

'Living Cultural Storybases': Self-empowering narratives for minority cultures

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Abstract

Half the planet's languages and cultures are held by 5% of its population - the 370M indigenous peoples - the most marginalized, fractured and least represented. For every group dispossessed, urbanized or assimilated, a culture vanishes taking with it ancient knowledge of the environment, unique ways of living, alternative belief systems, irreplaceable skills, artistry and stories - the rich diversity of humanity. The digital revolution, rather than creating a "global village", accelerates this worldwide cultural demise. ICT access is scant and inappropriate for indigenous people, while content is dominated by the languages, interests and ideologies of the largest economic blocks.

We argue here that these same technologies causing the "digital divide" could nurture indigenous languages and cultures. Until now ICT initiatives have addressed immediate developmental needs, rarely even acknowledging minority languages or traditions. 'Living Cultural Storybases' (LCS) seeks to go further: facilitating appropriate, two-way access for all community members to gather and share cultural knowledge through spoken stories.

We propose community-controlled 'Virtual Cultural Networks' (VCNs): cultural intranets supporting role-based access, secure distributed communications and private cultural resources. LCS promotes natural and respectful interfaces for indigenous peoples' interaction with their oral tradition around a co-designed database core that reflects the culture, inviting further contributions and stimulating internal social debate. We hope to reconnect dispersed communities and urban members of minority cultures to embrace, grow and re-interpret their traditional narratives, strengthening their cultural identity across the generations. Aspirations for the future may lie with the young, but the old are the custodians of their proud heritage.

1 Background: Vanishing Cultural Diversity

This paper gives the background rationale for work in progress to planned community engagements.

1.1 What is 'culture' ?

UNESCO defines culture as "as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs..."

You can take the pygmy man out of the forest, but you can't take the forest out of the pygmy man.

(Cameroon Chief Arweh Richard)

Culture as a legacy (rather than other definitions of 'culture') originates in locale, because it needs context in which to thrive: the context of the group of people who shaped it and the land that shaped them. While culture might be exported, without its context, it will diminish. Thus, the tangible and

intangible heritages are intimately interdependent: cultural artifacts and architecture provide the physical 'hooks' for the intangible and the stage to shape the play of cultural life. Furthermore, 'culture' has a hierarchy of gradation, just as a botanical family, genus, species, subspecies and varietal. Each level of cultural granularity has its own locus, property and heritage, along with its own social mechanisms and network ties (not discussed here) for differentiating between those viewed as 'insiders' or 'outsiders'. In this paper we address 'culture' at the level of a common language.

1.2 Minority Cultures and Disappearing Biocultural Diversity

There are 370 million indigenous peoples on Earth, rooted to a particular place by history, legend, and language. They represent only about 5% of the Earth's population but more than half of the intellectual legacy of humanity- its languages and cultures. Yet these same people are the most marginalized, fractured and least represented in society: they are being swept away by poverty, disease, conflict, land appropriation and inappropriate technology (UNPFII, 2006).

While new forms of language and dialect are evolving on the Internet (Crystal, 2002), the world's diversity of native languages is disappearing. There are currently just over 6500 living languages, but 10 dominate and are the mother tongues of almost half of the world. Of the other 6490 languages 52% are spoken by fewer than 10,000 people, 28% by fewer than 1000 and 83% are restricted to single countries (SIL: Ethnologue, Grimes 1996). At least 512 native languages are all but extinct: one living language dies with its last speaker about every two weeks. This means words with unique definitions, perceptions of the world, their own intimations and humor are vanishing, never to be replaced.

Cultural diversity and biodiversity are correlated. Moreover, loss of indigenous culture may have a direct impact on biodiversity. Many indigenous cultures have developed low-impact interdependencies with their land. Traditional interactions with the environment that have less impact on biodiversity are passed on in local languages, but when those languages die the traditional methods die out too. (Terralingua, Maffi et al, 2004)

It's like standing by watching the destruction of the ancient library at Alexandria, without trying to put out the fire. (Bruce Batchelor)

Minority cultures matter. For every language that is lost a world perspective vanishes. For every group uprooted or assimilated, a culture vanishes, taking with it knowledge of the environment, unique ways of living, irreplaceable skills, artistry and ancient wisdom – the rich diversity of humanity. Each time a minority culture disappears it is as if a species becomes extinct.

We *all* need cultural diversity just as much as we need biodiversity – humans thrive when there are many perspectives, languages, skills, and ways of living in the world. Our creativity is sparked by the juxtaposition of different cultures and viewpoints to imagine the new and possible, whilst drawing on memory and heritage. The Unesco Universal Declaration on Cultural Diversity, adopted in 2001, states that cultural diversity is 1) the common heritage of humanity 2) necessary for human rights 3) encourages creativity and 4) strengthens capacity for international solidarity.

A culture survives when it has enough confidence in its past and enough say in its future to maintain its spirit and essence through all the changes it will inevitably undergo. (Wade Davis).

1.3 The Threat: Emergence of a global monoculture

Minority cultures face growing threats on external and internal fronts. Externally, they face economic, trade and capital domination by G8 nations, as well as mounting pressure by the governments of their own countries that lead to poverty, disease, conflict, land appropriation and inappropriate technology.

More insidious are the internal threats created by global monoculture. Youth are migrating to the cities and abandoning their traditional languages. The one billion now living in urban slums will double by 2030 (UN statistics). The ancient relationships between people and their environments are breaking down without the time for traditional processes, social dialogue or natural adaptation. These threats are urgent: minority cultures are disappearing at an accelerating rate.

1.4 The paradox of the 'digital divide'

Western media forms and digital ICT tools have evolved for majority cultures and thus disadvantage indigenous oral cultures. The tools used by these prevailing media are screens, written language and digital technologies, not tools that are comfortable or familiar for indigenous cultures. A strong Western monopoly on programming exacerbates a social exclusion that has been simplistically termed the 'digital divide': only 10% of the world's tongues are represented on the Internet, with 68% of all users being European language speakers (including 35% English), followed by 14% Chinese (NVTC, 2006). The cultural content is dominated by the interests and ideologies of the big cash economies, e.g. 95.4% of all web pages are in the top ten languages (Global Reach, 2006). Against this, the very small size of many indigenous linguistic groups makes it difficult to support the research and orthographic work needed for *textual* exchanges in their language on the Internet. (As an aside, we note that the term 'social inclusion' for indigenous peoples might beg questions like: 'Inclusion in *which* society?', 'Does inclusion imply assimilation or multiculturalism?')

From our previous work with deprived communities, we fully agree with Warschauer (2002, 2003) that like literacy in printed media, several factors contribute to effective digital technology for social inclusion, not just hardware provision or access. For example, the human and social resources supporting access to ICT are essential. Warschauer comments on several barriers to ICT use, and notes:

Those people who cannot read, who have never learned to use a computer, and who do not know any of the major languages that dominate available software and Internet content will have difficulty even getting online much less using the Internet productively.

Making the analogy with literacy, he adds:

As for relevant and accessible content, one of the major obstacles toward literacy acquisition is the dearth of published material in many if not most of the 7,000 languages that are spoken around the world.

The sensitivity of indigenous territories to global warming emphasizes the need for these peoples to participate in global dialogues and to lever the political and social empowerment brought by digital networking. Yet ICT access for indigenous people is scant and then dominantly keyboard based. The digital revolution, rather than creating a global village, has accelerated worldwide cultural demise by increasing the gap and economic leverage between the high-tech haves and have-nots. However, we believe that the same technologies that are implicated in the "digital divide", if applied appropriately and with innovation e.g. for voice support and coupled with social and human capacity building, could in fact nurture indigenous languages and cultures: the focus of our endeavour.

2 Oral heritage, story telling and role models

For most of human history culture has been transmitted through oral narrative, through stories, music and poetry. As a result, our brains are hard-wired to respond to stories – this is how we find meaning, how we are inspired, they are our source for roles models, heroes and aspirations. Stories told by one person to another are more powerful than writing or videos because they include an immediacy of contact and response, with prosody and affective emotional communication – the storyteller can respond to her audience in the moment, providing what the audience most needs, what will help convey the message, the culture most effectively. Storytelling is at the heart of social and personal identity; whether the story we tell is about our day at work, how to build a canoe or why the sky is far away, that story tells the listener and the world something about our culture and ourselves.

Beyond individual identity, the recounting of oral narratives plays a vital role in maintaining ethnic identity and group solidarity. Stories encapsulate the deeper beliefs and values of a culture, promoting role models and morals, ways of living, behaving and believing. Stories have social functions, representing the collective memory of the people, combining the past with present and attaching meaning to space and time. Spoken stories convey and maintain cultural identity as a living entity far more effectively than written documents or videography, because stories react to change – they are not held in stasis. As settings change, eternal truths are reinterpreted and the archetypal heroic quest to find identity is re-clothed in fresh narrative.

Oral narrative – storytelling - is the natural teaching medium about skills, the environment, or survival. It enables a social process that in turn enables cultural survival. Traditional stories or personal stories of their life experiences allow elders to communicate history, knowledge and wisdom to youth in ways that youth might not otherwise allow.

It is not as if there was a single set of 'authentic' stories that define a culture. Rather, exchanges and commentary on a culture's personal and collective narratives, debate and conversation around stories test and strengthen cultural identity. Reference to stories is often the medium to reach social consensus on what should change or be held precious in their mores in response to external, environmental or developmental pressures. This has always been the old social process, because it allows the past to come to agreement with the pressures of the present. But fragmentation, urbanization and globalization now makes 'gathering around the fire' increasingly difficult, as youth move away and there is less and less time for these old methods.

New technology need not hinder this ancient process. If stories can be captured and shared in ways that keep them alive and encourage transmission and reinterpretation then technology can actually foster a living oral storytelling tradition. Younger members of a community might then aspire to role models in their own stories and find value in their own traditions whilst telling new stories for their elders.

3 Cultural Ownership, Memory and Identity

For orally-based cultures the significance of storytelling goes beyond individual or social identity; stories and verbal communication form the database in which everything from medicinal practice to land rights is stored. They are in fact the evolving communal memory of the group who tells them, the basis of all a culture's intangible heritage. Intangible heritage is not only that which gives the past meaning

and acts as a building block for personal identity, but also nurtures what UNESCO refers to as the "capacity to aspire": highly specific ways in which various cultures define the 'good life' through 'specific images of beauty, harmony, sociality, well-being, and justice'. The capacity to aspire propels a community into the future because it provides the collective energy, creativity, and will to 'be full participants in designing their cultural futures'. A constant dialogue between the capacities to aspire and to remember ensures that aspirations do not become unrealistic or memories become xenophobic. In short, storytelling has moral, practical, political, legal and financial implications in defining the past and shaping the present, but also functions as a form of social capital, ensuring a healthy future for the community.

For many First Nations, stories and songs are family owned and handed down. Who tells what story, where and to whom is as significant and identity-forming as an ancestral castle and coat of arms might be to someone in Scotland. Just as the coat of arms "comes to life only by its interpretation through intangible forms of knowledge, art, craft, and symbolism" the stories, songs, and oral tradition of the First Nation peoples must be understood in the dimensions of time and space. While a Westerner would never think to drop in and take over someone's castle (being deeply acculturated to the notion of land rights), all too often the intangible heritage of indigenous groups is regarded by outsiders as an interesting curio to collect and pass around. But, collecting and documenting traditional knowledge does no more to ensure a culture's survival than pinning butterflies to a board aids the insect's survival. Knowledge, cultural memory and intangible heritage are often strongly located in an indigenous community's physical territory. In the extreme for aboriginal Australians, stories are embedded in the geography while features of the landscape become actors in their stories: separation from physical territory thus implies loss of intangible territory. Some stories can only be told or heard in special or sacred places in their clan's country, therefore not in any computer centre.

Thus, ownership, control and privacy importantly should frame any initiative or system that outsiders start for handling traditional stories, songs, traditions and languages, being essential qualities for maintaining healthy personal and communal identity. Disregarded, the culture that an outsider may think he or she is preserving, is in fact being undermined. Those individuals or groups in possession of stories should be the ones who determine how, when, and where they are communicated. Furthermore, because group membership is often not explicit and cultural membership has granularity, community engagement is recommended via gatekeepers whom the community trust.

4 Limitations of Previous initiatives: LCS Differentiators

Cultural survival is not about 'preservation', sequestering indigenous peoples in enclaves like zoological specimens. Rather, the paradigm is for communities to debate for themselves their developmental choices or interactions with the outside world, making decisions which are informed: both by an understanding of the new options, opportunities or threats brought by globalization and by their core values, beliefs and cultural strengths. One problem here is that cultural members may be too dispersed or that there is insufficient time or opportunity for face-to-face gatherings to support the traditional decision processes in the face of accelerating outside changes.

Too many past initiatives by outsiders have aimed at studying indigenous cultures academically, rather than helping the insiders to cherish their roots and reflect on their evolution. Culture is lived and enacted. Neither the collection of physical artifacts, nor the preservation of monuments, nor recordings of its intangible heritage will preserve a culture. Traditional storytelling may be analyzed in university

Media Studies programs, but this does little for the re-telling necessary to keep a story alive in a community.

UNESCO has as a prime declared objective the identification and preservation of the best of the world's 'intangible cultural heritage' (Stenou and UNESCO, 2002), including the proclamation of 'Living Human Treasures': musicians, poets, elders or expert storytellers. Whilst participating national states do offer programs to help preserve their intangible heritage e.g. youth training, none try to exploit new digital means to engage *all* members of a community in the refreshment of their oral heritage.

Initiatives to create keyboards, lexicons or phrase books for a few of the thousands of endangered languages are pitifully resourced. Moreover, replacing the human memory and spoken exchanges of an oral culture by a written repository and communication will inevitably change that culture. Attempts to apply digital technology with a suitable ICT architecture or appropriate digital tools to support direct spoken story exchange or the debate around stories within a minority culture are rare. All too often the ICT solution proposed is PC-based, but it is hard to believe that the traditional knowledge, practices and traditions of an oral culture can be funneled through a text keyboard by the trained elite of community youth sitting in a special computer centre. Frequently the teaching of ICT skills in developing countries follows the concept of education as 'banking' which Paulo Freire strongly criticized (Freire, 1970).

ICT initiatives 'for' the developing world have understandably focused on immediate basic developmental needs, rarely even acknowledging minority languages or cultural traditions. This approach is not self-sustaining, being based on a false dichotomy: it is the capacity to aspire which ultimately nurtures the collective creativity, energy and will to survive. Tangible development in terms of people's material well-being must be balanced with intangible development of spiritual and intellectual well-being rooted in identity if sustainable diversity is to be achieved (Unesco, 2002).

In short, digital ICT solutions using majority languages developed by, and for, the large urban power blocks are inappropriate for indigenous peoples. Those solutions undermine minority cultures by inherently carrying messages of Western cultural superiority, mental models, mores and aspirations. Instead we advocate participatory community informatics projects: here to facilitate appropriate two-way access for all community members to virtually gather, share and re-interpret cultural knowledge through spoken stories. We see a new opportunity to exploit mobile, digital, oral technologies for the direct exchange in their own language of their intangible heritage of stories, songs, poems and music across different places in the indigenous community's territory and with their diaspora.

5 A new initiative: Living Cultural Storybases

5.1 Mission

The aim of the not-for-profit 'Living Cultural Storybases' initiative to 'nurture the oral heritage of minority cultures in a digital world' will be realized through balancing two approaches: social and technical, see <http://www.storybases.org> . We will:

- a) Develop trustworthy, participatory methodologies that engage and empower dispersed communities and displaced members to embrace, grow and re-interpret their traditional narratives. This includes strengthening a sense of cultural identity, motivating youth pride in

their inheritance and promoting the intergenerational transmission of oral heritage, community dialogue and decision making in their own language.

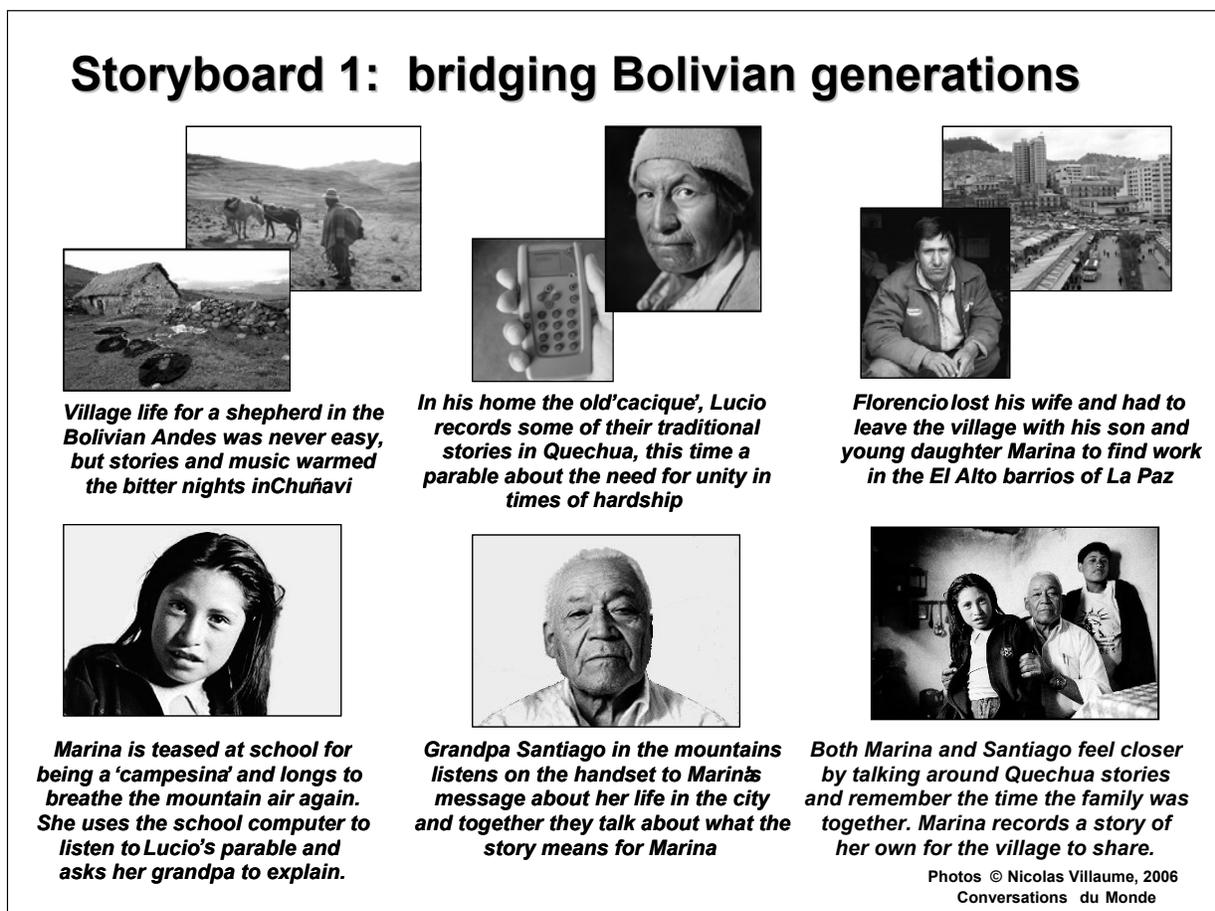
- b) Evolve a generalizable architecture which provides access for the entire population to a database for storing and sharing their stories. The system should reflect and respect the culture, through the database's ontology, secure role-based access and protection of their intellectual property. Two-way spoken access will be via devices that are appropriate and easy-to-use within the community setting, thus encouraging further contributions and discourse.

In the long term, we propose intranets that minority cultures can appropriate and easily manage themselves, within which narratives are only one type of private resource.

5.2 Storyboards

Two storyboards below try to encapsulate how our aims of (a) re-connecting a dialogue between the generations and (b) reconnecting communities sharing the same culture might be realized.

Storyboard 1: bridging Bolivian generations



Village life for a shepherd in the Bolivian Andes was never easy, but stories and music warmed the bitter nights in Chuñavi

In his home the old 'cacique', Lucio records some of their traditional stories in Quechua, this time a parable about the need for unity in times of hardship

Florencio lost his wife and had to leave the village with his son and young daughter Marina to find work in the El Alto barrios of La Paz

Marina is teased at school for being a 'campesina' and longs to breathe the mountain air again. She uses the school computer to listen to Lucio's parable and asks her grandpa to explain.

Grandpa Santiago in the mountains listens on the handset to Marina's message about her life in the city and together they talk about what the story means for Marina

Both Marina and Santiago feel closer by talking around Quechua stories and remember the time the family was together. Marina records a story of her own for the village to share.

Photos © Nicolas Villaume, 2006
Conversations du Monde

Figure 1

Storyboard 2: linking Thai hilltribe villages

The Akha are one of 7 tribal groups, settled in 250 villages scattered over the forested Northern hills of Thailand

Proud of their identity, the Akha still dress traditionally. Animist beliefs and ceremonies are threatened by majority religions and lowland education.

In Ban Jamusi they have collected Akha artefacts into a museum, but they have no written language for their rich oral heritage.

Elders can still recite all the names of their line of 50+ ancestors. The spirit leader of Ban Par SangNguen records creation myths, checking with the other villages' versions

In Ban Jamusi they add a trickster tale to the communal cultural resources and join the regular discussion with other Akha villages over 'Akha-Net': today about water shortages

The young people in BanAber use Akha-Net to learn the significance of their sacred village spirit gate and about Akha plant medicines.

Photos © Paul Rankin, 2005
Winston Churchill Fellowship project

Figure 2

These storyboards are only examples. The particular usage models and access devices, types of stories and concerns that are exchanged, who participates, their locations and the social dynamic that is enabled should be designed by the community to suit their culture, selecting and adapting digital options that LCS and others can suggest.

5.3 A 20:20 Vision

We do not see the Internet evolving as a flat network for seven billion people, equally online without any social structures. The Internet is just the scalable transport layer, to be overlaid with a mosaic of overlapping cultural and ethnic nets.

Our vision for 2020 is of community-managed 'Virtual Cultural Networks' (VCN's): InuitNet, BushmanNet, TuaregNet, RomaniNet etc. These are distributed *cultural intranets* running across open public networks, supporting easy role-based access, secure communications in indigenous languages and searchable private cultural resources such as dynamic audio databases.

The access models should reflect each culture's social processes, being both multi-level and multi-faceted for community, family and individual participation. Some have more cultural rights, status or authority than others for particular aspects or knowledge, while only some should be privy to specific conversations. The system should support easy membership authentication and set the level of

participation, e.g. by birth right, initiation rite or invitation to a trusted outsider. Designing interfaces which make the VCN as easy to manage as it is to use is not trivial. In analogy, the corporate virtual private networks (VPN's) and firewalls of today are impoverished, but provide a basis for development. After all, cultural intranets are far more important than corporate ones.

Over time we want to work together with minority cultures and partners to create a rich virtual 'connection landscape' having private, family, sacred and community meeting places - as well as the current Internet 'market places'. Cultural identity, self-determination, political empowerment and ownership of intellectual property require privacy and security - protection just like land rights against 'digital colonialism', plagiarism, cultural piracy (eg biopiracy), cultural pollution or external surveillance.

This virtual landscape is completed with common meeting grounds where multi-lingual dialogues are encouraged and supported by interpretation tools, where shared knowledge and cross-cultural understanding, respect and creativity are fostered.

6 Social methodology

The tenets underpinning our social methodology are:

- Diversity is precious
- Culture is experienced and enacted – it is lived, it can't be documented or preserved like an artifact
- Cultures are not static, they evolve
- Stories are the essence of a culture
- Once the stories are no longer re-told, the culture is dead
- The communities should own the process and its pace, ie working bottom-up, not top-down
- Outsiders can facilitate - bringing a global perspective or new options and extracting the general principles and tools which can help nurture other minority cultures

Above all, solutions to the threats facing minority cultures and their oral tradition must be co-designed with the communities. We advocate community participation at all levels, including staffing, evaluation, and oversight.. It is the community members who must become the real, informed decision makers in any project process. They are best equipped to identify their strengths, weaknesses, opportunities and threats, as well as what they need and want from a digital initiative. Engaging the youth in this process is a particular challenge, otherwise the hope of continuing the handing of stories from generation to generation founders. How can traditional storytelling compete with the potent sensorial draw of Western media or the pressing need to earn income which takes the youth out of their traditional landscape? The methodology must involve the youth as well as elders from the outset in design and implementation so that excitement, ownership and pride are cultivated.

Through co-design, trust respect and openness are slowly built. As acceptance and trust in the system grow, the cultural resources held by the project can become more confidential. Only if the group feels control and ownership of the digital solution will this more protected information ever be included in the matrix. Outsiders may never have access to this sensitive information, however its inclusion is a metric of success.

As LCS progresses we envision a cumulative growth path, working incrementally with a few communities at a time and trying to infer those technologies and methodologies that are effective in nurturing oral heritage and bring these progressively more general tools and insights to help the next initiative.

7 Digital Technology

7.1 Technology platform: multilayered

Evolution towards our vision requires a multilevel architecture as sketched below. A general-purpose multimedia core is needed which can be customizable to a diversity of cultures for which different access devices are appropriate, exchanging different content via alternative usage models across a cultural intranet, e.g. from asynchronous, store-and-forward off-network use by nomads to synchronous, on-network use by sedentary communities.

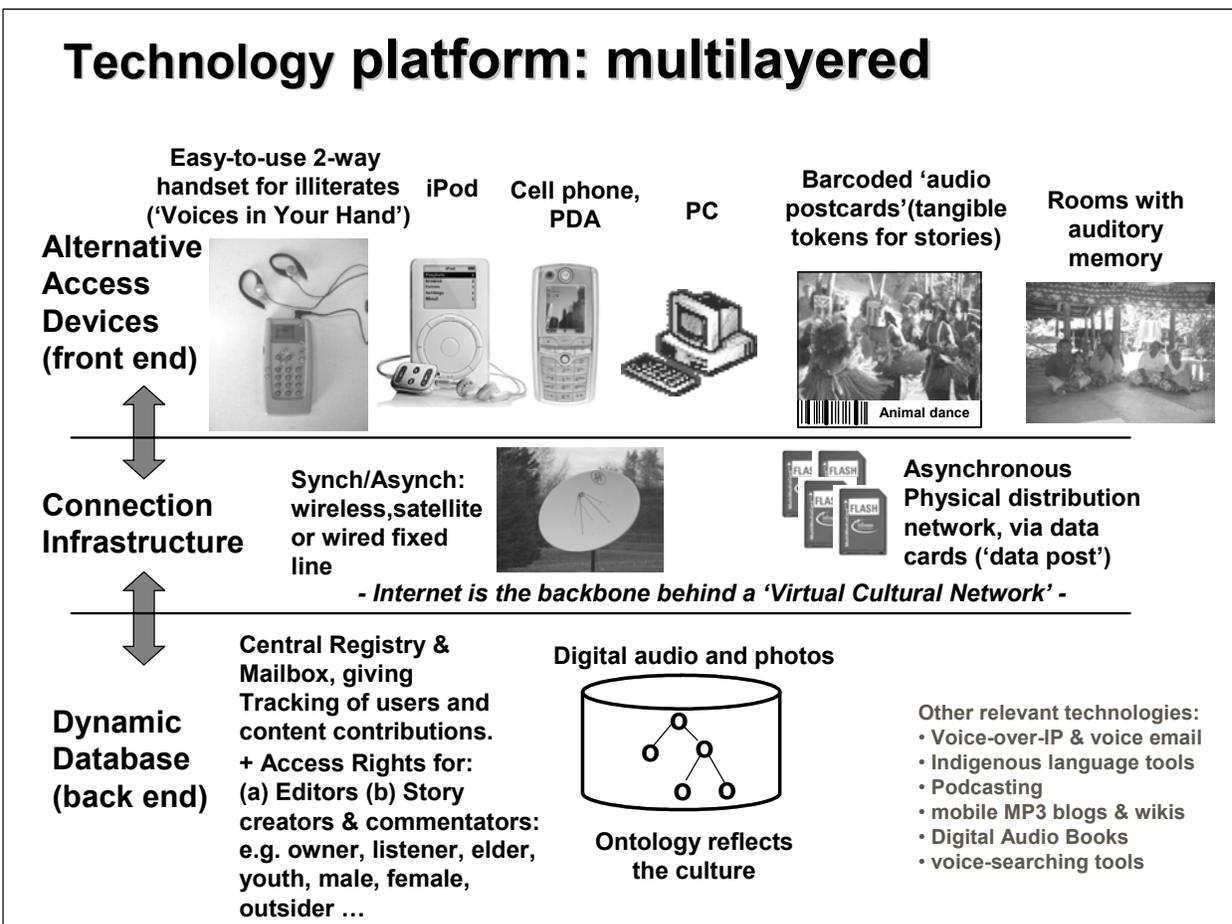


Figure 3: Multilevel LCS architecture

7.2 Access devices

For appropriate user access and system management devices, we envisage a variety of options depending on culture and context. These range from council rooms that can automatically record and

replay conversations, to bar-coded tokens that tangibly index multimedia content, as well as PC's or mobile phones.

Members of our team have particular experience in piloting systems of cheap, easy-to-use mobile *two-way* MP3 devices, fostering the social inclusion and empowerment these can bring to a marginalized community in Brazil. Such devices can be used in dispersed cultural locales far away from Internet, radio or cellular coverage and even without any mains electricity supply (Rankin, 2003). These handsets run a tagged audio format in any language that supports *interactive, branching* audio programs and asynchronous voice messaging. The result is like playing on-demand, personalized radio programs or a downloaded 'podcast', but users can talk back or supply numeric answers to specific questions embedded in the program. These digital possibilities can extend the reach, engagement, impact and cost-effectiveness of the accepted analogue medium of community radio. As UNESCO (2006) points out:

Radio is by far the most favoured community medium in developing countries. Given its accessibility and cost-effectiveness, community radio represents a democratic and participatory medium. It is easy to operate and lies within the capacities of many local communities who are not often a subject of mainstream media and information channels.

7.3 Database and system core

The multimedia database resource on a VCN must be dynamic, evolving with the communities it serves. Design by the community itself of the ontology of content and the relationships between narratives or issues of concern can bring engagement and insight to reflect on their developmental process (Srinivasan, 2002), just as knowledge management by the community brings ownership, responsibility and so sustainability. Provision of personalized feeds of regular content or facilities such as a community audio journal, spoken annotations on stories, group fora, voice messages to individual community members etc. requires central or distributed user registration and content tracking. Complex access rights may need to distinguish between different demographics and roles, e.g. editor, story creator, story owner, authority, listener, commentator, elder, youth, male, female et al.

8 First Community Engagements

8.1 Cultural Triangulation and Triage

Given more than 5000 indigenous cultures and that building relationships of mutual understanding needed for participatory co-design can take years, the choice of community partnerships for future LCS initiatives needs care. Would solutions learnt with one culture be transferable to help others? The dimensions of the space of cultures are high, reflecting their histories and variety of habitats - farmer, hunter, gatherer, herder, warrior, nomad, riverine, mountain, desert, island, jungle - in cultural indices such as power distance, uncertainty avoidance, individualism, masculinity and long-term orientation (Hofstede, 1984).

Therefore we advocate early non-committal discussions with a few sample communities, attempting a high-level comparative assessment of their position in the cultural space and the design implications. This cultural appraisal should try to assess the strengths, weaknesses, opportunities and threats perceived by the culture and features such as:

- Demographics of population (size, age profile..) and dispersion
- Hofstede indices

- Environmental influences
- Social structure (power/decision, age, gender networks..)
- Development indices and primary concerns (health, poverty..)
- Principal components of the oral tradition and its current strength viz-a-viz literacy and the majority language; main story themes and aspects that may be very specific (e.g. ownership)

Before balancing how much could be generalized from a potential engagement vs. its cultural specificity, several other historical, practical, financial and logistical considerations must be considered e.g.:

- State of ICT provision (existing infrastructure, digital inclusion of the population, support for the spoken or written language)
- Openness to collaboration with outsiders (legacy of previous initiatives and actors) and the accessibility of communities (gatekeepers, interpreters..)
- Other stakeholders in the culture (possible partners, sponsors or external experts)
- Initial community and its location (costs)

8.2 Evolutionary Prototyping with a Community

Taking a specific community we know, Tuareg nomads near Timbuktu in Mali as an example, our future plans for progressing the social methodology and technology through iterative prototyping can be sketched. We see this participatory process itself to be empowering - *both* the community and outsider facilitators learn together, as community capacity is built towards a critical level of consciousness and leadership in their developmental decisions (Freire,1970).

After building common ground and purpose together, the community co-design process might commence with brainstorming on their ontology of narratives, a discussion of permissible but engaging initial story genres and appraisal through focus groups of alternative usage models. Artistically strong personal, thematic or archetypal stories need to be gathered, e.g. from elders in the desert, to flesh out the initial ontology. Hopefully these prime the accretion of further related stories, say from youth in the towns, growing linked discussion threads and debate. 'Social tags' need to be added to the contributions: e.g. ownership, access rights, popularity, authority, scarcity, or recommendations.

Much can then be learnt from very simple prototyping technology: even paper cartoon storyboards with a few voice clips can stimulate focus group discussion on the plethora of technology options. Audio 'blogs' or 'wikis' carried on portable storage media, with which users can interact via an offline mobile device and supplemented by indexed photos, next seem promising tools to prototype first experiences of story-sharing. However, the Western metaphors behind these, respectively of a daily journal with comments and of consensus over an encyclopedia entry, seem inappropriate for indigenous mental models, so other metaphors and digital oral technologies will need to be developed in parallel.

Both linking the resulting virtual 'story networks' to live, located performances and the projection of certain community-selected parts of the oral heritage to outsiders offer further ground to explore as potential 'cultural goods' for sustainability. The possibilities include story-telling cafes in Timbuktu which would promote the craft and gather audience feedback, extensions to their existing music festivals or community gatherings and traveling exhibitions of photos and stories (Villaume, 2006) that stimulate village-to-village or village-to-city dialogue. Story playback and audio recording apparatus can even be

embedded in the architecture or the streets to use the tangible heritage of Timbuktu recognized by Unesco *literally* as hooks for the intangible.

9 Evaluation of Cultural Impact and Metrics of success

Given the subtle and complex nature of the changes in cultural communication that LCS is aiming to effect, the question of how to measure success is crucial. Traditional forms of evaluation, which place great emphasis on demonstrating causal relationships and statistically significant changes, can miss the real impact that cultural community initiatives have, e.g. because it is difficult to show a strengthened family bond on a pie chart. A new comprehensive tool needs to be constructed to evaluate these types of projects, one that not only measures program effectiveness and progress, but that acts as a compass to actively steers incremental prototyping with the community (Kellogg Foundation, 2006). We call such an evaluation tool 'Cultural Return on Investment' (CROI). (We are mindful that a capitalist concept such as a 'return on investment' should not foreclose other philanthropic motivations or creative endeavours.)

Measuring CROI must start at the level of the program participant. This is because while meta-changes in group behavior may take years to effectively measure, the change in individual attitudes or relationships can demonstrate whether or not the project is on track. First, a baseline on the existing cultural attitudes should be determined. Some areas where we can expect interim outcomes are trust in the project, understanding of the project, feeling of connectedness to the body of stories told by the community and feelings of inter-generational connection, e.g. a growing relationship between an elder in the desert and a remote child in the city. These can be evaluated using a variety of participatory and theory-based methods, for example through ethnography, individual and group interviews, as well as quantitative analysis such as how often a story is told.

The importance of the individual program participant does not make effective evaluation at the program level redundant. Performance targets such as demographic penetration, frequency of use, use by remote members, the entrustment of cultural secrets to the system and inter-generational transmission of cultural knowledge are all indicators of project efficacy. The key to using proxies or indicators is to remember they are meant to measure outcome goals, not become outcome goals in themselves. Our goal is to nurture cultural memory, not increase web traffic.

10 Summary and Points for Discussion

There are many intrinsic paradoxes when discussing cultural preservation. Who decides what should be preserved: outsiders or insiders? What defines 'outsider' and 'insider' anyway? Do cultural artifacts carry cultural meaning if they are separated from the culture, from their context? Does preservation ultimately support diversity, if the preserved materials aren't truly living? These questions do not have easy answers, but what is clear is that threatened cultures can be supported if their members have a means to sustain their culture in their daily life and evolve singularly.

We have established that minority cultures bring precious value and creative diversity to the world stage, even as they are encroached by dominant cultures from the world. Their oral cultures, while no longer the prevalent paradigm for cultural transmission, allow an intimacy and capture subtleties and different world views that written and electronic cultural transmission may not. But, what tools are available to strengthen and support the oral traditions of these cultures? Can a common solution foster diversity?

What procedures should be put into a technology and what retained in traditional cultural processes via rites, status etc?

Digital technologies can strengthen the oral traditions of endangered minority cultures, if they provide appropriable systems that support a dialogue in the local language linked to content. Many anthropologists or artists over the years have collected some of the rich stories from elders of tribal communities - 'last chances to preserve' the oral heritage for outsiders. We wish to go further, to create Living Cultural Storybases for the communities themselves. These are to be vibrant and accessible evolving digital repositories of cultural knowledge that offer a means to gather, search, connect and access the cultural life of a community. Spoken stories and visual material might be celebrated by old and young alike, so they can record and contribute further content and better understand their own identity within the context and locales of their unique cultural system. This core of cultural material might become the seed to stimulate community conversations about their own heritage and the development choices they face in reconciling new aspirations with ancient cultural memory.

New technologies will present new challenges for oral traditions, e.g. in the ability of asynchronous communication to emulate a shared experience, how to co-design these tools with indigenous people so they are comprehensible, accessible and acceptable, balancing free information for all against privacy and intellectual property rights, yet these technologies also offer greater ease for cultural connections and the transmission of knowledge across boundaries.

Peers are invited to help us debate such questions, whilst sponsors, experts in specific oral cultures, sociologists, anthropologists or potential technology providers might help in our search for solutions through community partnerships.

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