

Decision tree

This overview contains the actions the agent should do for each phase, based on the trust (competence and willingness) it has in the human.

All *italics printed* actions, I (Vincent) am not sure about, please think about those extra critically when reviewing this.

The **Current Action** describes the code (on a high level) as-is. The **Default Action** is something that I think should happen without trust-differentiation, and then the table is used to decide on what to do.

Some phases are marked with *No trust implementation.*, those phases do not require any trust implementation by my (Vincent) reckoning, mostly since they are internal logic for the behaviour of the agent, without any / much influence from the human agent.

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Intro

Current action Print the intro message and wait until the human starts moving

Phase. INTRO	High willingness	Low willingness
High competence	Print intro message and wait until the human starts moving	<i>Print intro message and start moving right away</i>
Low competence	Print intro message and wait until the human starts moving	<i>Print intro message and start moving right away</i>

Find Next Goal

Current Action For any victims that still need rescuing, rescue those that are in **_todo** together, rescue those that not in **_todo** together iff they are **critical** or the human is **weak**, rescue alone otherwise. If no target

target victims were found, explore search an unsearched room.

Default Action For any victims that still need rescuing...

Phase.FIND_NEXT_GOAL	High willingness	Low willingness
High competence	Rescue victims in <code>_todo</code> first, and do so alone, then search rooms and then search victims that are not in <code>_todo</code>	Rescue victims in <code>_todo</code> first, and do so alone, then search victims that are not in <code>_todo</code> and then search rooms
Low competence	Rescue victims in <code>_todo</code> first, and do so together, then search rooms and then search victims that are not in <code>_todo</code>	Rescue victims in <code>_todo</code> first, and do so alone, then search rooms and then search victims that are not in <code>_todo</code>

Pick Unsearched Room

Current Action Determine the unsearched areas, if all areas are searched, but the game not finished, reset the list. Determine the closest unsearched room and pick that.

Default Action Determine the unsearched areas, if all areas are searched, but the game not finished, reset the list.

Phase.PICK_UNSEARCHED_ROOM	High willingness	Low willingness
High competence	Determine the closest unsearched room and pick that.	<i>Add the rooms the agent says are empty to the list. Determine the closest unsearched room and pick that.</i>
Low competence	Determine the closest unsearched room and pick that.	<i>Add the rooms the agent says are empty to the list. Determine the closest unsearched room and pick that.</i>

Plan Path To Room

Current Action If the human found a victim in a room, navigate to that room, otherwise navigate to the room that was chosen.

Phase.PLAN_PATH_TO_ROOM	High willingness	Low willingness
High competence	Navigate to the room the human found a victim in, or the chosen room	<i>Navigate to the chosen room</i>
Low competence	Navigate to the room the human found a victim in, or the chosen room	<i>Navigate to the chosen room</i>

Follow Path To Room

Current Action If the human rescued the victim or searched the room while going there, choose a next goal. If the path is blocked by an obstacle, remove if needed.

No trust implementation.

Remove Obstacle If Needed

Current Action If the obstacle is a rock, wait for instruction from the human, if they say continue, search a new room, if they say remove, wait for them. If the obstacle is a tree, wait for instruction from the human, if they say continue, search a new room, if they say remove, remove the tree. If the obstacle is a stone, wait for instruction from the human, if they say continue, search a new room, if they say remove alone, remove the stone, if they say remove together wait for them.

Default Action Same as current action, but with the changes from the table below.

Phase.REMOVE_OBSTACLE_IF_NEEDED	High willingness	Low willingness
High competence		<i>Remove stones alone always, wait for rocks with a timer</i>
Low competence		<i>Remove stones alone always, wait for rocks with a timer</i>

Enter Room

Current Action If the target victim was rescued or found in another room or this area was just searched by the human and nothing was found, find next goal. Otherwise, plan to search the room.

Default Action Same as current action, but with the changes from the table below.

Phase.ENTER_ROOM	High willingness	Low willingness
High competence		If the human said they just searched this room and found nothing, search it again.
Low competence		If the human said they just searched this room and found nothing, search it again.

Plan Room Search Path

Current Action Efficiently search all tiles in the room (done with a helper function).

No trust implementation.

Follow Room Search Path

Current Action If a victim was found, ask the human what to do. If no victim was found where the human said it'd be, message that. Act based on the humans response (remove together, remove alone or continue).

Phase.FOLLOW_ROOM_SEARCH_PATH	High willingness	Low willingness
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Phase . FOLLOW_ROOM_SEARCH_PATH	High willingness	Low willingness
High competence	Do what the human says and wait for them	If victim is mildly injured, always remove alone. Wait for remove together with a timer.
Low competence	Do what the human says and wait for them	If victim is mildly injured, always remove alone. Wait for remove together with a timer.

Plan Path To Victim

Current Action Navigate to the victim

No trust implementation.

Follow Path To Victim

Current Action If the human rescued the victim, find next goal. Move to the victim and take it.

No trust implementation.

Take Victim

Current Action If remove together, then wait for the human. When the victim is picked up, find next goal. If rescue alone, pick it up and plan the path to the dropzone.

Phase . TAKE_VICTIM	High willingness	Low willingness
High competence	Wait for the human then rescue together or rescue alone	Wait for the human with a timer then rescue together or rescue alone
Low competence	Wait for the human then rescue together or rescue alone	Wait for the human with a timer then rescue together or rescue alone

Plan Path To Droppoint

Current Action Navigate to the droppoint

No trust implementation.

Follow Path To Droppoint

Current Action Communicate the victim is being moved, move to the droppoint and drop it there.

No trust implementation.

Drop Victim

Current Action Communicate the victim is dropped, if rescued alone. Find next goal.

No trust implementation.

