The Maltese Speech Synthesiser Team

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FITA
Foundation for
Information Technology Accessibility

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Better people: better business

The Foundation for Information Technology Accessibility (FITA) is the principal advocate and coordinator for making information communications technology (ICT) accessible for disabled people in the Maltese islands.
In ensuring that due steps are taken to minimize the digital divide, FITA enables individuals to contribute productively to society and the economy.

Crimsonwing is an international IT solutions provider, developing & implementing leading-edge solutions. We mainly specialise ERP and eCommerce solutions, but R&D also plays a crucial role. The company serves the European market from the offices in Malta, UK and The Netherlands. The majority of the development is carried out in Malta, which is gaining more and more momentum through local development and implementation projects.

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Investing in Competitiveness for a Better Quality of Life
Project part-financed by the European Union
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Investing in Your Future

FITA
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Maltese
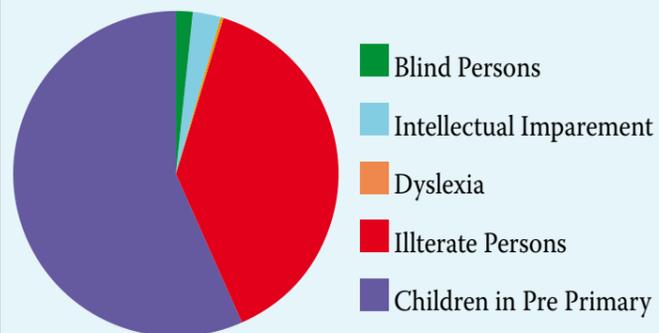## Speech
SYNTHESISER

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What is Speech Synthesis?

Speech synthesisers are used in order to convert written text to audible speech. The quality of a speech synthesiser is judged by its similarity to the human voice and by its ability to be understood.

FITA

In 2009, the Foundation for Information Technology (FITA) received a grant consisting of 85% EU funding and 15% public funds. The final product of this project is a Maltese language speech synthesiser that speaks out text in either of three available voices, being Ġanni, Marija and Mikiel.

Research Study

Legend:
- Blind Persons
- Intellectual Imparement
- Dyslexia
- Illterate Persons
- Children in Pre Primary

Project Survey on beneficiaries prior to projectstart. 2006/2007

The research element of the project focused on identifying the potential need in Malta for this technology. FITA's 2009 study suggests that there is significant interest in the Maltese speech engine, with 44% of participants stating that they perceived the need for speech enabled software which used the Maltese language.

Software Development

The Tender for Software development was awarded to Crimsonwing Malta. Work on the software consisting of

Lexicon Speech Synthesis and two host applications, commenced in January 2010. Three prototypes were produced prior to the final version in order to assess the progress of the Speech Engine.

What applications can use the Maltese Speech Engine?

Since the Maltese Speech Engine is compatible with SAPI 5.1 and upwards, the Speech Application Programming Interface standard, SAPI 5.1 and upwards. Only speech enabled software which is compatible with this standard can use it. These include many speech enabled products, including screen readers and educational software applications.

Key Beneficiaries

The potential beneficiaries of the Maltese speech engine include:

- Persons with a mobility impairment, who cannot handle books and newspapers.
- Blind persons and persons who have low vision.
- Persons with an intellectual impairment.
- People with Dyslexia and other print disabilities.

Other important beneficiaries include:

- Students who will be exposed to the Maltese Language via speech enabled educational software.

- Illiterate persons.
- People using equipment which requires their full visual attention.
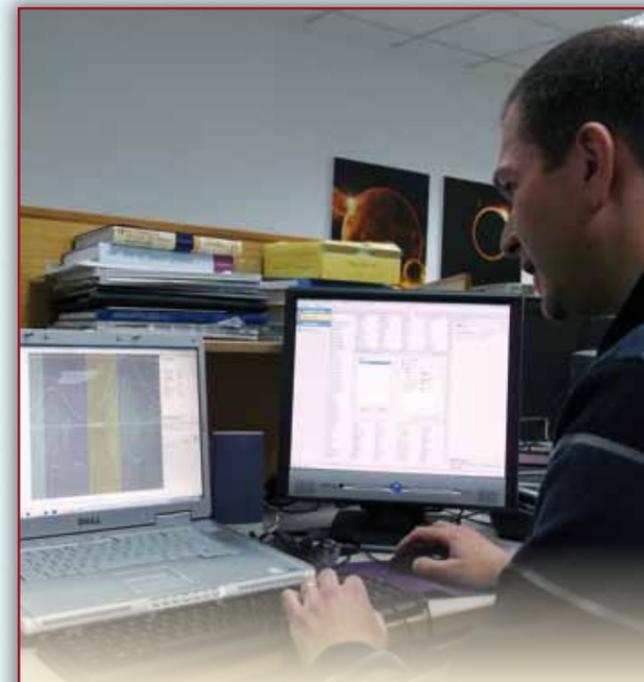- Elderly persons who may tire from reading text.

There are also many commercial applications that could use annunciation of process and commands in Maltese thus allowing industry to customize equipment to Maltese speaking operators. Some of the most common scenarios are e-services and the automated handling of phone calls. Anyone using speech enabled software that uses audio output as a method of communication can benefit from the Maltese speech engine. This computer technology is a first, in giving access to Maltese electronic text being pronounced in its correct form.

Lexicon

The lexicon developed by Crimsonwing for the Speech Engine project is a very specialised dictionary. It has the specific function of providing a repository of words that form the basis of the Speech Engine to parse text into a stream of words. The lexicon started with 28,000 Maltese words entries, and is being continually extended and edited.

Crimsonwing

From the very early stages of the project, Crimsonwing's involvement has been extensive, especially when it came to providing first-class research and complex development expertise. This is the first Speech Synthesiser commercially being released in Malta, which will have a life-changing impact on all it users and lead to many new opportunities.

Overview

The fuller inclusion of disabled persons across information society will benefit Maltese people as a whole by empowering individuals to gain better access to education and obtain gainful employment. E-services that rely on the Maltese language can be made more user friendly for Maltese speakers by utilizing the Maltese speech engine in order to facilitate computer access. Through empowerment and social inclusion disabled persons need to rely less on family and state support. In ensuring that due steps are taken to minimize the digital divide, FITA enables individuals to contribute productively to society and the economy.