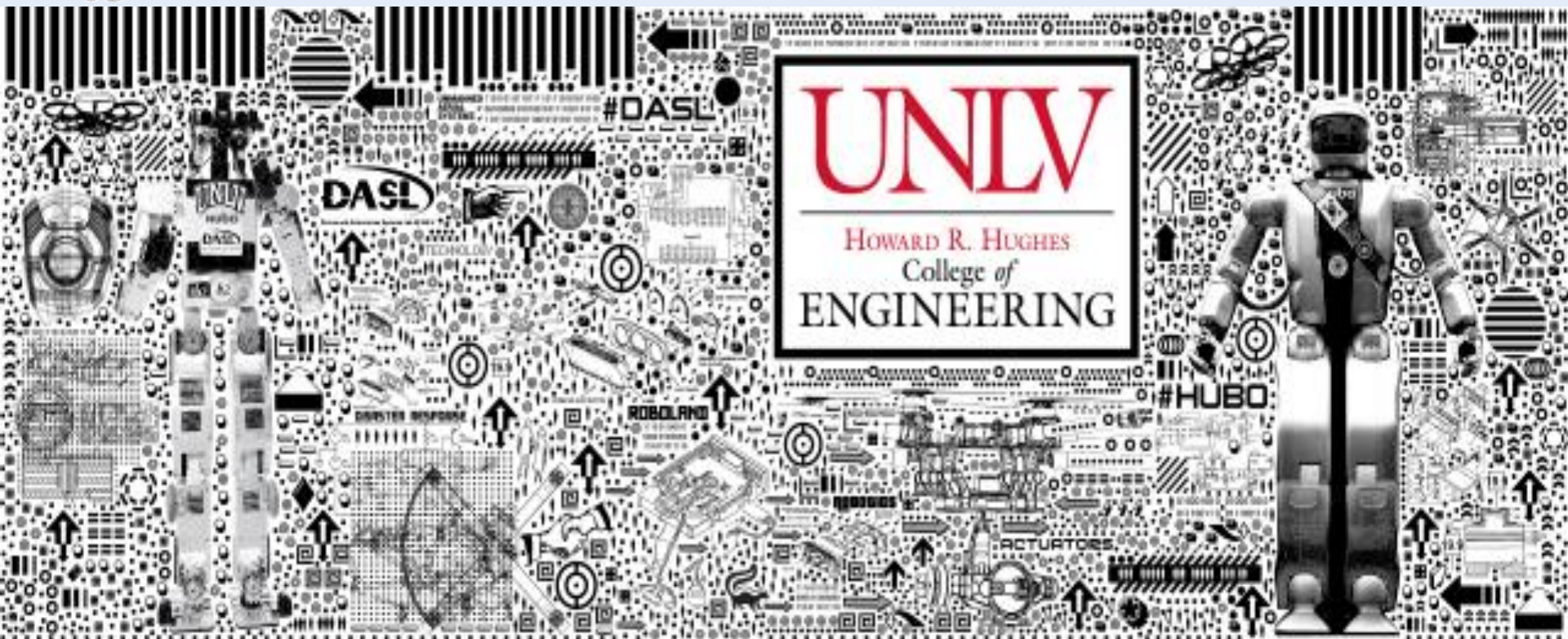




DARWIN-OP INTRODUCTION [DASL-104]

WEEK 3

INSTRUCTOR: JEAN CHAGAS VAZ



Tuesday, April 18, 2017, 10:37

Summary

DARwIn-OP Codes

Vision Track System

DARwIn-OP Demos

Walking Tuner

Webots Simulator

References

- **DARwIn-OP Codes;**
 - Overview;
- **Vision Track System;**
 - Characteristics;
 - Tele-control;
- **DARwIn-OP Demos;**
 - Hands-On;
 - Code Details;
- **Walking Turnner;**
 - Walkthrough;
- **Webots Simulator;**
 - Overview;



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```

dasl@soyleche: ~/Downloads/VNC/Untitled Folder
darwin@darwin: /darwin/Linux/project/demo
darwin@darwin: /darwin/Linux/project/demo 106x46
File Edit Options Buffers Tools C++ Help
/*
 * main.cpp
 *
 * Created on: 2011. 1. 4.
 * Author: robotis
 */
#include <stdio.h>
#include <unistd.h>
#include <limits.h>
#include <string.h>
#include <libgen.h>
#include <signal.h>
#include "mjpg_streamer.h"
#include "LinuxDARwIn.h"
#include "StatusCheck.h"
#include "VisionMode.h"
#ifdef MX28_1024
#define MOTION_FILE_PATH "../Data/motion_1024.bin"
#else
#define MOTION_FILE_PATH "../Data/motion_4096.bin"
#endif
#define INI_FILE_PATH "../Data/config.ini"
#define SCRIPT_FILE_PATH "script.asc"
#define SCRIPTJEAN_FILE_PATH "scriptJean.asc"
#define U2D_DEV_NAME0 "/dev/ttyUSB0"
#define U2D_DEV_NAME1 "/dev/ttyUSB1"
LinuxCM730 linux_cm730(U2D_DEV_NAME0);
CM730 cm730(&linux_cm730);
void change_current_dir()
{
    char exepath[1024] = {0};
    if(readlink("/proc/self/exe", exepath, sizeof(exepath)) != -1)
    {
        if(chdir(dirname(exepath)))
    }
}
-uu-: **-F1 main.cpp Top L1 SVN:77 (C++/l Abbrev)

```

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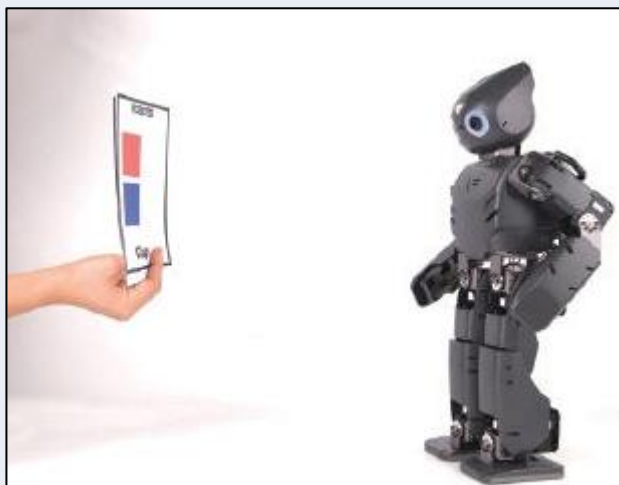
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➤ Vision Track System;

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Source: <http://support.robotis.com>



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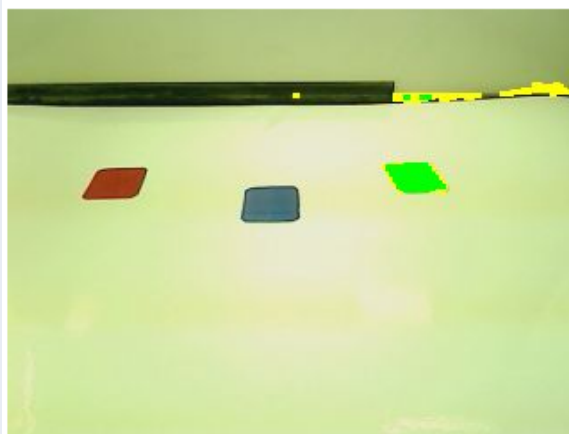
References

➤ Vision Track System;

- Tele-control;

```
Red = 0, 15, 45, 0, 0.3, 50.0  
Yellow = 60, 15, 45, 0, 0.3, 50.0  
Green = 120, 15, 45, 0, 0.3, 50.0  
Blue = 225, 15, 45, 0, 0.3, 50.0
```

Got response: hue_plus: 60



GAIN: (0 ~ 255)

-1 +1 -10 +10

EXPOSURE: (0 ~ 10000)

-1 +1 -10 +10 -100

+100

[BALL] [RED] [YELLOW] [BLUE]

BALL HUE: (0 ~ 360)

-1 +1 -10 +10

TOLERANCE: (0 ~ 179)

-1 +1 -10 +10

MIN SATURATION: (0 ~ 100)

-1 +1 -10 +10

MIN VALUE: (0 ~ 100)

-1 +1 -10 +10

RELOAD

SAVE

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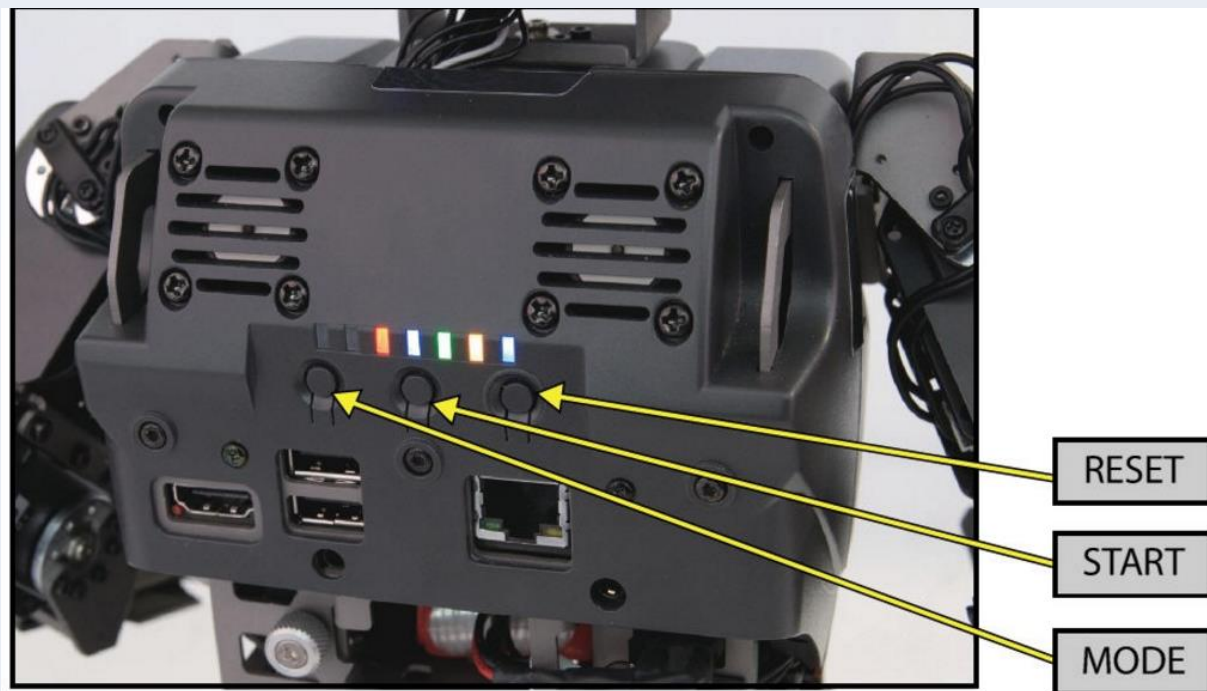
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References

➤ DARwIn-OP Demos;

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1 Thank you	2 Introduction	3 Wow!	4 Sit down
			
5 Stand up	6 Clap please	7 Oops!	8 Bye bye

Source: <http://support.robotis.com>



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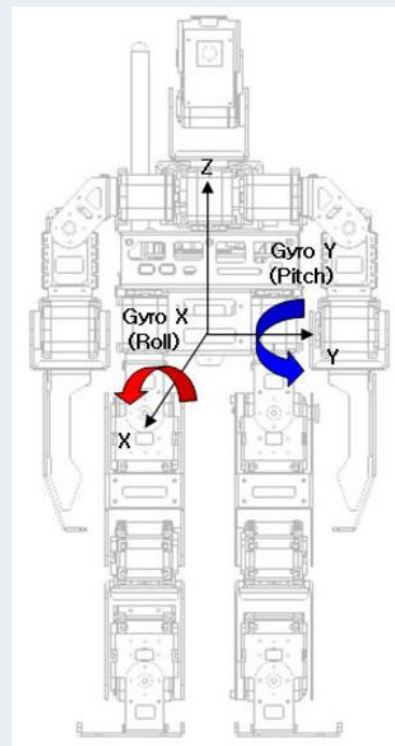
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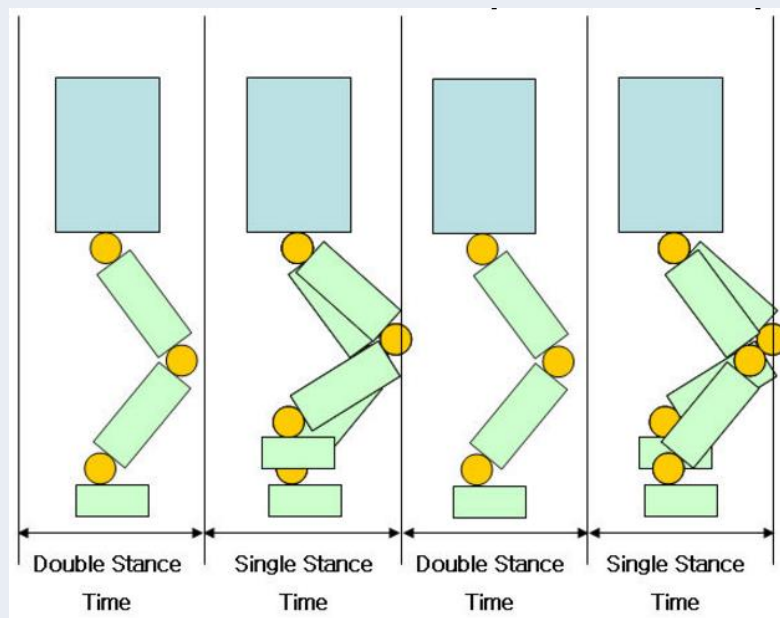
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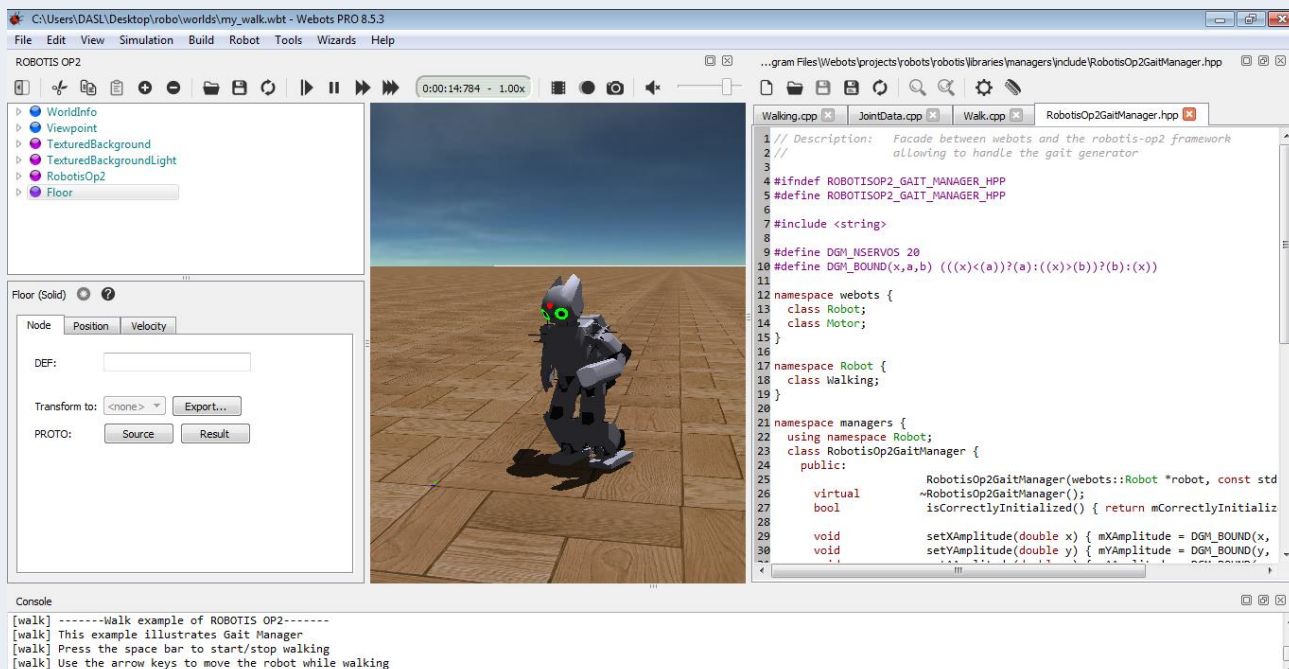
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References

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Webots™
robot simulation



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References

- http://support.robotis.com/en/product/darwin-op/development/tools/walking_tuner.htm
- http://support.robotis.com/en/product/darwin-op/operating/running_the_demonstration_programs.htm
- <https://www.cyberbotics.com/forum?message=1670>