

CCN Control Messages

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PARC / Cisco

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Messages

End-to-End

Application Messages

Feedback

Hop-by-hop

Not independently generated

Neighbor

Forwarder to forwarder

State maintenance

Messages

End-to-End

Application Messages

Feedback

Hop-by-hop

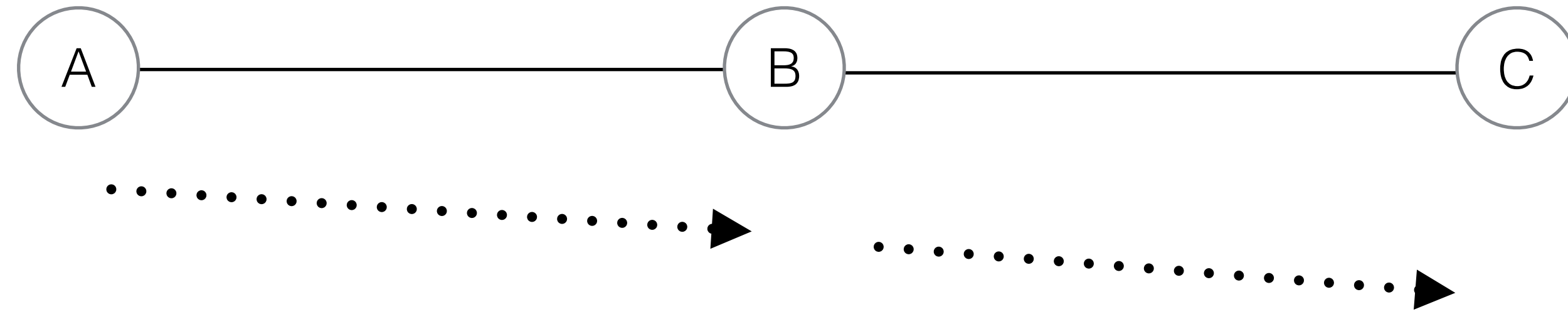
Not independently generated

Neighbor

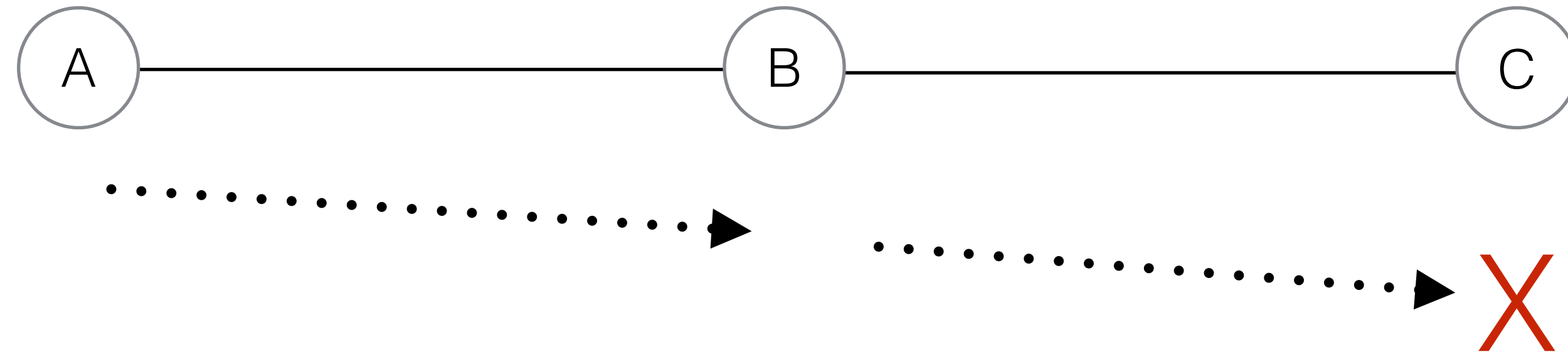
Forwarder to forwarder

State maintenance

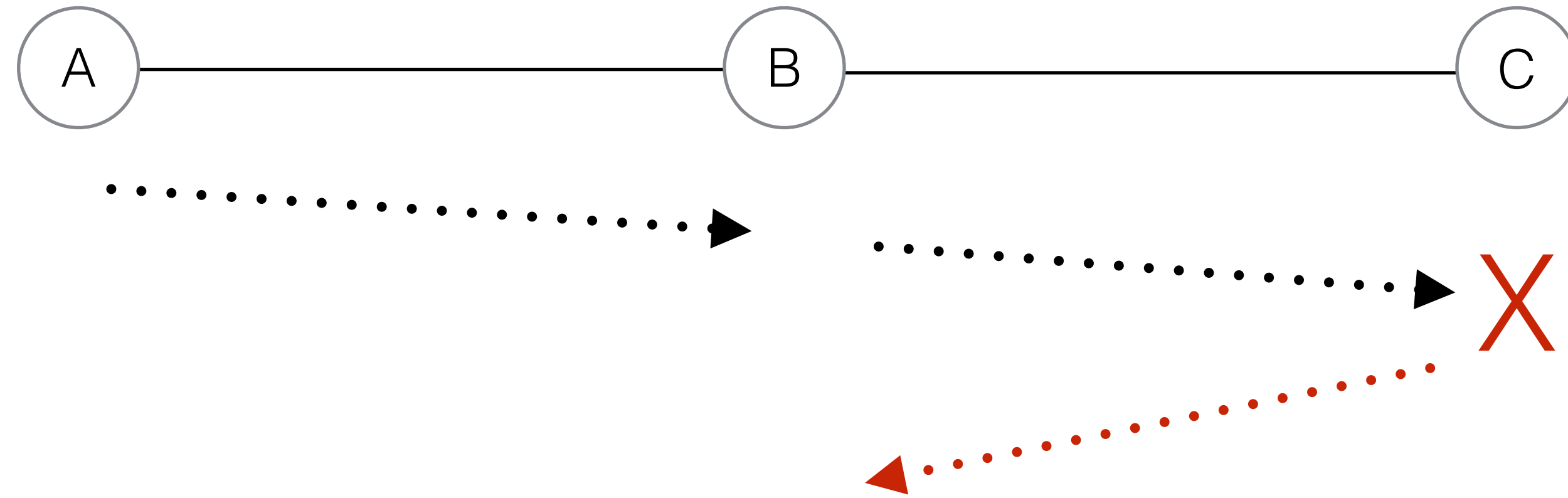
Interest Return



Interest Return



Interest Return



Interest Return

Let the network decide

Let the network elements decide if they can perform local repairs or return the error upstream

Low overhead

At most, the same overhead as processing valid data

Not required

A router is not required to generate Interest Return messages

A router is not required to process Interest Return messages

Interest Return Codes

No Route

The router has no route to the name

Hop Limit Exceeded

The hop limit has decremented to 0

Interest MTU too large

The interest MTU is too large to be forwarded

No resources

The forwarder doesn't have enough resources to process this interest

Interest Return Codes

Path Error

A transient error on the path to be followed

Congestion

A transient error due to congestion

Prohibited

Administrative policy forbids processing this interest

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Status

Work in progress

<https://datatracker.ietf.org/doc/draft-mosko-icnrg-ccnxsemantics/>
<https://datatracker.ietf.org/doc/draft-mosko-icnrg-ccnxmessages/>