

# The MOLTO Phrasebook

molto-project.eu

The MOLTO Phrasebook is a multilingual grammar application showcasing features of the **Grammatical Framework**, GF system. It demonstrates how reliable multilingual translations can be derived from an abstract grammar allowing to translate from any language to the others. The GF interlingua focuses on meanings or concepts.

GF offers a programming language combining features from grammar languages to functional programming with categorical grammar formalisms and logical frameworks. From the programmer's perspective, any GF application builds upon a large library of resource grammars and functors: the GF Resource Grammar Library, currently providing programmatic primitives to handle syntax, lexicon and inflection for 22 languages with variable coverage.

By leaving the linguistic aspects to the GF libraries, an application grammar author needs few basic skills to be able to add a new language. Many of the Phrasebook's grammars were created semi-automatically by generalization from examples and grammar induction from statistical models like Google translate. Various configurations of skills were tested during the development.

GF is distributed for all platforms and GF application grammars can be compiled to JavaScript for use in web browsers, irrespectively of the device. This makes GF a convenient tool for fast prototyping of mobile multilingual applications, such as the Phrasebook. Off the shelf JavaScript functions allow to construct a friendly user interface in which legitimate word choices guide the selection and/or textual input. Incremental parsing is used to prompt for the possibilities and to produce quasi-incremental translations of intermediate results from words or complete sentences.

The Phrasebook is distributed as open-source software, licensed under GNU LGPL, from [1]. It is also available online from the MOLTO project web pages, as a demo and as a mobile application for the Android platform. Fall-back to statistical translation is currently implemented just as a link to Google translate, however in future versions, GF will be integrated with tailor-made statistical models.

*non multa, sed multum*

MOLTO's goal is to develop tools for web content providers to translate texts between multiple languages in real time with high quality. Languages are separate modules in the tool and can be varied; prototypes covering a majority of the EU's 23 official languages will be built.

From: Swe To: Nor Del Clear Random Help

hur långt är det till

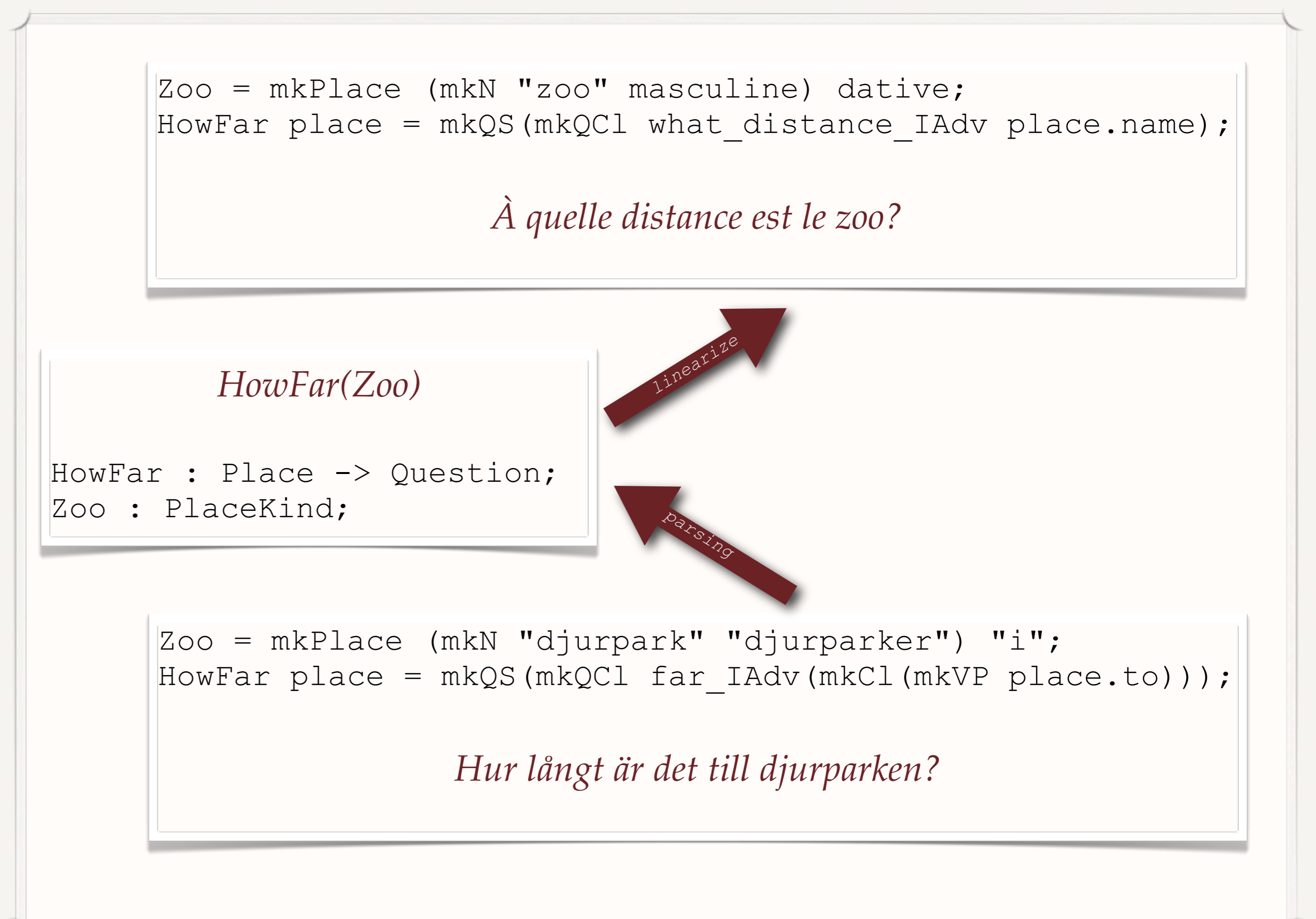
affären apoteket banken baren bion caféet den det diskoteket djurparken en ett flygplatsen hotellet innerstaden kyrkan museet nöjesparken parken parkeringen posten puben restaurangen sjukhuset skolan snabbköpet stationen teatern universitetet

From: Eng To: Fre Del Clear Random Help

you know that I am Italian .

Vous savez que je suis italien.  
-- You (polite,female) know that I (male) am Italian. / You (polite,male) know that I (male) am Italian.  
Vous savez que je suis italienne.  
-- You (polite,female) know that I (female) am Italian. / You (polite,male) know that I (female) am Italian.  
Tu sais que je suis italien.  
-- You (familiar,female) know that I (male) am Italian. / You (familiar,male) know that I (male) am Italian.  
Tu sais que je suis italienne.  
-- You (familiar,female) know that I (female) am Italian. / You (familiar,male) know that I (female) am Italian.

Try Google Translate Feedback



[1] <http://code.haskell.org/gf/examples/phrasebook>

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