Applied Compositional Thinking for Engineers (ACT4E)

Recital 1

Questions & Answers

Q: By "open system" do you mean "open loop"?

CB. I think by "open systems", it is meant here as systems with input and outputs. This has nothing to do with open-loop systems here.
JL: Yes, "open system" is just meant to indicate inputs and outputs (I'm not sure how "open loop" is meant above). Perhaps the naming "open system" here is not something standard or fixed that should be thought of describing only the type of system in this example.

Q: Are you going to post the recitation slides with the notes after the recitation?
JL: Yes
Awesome, thanks

Btw: I love the music!
JL: Great to hear! :)

Q: Is there a name for a relation that has an identity element but is not associative?
CB. Yes, it is called a Unital Magma.

Q: For the monoid dynamical system example, isn't it the set should be all transitions instead of R^n? Like in the plant growing example
at the right column, it should be <all transitions, transition composition, T0>, instead of <R^n, transition, idR^n>
Yes, everything is clear except the last line which was just removed. :-D

CB. The question is that the elements of the monoid are transition functions which are not in R^n. We do not compose elements of R^n but transition functions. However, there is a direct connection between R^n and the set of transition functions since one element of R^n is mapped into another one using a transition.