PSIRP
PUBLISH-SUBSCRIBE INTERNET ROUTING PARADIGM

Envision a system that dynamically adapts to evolving concerns and needs of their participating users

Following observations …

- Point-to-point and client-server communication modes are being replaced with distributed dynamic web of information
- Mutual trust and co-operation between the users is challenged by:
  - Increasing spam mail, unsolicited advertisements and distributed denial of service attacks
  - Escalation of Cyber warfare with increasing numbers of firewalls and middle boxes
- Micro-economics of the current communication mode favors senders and forces the receivers to carry the cost of unwanted traffic
  - Network forwards whatever senders send

….lead us to conclusion that:

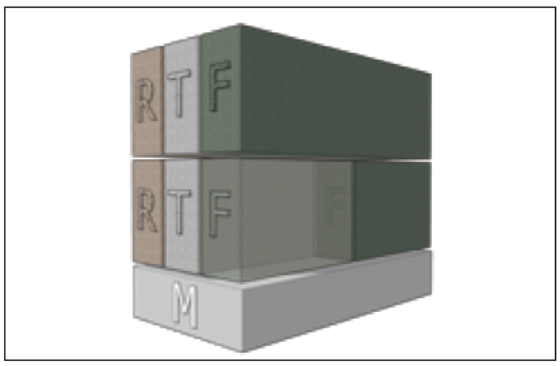
- the original design assumptions of the Internet are outdated and do not meet current realities and even less the needs of future network society that is centrally based on accurate access and distribution of information.
- We need to revisit the fundamentals of the network architecture.

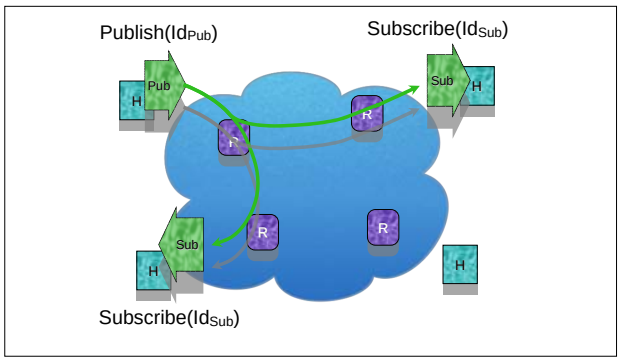
Objective:

The PSIRP project will design a new internetworking architecture based on the publish-subscribe paradigm that will restore the balance of economic incentives between the senders and the receivers.

Functional model principles

Routing and forwarding fabric operates entirely on the notion of information and its scope
Recursive Rendezvous-Topology-Forwarding-Mediation architecture:





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Publish-Subscribe Internet Routing Paradigm

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