Massively multilingual accessible audioguides via cell phones

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Abstract

Bidaide[1] is a web service that allows the visitors of a museum, route or building to read or listen to explanations relative to the visited place on their own mobile and in their own language. The visitor can access the explanations in various ways: by scanning some QR codes located in the place, by GPS positioning (in outdoor routes), or by automatic Bluetooth proximity activation. This makes it accessible for people with reduced or null vision. On the other hand, this platform also offers to the manager of the visited site the most advanced language resources to create the texts and audios of the explanations in many languages.

In museums, train stations, airports, etc., travellers have to read many messages that usually are at most offered in four languages. But if we consider that practically all travellers carry their own mobile phone, why not offer them this content in 20 languages? The texts corresponding to all those languages do not all have to be physically present on the poster (this way the poster would be confusing and difficult to assimilate).

QRpedia[2] is a similar mobile web-based system which uses QR codes to deliver contents to users, in their preferred language, but just Wikipedia articles.

The *Bidaide* web platform allows the manager of a museum, route or building to easily create text and audio contents in many languages by means of machine translation and speech synthesis. Once the text in a language is created,

you just have to press the buttons "Get machine translations" and "Create audios" to obtain the translations and audios. There is also the option of post-editing or manually translating the texts, and the option of recording the audios. You can also use automatic technologies for some languages and do it manually for others.

The application was created by Elhuyar and Donostia 2016 European Capital of Culture foundations, and the University of the Basque Country. It is based on *Ohar eleanitzak* (Garaio, 2014), an open-source application used in the Albaola Museum and in the events organised by Donostia 2016 (Agerri et al., 2017). Elhuyar Foundation improved this multi-lingual solution making it accessible for people with reduced or null vision. It is installed in various museums, touristic routes and public buildings in the Basque Country[3].
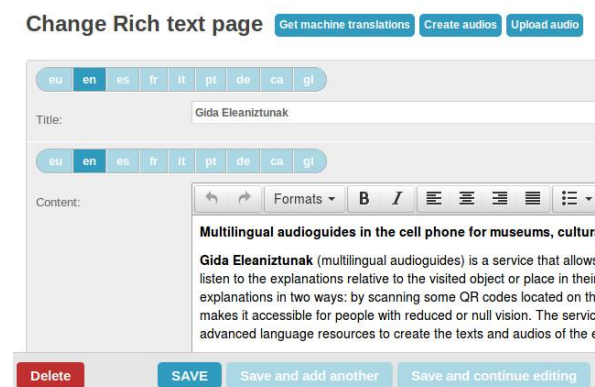

Figure 1: Creation and management of contents

References

Agerri, Rodrigo, Aitzol Astigarraga, Iñaki Alegria, Itziar Cortes, Arantza Diaz de Ilarraza, Igor Leturia, and Kepa Sarasola. 2017. L*anguage Technology projects in the frame of the European Capital of Culture 2016*. META-Forum 2017.

Garaio, Manex. 2014. *QR kodeak eta eduki-kudeaketa eleanitza*. Univ. of the Basque Country UPV/EHU.

[1]http://bidaide.elhuyar.eus
[2]https://www.learntechlib.org/p/182074/

[3]http://gidaeleaniztunak.elhuyar.eus/adibide-arrakastatsuak/