WIKI INDABA
AGADIR, MOROCCO 2023

WIKIMEDIA
MA USER GROUP

WIKIMEDIA
FOUNDATION

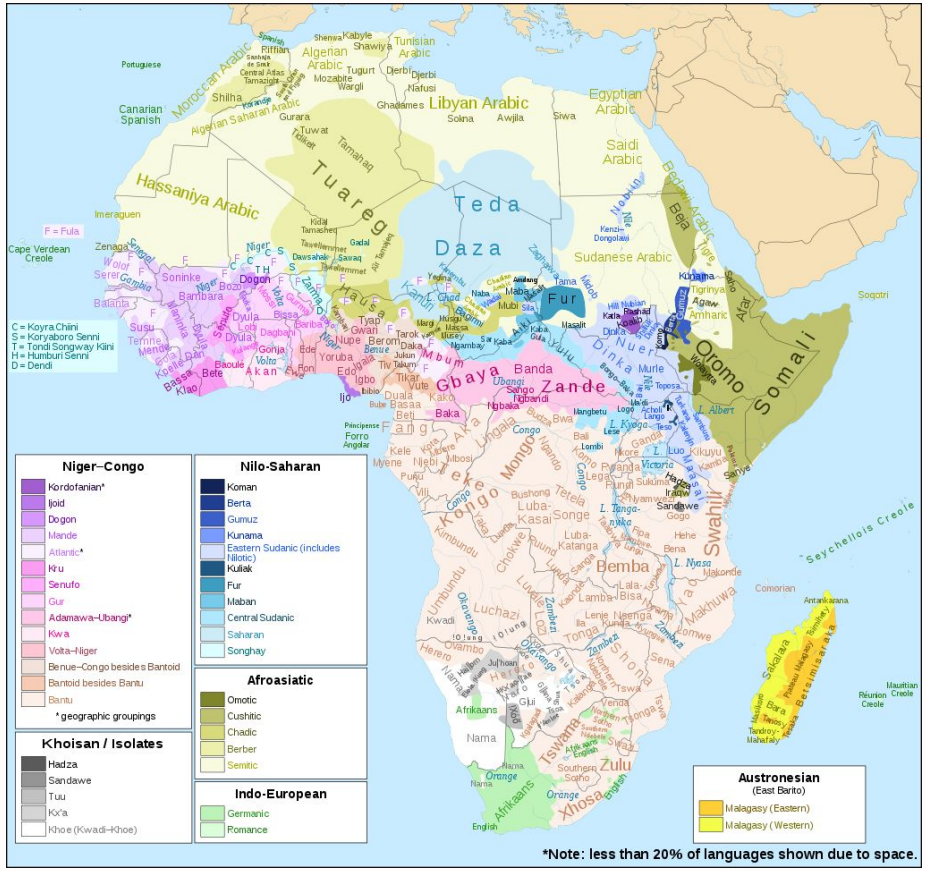
MMS Meta: How Can Artificial Intelligence Serve Wiki in Oral African Languages?

WikiIndaba 2023 - Agadir, Morocco

The number of languages natively spoken in Africa is variously estimated at between **1,250** and **2,100.**

The majority of African languages are **primarily spoken**, **lacking a strong tradition of written literature**.

A significant percentage of the population in Africa is **illiterate** in their own language.

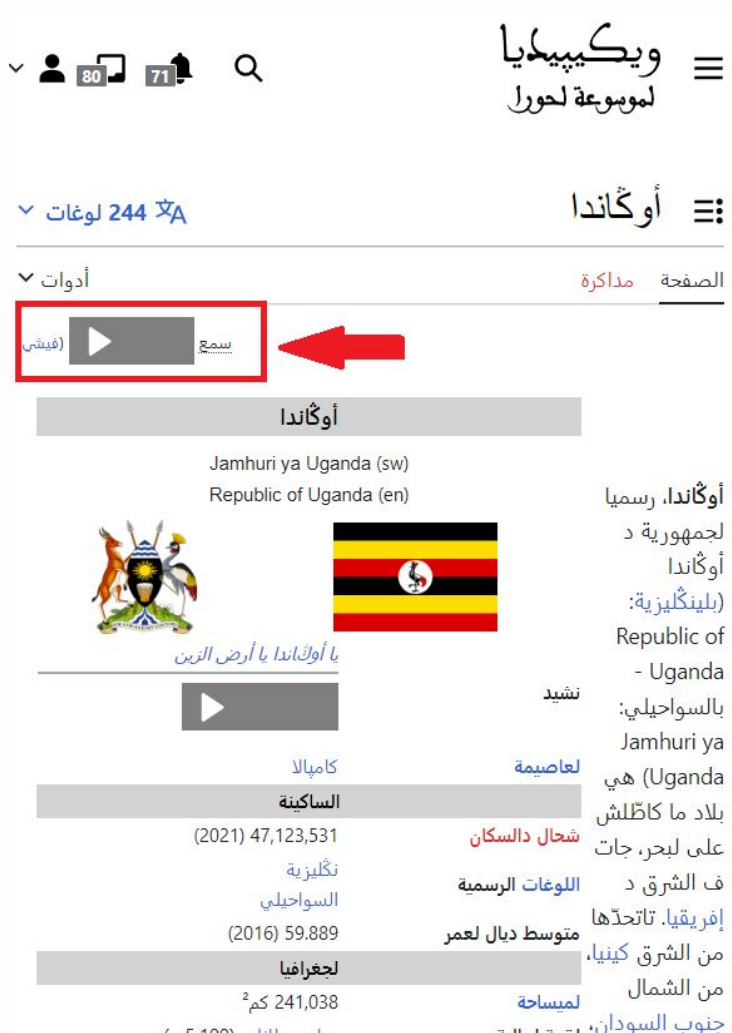


WIKI INDABA
AGADIR, MOROCCO 2023

Introduction

Wikipedia's main goal is to make **information accessible to everyone**, including those who are illiterate or visually impaired.

To achieve this, some African Wikis (Darija for example) have initiated the practice of adding **audio recordings**, allowing people to **listen** to the articles rather than reading them.



WIKI INDABA
AGADIR, MOROCCO 2023

Challenges Encountered During Implementation

Unlike Darija (+40M speakers), most african Wikipedia's:

- Lack a sufficient number of dedicated volunteers who are willing to invest their time in tasks such as reading articles, uploading audio recordings, and adding them to the articles.

- Struggle with engaging a sizable and active user base that can effectively collaborate in both creating written content and audio recording of articles.

But these smaller, oral languages deserve this as well.

What is MMS META ?

Massively Multilingual Speech (MMS) models expand **text-to-speech** and speech-to-text technology from around 100 languages to more than **1,100** — more than 10 times as many as before — and can also identify more than 4,000 spoken languages, 40 times more than before.

This is an open-source model and code so that others in the research community can build on our work and help preserve the world’s languages and bring the world closer together.

Meta

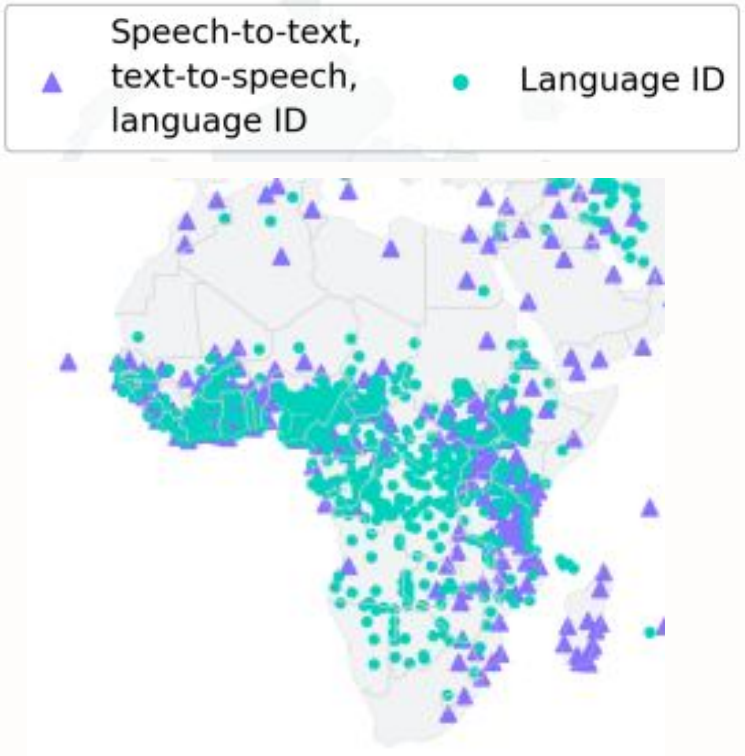
WIKI INDABA
AGADIR, MOROCCO 2023

WIKIMEDIA FOUNDATION

WIKIMEDIA MA USER GROUP

What is MMS META ?

More than 1,100 languages worldwide, including numerous small and oral African languages, are now accessible for **text-to-speech**, as illustrated by the graph, thanks to the availability of this open-source model.



WIKI INDABA
AGADIR, MOROCCO 2023

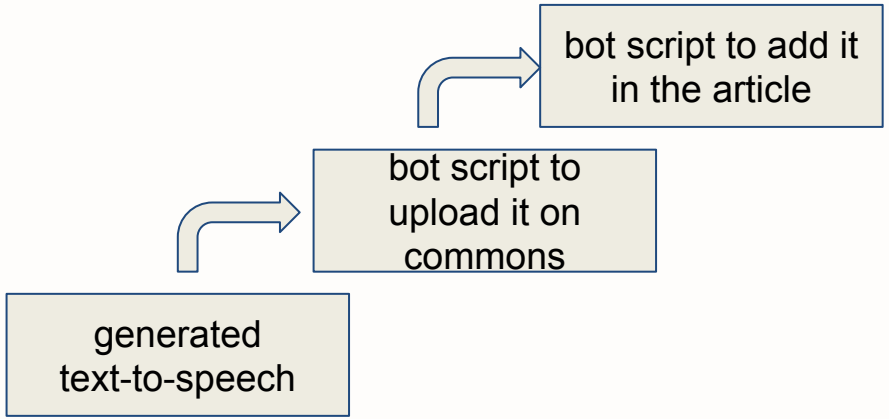
WIKIMEDIA FOUNDATION

WIKIMEDIA MA USER GROUP

How can we also apply this to these Wikipedias?

My idea is to :

Utilize this **AI model** in the cloud (as it needs high configuration) to automatically generate text-to-speech audio, which will then be uploaded to Commons platform and added to articles using a bot script.



Is it fine to use AI generated files on Wikimedia project.

There have been a lot of discussions about a specific topic in the Commons community. Please check here: *Commons:AI-generated media.*

As long as the MMS Project is open source, it is safe to use the media and upload them to Commons.

If you have any ideas about this, please let me know.

What will this look like if applied?

To test the feasibility of this idea, I tried to implement it on shi.wikipedia.

Let’s take the article Iẓnẓarn as an example.

WIKIPIDYA
Asamu ilelli

Tasna n usnubg
Aggur n tgrawt
Inɣmisn
Isnfal imggura
Tasna s udhmas
Tiwisi
Tikki

Imassn
Mad d ittawin s ɣid
Isnfal izdin
Sktur afaylu
Tasniwin timẓlan
Asɣun amɣlal
Tasna n usnɣms
Bdr tasna ad
Obtenir l'URL raccourcie
Wikidata taɣawsa

Asiggz/Asifḍ
Rnu kran udlis
Agm t id s PDF
Ambrimi tasna ad

Ɣ isnta yaḍnin
Wikimedia Commons

S tutlayin yaḍnin

Iẓnẓarn

(Tmmatti d zɣ Iznzarn abdlhadi)

Iɣ ur igi wad amgrad lli tsiggilt, kcm s tasna n Aẓnẓar bac ad tẓrt akkʷ imgradn nna dar illa yism zun d wad !

Tarabbut n **Iznẓarn** (s tifinaɣ: ⵉⵣⵏⵥⴰⵔⵏ nɣ d ⵉⵣⵏⵥⴰⵔⵏ ⵉⵅⵅⵉⵜ) tga yat zɣ trubba timzwura lli ittyssanin ɣ tmazirt n Lmɣrib d yad ɣ tilli ittuyẓlayn ɣ yigr n uẓawan atrar amaziɣ wala amɣribi. Mac ur tgi yat, rad tt tfurnt mnnawt yaḍn fkint atig i uẓawan Amṛṛuki ɣ isggʷasn wis id sḍis d mraw ɣ uzgn iggʷran ɣ tsuta n 1900. Tirubba ad lli rad isbid tinmal n uẓawan ikkan immaɣ f watig n ufgan d tmagit d tdlsa n Lmɣrib n tigira n wufuɣ n isrdas n Fransa d Sblyun.

D ur d mk lli ka tga yat ɣ tmzwura iskrn tamackut ad, maca mk lli tẓli tarmit nns aylliɣ akkʷ illa mad issaɣn i wanaw ad n umarg (amarg n trubba) taznẓarṭ.

Tumayin [ḥḍu]

1 Talalit
2 Tisfifin ilan atig
3 Iselkamn nbrra
4 Isaɣuln

Talalit [ssnfl | Snfl asagm]

Nzḍaṛ ad nini mas tmnaway tlalit ns; iɣ nssn mas d tarmiwin zwarnin n trubba zun d Laqdam ad ifkan; d imuttutn dranin n tmtti tamɣribit mad yad ffaɣn iṛumiyn sɣ tmazirt. Azmz ann a ɣ d ggʷrant tiwtlin mqqurnin yiwin s yan wanaw n tudrt ittuṣkan f wufuɣ d uzwag. Timizar akkʷ illan bṛṛa n tmdint zun d idrarn nɣ izaɣarn ur yakkan tanyaft iggutn ur sul zḍarnt ad qqnnt isɣawsatn n willi gisnt illan. Yawi uya s ad nkkrn isufuɣn n twjiwin ar nn ttrusn, zun d kraygat imzdi, ɣ wakal yaḍn. Akal imzdi ad tga tmdint d isaragn nns uqjirn n tudrt. Ɣinn a ɣ nn nmaggarn nttni zwar, s tarwa nnsn ilmma, d imrdukkutn izdin d tmukrisin n tdlsa, win tpsikulujit, d win usɣawsa amtti. Imukrisn ad akkʷ kkand s tuggt nnsn asnara ur inmalan n tnbaḍt ur iɣin ad tasi, s tɣarast iɣdmn, timasayin lli s bdda ttini gant tinns.

Mnid n tmukrisin ad ittguduyn, d usyafa idran s uzwag d tikssaḍ nna d ittu yan ixf nns, tugna d tmagit; frkn tarwa n imzdaɣn ad imzwagn s mas d iqqan ad siggln s kra n tɣarast, tgit asnulfu nɣ tga tamaɣt, mas ttinin aylli isisn ɣ uguns nnsn, ig it taɣamarg, nɣ iga taguḍi nɣ tagrẓawt, nɣ as nnan uhu mnid wudm iqqjrn n tsrtit tamaddudt. Inmuggur d usyafa ad d tizi lliɣ d ffaɣnt trubba ɣ tsggiwin yaḍn ɣ umaḍal nɣ Lmɣrib, iddrn zun d anaw ad n waddad, ɣ gan *The Beatles*, *Nas Lɣiwan* d tiyyaḍ.

Iẓnẓarn

ⵉⵣⵏⵥⴰⵔⵏ (taclḥit)

Tarabbut n Iznẓarn ɣ yan unmuggar ɣ tmdint n Glmim usggwas n 2009.

Kran Imɛlumat fllasn	
Adyar	Tamazirt n Sus
Tamazirt	Lmɣrib
Tutlayt	Taclḥit
Anaw	Taznẓart
Tarabbut n	Umarg
Igmamn	
Isuln gis	Ɛabdlhadi Iggut Mustạfa Caṭir Mulay Ibrahim Ṭṭalbi Muḥammad Ḥanfi Ḥasan Biri Ɛabdrraḥman Barda
Kkantin gis	Ɛabdlɛaziz Xams Laḥsn Bufrtal

WIKI INDABA
AGADIR, MOROCCO 2023
WIKIMEDIA FOUNDATION
WIKIMEDIA MA USER GROUP

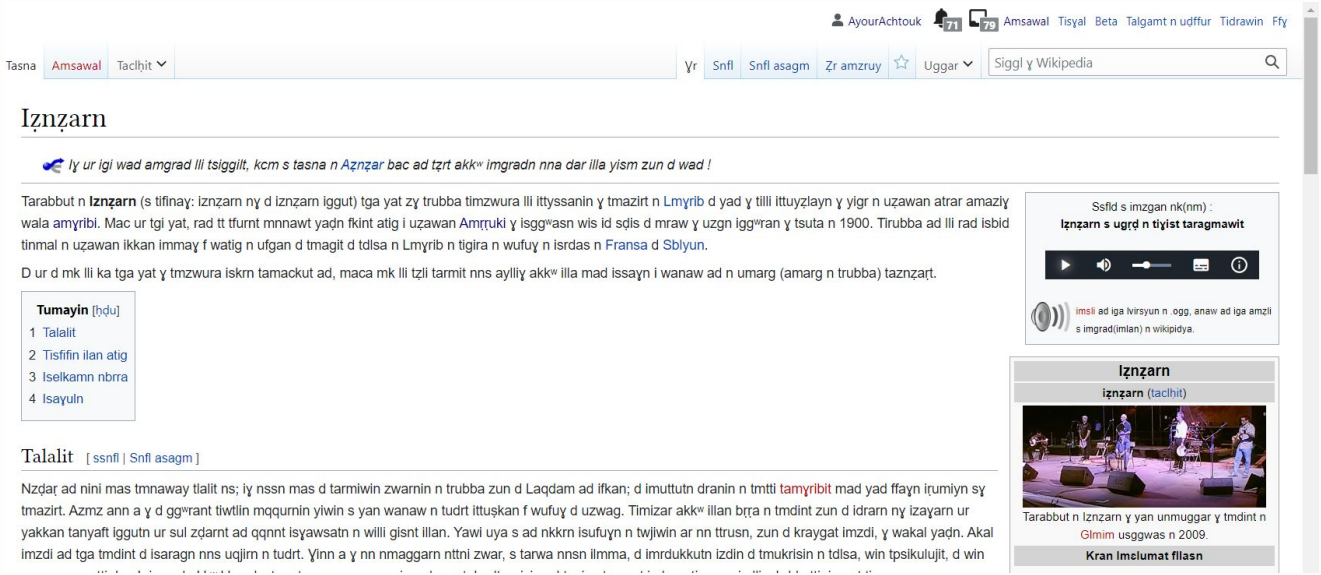
Text-to-speech of the article using MMS Meta TTS

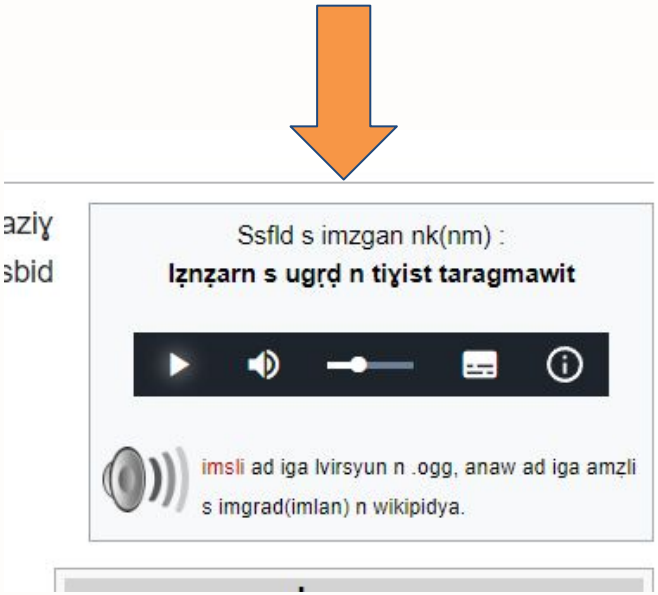
WIKI INDABA
AGADIR, MOROCCO 2023

WIKIMEDIA FOUNDATION

WIKIMEDIA MA USER GROUP

What will this look like if applied?





WIKI INDABA
AGADIR, MOROCCO 2023

WIKIMEDIA FOUNDATION

WIKIMEDIA MA USER GROUP

Future related projects ideas

Implementing this for oral languages, but not limited to them.

Implementing a live text-to-speech feature for all Wikipedias in all languages (similar to the one already used on many websites like Google Translate). This would assist people who have visual impairments, cannot read, or prefer listening to reading etc.

ⵡⵉⴽⵉ ⵉⵏⴷⴰⴱⴰ
ويكي إنـدابـا
WIKI INDABA
AGADIR, MOROCCO 2023

Thank you

WikiIndaba

Wikiindaba

wikiindaba

wikimediamorocco

WIKIMEDIA
MA USER GROUP

WIKIMEDIA
FOUNDATION