



**MELANIE**  
Language Identification  
MP

## MELANIE – Language Identification, MP

### Functionality

Speech signals can be analysed according to the language prevailing in the speech. For each speech signal, an overall score and probability is estimated. In addition, these values can also be estimated for any time interval.



### Training of Models

- Goal** Training is performed in order to optimise the models on the languages and channel of the application.
- Training Data** The training data must be labeled according to the language in the speech signal. The data must be representative and as similar as possible to the data of the application. A minimum of one hour of data is required for each language.
- Trained Models** In case of insufficient data, trained models for a set of languages can be provided to use the system from scratch.

### Technical Data

*OperatingSystem* Available on Windows XP and Linux

*Processing Time*

- On a P4; 3GHz, 1GB RAM computer
- Classifying 10 different languages
- 1/7 of real time; i.e. a signal of 7 minutes length is processed in one minute

*Recognition Rate* The recognition rate depends on the number of languages, on the similarities and characteristics of the languages, and on the speech quality. For example, when distinguishing 5 languages in radio quality, an accuracy of 80 % can be obtained.

### Products

- |                       |  |
|-----------------------|--|
| <i>Mel-Pr-MP-site</i> | Production environment for MELANIE MP (site license) |
| <i>Mel-Pr-MP-PC</i>   | Production environment for MELANIE MP (PC license)   |
| <i>Mel-Tr-MP</i>      | Training environment for MELANIE MP                  |
| <i>Mel-LM-MP</i>      | Trained language models for classification with MP   |



If you would like further Information about ELAMAN,  
or would like to discuss a specific requirement or project, please contact us at:

**Elaman GmbH**  
**German Security Solutions**  
**Seitzstr. 23**  
**80538 Munich**  
**Germany**

**Tel: +49-89-24 20 91 80**  
**Fax: +49-89-24 20 91 81**  
**info@elaman.de**  
**www.elaman.de**