

# Presentation Title

Presentation Subtitle

Ausgeführt von: Walter Subject

Personenkennzeichen: 1234567890

Betreuer: 1<sup>st</sup> Supervisor

2<sup>nd</sup> Supervisor    Vienna, Sunday 9<sup>th</sup> December, 2018



2018-12-09

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# Introduction

*Embedded Systems (ES)*-style beamer template of UAS  
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- Einstein [5]
- Pentz [8]
- Goossens et al. [6]
- Daniel [4]
- Knuth [7]
- [1, 2, 3]



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- Einstein [5]
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Bee Biene

Honey Honig

Ant Ameise

Elephant Elefant

Bee Biene

Honey Honig

# Demonstration - Block

## This is a block

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.



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This is a block.

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.

# Demonstration - Block

## This is a block

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.

## This is an exampleblock

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.



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Demonstration - Block

This is a block.

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.

This is an exampleblock.

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.

# Demonstration - Block

## This is a block

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.

## This is an exampleblock

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.

## This is an alertblock

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.



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This is an alertblock

Lipsum ipsum dolor sit amet, consectetur elit. Morbi ac arcu est, vel poseuere velit. In congue erat vel lorem ornare pretium.

# Demonstration - Equations

$$a = bq + r \quad (1)$$

where (1) is true if  $a$  and  $b$  are integers with  $b \neq c$ .

Maxwell's equations:

$$B' = -\nabla \times E, \quad (2a)$$

$$E' = \nabla \times B - 4\pi j, \quad (2b)$$



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Maxwell's equations:

$$B' = -\nabla \times E, \quad (2a)$$

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$$\oint_C E \cdot dl = -\frac{d}{dt} \int_S B_n dA \quad (3)$$

Figure 1: Maxwell's equation - Faraday's law

$$\forall x \in X, \quad \exists y \leq \epsilon \quad (4)$$

$$\oint_C E \cdot dl = -\frac{d}{dt} \int_S B_n dA \quad (3)$$

Figure 1: Maxwell's equation - Faraday's law

$$\forall x \in X, \quad \exists y \leq \epsilon \quad (4)$$



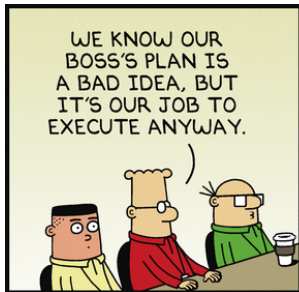


Figure 2: © 2018 Scott Adams, dilbert.com



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Figure 2: © 2018 Scott Adams, dilbert.com



Figure 2: © 2018 Scott Adams, dilbert.com



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Figure 2: © 2018 Scott Adams, dilbert.com



Figure 2: © 2018 Scott Adams, dilbert.com



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Figure 2: © 2018 Scott Adams, dilbert.com

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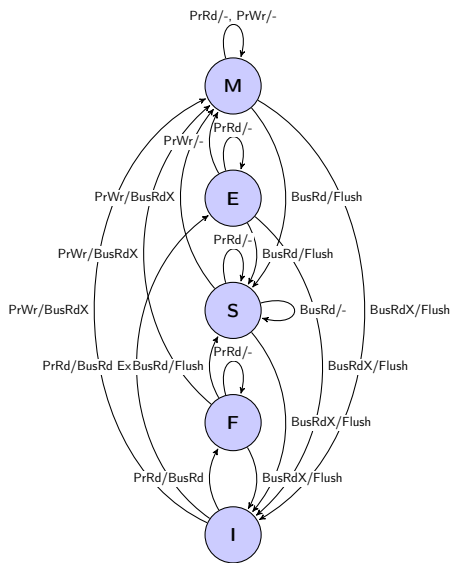


Figure 3: MESIF protocol, © Marek Fiser, marekfiser.cz



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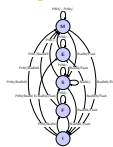


Figure 3: MESIF protocol, © Marek Fiser, marekfiser.cz

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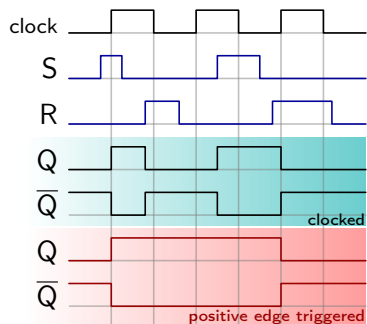


Figure 4: SR flip-flop timing diagram (package: timingtable)



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Figure 4: SR flip-flop timing diagram (package: timingtable)

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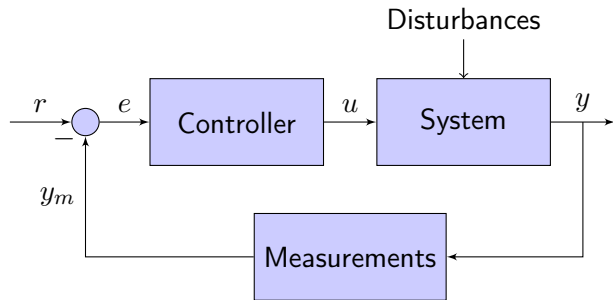


Figure 5: Control system principle, texample.net



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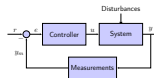


Figure 5: Control system principle, texample.net



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```
#include <stdio.h>
#include <stdlib.h>

int main(int argc, char *argv[]) {
    // Print to terminal
    printf("Hello World\n");
    return EXIT_SUCCESS;
}
```

Listing 1: C Syntax Highlighting

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main(int argc, char *argv[]) {
5
6     // Print to terminal
7     printf("Hello World\n");
8
9     return EXIT_SUCCESS;
10 }
```

Listing 1: C Syntax Highlighting

# Demonstration - Tables

Material	Symbol	$E_g$ (eV)	Type
<b>Elements</b>			
diamond	<i>C</i>	5.46	i
silicon	<i>Si</i>	1.12	i
germanium	<i>Ge</i>	0.67	i
selenium	<i>Se</i>	1.74	d
<b>IV-IV Compounds</b>			
silicon carbide	<i>SiC3C</i>	2.36	i
silicon carbide	<i>SiC4H</i>	3.28	i
silicon carbide	<i>SiC6H</i>	3.03	i
<b>III-V Compounds</b>			
indium phosphide	<i>InP</i>	1.27	d
indium arsenide	<i>InAs</i>	0.355	d
gallium nitride	<i>GaN</i>	3.37	d
gallium arsenide	<i>GaAs</i>	1.42	d
aluminium nitride	<i>AlN</i>	6.2	d

Table 1: The bandgap of some semiconductors.



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Table 1: The bandgap of some semiconductors.



# Demonstration - Tables

Unit name	Unit Symbol	Dimension symbol	Quantity name	Definition <sup>1</sup>
metre	m	L	length	<ul style="list-style-type: none"> <li>■ <b>Prior</b> (1793): <math>\frac{1}{10\,000\,000}</math> of the meridian through Paris between the North Pole and the Equator.<sup>FG</sup></li> <li>■ <b>Interim</b> (1960): 1 650 763.73 wavelengths in a vacuum of the radiation corresponding to the transition between the <math>2p^{10}</math> and <math>5d^5</math> quantum levels of the krypton-86 atom.</li> <li>■ <b>Current</b> (1983): The distance travelled by light in vacuum in <math>\frac{1}{299\,792\,458}</math> s.</li> </ul>
kilogram <sup>2</sup>	kg	M	mass	<ul style="list-style-type: none"> <li>■ <b>Prior</b> (1793): The grave was defined as being the mass (then called weight) of one litre of pure water at its freezing point.<sup>FG</sup></li> <li>■ <b>Current</b> (1889): The mass of a small squat cylinder of <math>\sim 47\text{ cm}^3</math> of platinum-iridium alloy kept in the Pavillon de Breteuil, France. Also, in practice, any of numerous official replicas of it.</li> <li>■ <b>Future</b> (2019): The kg is defined by taking the Planck constant <math>h</math> as exactly <math>6.626\,070\,15 \times 10^{-34}</math> J s (<math>\text{J} = \text{kg m}^2 \text{s}^{-2}</math>), given the definitions of the m and the s.</li> </ul>
second	s	T	time	<ul style="list-style-type: none"> <li>■ <b>Prior</b>: <math>\frac{1}{86\,400}</math> of a day of 24 h of 60 min of 60 s.</li> <li>■ <b>Interim</b> (1956): <math>\frac{1}{31\,556\,925.9747}</math> of the tropical year for 1900 January 0 at 12 h ephemeris time.</li> <li>■ <b>Current</b> (1967): The duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium-133 atom.</li> </ul>

<sup>1</sup> Interim definitions are given here only when there has been a significant difference in the definition.

<sup>2</sup> Despite the prefix "kilo-", the kilogram is the base unit of mass.

<sup>FG</sup> French Government (FG).

Table 2: SI base units



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Table 2: SI base units



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## Acronyms

- ES Embedded Systems
- FG French Government
- FHTW Fachhochschule Technikum Wien
- SI International System of Units (Système international (d'unités))
- UAS University of Applied Science

ES Embedded Systems

FG French Government

FHTW Fachhochschule Technikum Wien

SI International System of Units (Système international (d'unités))

UAS University of Applied Science

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### Acronyms

### References

- [1] P. Adams, "The title of the work," *The name of the journal*, vol. 4, no. 2, pp. 201–213, 7 1993, an optional note.
- [2] P. Babington, *The title of the work*, 3rd ed., ser. 10. The address: The name of the publisher, 7 1993, vol. 4, an optional note.
- [3] P. Caxton, "The title of the work," How it was published, The address of the publisher, 7 1993, an optional note.
- [4] H. Daniel, *Physik III: Optik, Thermodynamik, Quanten*. DE GRUYTER, jan 1998. [Online]. Available: <https://doi.org/10.1515/9783110807066>



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- [1] P. Adams, "The title of the work," *The name of the journal*, vol. 4, no. 2, pp. 201–213, 7 1993, an optional note.
- [2] P. Babington, *The title of the work*, 3rd ed., ser. 10. The address: The name of the publisher, 7 1993, vol. 4, an optional note.
- [3] P. Caxton, "The title of the work," How it was published, The address of the publisher, 7 1993, an optional note.
- [4] H. Daniel, *Physik III: Optik, Thermodynamik, Quanten*. DE GRUYTER, jan 1998. [Online]. Available: <https://doi.org/10.1515/9783110807066>

- [5] A. Einstein, “Zur elektrodynamik bewegter körper,” *Annalen der Physik*, vol. 322, no. 10, pp. 891–921, 1905. [Online]. Available: <https://doi.org/10.1002/andp.19053221004>
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