

# TAPS

and Transport Evolution:  
History and Next Steps

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IAB IP Stack Evolution Program

# How did we get here?

- The problem: sockets API not expressive enough for new transport requirements.
  - cf. discussion at TSVWG, Vancouver, Nov. '13.
- Transport Services activity (pre-London):
  1. define services to be offered by a Transport API
  2. show implementation using existing transports
  3. define mechanisms for path support discovery
- TAPS BoF in London

# London TAPS BoF

- Wide-ranging discussion of aspects of transport innovation:
  - Academic work (e.g. Polyversal TCP)
  - Middleware APIs (e.g. zMQ)
- Lots of insight into the problem(s)
  - (go read the minutes again!!)
- Little direction forward
  - (...and lots of side argument about what an API should and should not provide in the abstract...)

# IAB IP Stack Evolution

- Simultaneously, the IAB has started a program to look into architectural aspects of evolving the stack above layer 3:
  1. Improving application access to transport services beyond `SOCK_STREAM`, `SOCK_DGRAM`
  2. Improving path transparency in the Internet (i.e., solving the middlebox problem(s))
- Current approach under consideration: standard approaches supporting user-space transport evolution
- Transport service definitions from TAPS key to this effort

# Scope of TAPS today

- Broad agreement that understanding the services transport is to provide is key, regardless of the approach moving forward.
- So let's do first what we know we need to do: defining...
  - ...a set of existing transport services, and the subset of these that are generally important.
  - ...methods for providing these services in the context of incremental deployment.
- and keep talking about the rest.