POLITECNICO DI MILANO

Robotics and Design/ Design and Robotics course

Hato User Manual

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USER MANUAL

Introduction

The following is intended as a user manual for a correct and effective usage of Hato, a hat-robot designed for solving issues between children from 4 to 8 years old.

Assumptions

For simplicity, it is assumed the following notation:

1. **Supervisor**: Whoever supervises the entire flow of action between the kids. It can be a parent, a teacher or whoever has to manage the quarrel between the children.

2. **Child 1**: The child who receives Hato on the head as first

3. **Child 2**: The other child

Steps

- **STEP 1**: Insert two Li-ion 3.7 V 18650 batteries into the appropriate case. Please pay attention to positionate them following the correct

orientation.

- **STEP 2**: The supervisor can find a switch to turn the robot on. Press it in order to begin the interaction. After that, the robot will present itself by saying "Hi, I'm Hato. I'm here to help you to solve your problems".

- **STEP 3**: Put Hato on the head of the child 1 and wait until the robot says "Oh, hi".

- **STEP 4**: After that, the robot will say "Tell me what happened". This will be the beginning of the 20 seconds in which child 1 has to talk about the problem.

- **STEP 4.1**: If during this period the other child tries to scream against who is talking, the robot will try to restore calm by saying "Hey don't scream! Just let your friend tell what happened".

- **STEP 5**: After that amount of time, the robot will express its sadness to report that the time is up.

- **STEP 6**: Then, it communicates you that it is the moment to put Hato on the child 2's head by saying "Oh, I see. Now let's hear your friend's point of view".

- **STEP 7**: Once it is put on his head, Hato will say "Now it's your turn". After that, steps from 3 to 5 are repeated.

- **STEP 8**: When the time of the child 2 is up, the robot tries to solve the issue in a propositive way. Indeed, it will say: "I'm sorry you too fought. Now let's do an exercise: try to explain what your friend said". This will be the beginning of the second phase.

- **STEP 9**: Hato is still on the head of the child 1. From this moment on, he will try to express the mate's point of view in 20 seconds.

- **STEP 9.1**: As in step 3.1, if the other child screams the robot will say "Hey, don't scream! Just let your friend tell what happened".

- **STEP 10**: Once the time is up, Hato will say "Ok good job! Now it's your friend's turn". This will be the signal for you to move Hato on the head of child 1.

- **STEP 10.1**: If the conditions of the step 9.1 are verified, also during this phase the robot will behave as step 4.1.

- **STEP 11**: When the time finishes also for child 2, Hato will say "Perfect! Very good guys". After that, put Hato between the two children. This lets the third phase begin.

- **STEP 12**: To persuade children to make peace, Hato will be happy and will say "Okay, now press the red tentacles together to make peace".

- **STEP 13**: Two of Hato's tentacles will light up of red.

- **STEP 14**: After the children have squeezed them together, Hato will express its excitness and will say "Good job! I am happy you solved your issue" followed by "Goodbye huys". This is the final phrase that ends the interaction flow between parts.

- **STEP 15**: Turn off Hato by pressing on the switch.