



Project co-funded by the European Union's
Competitiveness and Innovation Framework
Programme



Able to include software layer

Brussels, 14 February 2017

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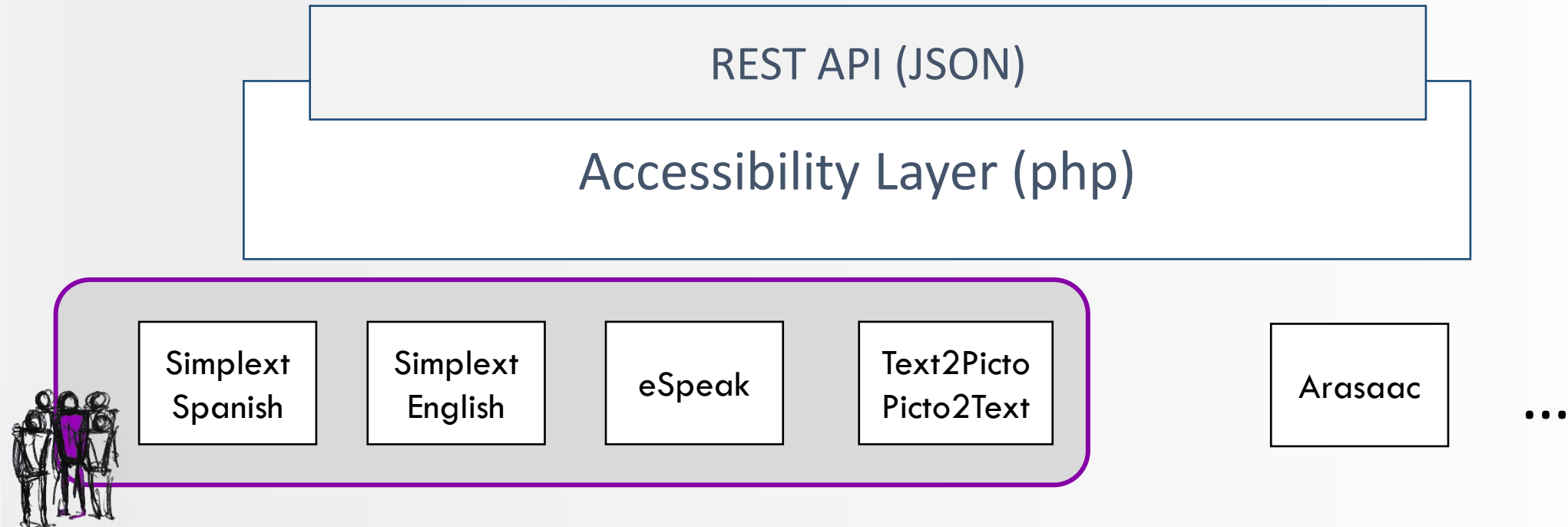
The National Microelectronics Applications Centre Ltd

<http://www.mac.ie/>



Contents

- Accessibility Layer architecture and design decisions
- How to work with the Layer
- Demonstration
- The future: We want you to join us...



- Developed using **PHP**
 - First version was implemented in **J2EE**.
- Available via **RESTful API**
- It does not support any threaded dialogues or retain any user data (to simplify the APIs and **Data Protection/Privacy/Ethical** issues)
- Accessibility Layer runs as a **Cloud Service** that is accessed through a **common API**
- The **Accessibility Layer** seamlessly **interworks with any Assistive Technology** or **device** options that the user is already using on their device.
- The **Simplext, Text2Picto/Picto2Text** and **Text2Speech** services is provided as Cloud web services (with light weight JSON) that
 - take **requests** (with suitable parameters) and
 - return the appropriate **response**.

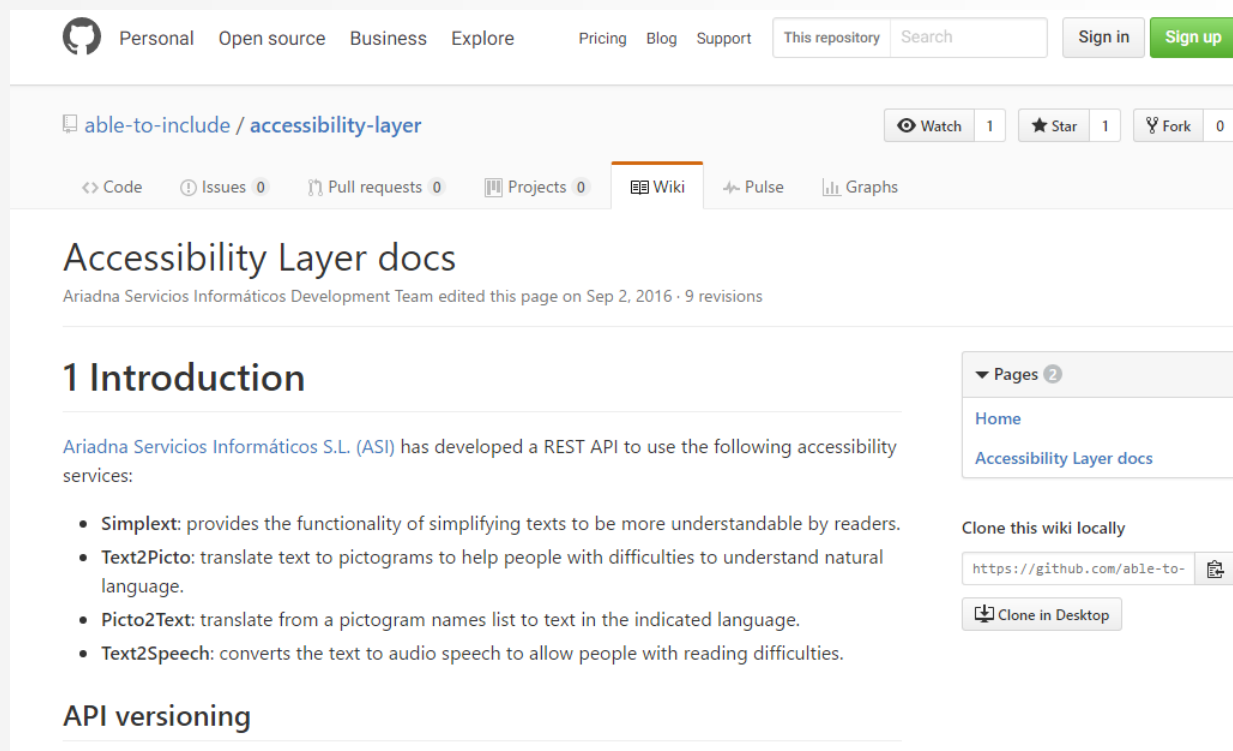
<https://github.com/able-to-include/accessibility-layer>

- **Single access point**
 - PHP Class “Able” encapsulating the functions.
 - Set of functions split into several files providing access to the different services
- Mechanism to check the **health of services**.
- **Easy to deploy**
- **Does Not keep user’s data**

| | | |
|---------------------------------|---------------------------------------|---------------|
| Able.php | Version 2.3 - Picto2Text | 5 months ago |
| Picto2Text.php | Version 2.3 - Picto2Text | 5 months ago |
| README.md | Revert "Commit test" | 11 months ago |
| Simplext.php | Settings file | 9 months ago |
| Text2Picto.php | Error correction | 6 months ago |
| Text2Speech.php | Settings file | 9 months ago |
| arasaac.php | ARASAAC pictogram base | 6 months ago |
| errors.php | API Version 1.1 - Parallel Text2Picto | 10 months ago |
| settings.php | Version 2.3 - Picto2Text | 5 months ago |

<https://github.com/able-to-include/accessibility-layer/>

<http://al.abletoinclude.eu/doc/> (Documentation)



The screenshot shows the GitHub repository page for 'able-to-include/accessibility-layer'. The page title is 'Accessibility Layer docs'. Below the title, it says 'Ariadna Servicios Informáticos Development Team edited this page on Sep 2, 2016 · 9 revisions'. The main content is under the heading '1 Introduction'. The text reads: 'Ariadna Servicios Informáticos S.L. (ASI) has developed a REST API to use the following accessibility services:'. There are four bullet points: 'Simplext: provides the functionality of simplifying texts to be more understandable by readers.', 'Text2Picto: translate text to pictograms to help people with difficulties to understand natural language.', 'Picto2Text: translate from a pictogram names list to text in the indicated language.', and 'Text2Speech: converts the text to audio speech to allow people with reading difficulties.'. On the right side, there is a 'Pages' dropdown menu with 'Home' and 'Accessibility Layer docs' options. Below that, there are buttons for 'Clone this wiki locally' and 'Clone in Desktop'.

<http://al.abletoinclude.eu/status/>

english

Text2Speech **online**
Simplext **online**
Text2Picto (old) **online**
Text2Picto (parallel) **online**

spanish

Text2Speech **online**
Simplext **online**
Text2Picto (old) **online**
Text2Picto (parallel) **online**

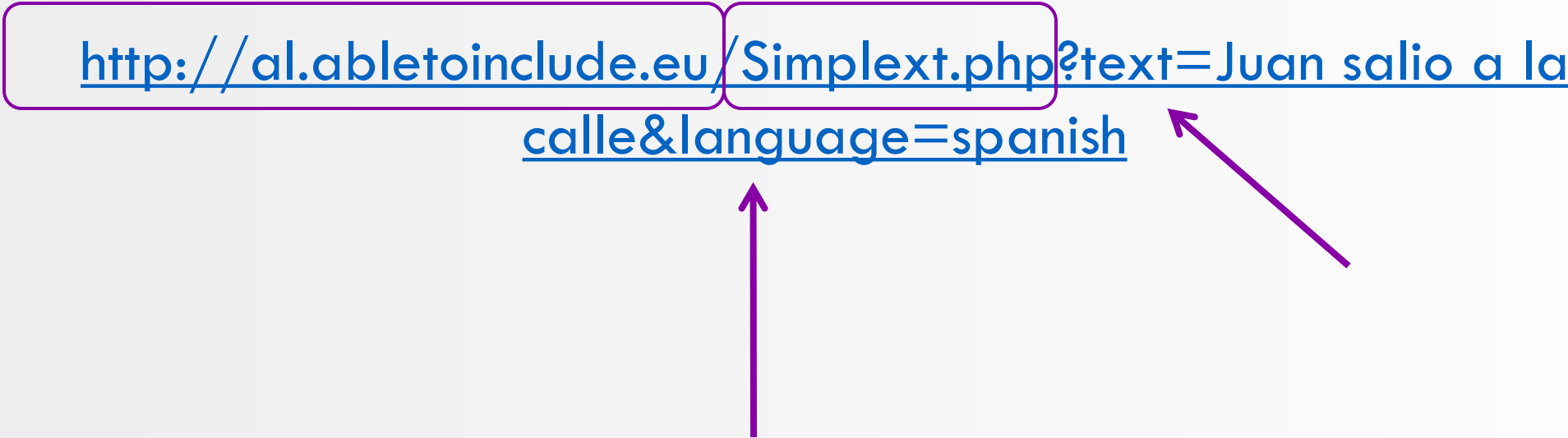
dutch

Text2Speech **online**
Simplext (NOT IMPLEMENTED) **offline**
Text2Picto (old) **online**
Text2Picto (parallel) **online**

1. Check the documentation
2. Prepare your application using our simple syntax

<Layer URL> + <Service Name> + Parameters

<http://al.abletoinclude.eu/Simplext.php?text=Juan salio a la calle&language=spanish>





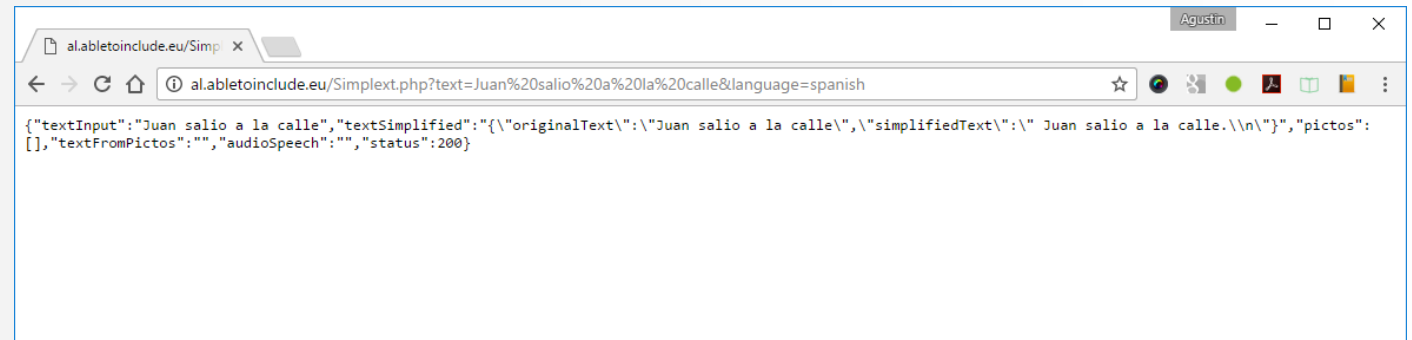
List of return codes

<http://al.abletoinclude.eu/doc/#errors>

| Code | Error description |
|------|---|
| 200 | Everything OK |
| 408 | Exceed the maximum time |
| 451 | No InputText has been introduced |
| 452 | No Language has been introduced |
| 453 | No Picto database has been introduced |
| 454 | No InputText or Language has been introduced |
| 455 | No Inputtext, Language or Picto database has been introduced |
| 456 | No Language or Picto database has been introduced |
| 457 | No Inputtext or Picto database has been introduced |
| 458 | Language is not valid |
| 459 | Picto database is not valid |
| 460 | (new in version 2.1) Parallel indicator must be "true" or "false". |

<http://al.abletoinclude.eu/Simplext.php?text=Juan salio a la calle&language=Spanish>

```
"textInput":"Juan salio a la calle",  
"textSimplified":  
  {"\"originalText\": \"Juan salio a la calle\",  
    \"simplifiedText\": \" Juan salio a la calle.\\n\""},  
"pictos":[],  
"textFromPictos": "",  
"audioSpeech": "",  
"status":200}
```



The screenshot shows a web browser window with the URL `al.abletoinclude.eu/Simplext.php?text=Juan%20salio%20a%20la%20calle&language=spanish`. The browser's developer tools display the following JSON response:

```
{\"textInput\":\"Juan salio a la calle\", \"textSimplified\": {\"originalText\": \"Juan salio a la calle\", \"simplifiedText\": \" Juan salio a la calle.\\n\"}, \"pictos\": [], \"textFromPictos\": \"\", \"audioSpeech\": \"\", \"status\": 200}
```



The future

- We will continue adding services to the **Accessibility Layer**
- Some other **Open Source developers** interested so far
 - Biblioeteca Technologies
 - Univ. Complutense de Madrid (IT department)
 - Padaone Games
 - ...
- We will all add more examples of source code to **GitHub**
- Requests to add **security features**
 - SSL connections.
 - Traffic encryption.
- **We want you to join us...** - contact Agustín (agustin@gonzalez-quel.net)
or me (john@mac.ie)



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Thank you!

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Question & Answers