

Improving Literacy

with

Audio-eBooks



Alberto Pettarin, CEO
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Summary

- ▶ Introducing ReadBeyond

- ▶ Improving Literacy with Audio-eBooks
 - ▶ What is an Audio-eBook?
 - ▶ ReadBeyond Sync
 - ▶ ReadBeyond Menestrello
 - ▶ ReadBeyond @ SaLTo/Digital Festival 2014

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, 29 (CEO, R&D)
 - ▶ Paolo Bertasi, PhD, 34 (CTO, IT Operations)
 - ▶ Simplicissimus Book Farm Srl (Legal, Marketing, Operations, PR)
- ▶ <https://www.readbeyond.it/>

Our Mission

We love **great stories**

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

Activity and Business Model

ReadBeyond is a **research lab** for digital publishing

- ▶ **researches** the current state of the art
- ▶ **devises** new algorithmic/software engineering approaches
- ▶ **prototypes** and **markets** new products/solutions

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ReadBeyond transfers its **knowledge**

- ▶ providing **innovative software** in SaaS mode
- ▶ being a **service boutique** for publishers
- ▶ **consulting** for SBF and other companies

Current Research Projects

ReadBeyond is currently working on **algorithms** and **platforms** for

- ▶ automatically **synchronizing** audio and text
- ▶ automatically extracting **semantically-rich structure** from unmarked documents (e.g., PDF)
- ▶ supporting **multilingual / parallel texts** in EPUB eBooks

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Audio-eBooks

What is an Audio-eBook?

🔍 [12] Macbeth - Tales from Shakespeare



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

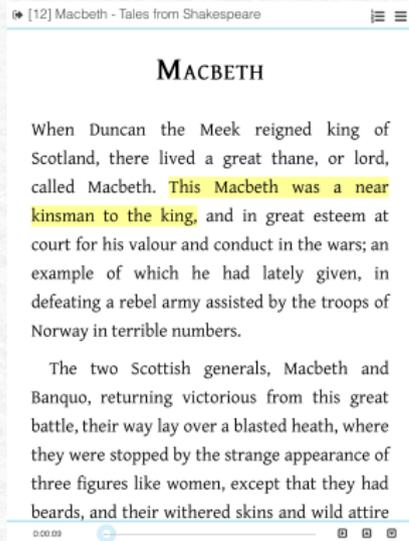
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An **Audio-eBook** is a digital file

What is an Audio-eBook?



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

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- ▶ and its **narration** recorded by a **professional reader**
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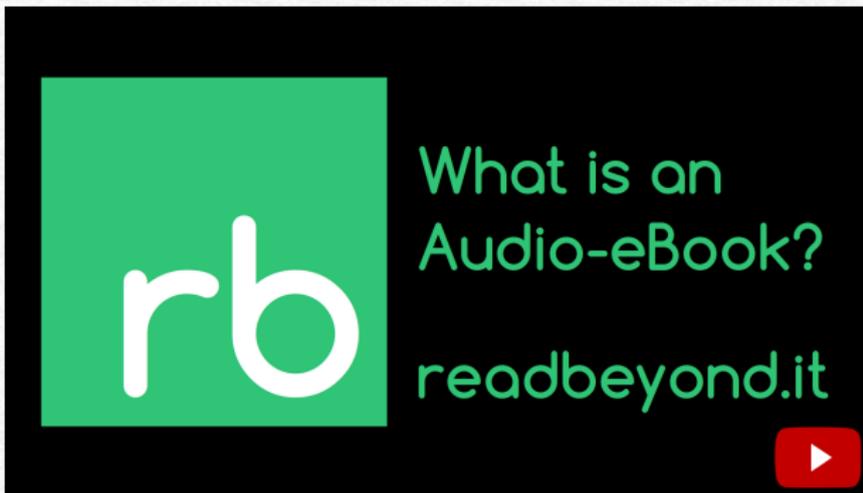
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An **Audio-eBook** is a digital file

- ▶ 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!



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

Video in italiano: <https://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** (R, L, R+L) 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)

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

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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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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- ▶ fast and predictable
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Thanks to **Sync**, ReadBeyond is the **first company** able to massively produce **reflowable EPUB3 Audio-eBooks**, in 17 languages!

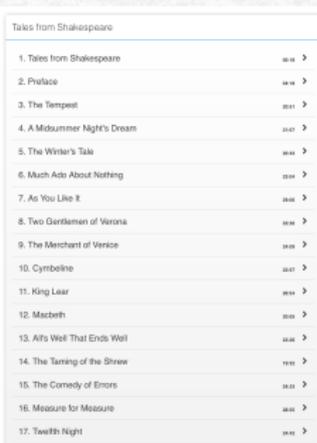
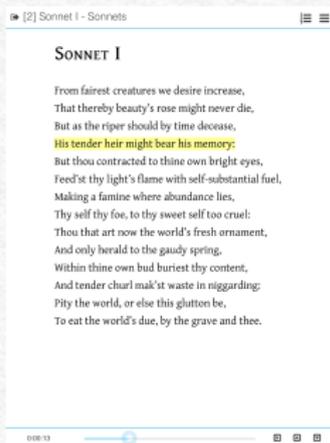
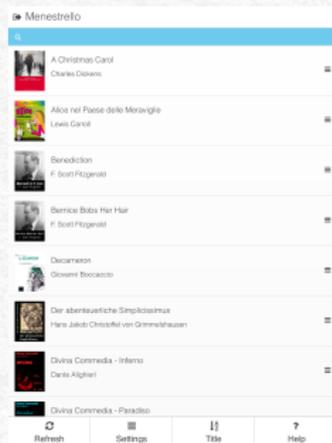
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Menestrello is our **free** app designed for EPUB3 Audio-eBooks



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

Audio-eBooks are Already Living Among Us!

50 EPUB3 Audio-eBooks, produced in collaboration with the Italian audiobook publisher **il Narratore Audiolibri**, are **already on sale**



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

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Several **free** Audio-eBooks, including Dante's **Divine Comedy** read by Prof. Pertile (Harvard U.) and Shakespeare's **Sonnets**, are available at

<https://www.readbeyond.it/ebooks.html>

ReadBeyond @ SaLTo/Digital Festival 2014

We would **love** to be at **SaLTo/Digital Festival 2014** to

- ▶ present Audio-eBooks to the **public**,
with **live demos** on tablets and smartphones
- ▶ discuss the potential of Audio-eBooks with **publishers**
- ▶ connect with perspective **investors**

Thank You!

<https://www.readbeyond.it/>

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This document is available online at <https://www.readbeyond.it/docs/df14.pdf>



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