Formal Abstractions for Packet Scheduling

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Friday 11:50am, Room 1
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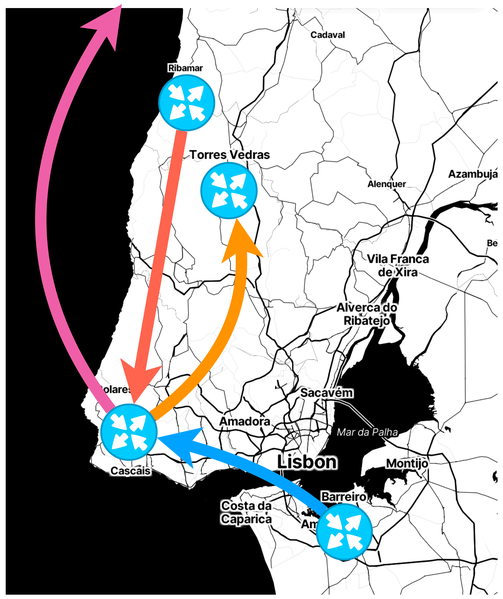
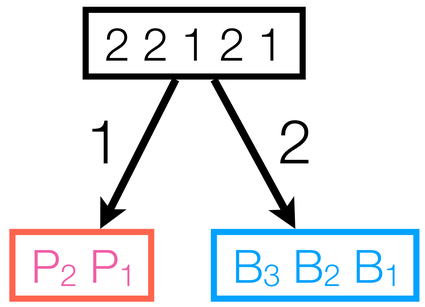
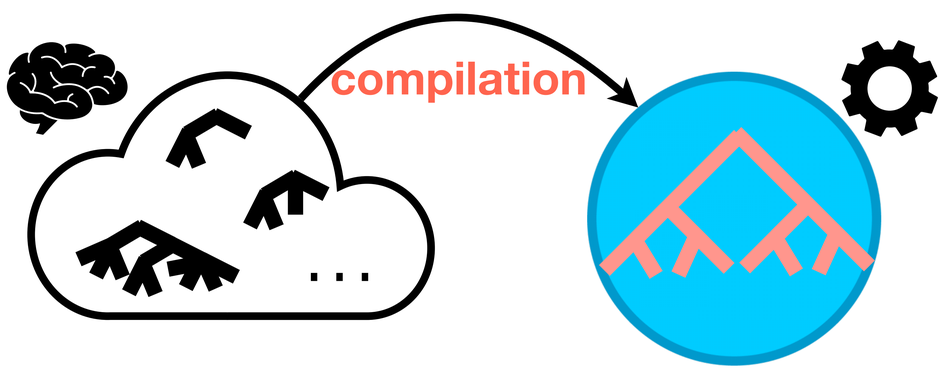


Interleave R and B;
interleave P and T.



PIFO tree! Done!

But we're not done.
We lack a general deployment strategy.

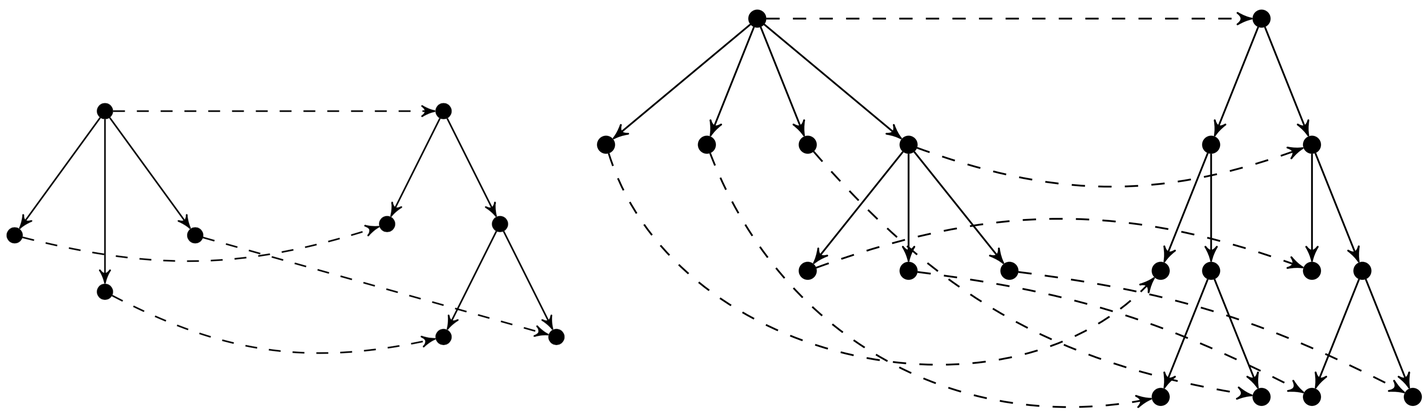


Key Insight

A PIFO tree manifests a *programming language.*

tree shape ⟷ language expressivity

Expressivity captured by *homomorphic embedding.*
Map root to root, leaves to leaves, respect ancestry.



Compilation achieved by *lifting* the embedding.
Stretch paths, duplicating ranks if needed.

PL Challenge

Can we *compile* a scheduler written for one tree so it runs on a new tree?