

http://named-function.net

(ICN- λ)

NFN intro example

- Fetch temperature for Berlin, convert it to Fahrenheit (or Kelvin, or average it etc)
- ICN has implicit function call: `FETCH(/name/of/Berlin/temp)`
- Make function invocation explicit:
`APPLY(FETCH(/nist/celcius2fahrenheit),
 FETCH(/name/of/Berlin/temp))`

- We have generalized this:
resolve arbitrary Lambda-expressions, let the ICN substrate find: **code, execution site and the data, and cache results**
- URIs becomes λ -expressions (single name, chain of function invocations, abstraction, etc)

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Today:

n

Variable (a name)

FETCH (store
breadcrumbs)

a) add

f (e)

Application

FETCH twice,
apply

b) add

λ x expr

Abstraction

substitute (store
some state)

c) add recursion, caching
of intermediate results

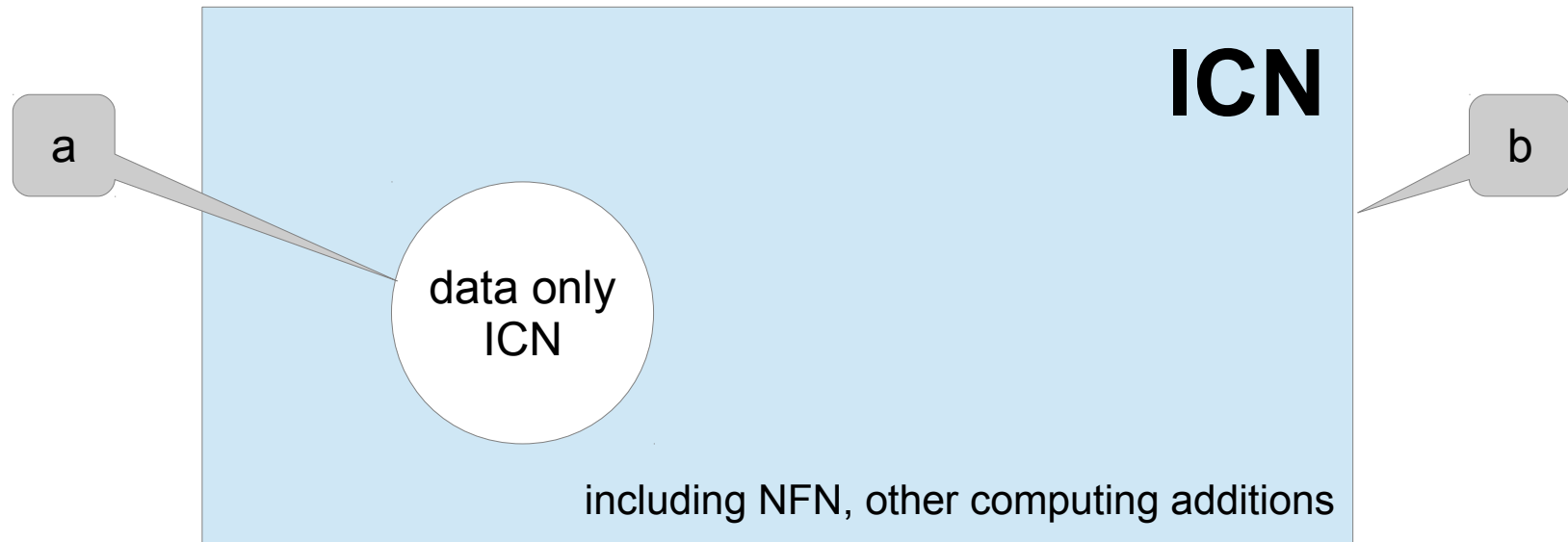
In λ -calculus, pick a resolution strategy: the confluence theorem guarantees that results will be the same.

„Call-By-Name“-resolution is natural for ICN, links to „Krivine's abstract machine“, can be combined with (CCN's) resolution principle (PIT).

Consequence: an ICN network becomes sort of a cloud.

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Question to the ICNRRG:

Which of (a) and (b)
should be the topic of the ICNRRG?