

VoCCN: Voice over Content-Centric Networks

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Everybody knows that ...

- Content-based networking is great for content dissemination ...
- ... but can't handle conversational or real-time traffic.

‘Everybody’ is half right.

Content networking is more general than IP

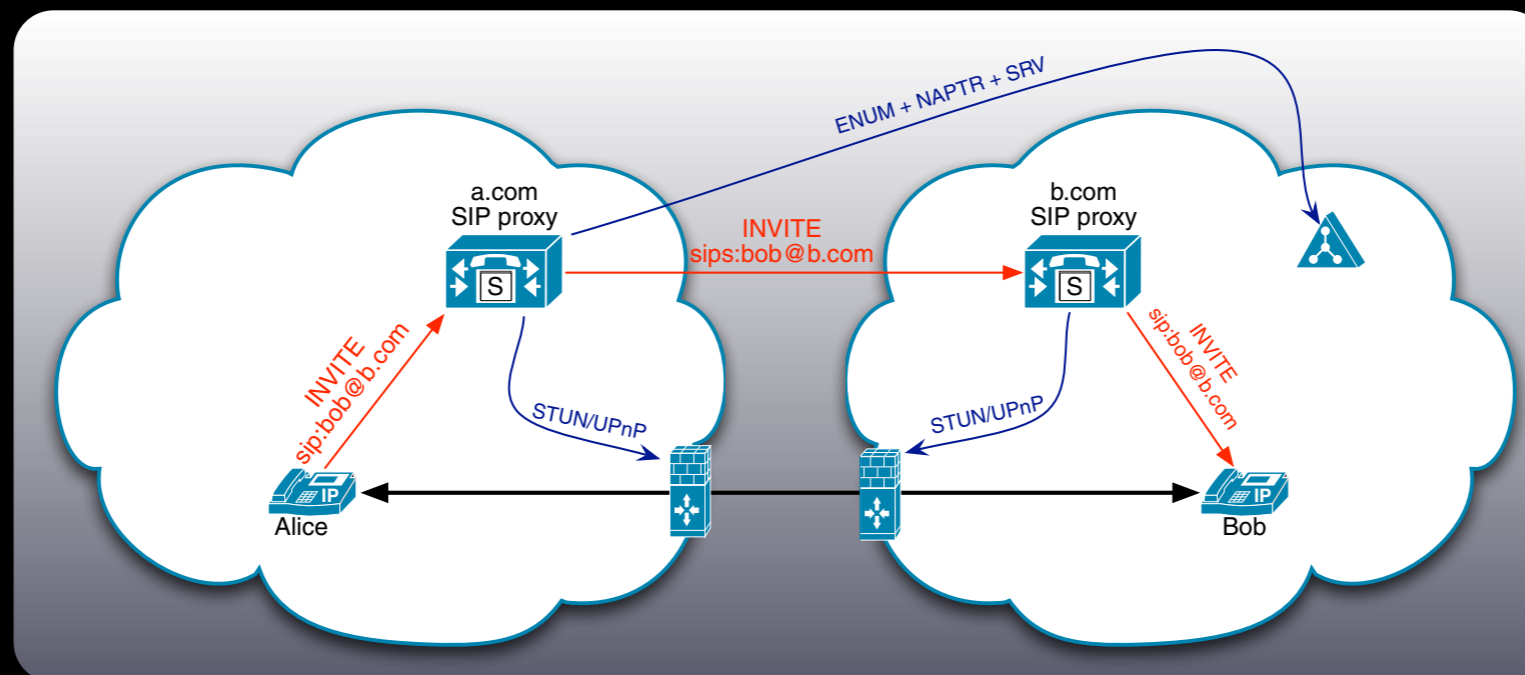
It does anything that IP can.

To demonstrate this we implemented VoCCN, a VoIP-functional-equivalent based on CCN.

(The way we map the IP conversation model isn't CCN-specific and should work for other Pub/Sub systems.)

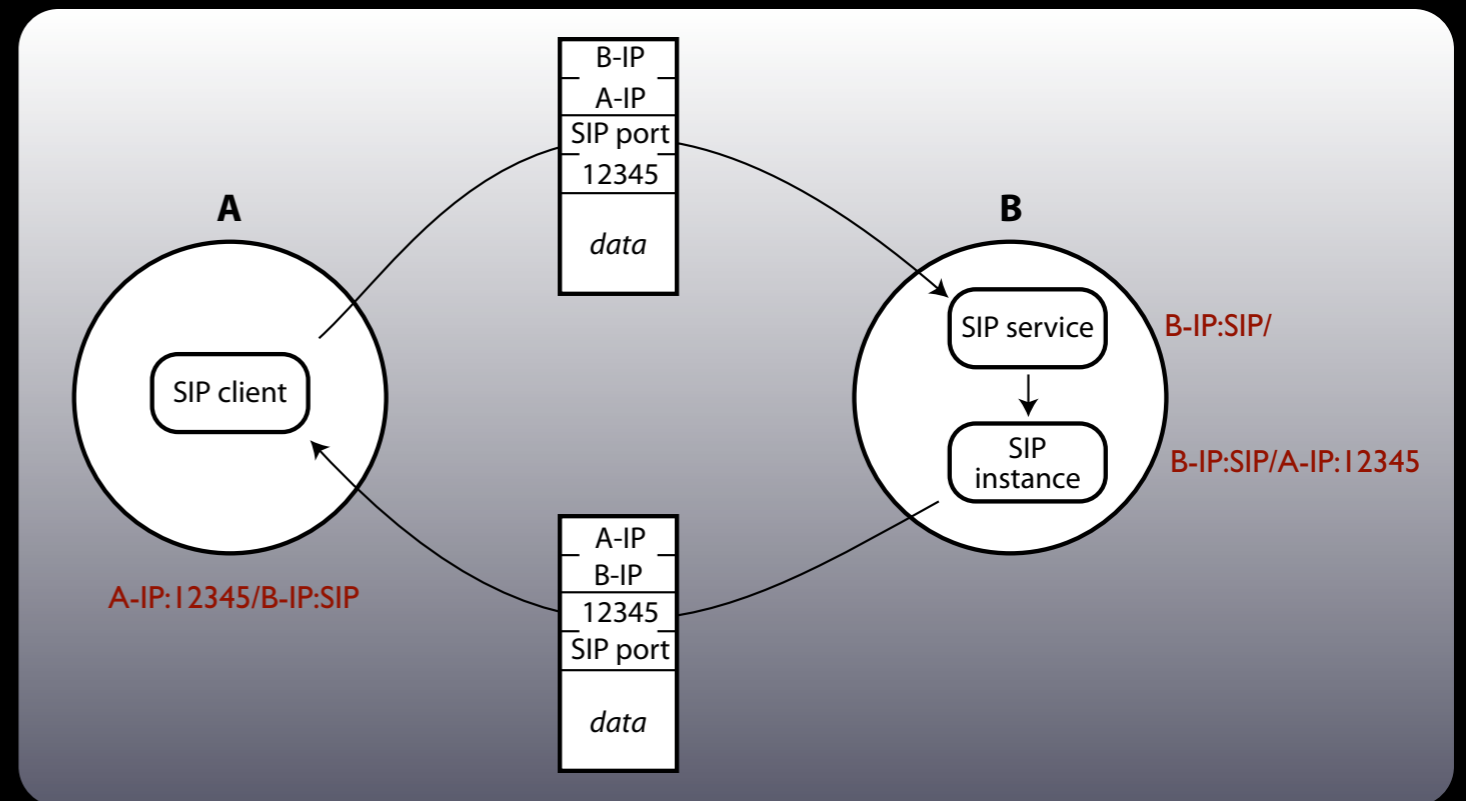
VoCCN – why bother?

- VoIP works badly for multi-point, multi-interface and mobility.
- VoIP security is poor.
- VoIP setup is complex.



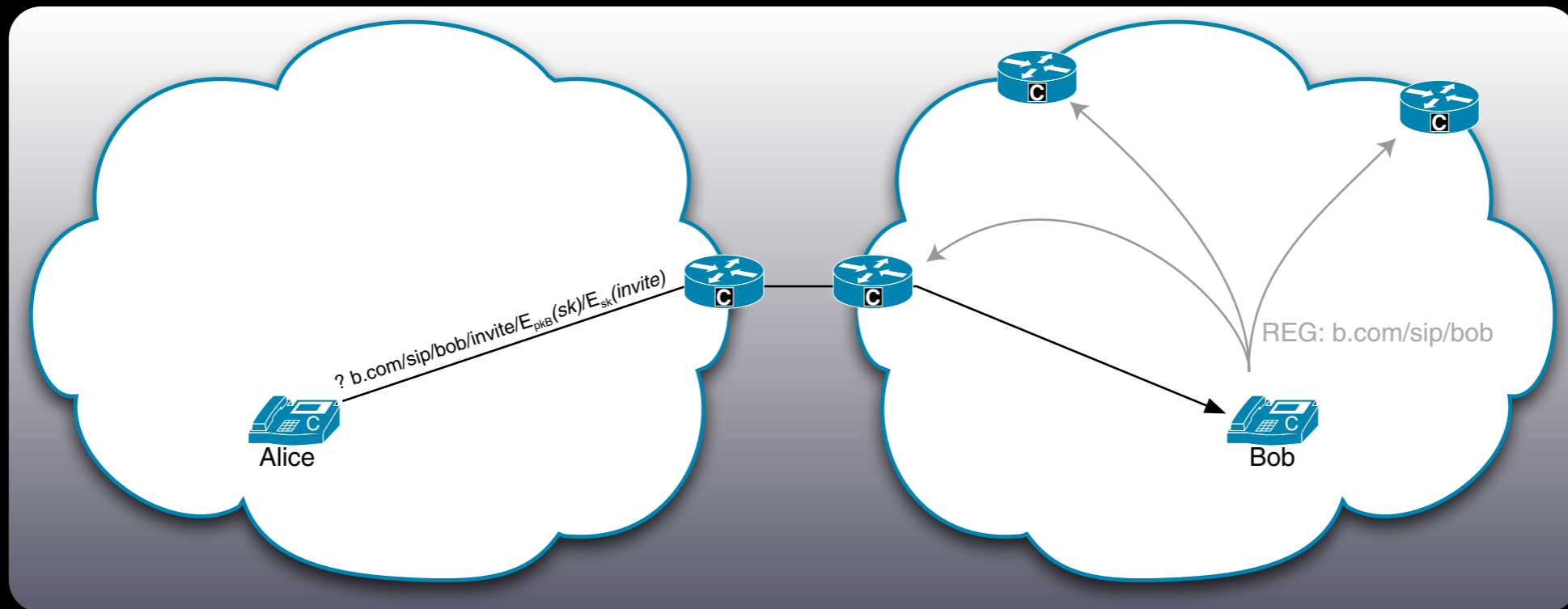
IP builds conversations using two patterns:

- Service to instance
- Uni- to bi-directional



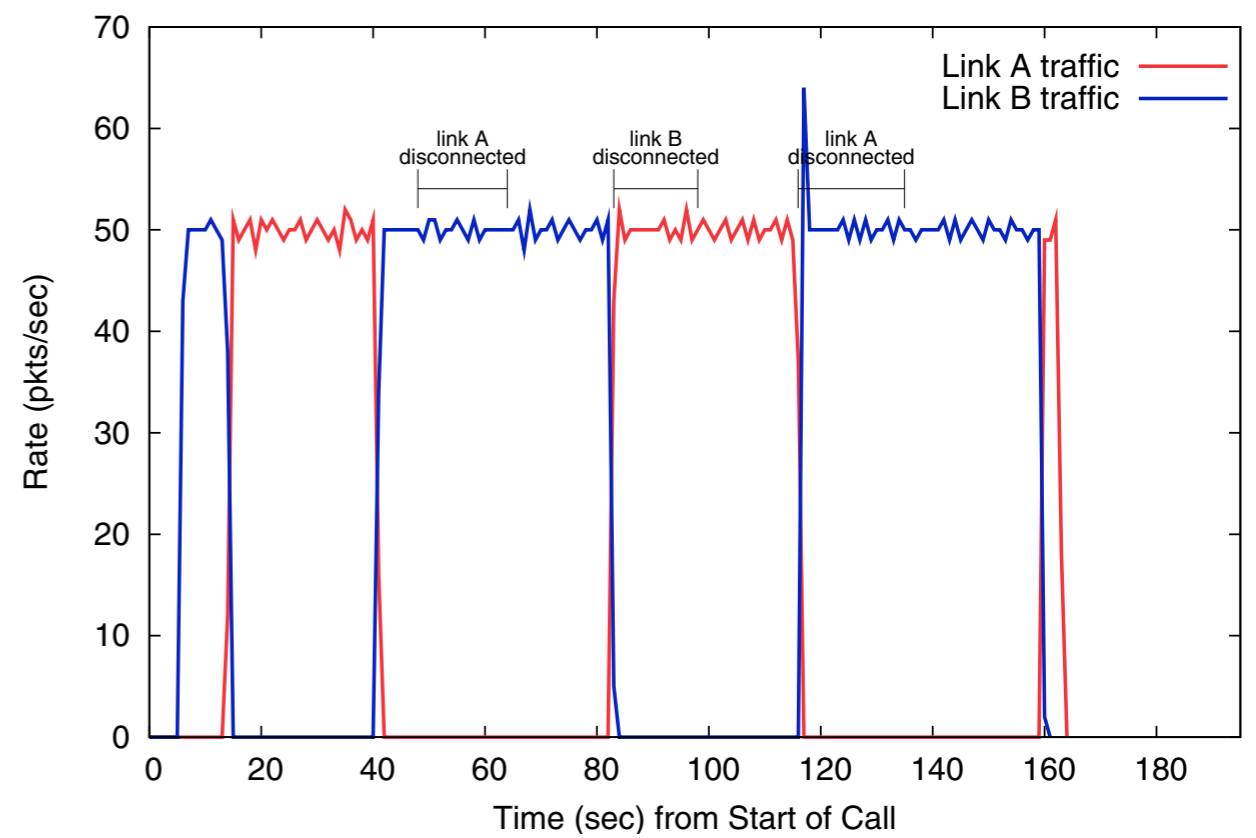
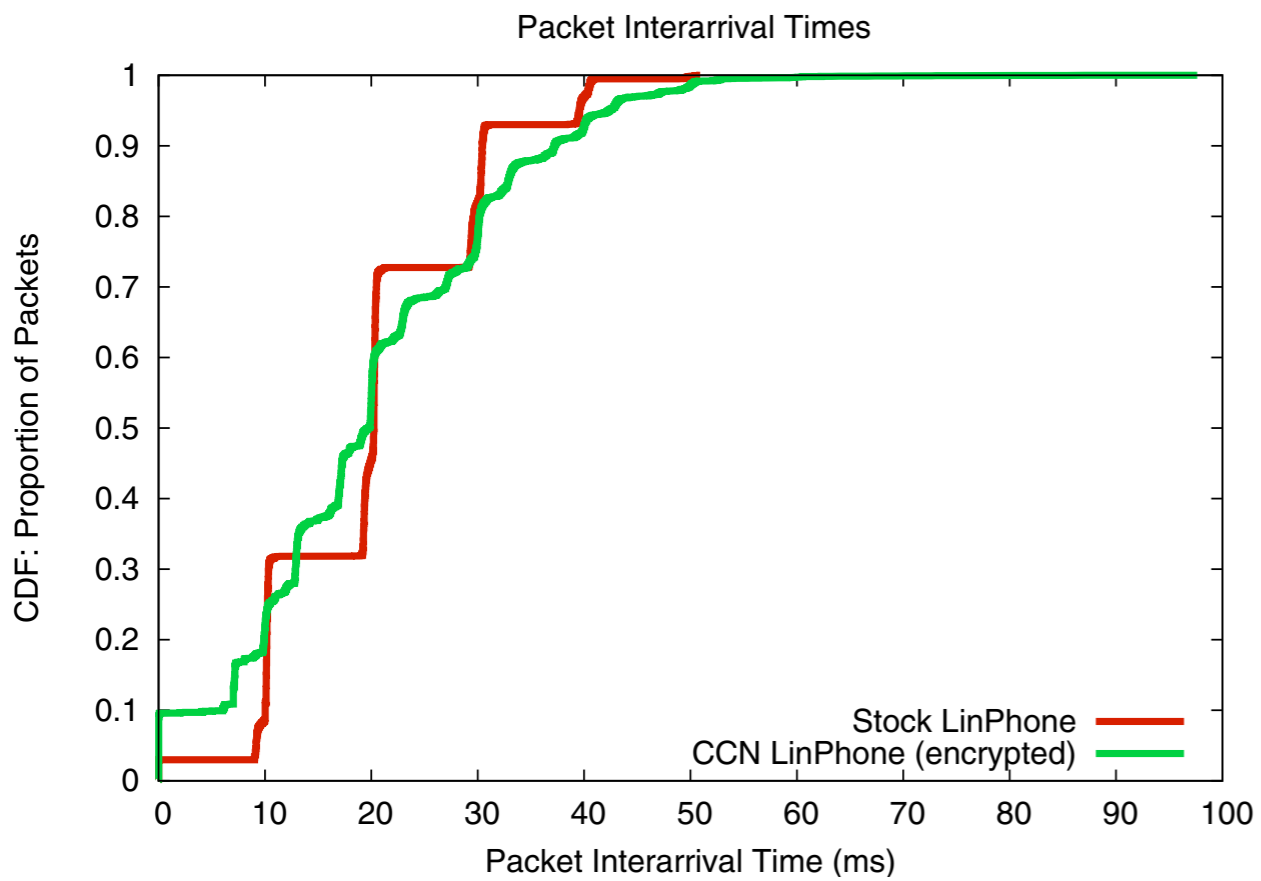
These are just 'name' manipulations that should map to any (topic-based) pub-sub system with hierarchical or algorithmic names.

VoCCN has only a few moving parts



- Resulting system is simple, secure and scalable.
- Robust support for mobility and multi-point.
- Supports secure, stateless, VoIP inter-operation.

Performance



Availability

- Our (open-source, GPL'd) CCN stack is available at www.ccnx.org.
- The VoCCN linphone code should be there by the end of this week.

Questions?

Message exchanges

