Clips ES Development

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What is CLIPS?

- C Language Integrated Production System
- CLIPS is a productive development and delivery expert system tool
- Provides a complete environment for the construction of rule and/or object based expert systems
- Created in 1985
- Now widely used in government, industry, and academia
- DYNACLIPS - a set of blackboard, dynamicknowledge exchange, and agent tools for CLIPS

Where did CLIPS come from?

- Dates back to 1984 at NASA's Johnson Space Center
- In part failed due to the extensive use of LISP at the time
- Prototype actually developed in just a little over 2 months
- Went under development after finally proving itself to NASA

Features

- Knowledge Representation
- Portability
- Integration/Extensibility
- Interactive Development
- Verification/Validation
- Fully Documented
- And obviously free

Flavors

- AdaCLIPS
- FuzzyCLIPS
- PerlCLIPS
- Python/CLIPS integration
- CLIPS Object Oriented Language (COOL)

Code Example

```
CLIPS> (assert (light green)) ;this is how to create a fact
CLIPS> (defrule go ; this is how to create a rule
(light green) ; if light is green
=> ; then
(printout t “go” crlf)) ; print “go”
CLIPS> (defrule stop
(light red)
=>
(printout t “stop” crlf))
CLIPS> (defrule red
(light red)
=>
(retract *) ; retract all facts
(assert (light green))) ; and assert the (light green) fact
CLIPS> (defrule green
(light green)
=>
(retract *)
(assert (light red)))
(run)
CLIPS> stop
Go
Stop
Go
Stop
     )
)
```

CLIPS vs JESS

- More stable
- Performs better on “classic” applications
- CLIPS generally gets new advancements incorporated first
- Been around longer, hence larger following of programmers