Mario AI Benchmark $^{\rm l}.$ Startup options.

Option key	Description	Values range	Example
-echo	Output all command line options to	<on off></on off>	Main -echo on
	console after initialization		
-ag	AgentName should extend Register-	AgentName or	Main -ag ForwardAgent
	ableAgent in order for the native agent	Agents implemen-	
	to be available from command line	tations	
-zm	Observation Detalization for Map. 0 -	<0 1 2>	Main -zm 0
	the most detailed		
-ze	Observation Detalization for Enemies.	<0 1 2>	Main -ze 0
	0 - The most detailed		
-vis	Enable Visualization	<on off></on off>	Main -vis on
-vaot	Set main View to be on top of other	<on off></on off>	Main -vaot on
_	windows		
-tl	Time limit. Option value: [1MAX-	<int></int>	Main -tl 42
	INT], units: marioseconds (1 MrSEC		
	== 16 interactions with Environment).		
	To give to the Agent the opportunity of		
	infinitie time per level use Option value		
	=-1	m	
-ssiw	Stop Simulation when first Win ob-	<on off></on off>	Main -ssiw on
	tained	m	
-pw	Pause of the World. Freezes animation	<on $ $ off $>$	Main -pw on
	all the sprites and disables Mario inter-		
	action with creatures. Mario still can		
	run and get level observation	. ms	
-pr	Enable Power restoration. Enable	<on off></on off>	Main -pr on
	Power restoration by pressing speed		
-ewf	button (A on a keyboard)	<on off></on off>	Main -ewf off
	Exit program when simulation is over Enable Game Viewer		
-gv		<on off></on off>	Main -gv on
-gvc	Enable Continuous Updates in GameViewer	<on off></on off>	
	Gameviewer		

¹v-0.1.6 compliant

Option key	Description	Values range		Example
-mm	Mario Mode. 0 – small,1 - large, 2 -	<0 1 2>		Main -mm 1
	large, fire ability is available			
-fps	Change FPS. 100 enables max FPS	<integers< td=""><td>in</td><td>Main -fps 50</td></integers<>	in	Main -fps 50
		[1100]>		13.5 1.75
-m	Matlab file name for the report output	<[w+] >		Main -m iMarioReport
-lt	Level type. 0 - Overground, 1 - Underground, 2 - Castle	<0 1 2>		Main -lt 1
-ls	Level (Randomization) Seed	$\langle \text{integers} 1 \text{maxInt} \rangle$	in	Main -ls 42
-11	Level length	<integers [14096]></integers 	in	Main -ll 550
-lh	Level height	<integers [14096]=""></integers>	in	Main -lh 18
-ld	Level Difficulty	<integers [0maxint]=""></integers>	in	Main -ld 5
-lde	Enable/disable dead ends on the level	<on off></on off>		Main -lde on
-lc	Enable/disable cannons on the level	<on off></on off>		Main -lc off
-lhs	Enable/Disable hills on the level	<on off></on off>		Main -lhs off
-ltb	Enable/Disable tubes on the level	<on off></on off>		Main -ltb off
-lg	Enable/Disable gaps on the level	<on off></on off>		Main -lg off
-lhb	Enable/Disable hidden blocks on the level ²	<on off></on off>		Main -lhb off
-le	Customize creatures on the level. Crea-	<xxxxxxxxx></xxxxxxxxx>		Main -le 0
	tures, that will be on the level are defined with bit mask. From left to right:			
	1. goomba			
	2. green koopa			
	3. red koopa			
	4. spiky			
	5. winged goomba 6. winged green koopa			
	7. winged red koopa			
	8. winged spiky			
	9. spiky flower			
	Replace x with 1 if you want creature to be on the level, otherwise 0. For more details and examples see marioai-lvlgen-options-usage.pdf			
-lb	Enable/Disable visible blocks on the level	<on off></on off>		Main -lb off
-lco	Enable/Disable coins on the level	<on off></on off>		Main -lco off
-lf	Create flat level	<on off></on off>		Main -lf on
-stop	Run benchmark and stop a game- play. To continue a gameplay press a SPACEBAR key.	Main -stop on		

Table 1: Generalization capacity. Performance of the