THÈSE DE DOCTORAT

DE L'ÉTABLISSEMENT UNIVERSITÉ DE TECHNOLOGIE DE BELFORT-MONTBÉLIARD

École doctorale n°37

Sciences pour l'Ingénieur et Microtechniques

Doctorat d'Intelligence Artificielle

par

FIRSTNAME LASTNAME

Title

Subtitle

Thèse présentée et soutenue à Belfort, le September 17, 2012

Composition du Jury :

HULK INCREDIBLE	Professor at Gotham City University Secondary comment	President
AMERICA CAPTAIN	Professor at USA University	Reviewer
MAN SUPER	Professor at Gotham City University	Examiner
Mr. MAN BAT	Professor at Gotham City University	Thesis Director
Mr. WOLVERINE THE	Professor at Gotham City University	Co-Director
Ms. MAN PAC	Professor somewhere	Invited

N° X X X

ACKNOWLEDGEMENTS

Contents

RÉSUMÉ LONG

You must write here a long summary of your PhD thesis in French language. According to the SPIM rules, the length of this long summary must be of minimum 3 pages for people who is not native-french speaker, and of minimum 20 pages for who is native-french speaker.

ACRONYMS

- **MAS:** Multi-Agent System

I

CONTEXT AND ISSUES

1 INTRODUCTION

This is an acronym: Multi-Agent System (MAS). This is the same acronym: MAS.

Research Question 1 (RQ1) – a name

Description of the research question.

Objective 1 (O1) – a name

Description of the objective.

Contribution 1 (C1) – a name

Description of the contribution.

1.1 Context

This template describes some elements that can help you write your thesis. A typical outline for a scientific thesis is also proposed.

1.2 Thesis Objectives

The main objective of your thesis can be highlighted using the environment below:

Propose a model that does something!

1.3 Thesis Outline

2

State of the Art

To help you write your thesis, several tools are described below. Many other macros are available in the LaTeX package set `tex-upmethodology` on which the style of this thesis is based. Examples include environments for automatically creating subfigures and macros for defining unnumbered sections that appear in the table of contents.

2.1 Propose a Definition

Definition 1 illustrates the proposal of a definition.

Definition 1: A Thesis

Document presented to a university jury for obtaining a doctorate.

2.2 Include a Figure

Including a figure is done using standard LaTeX tools (environment `figure`, `\includegraphics`, etc.).

We propose a macro to simplify the inclusion of a figure.

```
\mfigure[position]{options}{filename}{title}{labelid}
```

This is equivalent to (note the addition of `fig:` as a prefix to the label):

```
\begin{figure}[position]
 \begin{center}
  \includegraphics[options]{filename}
  \label{fig:labelid}
  \caption{title}
 \end{center}
\end{figure}
```

Referencing the figure can be done using the macros:

```
\figref{labelid}
\figpageref{labelid}
```

2.3 Include a Table

Including a table is done using standard LaTeX tools (environment `table`, environment `tabularx`, etc.).

We propose a macro to simplify the inclusion of a table.

```
\begin{mtable}[options]{width}{numberofcolumns}{columnspec}{title}{labelid}
 content
\end{mtable}
```

This is equivalent to (note the addition of `tab:` as a prefix to the label):

```
\begin{table}[options]
 \begin{center}
  \begin{tabularx}{width}{columnspec}
   content
  \end{tabularx}
  \label{tab:labelid}
  \caption{title}
 \end{center}
\end{table}
```

Referencing the table can be done using the macros:

```
\tabref{labelid}
\tabpageref{labelid}
```

2.3.1 Example 1

Table 2.1 is an example of a table with 4 columns, with a title added at the top.

Col1	Col2	Col3	Col4
a	b	c	d
e	f	g	h

Table 2.1: Table Title

2.3.2 Example 2

Table 2.2 is an example of a table with 5 columns, with the table title also added at the top.

Col1	Col2	Col3	Col4	Col5
a	b	c	d	x
e	f	g	h	z

Table 2.2: Table Title
Source:This is a source

2.4 Inline Enumeration

You can enumerate elements in a paragraph: *(i)* element 1, *(ii)* element 2, *(iii)* element 3; and continue your text.

2.5 Description

The `description` environment provided by LaTeX has been extended:

- **Element 1:** Text 1
- **Element 2:** Text 2
- **Element 3:** Text 3

Omitting an item header is not a problem:

- **Element 1:** Text 1
- Text 2
- **Element 3:** Text 3

2.6 Enumeration

The `enumerate` environment provided by LaTeX has been extended to combine the advantages of the `enumerate` and `description` environments in a single LaTeX environment:

1. **Element 1:** Text 1
2. **Element 2:** Text 2
3. **Element 3:** Text 3

You can specify the type of enumeration by switching to Arabic numerals:

1. **Element 1:** Text 1
2. **Element 2:** Text 2
3. **Element 3:** Text 3

Or in Roman numerals:

i. **Element 1:** Text 1
ii. **Element 2:** Text 2
iii. **Element 3:** Text 3

Or in alphabetical numerals:

a. **Element 1:** Text 1
b. **Element 2:** Text 2
c. **Element 3:** Text 3

Omitting an item header is not a problem:

1. **Element 1:** Text 1
2. Text 2
3. **Element 3:** Text 3

2.7 Format Text

You can place text $^{\text{as a superscript}}$. You can place text $_{\text{as a subscript}}$.

You can highlight text, or highlight it **even more**.

You can format people's names uniformly, for example Stéphane Galland (other macros are available).

2.8 Mathematical Symbols

- $\mathbb{R}$
- $\mathbb{N}$
- $\mathbb{Z}$
- $\mathbb{Q}$
- $\mathbb{C}$
- $\mathcal{P}a$
- $\operatorname{sgn}(a)$
- $\min(a, b)$
- $\max(a, b)$

2.9 Theorems

You can define your own environment to describe a theorem, lemma, etc. This type of environment must be declared in the preamble of your document with the macro `\declareupmtheorem` (see the example in the preamble of this template).

My Theorem 1: Some Theorem

This is the description of this theorem.

This is my optional source

At the end of your document, you can then add a chapter listing the theorems present in your document: `\listofmytheorems`

2.10 Conclusion

II

CONTRIBUTION

3

CONTRIBUTION

4

IMPLEMENTATION

III

CONCLUSION

5

General Conclusion

List of Figures

List of Tables

List of Definitions

IV

APPENDICES

A

First Appendix Chapter

B

Second Appendix Chapter

Document generated with LaTeX and:
the LaTeX style for PhD Thesis created by S. Galland — https://github.com/gallandarakhneorg/tex-templates
the tex-upmethodology package suite — http://www.arakhne.org/tex-upmethodology/

école doctorale **sciences pour l'ingénieur et microtechniques**

Title: Title

Keywords: Keyword 1, Keyword 2

Abstract:

This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English. This is the abstract in English.

Titre : Titre en francais

Mots-clés : Mot-clé 1, Mot-clé 2

Résumé :

Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français. Ceci est un résumé en français.

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