Sorting Networks

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Vincent Derkinderen
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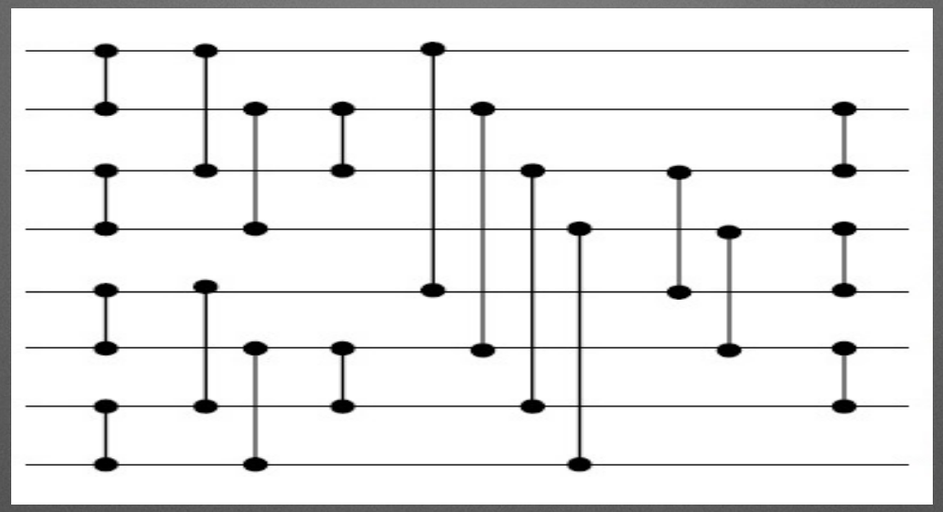
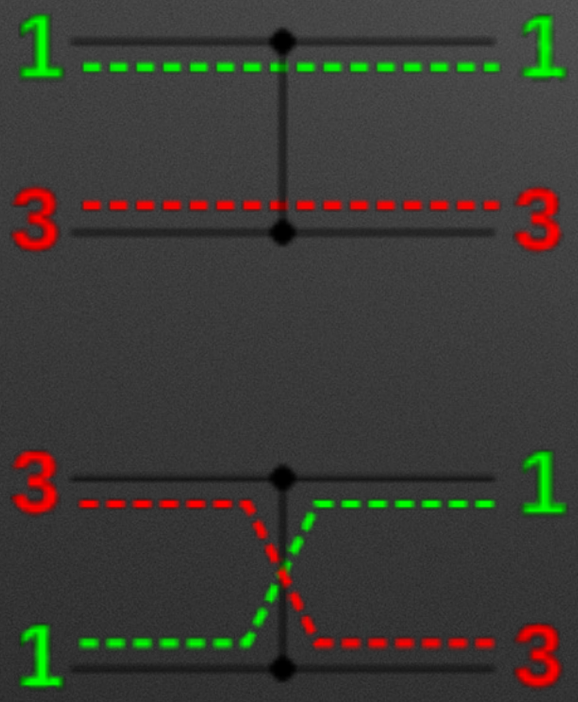
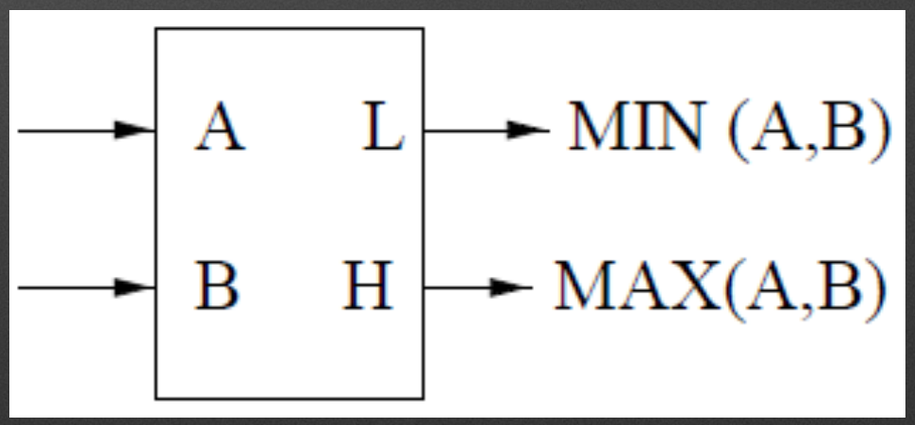
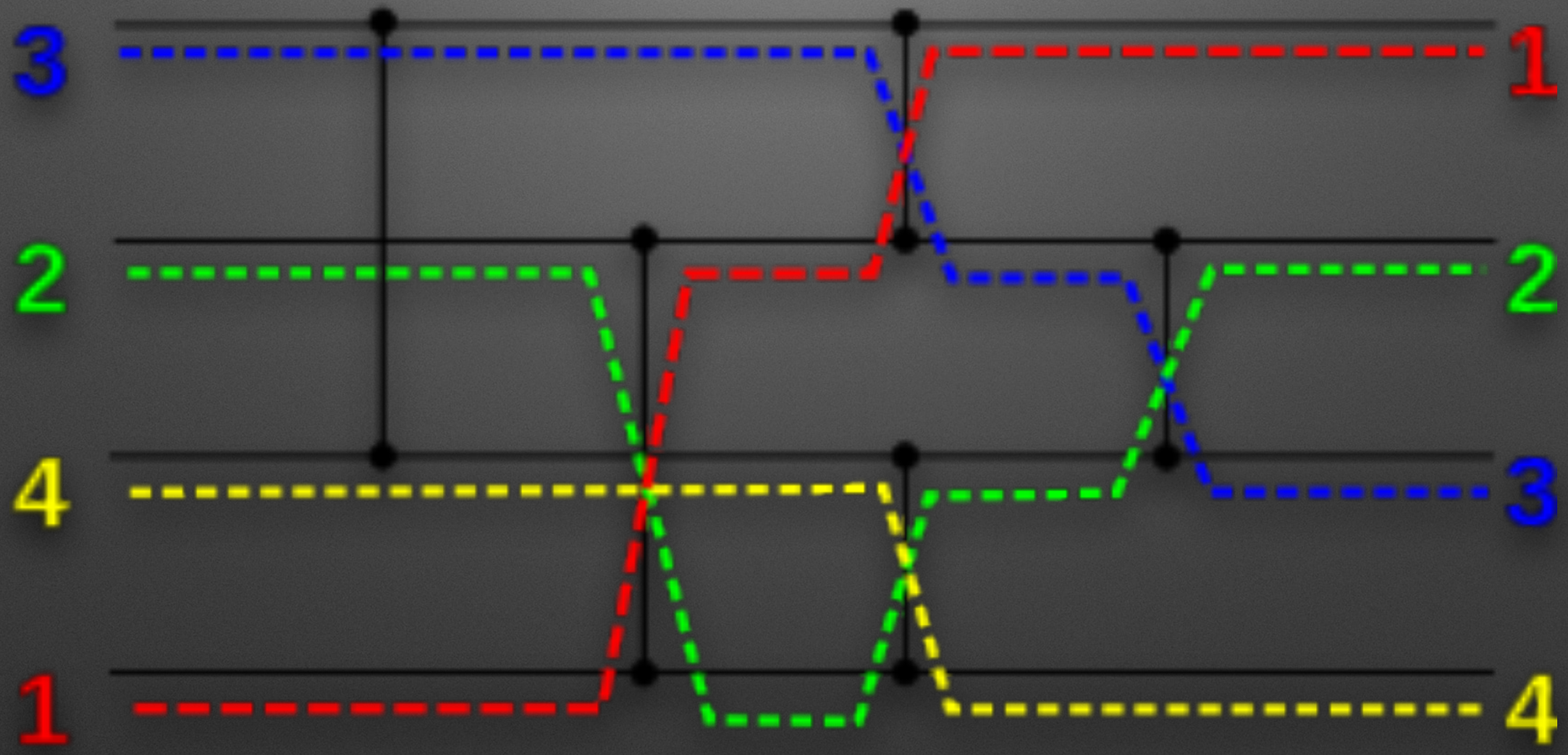
Comparator Network



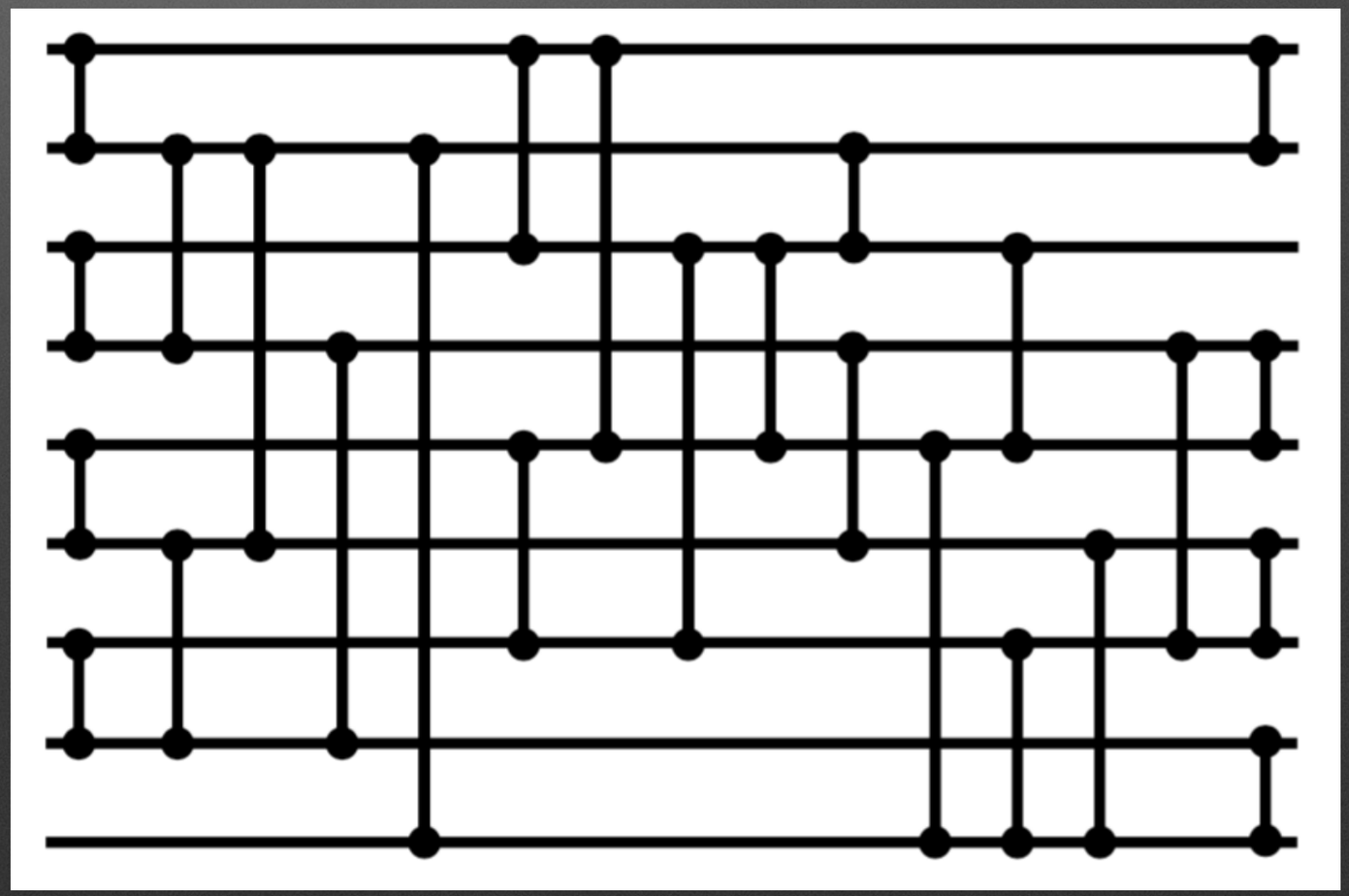




Sorting Network

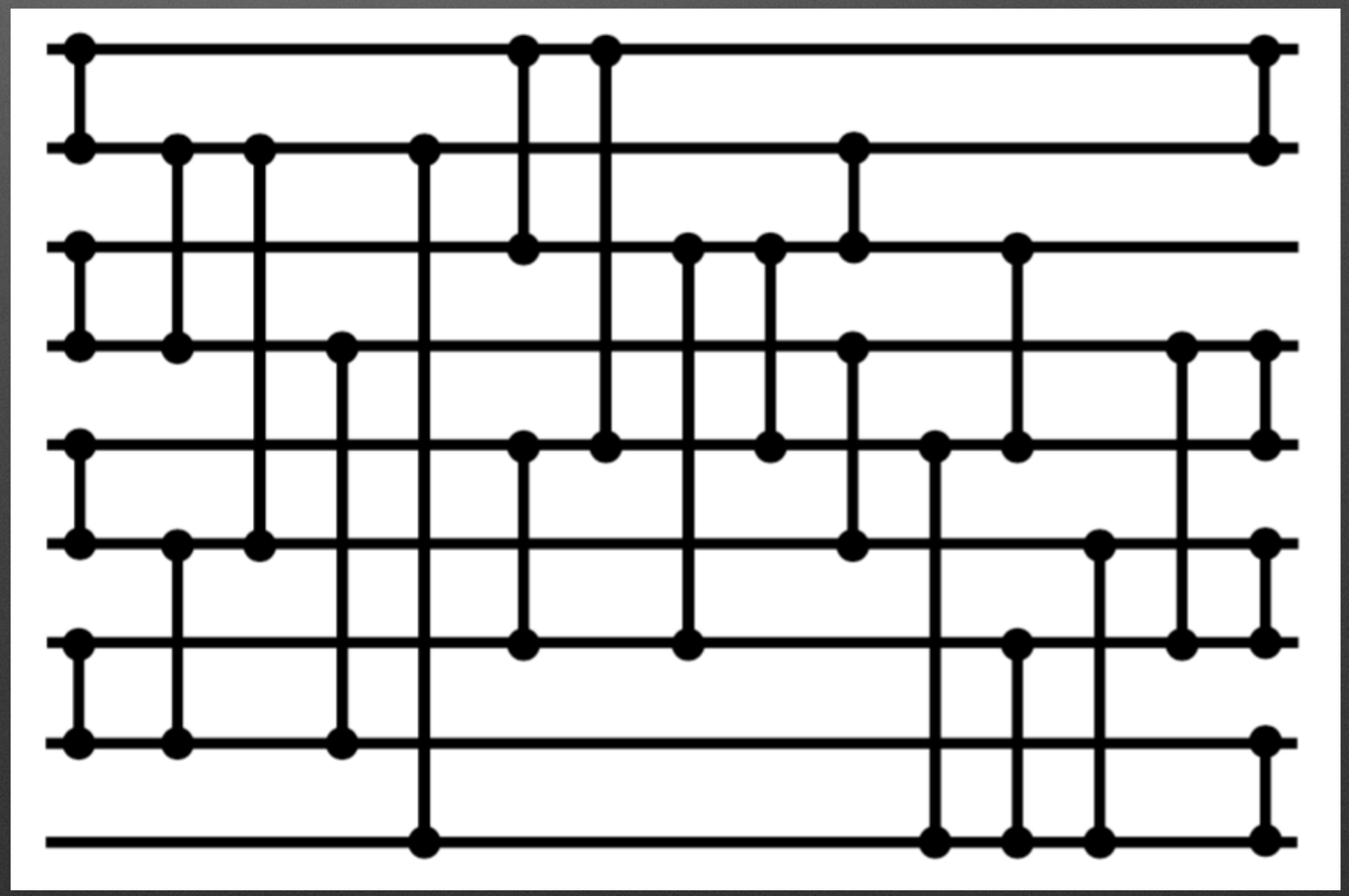


25 Comparators is Optimal when Sorting 9 Inputs



25 Comparators is Optimal when Sorting 9 Inputs

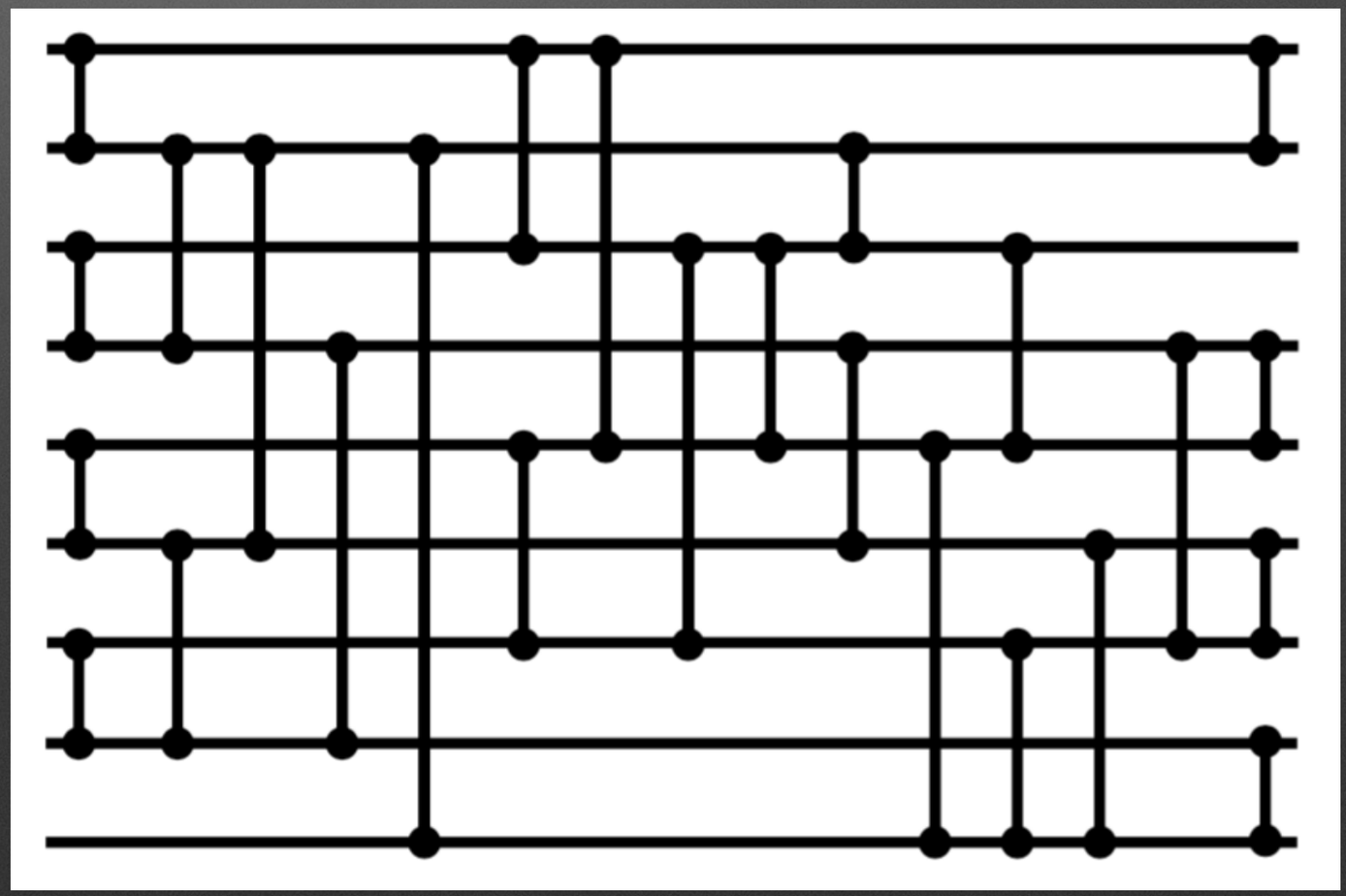
- Optimal Size
  (9 channels)



25 Comparators is Optimal when Sorting 9 Inputs

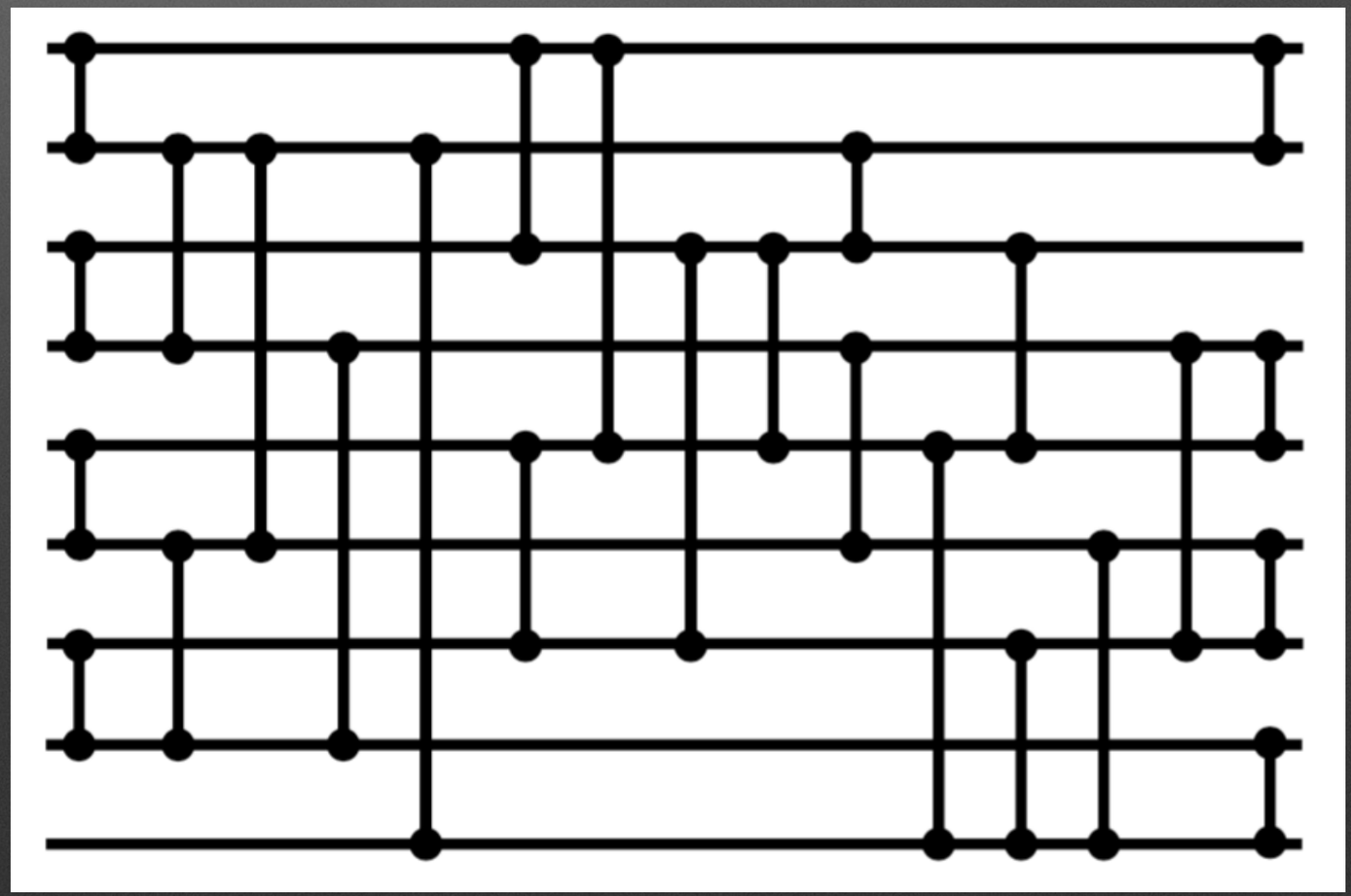
- Optimal Size
  (9 channels)

- Generate & Prune



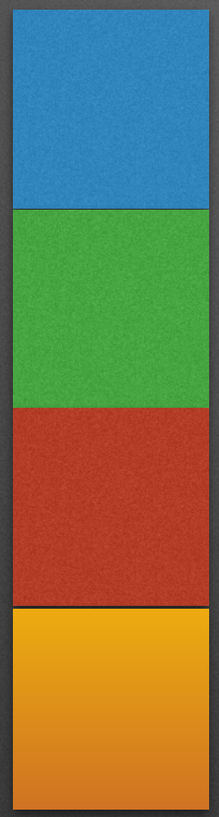
25 Comparators is Optimal when Sorting 9 Inputs

- Optimal Size
  (9 channels)
- Generate & Prune
- Subsumes



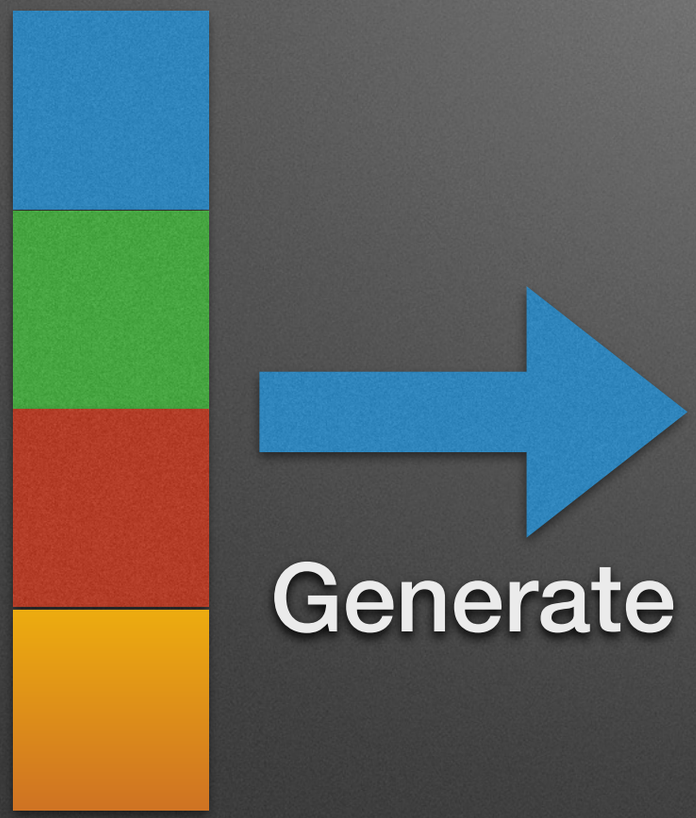
Generate & Prune

Generate & Prune



N^n_k

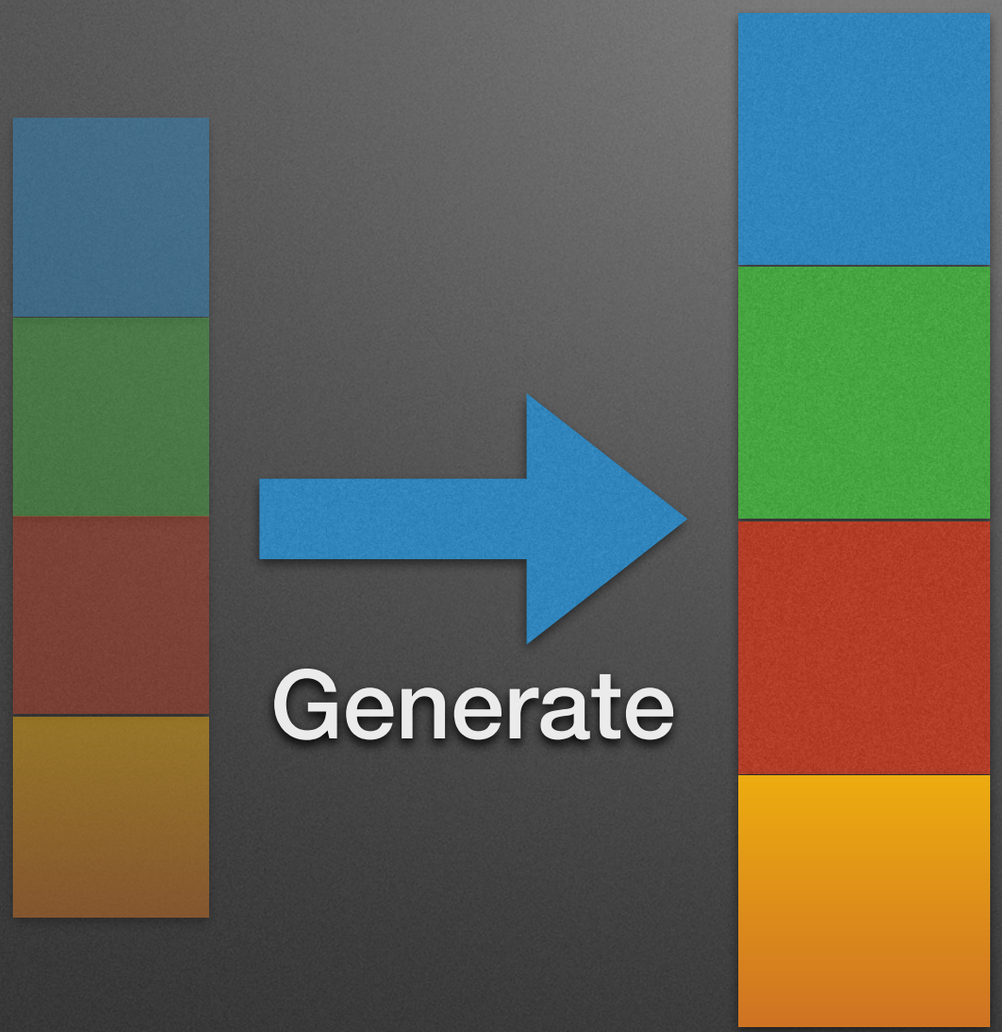
Generate & Prune



Generate

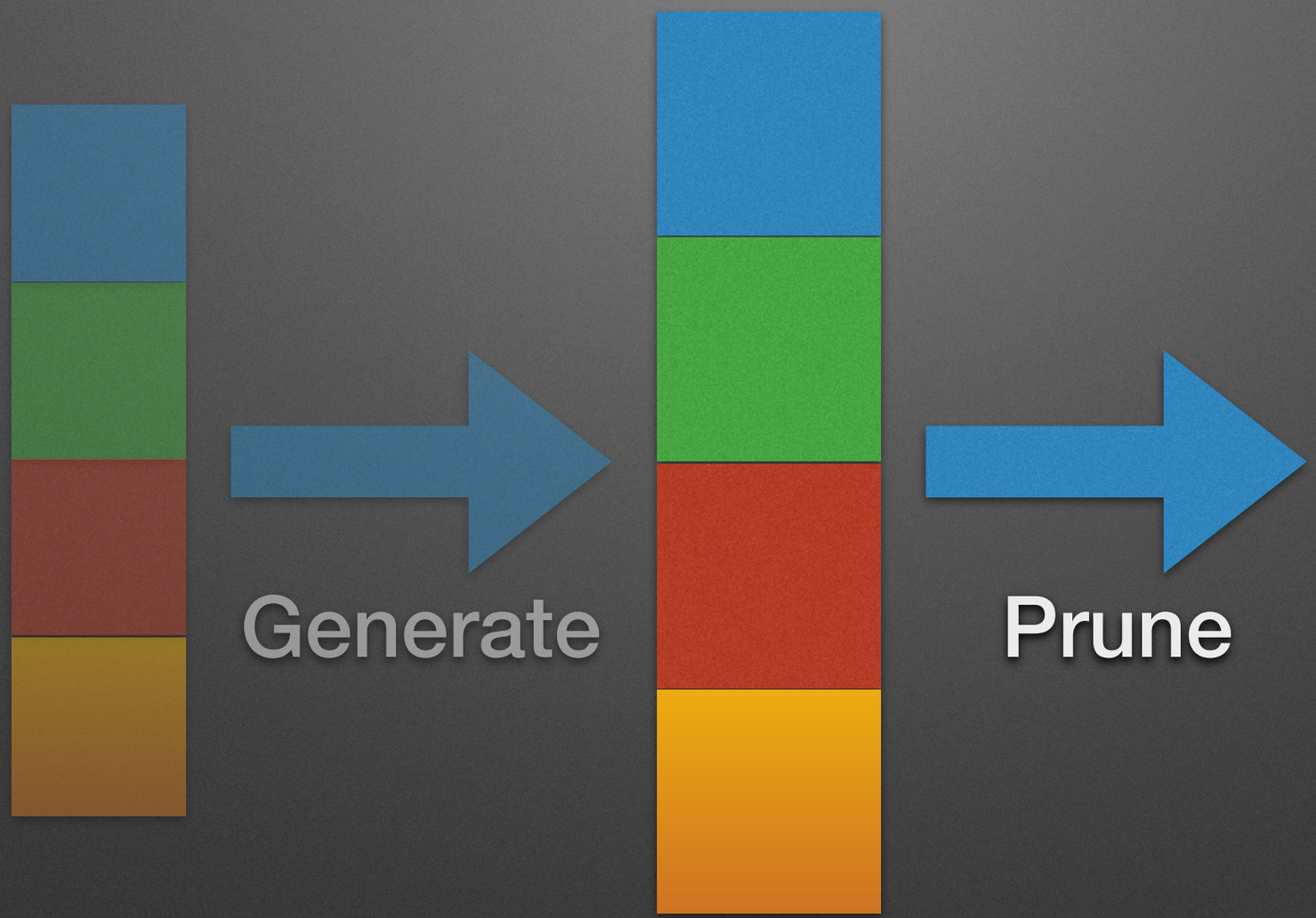
N^n_k

Generate & Prune

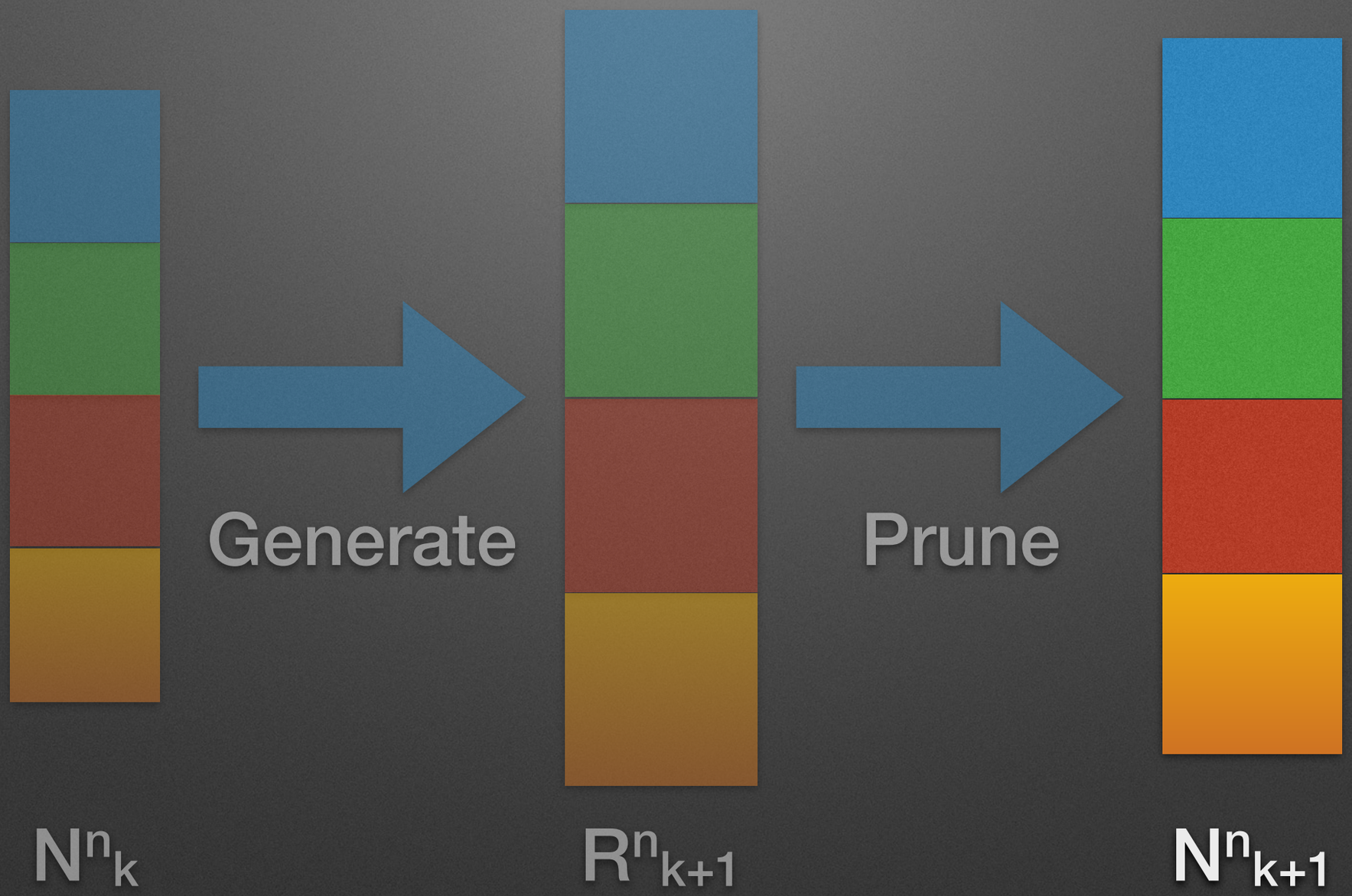


N^n_k R^n_{k+1}

Generate & Prune



Generate & Prune



Conclusion

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WHAT?
Find optimal size for 9 channels

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WHAT?
Find optimal size for 9 channels

HOW?
Reproduce method of the paper

Conclusion

WHAT?
Find optimal size for 9 channels

HOW?
Reproduce method of the paper

EVALUATION CRITERIA?
Result described in the paper

Questions?