Flipper Tutorial

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This tutorial will teach you some of the basics of Flipper for the ARIA-VALUSPA project using example templates (please find them in the accompanying zip-files). The setup is as follows: for each example we specify some simple rules for the system, we provide the Flipper templates for the example, and we give you a task (optional) to change the template in order to practise.

A general introduction to Flipper can be found here: <https://github.com/hmi-utwente/FlipperMMDS/wiki>

With each example we offer our solution in a zip-file.

Please extract this zip to: “\ARIA\System\Agent-Core-New\templates\”

In “\ARIA\System\Agent-Core-New\config\manager.xml” edit the BehaviourGenerator manager to include the appropriate template for your example. For example, add:

<template path="../templates/Example/tutorial1.xml"/>

### Example 1: Q&A

This first example shows very basic question-answer behaviour. Flipper is intended to switch (flip) information between modules based on abstract rules. These rules can be based on input the system receives and/or on information state updates the system generates autonomously. Flipper not intended for use as a QA matcher, but it can be used in this manner. This example shows how, based on some user input, appropriate bml output can be created for response behaviour generation and how this behaviour can depend on the dialogue history.

We specify:

1. A user says ‘Hi’ (or some synonym), we want the agent to say ‘Hello to you, $user\_name’.
2. A user says ‘Bye’ (or some synonym), we want the agent to say ‘Bye’ (or some synonym).
3. After the initial greeting, the agent does not respond to ‘Hi’ until the conversation is closed by the user saying ‘Bye’.

Examine the accompanying Flipper templates to see our solution (tutorial1.zip).

Task: change the behaviour of the agent by adding the following specification:

1. A user says ‘weather’ (or some synonym), we want the agent to say ‘I’m a computer, as long as I’m inside I don’t care about the weather’.

Hint: the synonym list can be found here: “ARIA\System\Agent-Core-New\data”. The words on each line are all ‘translated’ to the first word on that line.

### Example 2: Primitive counselor

Taking output from the SSI to make a compassionate remark can be enough to have a very primitive counselor, as we show in this example. We look at the valence value from the SSI framework (it is based on both visual and auditory information of the user).

We specify:

1. When the user looks happy (valence > 0.5), the agent says ‘You look happy! Why are you happy?’
2. When the user looks unhappy (valence < 0.3), the agent says ‘You seem sad. What happened?’.
3. The agent does not say the same thing twice (i.e. the user has to change valence before the agent makes another remark).

Examine the accompanying Flipper template to see our solution (tutorial2.zip).

Task: change the template so that the agent responds after each user utterance with an encouraging remark:

1. When a user says something, after the agent made a remark about the user’s state, the agent responds with ‘Really? Tell me more!’.

Hint: look at example 1.

### Example 3: Funny or not

In this example we show some logic (e.g. random) and how to use SSI input to select agent behaviour. We want the agent to tell jokes and show that it understands whether or not the user thought the joke was funny.

We specify:

1. The agent takes the initiative.
2. The agent selects a random joke (from three options) to crack.
3. The agent tells the joke and waits some time before delivering the punch line from that joke.
4. Based on the SSI input (valence) we want to user to respond differently:
   1. A user is smiling after the joke (happiness >= 0.8), the agent says ‘Good joke, made you laugh!’
   2. A user is not smiling after the joke (happiness < 0.8), the agent says ‘Sorry, not funny?’

Examine the accompanying Flipper templates to see our solution (tutorial3.zip).

Task: change the behaviour of the agent by adding the following specification:

1. If user is present according to SSI, the agent tells jokes. Otherwise the agent does nothing.

Hint: find the appropriate Information State in the Tutorial Information States.xlsx (found in the tutorials folder)