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# draft-francois-ordered-fib-02

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# Agenda

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- Updates since 01
- Further improvements to oFIB
  - Shortcuts
  - “Shortcut” completion messages

# Updates

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- Shorter, simpler, easier to understand
- Added section on fall back to regular convergence
  - Similar to PLSN fall back to regular convergence
- Added information on content of Completion Messages
  - Protocol dependent
  - What information to be encoded, not how information is to be encoded
  - Protocol specs will be produced for IS-IS and OSPF

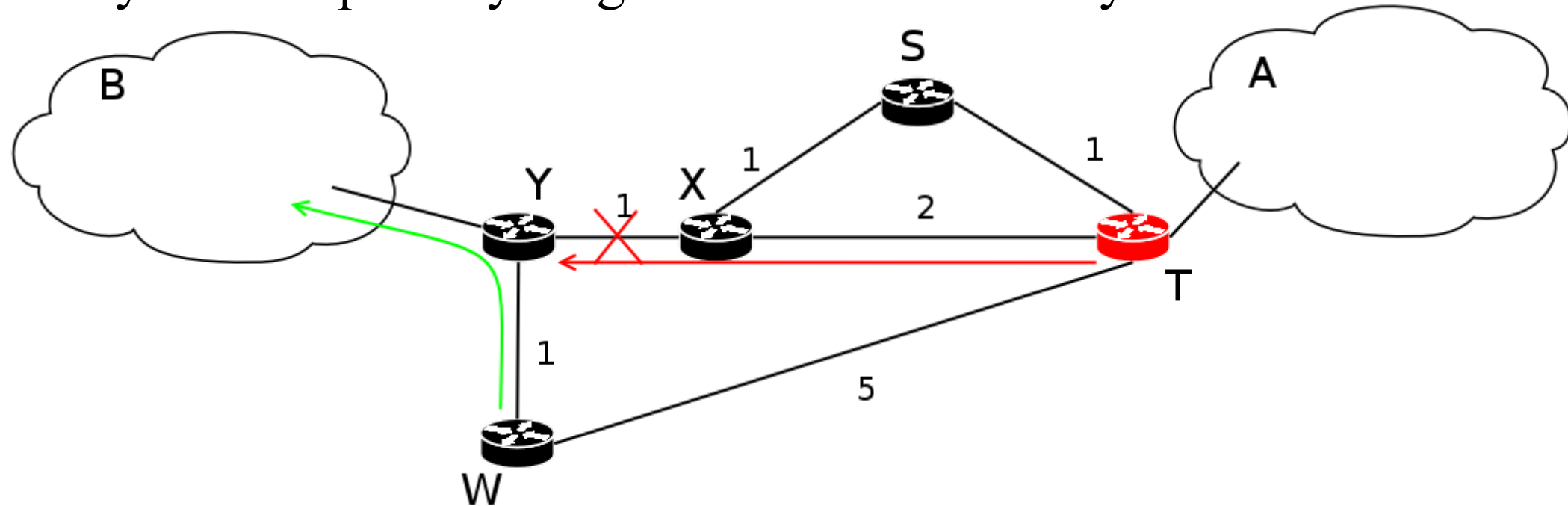
# Potential next steps

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- Current version only describes basic behavior of oFIB
- It's not always required to wait for
  - the ranked update Timer to expire, or
  - all the completion messages to be received

# Shortcuts

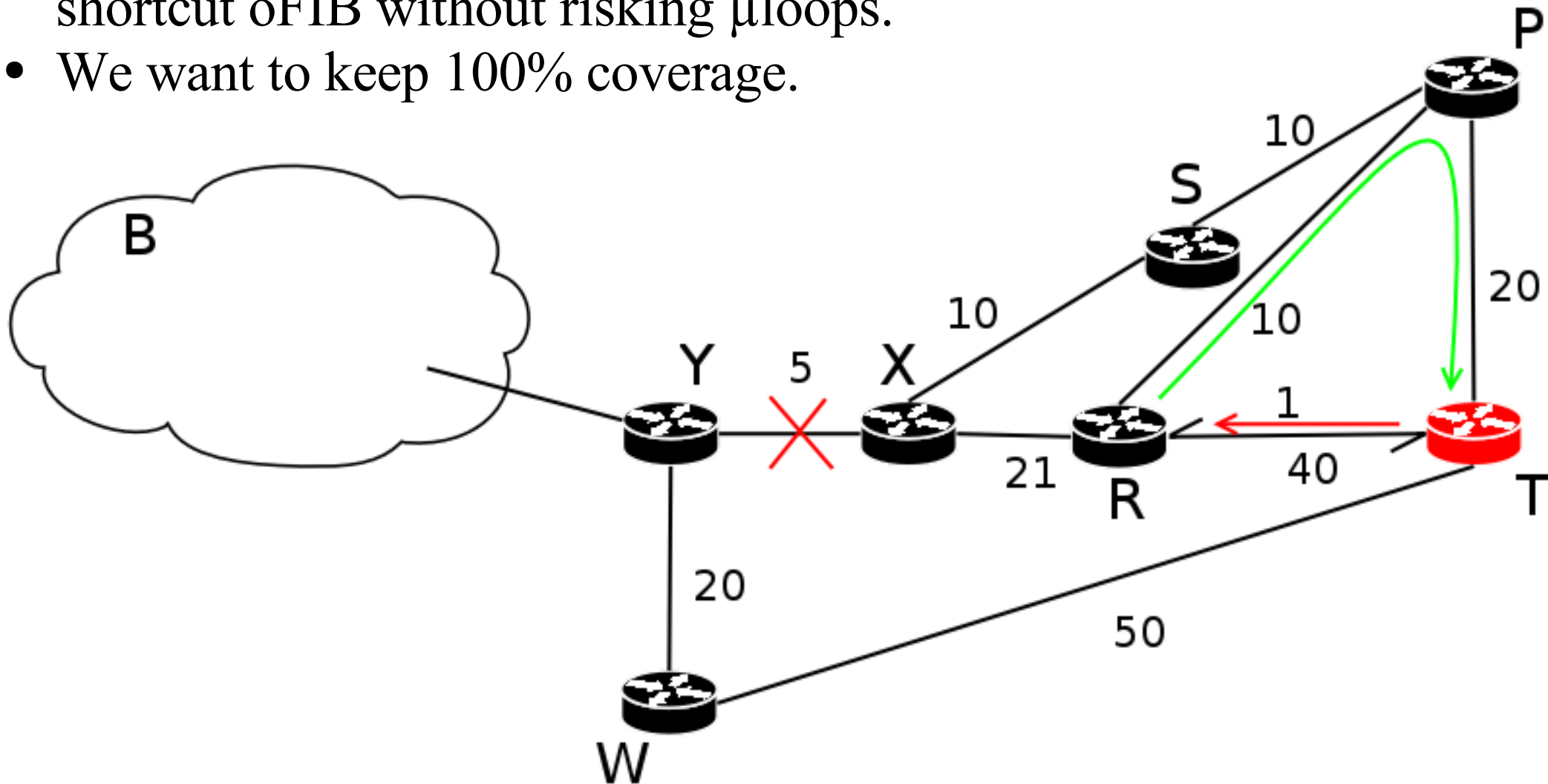
- If your new primary neighbor is not affected by the event



- W is not affected for the destinations reached via  $X \rightarrow Y$
- T can shortcut its rank for the destinations that it will reach via W
- Gain is noticeable if Cloud A contains deep branches and/or Cloud B contains many nodes
- Shortcuts are discovered during the computation of  $rSPT(Y)$

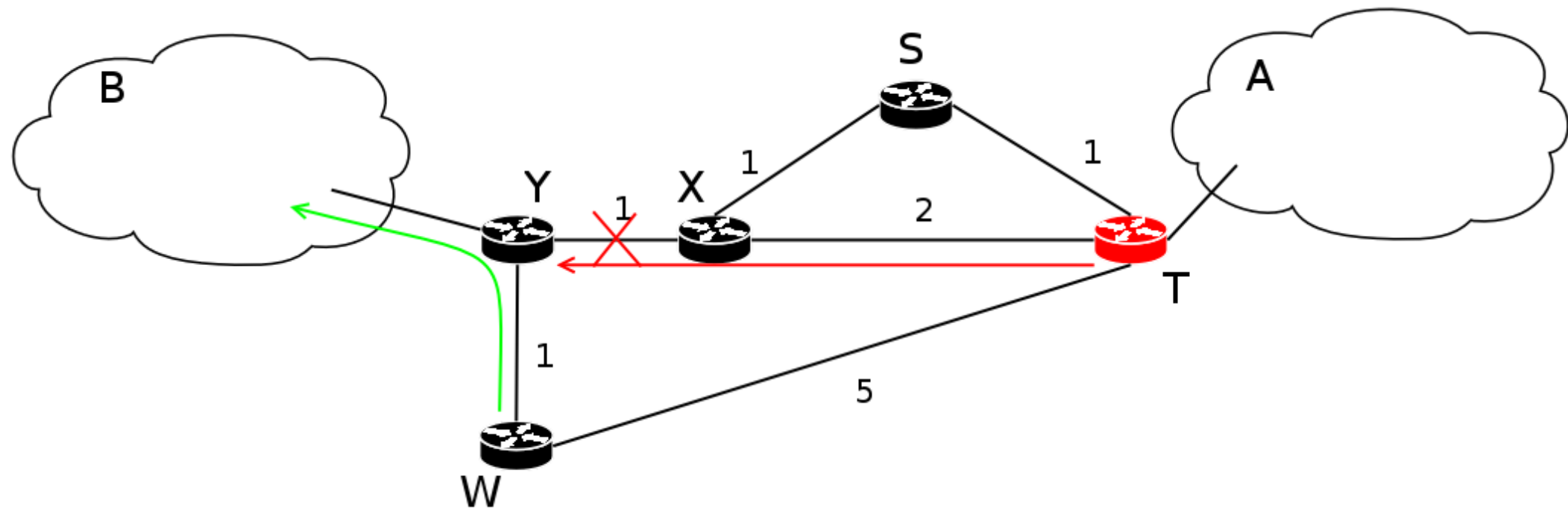
# Shortcuts(2)

- Having a “PLSN Type A” neighbor is not a sufficient condition to shortcut oFIB without risking  $\mu$ loops.
- We want to keep 100% coverage.



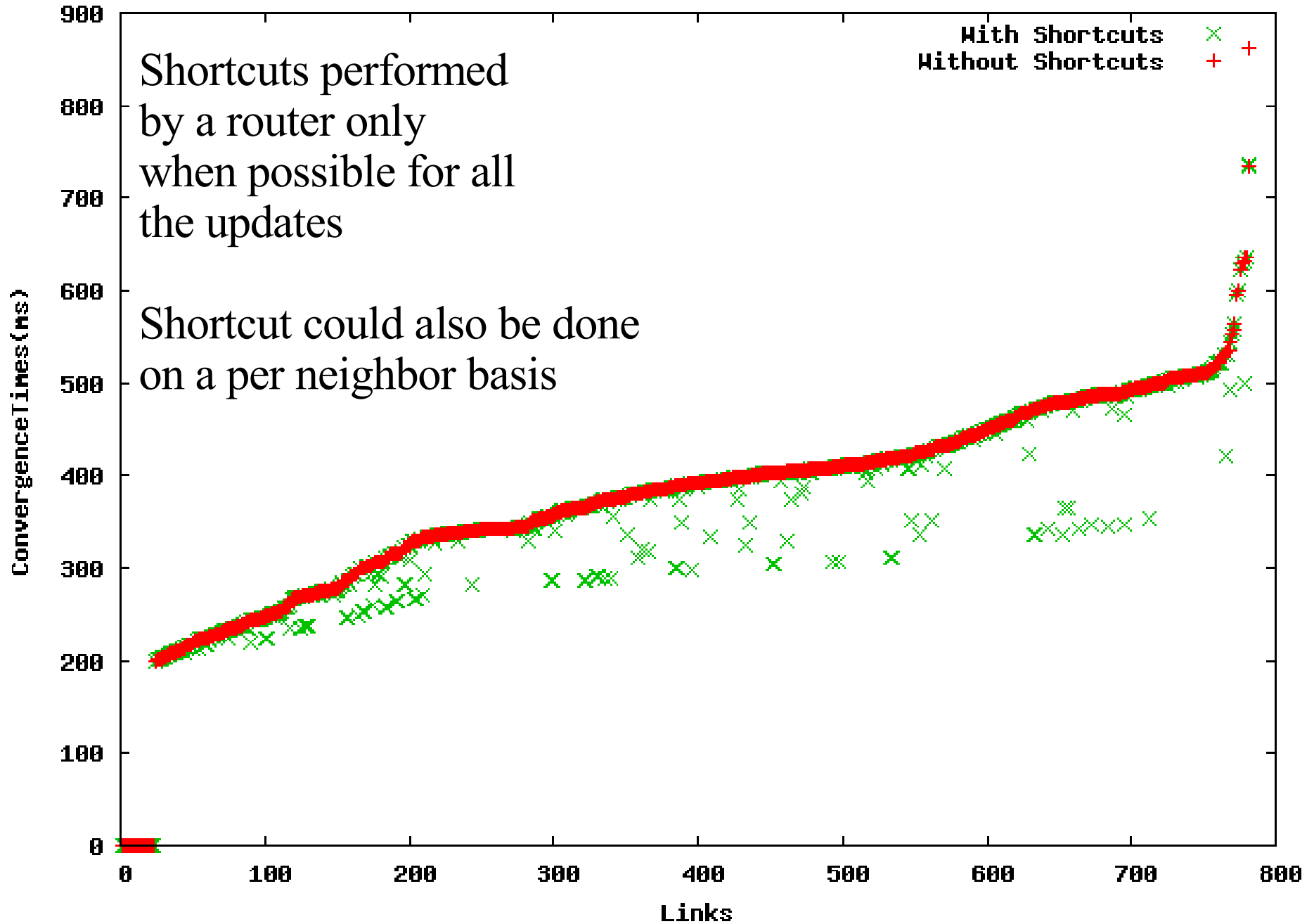
# Shortcuts : is it useful ?

- The network applies oFIB only where necessary,
- while enabling fast loopfree convergence in meshed parts of the network,



# Shortcuts : is it useful ?

Convergence times for graceful link shutdown in a Tier-1

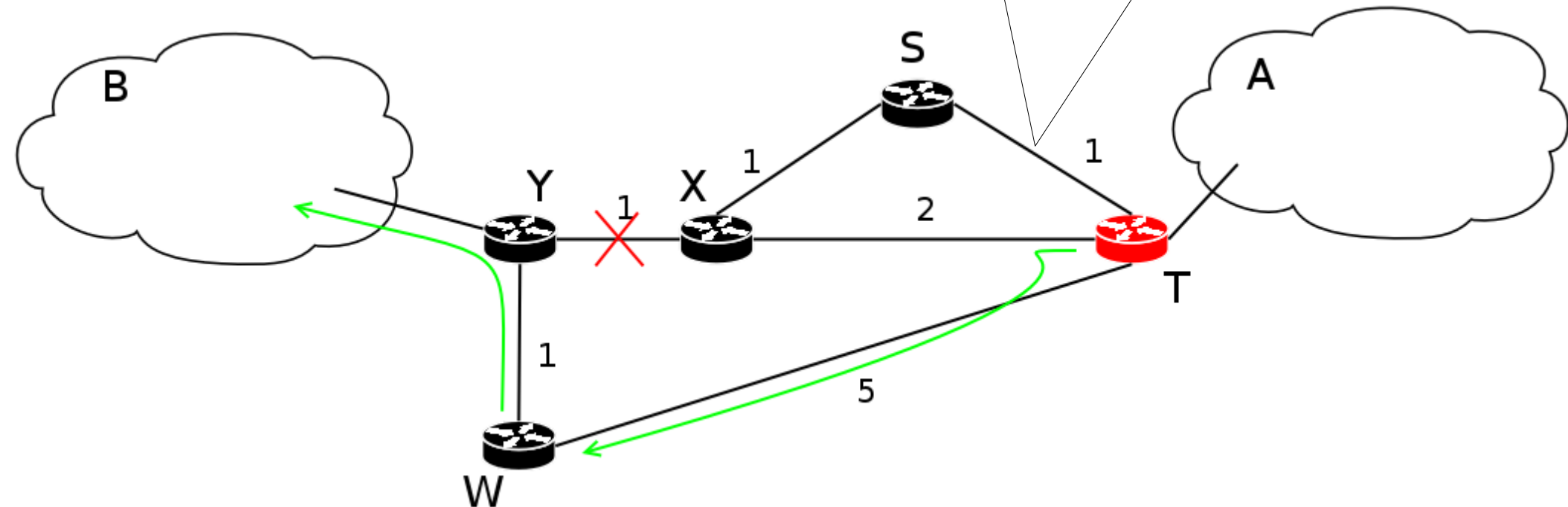




# Shortcuts : one step further ?

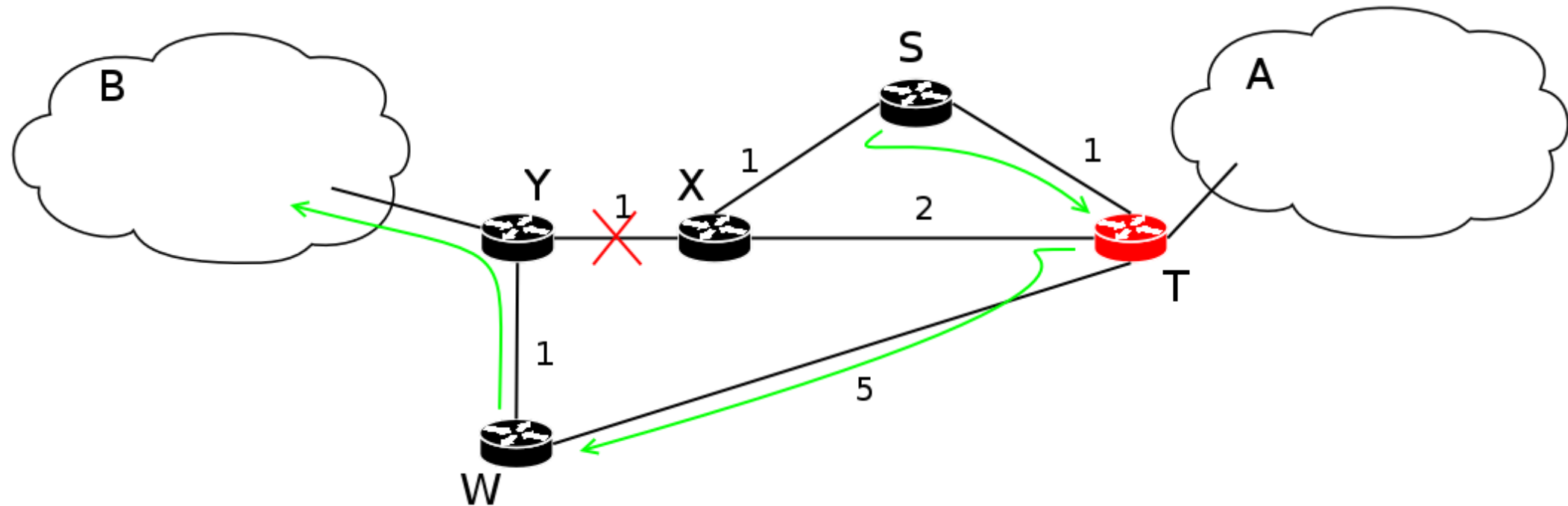
- Use “shortcut completion messages” to tell your neighbor that you are now using post-convergence paths via unaffected parts of the network

T's FIB is updated for the destinations rerouted along  
 $T \rightarrow W$



# Shortcuts : one step further ?

- S can update its FIB for all the prefixes in Cloud B !



- Use of shortcut completion messages should be negotiated among neighbors. Handling of shortcut completion messages is not mandatory.

# Questions ?

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