

On the design of a practical information-centric transport

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Information-centric architectures

- **From** conversation-centric end-to-end model
- **To** nodes directly addressing data they need, independently of its source/place of storage

Info-centric architectures so far

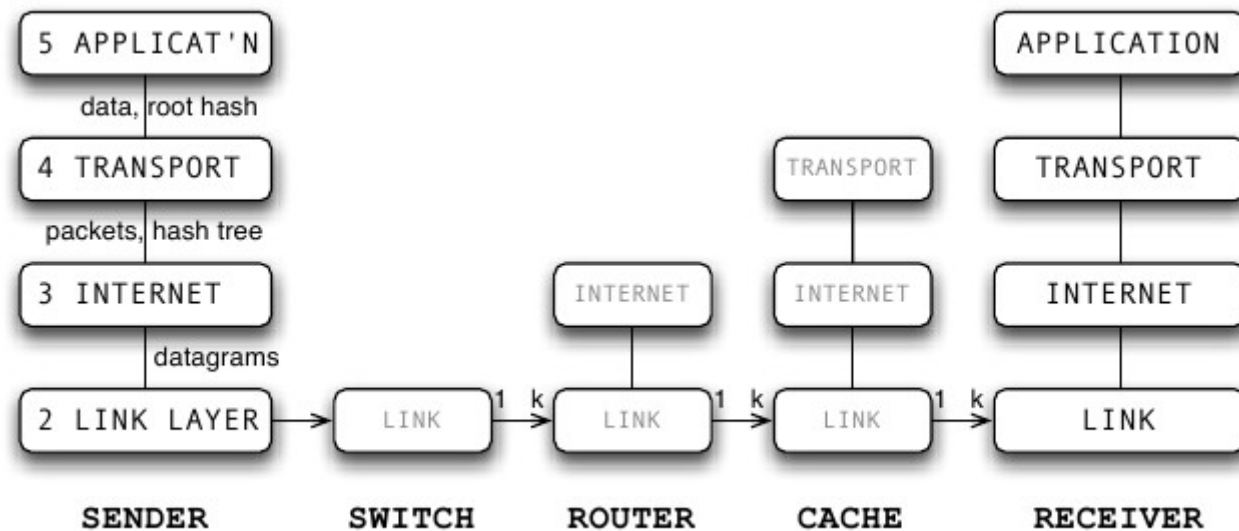
- Exploratory publications:
 - Single-piece interdependent design
 - Imbalance of upfront costs vs. immediate benefits
- Prospects of a piecemeal adoption?

Modular design for info-centric architectures

- **Start** with the info-centric primitives, e.g. self-certifying names
- **Design** an info-centric transport and **define** natural interfaces to internetworking layers, e.g. naming and routing

Info-centric “hourglass waist”

- **Based** on Merkle-hash trees
- Info-centric stack: relay, verification, storage
- Message vocabulary



UDP Implementation

- Transport protocol on top of UDP – *swift*
- *Data for a hash* interface
- Uses:
 - Defined message vocabulary
 - DHT to find peers for a hash

Questions to the masters of Bifrost Universe!

- So, what do you think of routing pieces of content based on hashes?
- What do you think of the recent work on offloading routing to GPUs?