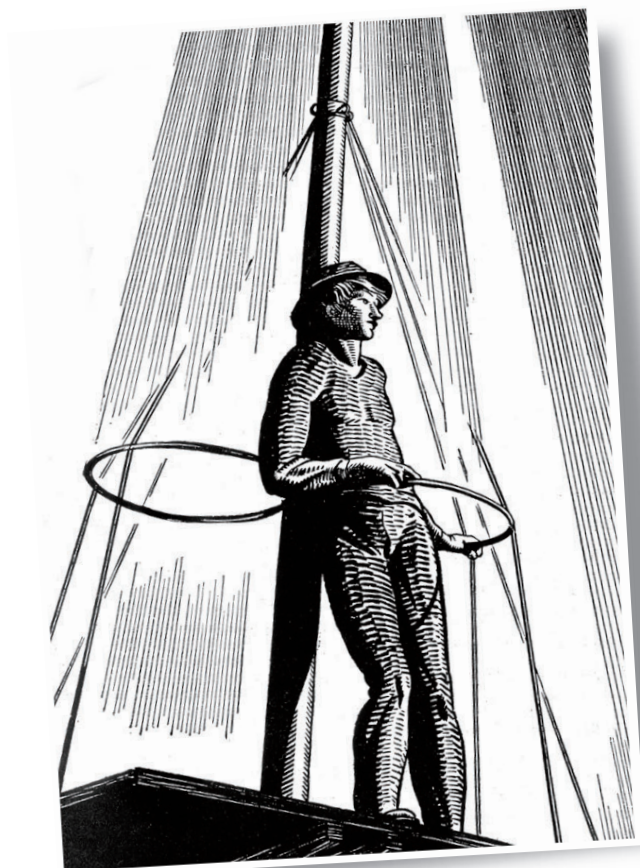


# The Long Voyage Home



## 果てなき航路

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# Rediscovering publishing in the age of the network

President, Voyager Japan, Inc.

Masaaki HAGINO

## ❖ Roots I refuse to forget

Even now I sometimes stop and wonder what led me into electronic publishing. Certainly I did not start out buoyed by any grand dreams, or great confidence. Rather, I had been searching for an escape from conventional media and its ruthless realities when I came across digital technology, waiting for me there in the uncharted wilds into which I had entered. I was not an engineer; I did not understand the workings of the technology, had no idea what made it cutting edge. I merely took hold of the simple hope it offered, in much the same way someone needing to survive might grasp a plow and hoe, or nails and a hammer.

The first pamphlet my colleagues and I put out after starting Voyager Japan declared, “Somewhere in the world, someone wants to read your book.” To reiterate what I wrote then, in slightly adapted form:

Electronic publishing was born to answer the hope of those who believe that someone, somewhere, is waiting for their book. It was born to assuage the disappointment of those who sorrow realizing their book will not reach many others. We abandoned the great human inventions of paper and printing to make the hard choice of reading on cold, unfeeling machines because we could not forsake letting voices be heard even when they had no commercial potential. The world may not embrace all the creative human endeavors that are put before it, but even what is cast aside contains things that cannot be forgotten. Our mission at Voyager is to carry those messages by any and all means possible. That is our reason for turning to the new technology.

Moveable type was also but a crude and fledgling invention when it was introduced five centuries ago. The humanists of the Renaissance loved their parchment and hand-copied manuscripts and disdained printed books. Print publishing at the time was indeed a meager tool,

but it was nevertheless one demanded by those people firmly dedicated to bringing new books into the world. Even in those unformed early years, the faith that a flourishing print culture would one day come into being was already undeniably there.

We humans value communication by language and desire to manipulate it to the utmost of our skills precisely because it is the means that comes most easily to us. From the countless available words that swirl around us like stars in the night sky, we have no trouble plucking out the ones we need to say what we want to say. No other tool we have yet been given holds such powerful, such endless possibilities. At Voyager we propose to make the new ebook technology serve the purposes of language and freedom. Doing so will surely bring vast changes. These changes will not be about devices or other technology, but rather about closing as much as possible the gap that now separates the realms of reading versus creating what people read. All readers are equally potential authors seeking to give their own testament to the times they live in. Our hope is for everyone to be able to express this part of themselves, as a natural outgrowth of being human. In that sense,



This Voyager Japan pamphlet from the early 1990s opens with a declaration headed “Somewhere in the world, someone wants to read your book.”



Novelist Toson Shimazaki self-published *Hakai* in 1905 as the first work in his private imprint, Ryokuin Soshō. The frontispiece is by the artist Kiyokata Kaburaki.



electronic publishing is a tool waiting to benefit all those in the midst of grappling with the struggle called life.

In the opening pages of his novel *Hakai* (The Broken Commandment), Toson Shimazaki acknowledges two men who helped finance the work's publication:

This book came into the world through the generosity of Keiji Hata in Hakodate and Takeshi Kozu in Shinano. On this day, having concluded my writing, I dedicate my tale to these two benefactors.

Such a statement would obviously have been unnecessary had the novel gone through a commercial publisher; it is there because Toson issued it himself under his private imprint, Ryokuin Soshō. On the day the books arrived from the bindery, or so the story goes, the novelist accompanied a loaded cart distributing the copies himself. No doubt along the way he helped push the cart forward as well.

The anecdote reminds us that the dawn will never come about on its own, not at least in this new era of publishing. Whether push or pull, we need to consciously pioneer our own way.

### ❖ “Year one” for Japanese ebooks: Did anything change?

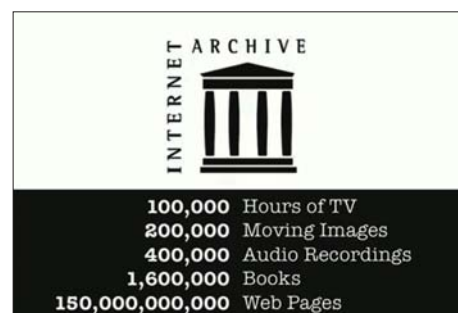
The above-described aspirations with which we at Voyager entered digital publishing—the indelible mix of hope and disappointment that prompted us to seek that world—are things I am convinced we must never let go from our hearts. In Japan, several high-profile business breakthroughs caused 2010 to be touted as “year one” of electronic publishing. But did anything actually change in those twelve months, when we think in light of the visions for the new publishing we have been keeping alive these long years? True, ebooks sold relatively well. That, however, only says that readers spent

money on ebooks, and not that they gained new possibilities for participating in the medium. The only things that really advanced are the setups for getting people to open their wallets.

Yet even these setups hardly make it easy for readers to register, let alone buy. Their ever-so-fancy systems are endlessly crashing or being invaded by hackers. At the same time, digital rights management (DRM) protections are preventing just as many people as ever from being able to read what they have bought; the more these protections are strengthened, the more ebooks will become subject to control by systems dominated by only a few vendors. It's the same as paying money to own a book but having it come dragging ropes and chains—only you can't see them.

The Internet Archive is a nonprofit organization based in San Francisco that aims to build an archive for the digital age. As part of promoting digitization of information resources, the group participates in electronic publishing including through its Open Library project, which makes mostly public-domain publications available on EPUB, MOBI, DAISY, and PDF, among other formats. When asked in an interview about DRM and ebooks, organization founder Brewster Kahle had this to say:

We looked at the people who were downloading and borrowing ebooks from the Internet Archive, and borrowing books through the Open Library site, and, of the people that found an ebook they wanted to borrow, [already] had [their local] library card, logged in, clicked to get the download going, of the people that got that far, less than half of them successfully got the book to launch. This is using Adobe Digital Editions software, which is free and pretty good [in terms of DRM]. That's an awful lot of frustrated readers. I think we have to do security differently. It's one of the things I like about books in browsers. It will always be possible to steal a



The Internet Archive seeks to preserve the entire range of cultural artifacts available on the Internet, from photos and moving images to audio recordings, books, and web pages.

library book, and the diligent will do it. But the way we're doing security now just makes it difficult for readers.

Three components need to be provided for readers to gain access to ebooks: devices for reading (i.e., hardware), ebook content (software) in the appropriate device formats, and vendors for distributing that content. The components may exist separately or in tandem. Looking around at the ebook market in Japan, we can therefore see major corporations in the three fields rushing to launch new companies or form partnerships as all—hardware, software, distribution—vie to gain the upper hand. These ventures are premised on the Internet—on its existence as a basic and widely available infrastructure. And indeed, if we think more deeply, the Internet more than anything else deserves to be focused on as *the* key digital-publishing resource belonging equally to every member of society.

Much ink has been spilled over the latest ebook news, and numerous devices have come onto the market along with various systems of distribution and sale. The parties behind these enterprises may believe they are putting the customer first. Yet the reality is that they all fail to see readers as anything more than purchasers. Despite the switch from paper to digital, control of publishing continues to lie in the same old hands, with readers being fed novels and manga from sure-selling authors that they are expected to shell out for, but nothing else. There is no leeway whatsoever for readers themselves to participate.

Readers, however, have a role to play beyond buying books. Not merely an audience for others' works, they are also authors with their own stories to tell. The only difference between them and "professional" writers is that as an anonymous member of the public the average reader has a



The author (right) shakes hands with Internet Archive founder Brewster Kahle at the organization's headquarters in San Francisco. In 2010, Voyager entered into an agreement to join the Internet Archive's work to establish a desirable electronic-publishing infrastructure.



At the May 2011 BookExpo America in New York, Amazon.com showcased its strategies for supporting indie publishing by new authors.

somewhat more modest voice. Unless one is famous it is difficult to make books sell, which explains why the market today is inundated with titles by popular authors, not to mention television stars and celebrity athletes. In the scramble for bestsellers, the true purpose of publishing—that of empowering minority voices—seems to have been all but forgotten.

Recognizing the trap into which print publishing has fallen, will digital publishing, too, only repeat the same mistake? Of all the ebook publishing and vending projects introduced by big-name Japanese corporations to so much fanfare during "year one," in my opinion not a single example overturned the premises of the old order or presented a vision for what digital publishing truly means for readers.

Of course, people are perfectly free to make money as they wish; no one can stop them. That is why readers and their allies need now more than ever to put their resources together in defense of their own cause.

## ❖ Ebook formats belong to everyone

Each ebook device supports one or a few formats. Each ebook (i.e., content package), then, needs to be readied in a format corresponding to its target device. Many different formats have been developed over the years, Voyager's dotbook (.book) among them.

Today the world is moving toward a shared and standardized format for ebooks. This is part of the process of endowing ebooks with universality, a quality they must gain if they are to spread and initiate a true dawn in the market. In that context, the time has clearly come for our company to also push .book along to the next stage, notwithstanding the solid reputation the product has enjoyed for its Japanese-language display capabilities since it was introduced in the early days of electronic publishing. We no longer live in an age when individuals or companies can draw proprietary boundaries around digital publishing, which is a social resource belonging

to all. Thus .book will expand its scope to match the world move toward universality. Having reached the end of its original goals, it will assume the new task of taking electronic publishing to the next horizon.

EPUB3 has so far been the most visible of the international attempts to establish a standard ebook format. It is still too early to say whether EPUB3 will in fact become the standard. What can be said, though, is that even if it is replaced, its attainments will definitely be acknowledged and reflected by what follows, seeing as EPUB represents the culmination of fervent efforts by participants from all around the world to negotiate a consensus.

Those participants include, from Japan, the Electronic Book Publishers Association of Japan (EBPAJ), the Japan Electronic Publishing Association (JEPA), Sony, Dai Nippon Printing, Toppan Printing, Sharp, Impress, Infocity, East, and Voyager. The members from outside Japan, too, cover the entire range of major ebook organizations and businesses from throughout North America, Europe, and Asia. The roster alone is enough to give a measure of the impact that the direction EPUB takes will have on the ebook world.

Meanwhile in Japan, the three ministries of Internal Affairs and Communications (MIC), Economy, Trade and Industry (METI), and Education, Culture, Sports, Science and Technology (MEXT) have responded to world trends by jointly calling on ebook-affiliated bodies to come together into a forum to discuss industry concerns. One outgrowth of these discussions has been the Ebook Interchange Format Standardization Project.

Japanese publishers are already amassing a considerable store of digital files of their publications. The aim of the format standardization project is to streamline this data and



Yoshinobu Noma, president of the Kodansha publishing company and representative director of EBPAJ, delivers a keynote speech at the May 2011 IDPF Digital Book conference in New York, where the International Digital Publishing Forum released the final draft of EPUB3.

minimize format differences within Japan so as to smooth the way toward eventually guaranteeing compatibility with the world standard as currently represented by EPUB. Voyager has accordingly been working within the project to develop a Japanese ebook interchange format, already clearing many goals in the process. By applying this format to their existing files, publishers can rest assured their data will never turn incompatible. The format of course helps convert .book to XMDF (another major Japanese ebook format developed by the Sharp Corporation) and vice versa, while also enabling both to be switched to EPUB3. No matter what is adopted in the end as the world standard, the tools are there to meet it immediately. The next issue to be addressed, then, is what reading system should be used to display content standardized through EPUB3 or other common international format.

## ❖ Toward Books in Browsers

Until now reading systems have been developed as applications for specific hardware devices or operating systems. They are customized to those environments, and hence belong to what are called “native apps.”

Native apps for Apple and Android, to give two examples, are each based on entirely different technology. Programming apps for multiple devices demands significant time and energy. But as long as certain pieces of hardware dominate the market, and riding on their success brings good sales, everyone so far has been all too willing to put up with their requirements through sheer force of labor. Indeed, we all seem to be under the illusion that being able to do so somehow proves our capability.

Once a piece of hardware finds success, along with its apps and the outlets vending content for those apps, the parties behind the enterprise will inevitably grow aggressive. Having become the “winners,” they will begin censoring content, revising fee schedules, and otherwise serving their own interests while placing greater and greater restrictions on users.

Can freedom of publishing really survive under such circumstances? That question has long troubled those of us in the ebook industry. Many have therefore joined in the quest to lift electronic publishing as quickly as possible to the next level, away from a proprietary environment gripped by a few businesses to one where everyone in society can share and join hands without borders.

Among the groups of people most alive to this issue are those seeking to connect electronic publishing to “social reading,” a form of communicative reading that lets users take advantage of ebook functions such as excerpting and margin notes to share thoughts about a book with a specified or unspecified set of fellow readers. The amazing spread of social media like Twitter and Facebook leaves no doubt that the digital reading experience, too, will become linked to such modes of social communication. For social reading to be true to its name, books need to be viewable online on a web browser, since everyone must be able to share them totally unhampered by walls or restrictions. A web browser guarantees that shareability.

This dimension has turned the spotlight on HTML5-based reading systems, which support the latest standardized web technologies. The newest web standard, HTML5 comprises a cluster of resources including cascading style sheets (CSS) and JavaScript. These technologies incorporate the Internet community’s shared accumulation of experience handling issues like accessibility, security, and compatibility. They moreover do not belong to any one enterprise, but are free and open for everyone to use.

Once reading systems become standard equipment on web browsers, enjoying ebooks will become just as easy as accessing the Internet. Readers will no longer need to worry over which hardware to use, because every choice will carry a web browser. Whether one is reading on an iPhone, Android, or Kindle, the text will be automatically optimized for display on that browser. All this promises a lot less frustration for



SocialBook is a social-reading platform currently being developed by partners from the United States, Europe, China, and Japan, including Voyager. Reading is shifting today from page to screen. The SocialBook project was launched in the belief that putting our members’ experience and expertise toward exploring the necessary concerns is the fitting next step to our two decades of involvement with electronic publishing.

both readers and publishers.

Such browser-based reading systems are known as “Books in Browsers.” Many examples are already beginning to appear in North America.

## ❖ Digital publishing, for whom?

Asked what publishing should be in the digital age, I have always stressed that it should be something people encourage and trust themselves to take into their own hands—that no one else is going to do the work for them. Now more than ever is the time for everyone to passionately and energetically engage with the new world of publishing. This isn’t as complicated as it sounds. People can begin simply by acting on what they now most want to say and pass on to the rest of society. That element—the *what* of writing—is and always will remain the be-all and end-all of publishing, digital or otherwise. We at Voyager, in turn, will continue to challenge ourselves to discover how we can assist people in their quest. Of course, we are not so ingenuous as to fail to imagine that there will be things we can and absolutely cannot do. Even so, our hope is to be responsible for a publishing medium that may not be very flashy, but is down-to-earth, affordable, flexible, resilient, and able to stand close to ordinary people as they exercise their modest everyday resourcefulness.

In closing, I would like to introduce one ebook written by a man who passed away following fifty years as a movie cameraman. The foreword I wrote for that work puts a personal face on the kind of people I believe digital publishing is there to serve:

On December 16, 2010, Hisahiko Fukui passed away, although the news did not reach me until a while later.

I received Fukui’s manuscript for this book about two years before his death. I had met him at a party, where he noted to me somewhat self-effacingly that while what he had written might seem a little too specialist and one-sided, it was still his attempt to express the world he had known in his own words. The computer-typed manuscript arrived in due course. I did not get around to having it published, though, and then came the news of his death.

Having worked in the movie industry from my twenties to mid-thirties, I myself know many professionals in the field—“film men,” to borrow Fukui’s phrasing. One by one over the past few years these aging former colleagues

have been taking leave of the world. Many before they die endeavor to leave some testament behind, fumbling for the right words, struggling over the unaccustomed task of piecing them into prose. Although versed in the art of making images sing most eloquently, in writing these men evidence an almost adolescent awkwardness. Still, the earnest emotion behind their words comes through for all to see; their prose shines with a wondrous innocence that stems if anything from their youthlike inexperience. How can society be made to open up greater chances for these and other now-unheeded voices to be heard? I urge every one of you to help find the answer. My fellows and I, too, pledge to join in the effort.

All this grand talk, however, has not kept me from wasting time and preventing Fukui's work from reaching fruition before it was too late, for which I must apologize. To him I sincerely say I'm sorry. And to you, the readers, I offer this tardy fruit in the hopes you will take a gentle taste.



*Katsudoya gojunen* (Fifty Years as a Film Man), cinematographer Hisahiko Fukui's remarkably personal account of living through the declining years of Japanese moviemaking, unfortunately became his last work. Available in Japanese for 300 yen plus sales tax at the Risoh Shoten ebook store (<http://voyager-store.com/risohshoten>).

NETTOWAAKUJIDAI NO SHUPPAN SAIHAKKEN

Translated by Chikako IMOTO

# What will change with EPUB3?

Development Division, Voyager Japan, Inc.

Toshiaki KOIKE

## ❖ The development of electronic books in Japanese

### Voyager's ebook

Beginning last year, we frequently started hearing the term “The First Year of the Ebook”. But the Japanese electronic book has a much longer history than that. Voyager’s “dotbook(.book)” and SHARP’s XMDf both have nearly ten years history. And, this history is not just one of viewer and format; it is also a history of publishers engaged in electronic publishing.

Voyager had its start in electronic publishing with the ExpandedBook beginning in 1993. The ExpandedBook of this era was based on the Apple Macintosh hypercard software. Since it displayed text only horizontally, it was not entirely appropriate for Japanese books, but it was a first step in reading digitized books via a computer screen.

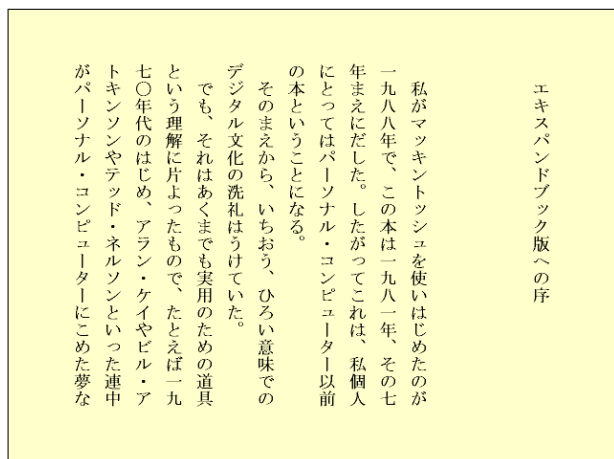
Then, in pursuit of particular Japanese textual features such as vertical text display, *ruby* pronunciation indicators, and Japanese punctuation marks, Voyager released the

ExpandedBook Tool Kit II in 1995. In this same year, the Japanese publishing house Shinchosha released the Shinchosha 100 Book Series (Shincho Bunko no Hyaku Satsu) using the ExpandedBook software. At the time, the standard was a 13 inch, 72dpi, 640x480 pixel display, and so the design was for this type of monitor, which could display not only ebooks, but any kind of multimedia content. But, a change was soon to come: the profusion of larger screens and the internet.

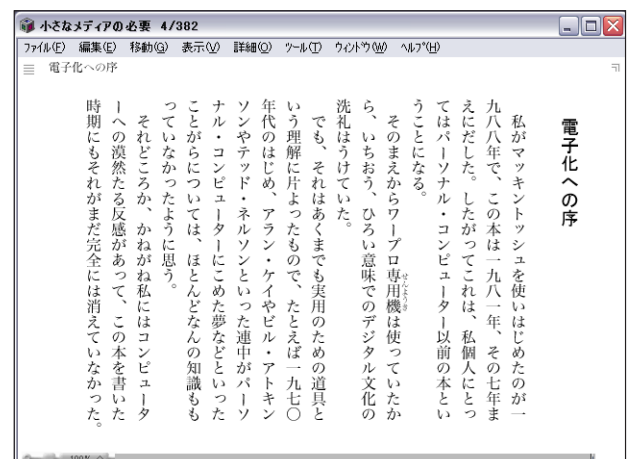
### Text reflow

Recently, the terms text reflow and fixed layout have come into circulation. Reflow describes how, in addition to changing the window and font size, a page itself can be changed, altering the number of lines on the page, or the size of the letters on a single line. Fixed layout refers to the idea of maintaining the same content regardless of page size, similar to a PDF. As screen sizes change, text reflow in digital publishing has become essential.

With this in mind, Voyager’s viewer application, T-Time and the digital publishing tool .book was created to meet this need. The .book application can meet both reader and



The Need for Small Media, published with ExpandedBook



The Need for Small Media, published with .book

publisher needs.

Ebooks, which use media entirely differently and have the possibility of text reflow, are completely different from printed books. What, then, is the best way to display content? Through trial and error, new viewers, formats, and content have developed based on the possibilities of text reflow, but still incorporating the layout principles of paper books.

## ❖ Japanese ebook interchange format

### Japanese ebook interchange format standardization project

Tens of thousands of titles were created with .book and XMDF. The term ebook has spread, and the market has expanded, but, as sales have increased, creating for different formats has become an issue. With this in mind, the Japanese Ministry of Internal Affairs and Communications, the Ministry of Education, Culture, Sports, Science and Technology (MEXT), and the Ministry of Economy, Trade and Industry (METI) promoted the Ebook Interchange Format Standardization Project as part of its project: Discussion on Developing the Practical and Profitable Use of Electronic Publishing in a Digital Society.

### Using existing modes of Japanese language publication

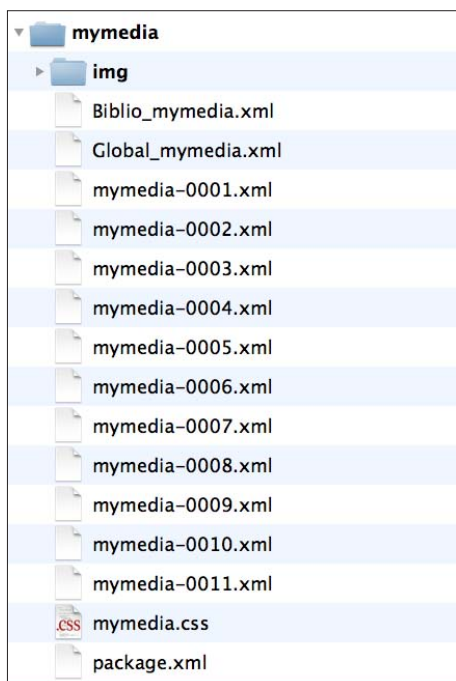
This project is of note because a large body of publisher data on ebooks was analyzed based on actual tests, and this feedback on the use of formats was used to increase precision.

As stated earlier, existing Japanese electronic publishing was the result of trial and error. There were attempts to make electronically published content appear as much as possible like print publishing. Even if it could not appear exactly the same, people wanted to be able to markup content the same way as before. Ebook interchangeable format was created with that in mind. With the interchangeable, generic format, one can move between the delivery (reader's format), in which "noise" such as markup and other information has been removed, and a format that preserves various information, including markup.

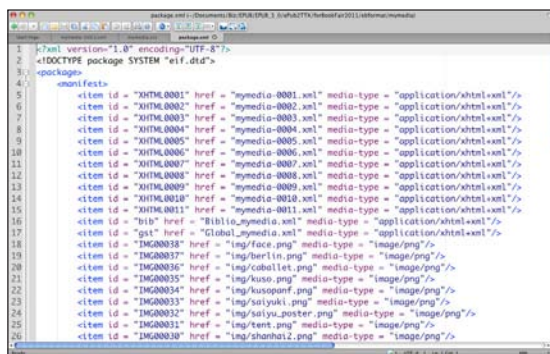
### Ebook interchange format

Ebook interchange format was intentionally designed for interchangeability; it is not a delivery format, and it is different from either .book or XMDF. Depending on widely used technologies, like XHTML or CSS based notation, it is possible to easily change formats. On the other hand, it is possible to add other capabilities not available with XHTML

#### ■ Ebook interchange format



"Interchange Format" composition of files and folders



"Interchange Format" package.xml



"Interchange Format" content document

or CSS. In a package.xml file, this describes the configuration file (manifest) or display sequence (spine).

In terms of content document, XML files are written with XHTML-based syntax, while the styles are written with CSS-based syntax. The method for packaging (or archiving) as can be done with EPUB is not regulated.

## ❖ EPUB3

### Background of EPUB3

At this point, it is useful to consider developments around the world. While the goal of ebook interchangeable format was a generic format that was, in fact, interchangeable, EPUB had delivery (reader's format) as its intent. Of course, there are examples where EPUB was used for ebook interchange format as well. But most people expected that if they used EPUB, they could deliver content anywhere with a global standard.

EPUB is the format recommended by the standardization group IDPF (International Digital Publishing Forum), and it

was designed from the beginning to maintain the openness of HTML, web browsers or software; similarly, mobile devices and PC software can also access offline by downloading; XHTML is the standard. EPUB3 greatly expands the capabilities of EPUB2. The particular characteristics include:

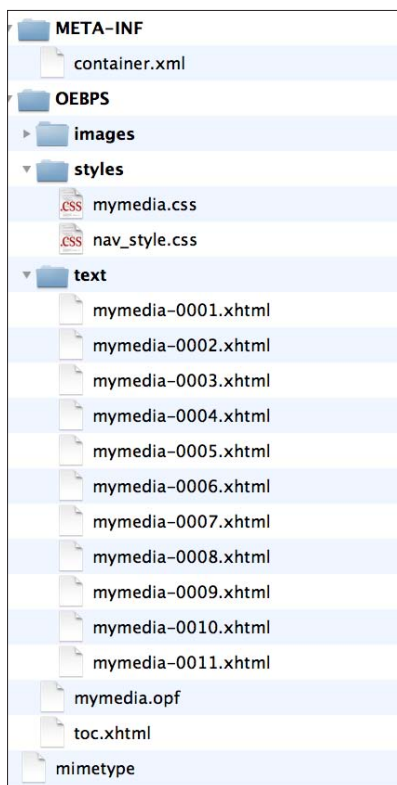
- \*Core content vocabulary based on HTML5
- \*In order to expand support of global languages, vertical text display is included as well as the ability to use *ruby* pronunciation indicators.
- \*Significantly improved metadata
- \*Support for MathML (ability to display mathematical symbols)

With the expansion of the ability to display in these ways, there is also an expansion of the following rich media:

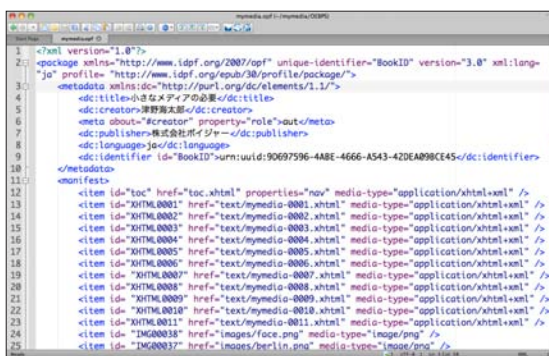
- \*Video and audio support
- \*Synchronized text and audio function
- \*SVG support
- \*Java script support

All in all, the expansion covers substantial ground. For the publishing world in Japan, the ability to display text vertically and to display *ruby* represents a noticeable improvement over

### ■ EPUB3



EPUB3 composition of files and folders. The files are archived as a zip file.



EPUB3 package file



EPUB3 content document



The Need for Small Media, published with EPUB

what had been available before.

### .book/Ebook interchangeable format/EPUB3

EPUB3 was a substantial improvement and has the potential to set the standard in the future. However, with the functions of EPUB3 just being developed, there is still not widespread use by viewers, and in Japanese digital publishing, for the foreseeable future the EPUB3 will be used with the present formats and will continue to exist. Ebook interchange format will continue to exist in that margin.

But there is no reason to stand by. By using .book, and responding to necessity, we can convert the files to EPUB3. Ebook interchange format is an important tool to effect that conversion. We can easily change the format, for example,

from ebook interchange format, package.xml, global settings, and bibliography files to EPUB3 Package Document (.opf), from style to a CSS file, and from XML file to HTML5 file.

Here, we can recommend a sensible change. “Sensible” here means that at a minimum, we should make the largest number of functions available to the greatest extent possible, in any format and on any platform. The point is, to make the structure with intention from the beginning.

Specifically, this means mentioning the following:

- \*The use of a style sheet
- \*The structure of chapter, page, and section should be clear from headings

In addition, the following items are also important:

- \*When using the same notation (that is, font size, etc.), even if various methods are used, there should always be one unified method.
- \*When user specified characters are used, create a comment using Unicode so that the information will be preserved regardless of the format.

In this way, Voyager is creating a new reading system: Books in Browsers, using .book, which includes needed features, and EPUB3 as a reading platform.

## ❖ Books in Browsers powered by Voyager

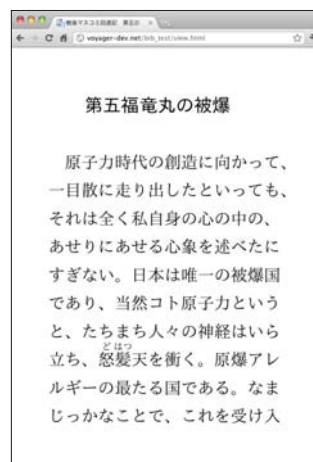
### What is “Books in Browsers”?

Books in Browsers is a general term for a reading system that uses a web browser.

### ■ Books in Browsers



A Journey Through Post-War Mass Communication, presented in vertical text



A Journey Through Post-War Mass Communication, presented in horizontal text



Screen capture of Mincho web font displayed on an Android

At Voyager, browsers have included T-Time Plugin and T-Time Crochet, which are plugins that function similarly to web-based browsers with plugins. But, when we use the term Books in Browsers, a special plugin is not required; it uses standards for web browsers, and with a regular browser installed, one can read on a PC, smart phone, or tablet. With this, a reader can seamlessly move from purchase of an ebook to reading it, all on a web browser. Viewer vendors have no need to design apps for each device, and can therefore respond to the ever increasing proliferation of platforms.

### **Voyager's Books in Browsers**

Displaying on the web generally means depending on a web display engine. Safari and Google Chrome run on the web engine called WebKit, and EPUB readers widely use those two. However, using these for reading ebooks has a downside. When changes are made in the display, etc., the text may change unexpectedly. Even if it isn't extreme, the quality can vary depending on the version.

Voyager, which has continued to pursue excellence in text display, believes that it is possible, with its T-Time and .Book products, to avoid dependence on browser engines and plugins to achieve expansion. "Canvas" is the way to do this.

Canvas is an HTML5 function, and was developed to create graphics in browsers. Using this function, text created using T-Time can be displayed using a browser. In addition, .book and EPUB3 can also be displayed.

Ebook interchange format can also be interchanged with EPUB3 in real time via a server and displayed. It can react to user needs including changing font size, window size, and moving between vertical and horizontal text display as needed, as well as text reflow and expansion.

Mincho (East Asian serif typeface) or JIS X 0213, which are used in Japanese books and are difficult to display on smart phones, can also be displayed using web fonts.

With a web browser device that can handle HTML5, the world of multimedia opens up easily, regardless of the hardware—PC, smart phones like iPhone, iPad, or Android, tablets--and regardless of the OS or retail seller. Voyager advocates this approach.

EPUB3 DE NANI GA KAWARUNOKA

Translated by Gretchen Jones

## VOYAGER TIMELINE

1998.7	"T-Time Internet Vertical Writing and Reading Method" (Hybrid edition) was released, a viewer converting HTML files into book-like text in vertical with PC.
1998.10	Adapted TTZ file, dedicated to T-Time, predecessor of dotbook (.book) file format.
2000.6	Adapted .book file format.
	Adapted T-TimePlug: .book/vertical reading and browsing system for web browsers. Made it possible for distributors to administrate the reading time on web browsers.
2000.9	".book" was adopted as the standard ebook format in the "PABURI electronic library", the collaborative electronic bookstore of 4 major publishing companies (KADOKAWA GROUP PUBLISHING, Kodansha, SHUEISHA, SHINCHOSHA Publishing).
	Opened the homepage of "Risoh Shoten" (Risoh Bookstore meaning "Ideal Bookstore"), an ebook specialized bookstore.
2001.9	Announced T-Time in WinCE/Pocket PC version.
2002.3	Cooperated with Architump. Announced "T-Break", a software that makes .book readable with "Pook", the company's Palms software.
2004.4	Announced "T-bridge", an on-demand printing system via PDF.
2005.3	Announced T-Time 5.5 with new function of exporting on-screen images.
2006.2	Implemented low-vision mode in T-Time. Made it possible for visually handicapped persons to read .book with the selective modes of size of letters, brightness reflection and magnifying glass.
2006.10	Made T-Time operate together with "Denshi-Kataribe", a talking software, which made it possible to orally read .book.
	Cooperated with CELSYS and INFOCITY. Adapted "BookSurfing", a synthetic viewer for mobile phones. Started distributing .book files changed over to files of BookSurfing format.
2008.5	Announced T-Time Crochet. Distributed .book files in installment and coded way. Realized a distributing system for high capacity contents, such as comics, that can instantly respond to users' requests regarding the display.
2008.7	Released T-Time adapted to iPhone. Started providing comic books for iPhone and iPod touch in App Store.
2008.11	.book became readable by PC-Talker, a screen reader software for visually handicapped person using PC.
2009.7	Adapted "Risoh BookViewer", an iPhone version application, to deal in .book files in Risoh Bookstore. Started distributing .book files on PC&iPhone.
2010.6	Adapted Risoh Shoten to iPad and released "Voyager Books", a viewer app for iPad.
2010.12	Opened "Voyager Store", the shopping mall including new direct management shop "altbook". "Risoh Shoten" won "Online Service Prize" in Japan Electronic Publishing Association Electronic Publishing Award (JEPA).
2011.3	"Toyo Keizai Shinpo-sha Store" opened as the 3rd bookstore in Voyager Store.
2011.5	"Gutenberg21 Store" opened as the 4th bookstore in Voyager Store.
2011.7	"Harlequin Comics Store" opened as the 5th bookstore in Voyager Store.

# Ebook for everyone!!

## Wish for reading of persons with reading disabilities

Vice Chief Director, BRC (Barrier-free documents Resources Center)

Susumu MATSUI

### ❖ Introduction

Publication technology of Gutenberg has brought many people the gospel, but for us, totally blind persons, a printed book is just a bundle of papers we can perceive only its smooth or rough touch; it is a barrierful publication we can make out no contents at all but difference of its materials.

It is not too much to say that practically it is almost impossible to realize a universal design of paper books; however, it is not so difficult to secure accessibility of ebooks. ebooks have the potential to enable those who cannot read as they like to choose one by themselves and to enjoy reading at will, like now I do at least. In this article, I will introduce the present situation, future problems and prospects of accessibility of ebooks.

### ❖ Visually impaired persons and reading

At first, how do visually impaired persons in Japan do reading? There is a history that braille libraries, public libraries, volunteer groups and other associations have made braille and talking books, and have loaned them to users for decades. Recently lending by public transmission has been available as PC and the Internet spread; you can read a book you want to read by listening on “Sapie Library” (provided by Information Service for Visually Impaired Persons) and also can borrow one by mail from the information service institute you have made a registration for.

Besides, the revised Copyright Act (especially Article 37, Section 3) which came into force on January 1, 2010 legalized copy and public transmission to users by “other methods necessary for the use of such persons with visual disabilities”, in addition to braille and reading translation; it enabled to copy more various media, too.

For a publishing company, it seems that so far we, persons with reading disabilities, have been people covered by

welfare, not customer, for who consent to braille or reading translation, font enlargement and so on are asked. However, ebooks have a possibility of evolution to a tool for single-handed reading by combination with supporting tools such as recitation by TTS (Text-to Speech), screen zoom function and braille display. If the condition that accessibility and universal design are secured is fulfilled, it is possible that we, persons with reading disabilities, can be “customer” and can emerge from the cover of welfare.

### ❖ About standard format of ebooks

To secure compatibility of ebooks, “EPUB” was settled to be the standard format; in 2007, IDPF (International Digital Publishing Forum) announced EPUB 2.0 as the standard format of ebooks. In 2008 it gained support from publishers associations of the US and the UK, and it was successively adopted by Google and Nook in 2009 and by iBooks in 2010.

As a result, EPUB became the actual standard format of ebook in the English-speaking countries. Furthermore, public draft of EPUB 3.0 in which functions peculiar to Japanese language are incorporated was revealed by IDPF in February 2011, which is expected to be the standard format in Japan.

This standard format of digital publishing is designed with a mind to accessibility from the beginning and it has been decided that EPUB 3.0 will entirely be adapted to DAISY 4.0. By the way, this DAISY was originally standardized as the international format of digital talking books for visually impaired persons by an international nonprofit organization, DAISY Consortium; recently it has progressed to accessible and universal ebook format in harmony with persons with various reading disabilities such as developmental disability, learning disability and mental disability.

Moreover, it shows how important accessibility is considered in the digital publishing world in the US that a totally blind engineer, George Kerscher, who is also secretary general of

DAISY Consortium, serves as the current president of IDPF.

## ❖ Current situation of voice-enabled ebook reading devices

Also in Japan, last year was called the first year of ebooks again after several times, and various ebook reading devices have been released one after another. And also, there are so many ebook formats now; it is necessary to standardize them as soon as possible.

Actually also in Japan, while it will have been more than a year after it was much rumored that Kindle would come like the Black Ships, the voice of expecting Kindle is heard among some of the people who hope to realize accessibility of ebooks, too.

In the US which is a developed country of ebooks, the second latest generation of Kindle, Kindle DX, had already had a text reading function by speech synthesis but it was not capable with function of reading out menu and navigation control by voice; therefore National Federation of the Blind (NFB), a membership organization of visually impaired persons in the US, and American Council of the Blind (ACB) considered that using Kindle DX in class puts visually impaired persons at a disadvantage in the aspect of information access, and declared that students with visual disabilities would be discriminated against by using Kindle, on the basis of the Americans with Disabilities Act (ADA) which prohibits discrimination based on disabilities.

As a result, while it is a thin and light ebook reading device of only 8.5mm in thickness and 282g in weight, Kindle 3 came to have TTS reading function within and to be equipped with control navigation function, though it is insufficient yet; it became capable with accessibility to some degree.

Besides, iPad and iPhone have a screen reader called VoiceOver as default factory equipment, but currently it is impossible to read iBooks by voice. Anyway, even in the US, other ebook reading devices such as Sony Reader or Nook are currently not accessible at all; future measures are being expected.

Android smartphone is lagging behind iPhone; due to DRM

of Adobe Content Server, Google eBooks cannot be read with support tools under the present conditions. As for ebook reading devices made in Japan, no terminal equipped with Japanese TTS has been released yet; future development of accessibility-secured ebook reading devices is awaited.

## ❖ For coexistence of DRM and accessibility

For whom do books exist? Even with disabilities to read, everybody has the same desire to read books. At the same time with protecting copyright from illegal copy by DRM (Digital Rights Management), it is an important issue to secure accessibility of ebook reading devices, too. Accessibility is realized by collaboration of universal design and support technologies.

It is understandable that DRM is important, but securing accessibility should be assigned higher priority; and needless to say, everyone's "reading right" is the priority. I suppose it is an urgent need to prevent construction of a system that obstructs readers' usability or accessibility and shuts out support technology by excessive DRM.

I would appreciate your cooperation to realize an environment that everyone can read ebooks.

DENSHISHOSEKI WA SUBETE NO HITO NI YOMERU HON NI NARIURU!! —DOKUSHO SHOGAISHA KARA NO NEGAI

Translated by Narumi SATO



### Susumu MATSUI

Born in 1971, in Chiba Prefecture. Now employed by Chiba Prefecture Western Library. The author of several works including "Q&A Guide Dog". (On Risoh Shoten, "Digital Picture Book: A Day of Andrew the Guide Dog" is now on sale.) He has been working on lectures about visually impaired persons and guide dogs, and on activities aimed at realization of barrier-free publishing.

# Bricklaying ten thousand public files under the blue sky

Aozora Bunko

Michio TOMITA

Aozora Bunko\* is a text archive project that began in 1997. The collection includes two types of works: those whose copyrights had expired and become of public domain; and those that copyright holders agree to make freely available while their rights still run valid.

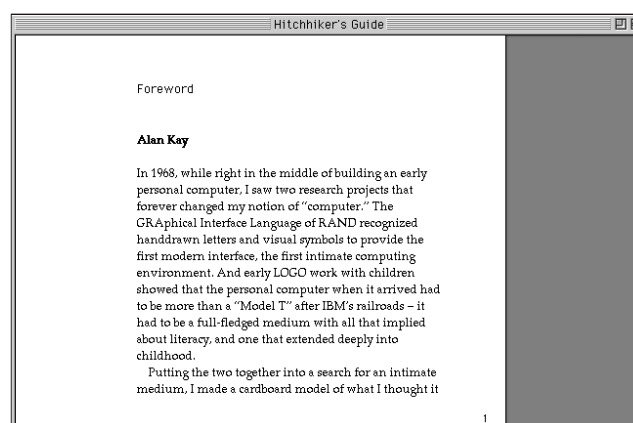
Out-of-copyright works are typed in and proofread by volunteers. “Shanghai” by Riichi Yokomitsu marked the ten thousandth (10,000<sup>th</sup>) file, archived by a total of 800 volunteers who passed the baton for this project. Voyager Japan, Inc., an exhibitor at the eBook Expo and creator of this booklet, was prominently involved in the inception and evolution of Aozora Bunko.

## ❖ Year 1990 — the first year of electronic book era

With Google Book Search, Amazon Kindle, Apple’s iPads and iPhones becoming widely acknowledged, year 2010 was marked the first year of the ebook era. But for the founding people of Voyager Japan and those who called for Aozora Bunko, however, the “first year” had happened nearly 20 years ago.

It all started out from an idea of using HyperCard, a Macintosh-based card-style information management system, to simulate the page of a book.

Voyager in the United States was exploring ways to offer unique films using high-capacity digital media and laser discs developed by Pioneer. The company conducted an experiment in the early 1990’s. They streamed text data into HyperCard, added a flip page function as reader interface, and named it ExpandedBook. By using the multimedia-compatible HyperCard, they were able to install images, sounds and videos in addition to text. With this project, Voyager started providing electronic publishing services. The company also developed an authoring system that would enable users to produce their own ebooks.



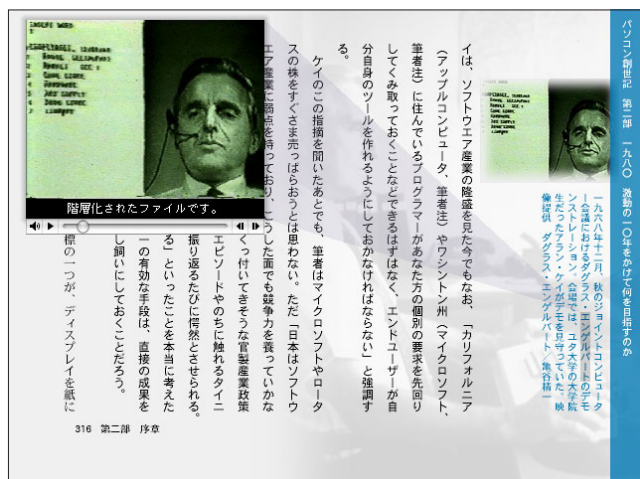
Original ExpandedBook based on HyperCard. Although it was localized to Japanese, the original typesetting functions were meager in horizontal text layout only. Yet, many were attracted to the idea to “create by yourself”.

Several people, including Mr. Masaaki Hagino who was, from the developer’s end at Pioneer exploring ways to use LaserDisk as media, responded to this movement. They established a sister company of Voyager in Japan and set out to localize ExpandedBook to Japanese.

At the time, circulation of paper books was still maintaining peak level. Yet, a certain group of “underdogs” that were in lack of footholds in publishing sought a more accessible alternative solution in digital. Being a struggling writer myself, I had hopes to leave behind my own books that had gone out of print in the form of ExpandedBook.

The first generation ExpandedBook was rather meager as platform for the Japanese typesetting system. Voyager Japan parted from HyperCard and rebuilt the entire system from scratch, completely transforming in 1995. Page size was expanded, compatibility with the typesetting system enhanced, and ingenuities to show fonts smoothly were added. The quality was so impressive that Shinchosha Publishing decided to use this system to create their “Shincho Bunko 100” on CD-ROM and subsequently sold them in series.

Prior to this, Sony developed its own ebook standards



Second generation ExpandedBook, remade to handle Japanese typesetting requirements. Became compatible with complex typesetting with vertical text layout and *ruby*. Shows the opening of an installed video.

focusing mainly on dictionaries, approached publishing houses to use the format for publishing on 8cm CD-ROMs, and began marketing readers/players starting in 1990. NEC, in 1993, launched a 3.5-inch floppy disc digital book player, which was something akin to Kindle's ancestor. In comparison to these efforts in which device manufacturers created their own standards to approach publishers, ExpandedBook was unique in that it opened up the world of bookmaking to the public.

Neither of these endeavors actually resulted in expanding the world of electronic publishing substantially, yet at that time, experiments to determine what could be done by digitizing books — for example, improving the use of dictionaries by digitalization, developing dedicated reading devices, and providing things like electronic mimeographs and other familiar publishing tools — were in fact conducted repeatedly. And in 1995, the year the new ExpandedBook was born, yet another determinant component was brought into electronic publishing.

The Internet.

Although books were digitized, when it came to delivering them at that time, they were still “objects” with strings attached. There were ways to deliver files to a closed network of PCs for each type of system, but the main circulation continued to rely on physical distribution in the forms of CD-ROMs and floppy discs. The Internet, once commercialized became social infrastructure at one stretch, made this bottleneck a history.

The circulation issue being resolved, the environment for

electronic bookstores and electronic libraries was ready. There was much excitement about both, naturally among those who were familiar with the bookmaking tool ExpandedBook.

At that time, what possessed Mr. Eiji Noguchi then at Voyager Japan was the idea of elibrary.

“If we can get files that are out of copyright, we can type in the data ourselves. We can always call for someone to work with us. There are literature and Japanese language scholars who are putting up their works on the Web. Let’s ask them if we can have access. Maybe some of them would want to post their own works. We want to make it so they are properly readable, so we should make it in ExpandedBook format and line them up. It would also be a good advertisement for the company, so we’ll ask Voyager to spare us some space on their server. It won’t cost us anything. We can start right away. Let’s just do it!”

In the summer of 1997, in a little corner of Voyager’s server, an ExpandedBook library Aozora Bunko was born. It started out with a bare lineup of five works entered by Mr. Akihiro Okajima, a faculty at Fukui University at that time.

## ❖ ExpandedBook — from library to text archive

Ebooks have multimedia and interactive capabilities. Voyager Japan could have chosen to continue pursuing functional enhancements along their conventional product line.

However, in the face of this new situation with the Internet, the company came up with an odd idea that seemed to nullify the *raison d’être* of ExpandedBook from within. T-Time emerged like a white book containing nothing.

Thanks to the Internet, ebooks were now instantly deliverable to any destination and at very little cost. On top of that, the world was brimming with attractive reading materials. Although they were not in the form of electronic books, they were certainly worth reading.

Developers of ExpandedBook began to use the ebook environment they themselves developed as whitebook to read *2channel* website more comfortably. To read websites more thoroughly, the idea was to download the content of the webpage and create a makeshift ebook out of it. This tool that diverted ExpandedBook later evolved into T-Time, with window resizable, vertical/horizontal text switchable, and text documents editable.

I am not implying that the effort to utilize the multimedia and interactive features of ebooks was “bad move” in essence. In fact, aspired to this goal many beautiful, excellent works were made during the experiment phase in the 1990s, and more will continue to appear down the road. However, to configure such ebooks we need some software platform. Personal computers continue to evolve; various trials to develop electronic devices that can be used for reading are about to begin; and environments keep changing as they come and go. In such time and place, it is virtually impossible to stick to a certain format and maintain compatibility all along. Formats can become a cage that locks up literary works, and once we lose the energy to support the new environment the works may die with us from murder-suicide.

If so, from the many possibilities that had been considered, why not focus first on text? Lining up the characters side by side and adding some layout functions are just transplants of what could be achieved on paper. Yet, the dramatic cost cut in reproduction and distribution that Internet can offer is something we can never expect with paper. The majority of expressions and knowledge that people have accumulated over the years pertain to paper books. By simply porting the contents into text and putting them up on the Internet, a door to a completely new world of books where we can access at any time from anywhere will open.

In May 2002, Aozora Bunko quit providing ExpandedBook. Instead, we pinpointed our file offerings to texts annotated with layout information. We focused on providing only two formats: text and its XHTML version, which was created by converting that text with a certain program.

Because Aozora Bunko stopped making ExpandedBook, for a while its files lost the readability and the ability to reproduce the type page. But T-Time had already proven that it was possible to take in texts from the Internet and display them neatly on the spot. If typesetting information is recorded in computer-processable form, the type pages can be reproduced on screen someday. Then, if so, among things that should be preserved we decided to focus on texts that have the least risk of getting too old to open.

Instructions on how to describe typesetting information in

the text were set forth in the “List of Annotations” page. By referring to this page, anyone can create texts in Aozora Bunko format with his/her own editor. There is a display software written for various devices that will enable users to reproduce data according to the designated vertical text layout with *ruby*. Programs to convert data into XHTML are also listed in the “Typesetting Guide” page.

What was the consequence, after 10 years, of the crucial decision to break away from a certain format and preserve text? Fortunately, you can see for yourselves on the device you are using.

After ExpandedBook, Voyager Japan adopted the dotbook (.book) format, took the “undiluted solutions” of books consisting of characters and funneled them into various devices, established a route to reproduce them into paper books, and contributed largely in stabilizing electronic publishing as an industry.

And now, they have adopted a new idea called BookServer advocated by Internet Archive to connect standard format files on the bibliographic information network, all the while pursuing their experiments around ebooks.

As I stack up more files in Aozora Bunko, I am eager to keep tab on their initiatives over five year, ten years of time to witness what kind of a new book world it will open.

\*Aozora Bunko = Blue Sky Library

AOZORA NI TSUNDA KOYU FAIRU ICHIMAN

Translated by Miki TANAKA



### Michio TOMITA

Writer and originator of Aozora Bunko. His books include “Pasokon Soseiki”, “Hon-no-Mirai” and “Aozora-no-Restart.”

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