

# Agents Intelligents

M1 Informatique Paris Descartes

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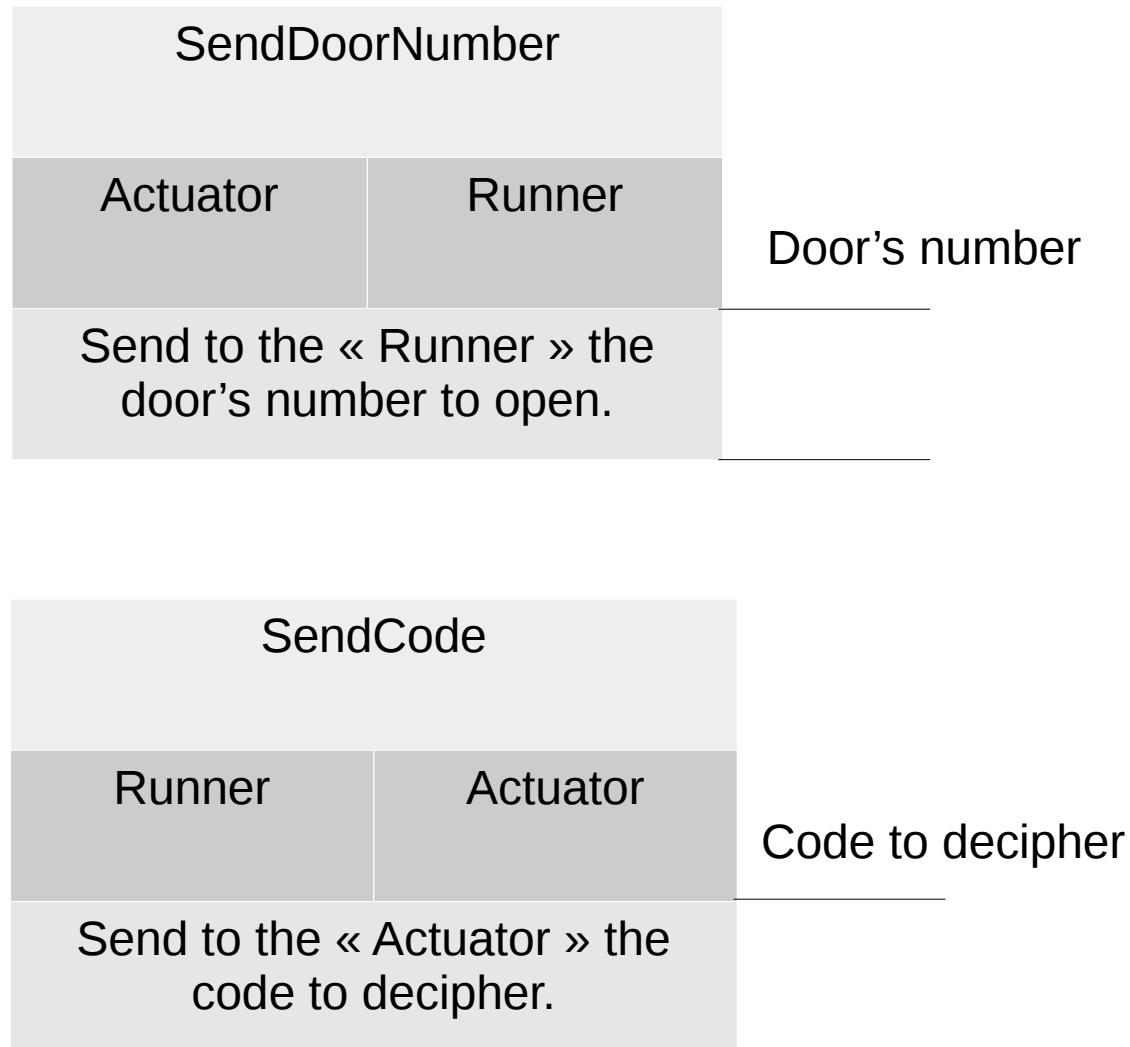
# Roles Model (1/2)

| Role Schema              | Actuator   |
|--------------------------|--|
| Description              | Receive the code, decipher it and push the right button to open the door for the « Runner ».   |
| Protocols and Activities | WaitCode, <u>Decipher</u> , <u>PressButton</u> , SendDoorNumber  |
| Permissions              |  |
| Responsibilities         | <ul style="list-style-type: none"><li>• Liveness :<br/>Actuator = (WaitCode.(<u>Decipher.PressButton</u>)<sup>+</sup>.SendDoorNumber)<sup>ω</sup></li><li>• Safety :</li></ul> |

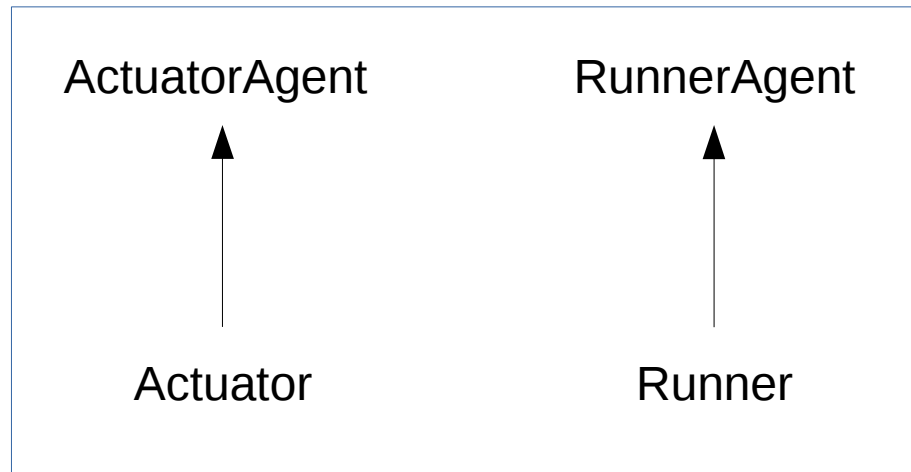
# Roles Model (2/2)

|                                 |   |
|---------------------------------|---|
| <b>Role Schema</b>              | Runner  |
| <b>Description</b>              | Find, send the code and pass through the right door once opened by the « Actuator ».  |
| <b>Protocols and Activities</b> | <u>FindCode</u> , SendCode, WaitDoorNumber, <u>OpenDoor</u>   |
| <b>Permissions</b>              |   |
| <b>Responsibilities</b>         | <ul style="list-style-type: none"><li>• Liveness :<br/>Runner = (<u>FindCode</u>.SendCode.WaitDoorNumber.<u>OpenDoor</u>)<math>\omega</math></li><li>• Safety :</li></ul> |

# Interactions Model



# Agent Model



# Services Model

| Service            | Inputs          | Outputs                              | Pre-condition   | Post-condition |
|--------------------|-----------------|--------------------------------------|-----------------|----------------|
| WaitCode           |                 | Code                                 |                 |                |
| <u>Decipher</u>    | Code            | - Button's Number<br>- Door's Number |                 |                |
| <u>PressButton</u> | Button's Number | buttonIsCorrect                      |                 |                |
| SendDoorNumber     | Door's Number   |                                      | buttonIsCorrect |                |
| <u>FindCode</u>    |                 | Code                                 |                 |                |
| SendCode           | Code            |                                      |                 |                |
| WaitDoorNumber     |                 | Door's Number                        |                 |                |
| <u>OpenDoor</u>    | Door's Number   |                                      | buttonIsCorrect |                |

# Acquaintance Model

