

Improving Literacy

with

Audio-eBooks



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Summary

- ▶ Introducing ReadBeyond
- ▶ Improving Literacy with Audio-eBooks
 - ▶ What is an Audio-eBook?
 - ▶ Our Proposal
 - ▶ ReadBeyond Sync
 - ▶ ReadBeyond Menestrello
 - ▶ Free/Commercial Audio-eBooks

Introducing ReadBeyond



- ▶ **Research lab** developing innovative software for **digital publishing**
- ▶ Limited-liability **startup** (“Srl startup innovativa”)
- ▶ Founded in July 2013 @ Padova, Italy, by
 - ▶ Alberto Pettarin, PhD, 30 (CEO, R&D)
 - ▶ Paolo Bertasi, PhD, 35 (CTO, IT Operations)
 - ▶ Simplicissimus Book Farm Srl (Legal, Marketing, Operations, PR)
- ▶ <http://www.readbeyond.it/>

Our Mission

We love **great stories**

We **research** and **create** tools allowing
people to **share** their **digital stories**

Improving Literacy

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What is an Audio-eBook?

[12] Macbeth - Tales from Shakespeare



An **Audio-eBook** is a digital file

MACBETH

When Duncan the Meek reigned king of Scotland, there lived a great thane, or lord, called Macbeth. This Macbeth was a near kinsman to the king, and in great esteem at court for his valour and conduct in the wars; an example of which he had lately given, in defeating a rebel army assisted by the troops of Norway in terrible numbers.

The two Scottish generals, Macbeth and Banquo, returning victorious from this great battle, their way lay over a blasted heath, where they were stopped by the strange appearance of three figures like women, except that they had beards, and their withered skins and wild attire

0:00:09



The phrase currently narrated is highlighted

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An **Audio-eBook** is a digital file

- ▶ containing the **text** of the book
- ⇒ user can **read**

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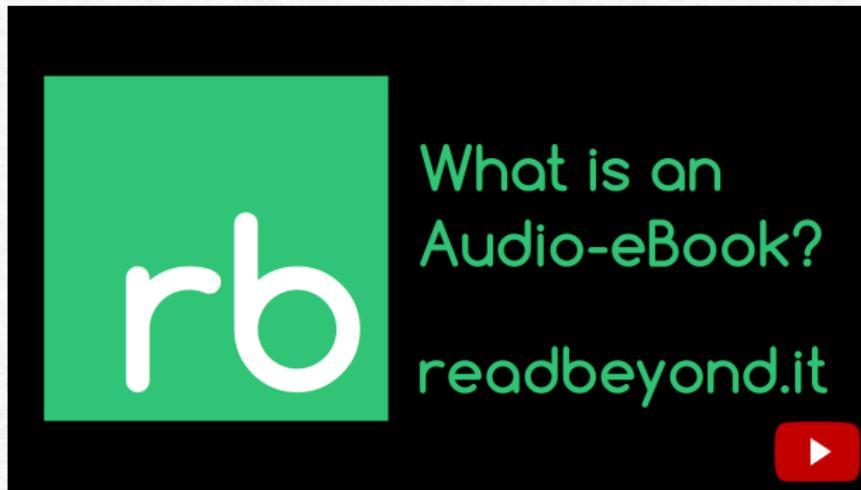
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- ▶ containing the **text** of the book
⇒ user can **read**
- ▶ and its **narration** recorded by a **professional reader**
⇒ user can **listen**
- ▶ where audio and text are **synchronized**
⇒ user can **read+listen**, stimulating the **visual** and **aural** channels **simultaneously**

What is an Audio-eBook?

Click to watch an Audio-eBook in action!



<http://www.readbeyond.it/audioebooks.html>

Video in italiano: <http://www.readbeyond.it/it/audioebook.html>

Practical Advantages of Audio-eBooks

Synchronized audio/text allow

- ▶ **highlighting** the text fragment being narrated
- ▶ restarting audio from a precise point of the text (**tap-to-play**)
- ▶ **switching modality** (Read, Listen, Read+Listen) seamlessly

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Audio-eBooks **combine** the best of **reflow eBooks** and **audiobooks**

- ▶ **adjustable typography** (font face, size, line spacing, . . .)
- ▶ **adapt** to any screen size (PC, tablet, smartphone, . . .)
- ▶ easy **navigation** of text (Table of Contents) and audio (Playlist)
- ▶ **audio controls**, including adjustable playback speed

Improving Literacy with Audio-eBooks

Simultaneously **reading+listening** conveys several benefits

- ▶ **immersive**: professional narrators create an unrivaled experience of immersion in the story
- ▶ **cognitive**: information retention is better and lasting longer than just reading or just listening
- ▶ **assistive**: it mitigates reading disabilities (e.g., dyslexia, learning disorders)

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In short, several **scientific studies** on reading+listening **show** that Audio-eBooks are **extremely effective** at **improving literacy**

Our Proposal

Building an **ecosystem**

for creating, selling, enjoying **Audio-eBooks**

including **non-English markets**

based on **open formats** (e.g. EPUB 3)

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- ▶ **distribution** platforms
- ▶ **readers/apps** (⇒ **RB Menestrello**)

ReadBeyond Sync

Problem

Synchronizing audio and text (with 100% accuracy) requires a human operator, listening to the audio and using a special program to create the synchronization information

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Synchronizing audio and text (with 100% accuracy) requires a **human operator**, listening to the audio and using a special program to create the synchronization information

Because of the human-in-the-loop, this process is

- ▶ prone to fatigue errors
- ▶ slow and with unpredictable latency
- ▶ expensive
- ▶ not scalable

ReadBeyond Sync

Solution

We developed **Sync**, a **computational package** which reads a pair of audio/text files, and outputs the synchronization information

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Being fully automated, **Sync** is

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Thanks to **Sync**, ReadBeyond is the **first company** able to massively produce **reflowable EPUB3 Audio-eBooks**, in 31 languages!

ReadBeyond Sync

The screenshot shows a web browser window for 'ReadBeyond Sync :: Home'. The URL is <https://sync.readbeyond.it/#/>. The page has a navigation bar with 'ReadBeyond Sync' (highlighted), 'Billing', 'Jobs', 'Profile', and 'Sign out'. A green banner at the top says 'Submitted for processing.' with a close button 'X'. The main content area is titled 'Job Management'. It shows a table of jobs:

| ID | Description | Config | Created | Tasks | Duration | Status | Actions |
|----|--|----------------------|--------------------|-------|----------|-------------------|--|
| 66 | Example: using the Wizard | Edit | 6/10/14 1:49 PM | 3 | 00:02:36 | processing 0/3 | Open Tasks Process Reset Delete |
| 65 | Example 3 (paged hierarchy, unparsed text files) | Edit | 6/10/14 1:24 PM | 3 | 00:02:36 | processed | Open Tasks Process Download Reset Delete |
| 64 | Example 1 (flat hierarchy, parsed text files) | Edit | 6/10/14 1:14 PM | 3 | 00:02:36 | processed | Open Tasks Process Download Reset Delete |

A small number '1' is in the bottom right corner of the main content area.

<http://www.readbeyond.it/sync/>

ReadBeyond Menestrello

EPUB3 is the *de facto standard open format* for eBooks, and it supports **Media Overlays**, i.e. the audio/text synchronization

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Menestrello is our **free** app designed for EPUB3 Audio-eBooks

The image displays three screenshots of the Menestrello app:

- Left Screenshot:** A list of books. Books visible include "A Christmas Carol" by Charles Dickens, "Alice nel Paese delle Meraviglie" by Lewis Carroll, "Benediction" by F. Scott Fitzgerald, "Bernice Bobs Her Hair" by F. Scott Fitzgerald, "Decameron" by Giovanni Boccaccio, "Der aberlauschige Simplicissimus" by Hans Jakob Christoffel von Grimmelhausen, "Divina Commedia - Inferno" by Dante Alighieri, and "Divina Commedia - Paradiso".
- Middle Screenshot:** The title screen for "Sonnet I - Sonnets". The sonnet text is:

From fairest creatures we desire increase,
That thereby beauty's rose might never die,
But as the riper should by time decease,
His tender heir might bear his memory;
But thou contracted to thine own bright eyes,
Feed'st thy light's flame with self-substantial fuel,
Making a famine where abundance lies,
Thy self thy foe, to thy sweet self too cruel:
Thou that art now the world's fresh ornament,
And only herald to the gaudy spring,
Within thine own bud buriest thy content,
And tender churl mak'st waste in niggarding;
Pity the world, or else this gluton be,
To eat the world's due, by the grave and thee.
- Right Screenshot:** A list titled "Tales from Shakespeare" containing 17 entries, each with a play name and a play icon. The entries are: 1. Tales from Shakespeare, 2. Preface, 3. The Taming of the Shrew, 4. A Midsummer Night's Dream, 5. The Winter's Tale, 6. Much Ado About Nothing, 7. As You Like It, 8. Two Gentlemen of Verona, 9. The Merchant of Venice, 10. Cymbeline, 11. King Lear, 12. Macbeth, 13. All's Well That Ends Well, 14. The Taming of the Shrew, 15. The Comedy of Errors, 16. Measure for Measure, and 17. Twelfth Night.



<http://www.readbeyond.it/menestrello/>

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- ▶ **20+** other titles, in **10 languages**, including Dante's **Divine Comedy**

read by Prof. Pertile (Harvard University)

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<http://www.ilnarratore.com/>

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- ▶ **teachers**
- ▶ **students**
- ▶ **readers**
- ▶ ...

Thank You!

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This document is available online at [**http://www.readbeyond.it/docs/li14.pdf**](http://www.readbeyond.it/docs/li14.pdf)



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