

ECLIPSE vs. SICSTUS

a short comparison

Two different versions of the Wumpus World were used for the comparison. One world (1) with 5×5 squares and another world (2) with 12×10 squares. Both versions were tested on an AMD Athlon 2100+ under Eclipse and Sicstus and some results of the statistics predicate which is implemented in both systems have been collected.

	eclipse (1)	eclipse (2)	sicstus (1)	sicstus (2)
runtime	1,44 s	3,24 s	5,73 s	30,24 s
global stack used	11928 bytes	3839144 bytes	2204 bytes	2204 bytes
trail stack used	400 bytes	136240 bytes	260 bytes	260 bytes
control stack used	572 bytes	10720 bytes	216 bytes	216 bytes
local stack used	380 bytes	27816 bytes	164 bytes	164 bytes
garbage collection	0 bytes	7317696 bytes	30685632 bytes	1313909904 bytes
number of gc's	0	1	24	908
time for gc	0 s	0,03 s	0,26 s	9,03 s

Obviously, Eclipse is quite fast but the necessary memory is increasing for larger applications. In opposite, Sicstus is comparably slow, especially in case of the larger application which is explained on the one hand by the large amount of garbage collections for keeping the necessary memory on a small value and on the other hand because Sicstus allows to store constraints more than once. Thus, evaluating the constraint store is especially for larger applications more time-consuming.