

INTERNET



# PLOP

(some thoughts from 1997)

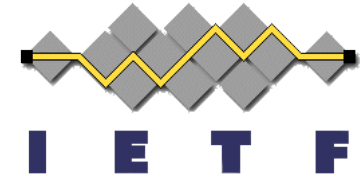
**Patrik Fältström**

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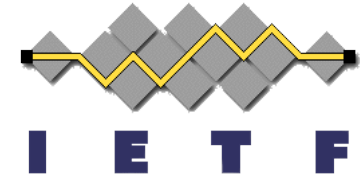
INTERNET

# Agenda

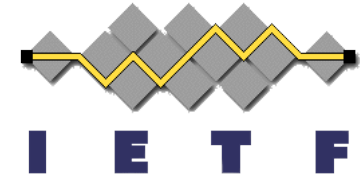
- Why NOT plop?
- Why plop?
- Model
- Solution



# Why not plop?



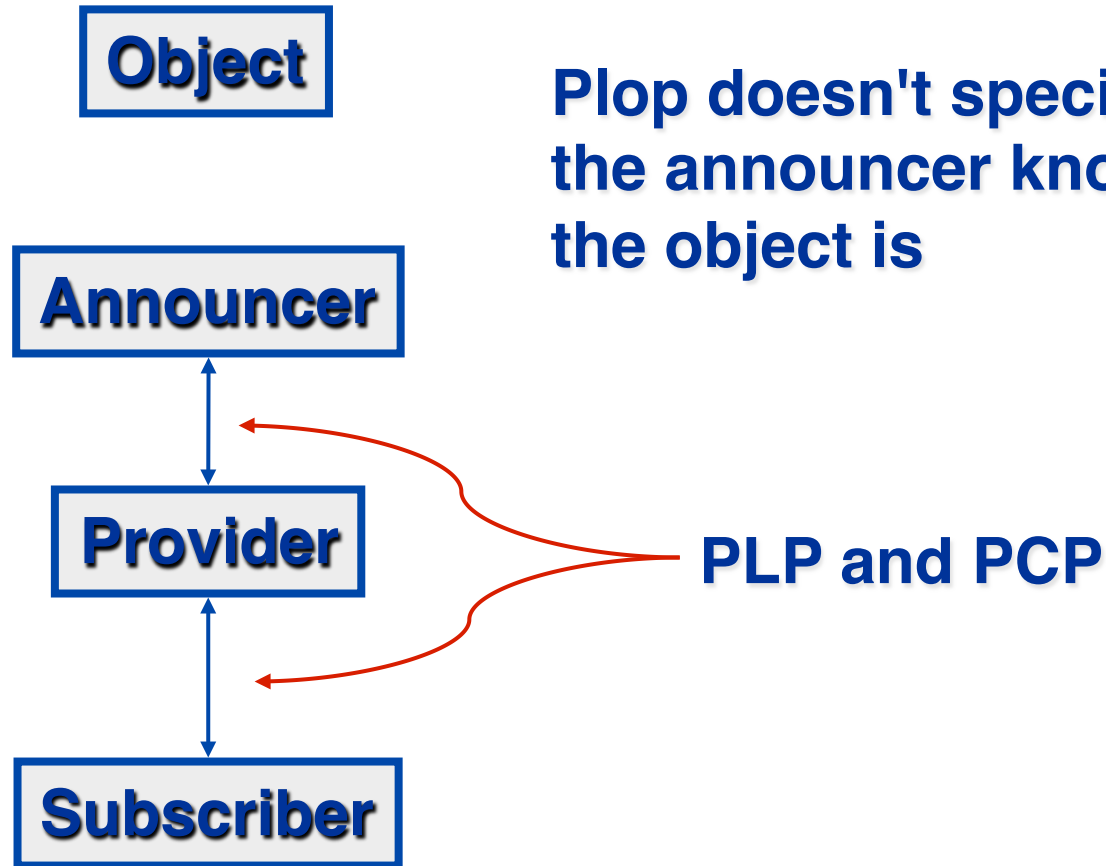
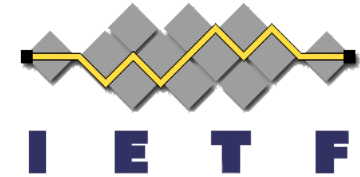
- It's not a working protocol?
  - How to identify a stream of data?
  - How to handle keep alive event?
  - Given an object, how to find the service provider which happen to have the location?
  - Is this the traditional "multicast problem"?



# Why plop?

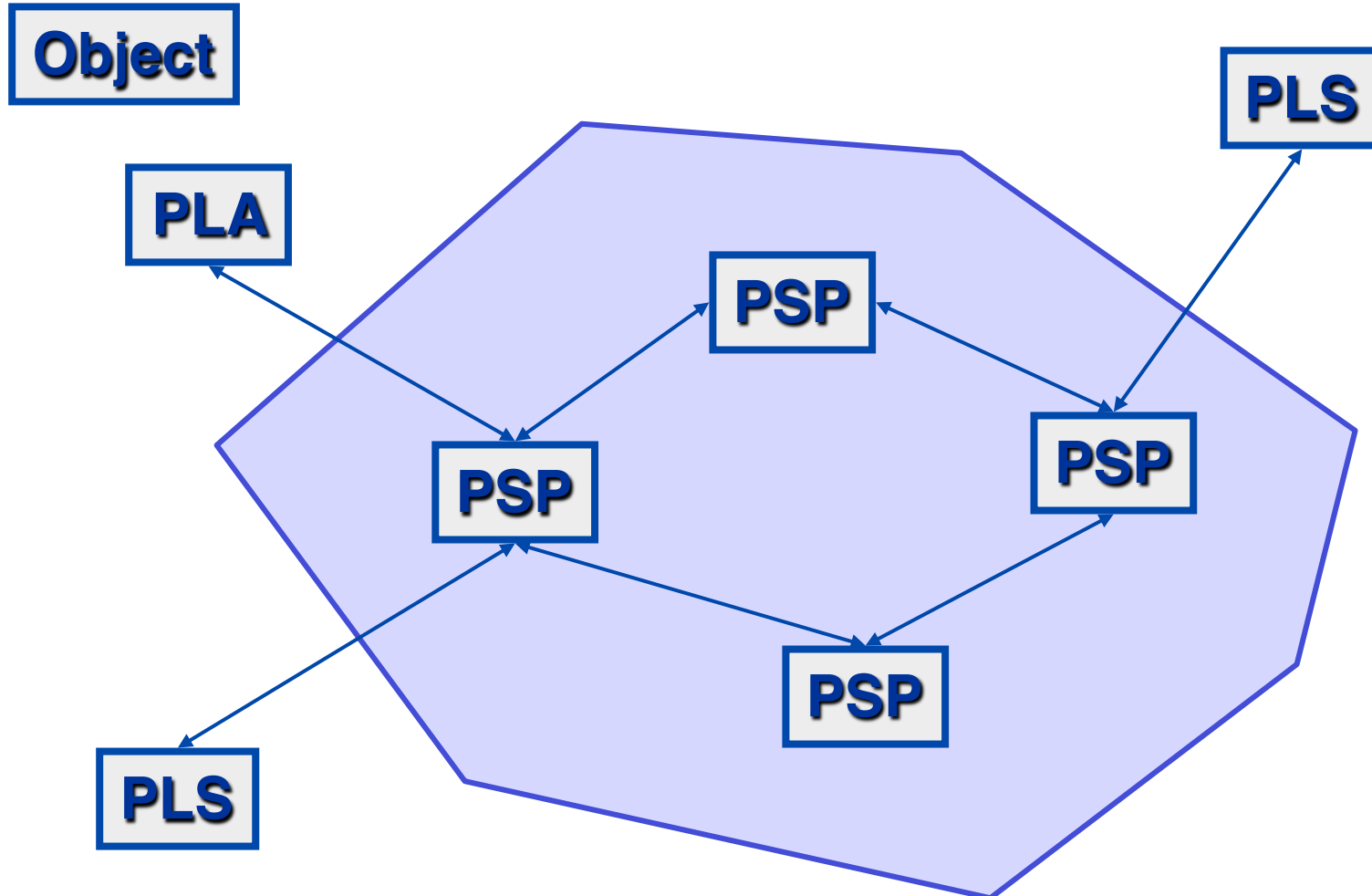
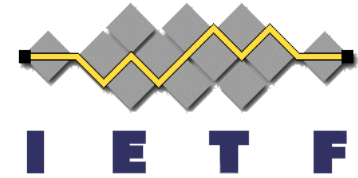
- There is a need in finding the geographical location of objects
- Objects might not want to be found
- Keywords
  - Privacy
  - Alternative responses
  - Scaling
  - Security

# Key objects

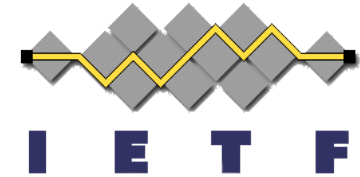


PloP doesn't specify how the announcer know where the object is

# Mesh of providers



# How it works 1



**Object**

The announcer get in some way an idea of where the object its

**Announcer**

**Provider**

**Subscriber**

# How it works 2



**Object**

**Announcer**

**Provider**

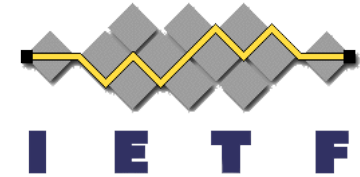
**Subscriber**

The announcer updates access control lists using the Plop Control Protocol (PCP) which is secured using PGP.

With PCP, keys are exchanged which will be used for the Plop Location Protocol (PLP).



# How it works 3



**Object**

The announcer signs and encrypts the location (using the key exchanged in PCP), and sends it to the provider using PLP.

**Announcer**



**Provider**

The PSP is verifying if the message is to be sent to another PSP, and if so, the message is forwarded.

**Subscriber**

# How it works 4



**Object**

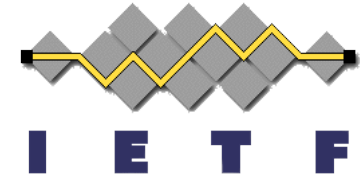
**Announcer**

**Provider**

**Subscriber**

The subscriber subscribes to the location of an announcer using PCP, and gets the keys to use for PLP.

# How it works 5



**Object**

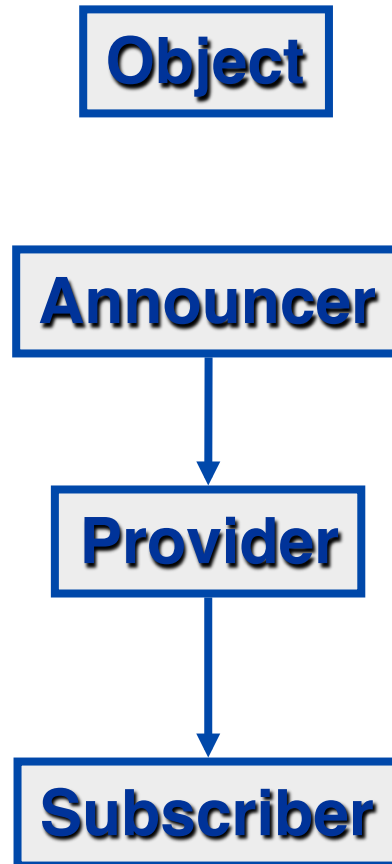
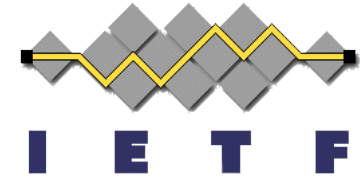
**Announcer**

**Provider**

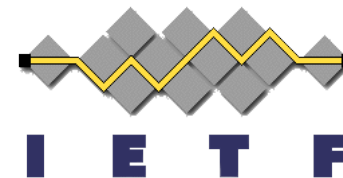
**Subscriber**

The PSP is sending the location of the announcer to the subscriber using PLP, secured with key exchanged in PCP.

# How it works 6



When the announcer want to update the location, it sends the location to the PSP, which forwards the message to all subscribers.



# Key things

- PCP (tcp) is used for
  - ACL updates
  - Subscriptions
  - Key exchanges
- PLP (udp) is used for
  - Sending continuous updates of location