

EventsonLine: Books That Move The Way You Do

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Abstract

This paper introduces the EventsonLine technology developed by Turtle Lane Studios Pty Ltd. EventsonLine enables the delivery of multiple, parallel, synchronised media through a web browser. This facilitates access to complex information spaces beyond the capability of traditional books or e-books.

The paper discusses the ideas underlying the architecture, details some products already developed or under development and concludes with a discussion as to enhancements to the technology.

1 Introduction

Human communication involves a sophisticated blend of strategies and techniques to ensure the required bandwidth is utilised to communicate the message successfully. A sophisticated protocol has evolved to ensure that the communication achieves maximum effect.

"In the 1800's, readers of books were talked to - ...poets, novelists and essayists addressed us all cosily as "Dear Reader" or "Gentle Reader". We felt valued as the author's friend. We were engaged jointly, in an act of complicity". (Dorner, 1993).

Dorner's argument continues, reading is an act of entering imaginatively into what the author is saying. The reader was someone to woo and writers considered carefully how to address the reader. There was the expectation that the reader would be led by the writer through the space, following the argument through its, sometimes, tortuous path to the conclusion. There was no notion of the reader using the writer's text beyond taking parts of it to pieces to examine ideas and techniques.

The medium that reached some sort of level of standardisation was paper. Although scrolls and codexes continued to exist, folded paper became the distribution medium of choice after Caesar first folded a roll into pages for dispatch to his troops (Manguel, 1996). The codex was adopted by the early Christians because it was easily hidden in their robes, pages could be numbered to allow quicker access and many codexes could be bound into convenient packages.

The development of codexes was an end of a long development including the separation of texts into words and sentences - most early scripts used no such subdivisions. The early scribes needed very few of such visual aids as they were intimately familiar with the texts they were transcribing. The visual aids evolved to assist those with poor reading skills, an evolution that led to a better understanding of the texts.

Paper provided the perfect medium for the author to capture their prose and the reader to absorb the message in a variety of circumstances, from walking in the country to sitting in the bath.

Recently, the e-book/e-publishing phenomenon has provided a further branch to this evolutionary tree.

We have seen the development of *electronic paper*, a digital simulacrum of the traditional codex retaining many of its characteristics. Like traditional codexes, e-books are paginated facilitating access, retain chapter structures described by table-of-contents. In fact, they are designed to act just as ordinary books.

Yet, the traditional way of addressing the reader has gone with the growth of the reader's use of the text. The 'oi-you' address is pervasive today, acknowledging that the reader is

there somewhere and is being manipulated (Dorner, 1993). Oi-you is seductive because the writer has come to consider the reader as "someone to be manipulated, someone who wants a quick consummation without any of the preliminaries" (Dorner, 1993). Arguments are undressed from the first paragraph, details are bullet-pointed, numbered, summarised, displayed in charts and beguiling graphics. Texts have been broken into reusable chunks.

This, in turn, has led to a change in the reader's attitude. Mass strategies have taken over where the amount of information has grown too large to absorb. Readers no longer read texts but scan looking for what is useful to them, in turn becoming end-users. Content has become information, a product people consume.

We have reached a Rubicon¹ in this evolution.

Multimedia technologies provide a sophisticated mechanism to communicate a message to a multitude of readers in a personalised fashion. It allows for readers to personalise their 'books' in ways previously not thought possible or desirable. The message moves - the book moves - as the reader moves.

The traditional way of writing and reading is being replaced by new mechanisms, involving the inter-blending of multiple synchronous media.

2 EventsonLine

EventsonLine (EOL) is an architecture developed to provide rich multiple media environments. It enables the provision of synchronised audio, video, image and text in conveying a message to an end-user. Users can choose which medium best conveys the message for them and can determine how much of the message to access.

EventsonLine products can be delivered through a standard browser interface across Macintosh and PC platforms. They can utilise the Quicktime, Windows Media and Real Video technologies. Products can be delivered via CD ROM or through the web or a combination of both.

The EOL architecture is depicted in Fig.1, multiple parallel synchronised channels of information through which a user can roam at will or be guided by appropriate 'tour guides'.

¹ When Roman legions were sent away from Rome, they could only turn back before crossing the Rubicon river. Once crossed, the legion was committed to the given task and any turning back would have ended in disgrace to the commander.

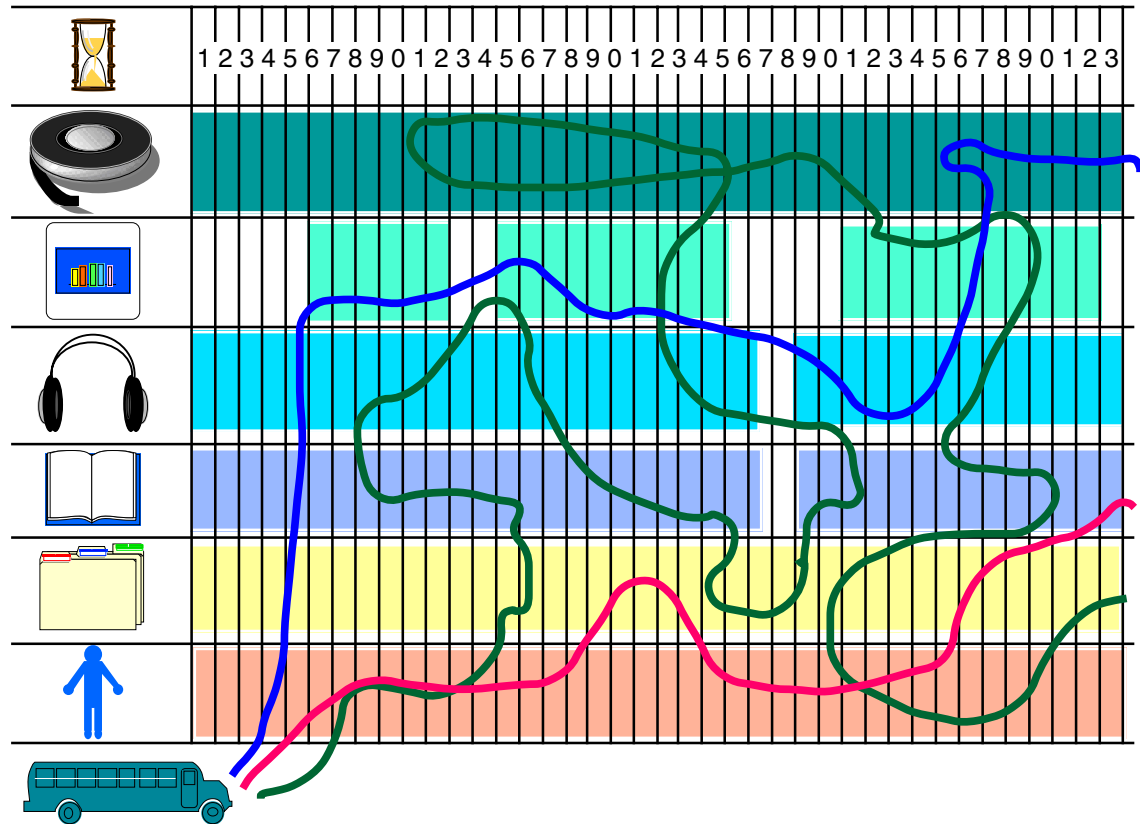


Figure 1 - EventsonLine Architecture, multiple synchronised parallel channels of information

Information in any channel need not be continuous - in a conference there are silent periods, breaks, etc. However, at any point in time where the message occupies multiple channels, these must remain synchronised throughout the user's access. This, in itself, provides special difficulties when it comes to authoring such content. For example, decisions need to be made with respect to the treatment of transcriptions, will they be verbatim or edited and if edited then edited how much?

To date, EOL has been utilised in a number of projects. We have built an electronic proceedings of a one-day workshop on Electronic Publishing for the Australian Vice Chancellors' Committee (AVCC), a walk through an art show of the work of Yvonne Boag (<http://showcase.cadre.com.au/eventsonline/yoagRM/>), the session on digital libraries at the Online and On Disk conference, 1999, (<http://showcase.cadre.com.au/olod99/>), and a CD ROM for the Federal Department of Communications Information Technology and the Arts (DCITA) titled *The Digital Environment: New Technologies and Australian Culture*. We are currently building an e-commerce and education web site that will utilise the EOL technology to provide a human interface to the material being presented. The Digital Environment CD ROM contains the complete capture of a one-day conference and over twenty megabytes of other documentation related to the digitisation of Australian cultural material with special

mechanisms for providing access to this disparate material in a way that ignores the media used in its recording.

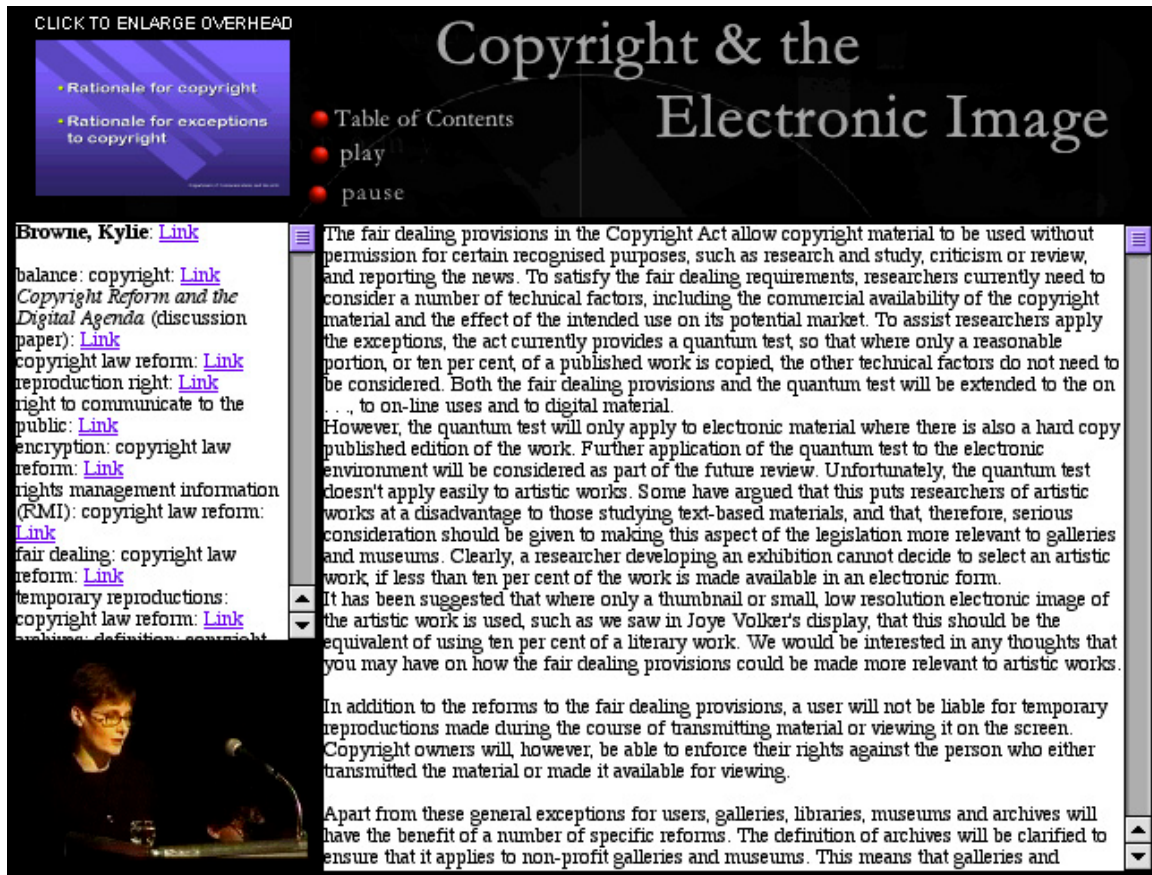


Figure 2 - A presentation from an online conference. Note the various channels of information, the video and audio, the transcript and the overhead slide on view at that time. In addition, the navigation facility provided through the topic list for this presentation.

An EOL project is developed by capturing the message in as many media as possible or desirable. Thus for a conference, we record the speaker, all questions and answers, the overheads used, the papers normally distributed as part of the proceedings. All this material is digitised and edited to remove any unwanted artefacts, such as 'ums and ahs', and cleaned up, such as sharpening images, compressing video, etc. All audio is transcribed using our own proprietary transcription tool, TLSTranscription, that enables the use of digital audio without dubbing to audiotape for use on conventional transcription consoles. As shown in figure 3, TLSTranscription produces transcriptions already marked up for web delivery and containing specific SMPTE timecode markup on each paragraph, added automatically by the tool. The timecodes are used as part of the indexing process. The tool enables a transcriber to reduce the rate of the audio stream facilitating uninterrupted typing.

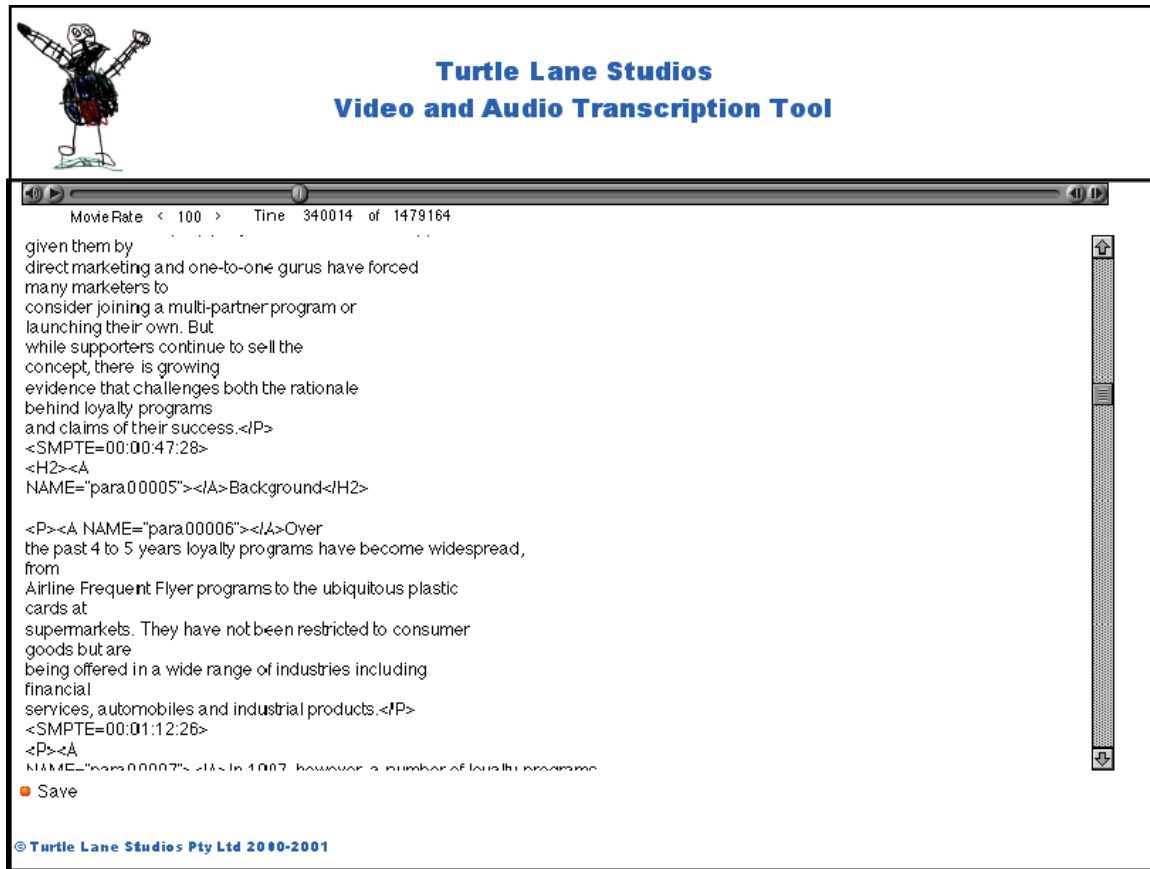


Figure 3 - TLSTranscript tool. Note the transcript is already marked up for web delivery with appropriate SMPTE timecodes on each paragraph and heading styles. Paragraphs are marked as our indexing granularity is the paragraph.

Once all source media are captured and edited into 'camera-ready', they are passed into the indexing process that results in an index for each information object. Index entries are stored with each object and can be combined to form more abstract objects. So for a collection of page objects, we can automatically generate indexes for each page, chapter, book, bookshelf, library, etc. The index captures each concept being discussed in all media and enables the reader to select a concept or theme and a set of media with which to engage the concept or theme. Indexes of this form are also simply amalgamated so as to encapsulate other disparate material. For example, it is a fairly simple process to merge indexes for two presentations to form one conference index and then to include other conferences.

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