceptions can probably be exploited by developing nations to improve access to essential educational materials.

As explicitly recognised in the New Partnership for Africa's Development (NEPAD) founding document, digital technologies (ICTs) and networks (internet) have an important role to play in expanding and improving education delivery, putting knowledge and research outputs into the public domain, and facilitating collaborations among tertiary institutions and research bodies. But there is concern that the digital, networked environment is not yielding as much benefit for African education as it could, and that many of the practices of large publishing and content houses, supported by international and national IPR rules, are to blame. For instance, it is argued that the inexpensive and widespread diffusion of education materials made possible by digitisation and digital networks is being undermined by the continuing vagueness and restrictiveness of "fair dealing" (called "fair use" in the US) exception rules in national copyright laws and regulations. Fair dealing, which draws its basis from the exceptions allowed under the Berne Convention's three-step test, allows students, librarians and educators to copy and distribute certain amounts of published material for teaching and learning purposes, without permission of the copyright holder. But the limits on the portion of a work that can be copied, and the number of copies that can be made, are often very narrowly defined in countries' copyright laws. There is evidence to suggest that traditional publishing companies that generate much of their income from sales of hard-copies of textbooks lobby to ensure that these fair dealing rules remain strict. It is also the case that the US, via TRIPS Plus provisions in free trade agreements (FTAs), is managing to shrink fair dealing even further in many parts of the world, including Africa.

Generic Textbooks?
There is also evidence that the international educational publishers, in behaviour similar to that of which the international pharmaceutical companies stand accused, are charging more than they need to for the products they provide to Africa and other parts of the developing world.

Just as there has been an "essential medicines" campaign, pushing for non-proprietary (generic) production and sale of certain drugs before the end of their 20-year patent, so too there is now a push from activists for "essential textbooks" to be freed-up before the end of their copyright terms. Digitisation and digital networks could play a key role in a "generic textbooks" model, allowing for printing of cheap e-book versions of chapters or texts by schools and teachers connected to the internet. Generic texts could also benefit African publishing houses that would not have to pay for copyright permission to use material from such texts in development of local books or in developing local translations.

CoL Document on Copyright Matters
The Commonwealth of Learning (CoL) is supporting African policy-makers in their efforts to devise copyright policies that are more enabling of education. CoL convened a meeting of experts in law, education and technology from Botswana, Canada, South Africa and the US in Johannesburg in mid-2005. The result was a "Document for Commonwealth Countries on Copyright Matters in Education" which makes

recommendations on how countries can increase access to learning materials through national copyright laws that exploit of TRIPS flexibilities.
http://www.col.org/programmes/infoknowledge/copyright.htm

3.5: Traditional Knowledge (TK)

African nations are home to multitudes of examples of traditional knowledge (TK), indigenous knowledge (IK) and traditional cultural expressions (TCEs, or "folklore"). These are types of intellectual output that often do not easily fit within the existing Western (individualistic, capitalistic) IPR system propagated by WIPO and the WTO. The world as seen by the WTO and WIPO bureaucrats has great difficulty catering to the worlds of TK, IK and TCEs, for the following reasons:

- **Ownership:** Much traditional or indigenous knowledge is, by its very nature, communally-held, and thus does not lend itself to the notions of private ownership that lie at the heart of the patent, trademark and copyright systems overseen by the WTO and WIPO.

- **Time:** Much of traditional or indigenous knowledge is, by its very nature, old, and seemingly "always there" in the past and present, making the time limits (20 years for patents, creator's life plus 50 years for copyright) that are typical of the WTO-WIPO regime clumsy at best and even irrelevant at times.

- **Representation and Recording:** Many examples of TCEs/folklore are not physically tangible, existing only in the minds of those who know them, and only seldom "performed" in an oral form, while the systems of patent, trademark and copyright are based on protection of physically manifested (audio, visual, text, performance) representations. Some instances of TCEs/folklore (e.g., a sacred practice) are not, by custom, supposed to be manifested beyond very particular situations or even viewed by non-members of a community or certain segments of a community.

- **Redress:** In spite of the slipperiness of the concepts of TK, IK and TCEs/folklore in terms of prevailing IPR notions, this hasn't stopped businesspeople – often not connected to the community from which the TK, IK or TCEs/folklore comes – from making money out of commercial applications of a community's creativity and innovation. Best-known are the cases of pharmaceutical firms making huge profits from drugs based on traditional medicinal knowledge. And one can be certain that the world's indigenous peoples are not getting much direct financial benefit from the use of their traditional imagery on the T-shirts, coffee mugs and playing cards sold in airports and big-city tourist districts. In many cases, commercial exploitation of TK, IK and TCEs/folklore has gone hand-in-hand with disenfranchisement of peoples (e.g., the aboriginal peoples of North and Latin America, Australia, New Zealand, South Africa and Japan). The existing WTO-WIPO IPR dispensation does not cater to notions of "redress" or special rights for intellectual property that has been abused and exploited unfairly.

So it then becomes reasonable to ask: what exactly does a "digital commons" have to offer to the world of TK, IK and TCEs/folklore? In some cases, a strong argument can be made for not recording, digitising and granting networked public access to TK, IK and TCEs/folklore. For intangible intellectual property, digital documentation or representation has the potential to undermine the very nature of the knowledge or to make it vulnerable to individual – as opposed to collective – claims of ownership. But in other

cases, digitisation, documentation and public-sharing of information can play a role in securing a community's or ethnic group's control over the knowledge and its uses, particularly its commercial uses. For instance, an indigenous group may want to take steps to prevent use (recording, documentation and archiving/distribution) of certain sacred rituals, while at the same time actively documenting and establishing ownership over something (a medicinal cure, a style of art) that is not sacred and which could have commercial benefit for the community/nation if exploited commercially. In both cases, some kind of public record or database can be of use since recording of information can help in assertion and protection of ownership.

3.6: *Sui Generis* Models

There is a growing belief that the best way for African nations to regulate the exploitation of TK is to develop *sui generis* policies, laws and regulations, either at national or regional level, with *"sui generis"* meaning "appropriate to the situation". The 1992 Rio Earth Summit's Convention on Biological Diversity (CBD) is often cited as an example of a *sui generis* approach. The CBD established principles and systems for indigenous peoples to benefit from exploitation of TK, in this case biological TK. While the Rio Convention's provisions have not been incorporated into TRIPS, they are useful in giving weight to the development of *sui generis* national or regional procedures. Another useful model, according to some analysts, is the OAU Draft Model Legislation on Community Rights and Access to Biological Resources, developed in 1998-99 (Musungu & Dutfield, 2003).

Within the WIPO dispensation, Article 15.4 of the Berne Convention includes a measure to protect unpublished and unprotected works, and the Tunis Model Law on Copyright for Developing Countries includes *sui generis* protection for TCEs/folklore. In 1982, WIPO worked with UNESCO to develop a *sui generis* model for the protection of folklore, known as the WIPO-UNESCO Model Provisions, and 1997 saw the UNESCO-WIPO World Forum on the Protection of Folklore in Phuket, Thailand. In 1998-99, WIPO engaged in fact-finding in 28 countries to identify "needs and expectations" among indigenous groups and others around IPR protection for TCEs/folklore. In 1999, WIPO and UNESCO held an African regional consultation on TCEs/folklore in Pretoria.

WIPO Intergovernmental Committee (IGC)
In 2000, WIPO set up its Intergovernmental Committee (IGC) on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. The "IGC", as the committee is known, has been engaging in fact-finding and convening regional meetings of experts to develop draft *sui generis* models. A recent IGC Secretariat document entitled "Overview of Policy Objectives and Core Principles" for traditional cultural expressions (TCEs) and expressions of folklore (EoF) contained some seemingly useful objectives and principles for African nations to consider incorporating into their national laws, including:
• Respect for customary use and transmission of TCEs/folklore;
• Promotion of community development;
• Guarding against awarding of invalid IP rights;
• Recognition of the indivisibility, in many communities, between traditional/indigenous knowledge and culture (TCEs/folklore). **http://www.wipo.int/tk/en**

Indigenous Knowledge Systems (IKS) Policy, South Africa
South Africa's Indigenous Knowledge Systems (IKS) Policy, adopted by Cabinet in November 2004 and being championed by the South African Department of Science and Technology (DST), is an attempt at a holistic and *sui generis* approach to protection of TK, IK and TCEs/folklore. Though driven by the DST, the policy is to be overseen and implemented by an interdepartmental committee on IKS made up of representatives from at least 14 different government departments, including Science and Technology, Education, Trade and Industry, Health and Arts and Culture. The policy is attempting to find a clear balance between respecting/protecting tradition on the one hand and, on the other, enabling community economic development through exploitation of the commercial value of traditional/indigenous knowledge and culture. The policy includes structures for government engagement with South African traditional leaders and indigenous knowledge holders and practitioners.
http://www.dst.gov.za/programmes/indigenous_knowledge/indigenous_knowledge.htm

3.7: FTAs & TRIPS Plus

In spite of the existence of regional African intellectual property bodies such as OAPI and ARIPO, and continental organisations such as UNECA and the AU with stated interest in intellectual property matters, much of the important rule-making on intellectual property in Africa is currently occurring at the level of bilateral free trade agreements (FTAs). As it has done in other parts of the world (including developed countries such as Australia), the United States is seeking TRIPS Plus intellectual property clauses in its FTAs with African countries. The US has already succeeded in securing TRIPS Plus provisions in its recent FTA with Morocco, and there are signs of a clear push for similar measures in the on-again, off-again FTA negotiations between the Office of the US Trade Representative (USTR) and the Southern African Customs Union (SACU), the trading block made up of South Africa, Swaziland, Lesotho, Botswana and Namibia. In their 2005 "Memorandum on the Free Trade Agreement Negotiations Between the United States and the Southern African Customs Union" Prabhala and Caine of the A2LM in Southern Africa project outlined the USTR's explicit aim to secure TRIPS Plus provisions in the US-SACU FTA, including:
• Extension of copyright term beyond 50 years;
• Curbs on parallel importing;
• Measures similar to those in the US Digital Millennium Copyright Act (DMCA) that would have the effect of limiting fair dealing in electronic content (Prabhala & Caine, 2005).

The US has also begun FTA talks with Egypt, and it can be expected that similar TRIPS Plus provisions will be sought.

3:8: Open Access & Open Content in Africa

As in the developed world, some of strongest open access work taking place in Africa is based at universities, driven by librarians and computer scientists. There are also some strong civil society, foundation and government players involved.

Open content is also starting to be adopted, but with many challenges to be overcome. Some of the challenges people on the continent face in producing open content, or any digital content, are as follows:

- **Low audience levels:** Only 1.7% of Africans are online and over half of these people reside in South Africa and Egypt. Literacy levels are at about 50 percent in much of the continent. The internet is not currently a medium that offers significant local audiences in Africa.

- **Fear of "theft":** There is evidence to suggest that people in Africa have little faith in sharing knowledge when local discourses around "intellectual property" are usually focused on stories of how Africans' local knowledge has been stolen by outsiders. Much of the knowledge that is published on the internet by Africans is actually consumed outside the continent by a massive, largely unregulated community. Content development for international audiences thus has little appeal on the African continent, especially among small companies and organisations.

- **Legal complexities and high costs in the content industry:** As Lawrence Lessig argues (*Free Culture,* 2004), culture and knowledge have never been cheaper or more accessible, but legal issues are very complex. Even with licences like Creative Commons that try to make the legal process simpler and cheaper, copyright law can, and does, strangle the potential for people to engage in sustainable publishing initiatives on the internet.

- **Missing the "branding" boat:** Many African websites do, in fact, contain most of the elements of "open content" but without a licence or formal alignment with the open content movement. Many organisations in Africa subscribe to open content principles, with wording on their websites that states what users can do with the material, but because they don't see it as strategic to align themselves with the legal licensing movements, they don't tend to make formal use of Creative Commons and other open content licences.

- **A lack of local applications:** The Johannesburg-based M&G Online's "Blogmark" (licensed under the Creative Commons Attribution 2.0 licence) is only a few months old and yet it receives over 1,500 unique users a day and has around 800 local South African bloggers on its pages. Local bloggers know that more than 1,500 people could read their blogs (the home page lists the most recent entries rather than the most popular ones), providing strong incentives for new authors and publishers. This 'Blogmark' case has also shown how the implementation of a local software solution can help to establish a local community of content creators and users who can feed off and engage with one another.

- **Lack of broadband infrastructure:** Blogging has relatively low technological requirements: you only need a computer with even a slow internet connection in order to blog. But development of content like video, animation or photography that requires relatively large-capacity computers, expensive software and high bandwidth is currently isolated to expensive training centres and a handful of advertising and private sector entertainment companies. The opportunity for community access to

new media content production is lost in telecentres that operate on thin client machines with limited hardware and facilities.

3.9: Funders

There are several funders supporting African digital commons work in one way or another:

- The International Development Research Centre (IDRC) Acacia project, funded by the Canadian government, is supporting the Commons-sense Project at the Wits LINK Centre, of which this *Guide* is part. Acacia is an Africa-wide ICT-focused initiative that supports a wide range of content, connectivity, access and policy interventions. **http://www.idrc.ca**
  Contact: Heloise Emdon: heloisee@dbsa.org

- The Open Society Institute (OSI) Information Programme is a key driver of the global open access movement, including several institutional repository and open access journal projects in Africa. **http://www.soros.org**
  Contact: Melissa Hagemann: mhagemann@sorosny.org.

- As the SADC member of the Soros-OSI family, the Open Society Initiative for Southern Africa (OSISA) supports a wide range of information commons initiatives through its ICT Programme, including FOSS projects, e-learning and Creative Commons licensing. **http://www.osiafrica.org**
  Contact: Ashraf Patel: ashrafp@osiafrica.org

- The Partnership for Higher Education in Africa, financed by the Carnegie Corporation and the Ford, MacArthur and Rockefeller Foundations, is supporting the AAU's Database of African Theses and Dissertations (DATAD) project; collaboration between Tufts University in the United States, Uganda's Makerere University and Tanzania's University of Dar es Salaam in the development of an electronic curriculum in international relations; and digitisation of the collections of the Mozambican Historical Archives. **http://www.foundation-partnership.org**

- The Aluka project, funded by the Mellon Foundation as part of its Ithaka programme, supports digital archiving of scholarly resources from the developing world, including the Digital Imaging South Africa (DISA) project at the University of KZN in Durban. **http://www.ithaka.org/aluka**

Section 4: Directory of African Projects

This section of the *Guide* was written with direct input from those involved in the projects listed. Participants from the projects were invited to edit their pages on the Commons-sense wiki to ensure that their work is accurately represented.

4.1: Research, Policy Inputs & Advocacy

AIM Laboratory, University of Cape Town
http://aim.cs.uct.ac.za
http://pubs.cs.uct.ac.za
http://www.cs.uct.ac.za
The Advanced Information Management (AIM) Laboratory project at UCT, begun by the Department of Computer Science in 2003, conducts research into various information management techniques, including databases, digital libraries, artificial intelligence, knowledge management and distributed, scientific and cluster computing. It is also a leading proponent of open access archiving, making all its research outputs available on the internet and advocating the establishment of institutional repositories in other departments and at other institutions. Its Research Document Archive runs on the GNU EPrints open source archive-creating software.
Contact: Hussein Suleman
hussein@cs.uct.ac.za

APC Africa ICT Policy Monitor
http://africa.rights.apc.org
http://www.apc.org
The global Association for Progressive Communications (APC) has been a key player in advocating for a free and egalitarian online environment since the early 1990s. The APC Africa ICT Policy Monitor is one of the better resources for tracking ICT and intellectual property policy issues on the continent. The APC uses Creative Commons licences to publish content, and is one of the partners in the ItrainOnline e-learning courseware series.
Contact: Emmanuel Njenga
njenga@apc.org

A2LM in Southern Africa
http://www.access.org.za
Begun in 2004, the Access to Learning Materials (A2LM) in Southern Africa project, hosted by the Consumer Institute for South Africa (CISA) in Johannesburg and funded by the Open Society Institute (OSI), is tackling a range of dynamic research and advocacy areas, including:
• TRIPS Plus copyright aspects of US Free Trade Agreement (FTA) talks with the South African Customs Union (SACU) countries of South Africa, Lesotho, Swaziland, Botswana and Namibia;
• Analysis of affordability of learning materials, and user perspectives on learning

material access, in South Africa;
• Analysis of the South African Print Industries Cluster Council report on intellectual property rights;
• Analysis of possible application of TRIPS flexibilities and exceptions for learning materials in the Southern African context;
• Participation in the international Access to Knowledge (A2K) Treaty discussions.

Much of the A2LM in Southern Africa Project output is on its website at **http://www.access.org.za.** The project hosted an international A2LM conference in Johannesburg in January 2005, and its coordinator, Achal Prabhala, assisted in the first draft of this *Guide.*
Contact: Achal Prabhala
achal@access.org.za

APSID-CI, Cote D'Ivoire
http://www.apsidci.org
APSID-CI, L'Association pour la Promotion des Sciences de l'information Documentaire in Cote D'Ivoire, is a librarians' trade association formed in 2002 and supported by the US and German Embassies in Abidjan. It advocates for relaxation of the country's copyright laws around fair dealing and stages public events, including a recent Book Caravan in Abidjan. APSID-CI is also involved in a National Digital Resource project.
Contact: Marie Laure Angoran
langoran@hotmail.com
angoranml@state.gov

AVLIN, Addis Ababa
http://www.uneca.org/disd/library/index.html
The African Virtual Library and Information Network (AVLIN) is designed to be a network of internet-based information and knowledge resources and services that form a web of virtual libraries and knowledge exchanges. A collaborative project of the UN Economic Commission for Africa (ECA) it will eventually link African libraries, information centres and specialised networks, as well as offering a platform for knowledge and information sharing among researchers and policy makers.

AVLIN's overarching objective is to help bridge the "digital divide" between Africa and the developed world by:
1) providing access to policy documents and reports, bibliographic databases, general information and expert and institutional profiles of African universities, research institutions, libraries and information centres;
2) building capacity at institutional, national and regional levels on the development of integrated virtual library services;
3) promoting regional cooperation on standardisation and virtual library system developments; and
4) facilitating research and developmental activities in both infrastructure and development of digital and virtual libraries.

AVLIN is a collaborative project of the UN Economic Commission for Africa (ECA) in

Addis Ababa, other regional institutions, and the African library community. AVLIN seeks to complement other UNECA initiatives, such as the African Information Society Initiative (AISI) and the African Knowledge Network Forum (AKNF). AVLIN will be a distributed network, meaning that its databases of information resources will not all be loaded onto the computer system of a single institution.
Contacts:
Abraham Agina Azubuike
Head, Systems and Information Resources Development
aazubuike@uneca.org
Petrina Amonoo, Chief Librarian, ECA Library
avlin@uneca.org
Chairman, Advisory Committee: Felix Ubogu, University Librarian, Wits University, Johannesburg
ubogu.f@library.wits.ac.za

bridges.org, Cape Town
http://www.bridges.org
Bridges is an international non-profit that specialises in ICT policy, technology research, and ICT project evaluations. All bridges.org reports are made available under Creative Commons licences.
Contact: Philipp Schmidt
research@bridges.org

CATIA, Johannesburg
http://www.catia.ws
Catalysing Access to ICT in Africa (CATIA) is a UK Department for International Development (DFID) programme developed in close collaboration with Sida, IDRC, CIDA, USAID and Cisco. It is being implemented in coordination with the Canadian government's Connectivity Africa initiative and is being managed by Atos KPMG Consulting from an office in Johannesburg. CATIA's first three-year phase ends in April 2006, and it consists of nine projects grouped into two broad areas:

1. Catalysing informed ICT policy and regulatory reform:
- 1a - Low-cost VSAT: Facilitating low-cost satellite internet access across Africa
- 1b - ISPAs and IXPs: Robust African internet backbone with exchange points (IXPs) at the core and strong African ISP associations
- 1c - ICT Policy Advocacy: Well-informed, lively and inclusive policy debates across Africa, shaping the local policy environment
- 1d - Pro-Poor Broadcasting Policy: Positive policy environments for radio broadcasting across Africa
- 1e - Policy and regulatory capacity-building: An African-led network of institutions actively strengthening African expertise involved in setting ICT-related policy
- 1f - International ICT decision-making: Increased capacity for African developing countries to participate in international ICT decision-making

2. Strategic Practical Interventions:

- 2a – Low-cost computers and open source software: Support for low-cost computers and open source software in Africa
- 2b - Networking African radio stations: Stronger network of community radio, FM and public service radio stations across Africa, offering good pro-poor radio programmes
- 2c - Open Knowledge Network (OKN): A thriving African-based Open Knowledge Network, catalysing the creation and exchange of local content

Commonwealth of Learning (CoL)
http://www.col.org/copyright
This Vancouver-based intergovernmental organisation funded by Commonwealth country governments is active in supporting "education-friendly" African copyright policy development. A meeting of copyright experts from South Africa and Botswana, convened by CoL in Johannesburg in May 2005, developed the "Document for Commonwealth Countries on Copyright Matters in Education" which was sent to Commonwealth Education Ministers. In November 2005, CoL teamed up with IFLA to sponsor the Africa Copyright Forum Conference in Kampala, organised by the Uganda Library and Information Association and the National Library of Uganda.
Contact: Paul West
pwest@col.org

HANA, Grahamstown, South Africa
http://www.highwayafrica.ru.ac.za/hana
The Highway Africa News Agency (HANA), an offshoot of the annual Highway Africa Conference at Rhodes University in Grahamstown, South Africa, has for the past several years been reporting from major events connected to media and ICT matters for the continent. HANA reported extensively on WSIS Phase I processes in 2003, on Africa Telecom 2004 in Cairo, on the April 2005 ICANN meeting in Argentina, and on WSIS Phase II events in 2005. The agency's target audience is journalists and editors around the continent. Its reporters are drawn mainly from South and East Africa, including Ethiopia, Kenya, Uganda, Zimbabwe and South Africa. The project now publishes all of its content under Creative Commons licences.
Contact: Chris Kabwato
c.kabwato@ru.ac.za

LINK Centre, Johannesburg
http://link.wits.ac.za
The Wits University LINK Centre, host institution for Creative Commons South Africa and for the Commons-sense Project of which this *Guide* is part, is a leading public-interest research and training centre within the Wits University Graduate School of Public and Development Management (P&DM). The LINK Centre provides both certificate courses and master's-level credits in telecommunications, broadcasting and ICT subjects, as well as coordinating the Research ICT Africa! (RIA) network of researchers from around the continent.
Contact: Luci Abrahams
abrahams.l@pdm.wits.ac.za

OneWorld Africa, Lusaka
http://africa.oneworld.net
The OneWorld office in Lusaka, Zambia is the African hub in the global OneWorld network, headquartered in London, which has hubs on five continents. OneWorld offices generate development information in text, audio and video formats for online publishing and sharing in several languages. OneWorld is a key player in the CATIA (Catalyzing Access to ICTs in Africa) project funded by the British and Canadian governments. An important CATIA project for the purposes of this *Guide* is Open Knowledge Network (OKN) Africa, which OneWorld International helps manage and OneWorld Africa helps drive. *See also 4.15 below for more on OKN Africa.*
Contact: Bornwell Mwewa
bornwell.mwewa@oneworld.net

Pambazuka
http://www.pambazuka.org
Pambazuka is an online newsletter promoting social change and development in Africa. It reaches over 60,000 people worldwide every week, keeping them updated on African human rights, conflict, health, environment, social welfare, development, and the internet. The Pambazuka site promotes grassroots activism with links to fundraising organisations and petition sites, and users also have the option of texting their opinions to government numbers provided.

SAIDE, Johannesburg
http://www.saide.org.za
Formally founded in 1992 but with its beginnings in the 1980s during the apartheid struggle, the South African Institute for Distance Education (SAIDE) has done a wide range of research projects around ICT use for educational purposes. A recent publication is a guide to ICT use for school principals.
Contact: Maryla Bialobrzeska
marylab@saide.org.za

SANGONeT, Johannesburg
http://sangonet.org.za/portal
The Southern African Non-Governmental Organisation Network (SANGONeT) was founded in South Africa in 1987 as Worknet, a pioneering ICT networking civil society organisation. A member of the Association for Progressive Communications (APC), SANGONeT's current key offerings to civil society are technology services, training and information networking. It has been hosting civil society ICT forums, called "Thetas" in recent years, and its May 2005 Theta brought together interested parties from around SADC, to strategise around use of Creative Commons licences in the region.
Contact: Fazila Farouk
fazila@sangonet.org.za

Women'sNet, Johannesburg
http://womensnet.org.za
Originally a project of SANGONeT, Women'sNet is now a stand-alone South African

member of the Association for Progressive Communications (APC), focusing on gender and ICT issues through advocacy, training and content development. Its GenderStats site, licenced under Creative Commons, provides qualitative and quantitative data for use in gender advocacy. Its "she-bytes" initiative provides audio files, on gender empowerment issues, developed by girls and by community radio stations.
Contact: Natasha Primo
natasha@womensnet.org.za

4.2: Creative Commons in Africa
South Africa is currently the only African country that has "ported" the Creative Commons (cc) licences to the national jurisdiction. Nigeria will probably be the second African country to join the movement, and many other countries are starting up projects. During the porting process, lawyers in the particular country are invited to participate in re-writing the generic Creative Commons licences according to the legal language of the particular jurisdiction. The result is a set of jurisdiction-specific licences that creators within a country can use to apply to their work, confident that the licences will be understood by the local legal fraternity.

In spite of the significant barriers to formal open content adoption in Africa (outlined earlier in this *Guide*), Africa is, in many respects, well suited to Creative Commons and a revolution in the field of "intellectual property rights". The idea that collective knowledge should form the starting point of a fluid, continuously-evolving creation process is still strong in Africa. For instance, South Africans, living by the philosophy of "ubuntu", have always created in collaborative groups. "Ubuntu" can be encapsulated in the phrase "umuntu ngumuntu ngabantu", roughly translated as "a person is a person through other people" or "I am what I am because of you". This philosophy emerges in song, dance and music, where all individuals in the community participate in the creation process. The philosophy of ubuntu is well suited to the philosophies of Creative Commons. Both embrace a process where creation is acknowledged as evolving out of the community, and recognise that at least some of the value coming out of that creative process needs to be given back to the community in order to strengthen future contributions.

Users
Many of the African initiatives outlined in this Section 4 of the *Guide* are making their materials available online with Creative Commons licences:
·   Wits University LINK Centre
·   bridges.org, Cape Town
·   KEWL e-learning platform, University of the Western Cape
·   APC – Association for Progressive Communications
·   Women'sNet
·   CATIA – Catalysing Access to ICTs in Africa
·   HANA - Highway Africa News Agency, Rhodes University Journalism Department
·   Thutong National Education Portal, South Africa
·   SchoolNet Africa
·   SchoolNet Namibia
·   The Shuttleworth Foundation

Workshops
Funded by the Open Society Initiative for Southern Africa (OSISA), the APC ran Creative Commons workshops in Grahamstown, Accra, Windhoek, Johannesburg and Cape Town in late 2004 and 2005. Presentations on cc licensing were also made at the Highway Africa and Idlelo conferences in Grahamstown and Cape Town respectively in 2004, as well as a number of regional and international fora.

4.3: ccSA: Creative Commons South Africa
http://za.creativecommons.org
Creative Commons (cc) established its African "beachhead" in South Africa in 2004-05. The formal legal "porting" of the cc licences into South Africa began with a first draft in July 2004, developed by Johannesburg lawyer Andrew Rens (currently based in San Francisco). This draft received public inputs in March 2005 at workshops in Johannesburg and Cape Town where interested lawyers, academics and members of civil society met to discuss the details of the South African jurisdiction-specific licences.

The official launch of Creative Commons South Africa (ccSA) took place on the evening of 25 May 2005, in Johannesburg at the Rosebank Hotel, as the opening event of the "Commons-sense" Conference. Speakers included Creative Commons Chairman Lawrence Lessig and Executive Director Neeru Paharia, as well as LINK Centre Director Luci Abrahams, Legal Lead Andrew Rens and the Public Lead, Heather Ford. ccSA is currently headquartered, along with the Commons-sense Project, at the Wits University LINK Centre in Johannesburg. The LINK Centre is responsible for updates to the licences and for developing informed use of the licences locally.
Contact: Heather Ford
hfordsa@gmail.com

4.4: Commons-sense Project
http://www.commons-sense.org
The Commons-sense Project, of which this *Guide* is part, is hosted by the Wits University LINK Centre in Johannesburg. Other project outputs for 2005-06:
• popularising the use of Creative Commons (cc) licensing in the SADC region;
• launching a set of South African-specific cc licences appropriate to the existing South African copyright regime;
• hosting of the "Commons-sense" Conference in Johannesburg in May 2005;
• collaborating with Brazilian activists in developing strategies for developing-country open content media and cultural production;
• developing a set of training materials for organisations in Africa that wish to devise innovative online publishing and copyright policies and use cc licences;
• research for the Open Society Institute into open access and open content initiatives throughout the continent.
Contact: Heather Ford
hfordsa@gmail.com

4.5: University Institutional Repositories

Some of the key players in the African open access publishing movement come from tertiary education institutions, where they are setting up institutional repositories containing full-text items accessible via the internet to the general public:

Rhodes University ReRR, Grahamstown, South Africa
http://eprints.ru.ac.za
Spearheaded by Rhodes University Library and the Rhodes University Information Technology Division, the Rhodes eResearch Repository (ReRR) contains the academic and research output of Rhodes University, i.e. full-text theses and dissertations, journal articles and conference papers. Testing for the project took place in 2004, with implementation beginning in 2005, using the EPrints software. Rhodes students are given a form to complete when they submit their master's theses or PhD dissertations. The form seeks permission from the student for the library to release the full-text of their works for access worldwide. Students also have an embargo option, where depositing is delayed for a period of up to five years before becoming available for open access.

The ReRR is to be registered with the international Open Archives Initiative, allowing its metadata to be "harvested". The library is now doing an investigation into which of the large international journal publishers – e.g., Elsevier – will allow authors to archive their articles in local university repositories as well as getting published in a journal. To showcase a sample collection of journal articles, the Rhodes Library approached Rhodes researchers who contributed articles to the Rhodes Centenary issue of the South African Journal of Science, to seek permission to archive their articles in full text the ReRR.
Contact: Irene Vermaak
I.Vermaak@ru.ac.za

University of Namibia (UNAM) Institutional Repository
https://dspace.unam.na:8443/dspace
http://wwwisis.unam.na
http://greennstone.unam.na
http://greenstone.unam.na/ojs
The UNAM Library is involved in various activities to make local information available on its intranet and on the internet, including specialised databases, Namibian theses and dissertations, examination papers and archival resources. UNAM is also working towards setting up an e-journal to be called the Namibia Development Journal. Installation of the institutional repository began in 2004, with training of UNAM users. The Budapest Open Access Initiative policy has been accepted by the Senate of the University, after going through all the appropriate committees. UNAM wants to involve other Namibian institutions, such as the National Museum, the National Archives and the Ministry of Education.
Contact: Renate Morgenstern
rmorgenstern@unam.na

4.6: University Electronic Theses & Dissertations

One of the central components of any university institutional repository is the institution's

output of masters' theses and PhD dissertations. African university librarians and scholars wanting to get their institutions' theses and dissertations online face technological, human resource and policy/legal obstacles. At the technical and human resource levels, uploading and hosting of theses and dissertations require the appropriate server infrastructure and IT skills. At the policy level, many university administrators are reluctant to make their "intellectual property" (of which their students' writings often form part) freely available. Also, many African universities have relationships with developed-world institutions for the purposes of registering and cataloguing theses and dissertations, meaning that foreign institutions have to be consulted before a thesis or dissertation can be put into the public domain.

The DATAD Project, AAU, Accra
http://www.aau.org/datad
A project of the Association of African Universities (AAU) since 2000, DATAD (the Database of African Theses and Dissertations) aims to develop an electronic index of all African theses and dissertations, past and present – using a common format — and to disseminate this index as widely as possible via internet and CD-ROM, for the purpose of "promotion and exchange of knowledge" (Hailu, 2002). Based at AAU headquarters in Accra, DATAD also aims to increase universities' capacity to respond to requests for data mentioned in the DATAD index; to encourage institutions to make entire full-text theses and dissertations – as opposed to just abstracts — available online; and to encourage the publication of peer-reviewed articles based on African research. Linked to this publication objective is DATAD's attempt to develop copyright approaches and archival regulations appropriate to African institutions wanting to make use of the digital online realm. Participating DATAD universities are in Cameroon, Egypt, Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Senegal, Tanzania, Uganda and Zimbabwe. DATAD is supported by the Partnership for Higher Education in Africa and the International Development Research Centre (IDRC).
Contact: datad@aau.org

4.7: Group Licences for Databases
While much of the work of building the African digital commons is concerned with finding alternatives to copyright and private-sector control of knowledge resources, there are also initiatives that are effectively negotiating with the content rights-holders on their own terms. It has been shown that if African universities come together in consortia they are able to negotiate lower-cost access to the electronic databases controlled by the large international academic publishing houses. Electronic database access costs are a huge, and often untenable, expense for university libraries in Africa.

SASLI – South African Site Licensing Initiative
http://www.cosalc.ac.za
A project of the Coalition of South African Library Consortia (COSALC), the South African Site Licensing Initiative (SASLI) brings together South African research institutes and libraries of South African tertiary educational institutions, as well as South African publishers, content aggregators and vendors. These institutions negotiate as a block, via SASLI, to get favourable terms of access to international education databases through a "site licence" — a shared country licence issued by an electronic database

publisher to a group of entities in that country.

SASLI negotiates with database owners on behalf of 30 South African tertiary libraries and research institutes. Since its inception in May 2002, SASLI has negotiated licences for access to 53 international databases and has saved institutions a total of roughly ZAR180 million (US$30 million). The total spent by the 30 institutions on the 53 databases since May 2002 has been around ZAR100 million, instead of the roughly ZAR280 million they would have spent negotiating one-on-one deals with the publishers. SASLI has trained 370 librarians in South Africa in the use of database products, and has trained another 120 librarians in four other African countries. SASLI is starting to work towards greater use of reciprocal arrangements between libraries, more university repositories and greater shared IT networks allowing universities and research institutes to pool computer storage capacity.

SASLI's latest project is the formation of a workgroup called SIVULILE ("we are open" in isiXhosa). SIVULILE aims to develop the technical skills and experience to plan, set up, launch and manage institutional repositories. The workgroup currently includes Dr. Dale Peters (DISA), Dr. Hussein Suleman (University of Cape Town), Dynal Patel (University of Cape Town) and Susan Veldsman (SASLI).
Contact: Susan Veldsman
sasli@cosalc.ac.za

4.8: Online Research Publishing

As well as the African universities working to get their theses, dissertations and research outputs online, the open access movement is also being adopted in varying forms by government-funded research bodies in Africa. There is an increasing belief that research findings generated by public funds should be publicly available.

CODESRIA, Senegal
http://www.codesria.org
Headquartered in Dakar, the Council for the Development of Social Science Research (CODESRIA) was established in 1973, and, through its publications programme, has been providing a platform for the dissemination of social science knowledge produced by Africans on Africa, both within and outside the continent. Its publications are in English, French and Arabic, and it has plans to incorporate Portuguese. CODESRIA is launching CODESRIA African Journals Online (CAJOL) and CODESRIA Monographs Online.
Contact: Francis Nyamnjoh
codesria@codesria.sn
francis.nyamnjoh@codesria.sn

HSRC Press, South Africa
http://www.hsrcpress.ac.za
South Africa's partially state-funded Human Sciences Research Council (HSRC) has adopted what it calls a "dual publishing" philosophy, selling its research publications in hard-copy offline while at the same time offering them free for download via an open access website. The HSRC Press publishes up to 50 titles a year of peer-reviewed work on democracy, governance, education, arts and culture. Its partial state funding comes

from an annual parliamentary grant. According to HSRC Publishing Director Garry Rosenberg, quoted in a recent HSRC media release, "At a time when the privatisation of academic publishing is growing on the one hand, and economics are limiting independent publication on the other, it is important to create something that is owned and held collectively with no restriction on access." In the same release, HSRC Marketing Manager Karen Bruns says that "The cost of traditional academic publishing has meant that less and less important research, particularly by newer authors, is being published – publishing houses tend to play it safe by sticking to recognised names, thus diminishing the actual amount of critical debate on the shelves. But by offering several publishing options, we have been able to extend our range of authors and maintain a high standard of quality publications."
Contact: Karen Bruns
kbruns@hsrc.ac.za

4.9: Online Journals
The push within the global open access movement for open access online-only journals has not yet really taken off in Africa, but there are some steps in this direction.

IJEDICT E-Journal, Barbados
http://ijedict.dec.uwi.edu/viewissue.php
The *International Journal of Education and Development Using Information and Communication Technology (IJEDICT)*, an open access e-journal published out of the University of the West Indies in Barbados, has put out a special issue on "ICT for Education and Development in Southern Africa", with guest editing by Laura Czerniewicz and Tony Carr of the Centre for Educational Technology at the University of Cape Town. This issue is now available on the IJEDICT website. The peer-reviewed papers report on work in Botswana, Mozambique, South Africa and Zimbabwe, and are based on papers presented at the Southern African regional online conference called "e/merge 2004."

KM4Dev Journal
http://www.km4dev.org/journal
The *Knowledge Management for Development (KM4Dev) Journal* is an online, peer-reviewed open access journal, started in 2005, with all articles published under a Creative Commons Attribution-NonCommercial-NoDerivs 2.5 Licence. The Journal's first 2006 issue will deal with "Effective Knowledge Sharing for Development in Africa" with guest editing by African information society experts Dina El Halaby, Reine Djuidje Kouam, Kingo Mchombu and Alice Munya, and overall editing by Julie Ferguson of HIVOS in the Netherlands. The issue will aim to present the challenges that African institutes face in knowledge-sharing and how to overcome these challenges, with the ultimate aim of poverty reduction, improved health and education, food security and gender equity.
Contact: Dina El Halaby
dhalaby@gdnet.org

SAJIC, Wits LINK Centre, Johannesburg

http://link.wits.ac.za
Full-text articles from the *Southern African Journal of Information and Communication (SAJIC)*, edited and published by the Wits University LINK Centre in Johannesburg, are readable and downloadable on the LINK Centre website. The next volume of SAJIC, due out in 2006, will be a special "commons" edition touching on some of the issues highlighted in this *Guide.*
Contact: Alison Gillwald
gillwald.a@pdm.wits.ac.za

AJOL – African Journals OnLine
http://www.ajol.info
Though first prize for proponents of the open access movement is to see academic journals completely online or publishing all their full-text articles online, some projects aim primarily to get the abstracts (summaries) of articles online. One such project is AJOL, launched in 1998 by the UK-based International Network for the Availability of Scientific Publications (INASP). AJOL calls itself the "Gateway to African Published Research" and is being managed by the National Inquiry Services Centre (NISC) in South Africa. AJOL's stated aim is to increase the visibility of African journals among researchers and librarians, and the AJOL website has links to around 200 journals from 21 countries, with more than 13,000 article abstracts (not full texts). It is a non-commercial venture funded by UNESCO and other donors, and there is no charge to the journals for their participation. AJOL only charges for document delivery requests from developed-country librarians and researchers. AJOL's founder, INASP, is an international charity established by the International Council for Science in 1992.
Contact: Margaret Crampton
info@nisc.co.za

4.10: e-Learning
Another important element of the African digital commons is the use of electronic digital networks to support learning opportunities for Africans.

African Virtual University (AVU)
http://www.avu.org
The African Virtual University (AVU) is an inter-governmental organisation based in Nairobi that supports African higher education institutions in their use of Open, Distance and e-Learning (ODeL) delivery methodologies. Currently the AVU has a presence in 42 established learning centres in 18 African countries, using video and internet platforms to provide interactive distance education. It employs both satellite and landline delivery mechanisms to send and receive content and inputs between the AVU and the AVU Learning Centres. The online learning management system is the proprietary WebCT platform, accessed via internet by students at AVU Learning Centres. WebCT makes use of e-mail, chat and discussion forums.

AVU adopted the "campus-based" Learning Centre model of distance education in order to overcome the access problems its students would face if needing to secure internet connectivity privately. Many AVU Learning Centres use asynchronous internet connectivity – high-bandwidth satellite download coupled with low-bandwidth land-line

return-path. The WebCT learning management system is "mirrored" offline on the AVU Learning Centre Local Area Networks (LANs), thus eliminating the need for a learner to be internet-connected all of the time. The next step in internet connectivity for AVU Learning Centres is the use of VSAT satellite technologies, which allow for more synchronous (broadband down and up) internet connectivity and eliminate the need to use land-lines and local ISPs. VSAT, though still subject to prohibitive regulatory restrictions in many African countries, is attractive to the AVU because it allows for the location of Learning Centres in rural areas that are not on the land-line phone grid. At present, most AVU Learning Centres are on the urban campuses of universities. VSAT has already been deployed in four Learning Centres and is expected to gradually extend to the rest of the network.

The year 2005 has seen the launch of the AVU's "In Country" Strategy" which is designed, among other things, to enhance the capacity of universities in the AVU partner network to participate in curriculum development. The AVU has formed two committees: the AVU/PI Consortium Advisory Council (APICAC) representing the Anglophone African institutions, and the Conseil Academique (CA), the Francophone equivalent. These committees are initially going to work towards greater local contextualization of learning programmes sourced outside Africa, and later towards generation of content from the African institutions themselves. The AVU is also in the process of developing a new Open Distance and eLearning (ODeL) Capacity Development Centre in Dakar, Senegal. AVU courses are currently in English and French, and will later include Portuguese.
Contact: Pauline Ngimwa
marketing@avu.org
pngimwa@avu.org

itrainOnline
http://www.itrainonline.org
This series of online training curricula in computer and internet skills is a joint initiative of seven organisations: the Association for Progressive Communications (APC), Bellanet International Secretariat, the UN Food and Agriculture Organisation (FAO), the International Institute for Communication and Development (IICD), the International Network for the Availability of Scientific Publications (INASP), OneWorld and UNESCO. The training modules – grouped into 'Basic Skills, Strategic Use, Web Development, Multimedia, Technical, Resources for Trainers, Resources for Women' – are fully available on the itrain website. The target audience is civil society users in the developing world, and the materials are in English, French and Spanish. The curricula are made available free and as open content (mostly under Creative Commons licences), allowing users to reproduce, translate, adapt and disseminate without permission, as long as itrain is credited. Some of the content development partners include: Alternatives (Canada), the World Association of Community Radio Broadcasters (AMARC), the APC Women's Networking Support Programme, Making IT Work for Volunteers (Canada), Panos Institute West Africa, Wamani (Argentina), Women'sNet (South Africa) and Radio for Development (UK). Funding for itrain comes from, among others, the World Bank infoDev programme, the UK Department for International Development (DFID), DGIS

in the Netherlands. and the Open Society Institute (OSI).

KEWL, UWC, Cape Town
http://kewl.uwc.ac.za
The Knowledge Environment for Web-Based Learning (KEWL) open source learning management system has been in development since 1997 at the University of the Western Cape (UWC) in Cape Town. KEWL is currently used at UWC for about 40 courses, in law, social work and biology, and has been adopted by several other institutions and e-learning projects, including the University of Ghana Legon and the NetTel Africa project. The latest version of KEWL is currently being tested by the University of Makerere in Uganda. UWC's Information and Communication Services Department, driver of KEWL, is also the main driver of the Africa-wide AVOIR free and open source (FOSS) project, and hosted the first Idlelo African free and open source conference in 2004. *See also AVOIR and Idlelo listings under 4.13 below.*
Contact: Derek Keats
dkeats@uwc.ac.za

NetTel Africa
http://www.nettelafrica.org
The NetTel Africa Training Project, an international collaboration between US and African universities, aims to build ICT policy, regulatory and management capacity in Africa thorough the provision of an e-learning service. NetTel provides digital online material accessed by students, augmented by local and international online support from professors. Students access the course material via the internet, using private access or access provided on a university campus, to gain qualifications at one of the following three levels:
• Seminar — a series of short courses, recognised with certificates of attendance;
• Post Graduate Diploma — awarded for completion of 10 core courses over a one-year period;
• Master's Degree — building on the Post Graduate Diploma and requiring four additional advanced level courses and a research project/thesis.

The NetTel Africa project was initiated based on a request by the Telecommunications Regulators Association of Southern Africa (TRASA), and the following universities are currently members:
• University of Botswana
• University of Witwatersrand LINK Centre
• University of Dar es Salaam
• University of Zambia
• University of Fort Hare, South Africa
• Makerere University, Uganda
• University of South Africa
• University of the Western Cape
• University of Colorado
• University of Florida
• University of Maryland
• Washington State University

The curricula have been developed collaboratively by US and African academics over a number of years, and the NetTel Africa headquarters are the University of Dar es Salaam in Tanzania. The main funder is the US Agency for International Development (USAID), which supported the curriculum development and provides bursaries to students.
Contact: NetTelAfrica@cs.udsm.ac.tz

OLS, University of KZN, Durban
http://www.ols.ac.za
The Open Learning System (OLS) free and open source online learning management system was developed in 2003 at the University of KwaZulu-Natal's Centre for IT in Higher Education (ITEd). It is based on "constructivist" learning theories and targeted at primary, secondary and tertiary educational institutions and corporate training environments. The system is constructivist in that it is designed to allow learning to occur through interaction and problem-solving among students. Key mechanisms include online chats, online discussion forums, and online peer review of written inputs. The system also provides easy course-authoring applications for professors and lecturers to use.

The OLS went online in 2004, and workshops have been held with professors and lecturers to iron out bugs and to make the users familiar with the system from both learner and course developer perspectives. In the first eight months that OLS was live in 2004, 230 modules were put online and there were 3,400 unique users of the system.
Contact: Alan Amory
amory@ukzn.ac.za

RESAFAD, Senegal
http://www.snresafad.org
The Réseau Africain de Formation à Distance (RESAFAD) project, linked to the Senegalese Ministry of Education headquarters in Dakar, has been focusing on using ICT multimedia centres to support face-to-face training, content development and e-learning since 2001. There are currently two RESAFAD centres, in Dakar and Thiès, providing training for teachers in basic skills for computer and internet use, as well as for curriculum integration and e-learning applications. Several educational websites have been developed by teachers through their participation in RESAFAD, including:
• http://sfc.education.sn
• http://irempt.education.sn
• http://www.poledakar.org
• http://www.education.sn
• http://www.examen.sn

Already 20 students have received diplomas via e-learning at the centres, through a curriculum developed in partnership with Dakar University and Le Mans University in France. The e-learning courses in progress include:
• FADCE (training of principals);
• FADVAC (teacher training, in partnership with Dakar University, UNESCO and Japan Cooperation).
Contact: Papa Youga Dieng

p.dieng@laposte.net

FADCE, Senegal
http://fadce.education.sn
This e-learning programme for secondary school principals is a project of RESAFAD Senegal and the Colectif des Chefs d'Etablissement de l'Enseignement Moyen et Secondaire du Sénégal (COLEMS). Started in 2004 and still in development, the project will train high school principals in school management. Initial testing of the course was under way in mid-2005. The Atutor and Acollab learner management tools are being used.
Contact: Papa Youga Dieng
p.dieng@laposte.net

RLS and Reusable Objects, South Africa
http://www.riverbendls.com
Riverbend Learning Services (RLS) and its product development unit Reusable Objects are leading e-learning system providers in South Africa. One recent project was their development, delivery and support for South Africa's Thutong National Education Portal, launched January 2005. Starting in 2003, RLS and Reusable Objects developed the learning management system for Thutong and did the skills development work with curriculum experts, materials developers, programmers and web developers to ensure support for the portal into the future. The project developed 96 web-enabled learning objects in English, seSotho and isiZulu, in the learning areas Mathematics, Natural Science and First Additional Language.
Contact: Gunda Spingies
gundas@riverbendls.com

SchoolNet Africa Online Course
http://www.schoolnetafrica.net/fileadmin/1MillionPCsTraining/Index.htm
This comprehensive e-course for SchoolNet Africa Technical Service Centre Managers, developed with funding from OSISA, has six modules, covering:
• Acquisition of PCs;
• Locating premises and establishing a centre;
• Distributing PCs;
• Refurbishing and maintaining PCs;
• Disposing of PCs at end-of-life;
• Business-planning.
See also SchoolNet Africa listing under 4.12 below.

4.11: Schools: Online Curriculum and Support
Other important expressions of the open access and open content philosophies in Africa are coming from organisations and projects that are developing and providing free, no-strings-attached online access to learning materials suitable to primary and secondary school instruction.

CoL — Commonwealth of Learning

http://www.col.org/lor
The Commonwealth of Learning, an inter-governmental organisation based in
Vancouver, Canada, with 18 African countries in its membership, has a Learning Objects
Repository (LOR) project aimed at supporting access to open course content by teachers.
CoL has developed an open source platform for schools and tertiary institutions to use in
hosting the LOR, and is collaborating with the African Virtual University (AVU),
headquartered in Nairobi, to upload the courseware. *See also AVU listing under 4.10
above and more on CoL under 3.4 and 4.1 above.*
Contact: Paul West
pwest@col.org

OpenLab International, Johannesburg
http://www.getopenlab.com
OpenLab International is a developer of educational technologies, based primarily on
Free and Open Source Software (FOSS), and headquartered in South Africa. OpenLab
products, ranging from free software (OpenLab GNU/Linux and DireqCafe) to
educational content offerings (EduSeries), are being utilised by organisations such as
SchoolNet Namibia and SchoolNet Nigeria.
Contact: Denis Brandjes
denis@getopenlab.com

Examen, Senegal
http://www.examen.sn
Started in 2001, this project is a web resource that helps high school students prepare for
examinations and to make career choices. The focus subjects are the sciences and
mathematics. The site is well-used, as evidenced by the following statistics from the
period 4-10 April 2005:
• 8,850 page visits (between 750 and 1,539 page visits per day)
• 963 site visits
• 822 distinct visitors
Contact: Papa Youga Dieng
p.dieng@laposte.net

FHSST, Cape Town
http://www.nongnu.org/fhsst
Initiated in 2002 by a post-graduate physics student at the University of Cape Town, the
Free High School Science Texts (FHSST) project is using a collaborative online method
to build free science textbooks for Grades 10-12. The project is taking the principles of
open source software development and applying them to textbook generation. The
initiative currently has about 35 contributors around the world. Specialist editors are
being brought in to check the finalised content before it is piloted schools.
Contact: Rory Adams
fhsst-admin-priv@nongnu.org

The Shuttleworth Foundation, Cape Town
http://www.shuttleworthfoundation.org
Known for its work in support of free and open source software and science and

technology education, South Africa's Shuttleworth Foundation is combining these core competencies to provide curriculum support for teachers. Its Shuttleworth Open Content for Knowledge Sharing (SOCKS) project, **http://socks.tsf.org.za**, aims to develop and share free science, technology, entrepreneurship and mathemathics teacher materials on an online interactive site. The Foundation is also supporting the development and sharing of materials aimed at open source computer literacy. All of the materials are open content – useable and adaptable by teachers free of charge.
Contact: Karien Bezuidenhout
karien@shuttleworthfoundation.org

Thutong South African Education Portal
http://www.thutong.org.za
Launched in January 2005 by the South African Education Minister, this web portal takes its name from the seTswana word "thutong" meaning "place of learning". The portal aims, in the words of the Minister, to provide a "starting point" for teachers and learners seeking information to use in the classroom and their projects. Thutong is aligned with the policy objectives of the South African Department of Education's *e-Education White Paper* of 2004, which calls for support of curriculum through software, electronic content and online learning systems. The portal includes access to:
• curriculum and learner support materials;
• professional development programmes for teachers;
• administration and management resources and tools for schools;
• education policy documents;
• general news and information on recent developments in South African education.

The teaching and resource materials are cross-referenced to the nationally-approved curriculum "unit standards" registered with the South African Qualifications Authority (SAQA), making it easy for a teacher or learner to find the materials precisely matching the learning goals of a particular subject at a certain school level. The Thutong project hopes to get the country's teachers to not only download curriculum materials for use, but also to create their own materials and share them with others, and to interact online with colleagues elsewhere in the country and abroad. Thutong makes use of Creative Commons non-commercial licences for content hosted on its portal.
Contact: Catherine MacDonald
cathymac@icon.co.za

4.12: SchoolNets & NEPAD e-Schools
SchoolNets are establishing themselves as key African digital commons players, supporting connectivity, ICT skills development and information/materials-sharing among teachers and learners. A strong focus on school ICT use is also coming from NEPAD.

SchoolNet Africa
http://www.schoolnetafrica.net
Started in 1999, SchoolNet Africa is a continental NGO based in Johannesburg that aims to improve education access, quality and efficiency through appropriate ICT use. It is a "network of networks" made up of affiliated national SchoolNets and has activities in

Angola, Benin, Botswana, Cameroon, Egypt, Ethiopia, The Gambia, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Senegal, South Africa, Sudan, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. Two of SchoolNet Africa's key online school support projects are the African Education Knowledge Warehouse (AEKW) and African Teachers Network (ATN). The AEKW has links to resources for setting up SchoolNets and resources for teachers, learners and policymakers. The ATN supports the development of online professional development courses targeted at African teachers.
Contact: Shafika Isaacs
s.isaacs@schoolnetafrica.org

SchoolNet Namibia
http://www.schoolnet.na/resources/teacherlinks.html
http://www.schoolnet.na/haiti
SchoolNet Namibia has established itself as a pioneer in providing ICT support for public and private schools, going beyond merely supporting connectivity by advocating open source use, developing PC refurbishment skills and pursuing other innovative approaches. The SchoolNet Namibia website provides curriculum resources for teachers and student support materials. One of the project's latest initiatives is an online open content comic called 'Hai Ti!', meaning "listen up" in the local Namibian Oshiwambo dialects. The comic aims to promote the ways in which computers and the internet can empower Namibian learners and teachers. The comic uses a dramatic format featuring SchoolNet Namibia workers and teachers and learners at a remote rural school, and is being put together by SchoolNet staff with the help of two private firms (Strika and Direq International). The first 20-page issue, published in late April 2005, featured a learner who uses the internet to prepare for a debate; a football fan who decides the internet can be a better source for sports information than the local backyard "cuca shop" tavern; and a young teacher learning computer basics with the help of SchoolNet trainers. Each edition is being published with a Creative Commons open content licence on SchoolNet Namibia's website, allowing for unrestricted adaptation and use by teachers. The comic is also distributed in hard copy as an insert in *The Namibian Youth Paper*.
Contact: Joris Komen
joris@schoonet.na

NEPAD e-School Initiative
This NEPAD plan, run from the NEPAD e-Africa Commission headquarters in South Africa, calls for at least 600,000 primary and secondary schools in Africa to be connected to one another via a computer network, with an emphasis on science and technology learning materials. The first phase of the programme is focusing on 20 countries including South Africa, Mozambique, Ethiopia, Mauritius, Uganda, Mali and Cameroon. The NEPAD e-School Initiative also eventually aims to equip all African schools with radio and television sets, phones and fax machines, and digital cameras. It is hoped that people living in rural areas near the e-Schools will get increased livelihood opportunities via business and entrepreneurial skills.

4.13: FOSS in Africa

One of the more dynamic digital commons project areas in Africa is the development of free and open source software (FOSS).

Africa Source workshops
http://www.tacticaltech.org/africasource2
The first of the Africa Source hands-on FOSS workshops was held in Namibia in March 2004, with Africa Source II scheduled for Kalangala Island, Uganda in January 2006. The Africa Source events, subtitled "Free and Open Source Software for Local Communities," are aimed at both techies and non-techies working within or for non-profit organizations. Africa Source II on Kalangala Island runs from 8-15 January 2006, providing eight days of hands-on workshop sessions aimed at building technical skills, including FOSS skills. Organisers are the Association for Progressive Communications (APC), Fantsuam Foundation (Nigeria), SchoolNet Africa, translate.org.za (South Africa), WOUGNET (Uganda), Creative Commons South Africa (ccSA), Aspiration (US), the Tactical Technology Collective (Netherlands), the East African Center for Open Source (EACOSS) and Linux Solutions. Similar Source events have taken place outside Africa in Croatia (2003), India (February 2005) and Tajikistan (October 2005).

AVOIR
http://avoir.uwc.ac.za
Based at the Department of Information and Communication Services at the University of the Western Cape (UWC) in Cape Town, the African Virtual Open Initiatives and Resources (AVOIR) project is a collaborative international project aimed at taking the existing Knowledge Environment for Web-based Learning (KEWL) e-learning platform developed by UWC to the "next generation" by modularising it and converting it entirely into a free software system. AVOIR aims both to build "the most advanced learning management system in the world" and to build a core of developers in African institutions, mainly universities but also other organisational structures. Programming for "KEWL.NextGen" is currently being carried out by AVOIR project members in South Africa, Mozambique, Tanzania, Uganda and the UK.
Contact: Derek Keats
dkeats@uwc.ac.za

EACOSS, Kampala
http://www.eacoss.org
The East African Centre for Open Source Software (EACOSS) started in August 2004 in the Ugandan capital Kampala, with a training centre at the Uganda Institute of Information and Communication Technology. EACOSS provides training, certification and access to free software, and is supported by the International Institute for Communication and Development (IICD), Ordina NV, and Radboud University Nijmegen.
Contact: info@eacoss.org

FOSSFA, Nairobi
http://www.fossfa.net
The Free Software and Open Source Software Foundation for Africa (FOSSFA) was

launched February 2003 in Geneva during a WSIS Preparatory Committee meeting. At its founding, FOSSFA pledged to focus on encouraging African use of free and open source software in government, health and education. It also supports research and development around open source deployment in Africa, uniformity in product development for the continent and local capacity-building/job creation through open source.
Contact: Bildad Kagai
fossfa@fossfa.net

Free Software Innovation Unit (FSIU), UWC, Cape Town
http://avoir.uwc.ac.za
This is another in the family of open source projects emanating from UWC in Cape Town. The Unit's mission is to "achieve excellence in the development and application of free software with a focus on higher education in Africa." Quoted in *Tectonic* magazine, Derek Keats, Executive Director of Information and Communication Services at UWC, said FSIU will achieve its mission through "the mobilisation of project funding, creating business opportunities out of free software, and extensive collaboration with other institutions with a focus on institutions within Africa. Its work is underpinned by a strong commitment to achieving quality through intellectually rigorous research and the application of evolving best practices."
Contact: Derek Keats
dkeats@uwc.ac.za

Idlelo 1 Conference – Cape Town, 2004
This conference, subtitled "The First African Conference on the Digital Commons" and held at the University of the Western Cape (UWC) in Cape Town, was an initiative of AVOIR and FOSSFA with support from UNECA. Its aim was to bring together open source and open content practitioners from around the continent to explore the potential of FOSS and free and open content to contribute towards economic development in Africa. The main push of Idlelo is to see open source and related practices not just as cost-savers but as engines for skills development and job creation. Sixteen African countries were represented among the more than 200 delegates.
Contact: Derek Keats
dkeats@uwc.ac.za

Meraka Open Source Centre, South Africa
http://floss.meraka.org.za
Established as a result of the South African government's decision to prioritise a migration to open source software, this project, based at one of South Africa's largest research institutions, the Council for Scientific and Industrial Research (CSIR), takes its name from the Sotho-language term "meraka", which refers to "common grazing land". Recently, Meraka has broadened its scope to include a range of other ICT for development programmes on top of its FOSS work.
Contact: Nhlanhla Mabaso
nmabaso@csir.co.za

Open Café, Potchefstroom, South Africa

http://www.opencafe.co.za
This non-profit internet café in Potchefstroom, South Africa, specialises in usage, distribution, training and technical support for open source software. All profits derived from the services are used to set up new open cafés and open source school labs and to run community-based open source and open content projects. Through running projects like ArtMarketOnline and Ples and the café itself, Open Café aims to demonstrate the practical and hands-on use of Linux and applications like Mozilla FireFox, OpenOffice.org, The Gimp and others. The project also introduces teachers, students and artists to the use of databases of freely available content such as the Wikipedia and the Internet Archive. Visitors are also able to learn about the process of publishing their work in open content databases under appropriate licences.
Contacts: Anna Dani, Eugene Coetzee
info@opencafe.co.za

The Shuttleworth Foundation, Cape Town
http://www.shuttleworthfoundation.org
South Africa's billionaire "Afronaut" Mark Shuttleworth, who made his name through IT entrepreneurialism and joining a Russian space expedition, has become a strong backer of open source projects, including the following:
• a mass LPI (Linux Professional Institute) certification in February 2005, with 196 people writing a total of 282 LPI exams in just one day;
• the "Go Open Source" awareness-raising campaign, which includes a weekly television programme;
• the "Freedom Toaster" project, a series of conveniently located, self-contained 'Bring 'n Burn' facilities, where users bring their own blank discs and make copies of the open source software they require (http://www.freedomtoaster.org);
• the "tuXlab" program for schools, which assist schools in providing learners with access to educational materials through the establishment of open source computer labs (http://www.tuxlab.org.za).

The Foundation, headquartered in Cape Town, is also a funder of other projects mentioned in this *Guide*, including Open Café in Potchefstroom. *See also Shuttleworth Foundation listing under 4.11 above.*

4.14: Archives
The African digital commons is also being expanded through the work of several archiving projects.

Bibliotheca Alexandrina
http://www.bibalex.org/

Bibliotheca Alexandrina aims to recapture the spirit of the original ancient "Library of Alexandria" by becoming "a centre of excellence in the production and dissemination of knowledge and to be a place of dialogue, learning and understanding between cultures and peoples".

The library is "committed to access to all information for all people at all times".
According to Bibliotheca Alexandrina's website, the library aspires to be:
▪ The world's window on Egypt; Egypt's window on the world;
▪ A leading institution of the digital age; and, above all,
▪ A centre for learning, tolerance, dialogue and understanding.

The Bibliothrina Alexandrina complex consists of a planetarium, exploratorium, a number of libraries, art galleries, museums and research centres. In April 2003, the Internet Archive in San Francisco donated a copy of the Internet Archive to Bibliotheca Alexandrina. The archive at Bibliotheca Alexandrina includes 10 billion web pages from 1996-2001; 2000 hours of Egyptian and US television broadcast and 1000 archival films. It represents 100 terabytes of data stored on 200 computers.

The 'Million Book Project' is a joint scheme between the Bibliotheca Alexandrina and over twenty international institutions, varying from universities to information institutes to development corporations from the USA, China and India. This project realizes the aims of Bibliothecha Alexandrina in using digital technology to make the works of man permanently accessible to billions of people all over the world. In its multiple-steps process, the project makes constantly available a free-to-read, searchable collection of one million books through the internet. Through this Bibliothecha Alexandrina hopes to achieve the goal of becoming a universal digital library that will improve global society through the availability of a vast range of knowledge. One of the key activities is to work with different libraries, universities and institutions worldwide that can adopt this model of exchanges and/or donate some of their collections whether in digital form or through sending them for digitization. In its long-term goal, the Million Book Project aims to capture all published books in digital form, while starting off with a short-term aim of digitizing one million books (less than 1% of all books in all languages ever published). The project was initiated at Carnegie Mellon University and aims to reach its short-term aim of digitizing one million books worldwide by dividing the work among several centres dispersed across different countries around the world.

Arquivo Histórico de Mocambique
http://www.ahm.uem.mz/home.htm
Digitisation of the collections in the Historical Archives of Mozambique is being supported by the Ford Foundation.

CAMA & CAN
http://www.cama.org.za
http://www.africa-can.org
Based at the Montebello Design Centre, University of Cape Town, the Contemporary African Music and Arts Archive (CAMA) has since 1995 been working on projects around innovative ICT use to document and disseminate audio-visual materials on artists and other culture-creators in Africa. The Culture Africa Network (CAN) Project, spearheaded by CAMA, has the following member sites around the continent:
• Ghana: ICAMD - International Centre for African Music & Dance,
University of Ghana at Legon, Accra;

• Kenya: Kuona Trust, National Museums of Kenya, Nairobi;
• Ethiopia: Institute for Ethiopian Studies, Addis Ababa University;
• Mali: Musee National du Mali, Bamako;
• Sudan: TRAMA - Traditional Music Archive, Institute for African and Asian Studies, University of Khartoum;
• Mozambique: ARPAC - Social and Cultural Research Institute, Maputo; CNCD - National Company of Song & Dance, Maputo; and Museu Nacional de Arte (National Museum of Art), Maputo.
Contact: John Turest-Swartz
cama@cama.org.za

DIN, Nigeria
http://www.ashoka.org/fellows/viewprofile3.cfm?reid=144130
As part of the environment programme of the Lagos-based Development Initiatives Network (DIN), Nigerian lawyer Bola Fajemirokun is developing an online database which will include reports of the proceedings from Nigerian trial courts such as the Federal and State High Courts, and from appellate courts such as the Court of Appeal and the Supreme Court. The aim is to provide a resource for lawyers, judges and researchers who until now have had to rely primarily on hard-copy files.
Contact: Bola Fajemirokun
dinlagos@yahoo.co.uk
info@dinresourcecentre.org

DISA, University of KZN, Durban
http://aboutdisa.ukzn.ac.za/index.old.html
http://disa.nu.ac.za
Based at the University of KwaZulu-Natal in Durban, Digital Imaging South Africa (DISA) focuses on getting Southern African historical material digitised and online. A non-profit initiative sponsored by the Mellon Foundation, DISA emphasises the digitisation of material of "high socio-political interest." The first major DISA project, "Southern Africa's Struggle for Democracy: Anti Apartheid Periodicals, 1960-1994" brings together the contents of around 40 anti-apartheid periodicals from various sectors including the trade union movement, religion, health, culture and gender. The archive contains more than 50-thousand pages of fully-searchable text. DISA 2, "Southern African Freedom Struggles, c. 1950–1994" is investigating further collections and materials for digitisation, with work underway at DISA headquarters in Durban (Campbell Collections, University of KwaZulu-Natal) and at other sites where relevant materials are housed. DISA has close links with the Mellon Foundation-supported Aluka project (under Mellon's Ithaka programme), which promotes appropriate ICT use for developing-country archive development.
Contact: Dale Peters
petersd@ukzn.ac.za

4.15: Local Content & Language
It has become a truism to talk of the under-representation of non-colonial African languages on the internet, and the dearth of locally-generated content. Some projects are trying to tackle these shortfalls directly.

OKN Africa
http://www.openknowledge.net
The Open Knowledge Network (OKN) has its origins in the G8 Digital Opportunity Task Force (DOTForce) recommendations, which emphasised, among other things, the need for ICTs to be used to support the creation and exchange of local content in local languages in the developing world. The OKN concept, championed by OneWorld International in London, was first tested in India in 2002 by the M.S. Swaminathan Research Foundation, based on the following principles:
• building capacity in communities to support knowledge-sharing;
• combining both offline and internet-based work;
• peer-to-peer networking between "knowledge workers" in different communities;
• use of XML metadata standards;
• open content copyright licences;
• sustainable business models adapted to different contexts.

OKN's work in Africa began in 2003 as part of the CATIA (Catalysing Access to ICT in Africa) suite of projects, and there are now OKN Africa "hubs" in Zimbabwe, Kenya, Senegal and Mali. The Zimbabwe project is with the Southern Alliance for Indigenous Resources (SAFIRE), working with a hub and five community "access points" including resource centres, a school, a refugee camp and a women's organisation. The Kenyan hub is at the headquarters of the Arid Lands Information Network (ALIN) in Nairobi, with five access points. The Senegalese project is with ENDA CyberPOP, based in Dakar, which is linked with seven access points, including rural women's savings collectives, a craft micro-entrepreneurs support centre, and traditional healers. In Mali, the NGO Jamana is working together with an Internet Service Provider named Afribone on a pilot that will have seven access points. OKN Africa uses a range of technology platforms to aggregate and network content, including WorldSpace satellite, cellular SMS, landline internet and an open source community software tool called Open eNRICH that was developed by OKN with UNESCO and India's National Informatics Centre. The software is specifically designed for the aggregation and exchange of local knowledge within and between communities. *See also CATIA OneWorld Africa entries above under 4.1.*
Contact: Peter Benjamin
peter.benjamin@oneworld.net

Swahili IT Glossary, Tanzania
http://www.kilinux.org/kiblog/index.html
This project develops Kiswahili versions of free and open source software.
Contact: Dr. Hashim Twaakyondo
htwaaky@cs.udsm.ac.tz

Translate.org.za, South Africa
http://www.translate.org.za
This Pretoria-based project, begun in 2001, aims to translate free and open source software packages into the 11 official languages of South Africa. It has already translated OpenOffice and Firefox into all 11 languages. It stages "Translate@thons" that bring many people together to help translate. The project receives support from the South

African Department of Communications (DoC), the CSIR, the IDRC's "First Mile First Inch Project" and the Shuttleworth Foundation. In 2002, the project translated KDE into a number of languages, and then Mozilla and Google in 2003. In early 2004, an Afrikaans spell checker was developed, and August 2004 saw the official release of OpenOffice in Afrikaans, Northern Sotho and Zulu. In early March 2005, the project held a "Zulu Translate-a-thon" in Durban, at which 30 Zulu speakers from the Durban Institute of Technology learned about software translation and helped translate Mozilla Firefox into Zulu. A number of other language speakers were also present. During this day people translated:

• 4,000 words of Mozilla Firefox into Zulu;
• 300 words of Firefox in Xhosa;
• 400 words of Pootle in Xhosa;
• 370 words of Pootle in Zulu;
• 500 words of Pootle in Afrikaans;
• 150 words of Pootle in Tswana.

Contact: Dwayne Bailey
dwayne@translate.org.za

4.16: Blogs

As in other continents, some of the key information commons workers in Africa are also avid webloggers.

African Blog Roundup
http://www.pambazuka.org/index.php?category=Blogging+Africa
The African Blog Roundup is a feature, begun in July 2005, on the Pambazuka Newsletter website, reachable via the "Blogging Africa" link on the homepage. The roundup is compiled by Nigerian writer and activist Sokari Ekine, who also has her own blog called "Black Looks": **http://okrasoup.typepad.com/black_looks.**
Blogs highlighted in the Roundup in recent months include:
•   African Bullets and Honey: **http://bulletsandhoney.blogspot.com**
•   The Zimbabwean Pundit: **http://zimpundit.blogspot.com**
•   ethiopundit: **http://ethiopundit.blogspot.com**
Contact: Sokari Ekine
blacklooks@gmail.com

Blog from Hell
http://www.silentcoder.co.za
South African free software developer A.J. Venter developed OpenLab, an African GNU/Linux distribution, and he is the original author of such projects as DireqCafé, GSETH and TappyTux. In his blog, he writes about technology, philosophy, politics and more. His blog site is also a publication point for his poems, short stories, plays and technical papers.
Contact: AJ Venter
ajventer@gmail.com

theCallipygousCamel

http://radbrad.rucus.net
This personal website and university studies repository, started in March 2004 by Bradley Whittington, features a weblog (including mobile blogging) and photo gallery. It started as a personal website while Whittington was studying at university, when he used it as a tool for learning web development, specifically the use of PHP, html and apache web server technology. Now he uses it to store photographs (with galleries for friends to use) and a personal weblog. Whittington supports the "hellkom" campaign against the pricing of South Africa's incumbent telco operator, Telkom and is an advocate for the use of Creative Commons, w3c web standards and FOSS in the African context.
Contact: Bradley Whittington
blog@radbrad.rucus.net

Ingrid's Home Page
http://ings.rucus.net
This web page and blog belong to Rhodes University Master of Science student Ingrid Brandt in Grahamstown, South Africa. Starting in 2004, with funding from the National Research Foundation (NRF) and the Telkom Centre of Excellence, Brandt has been investigating, and writing about, models of internet connectivity for previously disadvantaged schools in the Grahamstown district.
Contact: Ingrid Brandt
ings@rucus.ru.ac.za

Jangbalajugbu: Homeland Stories
http://www.edwardpopoola.com/blog
Edward Popoola has been named Nigeria's Information Technology Youth Ambassador and is a member of the WSIS Youth Caucus at international and Nigerian levels. In May 2004, he led the youth delegation to present the Nigerian Youth Declaration on WSIS at the eNigeria International ICT conference in Abuja. In 2005, he participated in the African Regional Preparatory Meeting in Accra, in the run up to the WSIS Second Phase meeting in Tunis. The Accra WSIS meeting formed the platform for the launching of the African Youth ICT4D Network. He is also one of the jurors for the World Summit Youth Award. His blog is called Jangbalajugbu: Homeland Stories.
Contact: Edward Popoola
me@edwwardpopoola.com

Nathaniel and the non-aggressive
http://www.nathanielstern.com/blog
Nathaniel Stern is a Johannesburg visual artist cum political activist. His blog features regular entries on the art scene as well as several guest bloggers. He himself is also a guest blogger on several other blogs, including the Blog from Hell.
Contact: Nathaniel Stern
http://nathanielstern.com/details/contact.html

Oro: 'Gbenga Sesan lets out the words ...
http://www.gbengasesan.com/blog
'Gbenga Sesan was Nigeria's first Information Technology Youth Ambassador. His interest and work is built around "Youth Bridging the Digital Divide" and has a strong

belief in the potential that ICTs hold for Nigeria and Africa. He has been an active participant at national, regional and international discussions on the need for Africa's inclusion in the Information Society and has consulted widely for numerous organisations, including the United Nations Economic Commission for Africa (UNECA). 'Gbenga is with the African Youth ICT4D Network as a Coordinating Bureau member and was winner of the ITU's Africa 2001 Youth Fellowship Award. 'Gbenga is Program Manager of Lagos Digital Village, which provides training and mentorship opportunities for underserved youth in Nigeria. His blog is called 'Oro: 'Gbenga Sesan lets out the words …'

Contact: 'Gbenga Sesan

me@gbengasesan.com

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