



Welcome!

3rd P4 Workshop, May 2016

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Technical Program Committee



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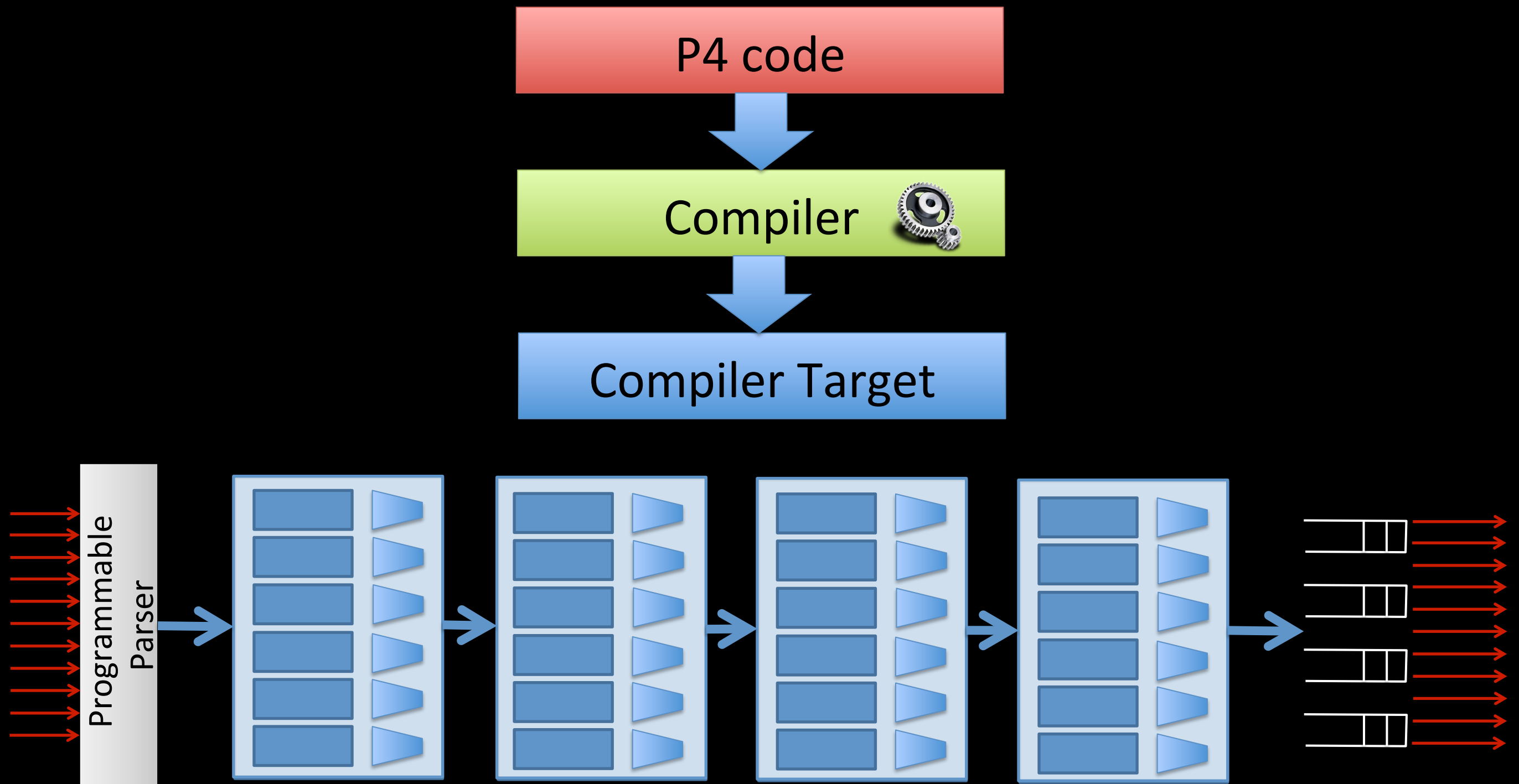
Infrastructure

1. Hardware is being replaced by software
2. Infrastructure is becoming defined by software
3. Thousands of developers empowered and unleashed

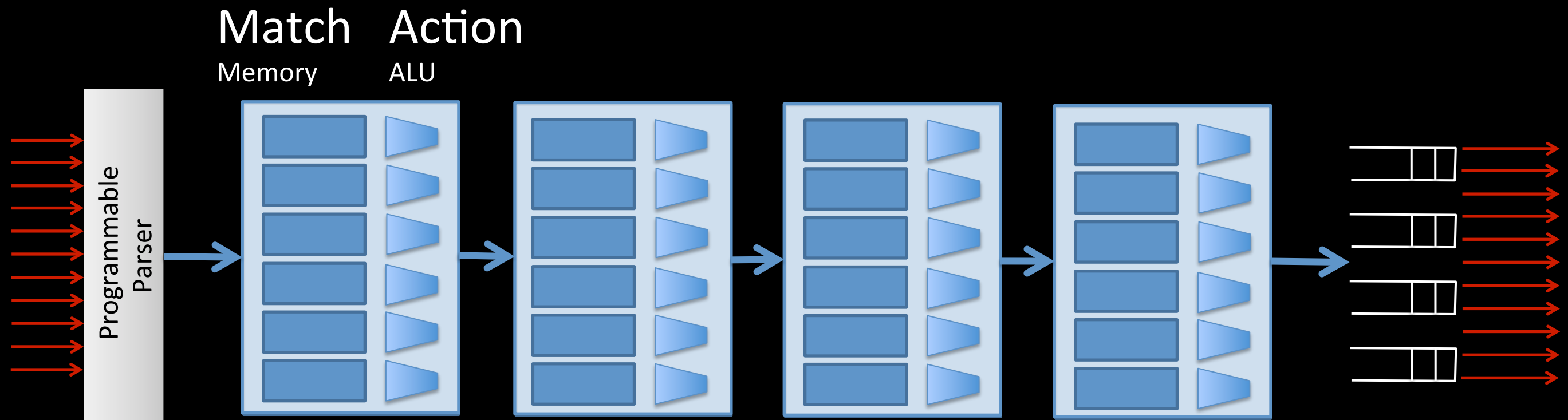
We are a community.

Protocols are being lifted off chips and into software.

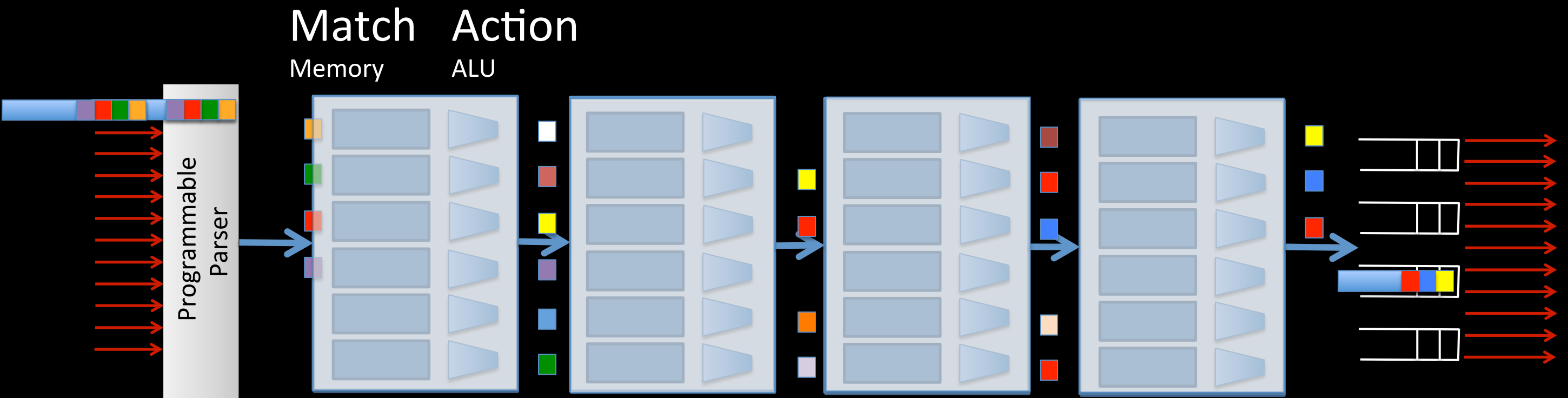
Where we have got so far



PISA: Protocol Independent Switch Architecture



PISA: Protocol Independent Switch Architecture



Five things on the horizon.....

1

Separation of language
from architecture

2

Reference architectures:
“PISA for plumbing”, Stateful processing,
NPUUs, etc.



Composable P4 libraries

4

Extend P4 to express packet scheduling and QoS disciplines

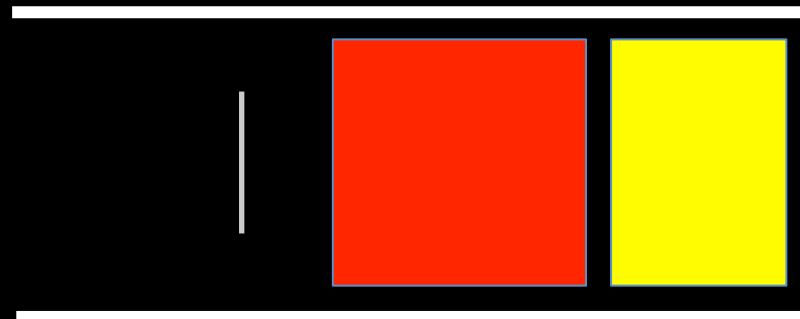
“Programmable Packet Scheduling”
Anirudh Sivaraman *et al.* Sigcomm 2016

4

Extend P4 to express packet scheduling and QoS disciplines

PIFO Abstract queue

Calculate “Push In”



“First Out”



“Packet Transactions: High-level Programming for Line-Rate Switches”

Anirudh Sivaraman *et al.* Sigcomm 2016



Extend P4 to express stateful processing

<The End>