Tygron Environment Guide

Tygron Connect
VH group 1

June 2015

Contents

Summary

In this document you can find the list of actions and percepts that are implemented in the Tygron environment. The environment can be downloaded from our Jenkins server located at: http://jenkins.buildwise.eu/job/tygron-connect/lastBuild/. You will need a configuration file to log in on the server, for this configuration file, ask us on github at https://github.com/tygron-virtual-humans/tygron-connect.

Chapter 1

Percepts

This section will list all the percepts that are usable in the Tygron environment, there are currently two types of percepts: **Send once** and **Send on change**. For the implementation of these percepts in your GOAL code, please refer to the GOAL manual.

1.1 Send once percepts

Stakeholder percept

Desription	Information about the stakeholders present in the map.
Type	Send once
Syntax	stakeholder(<ID>, <Name>, <ShortName>)
Parameters	<ID>: Unique number of the stakeholder.
	<Name>: The name of the stakeholder (eg. Housing Corporation).
	<ShortName>: The short name of the stakeholder (eg. DUWO).

Stakeholder Self percept

Desription	The ID of the current stakeholder.
Type	Send once
Syntax	stakeholderSelf(<ID>)
Parameters	<ID>: Unique number of the stakeholder.

InitIndicator percept

Description	Weights of the indicators in the map, this percept can also be used to connect stakeholders to indicators.
Type	Send once
Syntax	initIndicator(<SID>, <IID>, <Weight>)
Parameters	<SID>: ID of the stakeholder for which this percept has this weight.
	<IID>: The ID of the indicator.
	<ShortName>: The weight of the indicator.

1.2 On change percepts

Indicator percept

Desription	Information about the indicators present in the map, the finance indicator correlates to the budget of a stakeholder.
Type	Send on change
Syntax	indicator(<ID>, <Type>, <Name>, <Progress>, <Current>, <Target>)
Parameters	<ID>: Unique number of the indicator.
	<Type>: The type of indicator (eg. finance, parking, housing and green).
	<Name>: The name of the indicator.
	<Progress>: the progress of the indicator (current / target).
	<Current>: The current value of the indicator.
	<Target>: The target value of the indicator.

Economy percept

Desription	Information about the economies present in the map.
Type	Send on change
Syntax	economy(<ID>, <Category>, <State>)
Parameters	<ID>: Unique number of the economy.
	<Category>: The category of the economy.
	<State>: The state of the economy.

Building percept

Desription	Information about the buildings present in the map.
Type	Send on change
Syntax	building(<ID>, <Name>)
Parameters	<ID>: Unique number for the building.
	<Name>: The name of the building.

Permit percept

Desription	Information about all the permits requested by the current stakeholder.
Type	Send on change
Syntax	permits(<Amount>)
Parameters	<Amount>: Amount of permits.

Caution

The following percepts take a lot of time to complete, the bot will respond slower the more you call these percepts. Do not use these percepts if your bot needs to be fast and responsive. Only call the percept when really needed. Cycles will last longer when using this.

Available land percept

Desription	Information about the available land of the current stakeholder in the map.
Type	Send on change
Syntax	availableLand(<Amount>)
Parameters	<Amount>: Amount of land.

All land percept

Desription	Information about all the land of the current stakeholder in the map.
Type	Send on change
Syntax	allLand(<Amount>)
Parameters	<Amount>: Amount of land.

Chapter 2

Actions

In this section, You will find all the actions present in the latest stable Tygron environment, these actions can all be performed by the GOAL agent. The actions should be implemented with an actionspec.

2.1 General actions

Build action

Desription	Build.
Syntax	build(<Surface>, <Type>)
Parameters	<Surface>: The size of the surface to build on.
	<Type>: The type of building to be built, this is a natural number with:
	0 = building, 1 = park, 2 = parking lot and 3 = office.
Effects	Builds a park, building, office or parking lot on an available piece of land.

Buy land action

Desription	Buy land.
Syntax	buyLand(<Surface>, <Cost>)
Parameters	<Surface>: The size of the surface to buy.
	<Cost>: The cost of the land per m^2.
Effects	Buys land from another stakeholder.

Ask money action

Desription	Ask money from another stakeholder.
Syntax	buyLand(<Stakeholder>, <Amount>)
Parameters	<Stakeholder>: The stakeholder to ask money from.
	<Amount>: The amount of money.
Effects	Asks money from another stakeholder.

Give money action

Desription	Give money to another stakeholder.
Syntax	buyLand(<Stakeholder>, <Amount>)
Parameters	<Stakeholder>: The stakeholder to give money to.
	<Amount>: The amount of money.
Effects	Gives money to another stakeholder.

Chapter 3

Decisions

3.1 Build action

For this release of the environment we decided to have four sorts of buildings that the agent can build: parking spaces, offices, parks and buildings. We decided to do this because we have limited time; the Virtual Human will only play in a map where the only goals that can be accomplished involves building these buildings.