

The 6th Tutorial on Open Source Robot Audition Software *HARK*

HRI-JP Audition for Robots with Kyoto University

February 29, 2012

UPMC, Paris, France

URL: <http://winnie.kuis.kyoto-u.ac.jp/HARK/>

Open source robot audition software called HARK (HRI-JP Audition for Robots with Kyoto University) was released in 2008 as a result of more than ten year research activities like organized sessions on robot audition at IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2004–2011). It provides a number of modules for supporting many multi-channel sound cards, advanced signal processing like sound source localization and separation, and automatic speech recognition of separated speech. A user can make a real-time robot audition system by connecting the prepared modules on a GUI programming environment, Flowdesigner. HARK has been applied to many robots like HRP-2, Robovie, SIG to show its general applicability. In February 2012, HARK 1.1 will be released with the following new functions and improvements.

- Supported Microsoft Kinect, PlayStation Eye, ROS (HARK-ROS), 64 bit Linux
- Released new noise-robust sound source localization, tools for generating transfer functions, packages for visualization and logging like HARK-python, and HARK-MATLAB
- Updated rich documentations
- Many bugfixes

■ Time Table

10:00-10:10 Introduction

10:10-10:40 Overview of HARK

10:40-11:10 Practice 0: System boot and Kinect setting

11:10-12:00 Practice 1: Sound localization system

12:00-14:00 Lunch

14:00-15:00 Practice 2: Sound source separation and speech recognition system

15:00-15:20 break

15:20-16:20 Practice 3: Dialog system based on HARK

16:20-17:00 Live demonstration

■ Requirements for Participants

We would like to ask each participant to have a *laptop PC*, and *Microsoft Kinect* or *Sony PlayStation Eye*, which are used in Practices 0-3.

Laptop PC (Windows/Linux(Ubuntu 10.04)) should have a bootable DVD player, USB, Core2Duo or higher CPU, and > 1GB memory. "VMware player" (free software. **Later than version 4.0**) should be installed in advance.

■ Registration (Free of charges)

Email to HARK12Paris-Reg_at_zeus.kuis.kyoto-u.ac.jp (replace _at_ with @)

Subject: 6th HARK Tutorial

I will participate in the 6th HARK tutorial.

*Name:

*Affiliation:

*E-mail address:

*PC (type, vender, specification):
