

Lab ISS | ResumableBoundaryWalker with Actors

ResumableBoundaryWalker as a FSM in Java

ResumableBoundaryWalker (project *it.unibo.virtualrobotclient*)

MainRobotActorJava.java:

the **resumableBoundaryWalker** application as a system composed of **ActorBasicJava.java** components.

ConsoleGuiActor.java:

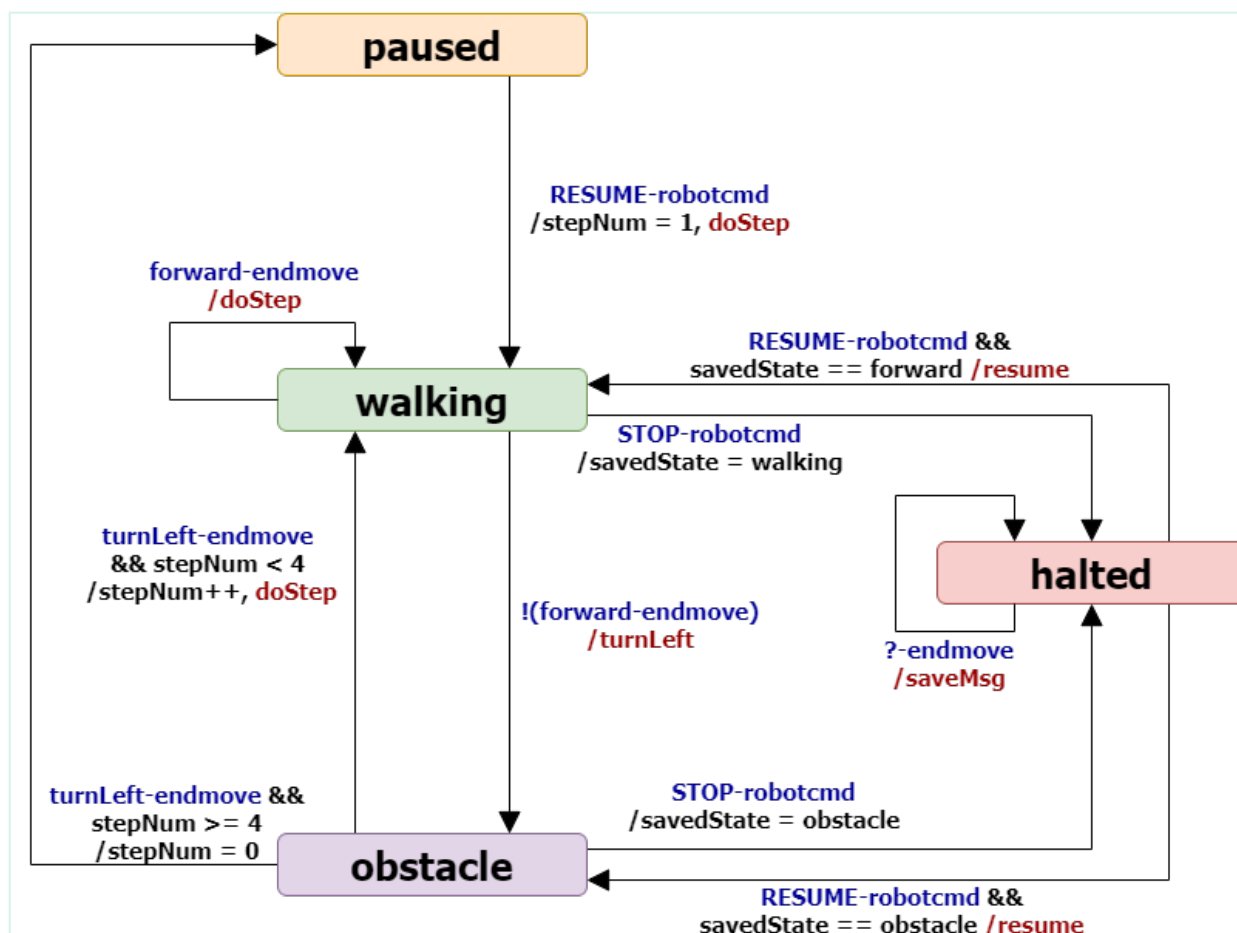
the **consoleGui** reviewed in order to be an actor, as specified in [wssupportAsActorJava.html](#).

The boundaryWalker as a Finite State Machine

ResumableBoundaryWalkerActor.java:

the **resumableBoundaryWalker** application logic designed and implemented as a Mealy Machine.

UML-like model after coding (**fsm** in **ResumableBoundaryWalkerActor**)



ResumableBoundaryWalker in GoLang

ResumableBoundaryWalker (directory [GoResumableBoundaryWalker](#))

GoLang implementation for the [ResumableBoundaryWalker](#). Golang [channels](#) let an easier implementation of the application using the **Actor-Oriented Programming Model**.

[Commands.go](#): a [commands](#) utility to represent robot interaction object in GoLang.

[IssSupport.go](#):

the [support](#) represented by two [Goroutines](#) using [websocket](#):

- **readFromWs**: the routine that cyclically reads over websocket;
- **StartSupport**: the routine that starts the support and that receives messages thanks to a channel connected with **readFromWs routine**; this routine can also send messages over websocket;

Others Goroutines can use the support in order to send and receive messages to the robot thanks to others channel specified in the code.

[ResumableCore/ResumableBoundaryWalker_v1.go](#):

the [component](#) that realize the bussiness logic; it has a Goroutine

StartResumableBoundaryWalkerActor that can be used from another routine to start it.

Notice that this version **do not uses finite state machine** but it uses the powerful of GoLang channels.

[ResumableCore/ResumableBoundaryWalker_v2.go](#):

the other version that realize the bussiness logic of the [resumableBoundaryWalker](#) that uses **finite state machine**, like in the java code (substantially, it is a porting).

[ConsoleGui.go](#):

the [consoleGui](#) that also starts the application using [tadvi/winc](#) library for GoLang.

[GoResumableBoundaryWalker_v1.exe](#) and [GoResumableBoundaryWalker_v2.exe](#) :

the [compiled](#) [resumableBoundaryWalker](#) executables for Windows (x64).

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Git Repo: <https://github.com/LM-96/MarchegianiLuca>

