

**Is ICN going to make it to  
deployment?**

Spiros Spirou  
Intracom Telecom

No\*

\*Within 5 years and given the current state of research.

Is ICN going to make it to deployment?



Who gets the ICN bill and will they cover it?

# Stakeholders



Network Service  
Provider  
(NSP)



End User  
(EU)



Content Service  
Provider  
(CSP)

Terminology from  
RFC 6707 "CDN Interconnection Problem Statement"



# End User I

- Pay NSP (or CSP) to deploy ICN.
  - Only if disguised as premium service.
- Contribute ICN resources.
  - ICN at leafs probably not enough. Dubious incentive.



# End User II

- Uniform access to content.
  - Mostly possible with search engine + browser + HTTP.
- Content location independency.
  - Just use search engine.
- Better performance.
  - If charged, will it be better than CDN?
- Ease of UGC publication.
  - Already have OTT repos. Need middleman for more?
- New apps
  - Which are those?



# Content Service Provider I

- Pay NSP to deploy ICN.
  - Which NSP? Will it be better than CDN?
- Contribute ICN resources.
  - ICN at leafs again.



# Content Service Provider II

- Publish once, sell everywhere.
  - Yes! Needs management and logging though.
- Better performance.
  - Better than CDN?
- New apps
  - Again, which are those?

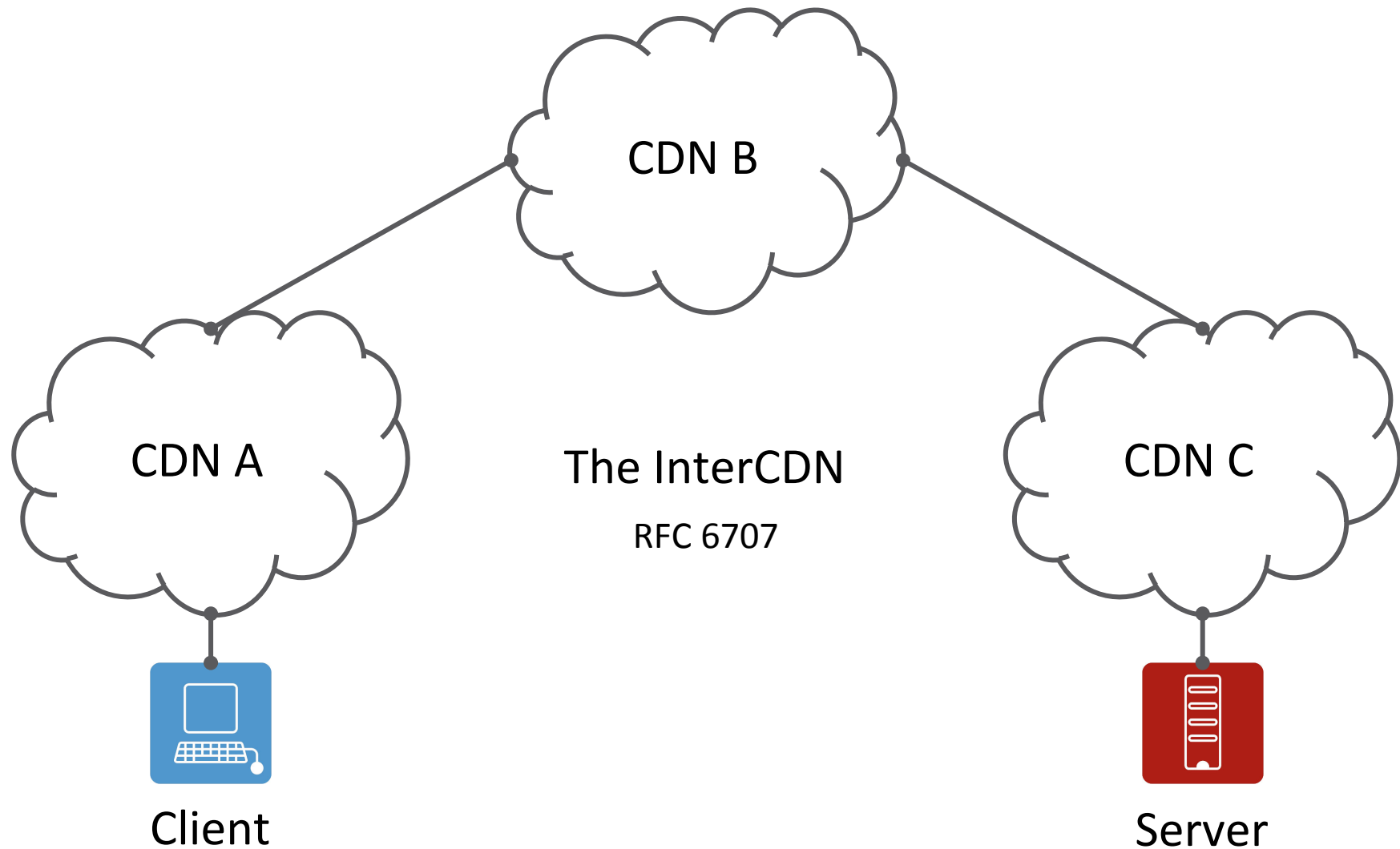




# Network Service Provider

- Pay for deploying ICN.
  - Why? Build it and they will come? Will others do it?
- Reduce management expenses.
  - Is it self-managing?
- Reduce transit expenses (with caching).
  - Make transit NSPs angry so they will sabotage ICN.
- Increase revenue with content services to End User.
  - Better than intra-domain CDN?
- Increase revenue with distribution services to CSP.
  - Risk revenue from CDN providers. Added value for CSP?

# The Elephant: CDNI



# “Why should I care?”™

- The internet is now commercial. Changing it means thinking commercially.
- A chance to become ~~rich and~~ famous.

# “What can I do?”™

- Gather requirements from NSP to drive design.
- Illustrate novel, meaningful and clear use cases.
- Keep it simple.
- Make it scalable.
- Add self-\*
- Add management and logging.

# Summary

- EU, CSP and NSP the main ICN stakeholders.
- NSP holds the key to ICN deployment.
- Weak and unclear incentives.
- CDNI could get there first and better equipped.
- A commercial medium needs commercial thinking.
- Get NSP feedback into design.

# CDNI & ICN

- Both CDNI and ICN target wide and effective content delivery.
- Interconnection of CDNs resembles interconnection of ICN routers/domains.
- ICN routers/domains interconnected by design; CDNs interconnected with CDNI.
- Similar technical challenges in request routing, content metadata, and control.
- No logging in ICN (yet).
- No CDN Provider equivalent in ICN; ICN "belongs" to all involved NSPs.
- CDN footprint extension can be achieved with interface to ICN domain.