

Université de Technologie de Belfort-Montbéliard

Laboratoire CIAD

13 rue Ernest Thierry Mieg

90010 Belfort cedex, France

Crowd Simulator

|  |  |
| --- | --- |
| Document Reference | 2021\_IA51\_<GROUPID> |
| Date of publication | 2021-03-08 |
| Members of the Group | Carteret thomas.carteret@utbm.fr  Iovleff stephane.iovleff@utbm.fr  Rothea hadrien.rothea@utbm.fr |

CONTENT

[1. General Presentation 4](#_Toc36812825)

[1.1. General Description of the Application 4](#_Toc36812826)

[1.2. Expected Measurements 4](#_Toc36812827)

[2. Detailled Description 4](#_Toc36812828)

[2.1. Environment Description 4](#_Toc36812829)

[2.1.1. Environment Content 4](#_Toc36812830)

[2.1.2. Environment Dynamics 4](#_Toc36812831)

[2.2. Intelligent Entities 4](#_Toc36812832)

[2.2.1. Agent Type 1 4](#_Toc36812833)

[3. Technological Environment 5](#_Toc36812834)

[4. User Interface 5](#_Toc36812835)

[5. Work Packages 5](#_Toc36812836)

[5.1. What is a Work-Package ? 5](#_Toc36812837)

[5.1. Work Package 1: Environment 6](#_Toc36812838)

[5.1.1. Description 6](#_Toc36812839)

[5.1.2. Inputs 6](#_Toc36812840)

[5.1.3. Outputs / Deliverables 6](#_Toc36812841)

[5.2. Work Package 2: Group 1 of Agents 6](#_Toc36812842)

[5.2.1. Description 6](#_Toc36812843)

[5.2.2. Inputs 7](#_Toc36812844)

[5.2.3. Outputs / Deliverables 7](#_Toc36812845)

[5.3. Work Package 3: Group 2 of Agents 7](#_Toc36812846)

[5.3.1. Description 7](#_Toc36812847)

[5.3.2. Inputs 7](#_Toc36812848)

[5.3.3. Outputs / Deliverables 7](#_Toc36812849)

[5.4. Work Package 4: User Interface 7](#_Toc36812850)

[5.4.1. Description 7](#_Toc36812851)

[5.4.2. Inputs 7](#_Toc36812852)

[5.4.3. Outputs / Deliverables 7](#_Toc36812853)

[5.5. Work Package 5: Integration 8](#_Toc36812854)

[5.5.1. Description 8](#_Toc36812855)

[5.5.2. Inputs 8](#_Toc36812856)

[5.5.3. Outputs / Deliverables 8](#_Toc36812857)

[6. Risk Assessments 8](#_Toc36812858)

[A1. Reports for the Sprint Meetings 11](#_Toc36812859)

[A1.1. Sprint Meeting #1 11](#_Toc36812860)

[A1.1.1. List of tasks for the current sprint 11](#_Toc36812861)

[A1.1.2. General Comments 11](#_Toc36812862)

[A1.2. Sprint Meeting #2 11](#_Toc36812863)

[A1.2.1 Status of the tasks of the Finished Sprint 11](#_Toc36812864)

[A1.2.2. List of tasks for the current sprint 11](#_Toc36812865)

[A1.2.2. General Comments 12](#_Toc36812866)

[A1.2. Sprint Meeting #3 12](#_Toc36812867)

[A1.3.1 Status of the tasks of the Finished Sprint 12](#_Toc36812868)

[A1.3.2. List of tasks for the current sprint 12](#_Toc36812869)

[A1.3.2. General Comments 12](#_Toc36812870)

# 1. General Presentation

## 1.1. General Description of the Application

Describe your application, its purpose, the elements inside.

## 1.2. Expected Measurements

List the values that you would like to measure from the simulation, e.g. the average travel duration for the agents, the average density of population, etc.):

* Measure 1:
  + What: explain what will be measured
  + Why: Explain why it is interesting to measure.

# 2. Detailled Description

## 2.1. Environment Description

### 2.1.1. Environment Content

Describe the environment and the elements inside.

### 2.1.2. Environment Dynamics

Describe the dynamics of the environment.

## 2.2. Intelligent Entities

### 2.2.1. Agent Type 1

#### 2.2.1.1. Expected Behavior

Describe informally the expected behavior of the agent type.

#### 2.2.1.2. Key properties

List the key properties that the agent behavior is used (level of stress, life level, preferences, etc.).

#### 2.2.1.3. Interaction with other agent types

List the interactions with the other agent types, and the impact on the current agent behavior.

#### 2.2.1.4. Interaction with Environment objects

List the interactions with the environments (perception or actions).

# 3. Technological Environment

Explain you’re a-priori technological choices.

Give concrete and arguments for your choices.

More specifically, you have to given convincing arguments if you would not use SARL.

# 4. User Interface

Brief description of the user interface of the simulator.

# 5. Work Packages

In this section, you should provide an tentative of description of the different work packages in your project. A work-package is a set of tasks that are all dedicated to a given topics. Below, examples are provided. But you could change them.

## 5.1. What is a Work-Package ?

The division of the project into “work-package”[[1]](#footnote-1) (WP) is a classic of projects. It is sometimes translated into French by « group of tasks », « type of action » or « activities », which does not reflect completely, the concept behind it.

If you look at the content, it’s simply a matter of breaking your project down into a few major activities. Generally, we find in all projects at least the following actions:

* + - * *Project Management*, i.e. related to the tasks dedicated to the project management itself;
      * *Communication*, i.e. the tasks related to the scientific and not scientific communication and publicity;
      * *Implementation of the project*, i.e. the work-packages that enable to reach the objectives of the project.

This will enable you to:

* + - * Make your project more understandable for an external evaluator by splitting its complexity into smaller units of works;
      * Dispatch the work load on several tasks within the different work-packages;
      * Assign the persons to the work-packages and the tasks into these work-packages;
      * Assign other resources (computers, etc.) to the tasks.

Each WP has:

* A description of the objectives of the WP;
* A list of tasks;
* A list of inputs (document, code, etc.) for each task that may be provided by another tasks within the same WP or another WP, or get from another source;
* A list of outputs, or outcomes (document, code, etc.) for each tasks.

**You are not supposed to be expert in project management, yet. That’s why, the list of WP and tasks that you will have to define and write into this document should not be “perfect”. But, take this opportunity in order to increase your experience related to a “professional” definition of a project.**

## 5.1. Work Package 1: Environment

### 5.1.1. Description

Describe the purpose of the work package.

List the tasks:

* T1.1: Name and explanation about the task 1 in this work package
* T1.2: Name and explanation about the task 2 in this work package

### 5.1.2. Inputs

List the information, the models, the files that are needed to realize the tasks.

### 5.1.3. Outputs / Deliverables

List the information, the models, the files or the code that are produced during this work package.

## 5.2. Work Package 2: Group 1 of Agents

### 5.2.1. Description

Describe the purpose of the work package.

List the tasks:

* T2.1: Name and explanation about the task 1 in this work package
* T2.2: Name and explanation about the task 2 in this work package

### 5.2.2. Inputs

List the information, the models, the files that are needed to realize the tasks.

### 5.2.3. Outputs / Deliverables

List the information, the models, the files or the code that are produced during this work package.

## 5.3. Work Package 3: Group 2 of Agents

### 5.3.1. Description

Describe the purpose of the work package.

List the tasks:

* T3.1: Name and explanation about the task 1 in this work package
* T3.2: Name and explanation about the task 2 in this work package

### 5.3.2. Inputs

List the information, the models, the files that are needed to realize the tasks.

### 5.3.3. Outputs / Deliverables

List the information, the models, the files or the code that are produced during this work package.

## 5.4. Work Package 4: User Interface

### 5.4.1. Description

Describe the purpose of the work package.

List the tasks:

* T4.1: Name and explanation about the task 1 in this work package
* T4.2: Name and explanation about the task 2 in this work package

### 5.4.2. Inputs

List the information, the models, the files that are needed to realize the tasks.

### 5.4.3. Outputs / Deliverables

List the information, the models, the files or the code that are produced during this work package.

## 5.5. Work Package 5: Integration

### 5.5.1. Description

Describe the purpose of the work package.

List the tasks:

* T5.1: Name and explanation about the task 1 in this work package
* T5.2: Name and explanation about the task 2 in this work package

### 5.5.2. Inputs

List the information, the models, the files that are needed to realize the tasks.

### 5.5.3. Outputs / Deliverables

List the information, the models, the files or the code that are produced during this work package.

# 6. Risk Assessments

Description of the risks that you could see and they may avoid you to finish your project.

Risk may be of different types :

* **Management :** related to the project management
  + Example 1: one member of the group leaves the group.
  + Example 2 : conflict between members on decisions.
* **Methodology :** related to the application of the agile methodology
  + Example 1: one member of the group does not deliver the outcomes on time.
  + Example 2: difficulties to determine the tasks of the next sprint.
* **Technological:** related to one of the technologies you have selected
  + Example 1: the selected technology cannot run enough agents under real-time constraint.
  + Example 2: the technology cannot be used for implementing a specific feature.

|  |  |  |  |
| --- | --- | --- | --- |
| ID | Type | Description | Mitigation |
| R1 | Technological | Explain the risk that is related to a technicial point | If possible, Explain how you could solve the problem related to the risk if the problem occur. |
| R2 | Management | … | … |

ANNEXES

# A1. Reports for the Sprint Meetings

## A1.1. Sprint Meeting #1

Date : XX/XX/20XX

### A1.1.1. List of tasks for the current sprint

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Problem or Task Description | Possible Solution | Assigned to | Validation by (if applicable) |
| S1.1 | Design of …. | n/a | X | Y |
| S1.2 | Implementation of… | n/a | Z | X |

### A1.1.2. General Comments

Write here some general comments that are discussed during the sprint meeting.

## A1.2. Sprint Meeting #2

Date : XX/XX/20XX

### A1.2.1 Status of the tasks of the Finished Sprint

|  |  |
| --- | --- |
| ID | Validated |
| S1.1 | Yes/No |
| S1.2 | Yes/No |

### A1.2.2. List of tasks for the current sprint

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Problem or Task Description | Possible Solution | Assigned to | Validation by (if applicable) |
| S2.1 | Design of …. | n/a | X | Y |
| S2.2 | Implementation of… | n/a | Z | X |

### A1.2.2. General Comments

Write here some general comments that are discussed during the sprint meeting.

## A1.2. Sprint Meeting #3

Date : XX/XX/20XX

### A1.3.1 Status of the tasks of the Finished Sprint

|  |  |
| --- | --- |
| ID | Validated |
| S2.1 | Yes/No |
| S2.2 | Yes/No |

### A1.3.2. List of tasks for the current sprint

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Problem or Task Description | Possible Solution | Assigned to | Validation by (if applicable) |
| S3.1 | Design of …. | n/a | X | Y |
| S3.2 | Implementation of… | n/a | Z | X |

### A1.3.2. General Comments

Write here some general comments that are discussed during the sprint meeting.

1. « work-package » is not a real English word. But , it is used in National and European projects. [↑](#footnote-ref-1)