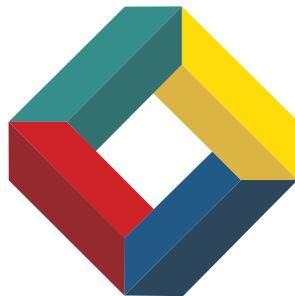


Diplomarbeit

Delta-Kinematik Roboter mit antropomorpher Hand



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$$L_{e_b\,n\,e_s}$$

Eidesstattliche Erklärung

Ich erkläre an Eides statt, dass ich die vorliegende Arbeit selbstständig verfasst, andere als die angegebenen Quellen/Hilfsmittel nicht benutzt und die den benutzten Quellen wörtlich und inhaltlich entnommenen Stellen als solche kenntlich gemacht habe.

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Innsbruck, am 16. Mai 2014

Danksagung

And I would like to acknowledge ...

Abstract

This is where you write your abstract ...

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Kapitel 1

Getting Started

Kapitel 2

My Second Chapter

Kapitel 3

My Third Chapter

3.1 First Section of the Third Chapter

And now I begin my third chapter here ...

And now to cite some more people Ancey et al. [2], Read [6]

3.1.1 First Subsection in the First Section

... and some more

3.1.2 Second Subsection in the First Section

... and some more ...

First subsub section in the second subsection

... and some more in the first subsub section otherwise it all looks the same doesn't it? well we can add some text to it ...

3.1.3 Third Subsection in the First Section

... and some more ...

First subsub section in the third subsection

... and some more in the first subsub section otherwise it all looks the same doesn't it? well we can add some text to it and some more and some more and some more and some more

and some more and some more and some more ...

Second subsub section in the third subsection

... and some more in the first subsub section otherwise it all looks the same doesn't it? well we can add some text to it ...

3.2 Second Section of the Third Chapter

and here I write more ...

Now we can refer to the table using Table. 3.1.

Tabelle 3.1 Table with Borders

1	2	3
4	5	6
7	8	9

Kapitel 4

Programmierbeispiel

Listing 4.1 My caption

```
1 #include <SoftwareSerial.h>
2 #include <Servo.h>
3
4 int bluetoothTx = 2; // TX-O pin of bluetooth mate, Arduino D2
5 int bluetoothRx = 3; // RX-I pin of bluetooth mate, Arduino D3
6
7 char arr[4];
8 int counter = 0;
9 int res = 0;
10
11 SoftwareSerial bluetooth(bluetoothTx, bluetoothRx);
12 //Servo myservo;
13
14 // plug the pins TX-0 to Arduino D2 and the RX-I to Arduino D3
15 // before uploading the sketch make sure that the bluetooth mate isn't
16 // supplied with voltage.
17 // after uploading supply the bluetooth module with voltage.
18 // In order to get the RN-42 into CMD mode, you need to send $$$ but
19 // without any CR/LF.
20
21 void setup()
22 {
23     //myservo.attach(5);
24     Serial.begin(9600); // Begin the serial monitor at 9600bps
25     bluetooth.begin(115200); // The Bluetooth Mate defaults to
26     // 115200bps
27     delay(320); // IMPORTANT DELAY! (Minimum ~276ms)
```

```
25  bluetooth.print("$$$");           // Enter command mode
26  delay(100);                     // IMPORTANT DELAY! (Minimum ~10ms)
27  bluetooth.println("U,9600,N");    // Temporarily Change the baudrate to
28  // 9600, no parity
29  bluetooth.println("____");
30  bluetooth.begin(9600);          // Start bluetooth serial at 9600
31
32 void loop()
33 {
34  if(blueooth.available()) // If the bluetooth sent any characters
35  {
36  // Send any characters the bluetooth prints to the serial monitor
37  arr[counter] = (char)blueooth.read();
38  if((arr[counter] != ';') && counter <= 4){
39  counter++;
40  } else{
41  counter = 0;
42  res = atoi(arr);
43  }
44  // myservo.write(map(blueooth.read(), 0, 1024, 0, 180));
45  }
46  if(Serial.available()) // If stuff was typed in the serial monitor
47  {
48  // Send any characters the Serial monitor prints to the bluetooth
49  blueooth.print(Serial.read());
50  }
51  // and loop forever and ever!
52 }
```

Anhang A

How to install L^AT_EX

Windows OS

TeXLive package - full version

1. Download the TeXLive ISO (2.2GB) from
<https://www.tug.org/texlive/>
2. Download WinCDEmu (if you don't have a virtual drive) from
<http://wincdemu.sysprogs.org/download/>
3. To install Windows CD Emulator follow the instructions at
<http://wincdemu.sysprogs.org/tutorials/install/>
4. Right click the iso and mount it using the WinCDEmu as shown in
<http://wincdemu.sysprogs.org/tutorials/mount/>
5. Open your virtual drive and run setup.pl

or

Basic MikTeX - TeX distribution

1. Download Basic-MiK_TE_X(32bit or 64bit) from
<http://miktex.org/download>
2. Run the installer

3. To add a new package go to Start » All Programs » MikTex » Maintenance (Admin) and choose Package Manager
4. Select or search for packages to install

TexStudio - Tex Editor

1. Download TexStudio from
<http://texstudio.sourceforge.net/#downloads>
2. Run the installer

Mac OS X

MacTeX - TeX distribution

1. Download the file from
<https://www.tug.org/mactex/>
2. Extract and double click to run the installer. It does the entire configuration, sit back and relax.

TexStudio - Tex Editor

1. Download TexStudio from
<http://texstudio.sourceforge.net/#downloads>
2. Extract and Start

Unix/Linux

TeXLive - TeX distribution

Getting the distribution:

1. TeXLive can be downloaded from
<http://www.tug.org/texlive/acquire-netinstall.html>.

2. TexLive is provided by most operating system you can use (rpm, apt-get or yum) to get TexLive distributions

Installation

1. Mount the ISO file in the mnt directory

```
mount -t iso9660 -o ro,loop,noauto /your/texlive####.iso /mnt
```

2. Install wget on your OS (use rpm, apt-get or yum install)

3. Run the installer script install-tl.

```
cd /your/download/directory  
./install-tl
```

4. Enter command ‘i’ for installation

5. Post-Installation configuration:

<http://www.tug.org/texlive/doc/texlive-en/texlive-en.html#x1-320003.4.1>

6. Set the path for the directory of TexLive binaries in your .bashrc file

For 32Bit OS

For Bourne-compatible shells such as bash, and using Intel x86 GNU/Linux and a default directory setup as an example, the file to edit might be

```
edit $~/.bashrc file and add following lines  
PATH=/usr/local/texlive/2011/bin/i386-linux:$PATH;  
export PATH  
MANPATH=/usr/local/texlive/2011/texmf/doc/man:$MANPATH;  
export MANPATH  
INFOPATH=/usr/local/texlive/2011/texmf/doc/info:$INFOPATH;  
export INFOPATH
```

For 64Bit

```
edit $~/.bashrc file and add following lines  
PATH=/usr/local/texlive/2011/bin/x86_64-linux:$PATH;  
export PATH  
MANPATH=/usr/local/texlive/2011/texmf/doc/man:$MANPATH;  
export MANPATH  
INFOPATH=/usr/local/texlive/2011/texmf/doc/info:$INFOPATH;  
export INFOPATH
```

Fedora/RedHat/CENTOS:

```
sudo yum install texlive  
sudo yum install psutils
```

SUSE:

```
sudo zypper install texlive
```

Debian/Ubuntu:

```
sudo apt-get install texlive texlive-latex-extra  
sudo apt-get install psutils
```

Anhang B

Installing the CUED Class file

\LaTeX .cls files can be accessed system-wide when they are placed in the <texmf>/tex/latex directory, where <texmf> is the root directory of the user's \TeX installation. On systems that have a local texmf tree (<texmflocal>), which may be named "texmf-local" or "localtexmf", it may be advisable to install packages in <texmflocal>, rather than <texmf> as the contents of the former, unlike that of the latter, are preserved after the \LaTeX system is reinstalled and/or upgraded.

It is recommended that the user create a subdirectory <texmf>/tex/latex/CUED for all CUED related \LaTeX class and package files. On some \LaTeX systems, the directory look-up tables will need to be refreshed after making additions or deletions to the system files. For $\text{\TeX}{}_{\text{Live}}$ systems this is accomplished via executing "texhash" as root. MIK \TeX users can run "initexmf -u" to accomplish the same thing.

Users not willing or able to install the files system-wide can install them in their personal directories, but will then have to provide the path (full or relative) in addition to the filename when referring to them in \LaTeX .

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