Clara Rules

Matt Pettis

What are rules?

Simple rules are simple

Anyone can go to G and PG movies

```
Person.id = "Kid Pettis"
Person.age = 12
Person.withParent = FALSE

Movie.name = "Paint Dries"
Movie.rating = "G"

# Rule that applies
if Movie.rating in ("G", "PG"):
    Movie.attendId = Person.id

# This kid can go to the movie
```

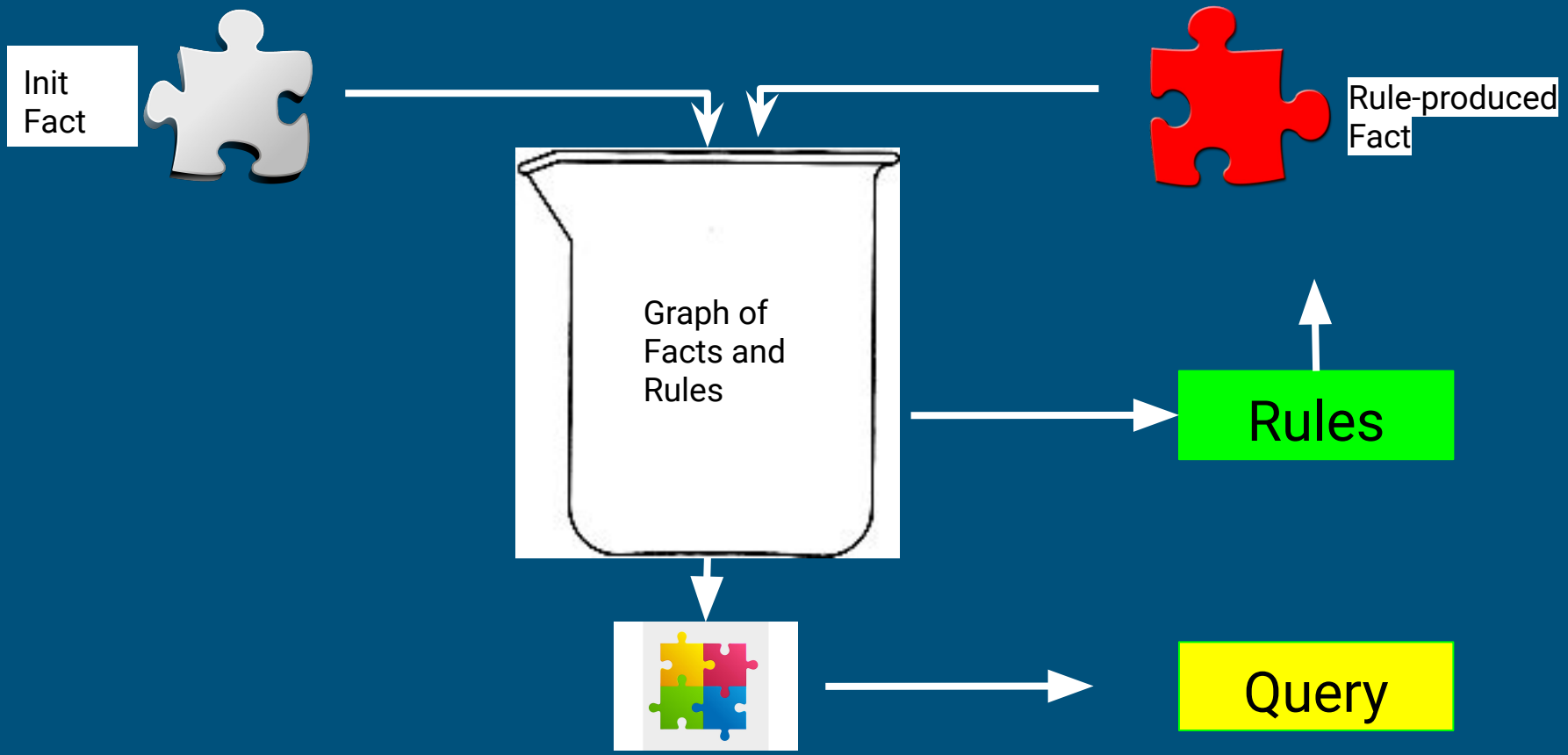
Fact

Fact

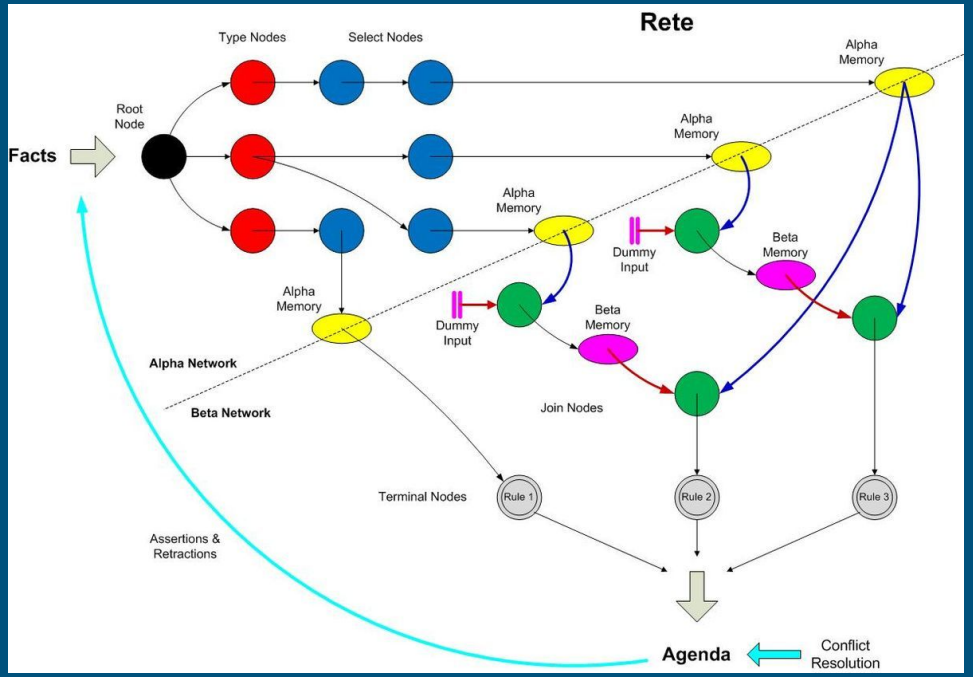
Rule

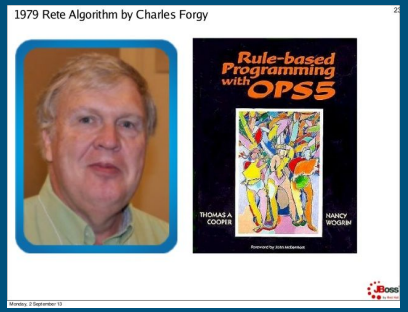
Fact (derived)

How I see rules



… This is more accurate





Examples

History*

*opinionated, unsourced, vague recollections, that seems kinda right but has some wrong stuff

- `If-then-else` statements
- `cond` statements
- Object polymorphism
- Function polymorphism, multimethod dispatch
- Statically typed functional programming (Haskell)
- Logic programming
- … lots of other stuff of which I am not aware
- Forward -chaining rules

Optional Implementations

- Clara Rules, Clojure (http://www.clara-rules.org)
- Drools, Java and private software. Supports Java Rules Engine API
- CLIPS, LISP-ish implementation written in C.

Who cares?

- Me, maybe you.
- Integration of knowledge across silos of people
- AI pre-training

Thank You

Appendix

Rules become more complex

PG-13 gets trickier

```
Person.id = "Kid Pettis"
Person.age = 12
Person.withParent = TRUE

Movie.name = "Gremlins"
Movie.rating = "PG-13"

# Rules that applies
# This kid can go to the movie because the second rule applies

if Movie.rating == "PG-13" and Person.age >= 13:
    Movie.attendId = Person.id

if Movie.rating == "PG-13" and Person.age < 13 and Person.withParent == TRUE:
    Movie.attendId = Person.id
```

Uhhh....

The movie is NC-17, the kid is 16, they are with a guardian who isn't their parent, have a note from their school saying the movie is for a class, so they should be able to attend.