

SUMMER SCHOOL

“DIGITAL TOOLS FOR HUMANISTS” - 2018

Digital editorship

The ebook revolution is over,
the major battles have been fought
and won, and the ebook is here
not only to stay but **to evolve**.

Nicoletta Salvatori -

Corso Editing e scritture professionali - University of Pisa

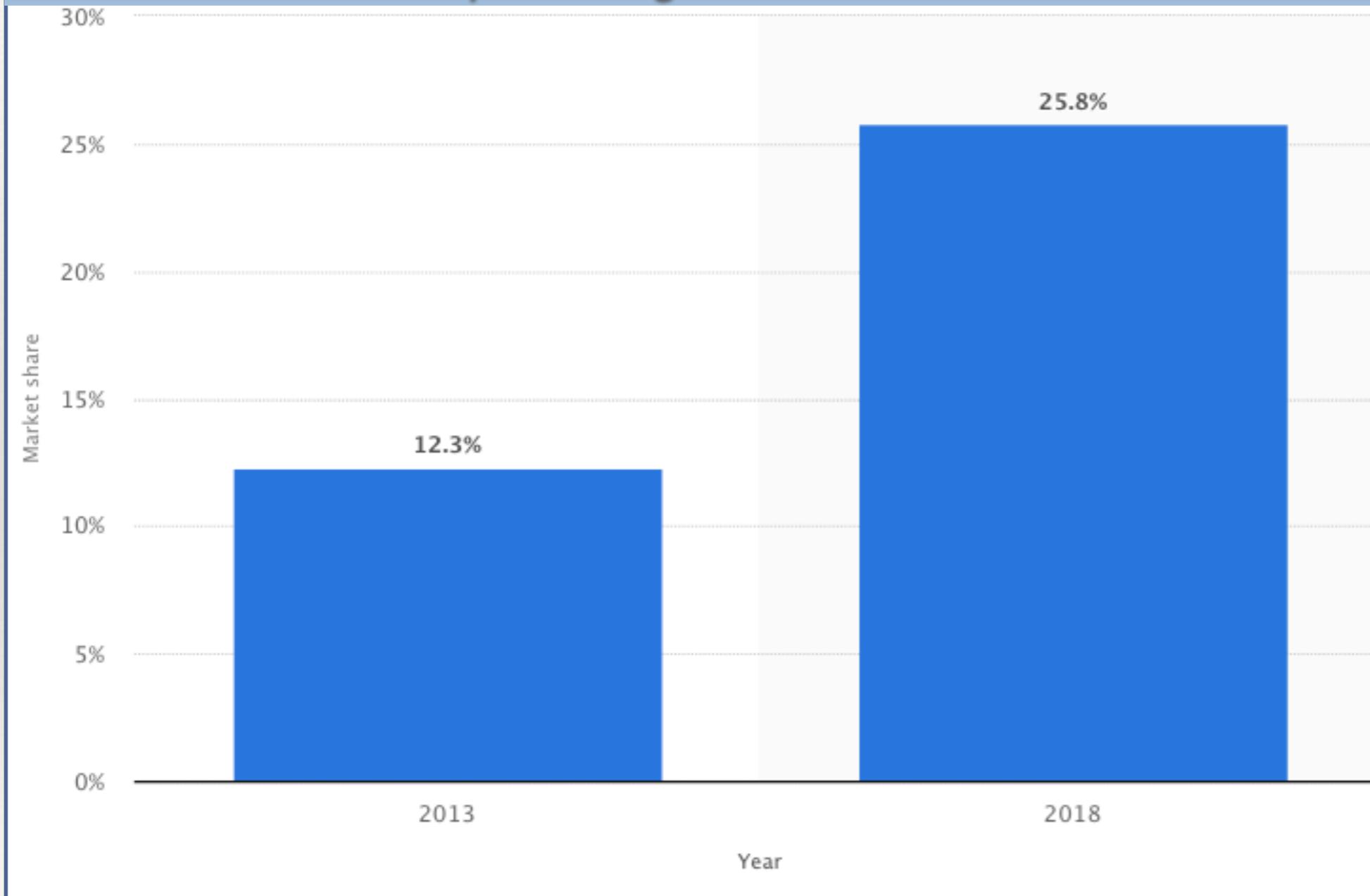
The state of art

- ❖ **Ebooks are the current expanding trend in education and publishing.** Being able to understand the trend in the eBook market will make many of the issues of creating ebooks a bit easier.
- ❖ You can read different kinds of ebooks, made for different markets and targets on different devices.
- ❖ You can have a liquid layout or a fixed layout, you can have multimediality and interactivity and even the graphic elegance once reserved to an art book or to a photographic hard cover book.
- ❖ The ebook is more and more shareable, social and flexible, with even the possibility to become an audiobook at next to no expense.
- ❖ And the most important thing is that the realization and publication of an ebook is at everybody reach, thanks to new and powerful softwares.



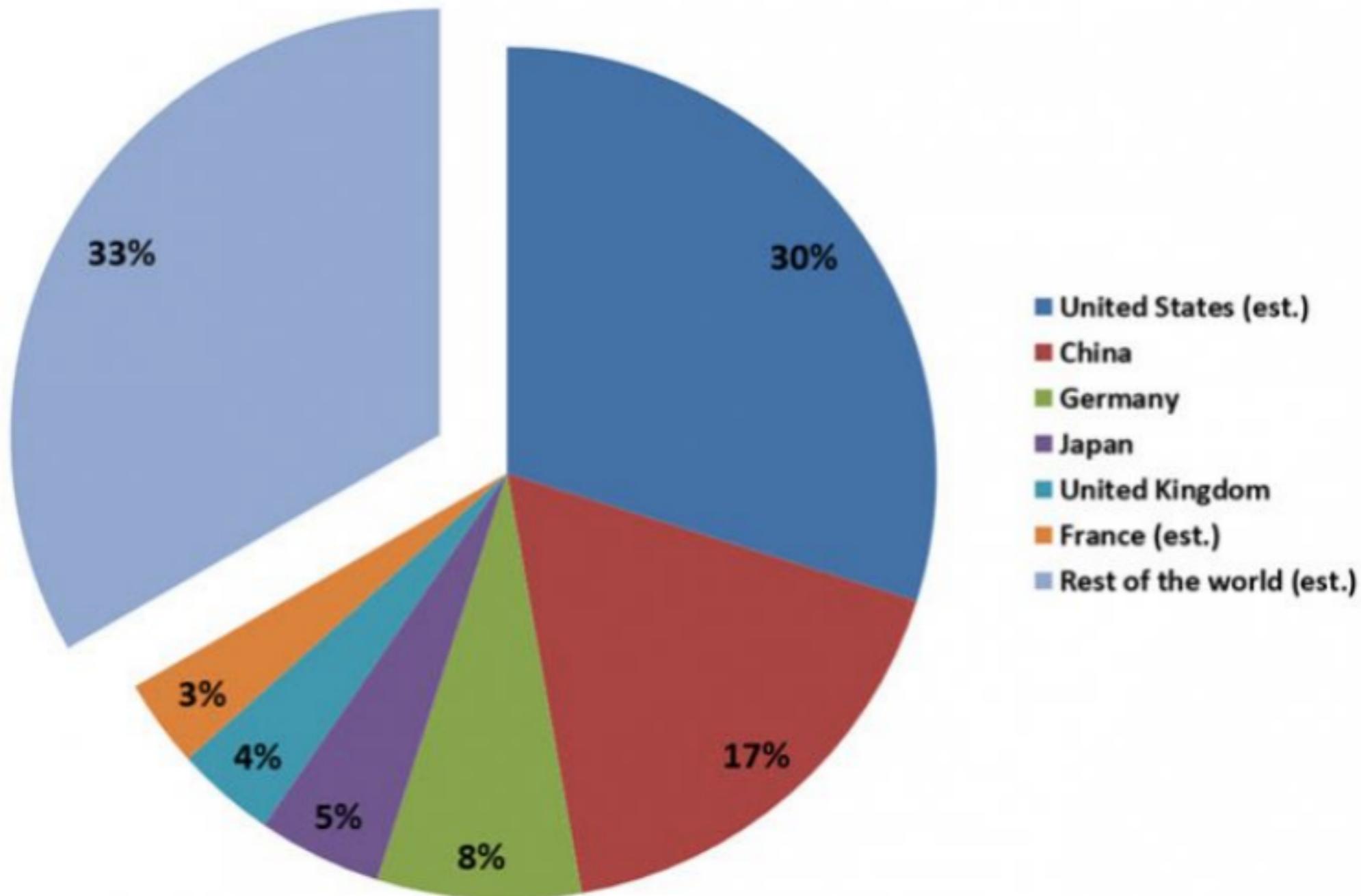
The international market

E-book sales as a percentage of total book sales worldwide



Even if the global market is growing the **Global Ebook Report** this year shows that there are so many disparate realities in world markets that a single interpretation is impossible.

Top 6 markets in % of World (2015)



Global Ebook Report 2017

In North America and the UK, ebooks quickly took a share between 15 and 25 %. In Western Europe, in the context of flat, or even declining book markets, ebooks account in most countries for well under 10 % percent of trade. Only in Germany and the Netherlands readers seem to have embraced reading on a screen.

The Italian market

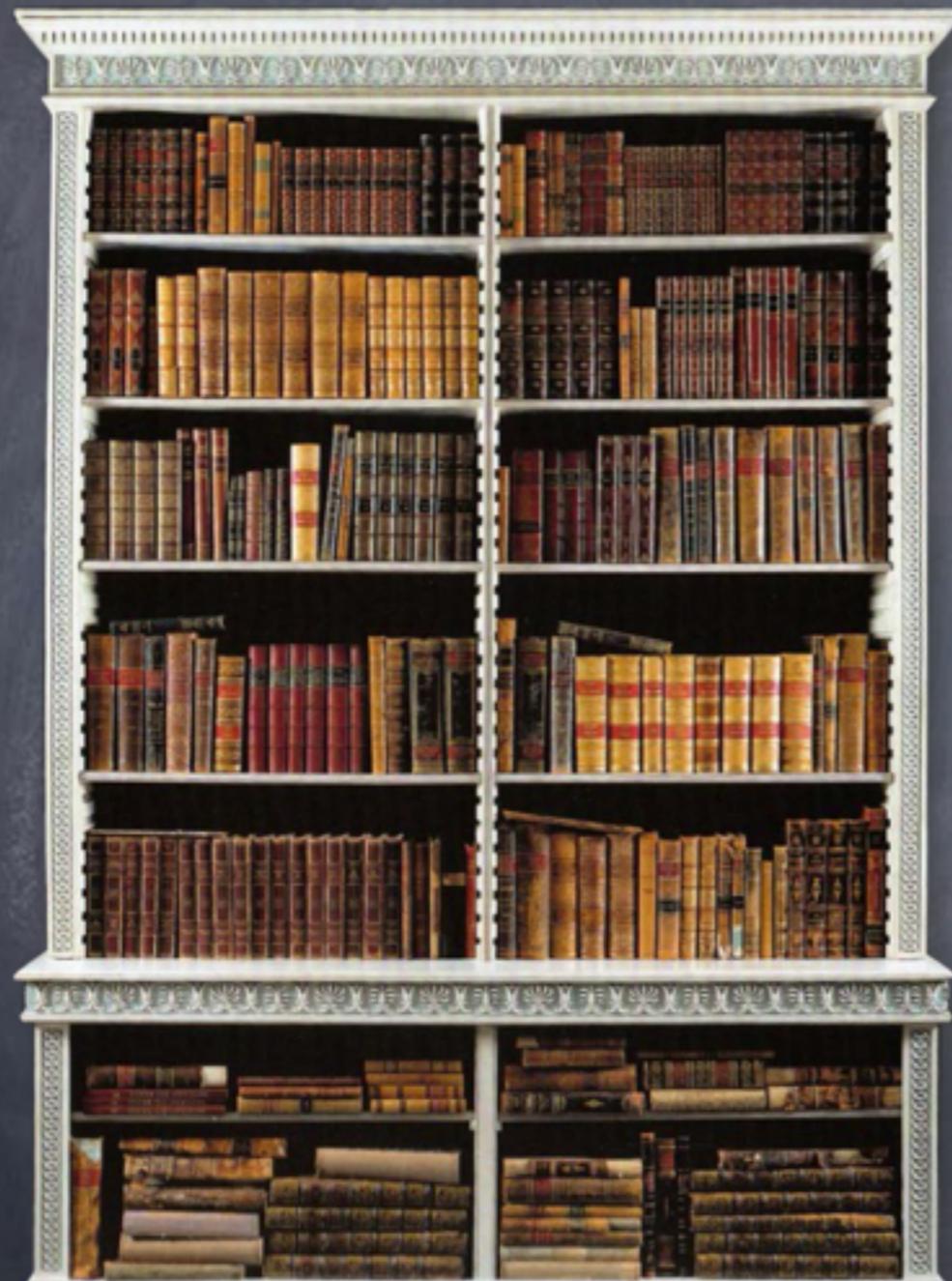
- ❖ According to the latest Report on the editorial market in Italy, edited by the Italian Publishers Association (AIE) the **book market** as a whole is having a small growth (+ 1.2%) this year
- ❖ The **e-book market**, despite having grown less than expected, is worth today more than **5% of the total**, while the digital publishing market as a whole amounts **13%** (in 2011 it was 5%).
- ❖ Sales channels have changed greatly: Amazon and the other ebook stores have taken the larger part of the sales market while large-scale retailers (supermarkets and large retailers) are falling down. The classic bookstore is still wealthy.
- ❖ Digital editions have increased of 29.6% at the end of last year.

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the e-book market in Italy reaches 63 million euros
(but 17 million euros came from self publishing digital editions)

Why ebooks are so great?



1000s of books in a tiny device







Pad 22:04 97%

Library A Dance With Dragons

THE GRIFFIN REBORN

He sent the archers in first.

Black Balaq commanded one thousand bows. In his youth, Jon Connington had shared the disdain most knights had for bowmen, but he had grown wiser in exile. In its own way, the arrow was as deadly as the sword, so for the long voyage he had insisted that Homeless Harry Strickland break Balaq's command into ten companies of one hundred men and place each company upon a different ship.

Six of those ships had stayed together well enough to deliver their passengers to the shores of Cape Wrath (the other four were lagging but would turn up eventually, the Volantenes assured them, but Griff thought it just as likely they were lost or had landed elsewhere), which left the company with six hundred bows. For this, two hundred proved sufficient. "They will try to send out ravens," he told Black Balaq. "Watch the maester's tower. Here." He pointed to the map he had drawn in the mud of their campsite. "Bring down every bird that leaves the castle."

1830 of 2047 25 pages left in this chapter

Pad 22:07 97%

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ebooks are searchable, you can add notes, highlight the text, some times past, copy and share

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"This we do," replied the Summer Islander.

A third of Balaq's men used crossbows, another third the double-curved horn-and-sinew bows of the east. Better than these were the big yew long-bows borne by the archers of Westerosi blood, and best of all were the great bows of goldenheart treasured by Black Balaq himself and his fifty Summer Islanders. Only a dragonbone bow could outrange one made of goldenheart. Whatever bow they carried, all of Balaq's men were sharp-eyed, seasoned veterans who had proved their worth in a hundred battles, raids, and skirmishes. They proved it again at Griffin's Roost.

The castle rose from the shores of Cape Wrath, on a lofty crag of dark red stone surrounded on three sides by the surging waters of Shipbreaker Bay. Its only approach was defended by a gatehouse, behind which lay the long bare ridge the Conningtons called the griffin's throat. To force the throat could be a bloody business, since the ridge exposed the attackers to the spears, stones, and arrows of defenders in the two round towers that flanked the castle's main gates. And once they reached those gates, the men inside could pour down boiling oil on their heads. Griff expected to lose a hundred men, perhaps more.

They lost four.

The woods had been allowed to encroach on the field beyond the gatehouse, so Franklyn Flowers was able to use the brush for concealment and lead his men within twenty yards of the gates before emerging from the trees with the ram they'd fashioned back at camp. The crash of wood on wood brought two men to the battlements; Black Balaq's archers took down both of them before they could rub the sleep out of their eyes.

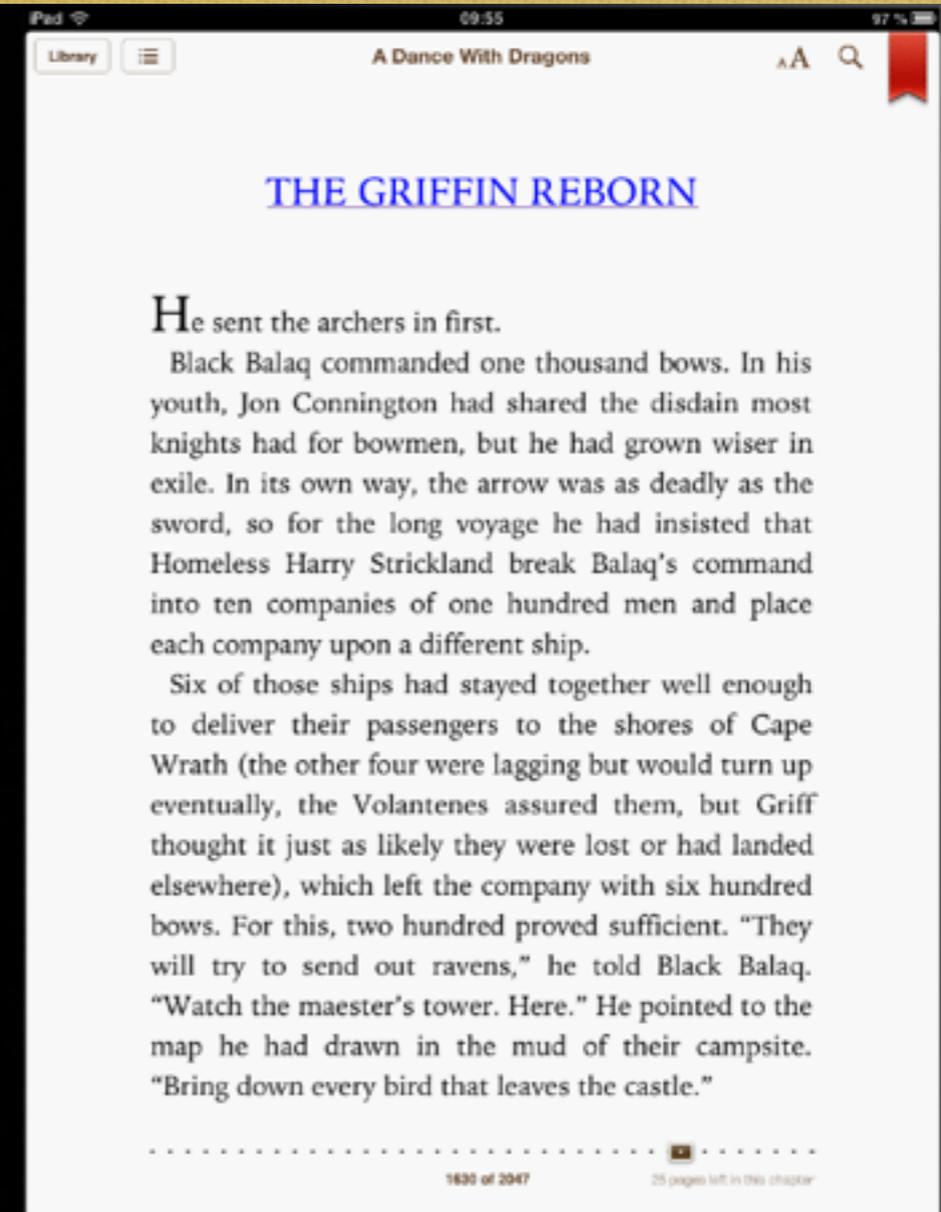
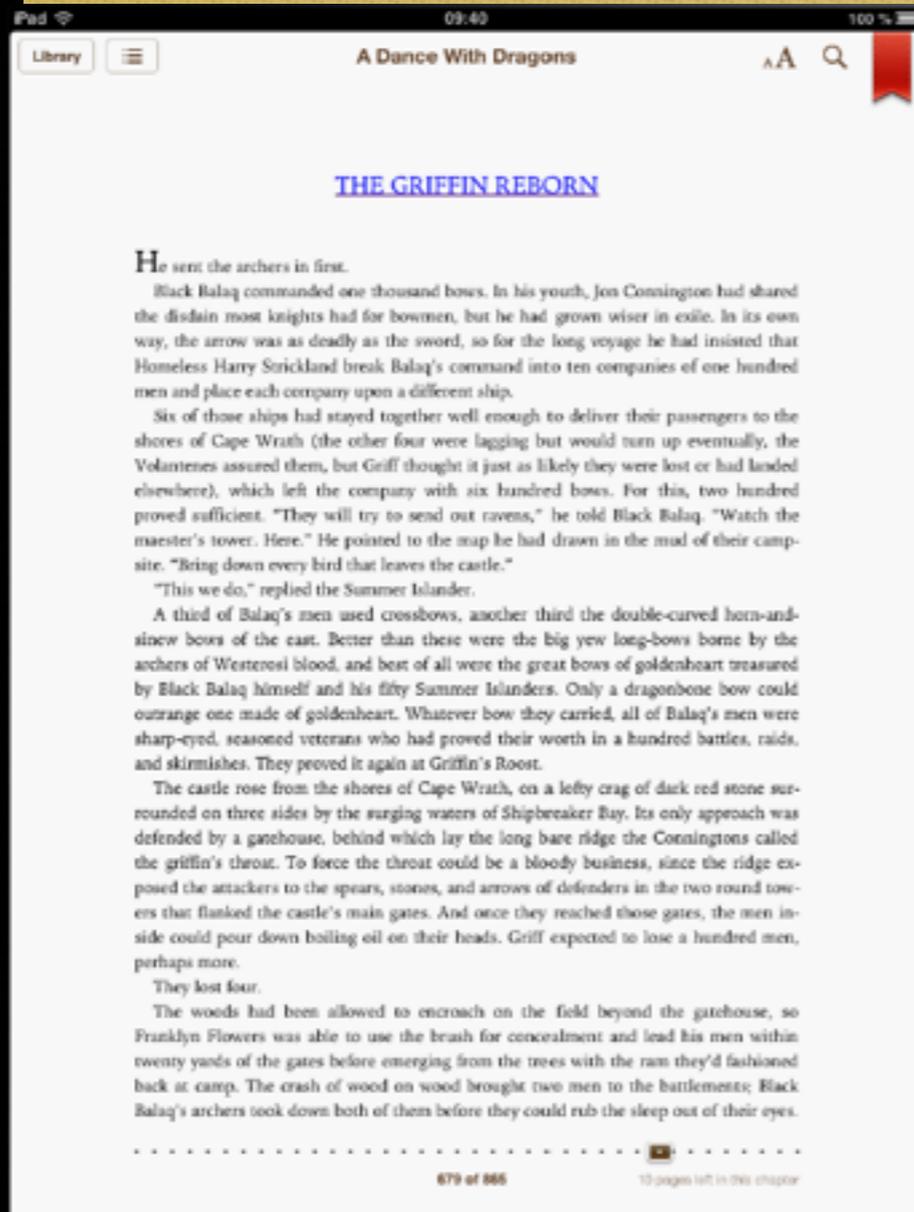
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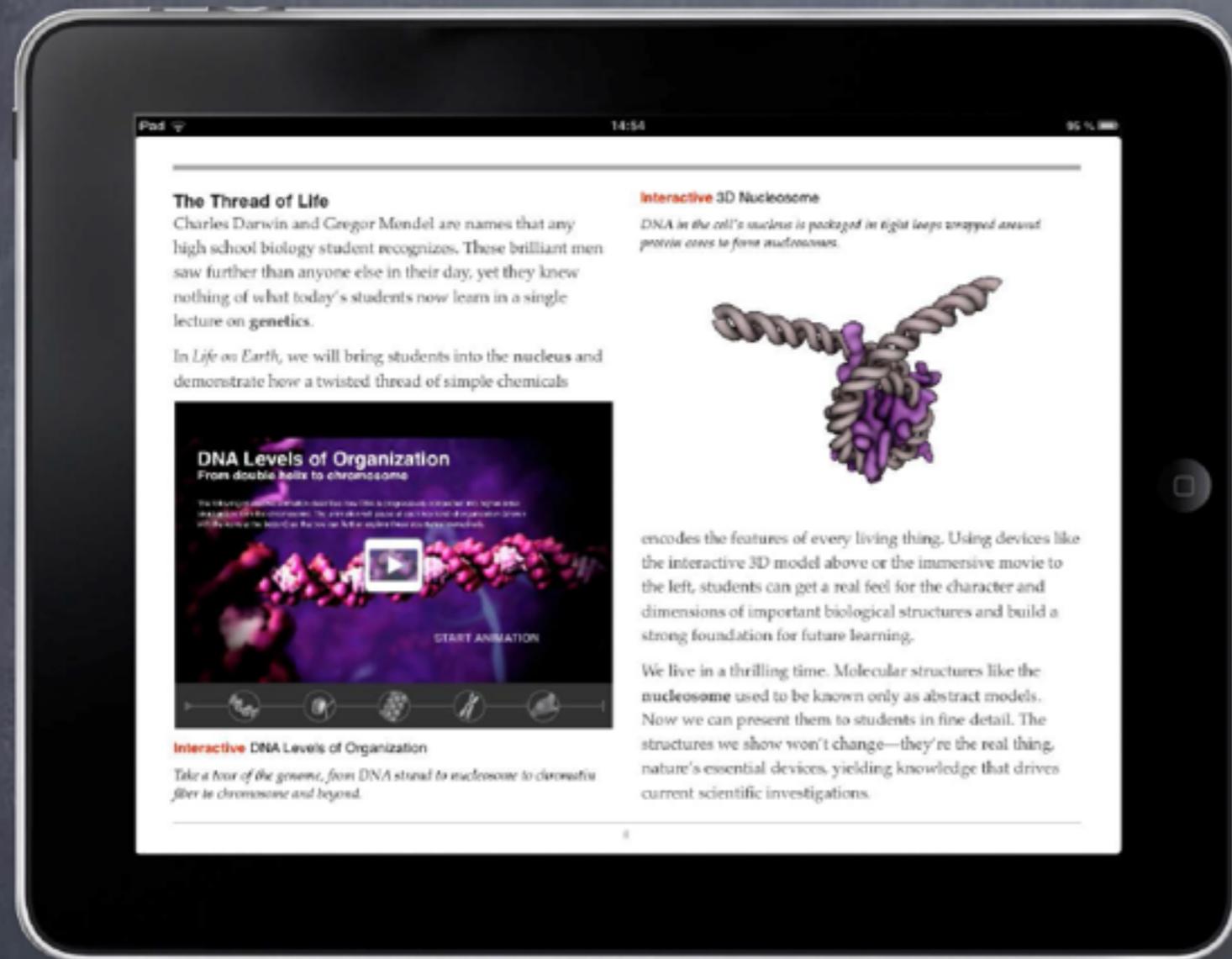
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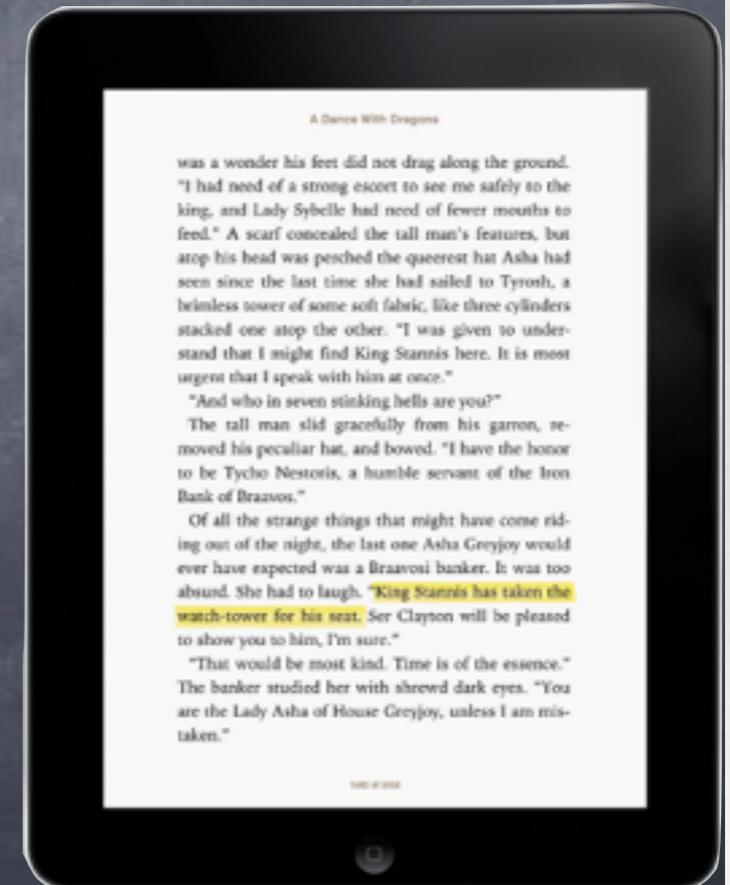
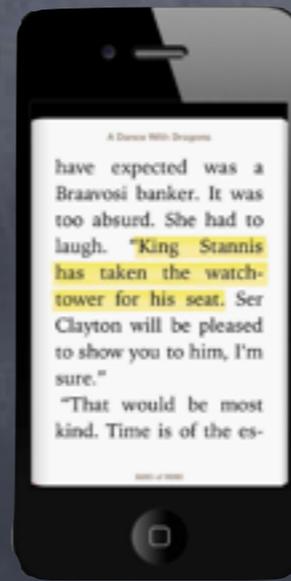
An ebook can be audible tanks to a text to speech application and with the epub3 format... it can display a fixed layout and multimedia

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1000s of books in one tiny box
- + are searchable
- + let you change the size of the letters, or even change the font
- + let you add notes and highlights which can also be removed again without any trace
- + let you directly access a dictionary
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Printed Books...

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Defining “eBook”

- ❖ It is not enough to say that an **eBook is a digital file for reading text on a digital device** — a computer, tablet, or smart phone
- ❖ Unfortunately, this definition would cover a wide variety of documents that aren't ebooks
- ❖ In particular PDFs - the now-universal Portable Document Format invented by Adobe as a way of distributing print documents digitally - is not an eBook.
- ❖ We share our own personal documents (letters, etc.) through the internet as PDF, and publishers have been transferring print-ready files to commercial printers for decades in this format.

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❖ The PDF isn't truly an ebook because it retains its format no matter the size of the screen that displays it. It will always be an accurate representation of the paper document that it represents — on a 27 inches monitor, on a 13" laptop display, on an 9.7" iPad screen, or a 4.8" smart phone.

- ❖ The basic unit for a PDF is the page.
And so as the screen shrinks, so does the page size, and with it the size of the words, and the readability.
Anyone who's tried to read a PDF on a small screen knows what I mean.

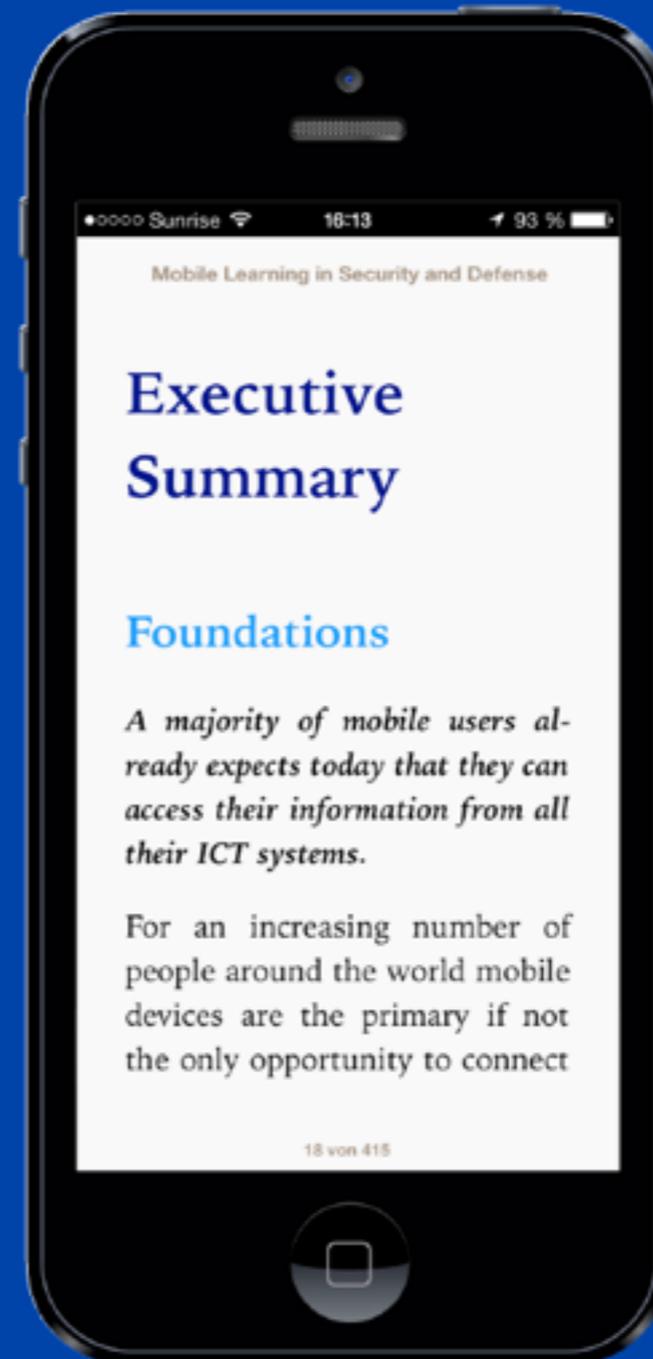


Defining “eBook”

PDF



ePub



Characteristics of an eBook

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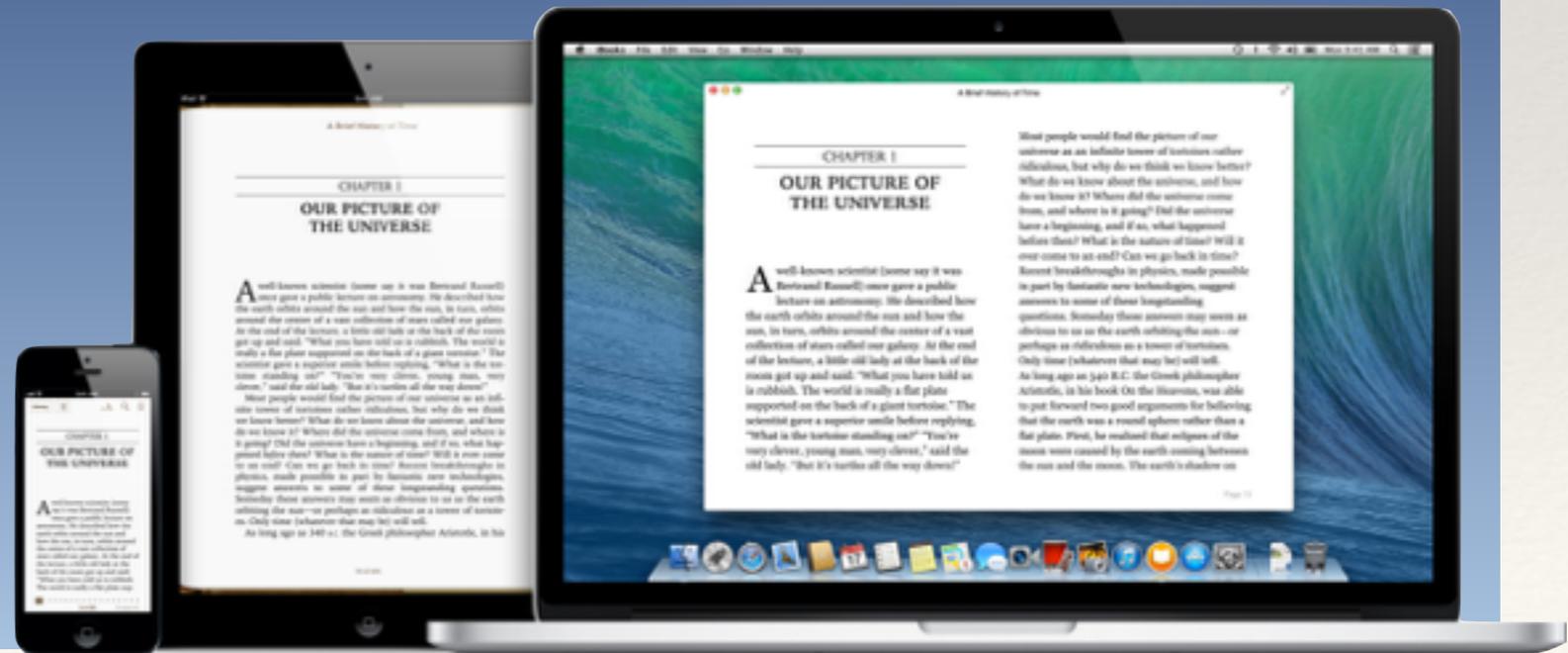
- ❖ What a true eBook, then, does, is to present correctly formatted text and images no matter the size of the screen it's being displayed on. In order to do this, ebooks get rid of the idea of a page; the text will format to flow properly, and when one screen is full, will flow to the next — eBooks are liquid, they are **reflowable**.
- ❖ Images will resize (if the book has been properly designed) to the proportions of the screen. The book will be attractive and easy to read **on any device** — and because each software application for reading ebooks has some reader controls, we can make the characters of the text larger, or if we don't like serif fonts we can have the book display in sans-serif.

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- ❖ This means that page 23 on your laptop of the same eBook may be page 12 on my big monitor or page 124 on my smartphone.



eBook formats

- ❖ Now we know very well that Web pages provide exactly the flexibility that ebooks require.
- ❖ So when the IDPF **International Digital Publishing Forum** (idpf.org) created a new eBook standard over a decade ago, they looked to the language of the Web — HTML — as a basic building block.
- ❖ At the time, there were many competing “eBook” formats (PDF, Mobipocket, Microsoft’s LIT, and a few more)
- ❖ The IDPF created an open format (a self-contained set of HTML files) called **ePub (electronic publication)**. In the past decade it has become the standard eBook file format. Most ebook readers, apps and devices use some variation on the ePub file format to display text and images.

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- ❖ Now we know very well that Web pages provide exactly the flexibility that ebooks require.
- ❖ Maybe I have simplified too much but Amazon's so-called KF8 format is now in fact a variation on the ePub standard, as are the AZW3 files now in Kindle or Kindle app (previously Amazon tried to maintain its monopoly in the eBook market using the proprietary format .mobi and its evolutions).
- ❖ The IDPF created an open format (a self-contained set of HTML files) called **ePub (electronic publication)**. In the past decade it has become the standard eBook file format. Most ebook readers, apps and devices use some variation on the ePub file format to display text and images.



What is an ePub file?

- ❖ An EPUB file is a **zip archive** which contains XML structures, HTML and CSS resources, images and – with EPUB 3 – javascript code, audio and video assets.
- ❖ Being a Web Standards ePub brings many advantages to the publishing industry:
- ❖ Web Standards are interoperable, usable on any kind of device.
- ❖ Publishers benefit from the work of the entire Web community and avoids reinventing the wheel ...

In short: **ePub is today the reference format for distribution and interchange in the digital publishing industry**, as it allows publishers to produce and send a single digital publication file through distribution.

What is an ePub file?

- ❖ An EPUB file is a **zip archive** which contains XML structures, HTML and CSS resources, images and – with EPUB 3 – javascript code, audio and video assets.
- ❖ Being a Web Standards ePub brings many advantages to the publishing

In a much more simpler words

the ePub file (**e**lectronic **P**ublication) is nothing more than a self-contained package containing a group of HTML files, with its own set of styles for formatting and a navigation document for making sure everything gets displayed in the right order.

We could say that an eBook is a **website in a box**.



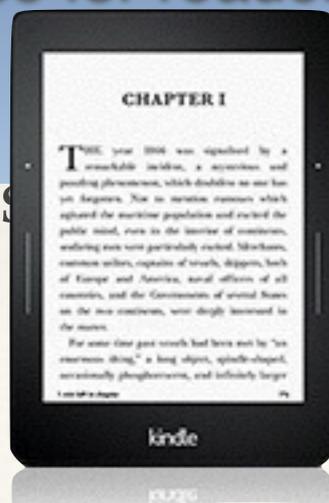
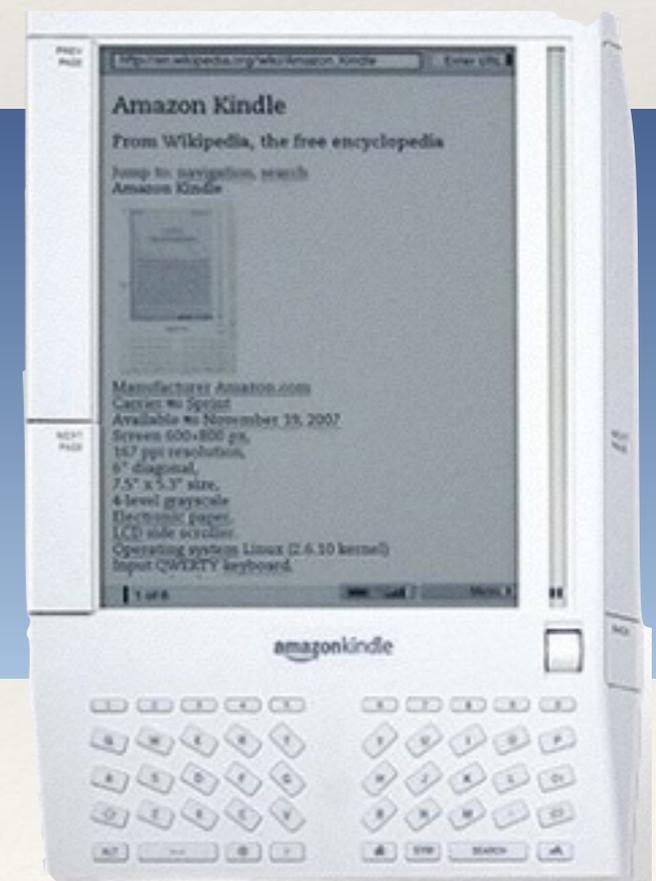
Evolution

- ❖ The ePub standard has been around since the beginning of the century. But **ePub first version 1.0**, never succeeded commercially. Not only it wasn't very smart, but more to the point, there was not really a way **to read or buy ebooks** in ePub format those days. There were not good devices to read eBooks!
- ❖ All changed in 2007 with the birth of the **Kindle** — which used the proprietary .mobi file format created for old Palms. Attached as it was to Amazon, the Kindle created an immediate **retail ecosystem for ebook readers and publishers**. The eBooks at the time were not beautiful: limited typography, no color, primitive layout, and low-resolution images. **But the system worked.**

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The first Kindle had 250MB internal storage and a 6-inch display capable of 4 shades of grey. The original Kindle with the traditional Kindle keyboard seems now outdated. At the time however, this was the must-have device for readers.



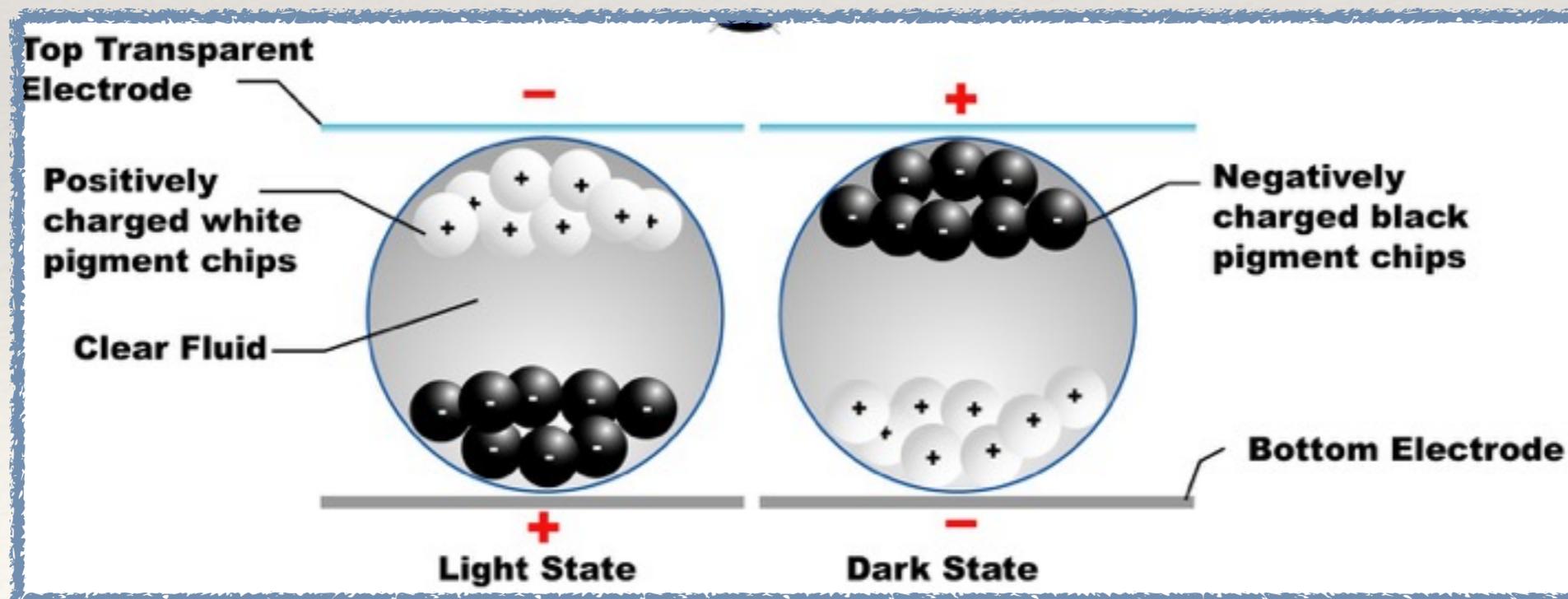
Kindle and the eInk technology

- ❖ Kindle hardware has evolved from the original Kindle. However, the Kindle e-readers have always been **single-purpose devices for reading** while tablets have always been **multipurpose hardwares** (like smartphones).
- ❖ Kindle and the other eBook readers owe their success to the **eInk technology** invented in 1996 by MIT's Media Lab



Electronic Ink

- ❖ E-ink technology works by using tiny microcapsules that are suspended in a liquid placed within two film layers. The microcapsules, contain positively charged white particles and negatively charged black particles.
- ❖ Applying a negative electrical field causes the white particles to come to the surface. Conversely, applying a positive electrical field causes the black particles to come to the surface. By applying different fields at various parts of a screen, e-ink produces a text display.
- ❖ E-ink displays resemble printed paper. Besides that, ink also allows for lower power consumption, particularly when compared to traditional backlit liquid crystal display (LCD) screens. These advantages, along with its early adoption by major e-reader manufacturers such as Amazon and Sony, caused **e-ink to dominate the early e-book reader market.**



Electronic Ink

- ❖ In the early 2000s, e-Ink was in all the e-readers in the market (Amazon Kindle, Barnes & Noble's Nook, the Kobo eReader, Sony Reader, etc).
- ❖ e-Ink technology has its limitations: the typical e-ink devices
 - don't display color *
 - don't have backlighting**.
 - they can't display videos

* In 2016, elnk Corporation announced Advanced Color ePaper (ACEP), which displays thousands of colors, but the launch of the color e-paper displays has been delayed until 2019.

ACEP will be able to bring color to low-powered e-ink displays. Each pixel contains all the pigments to make every color. This improvement could maybe cause a new popularity in e-readers in the next future.

** the newer elnk readers like the Kindle Paperwhite have an integrated light which makes it easy to use in the dark and has a pixel density of 300 PPI that can increase the sharpness compared to the Basic Kindle

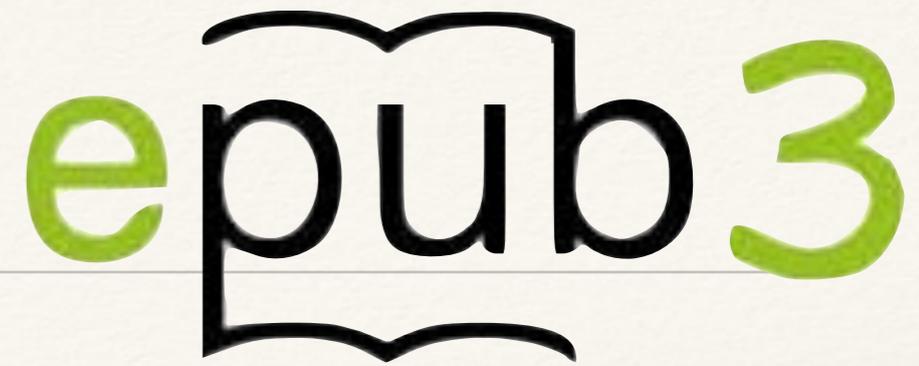
The iPad and the others

- ❖ In 2010, Apple launched the iPad creating a multifunction device which is ALSO an easy, attractive way to buy and enjoy eBooks.
- ❖ Meanwhile the ePub standard had evolved ePub version 2.1 (ePub2) and was embraced by a number of retailers that followed Apple in the TABLET business — (Kobo, Sony, Samsung, Huawei and many others). Everyone except Amazon, who were happy in their closed “Kindle garden”.
- ❖ Tablets could display in color, have backlighting, can show videos and animations. And the new ePub2 files, being based on the same HTML that drives the Web, allowed for much greater sophistication with regards to text formatting and layout.



The iPad almost unreadable in sunlight compared to an e-reader. Moreover it is power consuming and much more expensive. On the other hand it is much more multitasking and capable of Internet surfing....

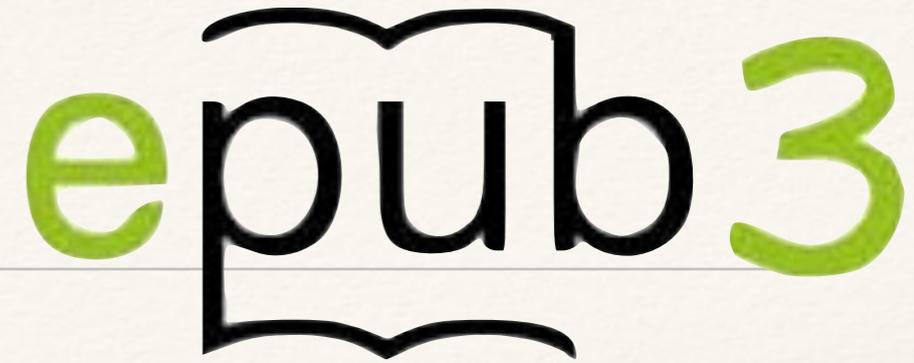
the ePub3



- ❖ In 2013 the International Digital Publishers Forum (IDPF - the group that created the ePub standard) improved the ePub format. **The ePub3 NOW include:**
- ❖ HTML5 and CSS3
- ❖ Improved navigation
- ❖ Ability to add media (video and audio) as well as tables and math formulas
- ❖ More sophisticated metadata
- ❖ The ability to create **fixed-format ebooks with an elegant graphic design**
- ❖ Backward compatibility with less recent devices.
- ❖ Better accessibility (<http://idpf.org/a11y>) (www.edrlab.org/readium/)



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the new format allows much more sophisticated structuring and formatting of ebooks. It is now possible

- to create a small section of text that isn't part of the main flow of the narrative (a sidebar)
- to have endnotes that pop up on the screen, rather than taking you to a different page
- to have gallery of pictures or pictures that enlarge as touched
- To create animation and many other things

Comparison

Items	ePub2	ePub3 Reflowable	ePub3 Fixed Layout	PDF
Reflowable based on screen size	Yes	Yes	No	No
Ability to change font size	Yes	Yes	No	No
Clean text and high readability	Yes	Yes	No	No
Smaller file sizes	Yes	Yes	No	No
Less graphic intensive for mobile class processors	Yes	Yes	Yes	No
Fixed Layout	No	No	Yes	Yes
Multimedia	No	No	Yes	No
Performance Display time	Fast	Normal	Normal	Normal

Life is not a bed of roses

- ❖ these are exciting new options but...**there are still problems**
- ❖ File size limitations — Most ebook stores are strict in their limits to the size of ebooks (200-300 MB) and images, audio and especially video positively blows it up
- ❖ Multimedia eBooks really don't seem to have found a market outside childrens' illustrated books and some textbooks.
- ❖ It seems that Multimedia in eBooks is a great idea, but there's nowhere to sell these enhanced eBooks profitably: the retailers don't like them, the publishers even less. **BUT**

Life is not a bed of roses

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❖

That's is going to change.

Marketing has discovered the superpowers of the ebook.

Catalogs have reborn for retailers and art exhibitions,
museums and galleries have began to use them as visitors guides...

❖

Almost all the editing software
NOW works with ePub3.

❖

meanwhile an ePub4 is in view with a bunch of new promises...

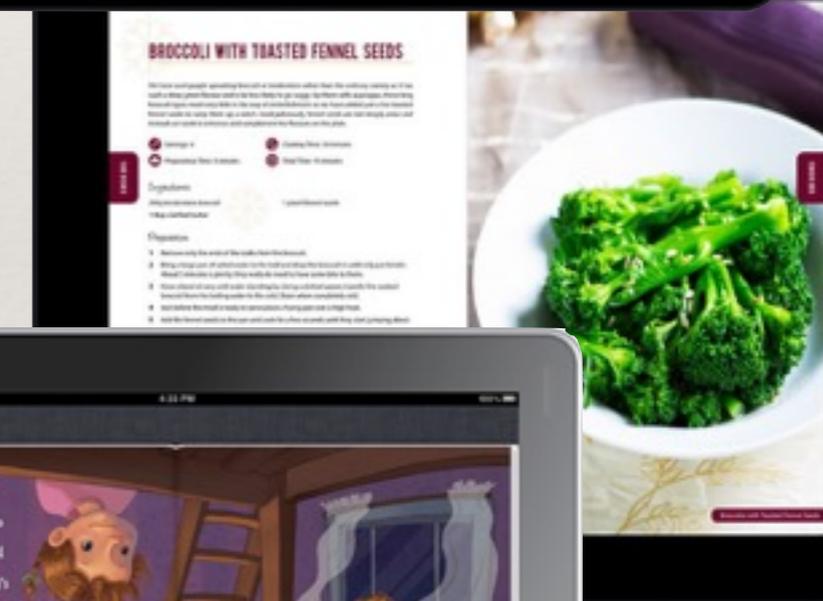
reflowable or fixed-layout eBook?

- ❖ the choice between ePub2 and ePub3 format is principally the choice between a **liquid** or a **fixed layout** and must be made depending on one's needs
- ❖ **In a reflowable ePub**, the content is fluid and fits the size of the screen.. Some good examples of reflowable ebooks are **novels**. But the reflowable format is not always ideal, especially when it comes to books about design, architecture, art, photography where **layout is critical**.

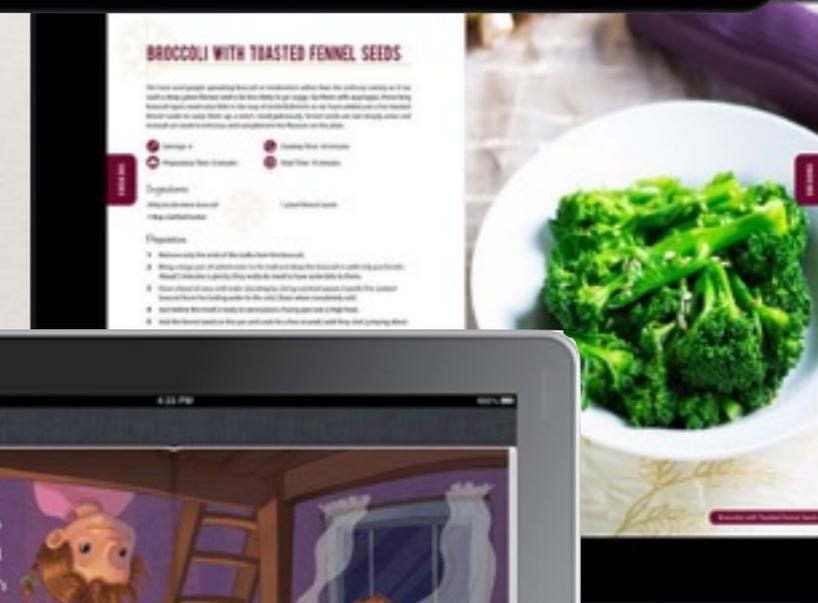


Back to graphic design

- ❖ A **fixed-layout ebook** preserves page design, which allows your ebook to maintain the same layout as your print book. Instead of the fluid, or flexible, layout used for most ebooks, fixed layout “fixes” images and text to exact spots on each page. This creates beautiful two-page spreads and prevents images and text from shifting around. These ebooks give the experience of reading a traditional print book enhanced with multimedia.
- ❖ Illustrated children’s books, cookbooks, coffee-table books, Photographic books, graphic novels, **technical manuals**, or any book that relies on a heavily designed, static presentation should be a fixed-layout ebook.

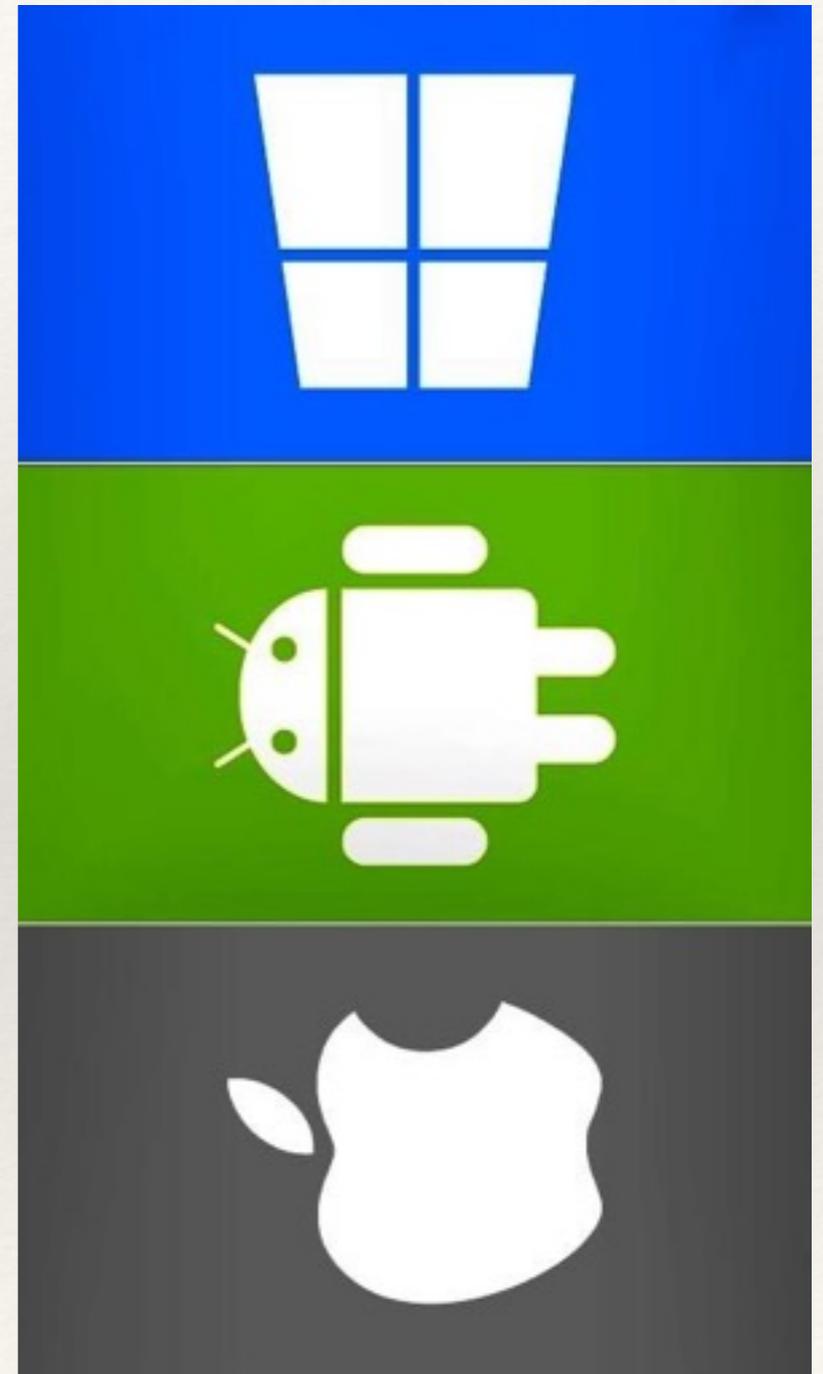


Back to graphic design



Time to embrace ePub3?

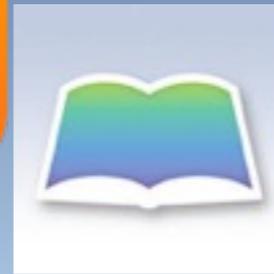
- ❖ To publish a fixed layout eBook one must take into account the plurality of the devices used to read (e-reader, tablet, smartphone) their different dimensions and the different operating system (OS) to be sure of the full accessibility to this product.
- ❖ Moreover eReaders, tablets and smartphones (according to a study published by the WallStreet Journal, those are increasingly used as a reading device) need an App to be able to process an ePub3 file.



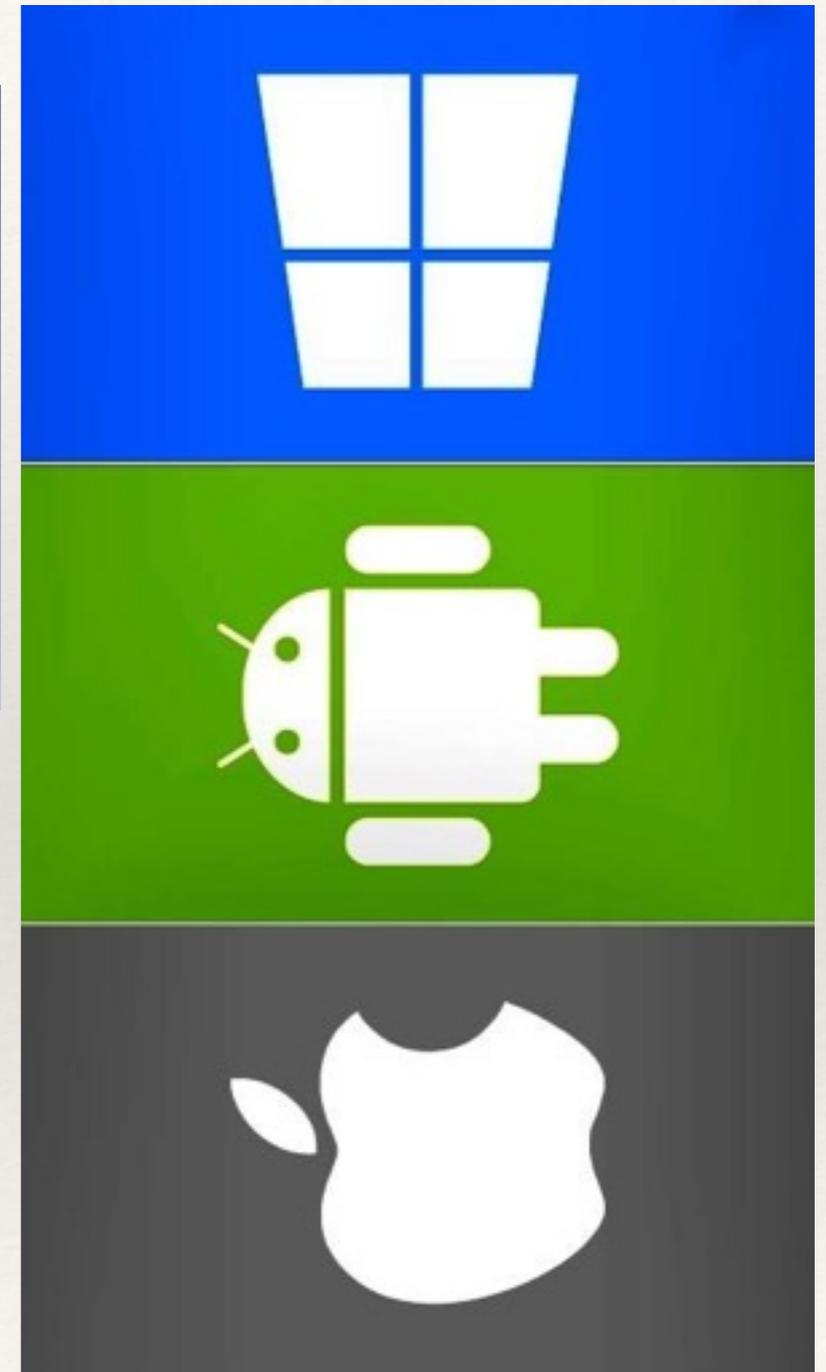
Time to embrace ePub3?

The ePub3 readers Apps

- **ePub3 Reader** for Microsoft
- **Gitden** for Android OS
- **iBooks** for iOS



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Let's be practical

USABILITY

usability means ease of use but most importantly it's about **the quality of the experience**. It has five qualities:

- Learnability: How easy is it for users to accomplish basic tasks the first time they encounter the design?
- Efficiency: Once users have learned the design, how quickly can they perform tasks?
- Memorability: When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- Errors: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- Satisfaction: How pleasant is it to use the design?

Source: Jakob Nielsen, Usability 101, <http://www.useit.com/alertbox/20030825.html>

Decisions to make

If you want your ebook enhanced (an EPUB3 with fixed layout and multimedia for instance) you should consider **if**:

- ❖ this enhanced design will justify the loss of potential readers
- ❖ there is a good share of the market that is able to read the enhanced ebook
- ❖ the target readers have technological skills
- ❖ the book simply wouldn't make sense without the advanced features
- ❖ there are tools that can let the book be compatible with older e-readers

‘have your cake and eat it too’

- ❖ Both EPUB3 and Kindle KF8 support fallbacks that will help to smooth the introduction of new features. In other words if a new feature is not supported by older e-readers, your ebook can be programmed to use an alternative that is supported (a fallback or a plan B).
- ❖ Sometimes this means **a lot of work** to do and you could decide to publish **two different editions**

do we need a crystal ball?



- ❖ The ebook industry is young and it is moving forward.
- ❖ Technology improves at a faster rate than people implement it. It can take years for new technology features to be widely adopted if they rely on existing users to upgrade or replace their systems. And the more people there are using a technology, the longer it takes for changes to filter through.
- ❖ How long will it take for older e-readers to work their way out of the system? In Italy e-reader use is still small and we are very fond of smartphones so new features could get established fairly quickly.

do we need a crystal ball?



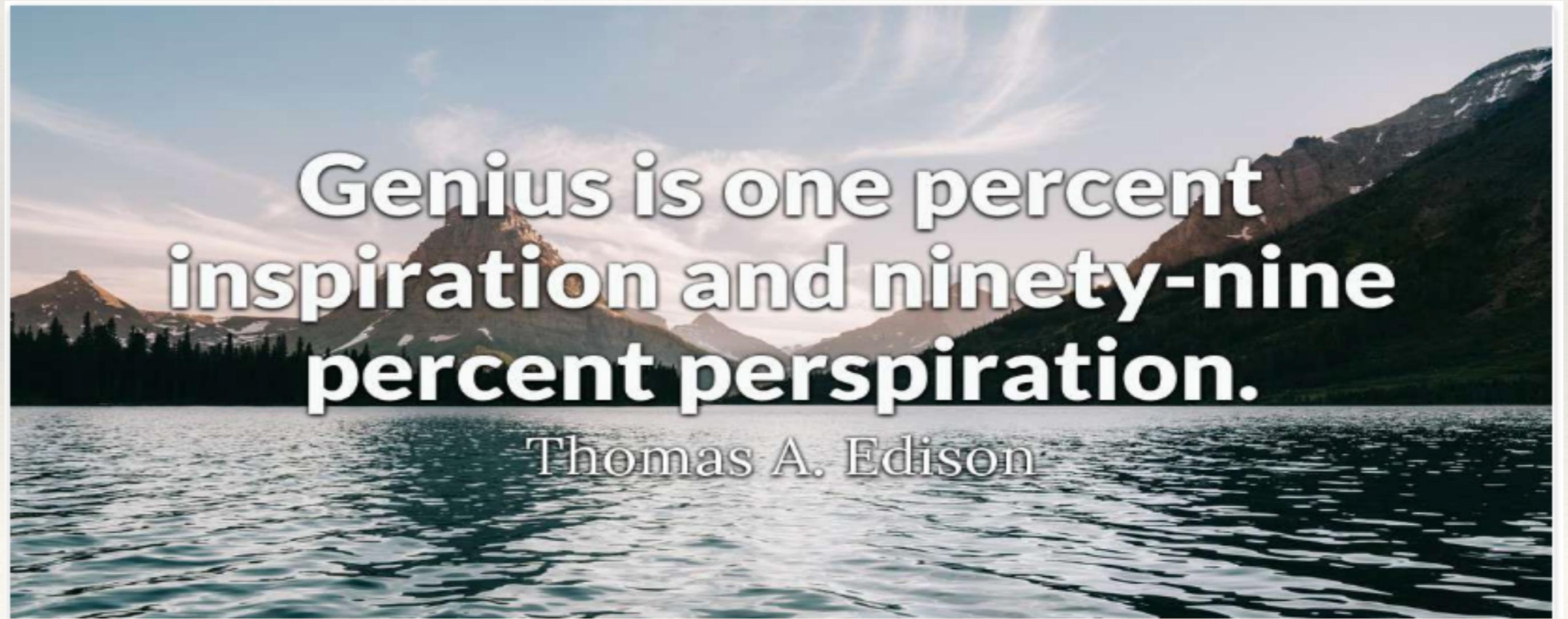
What could speed up the transformation?

- Upgrading is easier when few companies control the whole 'ecosystem' (as Amazon and Apple do in our case).
- Consumers can be offered incentives to replace old equipment.
- To change is easier if updates can be done via software rather than hardware. A lot of e-reader hardware and all apps can be updated via wifi even automatically
- It is easier to get rid of old devices if new devices are cheap

We know that Amazon's control of the entire Kindle 'ecosystem', and the fact that all of its devices are internet-connected for automatic updates, gives it a big advantage when introducing new features. So its new KF8 format might get established more quickly than EPUB3 which requires lots of independent manufacturers to cooperate and coordinate.

But Amazon also has challenges: It is vulnerable to competitors like Apple because it has a large installed base of older Kindles which must be replaced while Apple can introduce most of its innovations through automatic software updates.

And now is time to work



**Genius is one percent
inspiration and ninety-nine
percent perspiration.**

Thomas A. Edison