Restriction Classes, Bitches

Hey everyone! Stop saying "bitches" so much!
It's OWL learning time

- OWL lets you define properties
- OWL lets you control what the property can apply to
- OWL lets you control the values the property can take
- OWL provides an easy way to do this
- OWL provides a really confusing way to do this

- The easy way is usually wrong
You wrote **Domain** – did you *mean* bitches?

- What can this property apply to?
  - Everything that eats something is an Animal.
  - `ObjectPropertyDomain(<&ex;eat>&ex;#Animal)`

- This applies to *every* use of the property
You wrote **Range** – did you *mean bitches*?

- You can define range restrictions
  - What kind of values can it take?
    - Everything that is eaten by something is a FoodStuff.
    - `ObjectPropertyRange(<&ex;:eat>&ex;:#Animal)`

- This applies to every use of the property
What if different Things have different constraints?

- How can we say that “Everything that a Weasel eats is an Egg.”?
- We have to say that Objects that are the value of eat for any Weasel are a subclass of Egg.
- Sound complicated?
Restriction Classes, Bitches

∃eat\textsuperscript{-1}.\textit{Weasel} \sqsubseteq \textit{Egg}

\textbf{SubClassOf}(

\textbf{ObjectSomeValuesFrom}(

\textbf{ObjectInverseOf}(<\textit{ex}; \#eat>)

<\textit{ex}; \#Weasel>)

<\textit{ex}; \#Egg>)

)
Or... Attempto, Bitches

- Everything that eats something is an Animal.
- Everything that is eaten by something is a FoodStuff.
- Everything that a Weasel eats is an Egg.

http://attempto.ifi.uzh.ch/site/