Eds. Lauri Saarinen, Juri Joensuu & Raine Koskimaa

BOOK 2010

Development trends in the book trade – summary

Translation: Marja and Roderick Dixon

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the virtual bookstore Granum.

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FOREWORD

The aim of the research project, *Development trends in the book trade 2010,* was to clarify the outlook for the book trade until 2010. The target of the research was the digitalisation of books, in other words, the impact of the digital production, distribution and business processes on the operational prerequisites of the book trade. In the project research report, *Book 2010 – development trends of the book trade,* the trends and factors for change connected with the business activities of the book trade players and the digital production and distribution processes are examined. The research covers the whole value chain of book production, which we call a book chain: content producers, publishers, printers, wholesale and retail trade, as well as consumers. We have knowingly omitted very detailed descriptions of the processes from the report. The main emphasis of the research is on examining the structural changes of the business and in individual roles of the field, not on company-oriented strategies or cost-benefit analyses.

The task of the research group was to estimate the effects of the coming changes on supply and demand, as well as construct alternative future scenarios for the book trade with book chain players.

The research group comprised:
- Professor Jukka Heikkilä, University of Jyväskylä
- Lauri Saarinen, LTT-Tutkimus Oy, project head, special researcher
- Jali Heilmann, Technical Research Centre of Finland, researcher,
- Kaarina Hyvönen, National Consumer Research Centre, researcher,
- Juri Joensuu, University of Jyväskylä, research assistant
- Helene Juhola, Technical Research Centre of Finland, research head
- Raine Koskimaa, University of Jyväskylä, researcher
- Juha Laine, LTT-Tutkimus Oy, researcher
- Tatu Lindberg, Technical Research Centre of Finland, researcher

- Marja-Leena Mansala, IPR University Center, secretary general
- Yrjö Repo, marketing planner
- Timo Siivonen, Technical Research Centre of Finland, special researcher

Even though from our point of view, the printed book will remain, in many cases, the main form of publication for literature for a long time, further research is needed to clarify what a book will be like in 2010, what are the various purposes it will serve, what is its position in relation to other means of recording stories and other knowledge, as well as what changes will there be in its preparation and distribution. We see the biggest changes in the coming years in distribution and consumption. The position of the other players will not inevitably change as strongly, as digitalisation has already happened in many stages of production in the book chain. Player-oriented analyses are especially interesting subjects for further research, as we are unable to produce strategies for each particular player, because we try to remain neutral in this report in handling each type of player as part of the modern book chain and we try to form an entity, not produce strategies for a particular player type.

Our report positions itself among the other studies to clarify the present situation, enabling the outlining of possible futures. Those belonging to the book chain must react to the changes this will bring, either by actively influencing or adapting to them. We hope our report will lead to ideas that would be of use to the book chain players in a world that is getting more internationalised and is increasingly exploiting new technologies.

On behalf of the research group

Helsinki and Jyväskylä 3 Sept. 2001

The Editors

INTRODUCTION

The modern form of the book is generally seen as beginning with the Bible printed in 1458, which was produced using a much faster typesetting technique invented by Johannes Gutenberg. The book and printing have changed over time. With the spread of literacy, the book has changed from a prerogative of the few to a source of knowledge and experiences belonging in the hands of everyone. Technically, a book is a means of storing and spreading (its) content, which has held its own quite well against many competing alternatives. Technical innovations, especially since the beginning of the 1970s, have significantly changed the production process of books, but, however, the final product has always been the printed book. The information technology breakthrough that began in the first half of the 1990s is no longer limited just to production engineering, but gives whole new extensions to the form of a book, as well as to its distribution.

Book 2010 has been intended primarily, in one way or another, for people active in the book trade, but it is equally suitable for anyone interested in the 'life' of a book. It endeavours to cover the whole book trade chain from beginning to end.

The report is in two parts. In Part 1 (Changing business environment) the use, content and definition of a book and literature are presented, as well as an introduction of reading technologies to the players, production chains and structures of the book trade. It is a description of the business environment as analysed by the research group at the beginning of the 2000s. This part also deals with outside factors, like political decisions and copyright in relation to the players, but which are strongly connected to the operational prerequisites of the field. Part 1 might then be of most interest to the players in the book trade and readers familiar with the processes. In Part 2 (Future factors), which is particularly intended for the players in the book chain, the research group, together with representatives of the book trade, presents scenarios, or possible models for the future, and the conclusions of the research.

A central factor, and the main theme of the research, is the influence of technological change on the book and the players of the book chain. What kind of future does reading have? What is the position of the book in the arena of increasing content services? What real opportunities does an e-book have? Will the chain of commercial players become a network? Will there be room for new players? Who are the middlemen and are they necessary? In what position are the different players, for what does it pay to prepare and for what must they prepare themselves? What does the book buyer of the future want? What will copyrights be like in the future? An attempt has been made to examine these questions from as many angles as possible.

The work avoids taking a stance for or against digitalisation. Digitalisation is not a force of nature, but a method, which people use and which is shaped by them. Products and business methods change, but, both now and in the future, the task of the book chain players is the mediation of knowledge and stories for learning and experiencing.

I

CHANGING BUSINESS ENVIRONMENT

THE BOOK AS A CONCEPT, FORM OF EXPRESSION AND DICTION

Definitions of a Book

Freely adapting the well-known saying of St Augustine, a Church Father, one can say: " We all know what a book is, so there is no need to explain it, but if someone asks me, I can't say what a book is." A book is a completely everyday object in our culture and people talk daily about books. Still the precise definition of a book is difficult – or maybe even impossible.

For various practical reasons, some kind of definition of a book is, however, needed, and many definitions, influential in various ways, are in use. One of the most-used is the UNESCO definition, which is used as a basis for international statistical data. In short, the UNESCO definition of a book (as distinct from serial publications) is: at minimum a 48-page monograph.

In Finland, Statistics Finland and the Customs Department use the definition: "Class 49.01 Books, booklets, leaflets and similar printed matter, including loose sheets". It includes " almost all printed matter intended for reading, also illustrated, with the exception of advertising material and other printed matter which are tariffed with others of this group, and other headings containing more detailed product specifications." The other products of the group are, thus, more precisely defined elsewhere and the remainder, less detailed undefined products, are probably 'books'. Instead of an abstract definition, the Customs Department offers an incomplete catalogue of products considered to be books.

The Class 49.01 definition contains a small but important detail. The definition mentions separately that " dust jackets, book closures, bookmarks and other secondary items delivered with a book are considered parts of a book". In this definition at least, it is made abundantly clear that a book is a material device, to which different parts belong; this point has

not been sufficiently emphasised in discussions on literature. From the point of view of book production, this matter is obvious but, particularly in connection with the discussion on the development of digitalisation, it would be well to remember the tangible extension of the book, in addition to its spiritual and 'intimate' extension.

Book as Technology

The book and writing are technologies and as such they have always had ties to other technical developments. The development of lighting and transportation of goods, in particular, have significantly affected the historical development of the book: as electric lights became common, the opportunities to read increased and created a whole new audience for literature, the spread of railways also enabled the relatively quick dissemination and cost-effectiveness of the book from the mid 1800s onwards, when the book trade in its modern form came about (publishing and publication, book agency, bookshops etc. separated into their own branches). [2]

It is always important to take into consideration that the book as a product has developed as part of the development of both technology and the economy and even culture.

Books as an object are characterised by such properties as permanence (once printed the text stays the same, and closely associated with this is that the printed text is connected with confidence); durability (withstands rough handling); intimacy (generally only one reader at a time per book); mobility (easily moveable, not dependant on other outside resources except lighting); easy to use (and being long in use is familiar to all); suitability for linear presentation (for example, the plot in narrative literature; the classical argumentation of scientific and educational works). These properties make the book a very good medium for certain kinds of literature (for example, the novel is especially 'book-like'), but correspondingly bad for other kinds of texts (for example, continually up-dating demanding reference works).

New Book-like Products

Because the book has such a clear position in our culture, it is understandable that the concept 'book' is also used for the new literary media (equipment and user interfaces) such as in connection with electronic e-book reading devices, for example. The use of the word 'book' in these connections probably lessens the prejudices and fears directed towards them. However, they diverge from the properties that are essentially those of a book and thus to speak of a book is misleading and possibly even suffocating for innovations.

Talking Books

Talking books are books that have been read aloud and stored on cassettes and, nowadays, even CDs. They are distinguished from radio plays in that there are no actors (just one reader), dramatisation or effects. The target audience for talking books is, first and foremost, the visually-impaired or people who otherwise have difficulty reading, but there is also an increasing number of people who want to enjoy literature whilst doing something else (for example, driving a car, doing housework etc.).

Mass Storage – CD-ROM and DVD

First magnetic tapes and different sized diskettes (8, 5.25 and 3.5 inch) were used to transfer stored material to the computer. The day of diskettes is, however, already gone, having been replaced by CD-ROM recordings, which differ from diskettes, in particular, in that they have a noticeably greater storage capacity (1.44MB on a 3.5 inch diskette against 800MB on a CD-ROM). In the beginning of the 2000s, DVD discs began to replace CD-ROMs as they offer more memory space, so on one disc a full-length film can be stored in digital form. DVDs, in turn, will be replaced by a more efficient form of storage (and certainly the development of the CD-ROM will be followed by general DVD stations and rewritable DVD disks). So there is reason to emphasise that when talking about CR-

ROMs we actually mean any of these forms of mass storage. It is a question then of the dissemination of digital text or a multimedia product as a commercial diskette, CD disc or some similar form of storage. At the time of writing, it is mostly multimedia works that have been published in this form, the first of which are primarily various reference and educational books. There are also some CD-ROMs designed for children which, in content, are midway between children's books and games.

Multimedia works (reference works and children's CD-ROMs) have mainly been the products of traditional publishers and their distribution is the same as for a book. Often a diskette or CD-ROM has been delivered with the book. The future position of CD-ROMs is, however, questionable as an increasing number of digital products are being distributed via the Internet.

Electronic E-book Reading Devices – E-book

Digitalisation, networking and wirelessness make it possible to produce new types of electronic publications. Electronic e-book reading devices (e-books) are especially intended for reading text on simple, easy-to-use computers. The success of personal digital assistants has blazed the trail for the equipment. The fall in the cost of electronics, such as memory units, as well as the improved displays and batteries, has made portable equipment possible. The overwhelmingly most important element is, however, the Internet, which has made the cheap, fast and easy dissemination of digital texts possible. At the time of writing, mainly novels are available for e-book reading devices from electronic bookshops, but dozens of newspapers in the United States now publish versions to be read on the e-book reading devices. These devices are quite commonly called 'e-books', but for the sake of clarity, one should speak of e-book reading devices, it being a question of a certain type of computer that as a product is essentially different from a book.

Because the amount of information is growing at an increasing speed, and ever more information is also merely in digital form, it is essential that the readability on the screen be improved on specially designed equipment for it. In research into reading on the screen, it has, for example, been observed that the test subjects appreciate vertical page formats, non-rolling page changes, good navigational features and a layout like a traditional book. Reading from a PC screen does not generally meet these demands.

For the user, the e-book reading device is cheaper, easier to use and lighter than a laptop, and makes it possible to carry a small library. The books can be got quickly and cheaply from the Internet and they do not take up shelf space at home or wear out with use. Also their price at the turn of the millennium was a little cheaper than the corresponding printed book. Different data processing actions like the quick looking up of a word in a dictionary or reference functions increase their ease of use. Moreover, e-books can with the aid of an e-book reading device be read in the dark.

The most important properties of the future e-book reading devices are their suitability for many different uses. With the device it is possible to read books, as well as newspapers and magazines, catalogues and also one's own documents. The devices can also be used, for example, as a diary, clock, notepad, calculator, like current Personal Data Assistants or even as e-mail and a communicator. It is presumable that in the future the technologies of portable devices will be partly combined. One proposed suggestion is that the screen would be removed from laptops and could be used as an e-book reading device. What is more likely, however, is that there will be e-book reading devices noticeably cheaper and easier to use than laptops and communicators also in the future.

Electronic Paper – and Ink

Under development are display technologies, which can in a few years time enable new types of thin, flexible displays for televisions and laptops, as well as e-book reading devices. It is particularly tempting that the displays can be manufactured from reasonably cheap materials. Some of them have also been called electronic paper, because with the technology it is possible to achieve the easiness of paper use, such as lightness, readability regardless of the angle, paleness, good contrast, as well as even the feel and appearance of paper. The credibility of the projects is increased as a group of giant companies in the communications field are involved.

Components needed for portable e-book reading devices like large enough memory, energy saving electronics and efficient batteries, have already been available since the beginning of the 1990s. However, the general availability of the devices has been restricted by the lack of suitable portable screens. In the last few years, high quality LCD colour screens for laptops have been developed which however, use too much energy, and which will need larger and heavier batteries in order to be usable in

the e-book reading devices. In the portable publishing platforms, a very essential property is the weight of the device, because it cannot be much heavier than a traditional book or paper is supposed to weigh. A reflecting memory screen uses power only when the image on the screen is changed, so it is ideal for the portable e-book reading devices. The electronic papers represent the new wave of memory screens.

Electronic ink contains transparent microcapsules, inside which there is a dark liquid containing water-based polymer. The dark liquid contains small white pigment particles. By transporting the particles with the help of an electromagnetic field to the surface of the capsule, the colour of the screen changes from black to white. The phenomenon is called electrophoresis. The technique makes it possible to apply the balls as ink directly onto many surfaces, such as paper or plastic, using, for example, the traditional printing methods.

It is easy to use a store's central computer to update the changing information, for example, on an electronic advertising board that uses electronic ink. In the future, all the billboards of a particular chain of stores could be changed simultaneously nationwide, even many times a day.

Digital TV

Digital TV increases the number of TV channels and the content need. Furthermore, digital TV makes some degree of interaction at least possible, and so digital TV is also one of the potential distribution channels for digital literature.

When the digital TV transmissions started on 27 August 2001, there were still very few households in Finland able to receive the programmes. The uncertain situation of both acquiring the equipment and producing transmissions may cause even long-term problems and obstacles for the implementation of the new technology.

The development of the reception of the digital transmissions may follow the same path as information technology. The early owners use the new technology even though they know it is expensive and that many of the device generations of the beginning phase will age quickly.

The central element is the programme guide from the perspective of interactivity and other possible uses offered by digital TV. Making digital TV more common may speed up when the set-top box or television receiver, that make it possible to use the programme guide, will be available

at a reasonable price. Then one will get a set-top box for the newish analogue TV or the old TV will be changed for a digital one.

Besides the technology, the household decisions about moving into digital TV time may also be affected by the programme supply proper and the offered value added services that the analogue transmissions cannot offer. One must see how big the interactive or otherwise active use of digital TV will be in relation to the traditional programme viewing. Digital TV enables the viewer, for example, to get instant background information connected to the news or other relevant matters, from the Internet, as well as the use of commercial or other Net services not connected to the programmes. The use of the Internet will, in any case, be diffused between more and more devices, of which digital TV is only one. When viewing contents like books, the lightness of the device and easy portability are such important properties that while digital TV can be an important channel for downloading content off the Internet, it probably will not, however, be one for reading.

Reader Programs and E-books

In addition to separate e-book reading devices, reader programs are also available that offer an easy-to-use environment for reading digital texts on the computer screen. Text files or electronic books formatted for both the e-book reading devices or reader programs are available. Often it is a question of the electronic version of the printed book, but new books can also be published simply as e-books.

According to our definition, electronic books are those texts published in digital form, which will not essentially change even if published as a printed book.

This definition separates the electronic books, not just from e-book reading devices, but also from multimedia works, Net texts (digital works that use the Internet methods in a way that a printed book cannot copy) and from other cybertexts (programmed texts). Defined in this limited way, the 'book' part in 'electronic book' is justified and understandable.

Books distributed to the publisher in electronic form offer many advantages. About half of the cost of a printed book goes on marketing, distribution and printing. Of course, a digital book also has to be marketed. Moreover, a significant number of the books delivered to bookshops are returned to the publisher because of lack of demand. The user related librar-

ies maintained by the publisher enable the profiled direct and test marketing. The efficient protection measures of separate e-book reading devices make it very difficult to make and distribute pirated copies.

Books are never out of print either and large numbers of books in digital form can be stored cheaply. Moreover, the updating and distribution of quickly outdated material like catalogues and manuals is easier when the files are in electronic form.

Net Texts

The Net texts are hypertexts on the Internet, which differ from e-books in that it is not even possible in theory to publish them in printed form. This is because they use the Internet environment as part of the structure of the work. The Net texts can have, for example, links to different parts of the Internet (for example, to different regularly updated pages) or one can use Flash animation, Java scripts, etc in them.

Written Net texts have so far been published almost wholly as a hobby. At the turn of the millennium, even several Net papers and magazines have established their position so that they can already be considered equal to printed literary magazines as publishing forums.[3] As publishing forums, they offer editorial practices equal to printed publications, in other words, the published Net works are accepted and polished by professional editors. The Net magazines, almost without exception, have been working on the basis of so-called banner ads – the publication has advertisements on its pages, which finances the activity. The publications are free for readers, and they are generally not required to register.

Also some non-fiction literature is published on the Internet. However, often it is a question of different manuals and instruction books, and they differ mainly from the printed version in the hyperlinking. Reading these texts often requires paying a fee or at least for the user to register. In scientific publishing, especially periodicals, some fields of science have given up printing and moved to Internet publishing. In addition, scientific publishers offer the magazine subscribers more and more scientific databases, from where they can get the complete text version of the articles.

Among the Net texts, one can also include the quickly increasing documentation on the Internet inside companies and between companies; different catalogues and process descriptions, as Net texts, can make it possible, for example, for them to be used by more than one person, in other

words, several players can modify and update documents in real time. Interactivity also enables new service innovations for commercial Net texts.

Mobile Texts

Of the mobile texts, SMS, that is, text messages, have received most attention, but because of their shortness (160 characters with old devices, 600 with new ones) the text messages do not, as such, come under the heading of literature. On the other hand, messages with 600 marks or short text documents read using a WAP phone could function as a basis for different interactivity and real-time stories. Especially when it becomes more common, the MPS (Mobile Positioning System) will make it possible to localise the texts/stories according to where it is read – the same adventure story can, for example, be located by changing street names to those in the city where it happens to be read.

So far, mobile texts are limited by the smallness and poor reading quality of the screens of the devices, as well as the very limited program functions of the devices. The latter limitation can be circumvented, for example, in the WAP environment by driving the program on the WAP server, and by transferring only the processed final texts, for example, modified by the readers' feedback, to the mobile phone.

Mobile texts can also include texts readable by a PDA (Personal Digital Assistant), because when connected to the mobile phone, they offer, due to their small size, the same flexibility as the mobile phones and besides they have a slightly larger screen and more versatile program environment.

It can be said that mobile texts are stripped-down versions of Net texts, but even more of the Net text properties will also be used in the mobile environment. Networking and mobility are two dimensions of the same phenomenon: mobility requires the information network where decentralised information is available in real time regardless of the geographical location.

Hybrid Texts and Interactive Services

Texts can also be published as a combination of book and Net text. It is the different hybrid products that offer the best opportunities for producing the so-called edutainment and infotainment, in other words, the entertaining educational material or the "informing entertainment".

Entertaining and experiential elements can be combined with textbooks through the interactive Net pages. The textbook will have Net pages requiring the continuous updating of the material, supplementary texts, different assignments (which may exploit, for example, three-dimensional graphics and animation) or even a full-blown distance-learning service (Net-based study environment). The matter being taught can also be presented with the help of entertainment, for example, as a computer game. The production of textbooks traditionally printed has already been going in this direction with regard to content, as even in textbooks, for example, the story structure has been started to be used.

Media contents are increasingly being circulated between different media – a book is made into a film, film music is being sold on CDs etc. This also increasingly concerns the new media and mobile devices, so a comic can be made first into a film and then, for example, into a game playable with text messages on mobile phones. Correspondingly, one can attach a "community" formation to a film that operates using mobile phones. In the future, one can expect that even books will be written and published increasingly often by bearing in mind such polymorphic use.

Transferring contents from one medium to another is just the first step in the media convergence. The real combination of production is now starting; the basis for this development was created, of course, by the large vertical mergers in the media in recent years. This has helped to solve, for instance, conflicts connected to copyrights.

BOOK AND LITERATURE

The medium, device or transmission channel set their own limitations on the contents to be transmitted. The central question, from the perspective of digitalisation of a book, is the relationship of the contents to the device. The relationship is complicated and direct conclusions cannot be drawn from the technological changes to the changes of contents. The question should be put forward from both the practical and conceptual perspective.

In this chapter, the tangible side of the book will be examined and also how it has affected our images and concepts of the book's content. The relationship between a book and literature is more complicated and awkward than is generally thought – not to mention that they could be considered one and the same. The content is always in a relationship to that "platform", the object, where it is presented. In this chapter, one tries to shed light on the essence of the book through this relationship and to deliberate on why it has surfaced just in connection with book digitalisation.

We can talk about the book and literature, both as a formal and a contentual concept. The first mentioned consists of the printed matter published in the form of a book, regardless of the content. For the publishers, bookshops and distribution chains, the book is above all a book object, printed matter. The authors, readers and the humanist tradition often see the book only as aesthetic contents, literature. A book/literature thought of as content does not necessarily limit itself to the book object. In the future, the concept of a book may be even less unambiguous.

Towards the end of this book, the materiality of the book will be dealt with from the conceptual perspective and concepts connected to it – what does the book object mean to the readers, book users and consumers. Also some aspects of the book are presented which have come about through digitalisation. The chapter on the permanent nature of the text deals with some practical and theoretical problems connected to recording and reliability. The central ideas in it will be the relationships of the reading platform (whether it be a traditional book or electronic device) and reading, the printed and digital text, and of the content and materiality.

The Book as a Definer of Literature

The concept of "literature" contains two fundamental problems or points with multiple interpretations. Firstly, literature can be defined through the book:: literature includes all material published as a book. Thus, one can talk about the "container concept", the book is a container for literature and, at the same time, a defining over-riding concept. According to Walter J. Ong, this kind of literature concept was born when printing technologies became more common.[4] On the other hand, literature can be defined aesthetically.

Aesthetic Concept of Literature

When defining literature aesthetically, literature is fiction, which can appear in different forms not just as books. According to the classical grouping, the genres of literature are narrative literature (novel, short story), lyrical poetry and drama. One can also include, to some extent, non-fiction that has some "fiction" values. Ancient folk poetry has been considered "unwritten literature".

The aesthetic definitions of literature have always had value qualifications – all fiction is not automatically literature. Even though the threshold between highbrow and lowbrow literature has continually got lower, romance novels or westerns have not been counted as 'real' literature.

From the book production's perspective, the first definition, "container concept", is relevant, because the production process is almost the same for fiction and other literature; however, the discussion about literature and the future of the book trade is most often looked at from the perspective of fiction. The dusty smell connected with the book as an object, or the history of generations of readers reminded by the dog-eared pages and other extensions of experiences, is surely an important part of reading a favourite novel (for the sixth time) but, for example, for a Net surfer oriented in information technology, they might have very little meaning.

Complex Relationship between Book and Literature

It is important to see behind the confusingly one-dimensional word, 'literature" – very different types of texts, which have nothing else in common except the book form (which can itself be very varied – compare a cheap paperback with a four-colour printed coffee-table book), can be published as a book. In addition there is literature outside books (radio play, talking books, etc). At least two things follow from this.

Firstly, different types of literature (contents) are in different relationships to the book (object) and, on the other hand, a book and literature are two different things, which are no doubt dependent on each other, but whose very close relationship, such as we know it, is merely one phase of the historical development. In the field of book production, one knows well the materialistic extension of the book and understands it as self-evident how different contents in book form can be presented. Whilst on the literature research side, extensions of literature are known which historically and culturally exceed the book as an object.

Combining these two perspectives is necessary in the present situation, where a printed book as an object of literature is no longer self-evident. In the era of "content production", the pithy definition by Ted Nelson, the creator of the hypertext concept: " I mean by literature all the information that we record and disseminate", is especially interesting from the book trade's perspective.

Literature and Medium

The difference between the digital and printed book became a juridical precedent when a US court took a clear stand on the question of defining a printed and electronic book. On 11 July 2001, the US publishing company, Random House, lost the court case it had brought against the Internet publisher, Rosetta Books. The publishing contracts of the Random House writers forbid them to publish their works elsewhere in book form. According to the judge's ruling, an electronic book is not a book, however. He

based his decision on a dictionary published by Random House itself, which defines a book as a work printed " on paper sheets bound between covers."[5]

Unlike a book (in Judge Stein's opinion), literature is not, however, tied to a printed format. Literature has gone through important changes in formats, first from oral literature to papyrus scrolls, parchment rolls, codexes and currently the digital form. Literature is dependent, at least partly, on its material form, but this does not mean that the development of literature would unambiguously follow changes happening in the media. The media sets its own limits, but inside these borders literature continually changes and develops.

Moving from printed text to digital text does not automatically cause any changes in literature. On the other hand, one must note that within literature one can notice a line of development – as the next step of the development of literature (appearing particularly in experimental avant-garde literature) – which leads towards the possibilities brought on by digitalisation.

Digitalisation has also caused an opposite reaction, in other words, literature that particularly emphasises the materiality of the printed book (emphasising the layout, massive "hefty tomes", etc.). While writing this, several operation modes live side by side. The traditional printed literature is still strong, according to many indicators, stronger than ever. There is parallel publishing, where the same text is published both in print and digital form. In this case, literature is published in digital form only for econotechnical reasons. In addition, there is "genuinely" digital literature, which cannot be printed at all, and, furthermore, there are some hand-made artists' books. In a changing situation, some of the most important defining questions of book and literature are the relationship between the book and the new reading platforms, and once more understanding literature as a separate phenomenon from the book object.

Materiality of the Book

The discussions on literature and reading have partly moved from the contental level to the material level of reading: the book as an object, reading as a physiological act, as well as the technologies connected to literature. The question about the betterness of the digital or printed text has raised a side issue that is most often forgotten when dealing with literature and

reading: in reading, the physiological combines with the material. Of course, reading can not be generalised in this way nor can its importance be forgotten when it is a question of the connections of the new operation modes, innovations, devices, as well as reading and reception. Digitalisation produces, in the first place, technological changes and changes, and not until after (in the long run) reading habits and practices.

If one compares reading the computer screen to reading a book or e-book, it is clear that the screen's properties are worse. The reading position is very limited when reading the screen in a sitting position, and often unpleasant and ergonomically bad. When reading text from the book or reading platform, the reading position can be chosen freely and, moreover, the angle of the text and distance from the eyes can be made pleasant with small hand movements. As physical objects, e-books hardly differ from books – they are most often the size and weight of a medium book, unless smaller. However, the properties of the text to be read differ from those of the printed text in many ways.

The form of the printed book itself outlines its use in a different way than if there were one homogeneous undivided text entity. Reading freely navigable hypertext may be unpleasant or unrewarding, if the reader approaches the text with the default values of the printed, linearly outlined text. The pages of a printed book give rhythm and pauses to the reading. Unlike hypertext, the linear presentation usually produces an easily followable continuation.

The material form of the book is connected to the thematic and historical properties (page numbering, chapter begins on a new page, use of space). The writer William H. Gass has defended the characteristic quality of printed literature. In his opinion, reading is a question of "enduring pleasures of paper, type, page, and ink" (Gass 1999). Gass emphasises the physical character of the book as an explanation of the attraction and sees the digital text as a pale shadow of the traditional text: the essence of the book is based on its concrete nature.[6] A printed novel is a reading platform, marks left on it become part of the book. The marks mould it to the likeness of its reader: the most read parts are visible, as are markings, underlining, dog-ears and jam stains. Thus, Gass also emphasises the personalness of the book: the digital text cannot get on the same level of intimate recognisability of a book that has been lovingly read. One cannot own an electronic text as an object.

Part of the pleasure of reading a book (whether it be a novel or non-fiction) seems to come from the material use of the book object: the layout

and the plot flowing along livelily– or the struggle against the book object (" this much left"). Also part of reading are the occasional returns from the world of fiction to the book object itself to wander amongst the cover art, blurbs or bibliography that belong to the book object, but not the book as fiction (according to Genette peritexts). A book can also consciously exploit its material essence in different ways. In other words, one of the resources of printed fiction is the relationship of its material essence to what it presents.

This relationship will change when, in addition to the reading platforms, the texts can also use modern technical strategies. When one can read linked Net texts on an e-book reading device, it will be difficult to define the boundaries of the work. For example, in a non-fiction book there can be links to outside the work for those who want to learn more. The reading gets rhythm (or the work can give it rhythm) in many different ways. Naturally the texts in electronic form can also use the traditional form tied to pages, chapters and paragraphs.

Generally readers prefer the reading properties of text printed on paper overwhelmingly compared to electronic screens. The fact that the manufacturers of e-book reading devices spend huge sums on developing a digital reading platform, which resembles paper as much as possible, is not as paradoxical as it might first seem. Consumers also demand copies of email and reader programs in the traditional letter form. The test users participating in the questionnaire valued "book-like qualities" – for example, vertical page formats and non-scrolling page changes One can consider the over one- thousand-year history of the book format optimally shaped the use properties, so these must be imitated by the electronic devices. What makes the division of the text into pages such a practical property that we live and write the history of the book and not the scroll?

The Permanence of the Text

In the discussions about digitalness, there is one argument that handles the material essence of the text placing the permanence of the printed word, as well as the impermanence of the digital word and 'uncertainty', against each other. It is true that text once printed is very difficult to get off the paper! One can, however, question the permanence of the printed word from both the material and contextual or contentual perspective. Paper is

not very good material and inadequate conservation techniques, in particular, are continuously destroying old, printed literature. Paper was produced by old production methods and was fertile ground for moulds to grow on. Old perishing books are often very difficult or impossible to reprint. Another fact is that books are also consumer goods and suffer from reading.

On a conceptual level, the permanence of the printed text is also questionable. Even though it is by its material 'being' static, the default assumption of literature researchers has been for a long time that the 'essence' of the text is formed in a subjective reading experience and you cannot go back to the 'same' text twice. A fiction text forms a multidimensional semantic entity, all aspects of which cannot be mastered in a single reading. Something in the text will always be left out in the reading process and the forthcoming elements depend on the properties, reading moment and the environment of the reader. In other words, if the text is understood to be something other than mere black marks on paper, it is unstable.

There is a functional difference in the printed texts and programmed cybertexts: the printed text is static, cybertext dynamic. This is a basic difference, not so much a determining difference. The essence of a printed text can be dynamic according to the creator of the concept, Espen Aarseth (1997), the *cyber-textuality* is a perspective into all literature and even electronic text can be static if the author so wishes. The cybertext can use occasional static as a thematic means. Most of the electronic texts (for example, all digitalised works and most of the texts meant for e-book reading devices) are static. In other words, the essence of the printed or electronic text cannot categorically be assumed to be of a certain kind.

In practice, the digital information communications have problems connected to recording, which the printed matter does not have. The heterogeneity of the environments where used, bad planning, as well as the rapid development of different formats, and through that a quick turnover make it more difficult to record digital information. Even though it is possible to copy identically countless times, its physical recording forms do not last forever or are commensurable with changing and increasingly rapidly outdated equipment. Based on our daily experiences, we are inclined to consider printed text to be more reliable than digital. This is not an insignificant matter, either from the perspective of mental pictures connected to literature or the perspective of its 'image'.

FUNCTIONS, GENRES, USERS
OF THE BOOK AND WHEN ONE READS

Digitalisation has started at the beginning of the production chain. The end product of the word processing program used by the author, and of the digitalised production process, is still mainly the traditional printed book. At the end of the distribution chain, even a small change is more visible to the public, the buyer of the book, than a large change at the beginning. Depending on the perspective, its effects are also noticeable in the reading culture.

The outline of the discussion on the digitalisation of reading tells about the present situation both on the information and emotional level. The fear for 'the disappearance of the book' is exaggerated in many ways.

The electronic text cannot compete with the printed book if its only asset is that it is electronic, and it does not exploit the advantages of digital text, in other words, does not produce 'added value' compared to the printed book, for example, interactivity and the possibility of individual modification. From the perspective of the reader, other 'added value properties' can be, for example, up-datability, links or cheap down-loading, or from the perspective of distribution, storage or direct e-commerce.

Statistics about Reading and Readers in Finland

Reading books has been one of the most popular Finnish pastimes. According to the Statistics Finland research into *Culture and leisure-time*, 1981 and *Leisure-time*, 1991, interview information, both in 1981 and 1991 three out of four (76% and 75%) over 10 year-old Finns had read at least one book during the six months preceding the interview (Eskola 1993, 27).

However, during the 1990s the percentage of the population reading books decreased. This time a question about reading books during one year was included in the comparative information. According to the results from the interviews conducted in 1991 and 1999, 82 percent of the

over 10 year-olds in 1991 and 73 percent in 1999 had read books during the year. To reverse it: 18 percent at the beginning of the 1990s and 27percent at the end of the 1990s had not read any books during the year (Minkkinen, Pääkkönen & Liikkanen 2001).

What will happen to the reading enthusiasm of Finns in the coming decades? Very different alternatives have been presented. The most common one is that the position of the printed book will last, but its social, cultural and practical status will change and may get new features. As a mental exercise, one can put forward two opposite views: either the future book will be a withering and inadequate way of conveying text, with many defects and which, in addition, is an ecologically questionable form of publication; or the book will keep its status as a form of conveying literature and, for example, the title, and the print quantities of fiction will continue to grow. In both cases, it is probable that expensively made books will remain valuable status objects, with which to express social status and human capital – texts considered valuable are published as valuable books.

'It is probable that the book will still keep its position, but its proportional part of the total communication will decrease'. (Stockmann *et al*.,74). The book will most likely last for a long time side by side with the digital publication forms. It is essential, however, to know what this co-existence will be like and how it will affect reading habits and practices. Different estimations can be made about the share of different population groups (for example, pensioners) of the readers and buyers. Even at their best, they are assumptions, because there are many variants and unforeseen factors (wealth of the future pensioners, use of time, other activities, social factors, etc.).

When examining reading, one needs to remember that reading includes many other things than fiction. Currently, ever more people educate themselves to a higher level. It is probable that one will use more and more time to study text and course books. The level of education is also connected to other reading activities. The change in the occupational structure may have led to the fact that one also has to read more in connection with one's work than a decade or two ago (which, in turn, may have a negative effect on the enthusiasm for reading fiction). The number of magazines has grown significantly, especially in the 1990s – in other words, obviously an increasing amount of time is spent reading them. Quite new text types have been created: young people in particular read and write many text messages and most of the Internet use is reading.

Different studies can measure reading in very different ways. Even if the questions were similar, the respondents can interpret them in different ways: if people are asked how much time they spend reading daily, one may give the time used for reading books and magazines, another may also include the Internet reading, a third only the time spent in leisure reading and a fourth may also include the time spent on work-related reading. The respondents may also relate reading to reading 'high status' fictional literature, thus resulting in figures that are too low.

Reader Profiles

Different reader types can be created, for example, according to age, social status, education or sex. It may be justifiable to predict that some kind of reader generation gap will happen in the future. Which reader groups will be in a key position when the new form of publishing, distribution and reading takes place? How will, for example, the age group of the (near) future, whose social environment and communications, as well as pastimes, have, since childhood, been suffused by digital innovations, see the position, importance and value of printed literature? How will the large retired age groups relate to the book and reading? An important question will also be what will the value of literary culture look like in the future alongside other forms of culture? How will literature as an area of cultural activity succeed in forming its own 'image'?

In reading scenarios, one has to also take into account the possibly statistically invisible but recognisable reader groups, which will affect the future reading cultures or which are part of them. These could be, for example, the major consumers of romantic literature or science fiction and role-play games (development of hybrid forms?).

The literature of the future will consist of new features, as well as a lot of the old – social, aesthetic, economic, political; valuations, assumptions and uses. This area will slowly change. The relationship of the old and the new will not come about by accident, but will be modified in social practices.

The development of the reading practices of the present 15–20 year-olds, the so-called computer generation, is an important issue from the perspective of the future of the book trade. It is difficult to find the guidelines without research results being followed up properly, and it is very difficult to say which reading features of the generation in question belong to the age group in question and, which, on the other hand, are genuinely

connected to the fact that it is a different generation. A new multilevel mapping on reading is required.

The accumulation of activity has been a repetitive occurrence of observations in research on reading, media use and cultural interests. For example, young people using the computer and watching TV a lot are also often keen readers. There are also special groups which concentrate on one or two hobbies, for example, reading, watching videos, listening to music, playing games (see, for example, Koskimaa 1996). Thus, only certain groups, for example, using the new media directly will read less. From the perspective of the future, it is the development of these groups that is essential – what is the ratio of the active and passive ones and, on the other hand, which (often very genre conscious) special interest groups obtain and read many books.

Reading for Entertainment and Information

The entertainment function and information interest do not appear purely divided in reading fiction or non-fiction literature. Reading the most popular Finnish novels is guided by the entertainment function, as well as the thirst for information/knowledge: according to the readers, good literature offers reliable information on society, history, people, regions, etc.

A clear interest in knowledge suffuses the experience and entertainment interest or works side by side with it. In reverse, non-fiction literature also has always an experience function – it can be read purely as entertainment, without directly aiming at knowledge.

When and Where One Reads

In different situations, reading is controlled by different, generally reasonably strong reading habits. The reading situation can be static or mobile, long- or short-term. Reading fiction is nearly always defined by the entertainment function or 'experience' reading. Such definitions are generally associated with highbrow literature and they require a certain kind of reading situation. Reading fiction can also have practical extensions: for example, in a waiting room or when travelling one often reads magazines or airport fiction, which as its name indicates is easily available on such occasions. For example, reading classics merely to raise one's literary educa-

tion or social status works on the basis of a practical function, not merely as entertainment. Fiction has also therapeutical significance.

Traditionally, reading fiction is connected to a 'quiet moment', a situation when it is possible to just concentrate on reading. It is difficult to read the so-called 'light reading' a little at a time, leaving off reading to do some other task. The often-heard remark 'I don't have time to read' illustrates exactly that a moment dedicated to reading is required in order to get the experience of the interaction of text and reader. Such a situation is linked to the argument defending the reading of traditional literature, which defines reading as calming down, long-term, concentration and internalised 'I – dialogue'. The opposite is reading the new form, digital text, which may include multi-media material, and which is not only more fragmentary than the traditional reading, but also involves gathering material or digging deeper.

The social practices of the future (for example, the rhythm of life, leisure-time and values) will mould the reading culture. It was concluded above that the 'nature' of reading is in some way related to the reading situation or moment, the time used for it. What is this relation like, what has formed it, how is it connected to other historical, social and economic factors and, above all, how will it change in the future? This should be researched in an interdisciplinary fashion using the methods and concepts of many science disciplines.

Fiction and the Meaning of Reading

A story, a narrative, is typical of people, a way of enjoying and experiencing. Reading may be the oldest form of narration after talking and listening to a story or play. When compared to the other forms of narration, for instance, a play or film, reading has features that explain its strong position. For example, the dependency of the story's mental pictures on the reader (every reader visualises the story his own way, produces his own story) or the subjugation of the story time to reading time (if you raise your eyes from the book, the story does not move on) are particular properties of reading.

According to Victor Nell (1988, 2) reading is action-changing consciousness. The book has the ability to 'create worlds' and the ability to absorb the reader into this world. The narrative structure does not limit itself to fiction texts. The story, 'the parallel world' of the text happenings outlined

in time, is (or can be), in addition to the imaginary world of fiction, also the structure of non-fiction, textbook, biography or history.

Reading Habits and Literature Genres

The genre of literature always has an effect on reading – it creates the settings for the way of reading and, thus, regulates reading. Non-fiction is read differently from fiction.

One way of approaching the present state of reading is to compare the differences in the reading habits of the so-called highbrow literature and the so-called genre literature (popular literature). Popular literature generally includes at least thrillers, novels about war, love, horror (generally just novels), as well as detective stories. From the perspective of highbrow literature, the most defining aspect of genre literature is generally seen as its formal nature.

It is necessary to stress the flexible (and also partly old-fashioned) nature of the classification for at least two reasons. Firstly, highbrow literature has, at least since the 1960s used entertainment literature as a stylistic means. Many novels considered quality literature use, for example, the conventions of detective or adventure stories.

When the practical aspects of the text get closer to the functions made possible by the new technologies, different reading habits and their economies will certainly compete with each other and at last determine what texts (for example, genre, structure, themes and length) are profitable to publish in the digital environment. So far the commercial innovations of digital texts have happened mainly in entertainment literature, where there are bigger opportunities for profitable transactions. It is, however, obvious that digitalisation will gradually have an impact on the whole field of literature, both the economic and the content sides: 'the development of the new kind of textual forms of expression is, however, also going on, it will happen slower and more unnoticed' (Koskimaa 2000a, 53). Literature will not become digitalised without changes in the ways of reading and reading habits.

Precursors of Development?

The technological development produces new instruments, technical innovations, with which it is possible to do things differently than before. Often

when the new instruments come on the market, they are still very raw in their properties and unreliable in their functions. Nevertheless, there are usually people who, regardless of the difficulties, either want to use them or think that the difficulties are just a minor point compared to the advantage achieved by them. Often professional users first get acquainted with the new innovative products. One will learn from their experiences, good or bad, and that of the other pilot users and maybe the new product can be developed enough that the innovation will spread to even wider markets.

From the perspective of the future of literature, the central question is what will it take from the contentual, practical and commercial perspective to transfer from the e-book reading devices of professional users, to devices that carry entertainment or information content for the public at large. While writing this, there are more questions than answers. In whose hands is the leap from the professional devices to devices for the general public and how will the players in the different links of the book trade chain (or network) be able to impact it? What will happen between these different development phases? Will the contents be developed for the equipment or the equipment for the contents?

The device manufacturers are interested in whether there is, from the readers' perspective, something essentially better or more pleasant in text printed on paper than in digital text and, on the other hand, what improvements can possibly be made in the e-book reading devices compared to paper. Where is this difference between paper and screen situated – is it in the physiological reading happening (the essence of the text on the screen, glass between text and eyes) or in the prejudiced attitude of the 'permanence' of the text and the content it conveys? Can one argue that the question is just a matter of getting used to it? Paper as a reading platform will long be an object, to which screens will be compared.

The views defending text printed on paper have their merits, but they have been partly based on the untenable justification connected to technical development: the possibility of development is questioned on the basis of the current situation. When comparing the properties of different screens and paper, so far what has been discussed is how the reading properties of a particular screen are much less worse than paper. It is understandable that it is difficult for the consumer so far to imagine a screen, the reading properties of which would unquestionably be better than that of paper. However, in principle this does not prevent one being developed in the future. When developing the readability of e-paper, the aim is to make the physical strain on the eye as little as possible.

Book – an Intimate Friend?

The alignment of the conversations connected to the digitalisation of reading tells about the current situation on both the knowledge and emotional level. The differences in the various views go back deep into the concepts concerning literature. The views can roughly be divided into those whose attitude is critical or opposed to digitalisation emphasising the superiority of the traditional book and the 'techno-optimistic' attitude emphasising the inevitability of digitalisation and new opportunities. Naturally, there is a more neutral, wait-and-see view between them. The view defending printed literature often accuses the 'digitalists' of being fanatics and of ignoring the 'fundamental essence' of reading. In the eyes of the defenders of digitalness, the defenders of the printed book are opponents of unavoidable development, who aim at limiting the essence of literature to just one historical phase.

One can contemplate the book's tangibleness also from the perspective of the bookshop. Especially, if one thinks of the buyer of fiction (light reading may be a different matter) and the differences of shops and online shops, one can ask, if in the first place the customer buys the content or also the tangible and visual object. The buyer of a book often flicks through the book.

The defenders of the traditional book have often leaned on perceptions that emphasise the emotional-like, difficult to limit and define properties of reading and literature. The essence of the book is 'safe', 'intimate'; text printed on paper is unchangeable and reliable. Also, the tangible essence of the book has been seen to be important; the Net text or e-book cannot replace the sympathetic scent, feel or something that the author, Amy Tan, described as charming sensuality (Koskimaa 2000a, 49).

When technically comparing the texts of the book and electronic texts, one most often forgets the continuing technical development – the future of digital literature cannot be evaluated simply by the level of current technologies. With these arguments on the background, one can also notice the naturalisation of the book properties, in other words, forgetting the fact that a book is not 'ready', but always (now as before) in contact with technological innovations of its time.

A third weak argument defines literature or reading through the reading situation, in other words, projecting 'intimacy' or 'mysticity' belonging as such to reading – in other words, defining the correct way to read, which shuts out the ways of reading uncommitted to this view from the reading

with the right sort of attitude. In the views that see reading as intimate, the different genres are omitted and reading is considered unambiguously the reading of good fiction. This kind of correct, cultured reading has 'entwined with the aesthetic values of the quality literature' (Koskimaa 2000a, 52).

Does this kind of 'intimacy' belong to reading itself? The general essence of reading is very difficult to pin down. Can one, for example, say a text role-play game which is played by many people simultaneously, is outside literature or at least outside good literature? It contradicts (at least) two definitions of printed literature: it is not isolated, intimate reading, but collective action; nor is the text permanent or predetermined.

The 'intimacy argument' sees reading as action developing and analysing personality. In the background there is a worrying thought about the decreased interest in reading among young people. Why then is intimate, quality and 'developmental' reading is possible only in a paper environment? A printed book qualifies for the formal minimum definition of literature – a format that also defines the content and images connected to it. It has clear limits, so it is basically controllable by the reader.

The intimacy argument wants to save the purity of literature as a cultural form and preserve reading as an activity only in the tradition of highbrow literature – digitalness intrudes into a pure, already valued and accepted tradition. The change in the literature and diversification field makes it difficult to evaluate literature from that tradition. Valuable texts are equal to printed, recognised good texts whereas texts belonging to the digital environment (for example, hypertexts, cybertexts, online literature, text role plays, chat groups, computer games) are considered to be outside good reading. Literature is wanted to be stopped/set into a certain entity, so that the continuation would be controllable. This is nothing odd or historically new – the boundaries of highbrow literature have always had to be defined somehow and somewhere. It may be that in the 'historical transfer phase' if this kind of concept is justified, one literary canon will be defined for a long time with printed (accepted) and digital (rejected) definitions.

New Forms of Reading

Digital Texts

Digital texts can be divided, for example, into the following groups:

1. **Digitalisation of printed literature.**

   This group includes such large archive projects as the Gutenberg and Runeberg projects, in which one tries to digitalise as completely as possible existing (mostly the older, out of copyright) literature. For example, the Runeberg project consists of over 200 Nordic titles.7

2. **Publishing new literature digitally.**

   These texts have none at all or only very few, for example, hypertextual techniques**.** Literature follows the traditional form and digitalness is above all an instrument for the dissemination and distribution of text. The text can be on the Internet browser in readable form, made for a special reader program, or in a form readable by an e-book reader. As these texts do not really use the new possibilities offered by digitalness, they can when necessary also be published in print.

   Papers and magazines, in particular, have been doing parallel publishing in both digital and print versions. As the e-book markets gradually get bigger, more and more new books are also published as a digital file; often the digital version is published afterwards, for example, at the same time as the paperback version. Thus, it is really a question of taste, whether these texts are classified here or in the former group.

3. **Literature exploiting the new opportunities given by digitalisation.**

   For example, hyper-novels and interactive poetry, as well as multimedia reference books, belong to this group. Digital literature distributed as a physical product – diskette, DC-ROM – has not

succeeded in creating proper markets except for some reference books (for example, specialised dictionaries).

4. Internet literature.

Internet literature is digital literature, which, in addition to the properties of group 3 texts, exploits the special opportunities of the Internet. It is possible to up-date the texts when wanted (or it can be programmed to change itself), texts can be linked together, the reader and the author can be in real-time contact with each other through information networks, readers can be given a chance to take part in writing the text, etc. Works belonging this group are so far not being published commercially (nor, in practice, even free of charge by commercial publishers). The works are mainly publications comparable to self-publications, but, to some extent, also published by some already established literature storehouses working on the Internet.

Texts belonging to groups 1 and 2 are mainly works classified as e-books and publishing them does not differ very much from publishing printed literature. The important differences are: pirating – illegal copies – because it is easy to a digital document, is a much greater adverse factor than with printed literature; the distribution possibilities are more manifold, the work can be sold, for example, one chapter at a time, for a certain time, licensed for a certain number of users, etc. Both the computer program business and, especially, the music business are fields from which one can learn in the distribution of this kind of text.

The works in group 3, however, are marketed and distributed very much like printed books, but their production requires 'technical editing' (checking that it works properly as a computer program) which printed books do not. Especially there is a need for user support in this group.

Works in the group 4 though differ essentially from literature in the traditional sense, and it is not self-evident that the traditional book trade players want to be, or that it would pay them to become, publishers of such Internet works. On the other hand, the works owned by the publishers (especially novels) are a huge content store, which can be made into new digital products with not too much work. The copyright regulations, however, will cause practical problems for such an operation. The experience of the publishing editor can also be exploited in editing the work in connection with these texts. Moreover, some of the authors belonging to the pub-

lishers' 'stables' may move over to this type of text. Natural partners for them would be companies producing the new media and the Internet (book)shops, as well as possibly the providers of Internet services.

Reading Digital Texts in Relation to the Devices

There is very little (researched) information on reading digital texts, and its exploitability limited. So far, most of the digital texts are read on the computer screen, which considerably limits where they can be read – the texts have to be read where the computer is. For most people, this fact alone is a sufficient obstacle to reading literature, particularly when in digital form. In addition, high-quality monitor screens are very expensive and using a lower-quality one often causes headaches and eyestrain. Laptops make it easier with regard to the reading place, but they also emphasise how unsuitable the screen for long-term, continuous reading. Even though there are people ready to read even novels on the screen, one can say that as long as screens based on picture tube technology are the major e-book reading devices for digital texts, digital literature will not really develop.

The technical development will, however, change the situation in at least two ways: the readability of the monitor screens will improve and they also get smaller (or rather: the size of the monitor screen in ratio to the size of the active screen will get smaller). Moreover, they can have a cordless connection to the computer itself. Thus, both the limitations of the reading place and problems connected to the strain of reading will get easier.

The portable e-book reading devices are a conscious effort to make digital literature more available for the reader. There are mainly two types of e-book reading devices: the proper e-book reading devices and the Personal Digital Assistant PDA. The (potential) advantages of the proper e-book reading devices are the reasonable price, ease of use and reliable operation. In principle, reading with the help of a well-designed e-book reading device hardly need differ from reading a printed book – their relationship is in many ways similar to that of the vinyl record and CD disc. The transition requires some getting used to, but the basic function is the same. In addition, one gains some additional advantages, such as different search and recording options. The important difference is that the CD disc offers a better quality sound than the vinyl record, but it will be sometime before the screens of e-book reading devices are able to compete with the printed page in reading comfort. One of the advantages of the screen, for

example, is the background light, which will guarantee good visibility even in bad or changing lighting conditions. The other important difference is cultural: the vinyl record only had a history of about 30 years before the CD came on the market and it had not become as inseparable a part of Western history as the book has during its 500 year history.

A test carried out with a very small reader group on the reading of a text-emphasised multimedia work on a computer monitor screen gave some hints that reading and the reading experience itself do not deviate significantly from reading a printed book.[8] Thus, the e-book reading devices and digital texts do not necessarily change reading habits very significantly – what is being read may even change more when the reader constantly has practically unlimited text selection within reach (providing that the e-book reading device has a modem or other component for an Internet connection).

The personal digital assistants are already used quite a lot for reading all kinds of textual material. Many papers, for example, produce article packages or news collections formatted for the microcomputers; seminar programmes and other texts can also be distributed in this form. Even though one can make reader programs for these devices, which work the same way as the proper e-book reading devices, the reading itself is different. The reader program has to be started separately, it is a part of a larger operating system which may interrupt reading with all kinds of messages (error notices, e-mail, program updating, etc.) and one can potentially use all the other functions of the device all the time (calendar, address book, etc.) – because the device in question is not a dedicated reader. A device as a reading environment defines and guides reading more than the proper e-book reading device. The mobile phones of the next generation will also be possible reading platforms. Currently, it is impossible to say what kind of reading these devices are suitable for and how are they really read.

It may be justified to say that the share of the digital e-book reading devices of the reading platforms will be marginal as long as they are – to put it bluntly – books transferred into electronic form, in other words, they do not exploit the difference in the functional base of the digital and printed text. The mere chance to upload and store works in the e-book reading device ('library in your book') may not beat the traditional book, at least as long as the devices are expensive and the reading properties are clearly inferior to the printed book.

E-book reading devices are still used so little that their development work is a minute part of the rest of the technological innovations. One will

not necessarily be able to lower the consumer prices of the reader devices, unless interest in them rises – and vice versa.

However, the manufacturers of digital reading platforms most likely believe in the electronic future of the devices because they invest in product development. The digital reading platforms have their place in the reading practices of the future, but at least in the near future that place seems to belong to updateable texts. Consumer behaviour is, as we know, very difficult to predict. The future demand for e-books will depend on many things – how will the ratio of the use and price be formed in the market? What innovations will the high technology of the near future bring (development/cheapness of the devices)? What kind of 'image' will one be able to create for the reading devices? What kind of texts will one be able to read, for example, in 2001 and how much? What position will fiction have then *vis a vis* the other art and entertainment forms?

The development of the electronic e-book reading devices seems to follow the logic of other technological development. Popular technology has been, almost without exception, technology developed for the immediate needs of an interested group, for a small-scale job or some other reason, before it spread to the general public. Technical innovations need a certain time before they 'leak out' to the general public, mould themselves to its needs, get new features and properties, as well as become commercialised. Instead of e-books, personal digital assistants are being developed, which are meant for the use of different up-datable material cordlessly. The purpose of the use generally defines the concept, so in a wider sense one can call these devices e-book reading devices of e-books. Fire and rescue operation, mechanics, repairmen, sale reps, the police and border guard, for example, can use the cordless e-book reading device, in which the updated and localised information is real-time precise information. It can include graphics, technical drawings, a memo-book, address information and, of course, the Internet connection. Some auxiliary functions may also have been integrated in the device, for example, a code-reader for health insurance, credit or other cards.

ʹWidened Readingʹ and Multimedia

Traditionally, literacy has been understood, in addition to the mechanical literacy ('decoding' of words from paper), as an individual's ability to 'understand, use and assess different texts […] to achieve his own goals,

develop his knowledge and opportunities, as well as take part actively in the functions of society.' (*Suomi (o)saa lukea*, 31.) Reading does not happen separately from the context, and it is always to some extent strategic, in other words, 'taking into account the situation, purpose, text type and media' (Linnakylä *et al.* 2000, 6). *Widened reading means, in general, semantic practices in new media environments.* By widened reading, like media literacy, one means generally reading that happens in the information networks or multimedia reading, which has, in addition to texts, for example, material containing moving pictures or sounds.

New techniques become merged into old ones. The merger renders part of the concepts inadequate, produces concept hybrids and new concepts. Media literacy is a good example of the functional widening of the concept. When the reading culture is changing, in addition to the adoption of the new concepts, the old concepts get additional meanings, new ways of utilisation and connections. The concepts of the book and literature will also be changed and widened. The book must be redefined ('Is this still a book? Is an e-book a book? Is this literature any more?'). The digital environment will change the definition of the relationship between the book and the work.

Media literacy or 'new reading' stresses the properties of the traditional reading from new perspectives. The importance of receivabilty, productivity and critical reading is stressed when reading texts in a digital environment, navigating and choosing. Compared to the printed environment, it is customary in Internet reading to emphasise more the reader's ability to choose *(Suomi (o)saa lukea,* 16.) Internet reading does not go back, like traditional text, to the linear narrative continuation – analysing the multi-linear hypertext requires thinking about the reference relationships of the text at the cost of outlining the uniform plot (Järvinen 1999, 57).

New ways of reading must be learnt. The starting point for reading the texts can be exploiting the new methods of expression, made possible by digitalness, and the possibilities of Internet literature, whilst applying the reading habits learnt in the first place through the printed literature. However, this is not enough, but the reader must also learn new reading habits, some of which may become more common with time and make it an automatic part of reading, so the reader will no longer need to pay special attention to them. In this stage, every new digital text requires learning of its own**,** so that one can get the most from it.

Writers of digital texts, who most often started with traditional texts, are quite clearly aware of the problem and offer readers special instructions. In addition, digital texts, at least in this transitional phase, often consist of sections which deal with the function of the text and which at the same time indirectly give the reader reading instructions. Despite these auxiliary instruments, the reader has to naturally rely on the trial and error method, to learn by doing.

Reading instructions can be divided into two groups:

1. technical instructions, which come very close to the operating instructions of a computer (telling how a program is installed, how its user interface operates, etc.),
2. content instructions, which guide how the reader should interpret and use the text in question.

It is obvious that certain uses of the digital texts will become more common and established as new ways of functioning. For example, hypertext is already a very commonly known way of expression. In digital text, on coming to a word/sentence separated from the rest of the text (different colours, fonts, underlined, etc.), the reader already knows that by pointing at the place and activating it, he will either get to a different place in the text or open a new window on the screen with some additional material. Understanding and learning the hypertext principle is essential – then the changing details (for example, way of pointing at the link) hardly affect the reading. Another fundamental property of digital texts is dynamicity: a text once printed always stays the same, but a digital text can change – it can change either whilst being read on the screen or unseen by the reader, in the computer's memory. To people using the Internet, this is also self-evident; a text once read can already be different when read a second time. Again the way and importance of the changes can vary from one text to another, but it is essential that people learn to think of digital texts as (at least possibly) dynamic.

The difference from the reading of traditional literature does not necessarily have to be big – even in printed literature there numerous different genres with reading habits of their own: a poetry book is read and used differently from a novel; a printed play in its own way, etc. Moreover, some writers of digital texts can consciously avoid ways which are set or

look like set – they can create unique text programs, whose essential feature is that the reader can never know in advance how a certain text will 'behave'. This is not a completely never-before-seen feature, either – it just continues the artistic avant-garde tradition.

New reading habits adopted. Reading habits associated with the book as an object and reading it are so established and internalised that one seldom even notices them. To recognise the changes in the reading culture and the present situation, it is important, however, to note that all the features associated with reading practices are defined and penetrated by some kind of habit. These reading habits, however, are to a certain extent, technological, in other words, connected with the tangible nature of the book. The uneducated peasant in the Middle Ages would probably not have understood the logic of the book (turning pages, linear order) had he seen one.

The new reading habits can be divided into habits inside and outside the text. The former ones define reading habits and techniques of interpretation and as such will not be inderstood as easily as the latter ones, which define social practices. One new 'inside' text reading habit is, however, perceivable. Superficiality and speed are being noticed in the use of both the informative and fictive text. Will the quick-tempered, intensive, surfing audio-visual expression also mean the reading is also becoming 'superficial?

It is clear that reading can not stay unchanged, if the surrounding reality changes – reading is not an island separate from the rest of the culture. The socio-cultural changes do not really necessarily affect the literature in just one direction: a busy, intensive life, the digitalisation of working life and technical uncertainty, as well as an audio-visual environment, may just as easily direct readers 'back' to the safety of the printed word and the 'reality' of traditional novels.

Will the digitalisation of literary environments produce any more ground for narration, the chronologically narrative structure? Digital environments do not favour staying in the realistic (narrative and plot-wise chronological) tradition in the same way as does the traditional novel. Traditional narrative is closely connected to the physical form of the book: the meandering and detailed flow of plot produces impressive 'bricks', light reading. The mass of the text would seem to have some kind of connection to the strength of the illusion of reality it produces – for example, just think about the massive fantasy novel series, which build a complete 'parallel world' of their own.

Assessments of the Commercial Application Areas of the E-book

Earlier on we defined the e-book as a text published in a digital form, which does not essentially change, even though it would be published as a printed book. The definition automatically excludes the moving picture and sound from the elements of the content. Instead, a photo, drawing or graphic design are considered similar to text. The e-book has to be understood in this connection, to be limited to an entity, which has an author and a publisher.

Outlined this way, the e-book is technically suitable for presenting any content. One of the advantages of the e-book for the publisher, compared to the printed one, is that storage does not tie down any capital. From the commercial perspective, the applications must, however, be weighed according to what kind of additional value compared to the printed one they give the user.

Uniform Content Entity

All novels and plays, most biographies and many non-fiction books are understandable in the way the author meant only as entities and readable only from beginning to end. Only in this way will the story told by a novel or play advance logically. Most biographies advance in chronological order and the text read earlier will help to understand the things that happen later on. In non-fiction books, the information on the earlier pages is necessary or at least will help in understanding the later information.

In collected works every single part is an entity. Except for few exceptions, the parts can be read in any order or left out altogether without losing anything essential.

Poetry, novels, aphorisms, anecdotes or other collection, as well as a book consisting of earlier published or separately ordered articles or short stories, will achieve new dimensions in digital form, which can be also considered as additional values offered to the user.

An e-book can be an entity or the buyer can select the parts he wants. The buyer can make a book of the most preferred aphorisms or from the

most important writings of a branch of science, which is of interest. He can also compile a collection of poems or proverbs for his friend.

Single items in a collection can be sold either for recording and printing or for one-time-only viewing to those who want them. An anecdote, proverb, aphorism or poem is easily readable on the screen of a mobile phone. A novel or short story is more pleasant to read with the help of a computer, personal digital assistant or e-book reading device. There is already a limited supply available. The information transfer is carried out through the Internet, phone and, later on, digital TV system. Thus, the problems of the small one-time fees could be solved in co-operation with operators.

Best contents for an E-Book

Only a small part at a time is most often read from the telephone directory, dictionary, encyclopaedia, law book, how-to book, cook book and mushroom book and only very little time is spent on it. Most users need, or want to use, only a fraction of the information contained in these publications. This material can also be sold for recording or merely for viewing. A customer can buy those recipes or hints he wants and visits other information as needed. Pure text information also works well in the mobile phone. If pictures are required, a larger screen is essential.

Assessments of Multimedia Application Areas

CD-ROM and DVD multimedia products are book-like limited entities. According to our definition, one cannot consider them e-books, but their purpose is the same as a book's.

Compared to the printed book, the multimedia properties, the moving picture and sound bring quite a new look to an animal book, travel guide or hobby book. In the text material, the functional principles of technical equipment, phenomena of physics and chemistry, animal habits, the effect of waves on the shore and the flowing river on the bank, or the effect of the wind on the formation of sand dunes and snow drifts can, with the help of video and animation, be brought before the students' eyes and the event can always be repeated as desired.

Paper or Bit?

Hardly anybody will be surprised if we draw the conclusion that a long, continuous text is still best read printed on paper. The printed form also works for short texts, but an anthology compiled from short texts, in particular, based on information search and combination, or one that is to be read in a random order, is a sensible combination downloaded on a digital e-book reading device.

The longer multimedia is used at any one time, the digital recording (CD-ROM, DVD or some new form) is still, at the time of writing, the better form. When the information transfer gets better, the online connection usability improves. The Internet service is a practical and easy form to use for information that is only needed for a short time. A device equipped with a small screen, for instance, a mobile phone, will be adequate for reading, but still a PC or a larger screen is more comfortable than the mobile equipment, depending on the length and purpose of the text.

People are individuals even when using content. One requires pictures to support the text, another uses his imagination. A picture, drawing, chart or figure tells everything essential to one person, another one understands the same thing easier from a two-page text. One is ready to employ new methods and equipment, while another wants to hold on to the old ones. One always wants everything on the same device; another naturally uses what is the most practical or available. Some detest the book, others the technical equipment. One wants the information he needs, or needs the information he requires, straight away as an online service to his mobile phone; another has time to wait for a quieter moment and leaf through a manual at night in his easy chair.

In the final analysis, the greatest contribution of digitalisation will be genuinely customer-based service, with which one can offer every customer a combination of content and device according to his needs and likings.

BOOK CHAIN PLAYERS

A storyteller needs a listener. An inventor, observer or someone who has experienced something also brings his experience to the attention of others. Gesture communications, from the dawn of time, requires eye contact between sender and receiver, one based on voice, at least both present at the same time. A message carved in stone, engraved in a clay tablet, drawn on tree-bark, expressed with knots on the hamstring of a slain animal or later on with knots on a string and even later written on papyrus, parchment or paper could be interpreted much later than when it was made.

In the beginning of written communications, writing and reading skills were rare. Often the sender of a message who could not write needed a clerk to help him and an illiterate recipient needed a literate assistant. If the sender and recipient spoke different languages, one needed a literate interpreter, nowadays called a translator. To get the message to the destination, one also needed a courier.

In this chapter, the journey of a printed (and to some extent also published in a digital form) book in its present-day form from an idea to an experience, and the roles of the players participating in this process, will be described. The *Book Trade Development Trends 2010* research project in its entirety is looking for answers to how digitalisation will affect the book and the book chain players. Some of the important factors are technological development and legislation, as well as the co-operation of consumers and companies.

The Redistribution of the Media and the Book Trade

The redistribution of the media field that has been going on for several years, and is still going on, is a worldwide phenomenon, which is strongly visible also in Finland. In the background, there is the integration of the electronic and printed communication with each other, and through that the new product concepts made possible by new processes, publication

channels and publication platforms. The development of technology has been significant, but, however, only one of the components of the structure has changed. One can see four mega-trends in the development:

1. concentration around some media giants – polarisation
2. obscurity of the independence of the media companies on the outside
3. appearance of new players like teleoperators and new media houses in the traditional field of media, and
4. globalisation

In the traditional media house, technology has had a central role. The printing machine investments have been massive and only by having one's own printing house have the publishers remained independent with a secure distribution channel. The electronic media has been the 'official communicator', separate and controlled by the state. It was not until cable television and local radio stations gave the private media companies the first taste of the electronic media that was then considered a competitor.

In the new media economy, the content is emerging to be a central value factor. New technological solutions are needed for recording it in as general and multi-use form as possible: for processing and packaging to suit different media, for distribution through different channels, as well as reception and consumption on different publishing platforms.

Traditional media companies are not strong enough to manage on their own the whole value chain from content generation to distribution, with the necessary technology and distribution channels. The alliances and mergers, both between the media companies and the media companies and the owners of the distribution channels, which have occurred, are a logical way to develop the integration of the media and create sufficient resources for the multiple use of the content. At the same time, the traditional home-market-centred publishing industry has become part of the global media and entertainment industry.

The book trade is part of the media field and one can notice during the first years of the millennium some concentration and internationalisation. The total VAT free net sales of books by the members of the Finnish Book Publishers Association in 2000 was 250 million euros and the turnover of the whole book publishing business in Finland was a good 290 million euros. The market share of the largest book publisher was about 40 percent, the total of the five largest about 75 percent and the eight largest about 80

percent. All the media groups, large by Finnish standards, also have contacts with the Finnish book trade and all the large book publishers have connections with either book printing or distribution.

For the publisher and content producer, a new owner, already operating in the book trade, may be more often seen as an opportunity than a threat. In many cases, a publishing house that has changed owners has been able to continue publishing as its own unit rather independently and with better economic resources than would have been possible by itself.

Bookshop and Changes

In the distribution chain, the number of entrepreneur bookshops and those of co-operatives has, in recent decades, followed the population migration from the countryside to the larger urban centres, because of the improvement of the commercial services of the urban centres.

The most important difference between the past thirty years and the next ten years may be the increasing speed and internationalisation of the change. Books are global. The share of translated literature has been important in the publishing schedules of most publishers for a long time and during the last few years the sales of the Finnish books' translation rights abroad has increased. The publisher, printing house and distribution channel have begun to get international both through ownership and operations. Foreign players have come to Finland and Finns have extended their operations abroad. In the years to come, the internationalisation of the reader will show so that ever more Finns will be reading books also in foreign languages, especially English. Digitalisation through the book chain, from author to reader, will create prerequisites especially for operational changes.

In any case, all the book trade players must be prepared for changes in their operational environment and prerequisites. It may be a question of a competitor striving to grow by buying up the competition, about a completely new competitor operating in a new way or about a player breaking out of his own traditional role in the operation chain. Pressures for change may come either from Finland or abroad. Buying the competition and breaking out of the traditional role by, for example, trying to cut out the distribution channel, are basically competition between companies. Creating new business models also requires the co-operation of the end customer.

Production

To put it simply, the players of the production chain are author, publisher and printing house. The others participating in the production are subcontractors to the publisher or the printing house, seldom to the author.

Mostly the author and the publisher are different people or organisations. Exceptions are books called self-publications, for which the author has not looked for or found another publisher. Almost without exception, the largest publishers belong to groups, one part of which is also a printing house. The printing houses in question do not, however, serve just one publisher and the publisher does not necessarily print all the books he publishes in his own printing house.

The digitalisation of printing affects the production process of the book in many ways. Small print runs made possible by digital printing reduce the capital of the publisher tied up in warehousing and fewer books than before are left unsold. The economic risk threshold of publishing falls considerably and helps not only new publishers enter the market, but also self-publishing. Someone ordering a printing job will have more choice, because the number of the players capable of printing books will increase.

The companies will thrive by persuading the other parties in the operation chain to more profitable business models and customer interfaces from their own perspective. Earlier on, the end customer was able to choose his own operation model from the possibilities offered. In the Internet world, his chances to actively affect the forms on offer may improve. The consumer can really become a king.

When the distribution chain is becoming digitalised the players can more easily than ever before move into each other's areas of operation. There will be also new players, who can, for example, be conveyors of information or specialise in handling the present business functions: marketing, financing, ordering and distribution. Nearly all the players in the value chain of the printed book can take part in the Internet trading of digital products and merge into each other's business areas:

·   The bookshop can print the book from the server of the publisher, wholesaler or author while the customer is waiting.

- The wholesaler can establish an online shop, which serves, in addition to the author, publisher and retailer, also directly the end customer.
- The publisher can sell the content from his own server directly to the end customer bypassing both the wholesaler and bookshop.
- The end customer can communicate directly with the author, download books anywhere on his own e-book reading device and read the work on the screen or print it.

Three Production Methods

We distinguish three different production methods in book production: traditional production for the warehouse, on-demand production and production meant for direct electronic distribution. A combination of these production methods is also possible. The production methods differ from each other both technically and logistically. Choosing the production method is not the decision of the printing house, but is part of the marketing strategy of the publisher and logistics management.

In traditional book production, the book is made by the lot for the warehouse according to the forecasted sales, and distribution is from the warehouse to the customer. The traditional lot system is based on the cost structure of the offset method, where, because of the high costs, it is more profitable to print larger amounts at a time. Thus, the whole forecasted sales amount of the book or, for example, the forecasted sales for 6 months of books that are known or assumed to be bestsellers is printed at a time. The average print runs vary from one thousand to several thousand copies; the largest print runs are tens of thousands of copies.

The publisher distributes the books sold in advance immediately after printing to customers; wholesalers, retailers or end customer. The rest of the books the publisher stores either in his own warehouse or with subcontractors. When the book is out of print, it will be reprinted, as long as there are enough sales forecast to cover the cost of the whole reprint. If the sales of the book do not match the forecast, one has to ship the books out of the warehouse through sales, sales of remainders or by invalidating. The efficiency of the traditional production method is based largely on forecasting the book sales successfully.

In on-demand production a product is only made, when the product already has a buyer. In practice this is done so that when ordering a book, one sends a work order to the printing house, on the basis of which the printing house will print a certain number of the book in question. The basic prerequisite of the on-demand production is that the book is stored in the printing house in electronic form and that the whole book or parts of it will be printed digitally. When the book is ready, it will be delivered directly to the customer.

The advantage of on-demand production is the reduction in warehousing and the capital tied up in it and the lengthening of the life of the book. In on-demand production, the print of the book never runs out and it is especially suitable for books, whose number of sales is small or is divided over a long period. Also the advance print runs made for test marketing or other purposes and the reprint of the best sellers is suitable for on-demand production.

The on-demand production sets limitations for the final handling of the books. The traditional equipment used for the final handling of the books has been designed bearing in mind large lots, so their installation times do not fit in the on-demand production. This will limit the applications of on-demand production freely on book production. With the equipment available in autumn 2001, for example, the on-demand production of hardback books is economically not profitable in print runs of under one hundred copies. However, on-demand production makes it possible to use different printing technologies during the different phases of the product's life span: the first lot can be printed as on-demand and the next as offset or vice versa.

In those cases where, for different reasons, the on-demand production is used to produce smallish series, one can talk about *print-to-need production.* On-demand production also offers a chance to make versions of the products. The starting point for making versions of the whole work is one manuscript, which will be modified. When one talks about very small lots or even single works, the question is about *precise production.* The customer can slice and dice the version he wants from databases, which will be printed to order. Precise book is more individual; it is collected from several sources or compiled in some other way into an individual entity. One can assume that the on-demand production and precise production in particular, will increase in the production of non-fiction and text material.

The content meant for electronic distribution is not planned to be delivered, printed in the printing house or by the sales person, even though that way of delivery is possible. With the help of the information networks, the content meant for distribution directly to the customer can be called a network product to separate it from the electronic recording. For warehousing, one copy is enough, which will be made into completely identical copies for customers.

Most of the present manuscripts are already in electronic form from the work phase. When the book has been recorded and stored in electronic form, any of the players of the value chain of the book trade, who has the necessary technology and the rights for the distribution of the product, can deliver the product to the end customer. Compared to on-demand production, the warehousing and capital tied up in them is even smaller and the availability of the book is at least as good. The electronic recording and distribution form is particularly suitable for products that, in addition to text, contain, for example, sound and moving pictures. However, then the question is not, according to the definition of this research, about a book but a multimedia product. In electronic products, as in on-demand production, the print-to-need and precise printing are technically easy to realise. To up-date the product, an electronic recording on the Net is the most efficient. Different versions can be easily distributed and only the changed parts of the product up-dated.

Also a recording (CD-ROM, DVD or other recording) can be understood to be content meant for distribution in electronic form, even though not electronically. It is much closer to a book in its production and distribution method than a network product - a physical object which is generally produced for warehouses and which is distributed like a book.

Titles, differing from the ones used in traditional book production, are used or can be used of players in the production of electronic recording and network products. The author is called a content producer. When producing large multimedia entities, the roles of the publisher and the editor get closer to the producer, familiar from films or television. It can also include players corresponding to set designer, dramaturgist and director.

Authors

In this research, an author is a person who produces the content of a book, who is not in a permanent work relationship with the publisher or subcon-

tractor of the book in question at any given time. The author produces the content as his creative work on his own initiative or to someone else's order, mostly the publisher.[9]

A writer produces the text of a book by himself or as a member of a work group. The basic task of a writer is to create ideas and write, but he can also take part in the operation of the value chain of the whole book in other ways. Appearing in interviews or otherwise in mass media can help the sale of his books, even though they might not even be mentioned separately in an article or programme. The author can, at the request of the publisher, promote his book in information meetings arranged for the bookshops. He can, at the request of a bookshop, appear in the bookshop and meet the readers and sign his book that customers have bought. He can appear in different public occasions. Author visits to schools and libraries are popular, but then the focus is more on literature in general, not so much about the author or a particular book.

The book and the author face ever more new challengers in competing for people's attention and time. Will the publisher, while evaluating manuscripts, also have to think more and more about how willing the author is to market the book? Will the matter resolve itself so that such persons, who want to take part in marketing more than authors traditionally did, will seek to be writers?

An author or editor? In this research, the distinction is not made according to how the matter is marked in bibliographies. According to our definition, a writer editing an oral story or already existing literary material into a uniform text, the ghostwriter of a biography or a compiler of an anthology is comparable to a writer, if he is not employed by the publisher of the book in question.

The illustrator of the book is a photographer, drawer, painter or graphic designer who creates the illustrations for a certain book and does not permanently work for the publisher of the book. A person compiling a significant illustration, from the perspective of the content of the work, from existing material is here comparable to an illustrator, if independent of the publisher. On the other hand, the creators of the pictures or illustrations he is using are not illustrators of the book. Usually, the publisher orders the illustration, but, especially in children's books, the author and the illustrator can form a team who together offer the manuscript to the publisher.

Most often the illustration or graphic presentation supports the text. In photography works or in a coffee table book, the illustration makes the

frame that the text supports. A drawer and writer are needed to make a comic, and a lettering artist can also participate, who can be compared to some extent to an illustrator.

In the production of digital content, the illustrator can be defined the same way as with the printed book, unless it makes more sense to define him by some other title. When one is making, in particularly, moving or animated pictures for multimedia one is getting closer to the job titles and work methods of television or films.

Figure 1 presents the production process using those titles that are used in traditional production. According to our definition, a translator is one of the makers of the book if he is not employed by the publisher while translating the book in question, but the translation happens within the framework of a contract for a specific work. A good translation is not just a technical performance whether it is an adult or children's book, non-fiction or fiction. In fiction, in particular, the purpose is not a word-for-word translation, but the ability to also transfer the style and spirit of the text to the translation. In many respects, translating comes close to the work of an author.

Figure 1. Makers of a book.
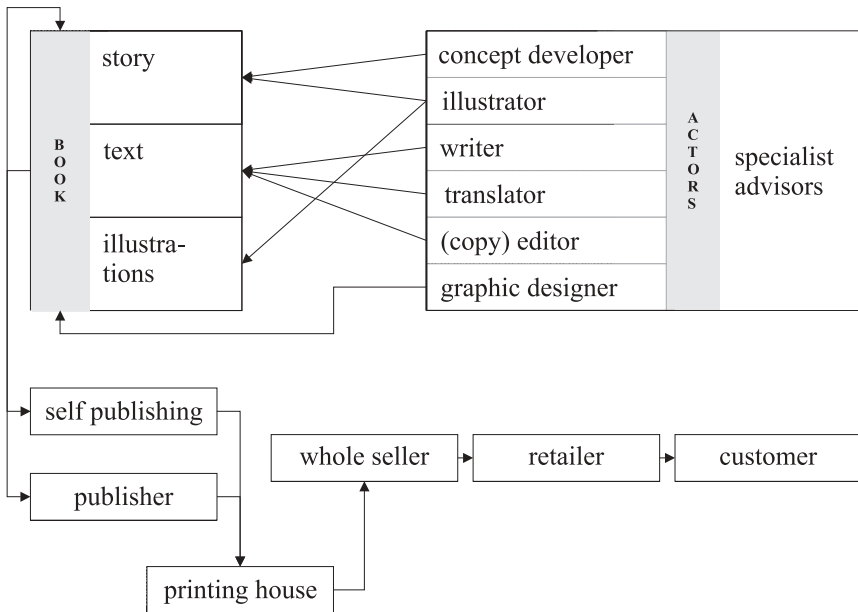
Digitalisation may bring devices of use to a translator. In 2001, there are already programs which one can use to produce understandable translations from simple texts, even though not in very good language. There will be learning translation programs. In future it is possible, even though not desirable that the translator will have to defend the importance of his work against those who, for example, because of pressure are ready to accept understandable but imperfect translations. The translation programs as devices may be of most importance for the new generation of translators who from the beginning are getting used to them.

A fiction work is a story produced by the imagination of the author or by combining real events and fiction and which the author wants to tell to others. Fiction in practice comes about at the initiative of the author and is almost without exception the product of one author. Will the division stay or shall we also see fiction to order – makers of the light fiction mega-hits?

In Finland most of the books for children and young people are published at the initiative of the author, with an estimated 20 percent of the titles the result of the publisher's ideas. In the production of non-fiction books for children and young people, especially, the share of commissioned books may increase.

The non-fiction book, unlike fiction, is more often commissioned by the publisher and there is often more than one writer. Typical books initiated by the publisher are the multi-part works and encyclopaedias. The general non-fiction book is most often at the initiative of the author, but the situation varies according to the discipline. Histories are often the result of someone, not necessarily a publisher, wanting to finance a work that he considers necessary, for example, parish, societal and company histories. In some cases, a non-fiction book published at the initiative of the author creates a need or at least prerequisites for a new work, which is then published following a joint decision by the author and publisher.

The publisher initiates about 80 per cent of the textbooks of Finnish comprehensive schools, upper secondary schools or vocational institutes and most often there is more than one writer. The course books of universities are non-fiction books of the field studied that have often been created directly from the collected material or accumulated in the research.

In a way, books published as a result of a writing competition are also commissioned works, but the author has no guarantee when handing in the manuscript that the book will be published.

The motives of an author offering his first manuscript to the publisher are many. Someone wants to tell a story that he thinks is a good one; another is knowledgeable and wants to share it with others. A researcher is looking for merit, as publication is still an important measure of a scientist's achievements. A person might write because he has not found a book on some topic, or at least not one good enough.

If a would-be author just wants to see his manuscript printed, he may self-publish. Someone offering a publisher his manuscript is hoping people will read it. Among those offering their manuscript for the first time may also be people looking for fame and fortune. The topic and style are chosen according to what books he knows sell well. Even a person planning his first book might have in mind a certain target group.

The motive of an author, searching for his place in the literary world, as well as the topic selected, surely depend, to some extent, on how well his debut book (or several earlier published books) has been selling. If sales were weak, but he hopes to publish another book, the budding writer can look for a new audience by choosing a new topic or altering his style. If sales were good, he writes with the goal of reaching the same readers again and getting some new ones, too.

An established author writes first and foremost for his earlier readers. Even if the topics change, the style is the same. This can be considered, at least loosely, customer related. The customers have, through their purchases, told the author that I like your style or at least your books make good enough presents for nieces or godfathers. The author can consider he or she is on the top when customers demand a new work, annoyed that their favourite author has not written one this year.

Getting the book or the digital content ready requires many decisions, processes, instruments, as well as the work input of many people. However, everything begins with the author's manuscript. With commissioned works, the decision to publish, however, comes before the manuscript, but without a good manuscript this decision may not be implemented.

Digital technology is already a natural part of the production processes. Most of the manuscripts coming to the publisher, at least those that finally cross the publishing threshold, are already in electronic form, mostly made using a text processing program. A paper copy is usually required when someone offers his first manuscript. The typewriter has changed into text processing programs since the 1980s. Translators have been the forerunners in using the electronic text processing programs and are still

on average clearly more skilful users of text processing programs than authors. The digitalness has brought the means to create pictures and graphics and especially edit.

Digital printing has essentially lowered the costs for an author who wants to, or has to, self-publish. If he is skilful enough to produce the content directly in a form suitable for a digital printing machine, his costs will be even lower. Digitalness does not solve the practical obstacle of getting rich through the self-publication, the problem of marketing. The latest technical alternative is writing the content directly on the Net, but from the perspective of marketing it is the most uncertain. It contains the opportunity of a lifetime, but it is more likely that one will get hardly any readers.

Publishing

A publisher is a person or an organisation, who chooses which of the offered manuscripts will be published or will find authors for a publication which he has decided to publish.

Self-publishing traditionally means that the writer of the book publishes and gets his manuscript printed himself. Most often it is not economically viable or very lucrative. However, because the author of the book wants readers for his work, one cannot really consider self-publishing non-profitable. The digitalisation of the production chain of the book has already lowered the threshold of publication and will lower it more in the future. For example, the philosophy of many on-demand services is to offer tools to ease the small-scale and self-publishing. These are, for example, a service to make book-covers and ready-made layouts for writing the book itself (page models, styles, etc.). The on-demand service can also include a self-publishing bibliography service, which includes, for instance, the ISBN number and EAN code. The services also include the format versions from the printing original into electronic publishing format or vice versa.

Small-scale publishing cannot be exactly defined on the basis of turnover or number of titles to be published. In this research, one means a regular but small-scale operation. The publisher publishes a few books per year other than those he has written. Small-scale publishing is perhaps the best operational mode for the experiments connected to both technical and business models.

The on-demand production, as well as the digitalisation of other operations, has lowered the costs of publishing a title. The reduction in costs has made it possible for the small publisher to publish more and more titles.

Scientific publication means publishing carried out by universities and colleges. Other publishers also publish scientific books as opposed to non-fiction books meant for the general public.

Scientific publication was the first to go from printed to electronic publishing. In 2001, the most important scientific journals are available as electronic publications, and in many disciplines more often only on the Internet. In some science libraries, the acquisition of the paper versions has been already abandoned even though they are still available. Books will follow this development, first in those disciplines developing the fastest and little by little in all disciplines. The books will be published on the Internet, but they will also be available printed on-demand.

Educational material publishing means publishing books and other material meant for education and study. The production, publishing and use of the educational material interests both publishers, and, for example, the teleoperators and equipment manufacturers. There have been some experiments in Finland where students have been given a laptop to use. In the summer of 2001, an experiment was conducted in France, where a special version of the computer was developed for students, a kind of combination laptop and backpack, which will withstand heavy wear and tear. Vocational institutes have been the quickest to adopt the e-learning material where they have already long produced educational material for their own servers (Juhola 1998a).

Many publishers distribute nowadays many supplementary products and attachments with the educational material with the help of the Internet, often even inside a small-scale Net-based study environment. The publishers strive to exploit their content reserves and develop interactive solutions or at least educational material.

In producing educational material, the so-called joint-publishing principle is used, in other words, teachers and students produce the material together. Students can produce material as a result of an assignment and other similar work. If it is of a sufficiently high quality, it can also be used elsewhere in the future as educational material. The publishers have to offer their material so that it fits in with, for example, the supplementary material produced at schools and educational institutes. The position of copyrights in this case will become even more important. Material produc-

tion and its use can be effectively advanced or prevented through legislation and how it is interpreted.

At the time of writing, the educational material offered on the Internet, as well as the mutual relationship between the book and Net service, is still taking shape. In 2001, the expectations are that books will remain a central element, but they may become manuals or reference books, supplemented by digital material. Another possibility is that the Net service makes the material, and the parts that are wanted can be printed or made into a book at the printer's.

With the emphasis on educational material becoming a Net service, the distribution chain will be changed. The natural distribution chain for Net material is directly from the publisher to the educational institute or student. It is not self-evident, though, that distribution is handled by the publisher. A new kind of player specialising in the logistics of Net products will replace the traditional wholesaler and bookshop.

General publishing means professional publishing of books, other than textbooks, meant for the general public. The share of the largest publishers especially in the number of books sold in Finland has grown during the end of the 1990s and the beginning of the 2000s; the number of the publishers has not, however, diminished. The share of bestsellers of the sales of the largest publishers is significant, but if it has grown since last year, there is no exact information about it. The dominant share of the bestsellers in both marketing and the bookshop's selection can be also seen as a fault, but without the money they make, many small print books would not be published. And not all bestsellers are 'bad' literature.

The difference between a small publisher and small-scale publishing dealt with earlier is a line drawn in water. A small publisher most often specialises in printing certain types of books either for the general public or for selected target groups. It is difficult for a small publisher to get to publish best sellers. To be able to continue in business, it is important to have books that sell in reasonable numbers preferably for several years. The economic viability of a small publisher is not based on large sales but on costs adjusted to the scope of the publishing operation. Subcontracting is an important part of the business model.

One of the tasks of a publisher is to take care of economic and technical resources needed to edit the manuscript and reproduce it in a form where the end customer and, ultimately, the reader can and wants to use the content either for fun or to benefit from it.

The cost decisions are guided by many factors. Publishing and the book trade carry the weight of a cultural responsibility, but as an enterprise the publisher also has to be economically viable. With the profits from best-sellers, books, sales of which are estimated to be small or are known to be small and the title in itself is even non-profitable, can be published.

The decisions about new editions may often be most profitable. It is especially so when the material need not be renewed. With digitalisation, the production costs have gone down and the size of an economically viable print run has got smaller. Often one does not need to invest nearly as much in the marketing of reprints as of new publications; especially, when there is a ready demand with regard to text books and some non-fiction type books, for example, dictionaries.

When making publishing decisions, the publisher has, or should have, a target group in mind, to which the book is marketed, as well as the market-ing methods and the distribution channel. The publishers take the custom-ers' wishes into consideration in two ways. They try to sense what the current trend is and thus what books to publish. If a suitable one is not found among the manuscripts, an author is sought in one's own stable or else new authors will be actively sought at first from among those who have already been in the public eye regarding the trend in question. On the other hand, book sales are a good indication of what kind of books it pays to publish again and which do not seem to sell.

Book publishing can be a company's main line of business or a second-ary one. Will the future players be those to whom book publishing is a secondary line of business or is the expertise of a full-time publisher still an asset. Currently, companies, other organisations or individuals operate as publishers. Will the publishing business be concentrated in large or small companies? Will self-publishing and the number of titles increase when publishing comes technically and economically within reach of more peo-ple? There are already examples in the information networks.

A large staff and many tools are still used in the business processes. Will the future be dominated by subcontracting? The publisher has been a producer, marketer and distributor. Will the structure stay the same, or will some roles become stronger than others? And how will the role of an individual player in the production chain be changed in the future?

The publisher is one of the central players in the book chain in his role of co-ordinator. It is the most central role in marketing, and he aims at as big sales as possible of his own production or at least covering the targeted

group as well as possible. A single title is more important for the publisher than it is for the wholesaler or retailer. The publishing agreement concluded with the author already contains general commitments about marketing the book.

The publisher's marketing consists of information, sales and advertising. All marketing by publishers consists of the same elements, but the scope and the activity of the operation depend, essentially, on the scope of the production and the economic resources being used on something other than production.

Publicity needs to start as early as possible, so that the wholesaler is able to prepare for his own part in the distribution and the retailer will make his marketing plans according to his own operational rhythm.

Sales begin when the publication programme is ready. According to the present practice, large publishers sell their own titles just to the buyers of largest bookshop chains and central businesses, as well as to the largest individual bookshops.

The advertising for the end customer in the mass media will not begin until the book is available at the retailers. The publisher will also take part, within his distribution channel policies and his economic framework, in the marketing costs of the retailers. The publisher endeavours to get the book presented to, and reviewed in, the mass media either just before the publication date or just after it.

The planning and preparation of direct sales and book club sales run parallel to the retail marketing. From the perspective of general publishing, managing the publicity is an essential competitive factor, so that one will be able to efficiently exploit the most potential part of the ever-shortening life span of a book.

When producing digital material, the tasks of the publisher do not necessarily change. Depending on the quality and scope of the content, to produce it from the manuscript to the form desired by the end customer, can, however, require clearly more production machinery than in the case of a printed book.

Multimedia production (the same material can be used to produce a printed product, digital recording and a Net product to be read using different devices), in particular, is getting closer to the production of a film or TV programme and the corresponding organisation. Multimedia production changes work habits. It requires several different parties – at its largest, every media form needs its own expert. Managing the technical real-

isation is also essential; there is no standard way. Producing is expensive so it should be done efficiently, which often requires a project-like operational model. The share of subcontracting in the production will grow simply for economic reasons. The same model will perhaps also begin to be applied to the book production. Currently, many small publishers follow a very advanced subcontracting model.

The publisher's share in editing the content is concretised in the publishing editor's work. The fiction editor takes care of the grammatical correctness. He also gets rid of bad stylistic errors without losing the author's 'own voice'. The publishing editor takes care of the logic of the work structure and story.

A non-fiction author is not always a good writer. He has information and knows how to express it in a way that another expert understands. The non-fiction book editor must be able to edit the text of a book meant for the general public into such a way that the average reader has a chance to understand the content of the book. In many cases, it is useful to adapt a translated non-fiction book to Finnish conditions. As for translated non-fiction books, especially the scientific ones, it is usually necessary for both the editor and translator to turn to experts of the discipline in question to check the correctness of the translated terms.

The publishing editor does not have to interfere very much with the texts of some authors. There are also manuscripts, which, after the editor has worked on them, differ quite substantially from the original and the author's idea, which was presented in a confusing manner, has crystallised. In the future, if the observations about the increase in neo-illiteracy are correct, the work of the publishing editor can be more challenging, because if the average reader is getting less able, the same may be true of the authors.

The editor is a person of trust for both the author and the publisher, in whose hands the manuscript that entered the house unripe will at its best ripen into an acceptable book and a manuscript that just needed some finishing touch into a masterpiece. In addition to the editor processing the text, a picture editor will take part in the production process of the book when needed.

What will be the role of the present publishing editor in the new environment? In the new operating model, the editor can be an independent entrepreneur and a subcontractor to the author. The publishing editor can

look for new finds for publishing. He can edit the author's work before it is offered to the publisher.

The digital processes require the editor to learn new technical skills, because technology makes it possible to do the work in a different way and all the former operating models may not be possible any more. As to the content produced in digital form, especially, co-operational skills are needed in more directions than before. The editor may be saddled with the role of producer and co-ordinator, where his task is to manage a project made up of many parties. Earlier, co-operation with the author was enough, now the growing production group is placing new demands. It may be, that instead of one editor, two or more are needed.

The publisher co-ordinates and is responsible, at present and in future, for procuring economic, technical and personnel resources for the production. The work itself will be carried out by subcontractors. The layout is designed by graphic designers and cover makers. How far the page making is technically directly the responsibility of the publisher, depends a great deal on the publisher and printing house.

In the future, it will be essential in the production of layout if the product is to be published in several different media. Each media requires its own application, unless one is satisfied with 1:1 way of presentation. In order for such an operation to be efficient, the application should be as automatic as possible.

Currently, the content of books are already recorded in digital form. The material coming from the authors will in future be ready for printing with less processing than before. In the foreseeable future, nearly all material will be recorded in such form that printing it with a printer on paper, recording it on a diskette and transferring it onto the Net will be possible straight from the same file.

Old books will not necessarily be available except as archive copies, so to reproduce them requires digitalisation, that is, scanning the pages into some data system. If the book should be published in a form equivalent to the e-book, the recording form PDF (Portable Document Format) will suffice. If there are several publishing channels, the content must be recorded so that it is possible to modify it automatically into formats used by the distribution channels, thus, one possible solution is XML (Extensible Mark-Up Language).

With the help of XML, the tags used in describing the content and structure can be defined application by application and thus one can mark

the content in the document in a way required by the different uses. Thus, the XML coded content can be edited for different purposes. The final content can be compiled from several parts and for one XML document different layouts, including those that do not show all the parts of the document, can be defined with the help of different style sheets. With the help of the style sheet, one can thus make, for example, one HTML version consisting of the whole content for the Web and a version for the WAP phone consisting of only the title and the ingress. In addition to the text content proper, with the help of XML, other elements like pictures (for example, technical properties, target groups), customers (for example, targets of interest and background information), as well as when or where it is used (among other things, the publishing platform) can be described.

Printing house

The printing house is less of a decision maker than the author and publisher. It can advise when the balance is being searched for between a suitable and sellable layout for the printed product, the paper to be used, as well as reasonable costs. In the final analysis, the decisions are, however, made by the publisher and the printing house carries out its own task accordingly.

The printing house or, in the case of electronic products, a company specialising in producing them, offers the publisher the technical resources needed to make the content a marketable and, from the customer's perspective, a usable form. The page preparation of a printed book can also be separated from the printing house proper especially when using traditional printing methods like offset. Colour separation can be subcontracted from the rest of the page preparation, as can the bookbinding after the printing and, for example, lamination of the covers. There has been a move to transfer the page preparation process to the publishing editor or even to the author, especially in production aimed at digital printing. On the other hand, digital printing has made smaller, economically viable first editions and, especially, second editions, possible even the on-demand printing.

Digitalness makes it possible to produce the basic material for different media, thus, being able to make different products from the same material without the laborious in between stages. Thus, the book can be offered as a traditional book and/or, for example, as an e-book without scanning.

The technical protection of copyrights of the contents must also be taken into account, when planning and realising the recording of the digit-

ally divided book contents. This is especially important when several authors have rights to the same product or its parts. In addition to the contents, the metadata connected to them must also be defined and recorded, in order to be able to collect in real-time the desired compilations and entities for the content.

The production process of a book can be digital from the author's text all the way to a finished book. Currently, material written by the text processing programs must still be changed into forms used by the digital printing presses. The process, however, is getting easier all the time.

Application areas for digital printing are small print runs, on-demand production, decentralised printing and printing changing information. The practical applications of digital printing first started with the printing of small print runs. With the printing presses becoming more common, the use has spread into other application areas.

In digital printing there (see Figure 2) are no significant costs per lot. The printing costs comprise almost solely page-related secondary costs. This makes it possible to make very small print runs cheaply. As a process, digital printing is noticeably shorter than the traditional one. Therefore, one can also clearly reach a shorter turnaround time than traditional printing methods.

Figure 2. The production processes of traditional and digital printing.

Traditional printing

Creation of materials	Proofing	Output on film	Layout	Printing	Post production
	Proof	Films	Printing plates	Last proof	

Digital printing

Creation of materials	Proofing			Printing	Post production
	Proof			Last proof	
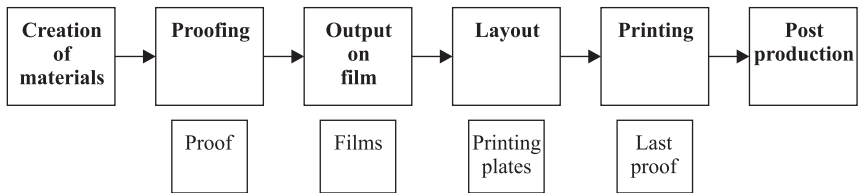
Printing small print runs cheaply makes a mode of operation possible where the content of printed products can be up-dated continuously and only the amount required need be printed. With the on-demand printing, one can decrease capital tied up in warehousing and reduce the loss caused by over-size print runs.

In decentralised printing, the printing is done as close to the end user as possible. Thus, one can reduce the costs caused by the physical delivery of the printed products. The digital material is sent to printing houses through the information network and the printing is carried out in a decentralised fashion so as to avoid hauling material long distances.

Every printed page can be different in digital printing. When printing changing information, one can combine text and pictures from a data system without the production speed slowing down. One can exploit the possibility of changing information in an electronic collation or in creating documents from changing information. In an electronic collation, the pages are printed by a printer in numerical order. The thought behind the generation of changing information is to produce for every end user an individual printed product using databases.

A document containing changing information can consist of a standard base, to which customer information from the database is attached, or to carry this further, a whole document can be compiled on the basis of the database information of elements of interest to the customer. By using changing information, one can add information that is of interest to each customer, thus, because of tailoring, the value of the printed product for each customer will increase.

From the perspective of printing in the production of changing information, the most demanding work phase is creating the printing documents themselves. There are some programs that create components and collect them into completed documents.

The market share of digital printing has risen steadily. At this writing, it is about 10 per cent and its rate of growth is a little bigger than the other printing methods. Small print runs still form the most significant market for digital printing, but the share of the other application areas like on-demand printing and the production of changing information will increase.

Distribution

We have defined the player chain of the distribution as **publisher – wholesaler – retailer** on the grounds that they at some stage temporarily own the book with a view to selling it further. The printing house is not a player, but a subcontractor. For example, a transport business or warehouse hotel is not a player. A company, offering versatile logistics service, however, must be considered a player, even though owning the products at one's own risk would not be included in the services it offers. The author generally does not own the completed product.

The publisher decides where the printing house will send the books, which have not been sold in advance to the wholesaler, bookshop or end customer. The alternatives are the publisher's own storage or a storage service offered as subcontracting by a logistics company. Through its sales commission policy, a publisher can influence if the additional orders of the retailer will be delivered directly to the store or via a wholesaler. The books to be sold directly to the end customer are delivered from the publisher's warehouse or through the services of a logistics company.

The wholesaler or logistics company earn their keep in distribution if they are able to offer something the publisher and /or the retailer considers to be beneficial to them. In addition to storing, transporting and services connected with ordering and billing services, they can offer, for example, an information management service. The centralised information on available Finnish books and offering it, through the bookshop, for the use of all parties, including the end customer, can, for example, be a wholesaler's strong point.

The retailer still forms the most important interface with the consumer. The customer can see the product and get to know it in a concrete way. The customer gets the product right away, and the delivery time is the shortest, even if you count in the travel time from home to the shop and back.

The direct sale is an important distribution alternative for a publisher, especially when the target group of the book is clear and when there are addresses and instruments to reach it. The Internet is a new instrument to

reach both the old and new customers. Even an occasional Net surfer expects that the pages presenting the company and its products will also include the opportunity to order or at least a link to the address from which to order. If a customer wants to order on the Net the most important thing for him is the effortlessness of buying. The publisher chooses if he will take care of the logistics himself or use subcontracting. If direct selling is a totally new concept for the publisher or if ordering on the Net can be expected to increase the direct orders, some questions should be answered. Does one want to increase the sale of individual items directly to the subscribers, in other words, will one offer only the chance of ordering directly or will it be marketed actively? Will the growth in the number of orders, shipments and bills require additional staff or information technology resources? Will the additional resources be acquired by the company or will subcontractors be used? What will be the costs and profits of the possible additional resources? How will the new mode of operation affect the marketing costs and methods?

One of the central functions of the traditional wholesaler has been buying and storing products, which ties up capital, for selling forward later on. The share of this function will, however, get less and be replaced by database, storing, ordering, billing, delivery and reporting services, as well as, to some extent, marketing support services.

The basic model for a retailer may still be, for a long time, a shop, where the customer gets a product straight away, as in a bookshop. The strengths of a shop as a customer interface are habit and the basic operations model that have become established over a long period. Even a bookshop changes with time, but it does not need to start from the beginning.

The online bookshops that only operate on the Net represent the new operations model. Some of the book clubs, whose operation is based on distance sales, also offer in addition to the traditional forms the possibility of ordering on the Net.

The Content Distribution Channels

By content distribution, one means the path from the author to the experience of the reader. A book, recording or a file moving in the information network are just instruments to convey that idea. The printing house and transport company are, in this case, necessary subcontractors, but not players of the chain. The distribution channel is mainly one-way. Feed-

back from the reader is desirable, but scarce and does not always travel all the way. Quality control and as exact information as possible are ways of trying to minimise the 'delivery against the current' of the tangible product, that is, returns for different reasons. Some returns, like those in the sample storage system are known in advance and can be taken into account, for example, when budgeting.

The author and the publisher are separate individuals or organisations, with the exception of self-publishing. The wholesaler means both the wholesale business and the provider of just the logistics. In the following, the alternatives for the distribution channels are examined on the basis of Figure 3.

A consumer buying a book is both a customer and a reader. In all other cases, the customer and reader are separate (a book is bought for a present, a library buys a book to be lent forward, a company or an institution buys a book for its staff to use).

The traditional long distribution channel is most common when a bookshop belonging to the distribution channel is a small unit. The operations models of large units vary, but small additional orders are often acquired through the wholesaler.

The advance orders of new titles, special orders, campaign purchases and other largish one-time orders, for example, are channelled through the traditional short distribution channel. Some bookshops may also use it for other reasons. Because of the sales commission policy, the books of some publishers are cheaper to order directly from the publisher than from a wholesaler.

Agency sales here describe a model where the routines between a shop and customer are taken care of partly or altogether by subcontract-

Figure 3. Different alternatives for distribution channels from an author's idea to the experience of the reader.

Traditional (long)	Traditional (short)	Sale by order	Direct sale (publisher)	Direct sale (author)
Author	**author**	**author**	**author**	**author**
Publisher	**publisher**	**publisher**	**publisher**	
Whole seller		**whole seller**		
Retailer	**retailer**			
Customer	**customer**	**customer**	**customer**	**customer**
Reader	**reader**	**reader**	**reader**	**reader**

ing. At the very least, the service covers the warehousing hotel and shipping of the product, which does not appear in a shop at all. At its widest, the service is so inclusive, especially as to long-term acquisition contracts, that the shop can concentrate on negotiating the order or acquisition contract and maintaining the customer relationship. All the trading routines are taken care of by a wholesaler or logistics company.

The author may sell his self-publications directly to the end customer in addition to trying to also sell them through the wholesaler and bookshop. All the above-mentioned distribution channels are suitable for books, recordings, as well as Net products. In the personal Net service, the question is expressly about the direct contact, made possible by the Net, between the author and the reader. Thus, the product is also solely on the Net (generally the reader can print the file if he wants). The contact can be so interactive that the author and reader edit the content together.

Information Connected to the Distribution

Pure **product information** is mostly one-way. The publisher sends information (including advertising) to all the parties of the distribution channel to the retailer and all the way to some customers (library), as well as to his own data system and to the National Library. The wholesaler conveys product information to the retailer to some extent. The subcontractors included are mainly information conveyors like the post office or companies offering web-page maintenance, as well as information communications operators.

Marketing information is sent and received by all parties, authors included. The sender and receiver are not necessarily one after the other (in the distribution channel). The publisher approaches the customer through advertising telling that the product is for sale in bookshops. The retailer tempts the customer to buy by telling what an excellent shop he has where all books, including this new title or book on offer, can be bought.

The feedback about a technically faulty book is first received by the sales person, to whom the customer returns the book and receives straight away, or within a few days, a perfect copy in its place. The sales person returns the book to where it came from (wholesaler or publisher) and gets a refund. The publisher complains to the printing house after several faulty books have been returned. The customer can provide feedback about the content of the book to the bookshop, publisher or directly to the author. A

popular author can get quite a lot of post from his readers. The publishers try to get feedback and hints from the bookshops, for example, about what books should perhaps be reprinted or what kind of non-fiction books customers have been asking for. The Internet pages of the publishers and the authors are also places where reader feedback is actively sought.

One needs subcontractors such as for making brochures, printing houses, web-page maintenance, advertising agencies, advertising media, premises and catering for press conferences and meetings, etc. all of whom offer their services in the customer channels.

Distribution and Monetary Transactions

There is money moving in all phases of the process. The author receives money from the publisher according to the contract, generally partly as an advance, partly as rendering of accounts according to the sales. The advance remunerations of the author, costs occurring while making the book and most of the marketing costs are paid by the publisher before the book even enters the market. There will be no income before the book is ready. The wholesaler and the retailer aim to sell as many of the books they have bought before they have to pay the publisher or wholesaler. The bookshop also sells on credit, to companies and institutions against an invoice and to the consumer through credit cards. Financing is needed. The main provider of financial service for companies is still the bank. The credit card and other financing companies mainly grant credit to the consumer.

Publishers

In August 2001, the Finnish Book Publishers Association consisted of 88 publishers, whose share of the published titles is about half and about 90 percent of the copy and sales value of Finnish books.

Small-scale publishers belonging to the Finnish Book Publishers Association are mainly specialised. The target groups of some of them are quite clear. Maybe a small-scale publisher should try at first to specialise in some viable business. Most often small-scale publishers operate with fairly low fixed costs and use subcontracting. Digitalness is proportionately bigger chance for a small-scale publisher than for larger ones.

Publishing as a secondary operation is carried out by universities and other educational institutions, consultation and training companies, news-

paper and magazine publishers, units of the state administration, municipal organisations, museums, societies, associations and, of course, private individuals.

Wholesalers and Logistics Companies

The wholesalers and logistics companies market their services, in the first place, to publishers and retailers. They try to show both target groups that using their services is, for the publisher and retailer macro-economically more economical than doing direct mutual business. The most important advantage for the retailer is that all the books are available in the same place, and for the publisher when logistics (orders, physical delivery, billing, returns, refunds) are needed to do business with only one customer. The wholesaler does not directly market products to the consumer. It offers logistics services for retailers (delivery services to companies, institutions and libraries).

Retailing and Customer Service

 In the retail business, books are the main product group in the general bookshops (including the online bookshops), special bookshops and some of the second-hand bookshops. Books are also sold by department stores, markets, supermarkets, kiosks, petrol stations and some other retailers. A book club can also be considered, not a business, but a retail shop when the nature of the business is taken into account.

Retailing Strengths

The position of the retailer in the distribution channel is based on the fact that it has, traditionally, been closer to the consumer, at least as close as one of its important customers, the public library.

In a retail shop there are, depending on the operation and business model, a significant number of book titles for the customer to see and get straight away. In a bookshop proper the consumer can also find information about the Finnish books available, which the shop does not stock at that moment, but which can be delivered in a few days.

The retail business markets itself in two directions. It tries to convince the publisher that it is the most professional and efficient distribution channel for books, with whom it pays the publisher co-operate intensively. In the other direction, the retailer tries to prove to the end customers that it is the best place to buy books. The retailer aims to get the consumer to buy all his books from them and emphasises in their catalogues, the scope of the book selection, in particular, during the biggest seasons, such as Father's Day, Christmas and the discount sales. They claim that individual book titles are examples of those best sellers which are cheap in their shop, and that they also sell those less-publicised books. The arrangement is bipartite in the sense that the publisher both co-operates with the retailer and competes with it through its direct sales.

The Future of Book Retailing

The future for a bookshop is with the customers, but will they be the representatives of just the older groups or also of today's youth? How can one lure young people into a bookshop? Nearly all the products in the product selection of a bookshop can also be bought elsewhere. A young person buying textbooks for the first time can also be offered other products they need. If it is the first time for the young person to visit a bookshop, he may feel the visit is 'compulsory'. Is this then the right time to create a positive image of a bookshop or are we already too late? What would convince a young person to visit the bookshop earlier, more often and voluntarily? In Germany, for example, the Thalia bookshop chain is investing in the appearance and interior design of the shops, in order to be more appealing to young people. There are computers in the bookshop for trying CD-ROMs, as well as for information searches. For example, in game shops one can try games and a group can also play them.

The best book selection in a locality may even be the strongest success factor of the future bookshop, but that alone will not be enough. It should include active marketing telling potential customers about the strengths of the bookshop. A bookshop cannot just stay in the role of a distributor that is being taken care of by its competitors.

A new service form for a bookshop can be providing its customers with books printed on-demand. In fact, it is no different from promising to deliver a book that is not in stock to the customer in a couple of days. As technology develops, digital production lines can enter the market, which

do not need to be used all the time or operated by a professional printer in order to be cost-effective. Possible sites for such production lines could be not just bookshops and libraries, for example, but also other players like cafés.

Is the book retailing the same as a bookstore? Already books are being sold in department stores, markets, kiosks and so on. Books can be bought from different Net shops, book clubs and publishers' direct sales. Will the bookshop as a specialised business have any future at all in the digitalised world?

Even new kinds of service points are possible. The friends of books should not get offended by the comparison, but most keys are made nowadays by express shoe-repair shops, not locksmiths. If in future consumers believe it is easier, more convenient and cheaper to get a book without leaving home or the office, then bookshops in their present form will disappear. Bookshops investing in comfort could be left with a social function, but even this will be threatened where new distribution systems have bypassed the middlemen.

Customer

A customer can be considered part of the distribution chain when he is not the principal reader of a book. The customer differs from the other players in that his main motive is not to sell the book, but to give it as a present or lend it. The customer has very little advance influence on what books are published. His influence mainly stems from the kind of books and authors he has bought before.

The customer chooses where to buy. Earlier buying experiences affect the choice, as does the kind of books either now or in general that he wants to buy. In the long run, the question is will printed books or book-like digital material or neither be bought and read. Will a digital book and a reading device be a sensible gift? Will the printed book become a rare object, an especially valued gift? Will it become so expensive that only a few can buy it to keep, will the person, who is eager to read, have to be satisfied with borrowing it from the library or reading it in a well guarded place?

One will arrive at a situation, with electronic data transference and electronic forms of the book becoming more common, where a book will

not be 'printed' except by the end user at home and collated by some simple binding gadget, thus shortening the distribution chain dramatically. The digitalisation of books may, thus, help lower the total price of the book. This will weaken the profitability of the distribution chain since the price of a book is mainly decided by the content production costs and not the overheads of the distribution chain.

New Players

Besides the distribution chain of the book trade there are several other institutions, which will affect the development of the field. As old players in the delivery field, there are different associations providing support services, as well as publishers and distributors and, especially, libraries. There are also new ones operating from no physical space like Net bookshops and teleoperators for whom content production and its distribution in digital form is an interesting new business area. In other words, among the channel co-ordinators (see Haapanen and Vepsäläinen 1999) are rising competitors, who will challenge parts of the traditional distribution chain in their own business areas.

A typical example of the new players is those online bookshops that, at least at the beginning, had no direct contact with companies that publish or sell books. One example is amazon.com. The Net service of many traditional bookshops is not a new player, but a new operations model of an old player.

Small-scale content producing, publishing and commerce come with the help of information networks within nearly everyone's reach. Extensive and good-quality multimedia production requires a production team like that of a film or television – maybe it will be the audio-visual side of the production where the new players, both the people and organisations, will come from? In the distribution and production of digital products, the equipment manufacturers and companies managing the information communications connections aim, at least, partly at the roles of the publisher and the distributor, as well as that of technical subcontractor.

The operational model of the service portals founded and maintained by teleoperators, TV companies and other parties, is interesting. Are they subcontractors, who offer a platform for service providers or are service providers subcontractors to these portals? Who will, in the final analysis,

be responsible for the technical working of the content offered, for monitoring copyrights and for the legal and ethical content?

Coupling the content services to the operator activities is a way for the teleoperators to increase their business and the market value of the company. The trend is international; for example, the largest portal in the United States of America, AOL, bought the largest media company in the world, Time Warner. A good example of bookshops is the German book wholesaler, Libri, who offers on its book-selling web pages, such things as the content of Spiegel Books.

The manufacturers of terminal devices like mobile phones are also very interested in content production, as the new generations of mobile phones are not needed so much for phone calls as for content distribution. On the other hand, there is relatively little distributable content in Europe so far and increasing it noticeably is a threshold question. The earlier mentioned polarisation of the media field can go on in search for co-operation partners, but this is not necessarily how it needs to be.

It has been predicted that the contents, in other words, the importance of the media will grow rapidly during the next ten years. This is rather logical, because the information communications infrastructure has developed and will develop strongly in the next few years as will the terminal equipment available. It is predicted that those parties who control the whole iMi, in other words, information technology, media and information communications will be in a central position (Kohlenbach 2001). While writing this, one has started to believe in the success of the information communications operators. This has essentially been brought on by the development in Japan, where information communications operator derived concepts (i-mode, J-phone) have been very successful and concepts are beginning to be transferred to such countries as the USA (Antikainen & Bäck 2000).

The situation of European operators, however, looks difficult, at the time of writing, while they are wrestling with economic problems. Suitably tied alliances or networking may, in the final analysis, be the right solution for the implementation of media convergence in practice (Antikainen 2001).

There has also been speculation about new formations where a media group, teleoperator, bank, insurance company and investment company, as well as some large foreign media company, would merge. This would no doubt lead, at least in Finland, to another merger.

An example of the new markets and players that also affects the book trade is the text message. There was at first no demand for it, but the

demand was created through supply. It seems to threaten most the position of the traditional short message, the postcard. The sales and posting of postcards have already started to decline. The telegram has already lost its position.

A product or service responding to a genuine demand already recognised or latent will certainly find its buyer. On the other hand, with regard to a very successful service or product one might philosophically wonder if the product is necessary. Obviously every buying decision serves some need of the buyer. Surely, it is sometimes difficult for a person, even the buyer himself, to understand what need was in question. Digitalisation, no doubt, will affect the opportunities to offer something new, but because of the effect of digitalisation will there be a ready demand, which can be recognised and to which one can answer?

Changes brought on by digitalisation have already occurred and have affected the production, storing, distribution and use of content material. Even though digitalisation is advancing quicker than many earlier technological changes, we do not always even notice it in our environment and in the operating models we now use.

For example, the large structures of book or magazine publishing have not yet significantly changed and most of the old strong players are still strong. The big basic inventions of the digital world have happened in large companies, but many of the product innovations based on these inventions have come small companies or small groups. Products or services with significant commercial value have made small company become big or, as often seems to happen, the products end up as part of some large company. This may be happening in the future.

The largest effects of digitalisation, the ones affecting the consumer, are yet to come. Do they mean the break-through of digital forms of presentation and instruments that we do not know yet? They can increase equality just as well as inequality, we do not know even yet.

The largest effects of digitalisation aimed at companies are also on their way. New players may take over the markets, come beside old ones or the old players may finally hold their own. They can fragment the enterprise world or centralise it even more. The influence of large companies can lessen or grow even more.

If technology is not exploited, one has to accommodate oneself to it through crises. The scenario makers are not short of ingredients.

Products, Processes and Roles will Change

In writing, graphic design and picture processing, as well as in the preliminary preparation of the printed book, one uses tools and programs, which make it possible to edit individual parts, as well as combining them significantly easier than before. Material recorded in digital form, makes it possible, directly or with minor alterations, to present and/or duplicate the material in several forms: on paper, as an electronic recording or on the Internet.

For the consumer, the digitalness brings new services: a new ordering channel as well as a distribution channel and the source of (marketing) information and an opportunity to already affect the content and layout of the product in the production phase. New product forms are being born: electronic recordings and texts, which are read from different reading platforms than earlier.

Editing the material (up-dating) for a new edition is essentially easier and quicker than before. Development of devices and programs has made it possible, for instance, to print directly from a file without films and printing surfaces**.** A better than ever chance to individualise products. For example, it has become possible to number an edition or print the name of each recipient on the book, not to mention the potential tailoring applications of the digital and interactive products. Print-on-demand and electronic recordings give birth to new ways of production and with their help one can make the production and distribution order-oriented rather than warehouse-oriented.

One of the central trademarks of traditional wholesaling, the owning of merchandise, may disappear or at least lessen. In 2010, we will probably not be talking about wholesaling but logistics service.

The trend in the past decades has been the increase in centralisation in several business branches. Technological development may be partly a background factor slowing this development down: adapting new techniques may, for example, increase the number of publishers, as it is cheaper to print smaller print runs than earlier.

The global information network, in principle, includes global markets. 'In principle' because an individual writer will drown in the ocean of infor-

mation without efficient marketing channels. Adapting technology, that makes production and distribution processes more efficient, will create new opportunities for new players, as was stated before. Technological development is not, however, the only force giving birth to changes. Independent of the development of digital products, there may be room between the author and publisher for a new kind of entrepreneur, the packager, who will combine the author, editor working in a new way, the printing and marketing. The packager will not, however, like the traditional publisher, take economic responsibility, but it will be divided between the players. An author, however, aiming at foreign distribution can use an agent, who can be a person working for his local publisher or it can be an entrepreneur familiar with the field and known and trusted by the publishers.

Information technology creates opportunities for collecting more and more detailed customer information. One can even follow the life and ownership of individual books every time it is resold. New operators, holders of databases, are particularly interested in managing this function, as the material increases it creates an increasing need to manage metadata, that is, information about information and, thus, one of the core matters of market information application. Time will tell which services will interest individual parties and who will really produce these services.

The position of libraries may be even more significant than currently in the future information society, in particular, as a distributor of digital products; especially, if standardised products are available on the market. The library resources are insufficient to distribute material in all the different formats and standards.

The publisher will probably increasingly concentrate on organising economic resources and marketing. Using subcontracting will increase in editing the content the author has produced and in technical production. Retailing will get new forms and operating models when people have learnt to use all that Net services have to offer in customer service. The shops will not, however, disappear.

Development of information technology will affect the production, form of existence, distribution and use of the book more than in many other products. This will create new opportunities for new players. Their operating models may differ considerably from the familiar ones, but they can still be called authors, publishers or shopkeepers. However, those players who fit in somewhere in between also will have an opportunity and who for the sake of clarity use new titles. When we get new players in

Finland will they try to adapt themselves to the system or do things differently? Will the new players be those who are already connected to the line of business or will they be totally new?

The basic structure of the book chain – author – publisher – wholesaler – retailer – customer – does not seem to be immediately threatened. In particular, the positions of the author and customer are that strong that without them there is no chain.

COPYRIGHT
IN THE INFORMATION SOCIETY

In this chapter we will be dealing with the challenges of digitalisation and distribution on the Internet, as well as the effects they will have on copyright.

The cornerstones of the exclusive rights of the copyright holder are the right to decide about making a copy, in other words, copying, either altered by any technology or unaltered, as well as the right to make the work available to the public by distributing copies among the public or displaying it publicly.

When it was a question of the traditional technology, managing the rights was taken care of reasonably well. However, the Internet has not been easy for copyright owners to cope with. Copying material on the Internet is easy and almost free of charge. Therefore, the Internet has sometimes been described as a worldwide copier with no limits to or control on copying.

However, this view does not give the correct picture of the whole situation. The information networks environment gives the copyright holders an opportunity to exploit the work, that was earlier "sold" as a whole, in small slices and efficiently control their use. One can go so far as to claim that the information networks environment has an opportunity to strengthen the position of the copyright owners, in a way previously unheard of, at the expense of the other interest groups like users and society.

 One can best illustrate the change from the analogue environment to a digital one with an example connected with books. The buyer of a tangible book can do many things with his book. He can read it once or ten times. He can sell the book or lend it to his friend. He can make markings on the book, photocopy or scan the whole book or parts of it on his computer hard-drive for his private use. He can keep the book in a bookcase as a decoration, use it as a paperweight or even burn it. All this is possible because the copyright to the tangible copy of the book is exhausted, when it is legally sold or otherwise released to the public. The power of decision over the book copy has been transferred to the owner of the book. In all other respects, the copyright, however, stays with the author.

The copyright owner might be willing to sell the book for one price, if the buyer promised to read the book only once, and for another price, if the buyer had the right to read the book as many times as he wants. Such pricing is not possible in practice, because the copyright owner has no real chance of controlling the reading behaviour of the buyer.

What if the copyright owner could completely control which parts of the book are read, whether it can be read once or ten times, how long it will stay readable, if one can take copies of it, if the text can be processed or if the book can be sent to a friend as an e-mail attachment?

The above is not a utopian idea, since even the present architecture of the Internet makes it possible to slice the objects of the copyright commercially and control the use efficiently. The theme for this chapter – copyright in the information society of the future – is, in our opinion, centrally connected to the technological- commercial change described above. How will the change affect the balance between the copyright owners, consumers and the interests of society?

The outline of the presentation is as follows: first (Copyright in a Nutshell) the development, contents and those changes in current copyright legislation, which have been made or are being made in the name of the development of the information society, will be examined. Next to be examined is copyright from the economic point of view, followed by the management of copyrights in the Internet environment. It is important in the discussion to describe the main characteristics of the copyright management systems (CMS), because copyright in the Internet environment is managed both technically and in contractual law with the help of the DRM/CMS systems. In the chapter "Copyright Challenges in the Internet Environment", legal questions connected to copyright are raised, which are some of the most important ones from the point of view of the development of the information society. On the top of the list are such things as the position of the copyright statutory restrictions in the Internet environment, the basic rights of the users, like protection of privacy and access to information, as well as the limits of the "contractual freedom" to make an agreement like those made with the consumers.

Copyright in a Nutshell

What to Protect?

Copyright protection is granted to everything that is a result of independent and original creative work (copyright law 1 §: "he/she who has created a work, has the copyright to the work"). The object of protection has to exceed the so-called work threshold. The object of protection of copyright is not defined more precisely either in Finnish legislation or international agreements. Copyright does not protect an idea, but only the form in which the idea has been manifested. Copyright does not protect information, either. A work is an abstract that can appear in any form. The work piece is the tangible piece of the work. The concepts "work" and "work piece" are to be kept separate, because, for example, the copyright limitations are most often aimed at the work piece and not at the work itself. The author's exclusive right to decide about the work means the work in all its forms. Without the author's consent, the work cannot be changed, copied and distributed or presented in public. The copyright restrictions make it possible to have a certain right to use works and work pieces without the specific consent of the author. Restrictions are dealt with later on in this section.

A work protected by copyright can have one or more authors. The work can be a compilation where the input of the authors is clearly visible or a joint work where the input of the different authors cannot be distinguished. The work in hand is an excellent example of a joint work.

International Development of Copyright

The history of copyright is basically the history of technology. The need to protect the results of human intellectual creative work came about at the same time as it became possible to industrially produce copies of the works. Technological development has increasingly emphasised opposing interests, in other words, demands for free information and protecting material and the moral benefits of the authors.

Intellectual capital has always moved easily from one country to another. Ease of mobility and common protection internationally led at an early stage to an international agreement on copyright protection, in other words, the Berne Convention in 1886 to protect literary and artistic works. The Convention has been amended to meet the demands of technological development. The Convention has been ratified by about 150 states.

The Berne Convention is based on two main principles, those of minimum protection and national treatment. The agreement defines the minimum level of protection that the member states must give the citizens of the other member states. According to the principle of national treatment, a member state must give the citizens of other member states the same protection as the citizens of their own state. The national protection is, however, always based on national legislation.

The World Intellectual Property Organisation, WIPO, manages all the international intellectual property agreements including the Berne Convention.

Fitting the demands brought on by digital technology and the Net world into the framework of the old agreement proved to be an overwhelming task. Therefore, two new international agreements on copyright were made in 1996, in which the new demands brought on by technological changes, were taken into account (WCT=WIPO Copyright Treaty and WPPT=WIPO Performances and Phonograms Treaty).

The European Parliament accepted the Directive of the Parliament and of the Council on harmonising certain characters of copyright and related rights in the information society in April 2001 (2001/29/EC or Copyright Directive). The Directive was published 22 May 2001. The purpose of the Directive is to harmonise the copyright legislations of the EU member states to correspond to the demands of the information society.

The Directive has been characterised as a compromising attempt at harmonisation. The aim is to obtain a wider level of harmonisation than the new WIPO agreements, for example, as far as the copy-making right, distribution right, restrictions and technical protection means are concerned. Should the Directive be ratified Finland will have to go through the Copyright Act thoroughly and it will cause changes in the current Act.

The Directive clarifies the author's right to communicate with the public. In addition, such a temporary copy of a protected work, which is temporary or occasional, as well as an inseparable and necessary part of the technical process, by which the work is made publicly available, can be

made without the consent of the copyright holder. One of the most important changes caused by the Directive concerns the protection of managing information of the technical measures and rights. According to the Directive, the member states have to regulate sufficient legal protection against the circumvention of the efficient technical measures.

The harmonisation between the EU member states sought by the Directive, will be, in practice, probably just remain a goal, because using the exceptions and limitations of the copyright in national legislation is left to the member states. The Directive only defines the boundaries of the national legislation.

This might mean that many facts important from the users' point of view, like copying for private use, using the quotation right, and use for teaching will be left outside the actual harmonisation. Even after the implementation of the Directive, copyright will be regulated by the national legislation of each member state, and some of the present problems, such as problems of interpretation, will still exist.

The Digital Millennium Copyright Act was passed in the United States of America on 8 October 1998. The requirements of the new international copyright agreements were taken into account and one reason for passing the Act has been to ensure that the United States can ratify the new WIPO copyright agreements. The proposed EU Directive and the Digital Millennium Copyright Act differ, however, from each other, because the copyright culture is different. It is not possible to deal with the United States legislation in detail here.

Author's Rights

The author has the exclusive right to his work. If the author does not display his work himself in public or get it published, nobody else has the right to do it, and the economic exploitation of the work is not possible. The work is made public when permission is given to make it available to the public. The work is published when copies of it have been delivered to a shop or otherwise distributed to the public. The network environment can be an instrument to display the work in public or publish it. The Copyright Act regulates the rights belonging to the author, as well as the limitations of the rights from the author's point of view. The limitations always concern either the work displayed in public or the published work.

The copyright is divided into economic and moral rights. The economic rights of the author include the right to reproduce the work and make it

available to the public. The right includes the work in all its manifest forms and also when transferred from one type of work to another. In accordance with the Copyright Act, it is also considered making a copy when the work is transferred to a device by which it can be reproduced.

The copyright aims at being neutral in relation to technology. The expressions used in the Copyright Act currently sound a little old-fashioned. However, the purpose was to use forms of expression as neutral as possible to take into account technological development without the need to amend the Act.

The paternity right and the honour and reputation right are moral rights. The paternity right means that the name of the author always has to be acknowledged when the work is used in one way or another. The honour and reputation right provides that the work may not be presented in a context that will offend the author and nor can it be altered in any way that offends the author. Infringement of the honour and reputation right will be appraised on objective grounds.

Duration of Copyright Protection

The duration of the copyright protection has been harmonised in the EU. Accordingly, the period of copyright protection is 70 years from the beginning of the year following the year the author died. In the case of a performing artist, recording artist and film producer and also the owners of other neighbouring rights, the length of copyright protection is 50 years either from the publication or recording. The period for catalogue and database protection is 15 years from when the work was done or made available to the public.

Increasingly, works are joint efforts. A computer program may have several authors. Audiovisual works are often the result of the co-operation of several authors. Each author basically has an independent right to control the use of the joint work. The length of the copyright protection starts from the year the last author died.

Copyright Transfer

Copyright always belongs to a physical person. Thus businesses, including publishers operate on the basis of the rights transferred to them. Copyright can be freely transferred without formal requirements. Only the transfer

of the moral rights is limited. If the copyright is to be transferred or the work altered, it must be agreed upon separately.

Transfer of a copy of a work does not include handing over the copyright. A copy made legally available, may be redistributed again. Transfer of a copy of a work does not mean it can be lent, rented or displayed in public.

The copyright is transferred "piecemeal", in other words, as rights to use it, licences for a certain purpose defined in the contract. The Copyright Act is interpreted narrowly from the perspective of the right's user. This also holds true when interpreting the transfer of the copyright. In the transfer agreement of the copyright one has to itemise as accurately as possible the use or uses of the work are being transferred.

The Copyright Act has also been interpreted so that the new ways of usage, relevant to the copyright, in other words, the new ways of economically exploiting the copyright, belong to the original author himself. In accordance with this, changing pre-existing material into digital form requires the consent of the rightholders, unless the technological development has been taken into account accurately enough in the agreement.

The Copyright Act does not contain a general regulation about the transfer of the rights of works created whilst employed by someone.

In accordance with § 40b of the Act the right to a computer program created at the workplace and the rights of a work directly connected to it are transferred to the employer. If a database has been created under similar conditions, the copyright connected to it will also be transferred to the employer in accordance with the law.

A contract has an important meaning in the exploitation of the copyright. To put it bluntly, one can say that the exploitation is almost always based on an agreement. As an agreement does not need to have formal requirements, it can be oral or even concludent.

Copyright in the Net World

Copyright is independent of technology. Use of the material protected by copyright in the Net world requires authorisation from the copyright owner with the same principles as it also does in the other media. The copyright holder also has the same rights in the electronic environment to decide on making copies of his work and publishing them. On the other hand, the limitations of the copyright are also valid in the Net world.

Copyright problems are currently mostly connected to the digital technology, the internationality of the net environment and the difficulty monitoring the rights.

The copyright operates with the concepts "making a copy" and "making it available to the public". Both concepts get a new dimension in the Net world. The starting point for making a copy could be regarded conceptually as the fact that there is an original piece, from which the other copies are made. The digital technique has changed this assumption. One cannot make a distinction between the original and the copies and in a traditional sense there is not always even an original piece.

Despite its international character, copyright has also traditionally worked regionally. In the analogue world, it has been possible to determine by reasonable measures, which country's law is being applied each time. The character of the Net world contains mobility, heedless of the boundaries of a country. This means that a work is globally available. Problems arise when one thinks about, for example, which country's law is being applied to infringements. The situation in the country from which it is sent may be legal as far as the material on the Net is concerned, but because there are numerous countries receiving the material, the interpretation in some of them may cause the material to infringe copyright. In addition, an interpretation of which country is sending the material is not without its problems.

Copying for Private Use

Perhaps the most important of the limitation regulations, from the practical point of view, is the right to make copies for private use and the quotation right. Making a few copies for private use has remained outside the exclusive right of the copyright holder for mainly practical reasons, one of the most important being the difficulty of monitoring. In other words, a person has the right to make a few copies of the work for his own private use. The copyright holder cannot forbid the making of a copy and one does not need to pay compensation (free exploitation right). A copy made for private use may not be used for other purposes. The above-mentioned principle is not completely without exceptions. For instance, copying a computer program for private use is not allowed.

It is very easy in the Net world to copy everything on the Internet onto your own computer. Basically, as stated before, this is allowed. Copying for private use, however, does not mean the work can be altered or otherwise manipulated. Nor does the regulation make it legal, under any cir-

cumstances, to copy material onto a company's intranet, no matter how small the company.

Quotation

It is permissible to quote a published work in accordance with good manners to the extent it is necessary for the purpose (free exploitation right). One can basically quote any kind of work. The quotation must have a relevant connection to the work of the person doing the quoting. The exception provision does not allow a work to be merely a compilation of quotations, but one must get permission from every author that will be quoted. Thus, a database cannot be legally made on the basis of the quotation right. Using quotations in advertisements has not been generally considered acceptable. When using quotations the source (author and work) has to be mentioned in accordance with good manners.

Using the quotation right is also allowed in the Net environment as long as the rules of quoting are followed, which also means mentioning the author and the source. On the other hand, web pages made public may also be legally quoted.

Links

Links are essential for the Internet to function. The permissibility of the links must be evaluated according to the type of link. The usual connection by clicking on to somebody else's web pages has mostly been seen as permissible from the copyright perspective. The situation gets more complicated regarding copyright when the question is about deep linking. However, it is not, unfortunately, possible to deal here with copyright problems connected to linking. From the perspective of making a digital book, the copyright character of linking is, however, one of the problems that need to be solved.

Monitoring Copyright

Basically copyright is an individual right and, therefore, copyright monitoring is in principle the author's responsibility. The mass use of works has also brought with it mass monitoring, which is carried out by the copyright organisations mentioned earlier. Because copyright protection and its use

are international, so too is the monitoring. In practice, the copyright organisations authorise their affiliated organisations in different countries to do the monitoring for them. The organisations render an account to each affiliated organisation for the amount owed it. All the important states from the point of view of monitoring have ratified the Berne Convention, so that monitoring is comprehensive.

Economic Perspectives on Copyright

If one production method becomes more efficient than another, the incentive to switch over grows, providing, however, that there is a market for the production and that investments can be protected against competition. What will happen, with digital convergence, to the production costs, differentiation and digital protection of works from the perspective of the different interest groups will be discussed in the following section. It should also be noted in this connection that the genres of literature are in a different position – the motive for writing or reading fiction or non-fiction is different.

Digital Convergence: What Happens to Costs?

With digital convergence, there will be opportunities to **modify** the work **cheaply.** One can make different versions of the same work, either by modifying the content or by bundling works together. Embedding the work into part of the product or service will also be possible at less cost than ever before (see, for example, Laine 2001), providing that the publisher/packager has the right to modify the works.

In that case, if the publisher knows or is able to guess the needs of the reader, he will be able to supply better than ever entities "tailored" to those "needs". Moreover, the selection will be larger, and then the delivery and storage of the tangible books will mean more work – online bookshops have, in addition to hard- and paperbacks, also a couple of e-book versions of several works. In addition, in a few years' time there are expected to be digital versions of works, which the user can modify, print, copy, redistribute and so on.

Costs of copy printing and delivery will go down with digitalisation. Digital convergence is just one phase in the improvement of the centuries-old production efficiency: one moved from hand-printed books

to printed, stitched ones, and from these to bound books and glued covers. When copiers became more common, "individual" pieces were made of books, because the production costs went down enough and the work pieces were more readily available. In future, the digital book increase cost efficiency with the help of a general file-form (for example, PDF format) and the book as a database, where the work's elements (components of multimedia) can be controlled one by one. In pre-digital days, cheaper copies generally meant lower quality, but with digital material one can make copies equal to the original.

Hand-made books were not transported, but people specially went to read (or listen to) them. It was not until later that bookshops and libraries (fee or no-fee) for printed books were established. Online bookshops like Amazon have revolutionised the field by uniting a gigantic selection with door-to-door delivery by couriers and the postal services. When the book is in electronic form, it is transported nearly anywhere by the information networks for under one cent.

Similarly also **the costs of stocking and out-of-stock are getting smaller.** In Finland, the so-called sample stock has been used to control the costs of stocking and out-of-stock Finnish literature, and linking it to the ordering, stocking and print-to-need systems of the works stored in digital form will further reduce both costs.

The increasingly important cost item will be the production, editing, copyright management of the book itself and acting as the author's representative. This increases the need to hire more personnel that have enough economic, technical and juridical skills from the competitive labour markets. Even though the importance of the costs of producing and delivering the tangible book has been declining, **it is difficult to reduce the cost of editing while the size of the print runs is going down –** cost efficiency has been sought by mechanisation, automation or outsourcing printing, as well as by centralising storing and deliveries or by reducing overheads (for example, "life-style publishing", see Halttunen 1995).

Impact of Digitalisation
on the Market Structure and Competition Methods

A work is a unique intellectual product that can be copied by industrial methods. The publisher may have an exclusive right to the work on the book markets, but not until recently, have exclusive rights been required in

author-publisher contracts. In practice the "strength" of the exclusive right depends, in the first place, on the speciality of the work (whether there are substitutes or not). General publishers in fiction often concentrate on making authors into brands, small-scale publishers on specialising in a genre of literature (for example, Halttunen 1995; Brunila & Uusitalo 1989).

Bookshops in Finland have often formed a natural regional monopoly (one region does not support two bookshops). Even though the number of publishers has grown in recent years, the number of important publishers has remained low and one can consider the market oligopolistic, in which certain genres of literature have a monopoly because of the special nature of the product. According to the standard economy theory, exclusive right encourages monopoly pricing, resulting in an inefficient book market (in other words, whoever prices the books can collect oversize profits because of the monopoly position by over-pricing the books). Monopoly pricing also encourages price discrimination, in which different customer groups pay a different price for the same product. In addition, with the help of the monopoly profits, one can slow down replacement products or competitors entering the market by the marginal pricing, in other words, by lowering the price temporarily. The competition has to either undercut the present players (with replacement products) or specialise (create unique products or services).

The situation will, however, change if we take into account the cost reduction caused by digitalisation and the effects on the pricing mechanisms. First of all, it is more difficult to apply marginal pricing that would prevent competitors entering the market, when technology is changing than in a stabilised field of operation, because price-fixing is difficult in a situation, where the long-term medium costs of the company entering the market are not known. Moreover, price discrimination by customer groups will become more difficult, because customers have access to very many bookshops and publishers through the Internet, who might have an identical or substitute work for sale. This will increase the competition threat, which will in the situation of falling costs drive prices down as costs also fall. That is why one can predict that differentiation, in its various forms, will even become the most significant competition method in the future– for example, the concepts of the effects of digitalisation by Shapiro & Varian (1999). The prerequisite for differentiation is, however, modification and combining allowed by the author, so the importance of the copyright will be emphasised even more in future.

In a production factors market the publisher does not have a monopoly position. The publishers' most important resource is the authors, who have stayed reasonably loyal to the publishers compared, for example, to the Swedish-speaking authors. The share of the so-called "free texts" to be published is based on either the publishers' networks and/or planned publishing policy (Halttunen 1995). The ratio of "good" publishable manuscripts produced by authors, to the number of manuscripts submitted for evaluation has stayed reasonable steady (5-10%) over the years (Rasilainen 1989; Kirja-Suomi – scenarios in this report). Therefore, the number of ordered works (when the editor together with the authors make a compilation work) has been growing.

The publisher is able, with digitalisation, to package and to modify works at a reasonable cost and follow this to widen his selection cheaply. Also the authors are benefiting from the differentiation, because more customers will probably find a suitable book. The differentiation thus benefits both author and publisher providing that the publisher gets the rights that allow modifying and format changing. On the other hand, for a general bookshop, the differentiated products mainly mean extra work, as the versions have to be displayed and sold to customers in the shop. That is why it is probable that the differentiated versions are sold through different channels, for example, through specialised shops that have entered the field. In e-commerce it is easy for the customer to choose, for example, by pricing the products by the formats.

In marketing tangible books, timing has become an increasingly important means of competition: the book has to be launched on time, reprints produced without delay and the stock cleared immediately sales start to fall. The digital convergence affects this in two ways: on the one hand, the work can be produced for sale very quickly after it is ready (digital delivery or print-to-need and also can be cleared immediately (especially e-books). On the other, the cost of stocking e-books is so minimal that there is no reason to reduce the selection, but it can be managed by the book's metadata.

From the perspective of the book's reader, the customer, digitalisation has led to a situation where the availability of all types and languages of literature has improved noticeably, but it is not very reasonably priced, because of the growing share of the handling costs. When ordering from outside the EU, the book trade is restricted by the low tax-free limits, as just a few books with handling costs will go under the Euro amount of tax-

free import limits set by the Customs. The price comparison is, however, easy, and ordering is simple and reliable (for example, according to research by Consumer Research Centre). In the long run, the digital convergence combined with the unlimited copyrights held by the publisher, can also lead to works being made scarce on purpose by pricing or making it difficult to obtain them. This will raise the need to discuss what legal means can be used to safeguard the fundamental rights of the citizens – access to information and what will be, in fact, the role of competition in ensuring the access.[10]

Copyright Management in the Internet Environment

As was mentioned above, copyrights and their management will be an important means of competition between publishers. In addition, changing certain genres into multimedia means monitoring copyrights in greater detail than at present.[11]

It is predicted that the digital material will be the first product group to move into worldwide retail: that is why the operators of the field have a genuine interest in deciding how the digital material will be protected and how it will then be delivered. In practice, this will also involve some accounting: who will be given the rights to use the digital material and for how long and for what compensation. In other words, the question is about packaging, delivery, sales and viewing of the digital material. In reverse, the question is really, how to prevent users from making and distributing copies of the digital material, which are, as we know, easy to make and deliver. The CMS and DRM systems are necessary if copyright protected material – whether books, music or videos – are intended to be distributed in electronic form and, at the same time, take care of the rights of the rightholders of the works. On the other hand, they may hinder the implementation of the statutory limitations of the copyright or so-called "fair use" principle (see later in the section "Challenges of the copyright in the network environment").

Copyright Management Systems – DRM and CMS Concepts

The systems described above are copyright management systems. They are usually called DRM or (E)CMS = (Electronic) Copyright Management Systems. The CMS systems can be defined as systems creating a

technical and organisational infrastructure which guards the copyright of the original author when third persons use the information product in the network environment (Hugenholtz 2000, 60).

The DRM (Digital Rights Management) is a concept wider than the CMS. Lately, it has begun to mean systems that protect other intellectual property rights like patents and trademarks, as well as tangibles, in addition to copyrights. The systems also include, besides the limitations of rights, characteristics for defining the business process (recognition and authorisation of the parties, pricing and paying, combining the material and registration of the components; Iannella 2001). Here we will, primarily, concentrate on systems that conform to the CMS concept, but we will also introduce DRM architectures and system entities that, in practice, are used to implement the CMS.

Often the DRM concept covers "all forms of rights usages" " over both tangible and intangible assets including management of rights holders relationships". Or as Iannella (2001) clarifies it: "Additionally, it is important to note that DRM is the 'digital management of rights' and not the 'management of digital rights'. That is, DRM manages all rights, not only the rights applicable to permission covering digital content". The DMR system should cover all the forms of usage and business practices by digital means regardless of the format.

DRM Architecture

Figure 4 presents the DRM architecture with its main features and it sheds light on the usage also in association with the CMS. The first component entity (=IP Asset Creation Capture, where IP means intellectual property rights) covers the securement of the rights, linking the secured rights to the contents and product, as well as defines the workflow to defining the rights. The second entity of the architecture is the management of intellectual property rights (IP Asset Management), where metadata (information about the work) is created about the works, authors and their representatives and rights and saved with the contents in a database (compare to, for example, DOI later in this chapter). At the same time, the contents is created into versions, "packaging" and a decision is made about licensing, payment systems and distribution channels and formats (for example, book, digital book, book for copying, book for printing). There are tools for monitoring and changing the rights, as well as for following the movements (see Figure 4) and usage of the work.

Figure 4. DRM architecture (Source: Iannella, 2001).
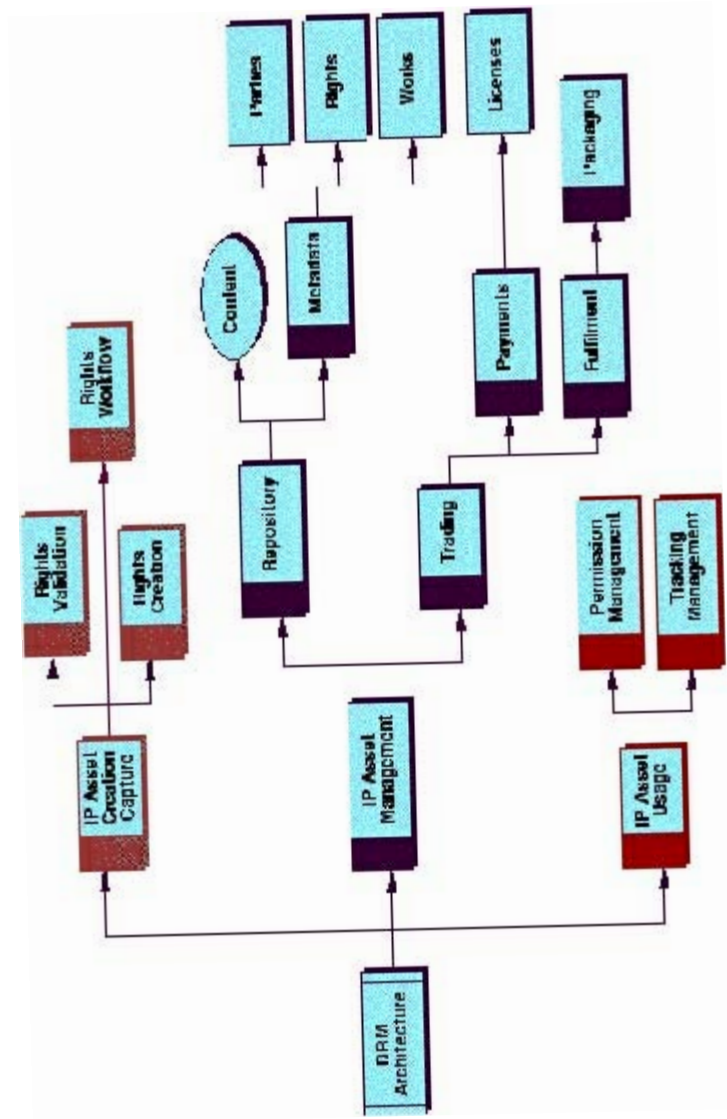
In order for the architecture to operate, it is of primary importance that the works, possibly even the individual pieces of work (manifestations of the work) one has to be able to recognise them individually and unambiguously: this means the work itself, as well as information about rights, permitted usages, rights holders, etc. Currently in Finland, the ISBN numbering of works is used which is not designed to identify and follow up the contents of multimedia products, but to identify the works published by a particular publisher.

During the last few years, several standards and standard proposals have been developed which are suitable for depicting the works.

Digital Object Identifier

DOI (Digital Object Identifier) is of special interest because it offers an infrastructure for business. The original idea of DOI is to "offer long-lasting and reliable identification of digital products with the technology that has been recognised to work – **CNRI access system–** as well as efficient management system which connects customers and publishers, makes e-commerce possible and also allows automated handling of the copyrights".

The CNRI access system in the core of DOI is a decentralised database, where the registered digital material data is saved and from where it can be accessed. The first-place users have been book and newspaper and magazine publishers, who have used DOI for identifying works and rights connected to them, but representatives of rightholders and the contents packagers can also access the database with the help of a DOI number, detailed information of the works, as well as the URN location on the Internet and its URI (Gervais 1999; www.doi.org).

DOI has been criticised, however, because its main purpose is to identify the address of the work and the rightholder and not accurate enough information of its parts.

Besides, in the original business model based on DOI the user pays for down-loading/reading (pay-per-view), so without paying one cannot even access the information (not even browse). To the same extent based on DOI, every publisher/producer can define the way of doing business his own way, thus leaving the user with hardly any uniform business conduct – the uniform business manner is missing (Bide 1998).

Metadata Standards and Standards Proposals

Table 1 contains a compilation of most important standards/standards proposals for metadata of digital products (Gervais 1999). The metadata in the table has two approaches: either to aim at a uniform standard followed by the parties (US MARC, Dublin Core) or at modification systems (INDECS) allowing several standards and guaranteeing compatibility.

The first alternative presents a problem of committing to a certain standard, which does not necessarily take into account the future needs. The latter alternative is complicated and also requires harmonisation to a certain degree.

For example, the classification covering all the material is said to be one of the most central contents of the library professional's network services based on MARC formats and presented by the memorandum of the Finnish library policy work group. The definitions would be made by the National Library and/or the Ministry of Education and the classification proper would be done by the library professionals (Kirjastopoliittinen työryhmä, 2001). Because the task of a library is to offer its services free of charge (according to the law), there is reason to doubt that the MARC definitions presented will support the components' rights management any more than the price and logistics information essential for business, at least not for the next few years – especially when one takes into account the chronic lack of money, the need to renew the infrastructure and the lack of know-how.

Table 1. Metadata standards and standard proposals

US MARC, machine-readable cataloging-records database	A widely used American-Australian public metadata-base with mainly bibliographical information in a standardized machina-language form (Library of Congress, the Canadian National Library, and the American Library association, Australian National Library, Online Computer Library Center, the Music Library Association, and the Special Libraries Association)
The Dublin Core	Defines the metadata structure for the exchange and trade of information resources, in a wide sense of the form (originally on the initiative of researchers, libraries, and the producers of digital materials)
INDECS: Interoperability of Data in E-Commerce Systems	Has the goal of creating operation rules and a minimal vocabulary for the use of identification methods by means of an integral information system (European Commission)

Technical Protection

When a work has been defined, identified and registered, it has to be protected to prevent (or recognise) illegal copying or modification.

The technical methods to limit access to the material are manifold: passwords, (or using similar systems) give the buyer different kinds of rights to access the information (see Figure 5). There are many protection mechanisms and they have been used since computers entered the mass markets. The systems meant to manage the copyrights of digital material of the book types have been available since the beginning of the 1990s. Part of the material, for example, the first chapter, may be unprotected, and then it is used in marketing.

Since the beginning, passwords and codes have been required to access content, such as feeding the serial number of the programs into the installation phase, user codes, electronic keys (for example, "blocks" installed at the portal of the computer/reader device) or using a laser on the original CD–ROM to identify the originality.

Information connected to copyrights can also be attached to materials conveyed digitally so that the user will not see it. Generally such information is attached to pictures, and nowadays also to sound files and video material. One talks about steganography, that is, digital watermarks and fingerprints. In a picture file, the digital watermark is in the picture with

Figure 5. Defining the rights to an electronic document (Adobe Acrobat).

Document Security	
Security Method:	Standard
Open Password:	No
Security Password:	No
Printing:	Allowed
Changing the Document:	Not Allowed
Selecting Text and Graphics:	Allowed
Adding or Changing Annotations and Form Fields:	Allowed

OK

the name of the copyright holder, copyright statement or something similar written once or more times. In practice, it is impossible to remove it (entirely) from the picture and it will reveal if the original picture has been altered (it gets distorted). For example, the ordinary picture processing, and multimedia programs like Adobe Photoshop or Macromedia Flash allow you to attach steganographic information on the picture. In the sound files, the watermark can be respectively hidden in the noise. The digital fingerprint can tell to whom the picture file has been licensed. In both cases, as opposed to the materials protection that uses passwords, the user does not even know that the material is, for example, earmarked just for his use. Thus, the misuse of picture and voice files can be traced.

With the development of electronics and information technology, one strives for ever more accurate protection. For example, the contents saved on the DVD (Digital Versatile Disk) in other words, not just the film – can be specified according to the market areas.

An essential part of protection is the user rights management: the DRM programs define what the user can do to the acquired material, and how long and how many times the defined rights are valid.

Figure 5 presents how the widely used Adobe Acrobat program can restrict the user rights of a document. The characteristics can be used to prevent copying and illegal use as well as to differentiation (for example, by pricing the printable version differently from the read-only version). These characteristics are exploited, for instance, with the e-books readable by Acrobat Reader (PC reader program): basically reading of electronic works is connected to the individual reader programs of a registered user. In addition, the reader programs can be automatically linked to the place of business of works and additional rights.

In the first phase, the DRM systems protected one entire file, but, for example, in the SoftLock system the PDF documents protection can be extended to the page level. Also, for example, in the InterTrust protection system, on one hand, one content entity can include several objects, in other words, several files can be placed in one frame. Along with this, the recent development work has been concentrated on coupling the management of the user rights with, for instance, the systems of rightholders, as well as with payment and monitoring mechanisms between works (see Figure 6.).

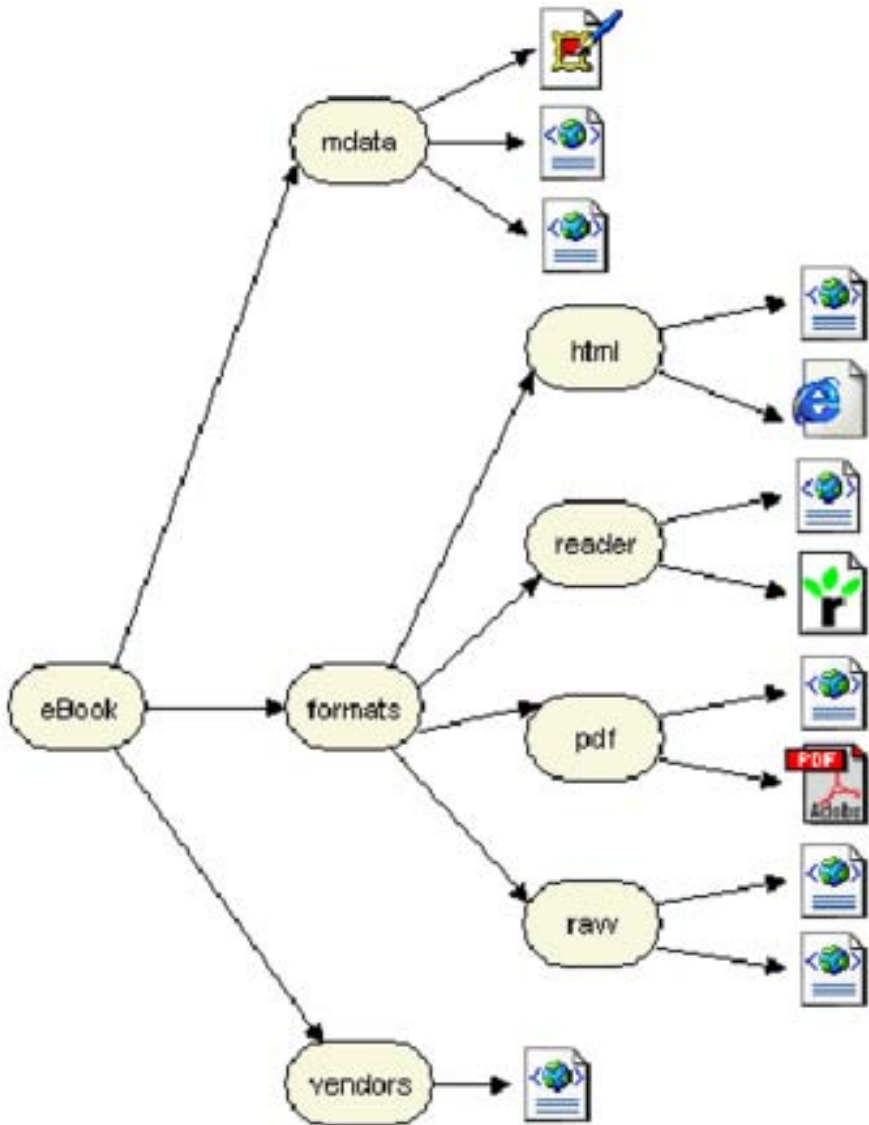*Figure 6. A digital product is composed of several components (Source: Erickson, 2001).*

Figure 7. *Functions belonging to the management of the user rights (Source: Iannella, 2001).*
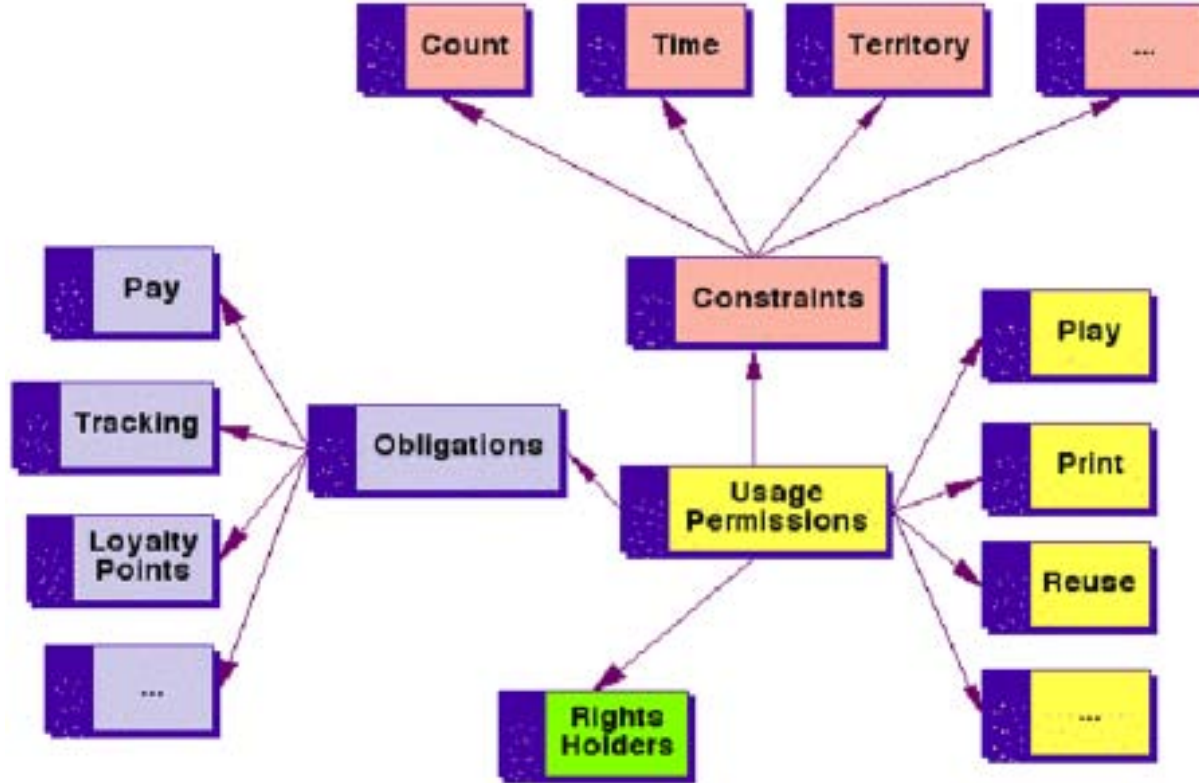
Figure 7 outlines the functions of user rights management compared with other systems (Iannella, 2001). It includes limitations (regional, time and quantities), the different usages (printing, browsing/repeat, reuse) and commitments (payments, follow-up, repeat customers), as well as access to the systems of rightholders for accounting the copyright fees.

The DRM systems should take into account the **rights of all the parties belonging to the digital material value chain.** The present systems are aimed at the publishers, who are presumed primarily to take care of the rights of the packagers/authors. The systems offer, in other words, a platform for an electronic place of business, which is in other words, controlled by the publisher. Besides the author, publisher, wholesaler and the bookshop, the distribution networks include the places of business (components and works), as well as many basic services, like clearinghouses and payment systems providers. Later in the article, the need for anonymous services is argued. In addition, the libraries have a significant role in preserving and classifying the metadata and cultural reserve.

Figure 8 presents an outline of the parties with their relationships and liabilities for managing the intellectual property rights in an EU project (IMPRIMATUR 1999). In addition to the known actors, there are also specialised roles like a general IPR database, verifiers–(CA) and monitoring service providers.

As the model points out, in an exemplary way, co-operation between background organisations is needed to manage the rights (Erickson, 2001).

The model starts with the assumption that the buyer has sincere intentions and, thus, the need for protection and the problems linked with payment are not discussed. To solve these, different procedures have been discussed, such as ordering an access code by a cellular phone to access www services, in control systems based on programs agencies. In the access code systems, a cellular phone operator and service provider make an agreement, with the help of which the buyer calls/sends a text message to a cellular phone number with a payment, (a special number), from which a code is sent to him as a text message, which the buyer can use to access the service or material.

The concept of the monitoring system of copyrights based on a program agency is presented in the figure. The procedures used to protect and make copyrights airtight are outlined in the figure.

Figure 8. An example of managing the rights in digital material trading.

Figure 9. Protection and its monitoring in practice. An imaginary example.
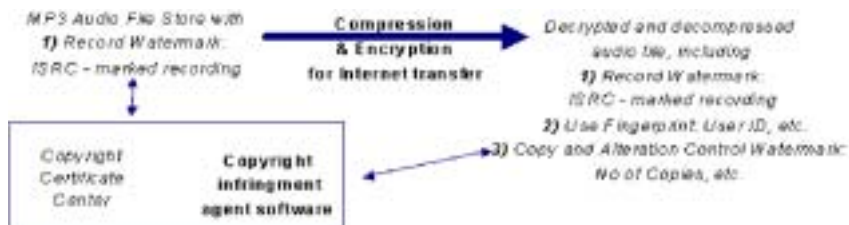
In the background of the systems, the so-called clearinghouses or copyright certificate centres operate, where the use of digital material is registered (compare with DOI above). These clearinghouses or centres operating in the network register information about the procedures done to the contents, like viewing it, printing it and copying it, as well as sending it to another person. This happens according to the terms set by the publisher regarding the material. On the basis of this, the rightholders are compensated.

A DRM example: **IBM EMMS (Electronic Media Management System)**

The system can be used to manage the rights of any contents (DOI and ISO3901 International Standard Recording Code compatible) and it includes the following components (cf. Iannella 2001). The EMMS can be described easiest through the workflow. The first phase is to make the master document of the contents and modify the formats. Next, the user rights of the material are defined, it is watermarked and the "fingerprints" embedded in it, then it is encrypted and compressed (for storing and transfer). In the next phase, the work is prepared for sale and delivery (for example, the dimensions of the tangible versions for logistics, the supporting sales material, etc.) and the formats are being integrated into the place of business. This means, for example, preparing the promotional material defining the actions connected to the business practice (like paying, delivery, follow-up, etc.). Finally, clearing services are assigned to an outside clearinghouse (for example, mediamatic.com or reciprocal.com), whose job will include the granting, verifying and reporting of licences, including if the user's material is destroyed or disappears.

In addition, the EMMS system contains program tools for developing the tailored instruments, reader programs etc. and for hosting the contents, which really means the methods of saving and storing, as well as their replication.

IBM's EMMS is a wide system, with which one can define and materialise the right monitoring, as well as the equipment to present the contents. The system is already being widely tested, for example, in practice in Sony and NTT DoCoMon iMode. The price of the system runs from hundreds of thousands to millions of euros and is defined by the coverage of the region (local – global), according to the number of media formats (one format – many formats).

Copyright Limitations and DRM

In the systems protection one has, however, to take into account the mitigations of copyrights for the special groups. Identifier systems using PRI systems have been tried and realised at least in the USA (see Gladney & Cantu 2001). Based mainly on smart cards, methods to prove who belongs to a certain special group have also been developed in Europe.

For example, in the SEDODEL project a specialised right system for the sight impaired is based on a smart card where a special application reads and is able to unlock protection according to the rights defined on the personal smart card. The same kind of idea can surely be applied to all materials, providing that the special rights have been defined and registered in the database of the clearinghouse (Burger *et al.* 1999).

In conclusion regarding the CMS and DRM systems and their impacts, one can say that even though the technique of the CMS and DRM systems is still in the initial development stage, some of the solutions already work. One of the biggest problems is the lack of international metadata standards. As a result, several different registration and clearinghouse services will exist side by side, which will slow down the management and delivery of digital materials. However, because of the economic (differentiation and price discrimination) and technical (protection, versatile business models) benefits described earlier, the publishers and authors or their representatives often have a genuine interest in switching to the DRM systems in larger numbers.

In future, it will be necessary to create and transmit the metadata of the book (information about the book, its physical size and contents) to the distribution networks as early as possible for marketing purposes.

Challenges of Copyrights in the Network Environment

Preliminary Perspectives

Copyright is based on balancing between the interests of the copyright holders and society, as well as the fundamental rights of the users. On a general level, one can see that copyrights reflect at least the following goals:

- Rewarding the authors: copyright guarantees the authors the right to enjoy the fruits of their creative work – the money as well as the respect.

- Advancing innovations: copyright encourages innovations, which increases economic growth and wellbeing.

- Cultural policy: some of the limitations of the copyrights, such as exceptions to education and libraries, are connected to the general cultural political goals.

Many copyright principles reflect the balancing of the divergent interests mentioned earlier. The content of copyright is limited in many ways. Firstly, copyright requires exceeding the work threshold or the level of a work. Secondly, only an idea's "inner form" gets copyright protection not the idea itself. Thirdly, many statutory restrictions limit copyright reflecting, for instance, the need to secure certain fundamental values, such as freedom of expression, privacy protection, right to information and culture, as well as promoting the use of education, research and libraries (see the section "Copyright in a nutshell"). Copyright is not separate from the rest of society and its regulations, either. In addition to the Copyright Act, copyright is limited by, for instance, regulations about freedom of expression, protection of privacy, right to information and culture, as well as education, research and promoting the use of libraries.

The equilibrium is, however, changing because of legislation, technological development and new business models connected to the information society. The duration of the copyright has been lengthened both in Europe and the United States of America from 50 to 70 years from the

death of the author. The copyright is being gradually extended from the protection of creative work to the protection of investments. This can be seen in the catalogue protection of the EC Database Directive, which is by nature an investment protection (see the earlier chapter "Copyright in a nutshell). The catalogue protection may in some cases also mean protecting the information itself creating at the same time an economic hindrance to accessing information.

The online agreements made directly with the users and the combination of the technical protection methods are an efficient tool to strengthen the copyright protection in e-commerce. With technical procedures, copyright holders are able to efficiently control that the works are not used against the conditions of the online licensing agreements. The increased protection of copyright is also complimented by the regulations on the protection of the technical protection procedures (see *Copyright Directive 2001/29/EC, Chapter III).* With the help of these, even the implementation of the copyright statutory restrictions and the users' access to information can be significantly prevented.

Appearance of the User Agreements

The CMS systems make it possible, for example, to commercialise the private use in a way that was impossible in an analogue world. For example, in the traditional book trade the rights of the buyer are directly based on copyright legislation. No licensing agreement is concluded between the copyright holder and the buyer.

On the other hand, the CMS systems are based on the assumption that the so-called online licensing agreement is concluded between the copyright holder and the user, in which the user is given the right to use a commodity protected by the copyright in a way defined by the copyright holder on the conditions of the agreement drawn up by him. In this system the **agreement** together with copyright legislation lay the foundation for the realisation of the rights and the obligations between the copyright holder and the user. In addition, the copyright holder is able, with the help of the technical protection and monitoring mechanisms, to efficiently prevent the use that is against the licensing terms.

Using agreements between the copyright holders and consumers is not a totally unknown phenomenon even in the analogue world. For example, computer programs sold on CD-ROMs usually have a user licence and

the user is considered to have accepted its conditions when he breaks the seal of the package. In practice, the user licences leave the user very little room to manoeuvre. A computer program must only be used in one computer, copies must not be made of the computer program, except the back-up copy, the computer program must not be lent or sold, etc.

Generally it is assumed that user licences will become the rule in the network environment, not the exception. Even at present, so-called "click-through", "mouse click" or "click-wrap" licences are being routinely concluded on the Internet. In future, most of the information commodities like newspapers, magazines, books, music, films and computer programs will be licensed directly to the users. Thus, the legal relationship between the copyright holders and the consumers will be arranged, for the central parts, with the help of agreements. If the consumer will not accept the terms of the agreement, his access to the service will be blocked by technical protection mechanisms.

The afore-mentioned agreement mechanism itself forms a working alternative compared to the business models of the analogue world. The interaction and text base of the Internet worldwide - or rather the WWW – make it easy to conclude agreement relationships between the copyright holders and the users.

The agreement model has, however, its disadvantage especially when the user is the consumer. Then the question is about the so-called consumer agreement between an entrepreneur and consumer. The consumer is the weaker party in the licensing agreement. The licensing agreement is based on the terms of the agreement dictated unilaterally by the copyright holder. There is a risk that the imbalance mentioned, combined with efficient technical protection and monitoring mechanisms, can even lead to the restriction of the fundamental rights of the consumer. The risk is greatest in situations where companies having a monopoly or commanding market position can use their "over-size" market power against consumers.

Statutory Limitations of Copyright and Freedom of Contract

It is possible, in principle, for the copyright holder, with the help of a licensing agreement, to restrict the consumer's rights to those allowed under the copyright law. For example, one can forbid the consumer to copy for private use, use the work for any scientific or educational purpose or use the quotation right. If the consumer refuses to accept the conditions, his ac-

cess to the work will simply be prevented. When the consumer accepts the conditions one can simply efficiently ensure that the conditions are observed by technical measures.

As to the limitation right, one needs to ask for what are the copyright restrictions mandatory so that they cannot be narrowed down by agreements. An answer to this matter must first be sought in legislation and, secondly, by examining those goals that are meant to be secured by the limitations.

As to the EU law in the directive issued about the legal protection of computer programs (Directive *91/250/EEC*, changed by Directive *93/98/EEC*), mandatory limitations have been issued to the copyright protection in favour of the legal user of the program. According to the Directive, a person legally obtaining a computer program may make such copies of, and modifications to, the program necessary for the intended use. Likewise, a legal user may make a backup copy of the program, in so far as it is necessary for the use of the program. In addition, the legal user of the program may view, examine and test the functioning of the program to clarify those ideas and principles that form the base of the program. The Directive also prescribes about so-called de-compilation, by which one cannot limit the right of the legal user to copy and recode the program code in so far as it is necessary to achieve compatibility with other programs.

The EU Directive on the legal protection of databases (96/9n/EC) also contains mandatory limitations. The legal user may perform functions necessary for the purpose of normal use. The chance of the legal user to re-exploit the non-essential parts of the database must not be prevented, either.

Generally, it is considered that the status of the copyright limitations in the information society should be analysed on the basis of what goals one has wanted to secure with the restriction in question. Firstly, in the background of the restriction there may be either practical or economic goals. Secondly, the restriction may be based on general interest. Thirdly, the limitation may be justified because one wants to secure certain fundamental rights and freedoms with it (Dusollier *et al*. 2000, 14). Fourthly, the restriction may have goals for advancing competition. One can, however, remark that in the background of the restriction there may originally have been more than one goal. There may not necessarily be any unanimity, either, about what the goals were behind the restriction. In addition, the suitability of the goals and the means have to be re-evaluated in regard to the digital operation environment.

Firstly, as far as the copyright limitations are concerned, the purpose of which is to safeguard fundamental rights, like freedom of expression and freedom of the press, access to information and the protection of privacy, their justification will also undoubtedly hold in the information society. Exceptions connected to the afore-mentioned fundamental rights include quotation right, parody, views of a critical nature, news reviews and the private use of the works.

The same holds true for the restrictions based on public interest, like the copyright restrictions on libraries, teaching, archives, museums, administration and jurisdiction. A different thing though is that, for example, the "online lending" differs so much from the traditional lending activities that the restriction in question will have to be "adjusted" to fit in the new environment.

The justification of the restrictions based on practical and economic reasons in the information society is not self-evident. For example, allowing copying for private use is often seen as based only on the practical reason that the copyright holders have not had an opportunity to control copying for private use. We understand that the reasons connected to the protection of privacy have also significantly affected the copyright limitations of private use (see especially Hugenholtz 2000, pp100–103).

Endangering the Protection of Privacy

Protection of Privacy and Information Protection

Information protection regulated by law is part of the fundamental protection of a person's privacy. Privacy as a term was first used in the United States of America at the beginning of the 1900s. It still has not been fully accepted in Europe. The protection of privacy is based on international general agreements. Thus in the background of the regulation for the protection of privacy in the Finnish constitution (Constitution §10) is the Article 8 of the European Convention on Human Rights (the right to enjoy the respect of private and family life). (Laine 2000, 165)

Personal information means according to the definitions of the Finnish personal information act §3, all kinds of entrances describing an individual or his characteristics or his living circumstances, which can be recognised as concerning him or his family or people living in a joint household.

What Data can be Processed?

One can assume that with the CMS operations one processes at least the following information. First of all, such information is the information that identifies the author or editor. The second category refers to the users. Personal information of users can be separated into two groups: browser related data collected while browsing and transaction related data collected during transactions.

The authors, of course, want to make themselves known, so the personal data of the authors are not a problem from the perspective of the information protection. The same cannot be said about the personal data of the users, so only they are examined below.

The amount and content of the information to be collected about the users in connection with the CMS operations depend on many types of factors. Some of the factors are juridical, some economic and some techno-organisational. The information protection legislation places, however, marginal terms on the personal information that is being collected, as well as on its later processing. The question is, however, one of how the information protection legislation, which leans basically on the general principles interpreted in a situation where commercial interests and the information protection interests of the users, is in conflict.

It may be in the economic interests of the copyright holder and other CMS operations participants to collect as much information as possible about the users when they are browsing and performing transactions. Thus, one can make, for example, personal profiles of the users, which can be exploited in marketing.

For example, the structure of the company can be mentioned as one of the techno-organisational reasons affecting the amount of information to be collected. If a group operating in many fields is in question, it has an interest to use all the personal information collected to market and sell the products of the whole group to consumers. In this connection, one can also mention the business practices of the company as to the use of "cookies", which has a direct effect on the extent to which the browser related data is registered automatically (Laine 2001, 176–177).

The maximisation of the data processing referring to a person is not, however, necessarily even in the interest of the copyright holder. This will be the situation if the users become educated enough about the threats against their information protection in conjunction with the CMS opera-

tions and avoid using services in which data protection is not equal to the best practices.

In addition, the technical structure of the Internet has, for its part, an effect on the registration possibilities. Currently, it is not really possible to "move" on the Internet without the browser revealing certain information about his activities. This information includes, for example, the person's network address, the URL of the page last visited, as well as information saved by cookies. Such data can produce personal information, if the browser can be identified on the basis of the information (Heinonen 2001).

On the other hand, nowadays, there are such applications and services, with the help of which, for instance, one can secure the anonymity of the browser or make it possible to perform transactions using a password (for example, www.anonymizer.com, credit card companies, verifiers). Using a password does not generally guarantee perfect anonymity. The person behind the password can be revealed, for instance, when he is guilty of misuse.

The user himself can also advance his information protection by using so-called techniques advancing privacy, in other words, PETs (privacy-enhancing technologies). However, it might be in the commercial interests of the CMS operators to prevent the use of PETs in the context of their own services.

Users' Interests

Registration, and the later processing of the information connected to browsing and transactions, may affect the protection of the user's privacy in many ways. The interests connected to the protection of the users' privacy can be approached on a general level with the help of three concepts: privacy, autonomy and integrity.

For the purpose of this presentation, privacy means limited access to three sub-areas:

1) secrecy referring to, for example, what extent our actions are known to others; 2) right to be alone (solitude) meaning, to what extent outsiders have access to our private "spaces" and 3) anonymity, meaning to what extent we are the objects of others' attention.

Autonomy refers to the intellectual self-determination of an individual, which is a central element in the information protection. Autonomy means a person's chance to determine to what extent his personal information is collected and then further processed (Laine 2001, 174).

Integrity refers to the fact that other people respect the person in question and not act against his justifiable expectations or good manners.

More information, and more detailed information than before, will be collected about private use in connection with CMS operations simply because the private use will enter the sphere of commercial exploitation. From the perspective of protection of privacy and information protection, this development is, as such, suspicious. If the registration happens against the will or knowledge of the users or if the rights of the users are limited unreasonably in connection with the CMS operations, the autonomy of the users will also lessen. If the information is processed or used against the reasonable assumptions of the user, the integrity of the user will also be infringed.

In conclusion, one can say that the CMS systems have the potential to noticeably change the balance of an analogue world between copyright and protection of privacy.

Assessments

Originally copyright and protection of privacy did not end in conflict. The private use and copying (by hand or typewriter) of the works was not seen to have a noticeable effect on the economic interests of the copyright holders. When audio and video-recording technology became more common, consumers were easily able to make good quality copies of protected works at home. This development was, justifiably, seen to endanger the economic interests of the copyright holders. However, efficient monitoring of private copying would have meant unreasonable interference with the protection of citizens' privacy. Therefore, it was decided to compensate the authors for the afore-mentioned copying by taxes imposed on tapes and devices. Thus, the economic interests of the copyright holders and the interests connected to the privacy protection of the users could be balanced.

In the digital world, the economic interests of the copyright holders have, however, by far displaced the interests connected to the protection of the users' privacy. The EU Directive on the legal protection of computer programs (91/250/EEC) contains a regulation by which the so-called temporary reproduction also belongs to the sphere of the author's exclusive rights. The requirement for using a computer program is to make a temporary copy on the RAM memory of a computer. The regulations in question mean, in fact, the right of the author to control the private use of

the works. A similar regulation exists in the Directive about the legal protection of databases (96/9/EC). Neither directive makes it possible to compensate private use with a system like a cassette fee.

Also the Copyright Directive (2001/29/EC) contains a regulation (Article 2), by which the author's exclusive right basically also covers making temporary copies. Thus, any private use of the digitalised works basically belongs to the sphere of the exclusive right of the author.

The Copyright Directive contains no regulations concerning information protection. The preamble to the Directive (Section 31) mentions that the balance between the rights and advantages of different rightholder groups and users of protected material must be secured. The preamble (Section 61) also states that the protection mentioned in the Directive should not affect, for example, the implementation of information protection of the Community legislation or the national legislation. In addition, it states (Section 57) that in the CMS systems one can process simultaneously personal information regarding a person's protected material of consumer habits and track down behaviour connected to direct use and that these functions should include the technical measures to protect privacy mentioned in the Copyright Directive (95/46/EC).

In other words, processing personal information in connection with CMS operations has been left to rest on the general information directive of the EC. The information protection directive makes it possible to process personal information, for instance, when the processing is necessary for implementing an agreement or to follow a legal obligation. The information protection directive does not apparently guarantee sufficient information protection at least if the prerequisites in question are interpreted widely while licensing private use with the help of the CMS systems. The information directive does not give, for example, other instructions about the personal information to be collected other than the information must be processed accordingly. So the literature states that the information protection in connection with the CMS operations should not have been left at the EC level resting on merely the general information protection directive, but it should have been decreed (Hugenholtz 2000, 113–114).

One way of balancing the economic interests of the copyright holders and the users´ interests connected to the protection of privacy and information protection is that in the CMS system the users have an opportunity to anonymous browsing and transactions under a password when securing the rights of the copyright holders do not necessarily require revealing personal information.

Copyright 2010

As far as the questions outlined in this chapter the copyright questions connected to the Book 2010 research can be summarised as follows:

The legislative framework of the copyright in the EU and the international agreements have been sign-posted so that large changes need not be expected by 2010 concerning legislature and international agreements. The most important trading partners have committed themselves to agreements and the Copyright Directive must be implemented in the EU Member States by the end of 2002.

The exploitation of the copyright moves increasingly from the traditional tangible copy production to public presentation. This emphasises the importance of the management of the agreement relationships in the value chain of the whole product (author – producer – user).

The importance of the user agreements and the increase of the technical protection methods require the examination of the mandatory restriction regulations of the copyright also from the users' perspective.

The technical development emphasises the relationship of the copyright, for example, to freedom of the speech, freedom of information, information protection, protection of privacy. To guarantee anonymity in certain situations would require besides technical instruments (PET, Privacy Enhancing Technologies), also national legislature. In developing national legislation fitting together the different interests requires making value choices among large enough interest groups.

To define agreement relationships there are already technical instruments available and in use. Both the authors and publishers have an important economic incentive also in Finland to use them extensively. One must start to improve these technical abilities required for the management of these agreement relationships without delay throughout the publishing trade (including the library establishment).

The most urgent task connected to the former is to up-grade the ISBN classification systems (ISO 23950, ISO ILL) that are in use to suit international e-commerce. This must be taken into account when planning the metadata structures. For instance, the management of copyrights must be

possible at least for the component types, at the most even for individual pieces of work and its components. In this one would imagine that the National Library and the Ministry of Education are in the key role and should participate actively in co-operation with international players and standardising organisations.

Preparation of the national implementation of the Copyright Directive has started in Finland at the time of writing. Now is the time to affect the national implementation of the directive.

II

FUTURE FACTORS

FROM THE BOOK CHAINS TO THE NETWORKS – SCENARIOS

A scenario, one particular manuscript of the future, is part of the research into the future. One can ask if one can research something that does not even exist. We have our past and present. The future, however, does not yet exist. On the one hand, it can be said we can no longer affect history and the present already exists. On the other, the future is still ahead. We can with our choices promote the futures we want and prevent or slow down the ones we do not want. This is exactly what makes research into the future fascinating. There are things we can and cannot affect. So we should have the patience to accept the things we cannot affect, the strength to change those things we can and the wisdom to distinguish between the two.

The starting points for research into the future are as follows: firstly, the future is not predictable. so one has to ask what is possible; secondly, the future is not predetermined so one has to ask what is probable and thirdly, the future can be affected by choices so one has to ask what is desirable.

Thus, the question in the scenario work is not about prediction, but about mapping threats and opportunities, about creating alternative futures and thus about conceptually seizing the future. In the Book 2010 project, the time-span was nine years into the future.

Futures Table

The method used was the futures table method.Its starting point is to recognise the factors mainly affecting the future of the object examined, in this case the book trade. They were searched for using the PESTE memo (P = Politics, E = Economy, S = Society, T = Technology, E = Ecology). In other words, matters affecting the future of the book trade were gathered in from such fields as politics, economics, society, technology and ecology.

The most central **variables** were chosen from these. They included, for example, reading a printed book and the price of energy. Next, a few possible alternatives for 2010 were chosen for **each variable**. The alternatives for reading a printed book were:

- Strongly declined, young people using the Internet
- Declined, but not drastically
- Kept its position, the Internet users and large age-groups read
- Growing slightly, more Potters found
- Strong growth, counter reaction to information flood
- Eliticised

Alternatives for the price of energy were:

- Rising
- Stays the same
- Falling

All these were arranged in the form of a table by variables.[12] Next, alternative futures were developed and named. Three of these were:

- Trend scenario – future with no surprises
- Positive twist – when Book-Finland took off …
- Nightmares come true – every man for himself

The work was delegated so that writing the first versions of the afore-mentioned scenarios were given to the researchers of the project group. Each of them went through the large-scale futures table and named one (or more) of the alternatives best describing the scenario in question. For example, in the alternative 'future with no surprises' in 2010, reading the printed book was assumed to have declined, but not drastically. However, at the same time reading was seen as becoming elitist. The price of energy was seen to rise. Finally, everyone interpreted the scenario himself. The final scenarios were written on the basis of the feedback and corrections.

Scenarios
– Can Interests be Divided in a Line of Business?

One problem in dealing with the whole operational field is the difference in perspectives. The interests of all the players in the field are not the same in all respects. The future desired by one player in the field may be a threat to another. Even though such conflicts were not emphasised or analysed further, the matter was sensed at times. Scenarios built for one party, especially a company, are always more complete than those aiming at collective interests. In the worst case, collective interest is no interest for an individual party. This is not the case, though, in the book trade.

The future world in each scenario is described as it is supposed to affect every player in the book chain. They have not been written specifically, from the perspective of any particular player. We hope the reader will find food for thought.

Trend Scenario – Future with no Surprises

The future with no surprises depicts the world, as it would be in 2010 if the present development trends continue. In other words, it is a kind of trend scenario. No surprises means that in 2010 there would nothing really surprising in the world looking at it from the perspective of today. However, it is obvious that the world will not be in ten years´ time like the future with no surprises scenario describes it.

The world in 2010 will be still divided into **regional trade blocs,** three of the most important ones being the EU, North America and Asia. The supranational companies will be exploiting the global development of the markets, which will reduce the importance of the **trade blocs.** The basis of **division** of the blocs will be not just regional reasons, but also the mutual alliance relationships of the companies. Such new bloc borders can change more overnight than geographical bloc borders in ten years. **Citizens' movements** have risen to protest globalisation, because it opens up such a free operations model for the companies that it cannot be controlled. This opposition, however, will not noticeably slow down the globalisation development.

The EU is a federation of states, not a federal state, which has expanded from the beginning of the 2000s so that it includes, for instance, a dozen former socialist countries. The costs of the EU have grown as a result of the expansion. As the new Member States are poorer than the rest of Europe, the present Member States like Finland will more clearly than ever be the **net payers**. As the EU costs are mainly covered by VAT, the level of VAT must be raised so much that even in Finland the VAT on books will go up. At least it will not go down. In addition, different types of **pistevero**t **point-of-sale taxes** are passed. Migration is increasing in Europe. The highly educated elite and **artisans** become international. Finland at the edge of Europe is becoming international slower than the rest of Europe.

In environmental matters, the most important issue will be the change in the climate. The massive felling of the rain forests (the lungs of the globe) will be restricted. In the northern coniferous forest belt, the exploitation of the primeval forests will be limited. This will bring pressure to bear on the price of paper. Compliance with environmental regulations will be monitored more thoroughly in the EU countries than elsewhere. Thus, countries outside the EU will gain a slight competition advantage.

Finland´s economy will still be based on telecommunications and the forest industry in 2010. The third pillar will be the metal industry. The stronger growing element, the service sector, will be there with its high-level know-how and network model. The business structure in Finland will still be decentralised, even though some multi-national large-scale enterprises have their headquarters in Finland. The dream about the new economy was realised, but not in the form that was supposed to completely change everything as was discussed at the end of the 1990s. The new economy, and especially the information technology connected with it, changed the structures and made operations more efficient in the old economy. The BNP, however, will be treading water or growing only a little. On the other hand, the business fluctuations have become stronger. Unemployment will be nearly ten per cent. However, at the same time there will be shortage of labour. Simultaneously, there will be high wages as well as low wages that barely reach subsistence level. The income differences will grow, but the safety nets that help people in the most difficult livelihood problems, as well as society, will not be threatened.

The countryside will become quiet, but not, however, empty. People will move to growth centres, especially along the vertical axis of Finland

(Helsinki-Tampere-Oulu), in other words, mainly following the information technology businesses. The average age will rise. Immigration will, however, slow down this development.

Finland will try to keep its image as a testing ground for information technology. The core of this will be in people with know-how. The level of education, when one means the so-called book learning, has risen a little. This will strengthen the position of reading and the book. The basic education is still being supported by society. The time spent in school will become shorter, but continuation and adult education while working will increase. The share of the private education systems in these will grow. The position of the science universities will be improved, but the focus point will be directed to areas, which are central to the development of the information society. The cultural heritage of Finland will still be appreciated, but it will decrease among the young age groups which are often more European than Finnish.

Over 80 percent of homes will be networked. The two-way digital television offers its services also to the "rural grandma". The mobile personal digital assistants (and other similar devices) have created different "mobile tribes", which have a subculture of their own. They are formed differently than the traditional village communities and neighbourhood gangs of cities. The mobile tribes are part of the mosaic of society, where matters experienced together and joint objects of interest are the basis of the community.

The continually changing product generations mean a new kind of environmental load. ADP scrap is collecting by the ton in the corners of companies and households. The discussion about the contents of the ecological backpack goes on. When is the transfer of molecules a better solution than the transfer of bits? The increase in the price of energy will make the transfer of bits advantageous. The ecological approach, as such, is self-evidently part of the traditional production process. The swan trademark no longer has a competitive edge.

Reading the printed book has declined, but not drastically. At the same time, reading a book has become elitist. Reading from a screen or other paperless platforms will increase. The amount of visualisation will increase and one will move from letters to pictures. A short concentration span will increase and the young, in particular, will have all the channels open at the same time.

The number of titles of printed books will have grown clearly in ten years. The total number of print runs will, however, have decreased a little or mostly stayed the same. The average print run will, thus, decrease. The price variation in books will increase, as there are both cheap, light reading and, expensive speciality and gift books on the market. Most printed books are, however, still traditional publications, whose medium price is more or less what it was 10 years ago regardless of the rise in the price of paper. The cost-effectiveness of the whole production chain, from author to reader, has been improved.

A printed book will still bought mainly for oneself for joy and learning. Because it is difficult to create the status of a gift book for the e-book, the printed book will also still be an important gift item. The third important market area for the printed book will be the schoolbook acquisitions by municipalities. Digital printing will be the prevailing method in small print runs, up to a print of a thousand books. In addition, books will be acquired from abroad by decentralised digital printing, for example, in large book-shops.

CD-ROM book and DVD book format have nearly vanished from the book market. The games are a different thing. The **e-book,** that is, one distributed on the information networks and read on the screen or printed paper, has found its place on its own areas such as science books.

E-books are used above all by doctors, lawyers and others who need **extensive** portable reference books in their profession. They have also become more common as textbooks. Also quite a few ordinary people – usually heavy consumers of books – use the e-book reader device for light reading.

New book type products on the market include such network publica-tions, which have interactive features and/or can be updated. These have been developed especially for the applications of textbooks. The price of such an e-book is higher than the printed book, because it contains the afore-mentioned interactive features.

The sale of the "e-paper book" (an object greatly resembling a book, the pages of which can be downloaded several times) is dawning. The first commercial applications will be on the market in 2010, but the market success has not been tested.

The EU favours European production, but does not accept special treat-ment for national literature. However, in practice, there is hidden support in most countries.

The publisher will still be, in 2010, the combining power, the guarantor of quality and manager of the author, who is the central pillar of book production. A few best-seller authors have tried to write directly for readers on the Net with varying success. Net publishing has become common with self- and small-scale publishing. There are new players involved such as mobile services providers.

The mutual work division of the author and publisher has become more versatile as the publisher also negotiates the rights with other publishing channels and ways of presentation. In some cases, there is some room between the author and publisher for managers who will negotiate copyrights on behalf of the author. Some successful authors move closer to being an entrepreneur by acting as their own manager and accepting some marketing responsibility themselves. The loyalty to the publisher has decreased and well-known authors compare publishers .

Such small-scale publishers, who publish texts by **new authors,** have larger publishing rights than other publishers, because they have negotiating power with the fledgling authors. Big publishers, who mainly publish works by already established authors, cannot get as easily wide publishing rights, because these authors know their market value. The copyrights are made case by case and there are many kinds of models. There is some room for brokers transferring copyrights. In theory, copyrights are in control, but in practice the situation varies. One has not been able to root out piratism.

The publishers ask for offers from printing houses. The largest printing houses, in addition to printing the information content, also process it on other publishing platforms and channels. They do this alone or in close cooperation with the companies of the ICT cluster. Some of the printing has moved to book shops and other service points, like the digital printing units in schools and universities.

Wholesalers, whose core know-how is based on the management of databases and information, have developed from wholesaler to logistics company. The service has **widened** to other areas.

The bookshop network has shrunken. In areas where the population is concentrated large bookshops offering good service have opened. In areas with migration loss, the last ones are still clinging on. Bookshops that have invested in customer service are like the living rooms of comfortable homes. In the corner of the "living room", there may be some high technology like Book-on-Demand system. The online bookshops' share of

the printed books market is a third. The share of the online bookshops, most of which are part of the parallel business of the traditional bookshops, is a third of the printed book market. The online bookshop is used not only by young people and students, but also by the large-scale consumers of the upper middle class, who think the Internet has by far the best supply and service and that there one can find the best offers with little effort. Schools mainly acquire their books direct from the publisher, and also partly by print-on-demand.

The library is one of the modern pillars of the information society. There will be fewer and their position will vary depending on the location. No-fee will still be the leading principle.

Positive Twist – When Book Finland took off

A situation is outlined in the scenario *When Book Finland took off*, where everything goes well – the economy grows a lot from the perspective of the former players and is supported by them, but changes have also happened. The use of technology has increased, but paper is still the leading material in book production.

The EU has remained a federation of states and the Eastern expansion has happened in a controlled manner creating a cost load for the other Member States. The development of Eastern Europe has advanced cautiously in a positive direction. Internationalisation as such is no longer an absolute value and great care is taken so that the inputs and outputs balance each other as a national advantage, and do not spread outside the borders. The negative effects of globalisation will be increasingly discussed also at the government level.

The nation states will remain, but they have to open their borders more. The population majority and the ethnic minorities will live in peaceful co-existence, and the new cultural influences will be a refreshing addition, which will also produce a many-sided national culture. The taxation on cultural products will be reduced (VAT), because in the EU one's own culture will be preserved. The value added tax on the virtual (electronic) content will be on a par with that on books.

Technology will have provided solutions with a reasonable timetable to most environmental problems that occur and will have developed production processes that are environmentally friendly, but still affordable.

In Finland the share of the service sector will have risen significantly in information communications and the forest industry.

Unemployment will have fallen a little and the national economy will have grown slightly. The distribution of income will have evened out since the wild years of the 2000s and the cost of the labour force will have stayed competitive. The structures of the economy will have become more efficient because of information technology. Societal regulation will, on average, be on the same level as elsewhere.

The eco-balance of the paper-based communications will be good. The ecology as such will not be a marketing trump card, because the industry recognises its environmental responsibility and lives up to it. The price of energy will fall which will improve the competitiveness of the paper industry and physical transportation, for example.

Some of the sparsely populated areas will have been kept vital by special societal measures and reasonably well-off pensioners will move to leisure-time accommodations to spend their retirement. The appreciation of the Finnish cultural heritage will have increased and for young people being Finnish is a self-evident fact, which they are proud of. As a counterbalance to increasing internationality, there will be a clear home base.

Society will invest in an all-round education. The age limit for compulsory education will have been lowered. Teaching the national language will be emphasised to guarantee the future of the country. Most of the educational material will still in the form of a book, and supplemented by electronic services. Teachers and students will be offered different alternatives to fit their own know-how, interests and profiles. Education alternatives in foreign languages must also exist, which will mean the growth and versatility of the educational material needs. Part of the educational material will be produced through international co-operation and will be located where needed.

Continuation and adult education will have essentially grown and in practice the whole working population will regularly have to up-date their know-how and re-train. E-learning has advanced to working practical applications and made room for new innovative learning material. The printed book will still be supplementary material.

More and more citizens will actively use information technology both at work and at home. The networking degree of homes will be proportionately high because an ever-increasing number of society's public services will be available through the networks.

Both technology and individuals have to find ways to filter and personalise the information flood. Reading books gives a chance to retire into one's own privacy.

The price of the book depending on the reduction in VAT, and also the improved efficiency of the whole book chain, will be competitive. The price of the e-book will not be essentially lower than the printed book, depending, however, on the number of the peripheral services attached to it.

Book storage will be mainly digital, and foreign books will be produced on the spot. Small series will be mainly produced by digital printing. The on-demand production, based on orders, will have networks, partly based on centralised production and distribution, and partly in a decentralised fashion.

E-books will have found their own customer base. E-book reading devices will have conquered some positions especially in professional and teaching use. Publishing platforms based on new screen technologies (e-paper) will start to achieve commercial success. Print products will have been developed and intelligence and interactivity will have been included in them. Finnish literature will have achieved international success, because of some well-marketed best-selling authors.

The book trade will have learnt to network, both inside and outside its field, to manage the increasingly versatile operational environment. Overlapping activities have been discarded especially for the part connected to product information recording and transmission, and the efficiency of the whole chain has been increased by information technology measures. There will be a shift from focussing on the product to focussing on the service.

Some of the **authors** will entrepreneurs, with agents helping them with the connections to publishers.

Self- and small-scale publishing will have grown significantly. There will be services available that help self-generated content production. Copyright agreements allow the multi-use of the content. Systems have been developed to manage and collect money for the copyrights and care of the various players. Systems will have especially been developed for the mobile world with Finland acting as a test laboratory.

The publishers will be valued as significant sustainers of national culture. Content databases will have been developed in the direction of possible multi-use. It will be possible to combine material by different publishers in the same tailor-made end product. The printers will have had to apply their processes to produce fast paced short print runs. The printers

will also offer services connected to electronic publishing. The wholesalers' role will have changed essentially from managing the physical logistics to that of service integrator with a wider job description. The library institution will have been developed so that in areas where there is no physical library, one can use developed Net services.

The customer service and management will be noticeably more developed than today. Somebody will be in charge of the management of both customers and digital storage. Bookshops will know their customers and will have become, like libraries, a centre of information. A competitive factor of the bookshop will be the capable and professional staff serving the customers. Demand will direct supply ever tighter and the feedback will be quick. On the other hand big stores will still sell well. The online business will strong on the b-to-b side. As to ordinary people, the only significant customers will be heavy users. Buying will be based on ease.

The Nightmares Come True – Everyone for Himself

In our horror scenario, the European Union will have spread east from the present format and, in practice, become a federal state. The Bonn climate agreement accomplished in 2001, has been functioning as a stimulus for the environmental protection norms and laws, which have been quickly strengthened. Environmental protection has become a factor especially in EU policy. The price of all printed matter on paper has risen unbearably high from the consumer's perspective. Restricting the transmission of information and experiences was not acceptable. The production, distribution and availability of the digital content has been in many ways supported. The consumers have voted, partly voluntarily, partly through economic necessity, with their wallets. A small elite will still be able to afford printed books; the great majority will be satisfied with digital material.

The EU having spread east will in theory be a federation of states, but in practice a federated state, which will require strict conformity from the legislation of its Member States. National culture can be advanced and sustained by other means, but supporting cultural production on national grounds will be forbidden in the name of the advancement of economic competition.

The EU will place environmental political margin conditions on business activities, which will be tougher than in the rest of the world. In the name of nature conservation, using wood as a raw material and all

traffic will be heavily taxed. The printed content will be placed in the normal VAT bracket and the digital content that saves natural resources, in the lower one. The global competitiveness of companies of the EU countries will weaken and the Community will become inward looking.

Officially all the languages in the EU countries will be equal, but the position of English as a second language will become stronger everywhere.

The price of the printed product will rise so high that consumers will abandon it. Production, distribution and consumption will move to the digital form.

Finland will strictly follow the norms set by the EU. Industrial production using wood as a raw material will collapse. Society will invest large-scale resources in improving the operational prerequisites of information, communications, monitoring and measuring technologies, and the services developing around them.

To guarantee people's access to information, society will endeavour to improve the reception and use of digital material. The strongest support will be given to the full-scale exploitation of digital TV features. Services by officials will be transferred to the Internet. A fee will be charged for borrowing printed books from the library and the use of digital material will clearly be cheaper than printed material.

Schools will be more prepared to use digital material at all levels of education and the prerequisites to produce digital educational material will be created. The production of printed educational material will be reduced.

Society's investments in education will, however, be limited to improving the external requirements. A small well-educated elite will consider the education in schools unsatisfactory because of the regulated teaching programmes and will found private schools. The education level of the best educated will rise, but there will be fewer of them. At the same time, most of the students will see their level of general education fall.

The shrinking elite will get its self-esteem from work and will earn well, but will not value leisure time. A growing number of those left outside the elite schools will have acquired good vocational training, will work to earn the money they need and place great value on leisure time.

The elite will also buy and read printed books, others will use digital material. **The real price of the printed book will double**, the number of titles published will be halved and reading will become elitist.

The price of the digital material will be less than half the equivalent price of the printed product and an increased amount of material will be

published. Digital TV, improving information communications connections and easy-to-use, e-book reading devices will essentially improve the utility of the Net publications. The educational material of schools will be digitalised and mainly transferred onto the Net.

The authors will adjust to the digital publishing form, and only a few will have their works published in printed form.

The position of the publisher will still be central in the production and distribution of the content and management of copyrights. The number of companies publishing as the first choice of business will fall and there will be entrepreneurs beside them acting like a program agency or producer. A few publishers will be specialised in printed book production, reduced in volume, but still remunerative because of the customer structure. Some will have become converted into digital content producers**.**

 Book wholesalers will no longer be a profitable operation. The publishers and bookshops that are left will be doing business together. **There will be just a few printers** who will print merely books. The book will be a home-market product and there will be no home-market competition. Some of the former book printers will produce digital material.

In the large population centres of Finland, **20 bookshops** will be **left** selling just printed books and in another 50 content product shops, there will be a separate department for printed books. In the last mentioned, printed books will be one product among the digital recordings and e-book reading devices, as well as the loading services of the e-books. Game products will form an important part of the turnover.

All the retailers will have Internet service. It will be natural to visit online bookshops and more or less the same products will be purchased as in the proper bookshop.

An e-book as digital content, not different from the traditional book, **will be a part of everyday life.** A printed book will be an elite product where the appearance is important. Partly for this reason, partly because of the high price, the book produced by the print-on-demand method will not have become common.

The Winds of Change

The trend scenario was made together with the players in the book trade, and it contains development paths that they thought possible. The other,

partly alternative scenarios were made by researchers to provoke thought and discussion, but they are still based on development paths, which are possible, even probable. A scenario is not meant to be a utopia.

More often than not, the whole process, through which the alternative futures are created whilst working on the scenario, is more important than the completed scenario. It is precisely this seizing of the future that is needed in a changing operational environment. The action strategy is not nailed down on a fixed prediction, the one and only and right image of the future, but the strategy frames are created to be flexible and ready to change.

In business life, those who are the first to sense the winds of changes and react to these changes, find themselves among the winners. Working on scenarios is an excellent way to develop this preparedness for change.

CONCLUSIONS

The book has been part of society – technology, economics and culture – since the development of writing and book printing technology. For the publishers, shopkeepers, printers and other commercial players, the printed book is first of all a book object, a printed product. The authors and readers, on the other hand, often see the book as content, literature. A book thought of contentually does not, however, necessarily limit itself only to a book as an object**. Digitalisation, networking and wirelessness make it possible to realise new types of publications.**

The e-book reading devices of electronic texts are computers planned for a special need. In addition to the e-book reading devices, digital texts can be read, for example, on the computer screen by reader programs. The files, that is, e-books readable by e-book reading devices and reader programs, were defined as **texts published in digital forms which will not essentially change even if they were to be published as a printed book.** By this definition, we can distinguish e-books from reader devices, multimedia works and cybertexts.

The printed book will survive alongside the digital publishing form. Neither will replace the other, but the **different forms of the book will compliment each other**. Even the printed books will be increasingly made for multi-form use. New innovations and services will either compliment books or visa versa. Transferring the contents from one media to another is just the first step in the media convergence. Presenting digital texts will, by the help of different reading and viewing devices, develop into part of everyday life through technological experiments, commercialising efforts and art. The digitalisation and media convergence will create new products and markets.

A long continuous text is most often best read printed on paper when considering the screen technology of the turn of the millennium**.** It makes sense to load it on an e-book reading device especially if it consists of short texts, is based on an information search and combines content readable in random order. In the near future, it will be possible, either direct or

with minor changes, to present and/or duplicate nearly all material record-ed in more forms than one: on paper, as an electronic recording or on the Net. The merger of new and old technologies causes part of the concepts we use to be insufficient. Media-reading ability is a good example of how the concept of reading ability is widening.

Alongside the technological change, the concepts of literature will also be changed and widened. In future, the concept of a book may be more ambiguous than now. It may be that in the future 'book ' will just mean the traditional book, and the digital applications will have other, more to-the-point names. Currently, it is hard to see in what direction the text-based digital story telling will go. Literature and other art forms will combine in the experiments.

In professional and scientific literature, many information networks are used as publishing channels, besides the traditional book. It is probable that the educational material will go more towards the so-called virtual learn-ing, where information networks are in a central position. In the future, the form of the "book" as a medium will not be important in learning, but the requirements of accessibility, usability, modifiability and up-datability of the content will decide the way of publishing, in other words, the choice of media. With the help of new equipment, the student will have quite a dif-ferent type of interaction with his educational material and other students than with traditional printed contents. The electronic educational material forms a multilevel entity together with the maintenance, contents, purpose of use and need mapping in connection with the printed book, electronic materials and services. Training is becoming a new dynamic production area in the information society, and all its operation modes are not yet known.

Reading as such may increase in the information society. One of the most visible reflections of the information society is the increase in the amount of information. In fact, the question is about the explosion-like growth of the volume of information rather than of the information. To manage in the present-day society, it is not enough to be able to read, but one must be able to search for, assess and analyse the mass of information and also refine raw information into knowledge and know-how. Reading is an essential part of a modern person's societal activities. Reading is al-ready versatile and multimedia elements are seamlessly joined in the read-ing without us noticing it. **People use several media simultaneously.**

For a long time, the content of books was recorded and sent from the author all the way to the publishing house in digital form. As the technology is changing and becoming increasingly cheaper and easier to use, nearly all players in the production and distribution chain of the printed book can more and more easily participate in online shopping for digital products and merge into each other's business areas.

The development of technology has been significant, but, however, it is just one component of the structural change. The most significant difference between the past thirty years and the next ten years may be **the speeding up and internationalisation of the change.**

The global information networks include global markets. Digital printing and online publishing have significantly lowered the costs and the threshold of publishing, especially for self- and small-scale publishing. The marketing problem, though. is not solved by the printing technology and digitalness, because a book as a product needs to be seen to sell. **In production and distribution, one is becoming network- and order-oriented rather than warehouse-oriented.**

The book chain needs a manager. **The position of the publisher is central** in the distribution chain of a printed book, **presumably also most often in publishing e-books.** The distribution chain is different than that of the traditional publishing and publishing of other digital content products. Both the locally and globally active micro-level players are involved: the information networks are exploited by hundreds of millions of users as writers, customers and readers. In the same field, the macro-level players include international media giants, which are able to tell universal stories in the global entertainment markets using the publishing channel of their choice.

The book wholesalers may become increasingly part of general logistics service, the special area of logistics. Retailing will get new forms and operating models, as all the possibilities of e-service are being learnt for use in customer service. The bookshops, however, will not disappear in the near future – the distribution channels of the books will change and diffuse from the earlier ones. **The distribution chain will change**.

The development of information technology affects the production, form of existence, distribution and use more deeply than many other products. **The field will get new players**, especially the information communications operators and equipment manufacturers who earlier worked with

information technology and infrastructure, and who have control of the distribution channel with the user information. **Multimedia production will change work habits** and to succeed in it one will need several different parties. In the new operating environment, one needs new kinds of networking with new players**. In support of the content production, there is, in the making, a branch of business** charged with taking care of the interfaces between the content producers, distribution infrastructure and technology providers.

With the electronic data transference becoming more common, one will reach a situation where "printing the book" or "presenting the book" may not happen until the end user prints it at home, binds it using a simple binding device or in a completely digital form, whereby the distribution chain will dramatically shorten. The digitalisation of the book distribution chain may thus lower the total price of the book. The profitability of the distribution chain will weaken when the price of the book is formed mainly from content production costs and overheads instead of the distribution chain.

Regardless of what part of the distribution chain is examined, the question is about customers. Every player operates in a customer relationship with some other player, either as a buyer or seller. One must move from focussing on the product to focussing on service for the reason that **contents in electronic forms are services, not products in the traditional meaning.**

Exploitation of copyright is increasingly moving from the traditional making of copies to public presentation. This emphasises the importance of the management of agreement relationships in the value chain of the whole product: author – producer – user. The same content is no longer necessarily recorded between covers and tangible, and ready to take home, but is used as a service-on-demand – maybe at different times in several different places and with the help of different media. As far as the legal framework of the copyright is concerned, no major changes, however, are expected. The increase of the importance of the user agreements and of the technical protection measures also requires examining the mandatory limitation regulations from the perspective of the users. The technical development emphasises the relationship of the copyright, for example, to freedom of speech, freedom of information, information protection and protection of privacy.

Digitalisation brings new services to the consumer, in addition to the new ordering channel and information source and chance to affect, already in the production phase, the content and appearance of the product. Changes occur in our way of life little by little, but continuously. Even though human evolution during the past decade may not have speeded up, operation modes in its daily routines have changed rather radically. Leisure-time is increasing thanks to the new technological innovations. The improving language skills of Finns create the prerequisites for reading foreign books and online shops make it easier to buy them. The freedom of choice and power of the buyer will increase. The demand will attract more and more supply. All the players in the book trade have to be prepared for changes in their operating environment and operating prerequisites.

Digital or digitised products and services have so far been made on the terms of technology, but the equipment and functions that will ease the daily chores will also quickly get a response in the market. Services emphasising and maintaining efficiency, communality and comfort may also be successful in the future. In the final analysis, the biggest contribution of digitalisation will be the genuinely customer-orientated service, with which one can offer every customer the end result according to his or her needs and preferences.

THEMES FOR FURTHER RESEARCH

The common interest of the book trade is to strengthen the position of the book and literature and maintain a good image. This is achieved in many different ways and common efforts. The Book and Rose Day and the Finlandia prizes for literature are good examples of the systematic supportive action aimed at the whole book trade. Campaigns aimed at young readers are carried out, for example, "Book at School".

The research report *Kirja 2010-Book 2010* was also brought about by the co-operation of experts from several disciplines and the book trade. Many issues came up during the research, which in this connection received too little attention, but which, at the same time, aroused interest in future multi-disciplinary co-operational work. New entities were found which we considered important; ones that will quickly or strongly develop into issues. Finally, we want to point out to the reader some development trends, which in our opinion particularly require more study.

There are **few** comparable international **statistics** about the book trade suitable for research. Collecting statistical data is not necessarily itself a topic for separate research, but empirical **research,** exploiting statistics as background, of the **production, marketing and distribution processes in different countries** would provide useful information for the players of the field. The aim of the research should be to find, by comparison of legislatures, market situation and ways of action, **operating models and business ideas that can be carried out in Finnish conditions.** By comparative research, one aims to support the production and distribution, as well as the development of publishing forms, so that one can sustain and strengthen the competitive position of the Finnish players in the home market and their ability to be competitive in exports.

The effects of the pleasantness, efficiency and comprehensibility connected to **reading the digital texts** compared to reading the traditional text, especially the book, need much research. There is little or no real knowledge, particularly about comprehensibility. Reading from different types of screens has many physiological factors affecting the pleasant-

ness and efficiency of reading. In addition, texts created in the digital environment differ from the traditional printed page; thus, it affects the comprehensibility of reading and interpretation of the text being read. One of the most obvious areas of application of the interactive digital texts is the educational material, especially materials imported into the e-learning environments. In e-learning, functions combine, in a concrete way, the ways of obtaining and using the texts, as well as the comprehensibility, efficiency and pleasantness of the text.

Besides the research on the reception of digital texts, one should also examine the questions connected to the generation of interactive texts. One should create concrete concepts of interactive texts in digital learning environments and test them in practice. The research should also clarify the different ways of using the printed and digital material and the development paths connected to them. What are the prerequisites and probable development trends for the ways of distribution and use of the different types of educational materials when taking into account the properties and needs of the users, economic questions and opportunities given by the technology? How will the traditional learning methods and equipment, including books, be combined with digital materials? The future use of educational materials will depend on both the reading and learning skills.

Research about reading would be very important as an auxiliary instrument to implement the national information strategy of education, providing the effects caused by the change in study habits on the production of the educational materials are taken into account. The research should, thus, be implemented by combining the perspectives of literature, technology, pedagogy and business economics.

A book as an object, service, form of expression and a way of presentation is becoming more versatile. One can add interactivity and intelligence in different ways to the new entity that is developing. A research project, which would clarify these aspects in more detail, from the operating model all the way to the development of a prototype, could be in two parts. The marketing system could exploit, for example, the existing book-reviews, marketing database, bar code reader and the home computer or mobile phone.

The content database, offered by the publisher or some other player could, for example, be transferred by wireless phone to an occasional tourist or nature lover's media mobile phone. The basic technical solutions exist, but such a production chain, for which there is a demand, still requires product development and, above all, wide-scale user tests.

The changes in production, distribution and consumption caused by the book-on-demand concept are worth clarifying. For example, the new digital ink jet printing machines make it possible to produce prints, from some dozens of copies to about ten thousand copies, quicker and cheaper than by any other method of printing. Will the new production methods affect the operation models of book publishing? Will the print-on-demand require decentralised or centralised management of content, information, payments and processes? The final handling of the books is now and will be in the future the bottleneck. What will be the most efficient way to realise the final handling in different production models?

The effects of legislature in the area of content production. Of particular interest would be **research combining copyright and contract law,** which would examine the contractual relationships for the whole value chain of the content production and pay particular attention to the weakest part of the content chain – the consumer's legal position. Among the big legal issues concerning the development of the information society also belong, no doubt, to the securing of certain basic rights like the protection of privacy and the right to information, in the online e-commerce environment. Legal research can be done either with separate projects or by combining it with research where answers are sought for business economic or technological questions.

Even though the media industry is merging into large units on the national and international level, **the book trade will have room for small-scale publishers**. Particularly in small language areas like Finland, the importance of the small-scale publishers is big. Like other publishers, the small-scale publishers meet the book in the whole production chain, marketing and distribution, as well as the changes that happen when the way of presentation becomes multiform. A project that would concentrate on operational alternatives in the digitising world would help the small-scale publishers exploit the new opportunities brought on by these changes, like online publishing and e-books. At the same time, one can examine, whether there are such technical, business economic and other operation models to be developed, which can be exported.

Book 2010 covered the whole field and the effect of literature genre on the presentation form could not be taken into account except in some special cases. Very important would be to research and compare the suitability of different **literature genres to different presentation forms.** What kind of content will be suitable to be presented in printed or digital

form in different situations and for different reader groups? How will the same content be suitable to be presented with the help of different media? In addition, research aiming at other than small-scale publishers, in other words, at various players, would help to outline the future more accurately in respect to the strategic choices of each player concerned.

NOTES

1. Companies which took part in scenario sessions, as well as experts of the book trade who were interviewed, are listed in Appendices.

2. For more details see Svedjedal 2000

3. *Beehive* and *Iowa Review Web* are examples of such publications

4. "Once print has been fairly well interiorized, a book was sensed as a kind of object which 'contained' information, scientific, fictional or other, rather than, as earlier, a recorded utterance." (Ong, 1982, 126)

5. More about the trial: *Helsingin Sanomat* 13.7.2001, B9.

6. "We shall not understand what a book is, and why a book has the value many persons have, and is even less replaceable than a person, if we forget how important to it is its body, the building that has been built to hold its lines of language safely together through many adventures and a long time." (Gass 1999 [no page numbers]).

7. More information on the web pages of the projects: www.lysator.liu.se/runeberg/, http://promo.net/pg.

8. Pilot research on reading digital texts was carried out in connection with the planning of the Book Finland project (Koskimaa).

9. Definitions are difficult as we remember from the Church Father, St Augustine. Our interpretations do not correspond completely, for example, to the definitions of trade unions or encyclopaedias, but are based on the fact that in the research we want to separate the author and publisher's sections from one another.

10. For example, many European countries have a fixed price system, where a book is often sold for a predetermined time at the price set by the publisher in all the bookshops of the market area. Afterwards, the copies can be sold at any price.

11. "Electronic commerce of publications, music, films and software encompasses all types of creations. They can be delivered in digital form either as a single media or jointly, as multimedia. Increasingly, new multimedia products and services are produced and distributed, off-line and online. They may incorporate a huge number of materials protected by copyright. To enhance multimedia productions, focus is needed on effective and efficient clearance of copyrights. This can take place electronically." (Koskinen-Olsson, 1999).

12. The future tables/tulevaisuustaulukot/don´t know that have to ask. and other appendix material produced during the research are available at: http://www.jyu.fi/ nykykulttuuri/Kirja2010

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APPENDICES

Companies participating in the scenarios

Academic Bookstore

Atena Kustannus Oy

BTJ Kirjastopalvelu Oy

European Booksellers Federation

Edita Plc

Gummerus Publishers

Continuing Education Centre, University of Jyväskylä

Kauppakaari Oy

Kipa Osuuskunta

Kirjakauppalehti

The Booksellers Association of Finland

Kirjavälitys OY

Otava Publishing Company

Tammi Publishers

Libri-Logistiikka Oy

Osuuskunta Info

Suomalainen Kirjakauppa Oy

Finnish Literature Society

Talentum Media Oy/Kauppakaari

Valitut Palat-Readers Digest Oy Ab

WSOY

Interviews

Elina Ahlbäck, Publishing Manager, Children's Books and Young Adult Fiction, WSOY

Jyri Ahti, Senior Vice President, Business Development, WSOY

Olli Arrakoski, Chairman of the Board, Tammi,

Mark Bernstein, Chief Scientist, Eastgate Systems, Inc.

Richard Curtis, Richard Curtis Associates, Inc.

Seth Godin, writer

Juha Hakala, Helsinki University Library

Heikki Huhtanen,

Kari Huju, Managing Director, Kirjavälitys Oy,

Eeva-Liisa Jokela, content producer, Meteori,

Kimmo Jokinen, researcher, University of Jyväskylä

Tetta Jounela, Project Manager, Uusimaa R&D Centre

Riitta Junninen, Managing Director, Meteori

Raimo Jussila, Chairman, Association of Finnish Non-Fiction Writers

Leena Kirstinä, professor, University of Jyväskylä

Sirkku Klemola, Foreign Rights Manager, WSOY

Hannele Koivunen,

Hannu Laukkanen, Senior Vice President, Educational Development, WSOY

Tuija Lehtinen, Chairman, The Finnish Union of Authors Writing for Children, Youngsters and Young Adults

Eila Mellin, Foreign Rights Manager (Selling), Otava

Valtteri Niiranen, director, Viestinnän Keskusliitto

Tuula Pelkonen-Tiri, Service Manager, Kirjavälitys Oy

Antti Reenpää, Managing Director, Otava

Touko Siltala, Literary Director, Senior Vice President, General Lite-
    rature, WSOY

Ahti Sirkiä, Managing Director, Gummerus Kustannus Oy

Doris Stockmann, Chairman, European Booksellers Federation

Liisa Uusitalo, professor, The Helsinki School of Economics

Jukka Vahtola, Publishing Director, Otava

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