

# CCN Updates

IETF 88 - ICNRG

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CCNx URIs (Labeled Segment)

CCNx Software Stack

CCNx Protocol update

CCNx TLV Packet Format

# Labeled Segment URI

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/path/segment/

value

green

label=value

eyes=green



label[:param]=value

eyes:color=green

/name=ls-uri/version:date=20131103

/name=ls-uri/version:serial=37

/wg=icnrg/year:1=2012/year:2=2013

lci: Labeled Content Information

# **A SCHEME FOR CCN**

$\lambda ci : /Name=foo/Name=bar$

Name=foo



Binary=0x4D7C

Nonce=0x58CC

Key=0x401B

App : 6 = 0xBEE4

Segment=18

0x0010=0xA2

lci:/Name=CCNxSpec/Serial=2/Segment=1

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# More information:

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<http://www.ccnx.org/>

<http://www.parc.com/ccn>

# RFC 3986

```
URI           = scheme ":" hier-part [ "?" query ] [ "#" fragment ]
hier-part     = "//" authority path-abempty
              / path-absolute
              / <other path types>
path-absolute = "/" [ segment-nz *( "/" segment ) ]
segment       = *pchar
segment-nz    = 1*pchar
pchar         = unreserved / pct-encoded / sub-delims / ":" / "@"
query         = *( pchar / "/" / "?" )
fragment      = *( pchar / "/" / "?" )
pct-encoded   = "%" HEXDIG HEXDIG
unreserved    = ALPHA / DIGIT / "-" / "." / "_" / "~"
reserved      = gen-delims / sub-delims
gen-delims    = ":" / "/" / "?" / "#" / "[" / "]" / "@"
sub-delims    = "!" / "$" / "&" / "'" / "(" / ")"
              / "*" / "+" / "," / ";" / "="
```

# Labeled Segment URI

```
LS-URI           = scheme ":" ls-hier-part ["?" ls-query]
                  ["#" fragment]
ls-hier-part      = ["//"] authority ls-path-absolute
ls-path-absolute = "/" [ ls-segment *( "/" ls-segment ) ]
ls-segment        = lpv-segment / v-segment
lpv-segment       = label [":" param] "=" s-value
v-segment         = s-value
label             = alpha-t / num-t
param             = alpha-t / num-t
s-value           = *(s-pchar)

ls-query          = *1 ( lpv-component / v-component
                        *( "&" (lpv-component / v-component) ) )
lpv-component     = label [":" param] "=" q-value
v-component       = q-value
q-value           = *(q-pchar)

alpha-t           = ALPHA *(ALPHA / DIGIT)
num-t             = dec-t / hex-t
dec-t             = 1*(DIGIT)
hex-t             = "0x" 1*(HEXDIG)
ls-pchar          = unreserved / pct-encoded / ls-sub-delims
s-pchar           = ls-pchar / ":" / "@" / "&"
q-pchar           = ls-pchar / ":" / "@" / "/"
ls-sub-delims     = "!" / "$" / "'" / "(" / ")"
                  / "*" / "+" / "," / ";"
```