



Tibi and Dabo robots

Tibi and Dabo are two mobile urban service robots aimed to perform navigation and human robot interaction tasks. Navigation is based on the differential Segway RMP200 platform, able to work in balancing mode, which is useful to overcome low slope ramps. Two 2D horizontal laser range sensors allow obstacle detection and localization. Human robot interaction is achieved with two 2 degrees of freedom (dof) arms, a 3 dof head with some face expressions, a stereo camera, text-to-speech software and a touch screen. They can be used to provide information, guiding and steward services to persons in urban spaces, either alone or both in collaboration.

Key Features

- Loquendo text-to-speech software with english, spanish and catalan languages

Possible Applications

- Teleoperation
- 2D navigation in urban environments
- Human robot interaction
- Multirobot systems



Access information

Corresponding infrastructure	Universitat Politècnica de Catalunya IRI
Location	C/ Llorens i Artigas 4-6, 08028 Barcelona, Spain
Unit of access	Working day

Technical specifications

Computer	Two industrial onboard computers and an external laptop for monitoring
Dimensions	60 (W) x 60 (L) x 160 (H) cm
Weight	about 100 kg
Connectivity	Onboard router for internal network with wi-fi and 3G connectivity
Battery	up to 3h operation time and 8h charge time.
Platform	Segway RMP200, maximum speed ~1m/s
Sensors	Two laser Hokuyo UTM-30LX, Stereo camera Bumblebee2 (placed on the head), Touch screen
Head DoF	3
Arms DoF	2 each
Face	LED face expressions (mouth, eyebrows and cheeks)
Software	ROS

Additional information

<http://wiki.iri.upc.edu/index.php/Tibi-Dabo>