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Introduction to DG: UMID Resolution Protocol

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Chair, DG: UMID Resolution Protocol

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Introduction



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- DG UMID Related Standards in TC-30MR
 - ST 330 Revision (under DP ballot)
 - Specifies UMID format
 - RP 205 1-Year Review (under second draft update)
 - Specifies UMID Application Principles
 - Introduces various UMID application examples
 - UMID Resolution Protocol (transferred to TC-34CS)
 - Specifies a standard method to convert a given UMID into the corresponding URL



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Introduction to UMID Resolution Protocol



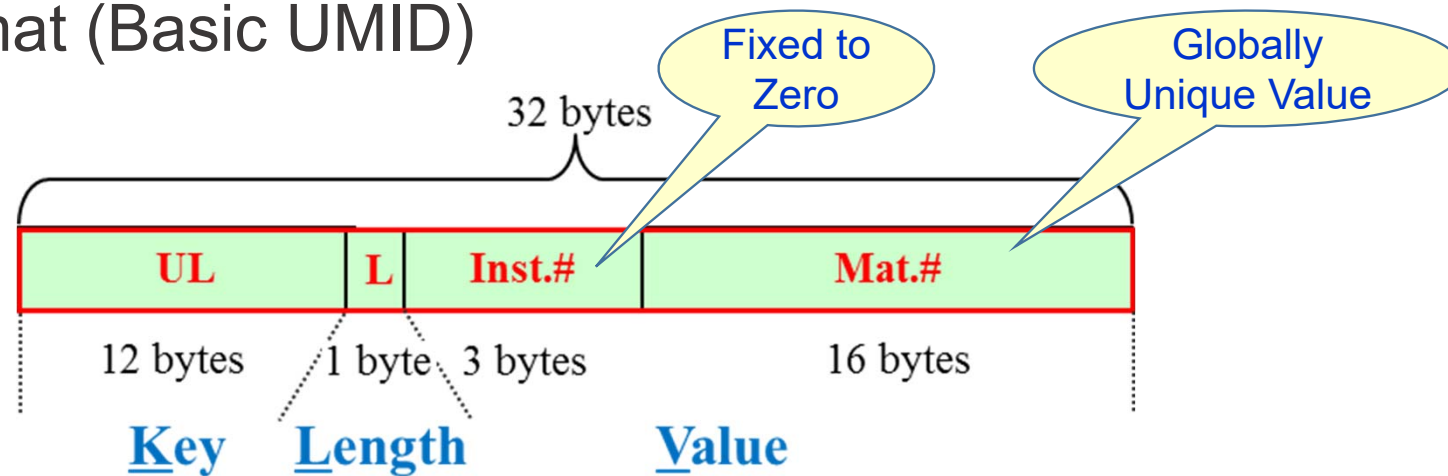
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UMID(Unique Material Identifier)



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- UMID format (Basic UMID)



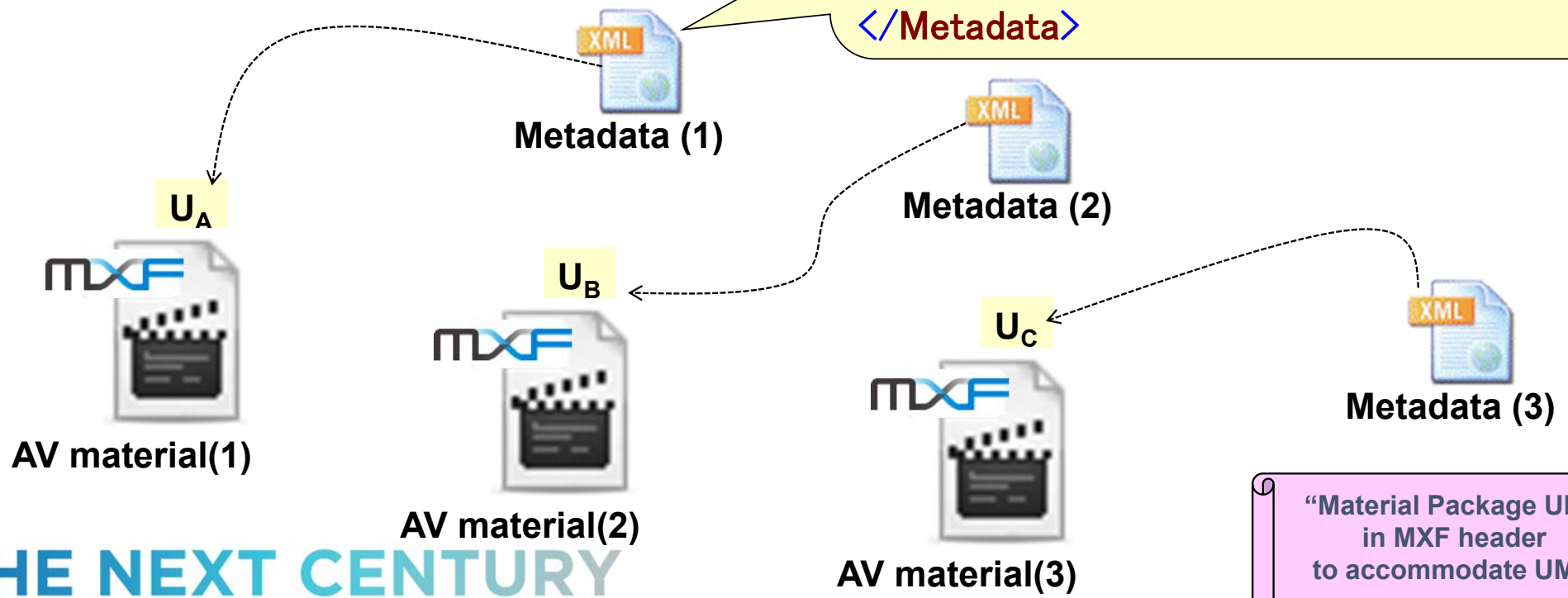
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Typical Use of UMID

- To associate AV material with Metadata

```
<Metadata xmlns="...">  
  <TargetMaterial umidRef="UA" />  
  <Title>Major League Baseball</Title>  
  :  
</Metadata>
```

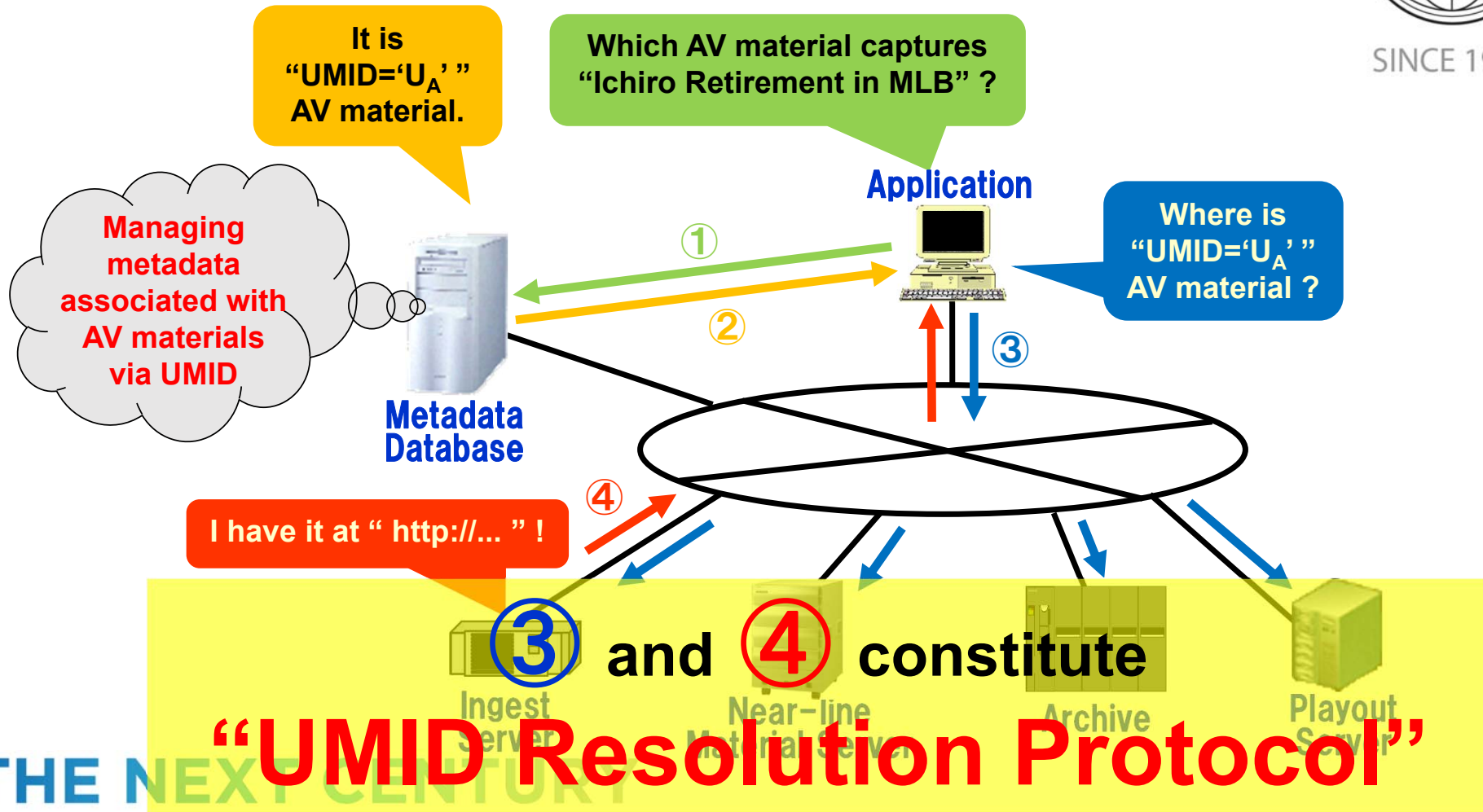


“Material Package UID”
in MXF header
to accommodate UMID



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UMID based AV Material Search



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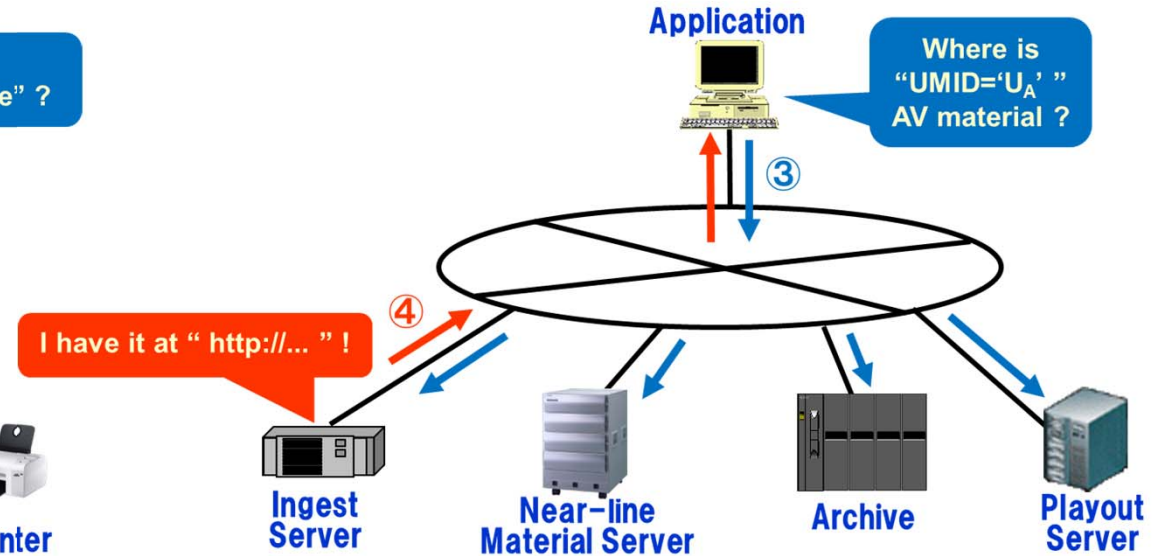
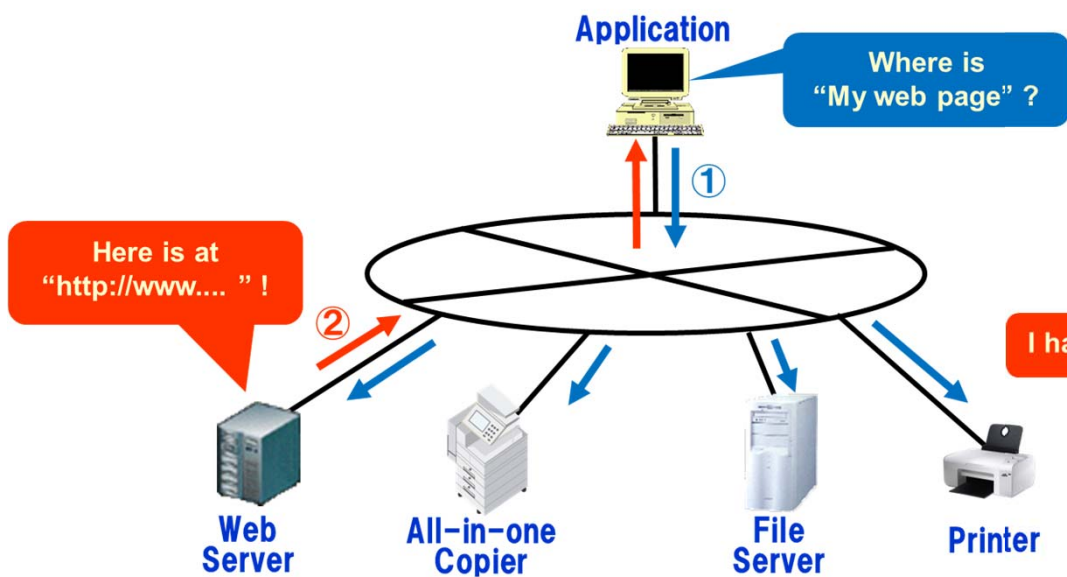
Implementation of UMID Resolution



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- DNS-based Service Discovery

- DNS-based UMID Resolution



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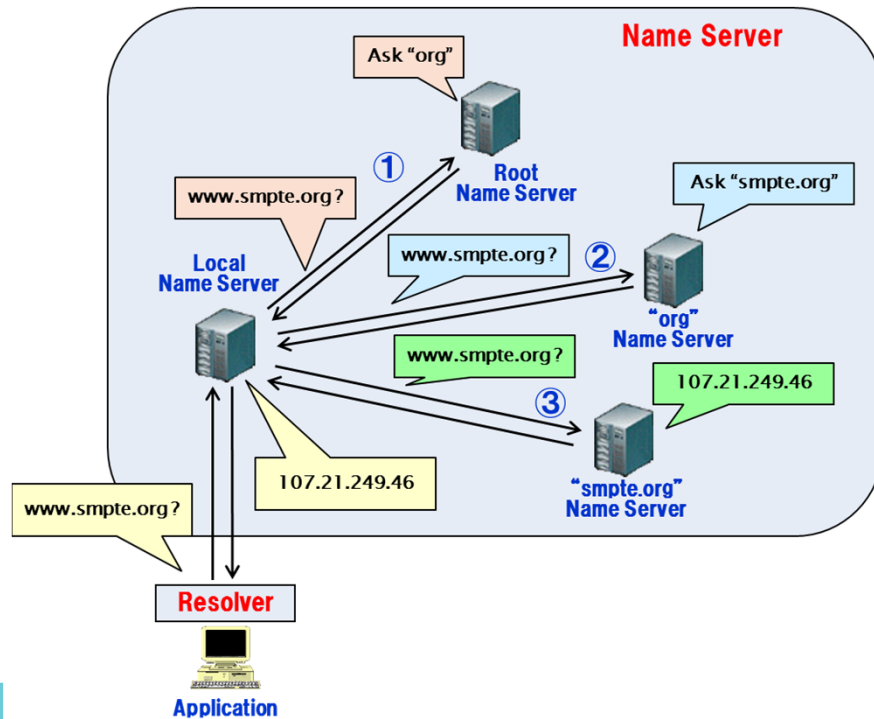
DNS: Domain Name System

Alternative Implementation

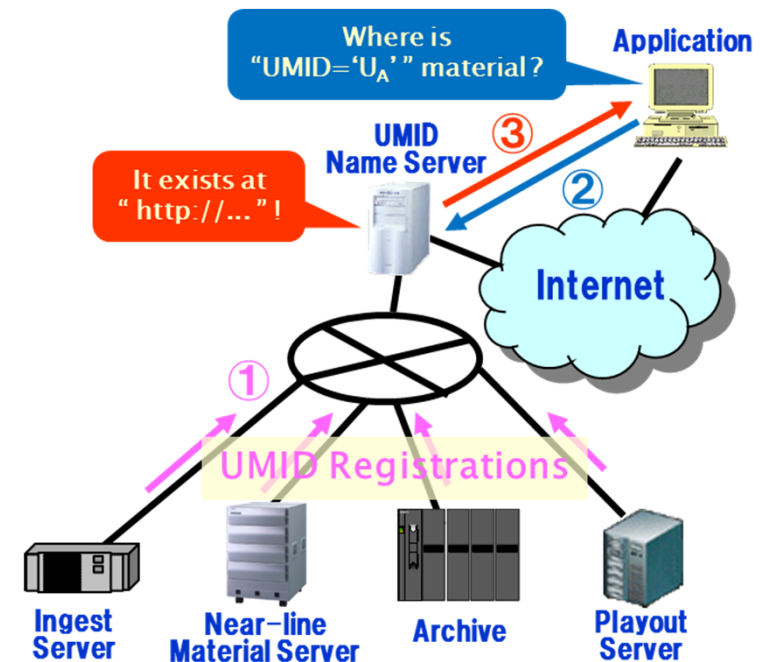


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- Using DNS Name Server



- Using UMID Name Server



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DNS: Domain Name System



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Preliminary Demo

- Using “BIND” (DNS Server) and “nslookup” (DNS Client)

```
C:\Windows\system32\cmd.exe
C:\>
C:\>nslookup -type=txt 0d20.13000000.d2c9036c.8f195343.ab7014d2.d718bdfd._umid._udp.local 127.0.0.1
Server:localhost
Address: 127.0.0.1 } UMID Name Server
                                Domain-based
                                UMID Representation
0d20.13000000.d2c9036c.8f195343.ab7014d2.d718bdfd._umid._udp.local      text =
    "dur=60"
    "depth=10"
    "sample=422" } Common Properties for Material (60sec, 10bit/pixel, YUV422)
0d20.13000000.d2c9036c.8f195343.ab7014d2.d718bdfd._umid._udp.local      text =
    "url=http://ingSrv.local/20130831/sports/file5.mxf"
    "codec=j2k"
    "wrapper=mxf" } Media File Specific Properties
                    (URL, JPEG2000, MXF)
local      nameserver = ns1.local
ns1.local      internet address = 127.0.0.1
C:\>
```

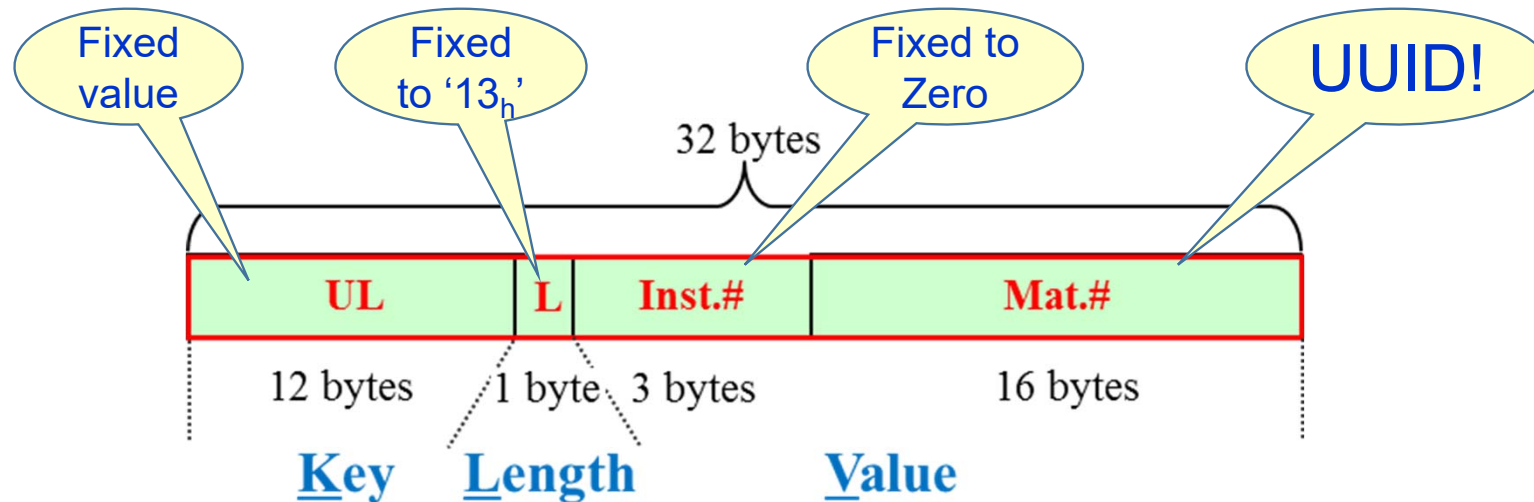
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UUID based UMID

- by using “UUID/UL Method” (2_h) for Mat.# generation



→ Equivalent if a scope of uniqueness is common

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Introduction to “DG” UMID Resolution Protocol



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History



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- Conducted intensive study to produce the Study Report
 - Under SG UMID Applications
- Proposed DG and established in 2014
 - Based on a recommendation by the SG
 - Assigned as a work-item of DG UMID Related Standards
- No particular progress has been made ...
 - Lower priority compared with
 - RP 205 “renovation” in 2014
 - Intensive study of UMID applications in MXF
 - ST 330 revision and RP 205 further update
- Agreed to transfer from TC-30MR to TC-34CS in the Mumbai

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Call for participation



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- Those being interested in, please join us!
 - Workspace to be prepared and announced shortly
- Volunteering a project (co-)editor is very much appreciated



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Thanks!



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