Alice and Bob look at PLUS

A momentary diversion into Architecture
Endpoints tell each other about transport state
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SYN-ACK
Endpoints tell each other about transport state

ACK
All that is in cleartext

Devices on path can see the exchange. And they may act on it by:

- adding state to tables
- opening firewall pinholes
- setting aside various resources
All that is in cleartext

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- adding state to tables
- opening firewall pinholes
- setting aside various resources
- copying everything to vast data stores.
Enter Encryption

To dodge that last bullet, we’re encrypting more data **and more metadata**.

But that leaves all the other items in a more fragile state, because the network elements were using them to maintain the path between Alice and Bob.
An implicit layer revealed

Those cleartext messages were from Alice to Bob, and vice versa. But they created a set of signals to the path elements as well.

That was, and is, an implicit path layer that we don’t usually discuss.
Options
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You could use Internet layer facilities to send these signals.
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You could bolt these signals onto each transport.
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You could do nothing.
**Options**

You could use Internet layer facilities to send these signals.

You could bolt these signals onto each transport.

You could do nothing.

You could restore the implicit signal by encrypting less.
Or
Or

We could make that implicit layer explicit.