

PubSubHubbub

Presupposti

- Publish & Subscribe

- HTTP

- Atom data format

-

Comunicazione client-server: Push & Pull

- Pull: il client richiede (tramite polling) dati al server
- Push: il server spedisce dati di sua iniziativa
- Long poll: il server mantiene comunicazione attiva finché i dati diventano disponibili

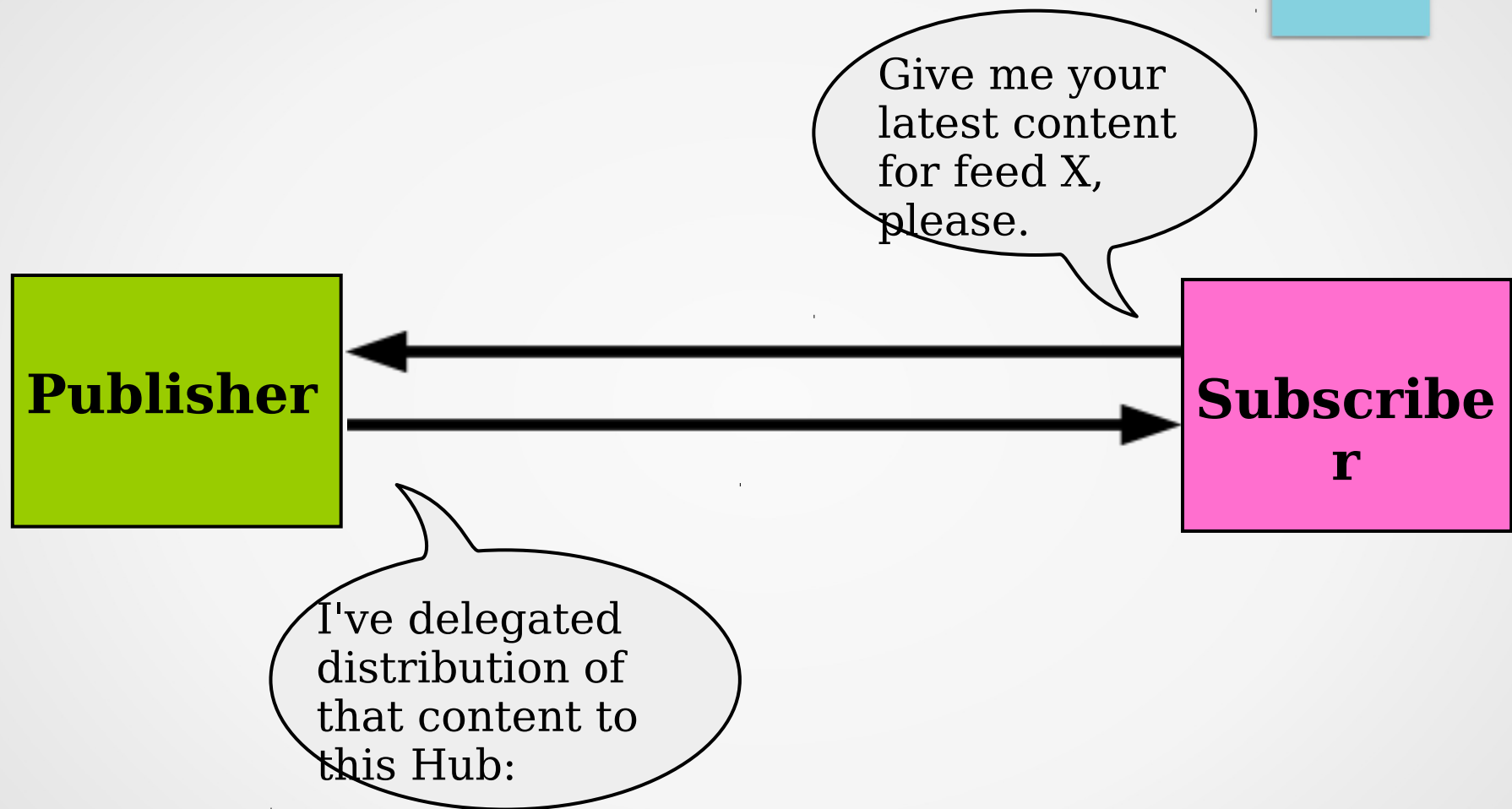


PubSubHubbub

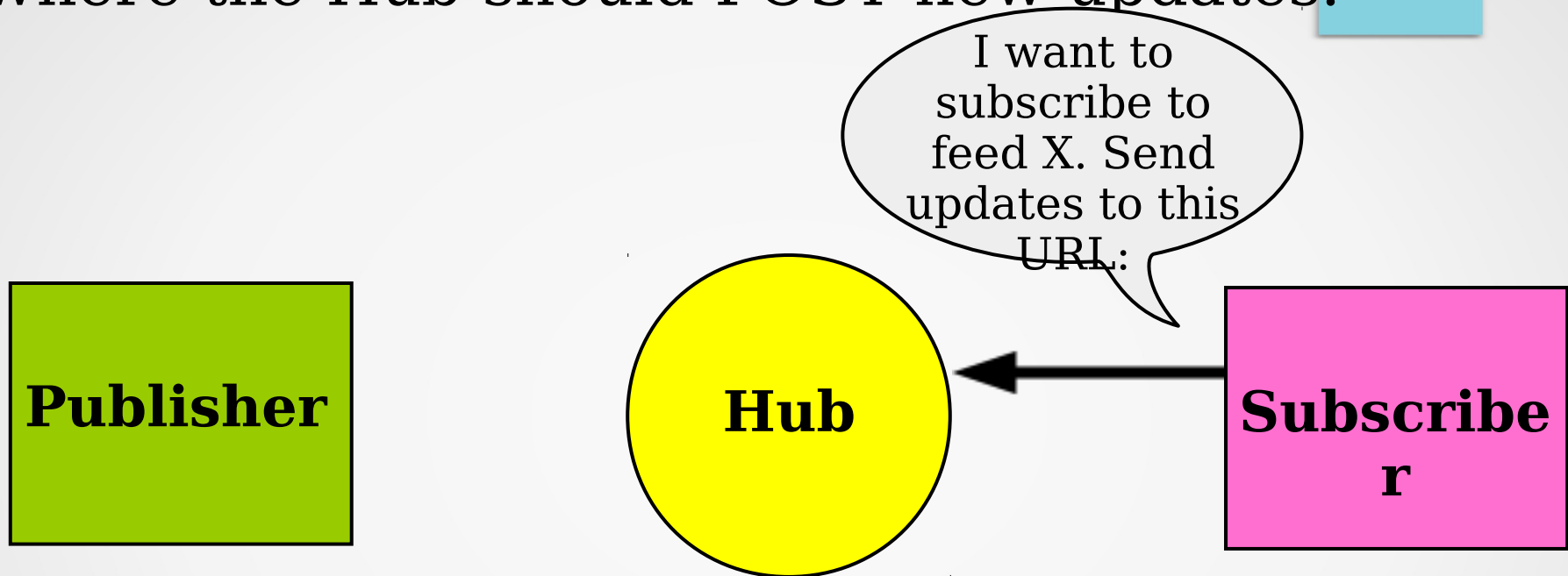
Subscription flow

Draft 0.1

1. Subscriber polls Publisher's feed. The feed contains a forward link to the Hub.



2. Subscriber POSTs subscription request to the Hub. The request contains the endpoint URL where the Hub should POST new updates.



3. Hub POSTs to the endpoint URL to verify the request was authentic; Subscriber responds with confirmation to the Hub.

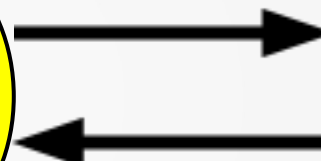
Publisher

Hub

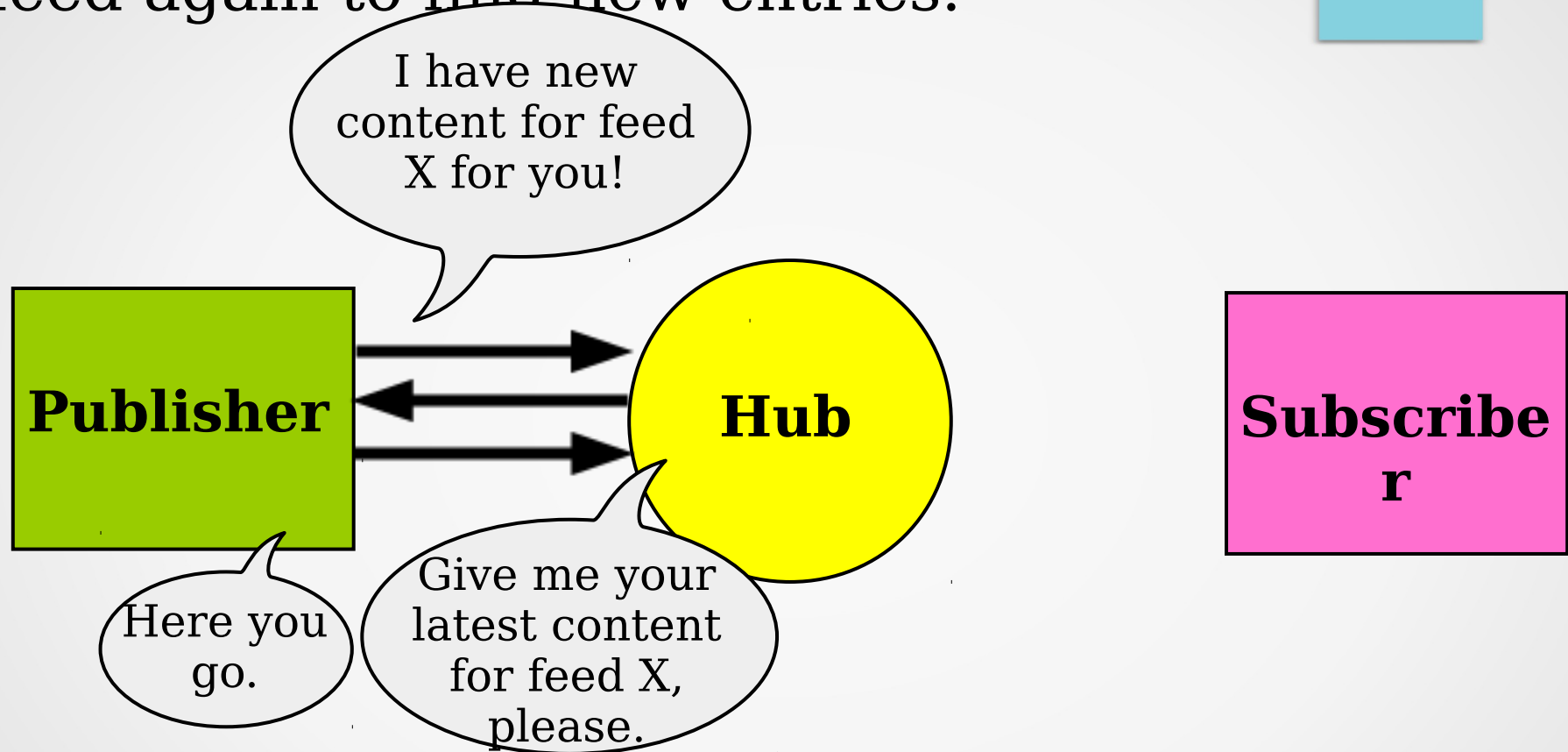
Subscriber

Hey there! Did you really send this request?

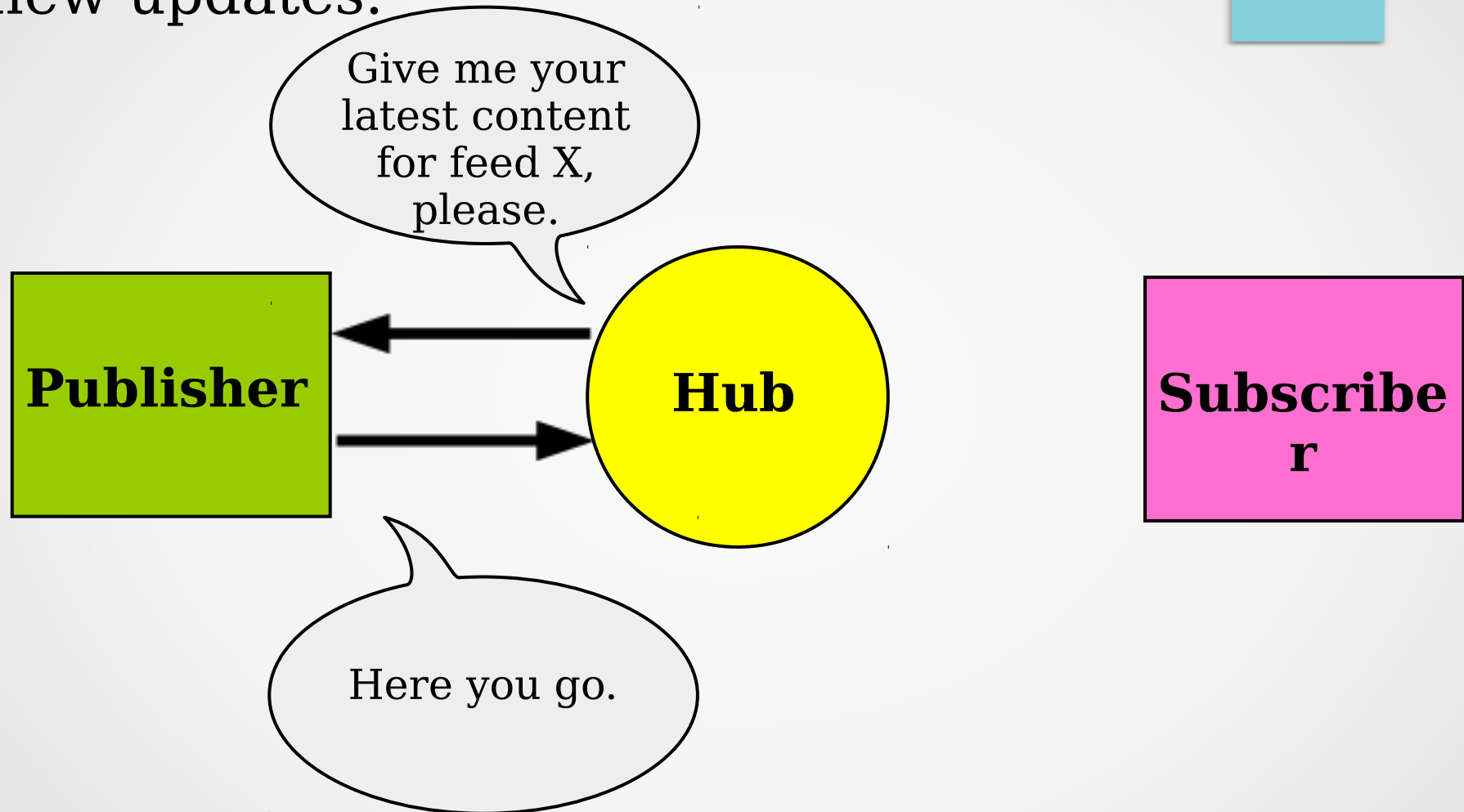
Yup, that was really me, not a DoS attacker.



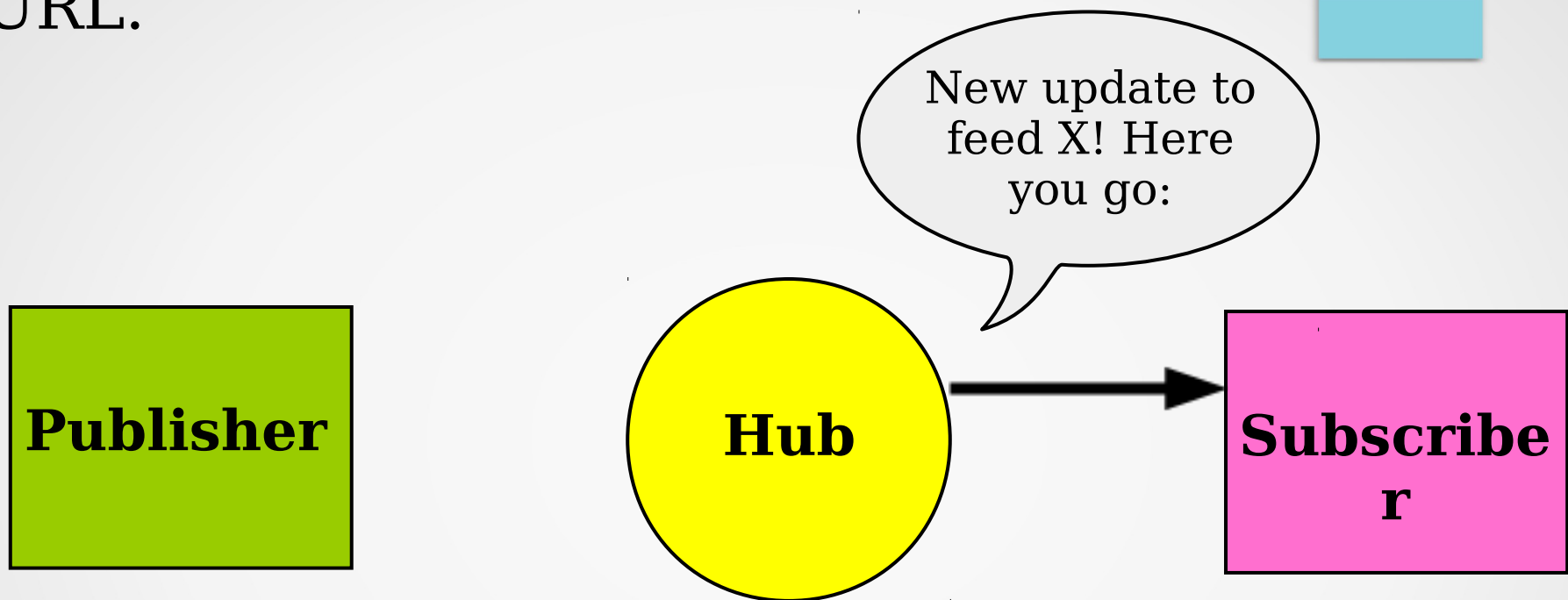
4. Publisher notifies Hub about updates by POSTing feed URLs to the Hub; Hub pulls the feed again to find new entries.



5. If the Publisher does not inform the Hub, the Hub will periodically poll the Publisher's feed for new updates.



6. When Hub receives new update to feed X, it POSTs the update to the Subscriber's endpoint URL.

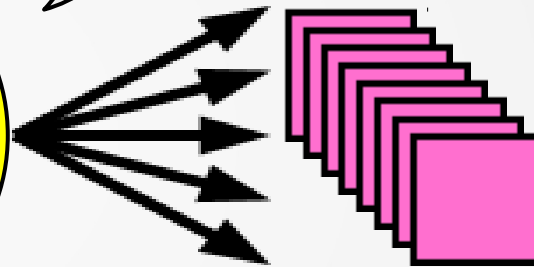


7. If feed X has multiple subscribers, the Hub sends updates to all of them. This reduces load on the Publisher.

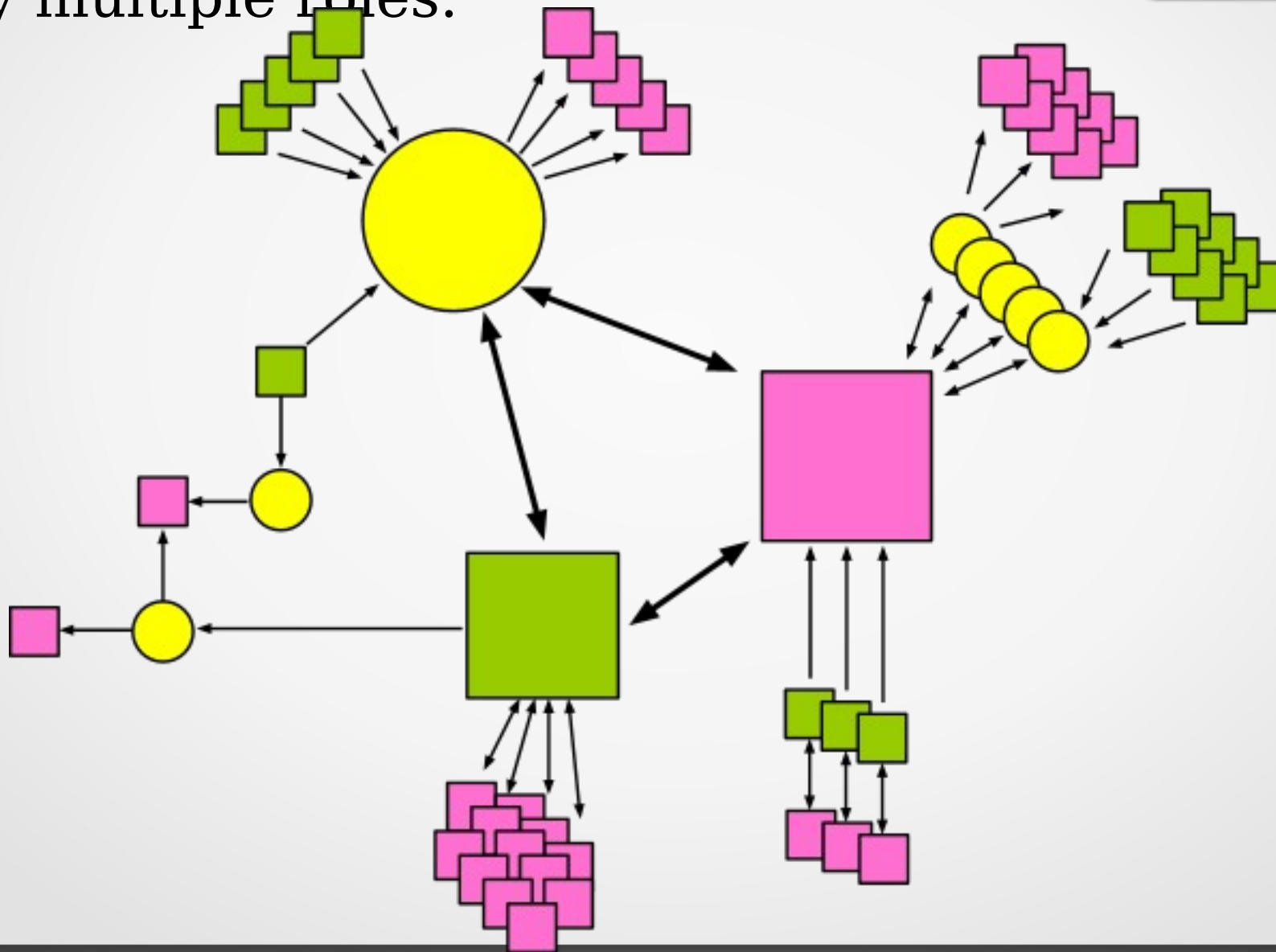
Publisher

Hub

New update to
feed X! Here
you go:



The future is distributed: There will be big hubs, many small hubs, and tons of publishers and subscribers. Publishers, subscribers, and hubs may play multiple roles.



Requirements

Publishers

- Publish Atom feeds with their content
- Include Hub forwarding information in feeds (optional)
- POST updates to Subscribers and Hubs (optional)

Subscribers

- Parse the feeds forwarded by the Hub
- POST subscription requests to Publishers and Hubs & confirm them
- Provide endpoint URLs to which Publishers and Hubs can post updates

Hubs

- Receive subscription requests from Subscribers & verify them
- Provide endpoint URLs to which Publishers can POST updates
- Poll non-push capable Publishers to turn pull into push (optional)
- POST updates to Subscribers
- Let subscribers poll it (optional)
- Scale!