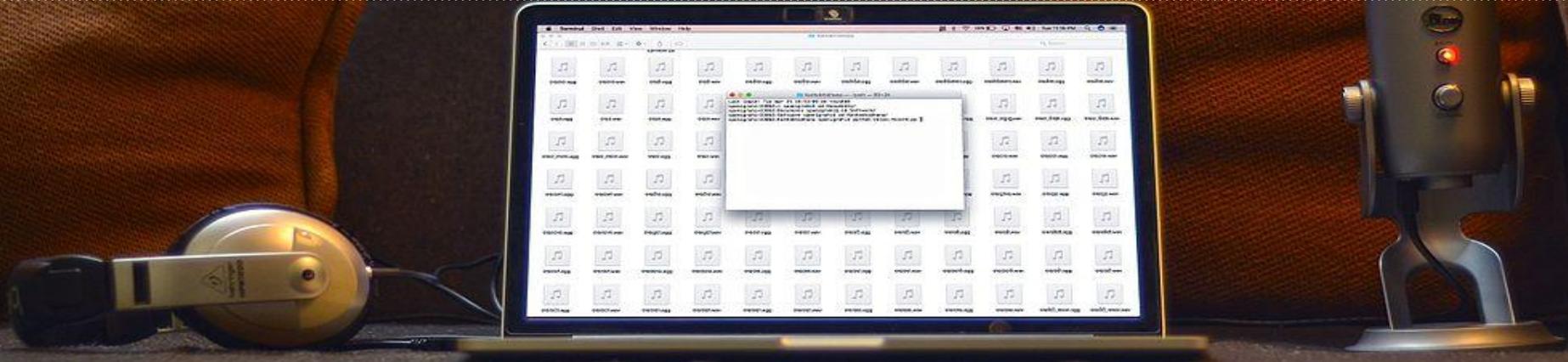


Kathabhidhana

Recording words for Wiktionary and preparing for an AI assistant



Subhashish Panigrahi @subhapa

Activity:

**How much do we know
each other?**

**Almost half of the
6909 living
languages of the world
are dying in a century's
time (UNESCO).**

**220+ languages
have died in India in
the last 50 years.**

**With these languages,
there dies a wealth of
knowledge forever...**

How languages die?

Lack of public policy

**Exploitation of
native speakers
force them to create
“sacred languages”**

**Knowledge in
native languages
doesn't pay off.**

Dominance of official *or* national languages

Lack of digital tools

Migration

**Restricting someone
from accessing
knowledge in their
own language push a
lot of stories aside.**

**And it's violation of
human rights!**

**Aren't our products
way too narrow?**

Activity:

How languages perish?

**Most people would go
70% Indians trust content in their
native language**

Languages—Defining India's Internet: A study by KPMG in India and Google.
April 2017

**39 million with
visual impairment +
30% with illiteracy
And hardly any good
quality Open Source
screen-reader app**

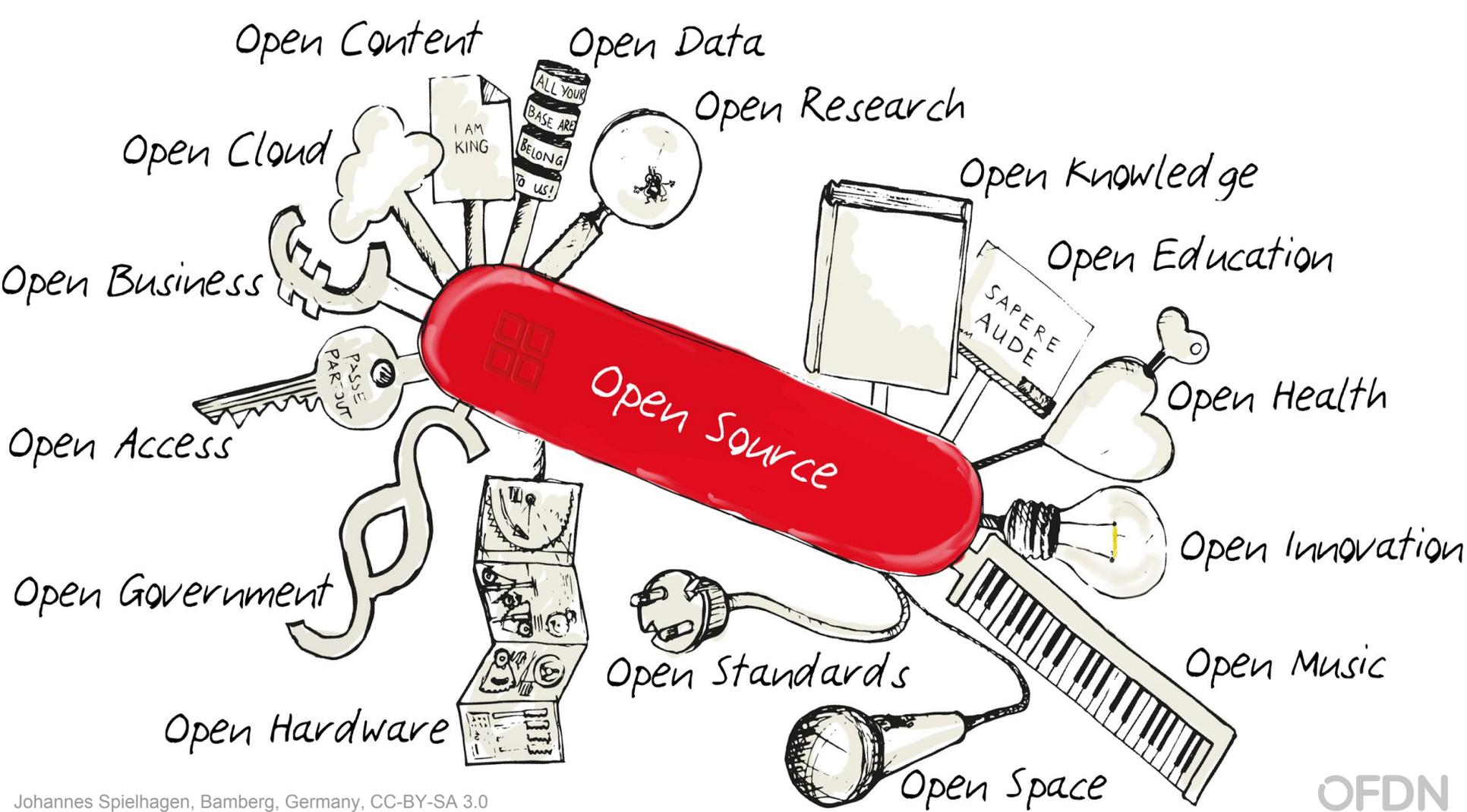
**But, what each of us
as individuals can do?**

**So, what these
languages actually
need?**

**We need a lot of native
language resources**

- Educational**
- Promotional**
- Digital tools**





Open Content

Open Data

Open Research

Open Knowledge

Open Education

Open Health

Open Innovation

Open Music

Open Space

Open Standards

Open Hardware

Open Government

Open Access

Open Business

Open Cloud

Dhvani

Linux/MacOS

<https://github.com/dhvani-tts/dhvani-tts>

NonVisual Desktop Access (NVDA)

Windows,

All official Indian languages

<https://github.com/nvaccess/nvda>

The age of Concatenative Text-to-speech is *almost* over

🔗 Read “Unit Selection In A Concatenative Speech Synthesis System Using A Large Speech Database” <https://goo.gl/yEMfx8>

Meet WaveNet, a smart AI by Google

- * Human voice (both ♂ and ♀)
- * Intonation, emotion, and even breathing sound
- * Natural speed variation

**But you still need
human voice
recordings
to train this AI**



🔗 Read “WaveNet: A Generative Model for Raw Audio”
<https://deepmind.com/blog/wavenet-generative-model-raw-audio>
Emoji: Designed by Freepik, CCBY

**People might die,
but digital recordings
will remain forever!**

**Let's record before
many endangered
language are
perished totally**

**Meet Kathabhidhana,
an open toolkit to record
a large number of words.**

<https://openspeaks.com/toolkits/kathabhidhana>

Consists of

- **Free/Libre & Open Source Software**
- **Open Educational Resources**
- **open methodologies**
- **open datasets**

Workflow

Tools



Demo:

Let's see how it works

In use:

- **2000+ recordings made in Odia**
- **1500+ used on Odia Wiktionary**
- **Started experimental TTS**
 - Check out:
<https://github.com/OpenSpeaks/Lekatha>

**So, what happens with
these hundreds and
thousands of audio
recordings?**

Transliteration

Wikidata

Phonetics

Machine translation

Audio recording of words

Machine learning

NLP

AI/AR

TTS STT

**Think of an
endangered language.**

**The language might
die tomorrow.**

**But it can be revived if
there exist enough
learning resources.**



**How to become creative
to harvest a big pool of
audio recordings without
annoying people?**

The middle ground is helping people with a toolkit



<https://openspeaks.com/toolkits/kathabhidhana/>

**Let's take Open Source
to our languages.**

Keep archiving!

Talk to me

Twitter @subhapa

subhashish@theofdn.org

Fork on Github: [OpenSpeaks/Kathabhidhana](https://github.com/OpenSpeaks/Kathabhidhana)

