



# KRISTINA

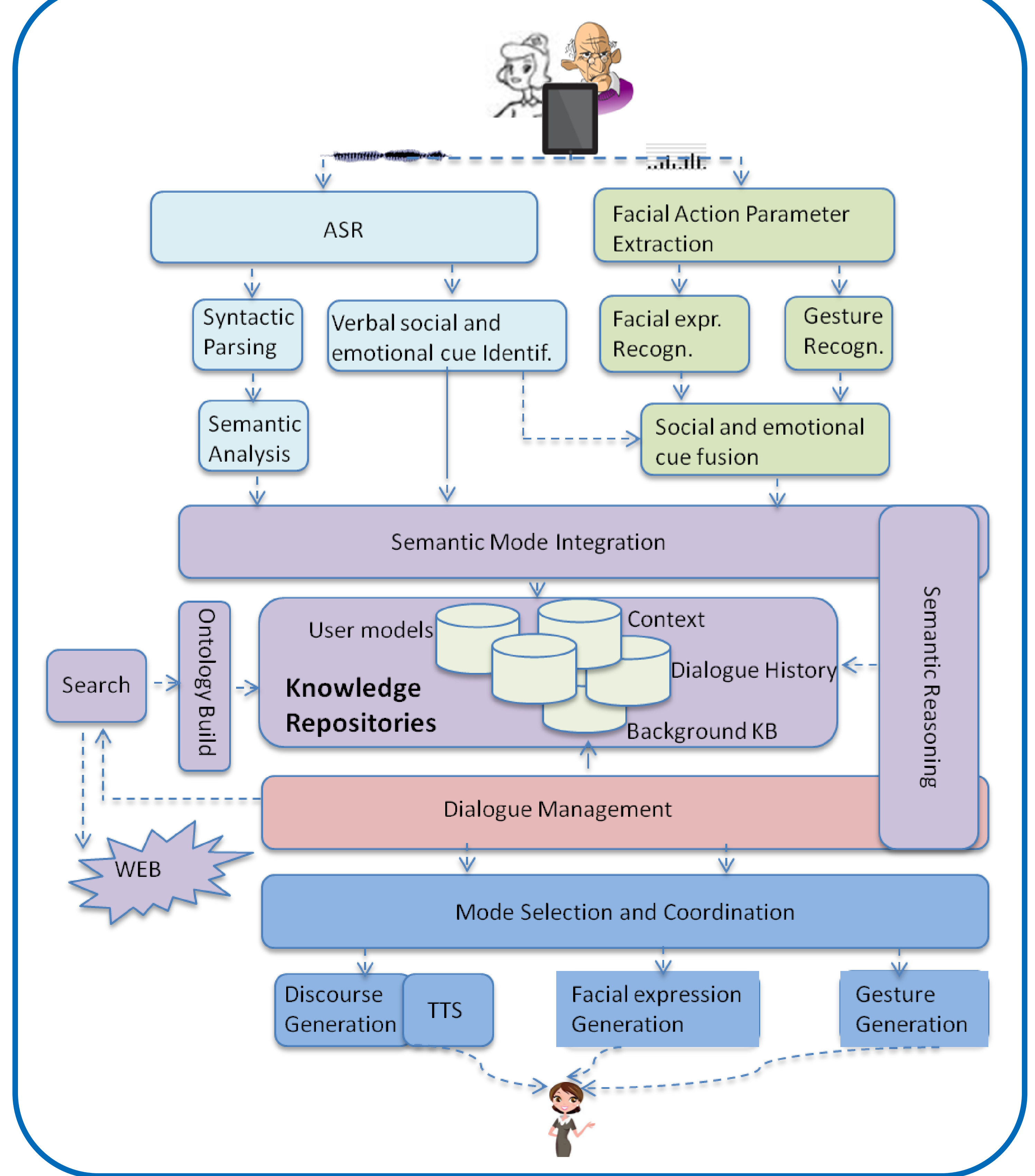
## A Knowledge-Based Information Agent with Social Competence and Human Interaction Capabilities

<http://www.kristina-project.eu>

### Scientific Objectives

- **Dialogue management** in culture-specific, highly varying social contexts
- Vocal (potentially impaired) communication analysis in noisy and emotionally charged contexts for **Arabic, Polish, and Turkish** (with English, German and Spanish as control languages)
- **Culture-specific** mimics and gesture analysis in emotionally charged contexts
- Web-oriented search of **medical** and **basic care information**
- **Semantic representation** and **reasoning** over heterogeneous knowledge spaces in the context of dialoguing
- Generation of integrated expressive **multimodal** and **multilingual** communication

### Architecture



### Motivation

- The share of the population aged **65+** is expected to **increase** from 17% in 2010 to 29% in 2060
- **Migrants** of Turkish origin show an especially **low take-up of care services** and the care insufficiently aligned with their needs
- East European migrant care givers often do not speak the language of the host country and **lack education in care giving**
- New migrant population from Maghreb in Spain raises the need to improve the knowledge of their health status and to **identify preventive measures** and priorities in health services

### Pilot Use Case 1: Natural communication in a geriatric context



#### Interaction with elderly migrants with Turkish background and with their relatives

As **personal assistant** of an elderly migrant in a home for elderly:

- Help with prescriptions and daily routines
- Communication between the user and care personnel

As a **companion** of the relatives of an elderly migrant

- Information on the daily care and health conditions of their relative
- Experience reports in social media with a similar disease history/profile
- Coaching of family members

#### Communication with care personnel with Polish migrant background

- **Medical background information** on topics related to health conditions
- Instructions on care of patients with specific health conditions
- Specific inquiries (made by the KRISTINA agent) about the **health state and behavior of the patient** and their communication to the responsible nursing and medical services at DRK

### Pilot Use Case 2: Natural communication in a healthcare context

#### Communication with North African migrants attending a hospital or medical centre

Guidance in **identifying and contacting** a medical specialist

- Mental health
- Infant care
- Gynecology
- Dental care
- Vaccination programs



#### Provision of information to North African migrants in a home setting

Guidance in **identifying and contacting** a medical specialist

- Guidance in **administrative procedures**
- getting an appointment
- obtaining certificates
- obtaining information about regulations of the sanitary system



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Aus Liebe zum Menschen.