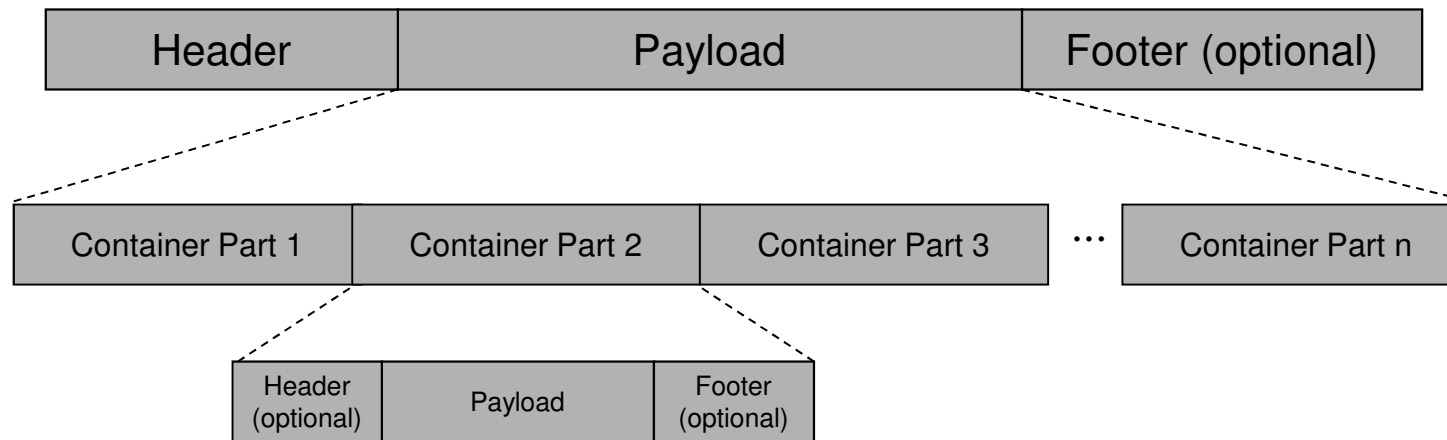
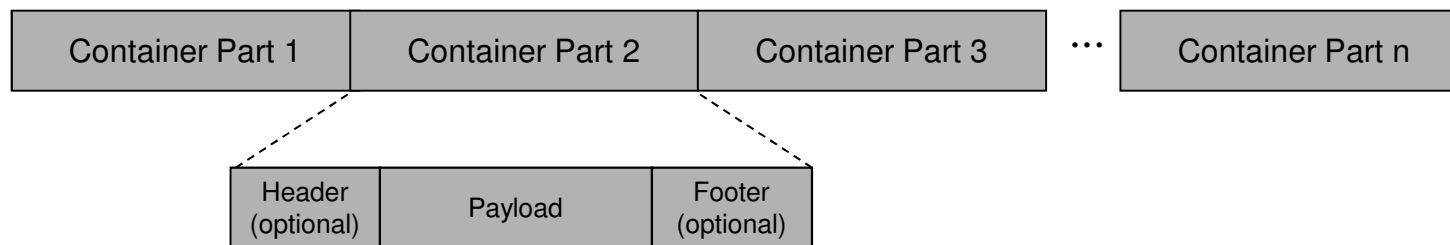
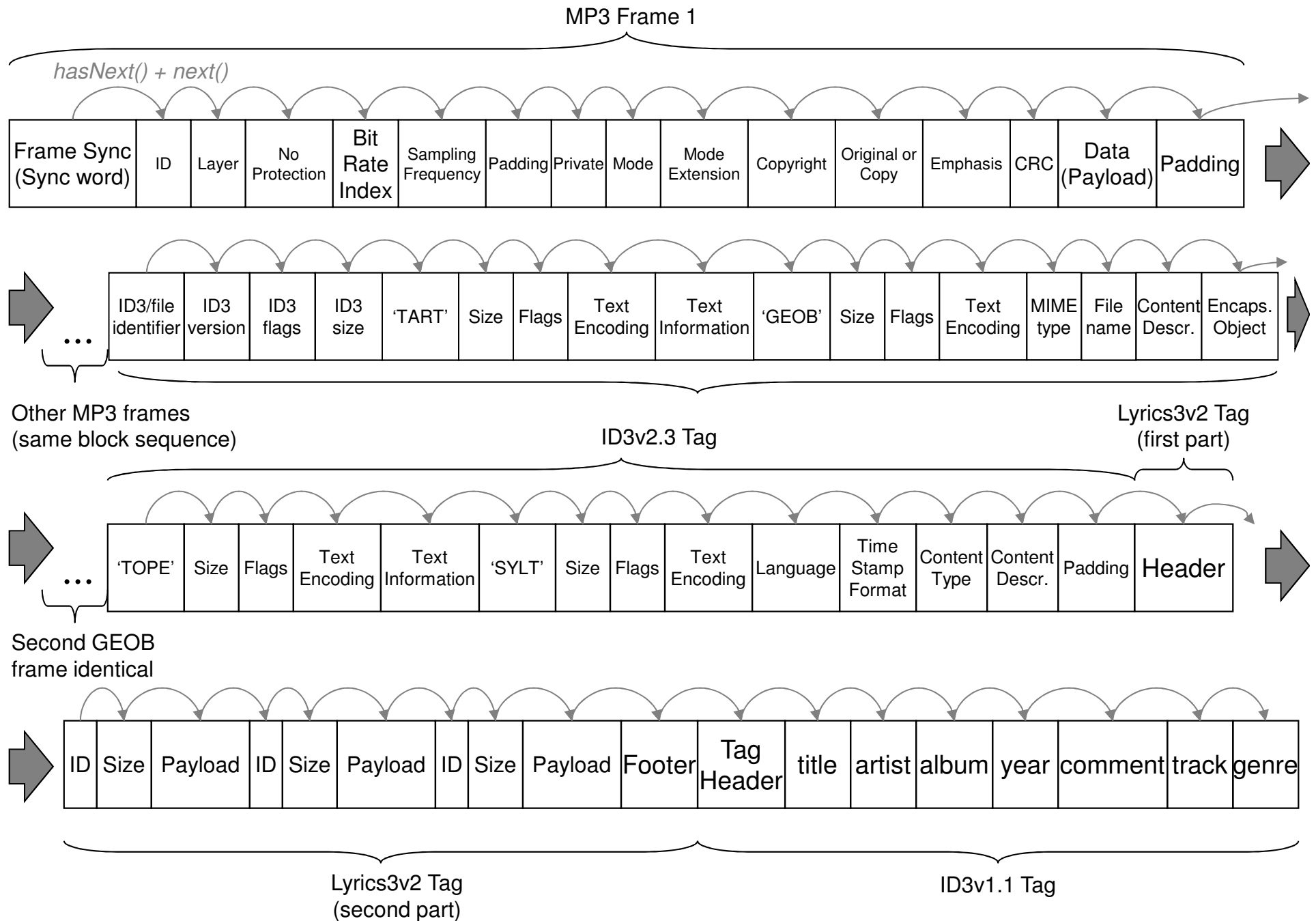


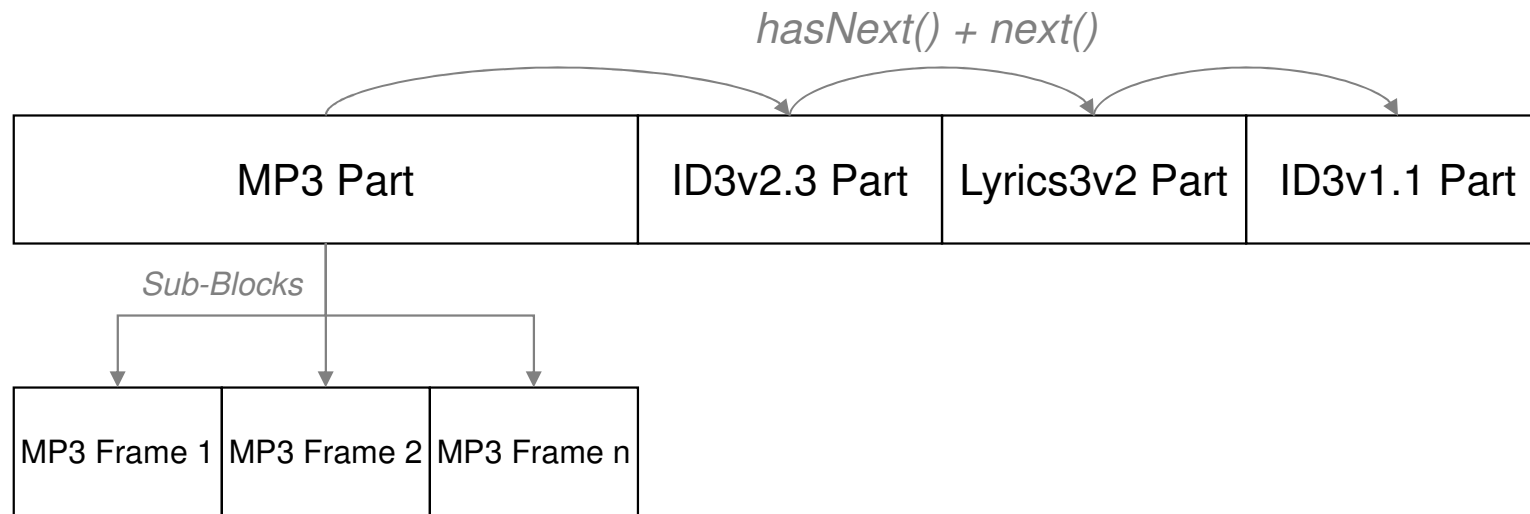
Parent Container

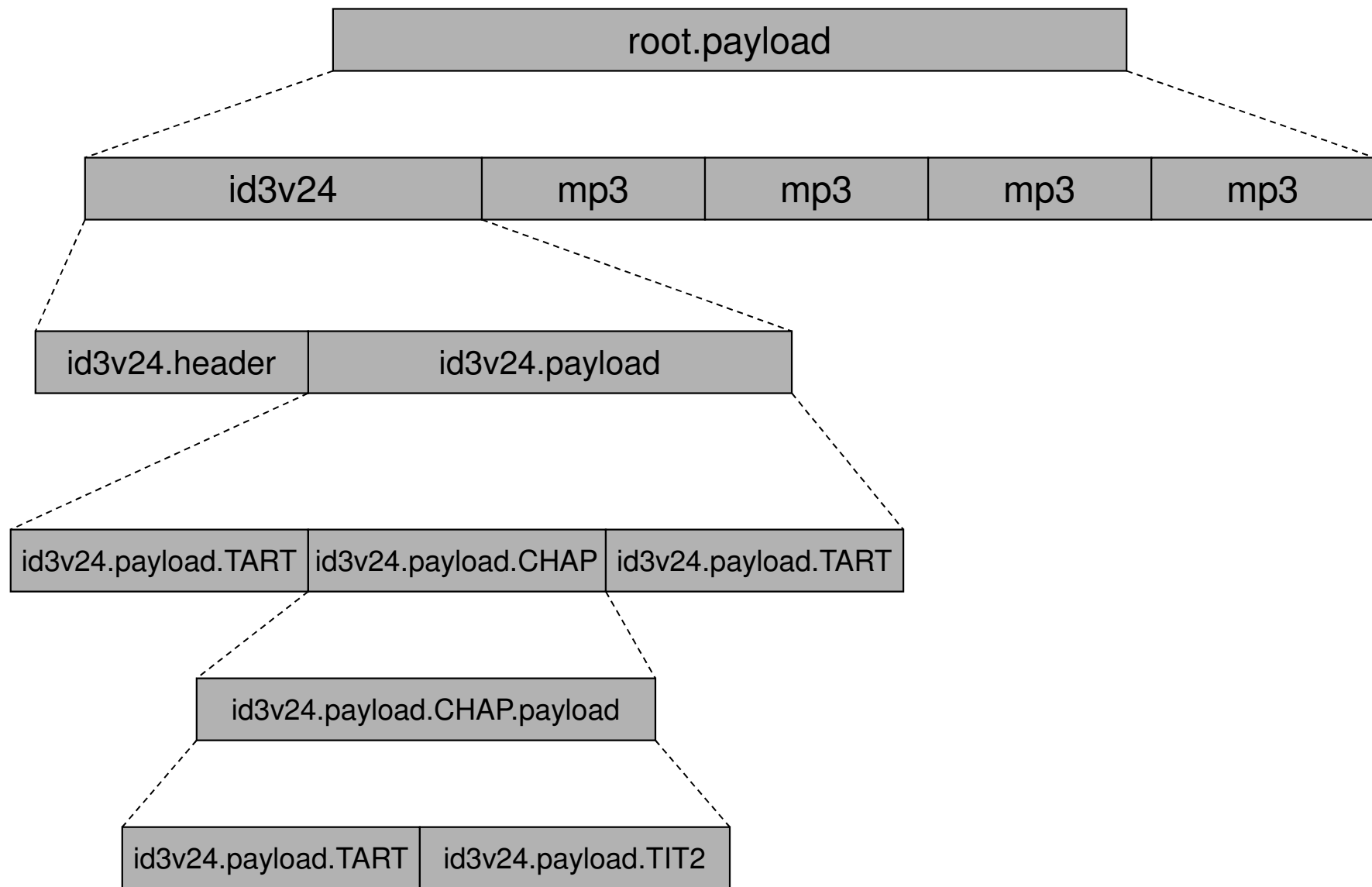


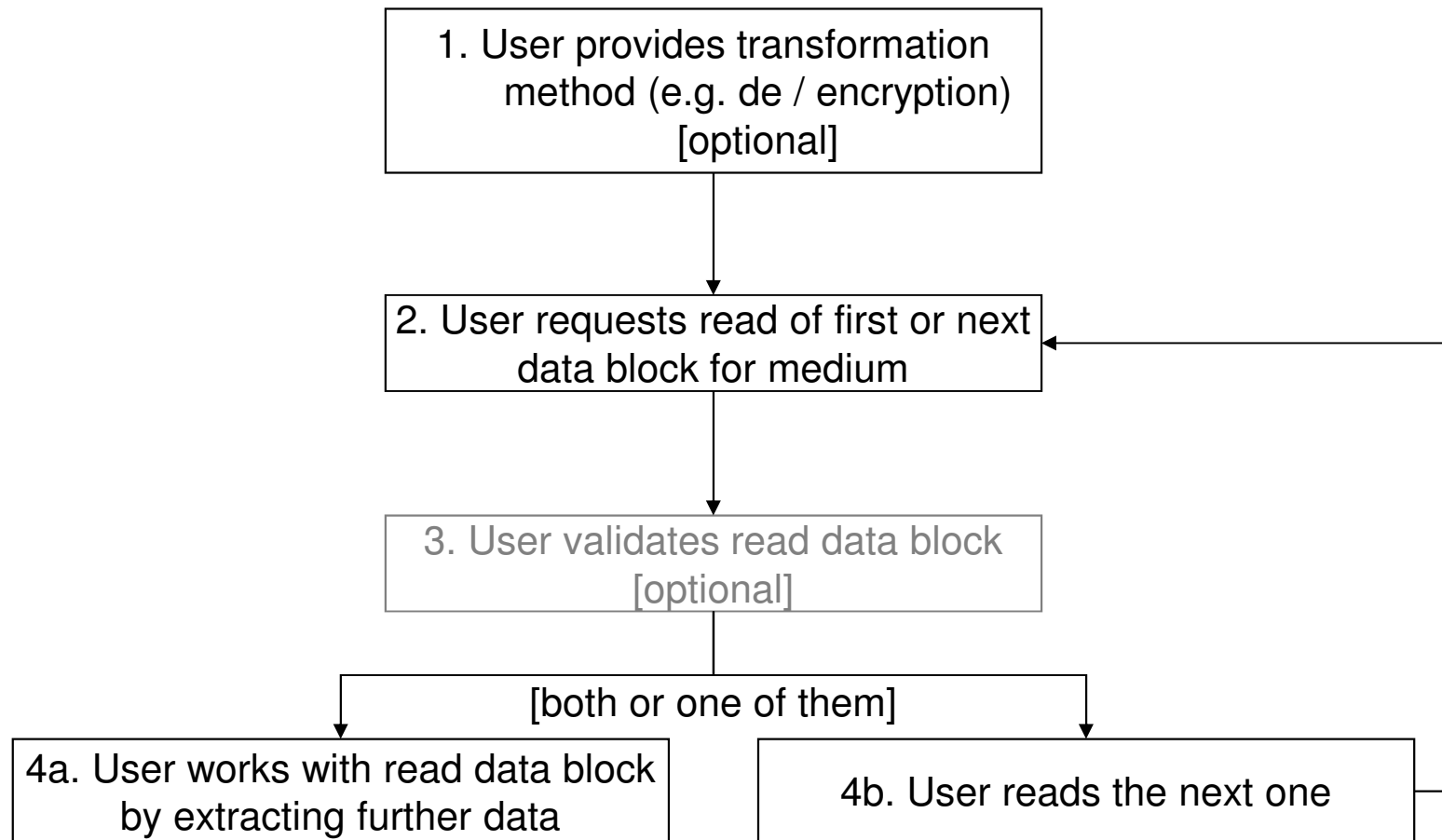
Top-Level Container Parts



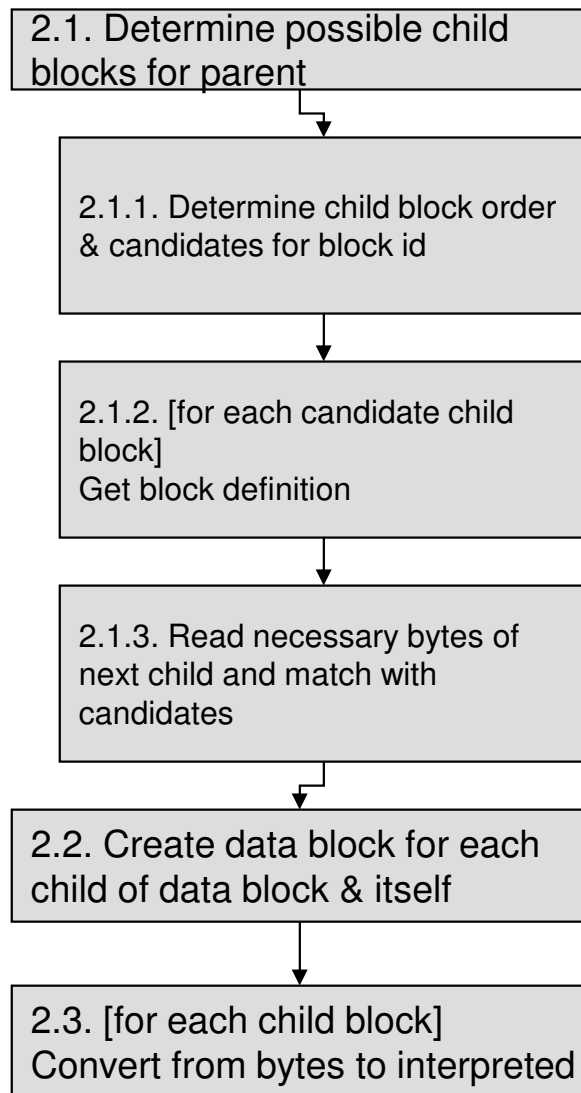






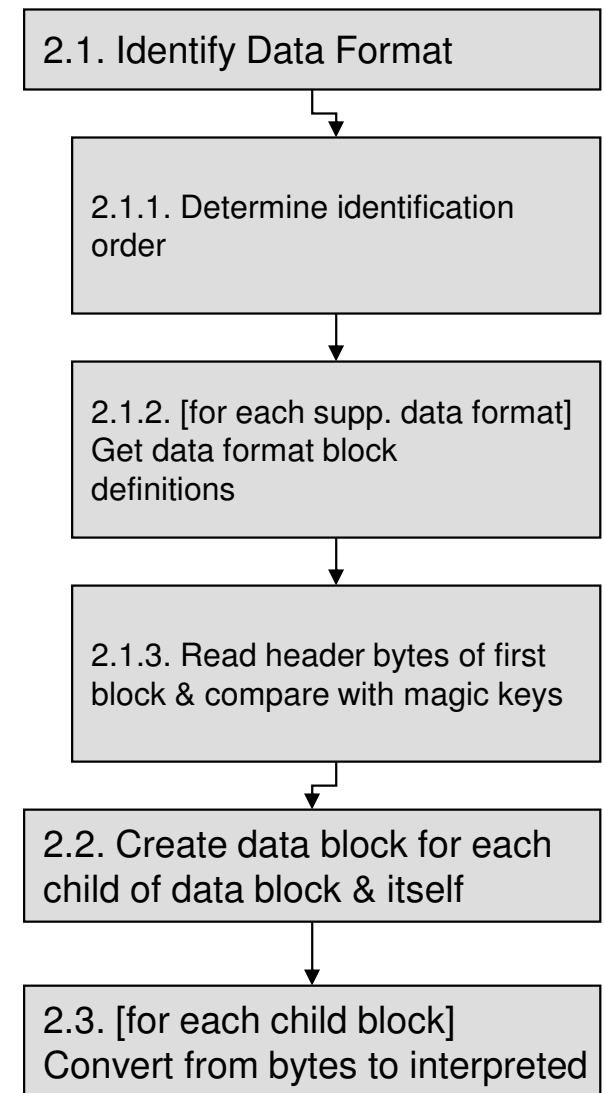


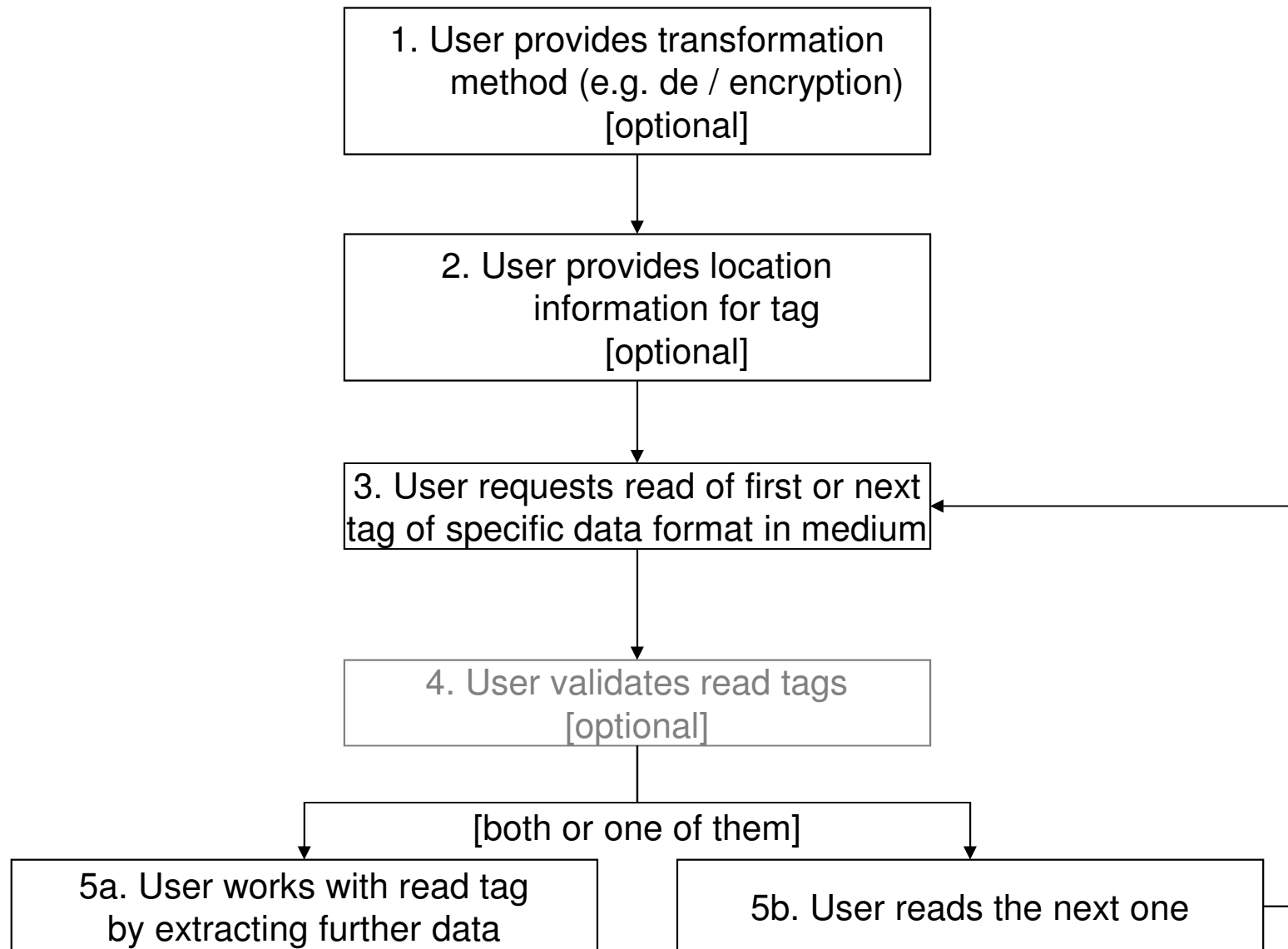
Known parent block / data format

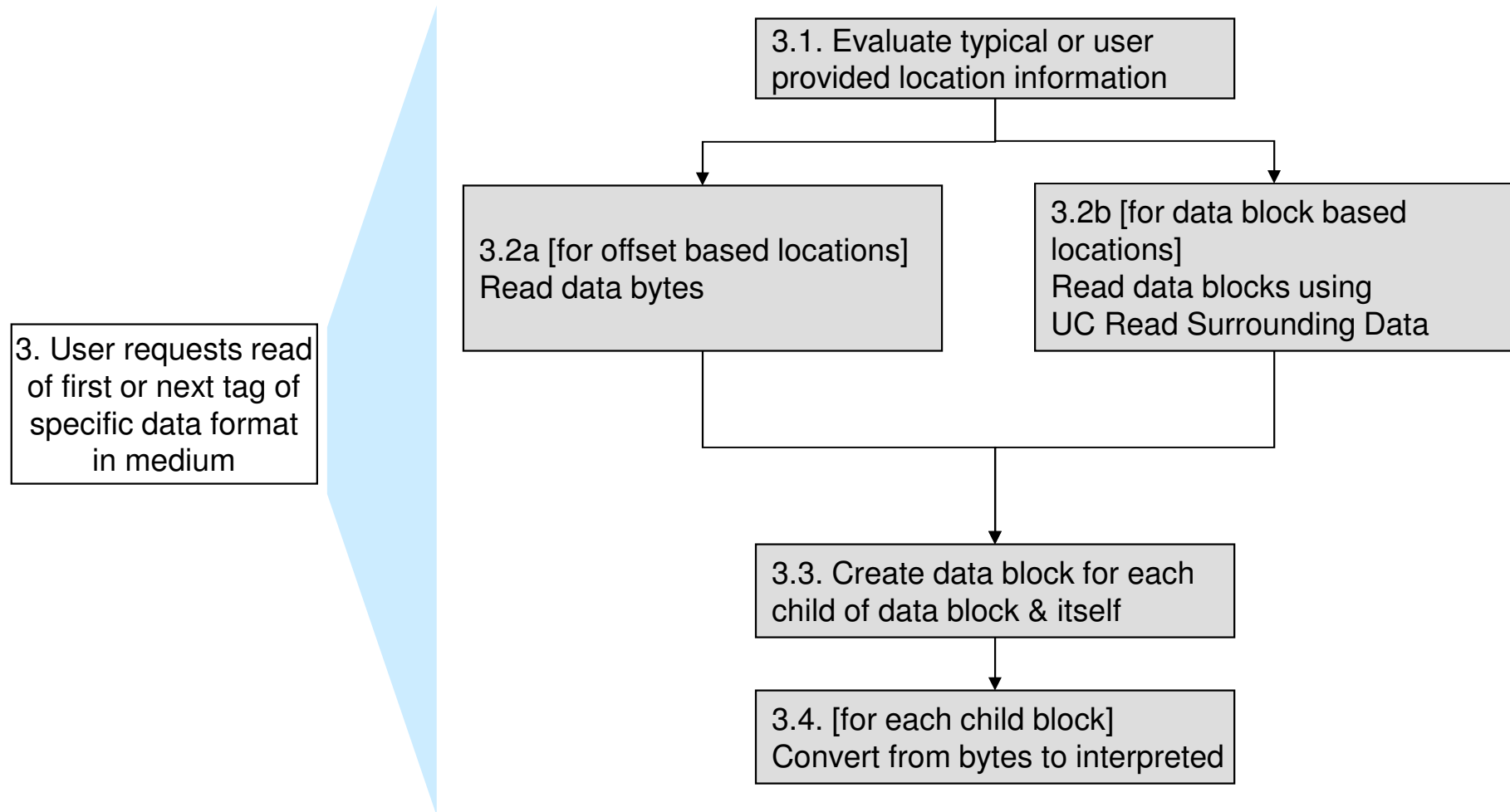


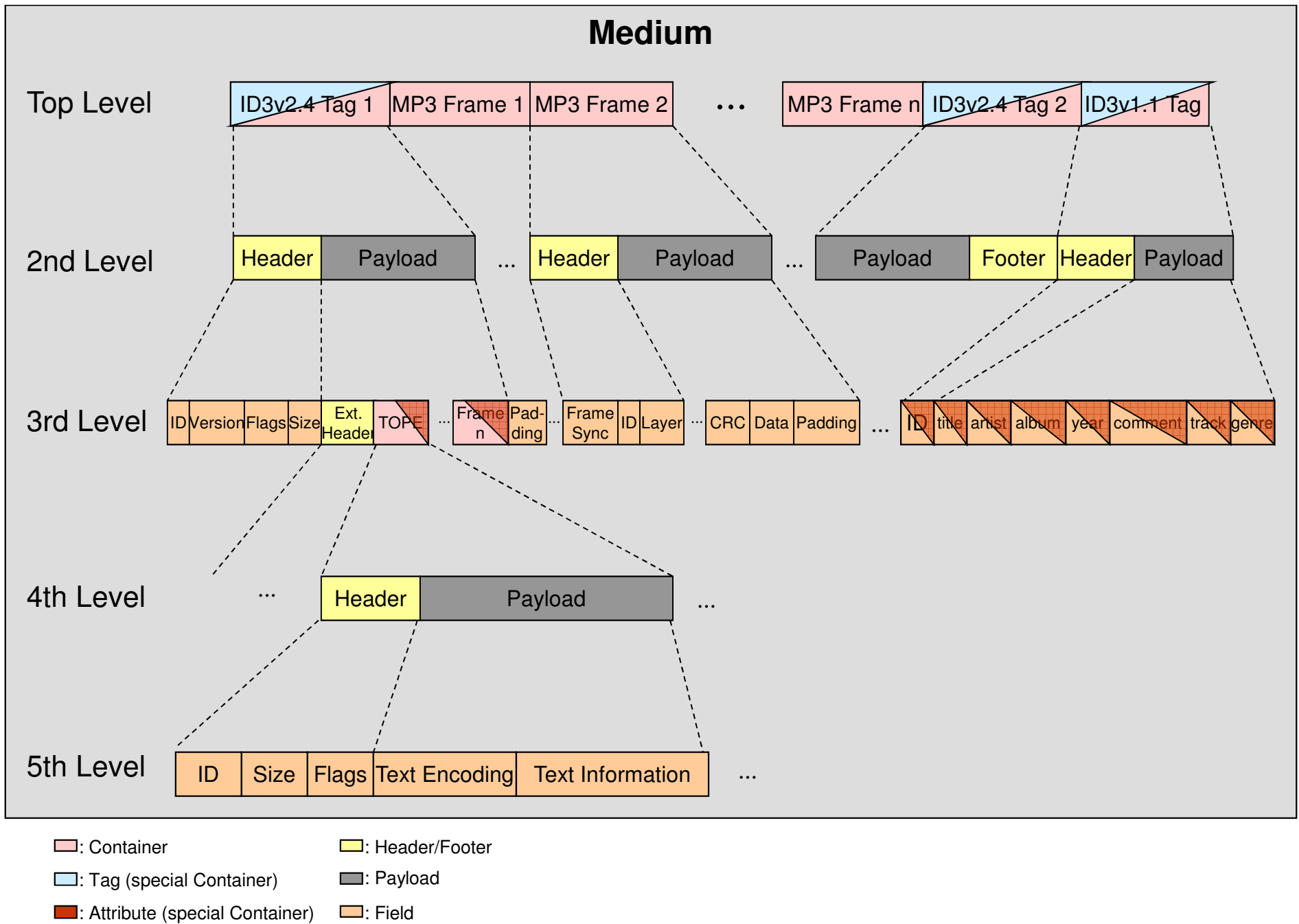
2. User requests
read of first or next
data block for medium

No parent block / data format









III_1_DataBlockStructure.pdf ##SIZE=[100;95]##

Reading a field

	No user access to field (internal processing)		User access to field (has been returned to user)
Binary Value	On medium only	On medium only	Partly on medium / Read into memory
Interpreted Value	Invalid	Valid	Valid

<<create>>
(internal)

conversion

return
field
to user

get
bytes

Field no longer
referenced: Garbage
collector frees memory

Time

<<create>>
(by user)

add
field

con-
version

Write bytes

Field no longer
referenced: Garbage
collector frees memory

Binary Value	Invalid	In memory only	On medium
Interpreted Value	Valid	Valid	Valid

Internal processing

Writing a field

User access to field
(user has created it)

Reading a large field

No user access to field
(internal processing)

User access to field
(has been returned to user)

Binary Value	On medium only	Partly on medium / Read into memory
Interpreted Value	Invalid	Valid

<<create>>
(internal)

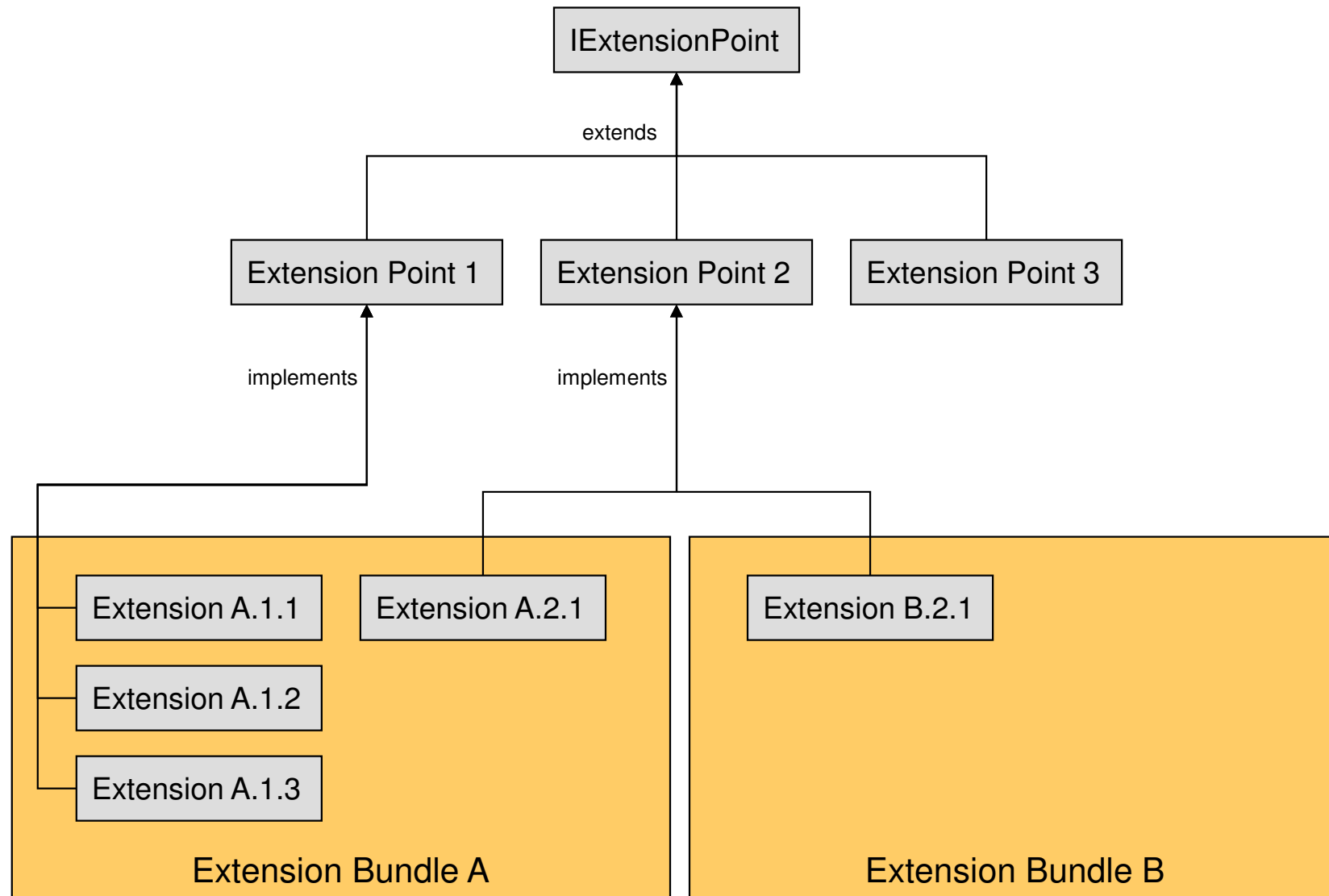
return
field
to user

get
bytes

conversion

Field no longer
referenced: Garbage
collector frees memory

Time





Value States


Read

Byte Representation	Invalid	Invalid	Valid
Interpreted Representation	Invalid	Invalid	Valid
Converter	Invalid	Valid	Valid

No User Access
to the object


↑
<<create>>
no arguments


↑
Set specification



↑
Set byte value


User has
Access

Write

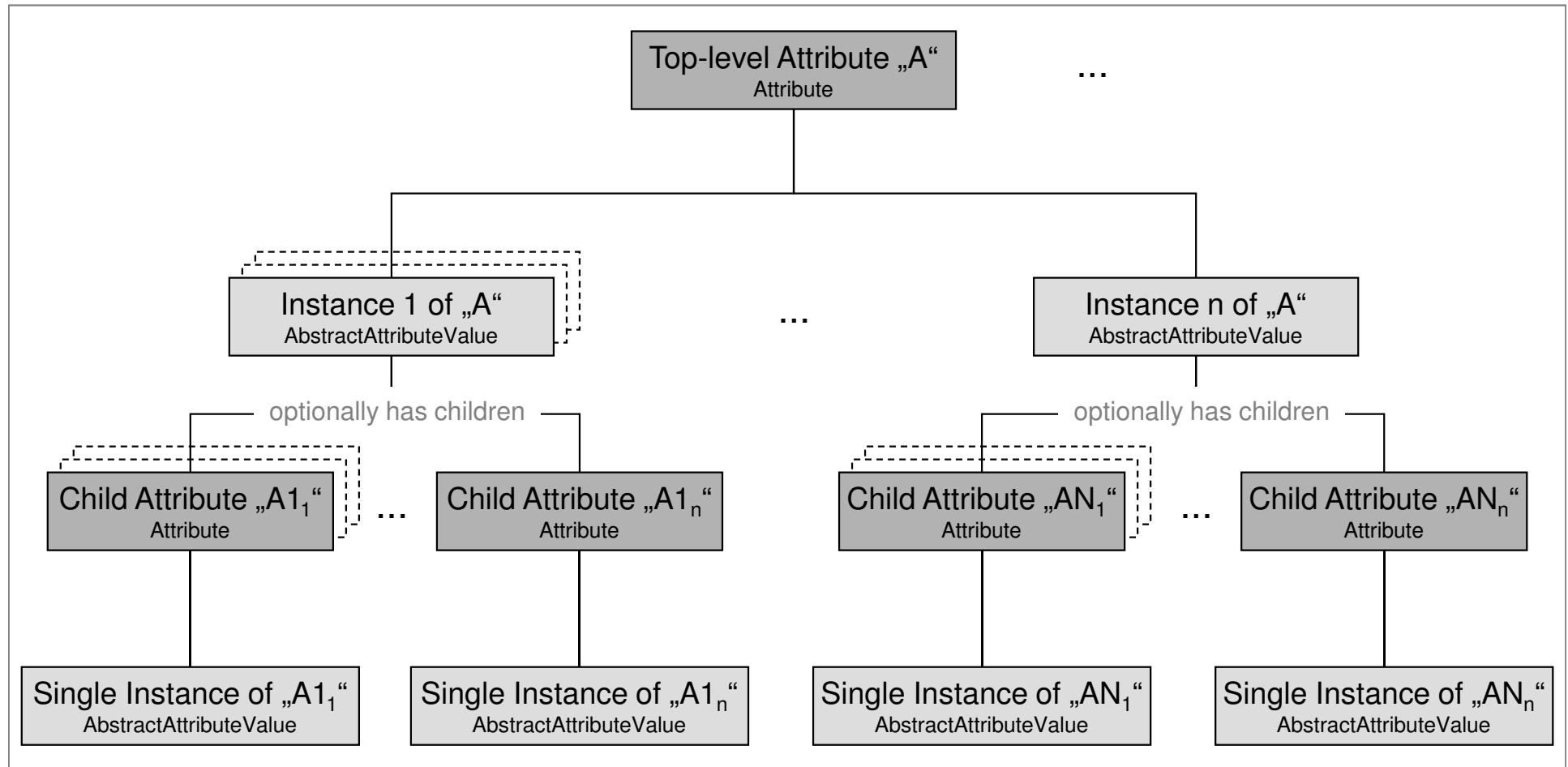
Byte Representation	Invalid	Valid	Valid
Interpreted Representation	Valid	Valid	Valid
Converter	Invalid	Valid	Valid

User has
Access


↑
<<create>>
Interpreted value

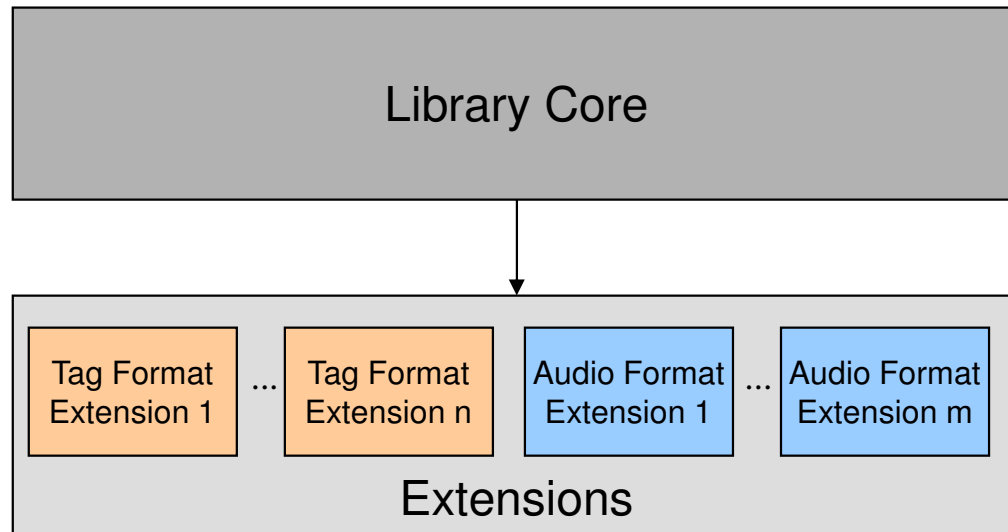

↑
Set specification

Attribute Hierarchy

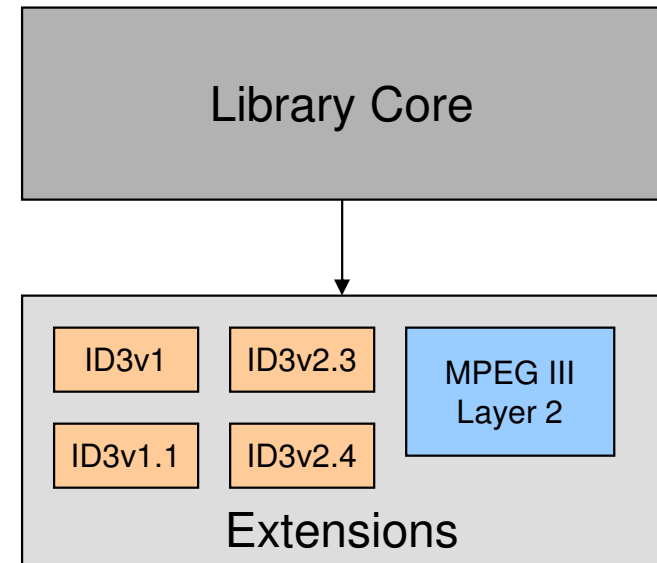


Library Structure

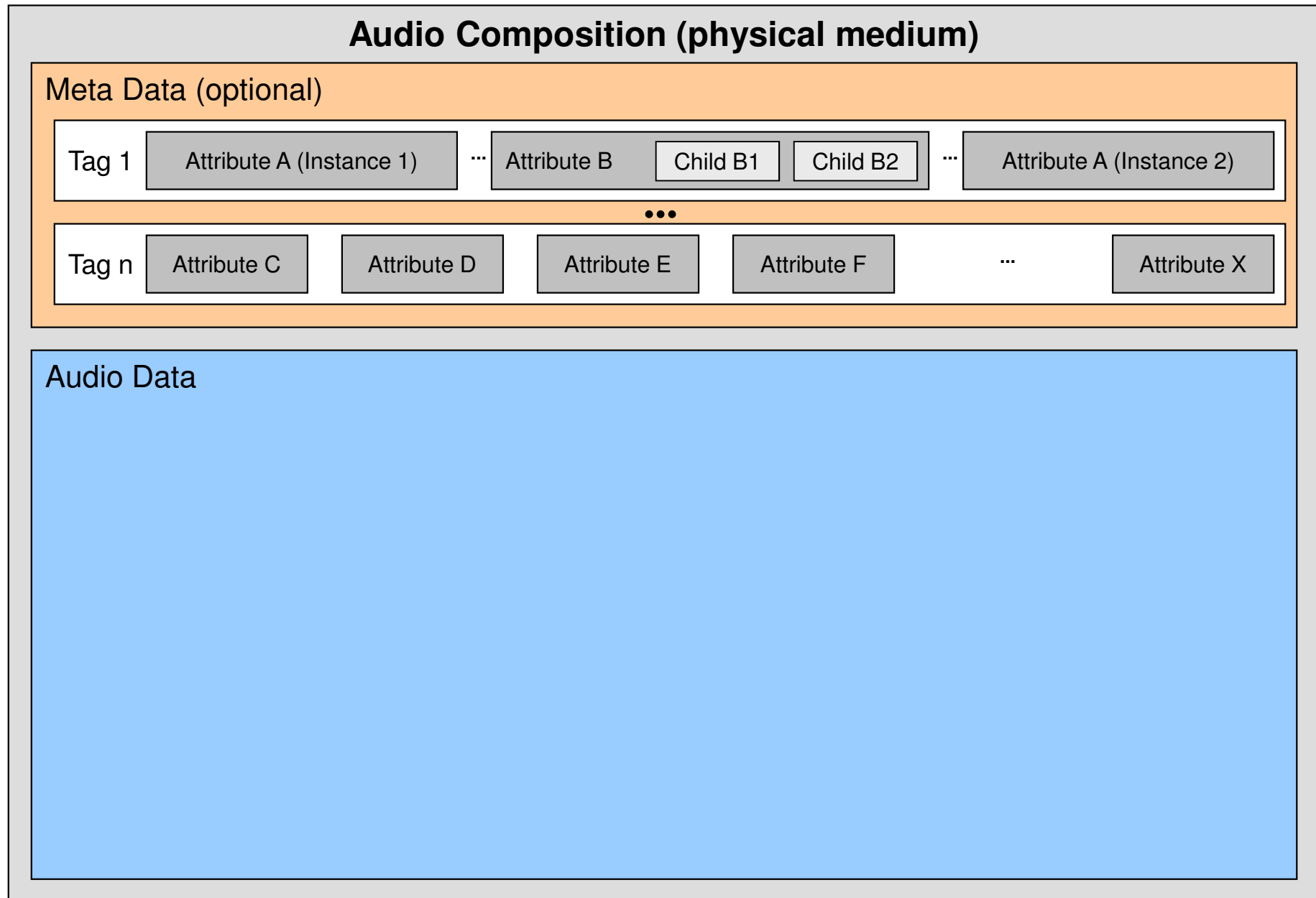
Basic concept



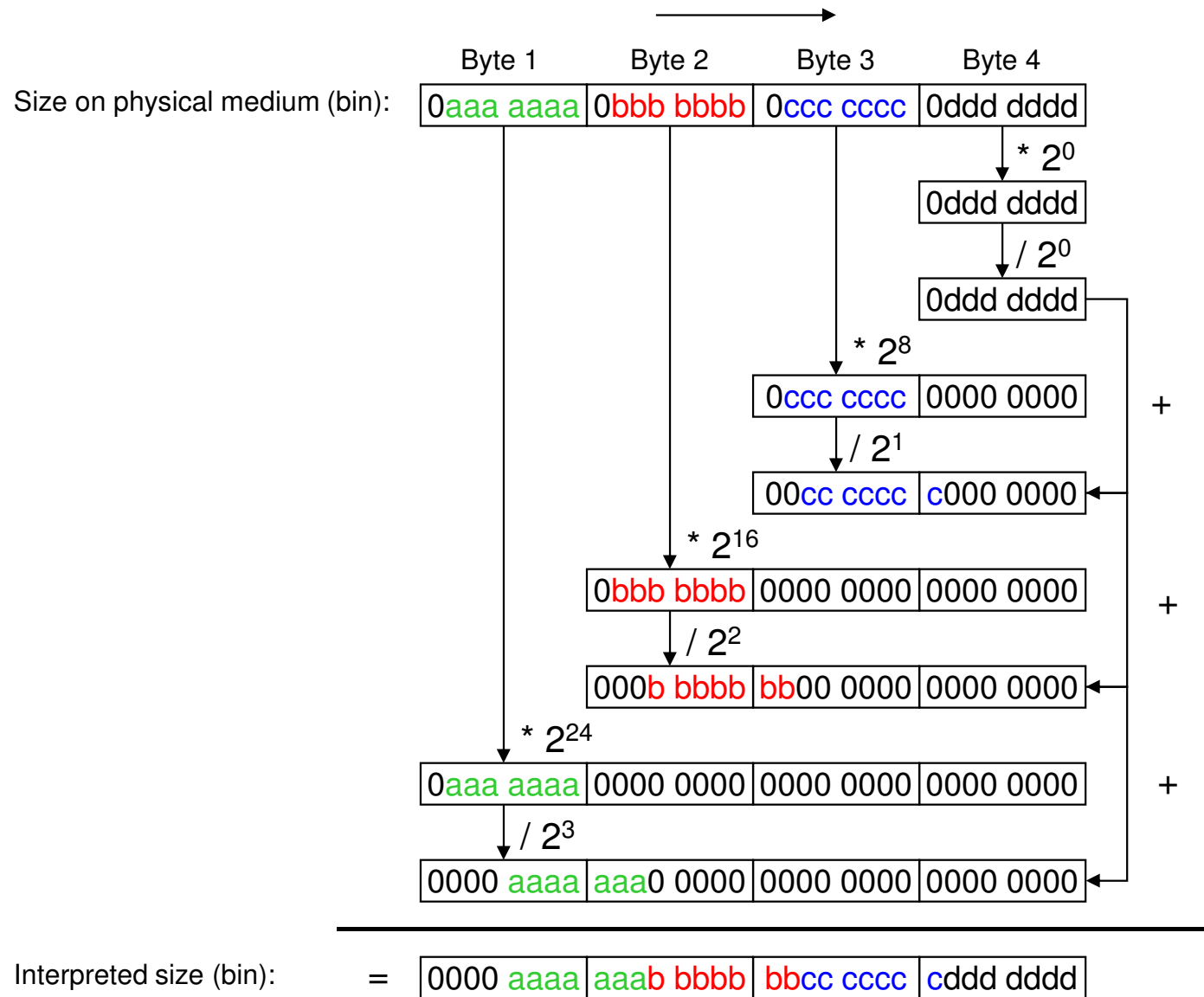
Extensions contained in v0.5 bundle



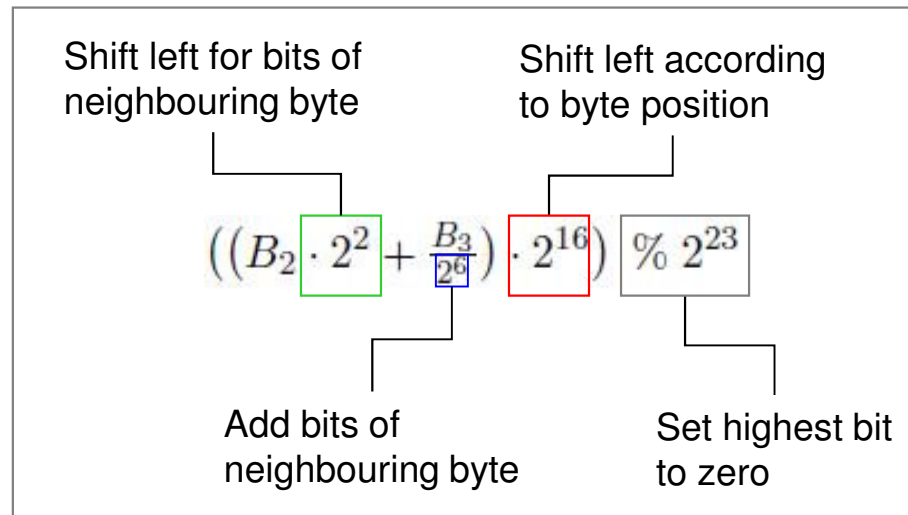
Audio Composition Structure



ID3v2 Size Interpretation After Reading

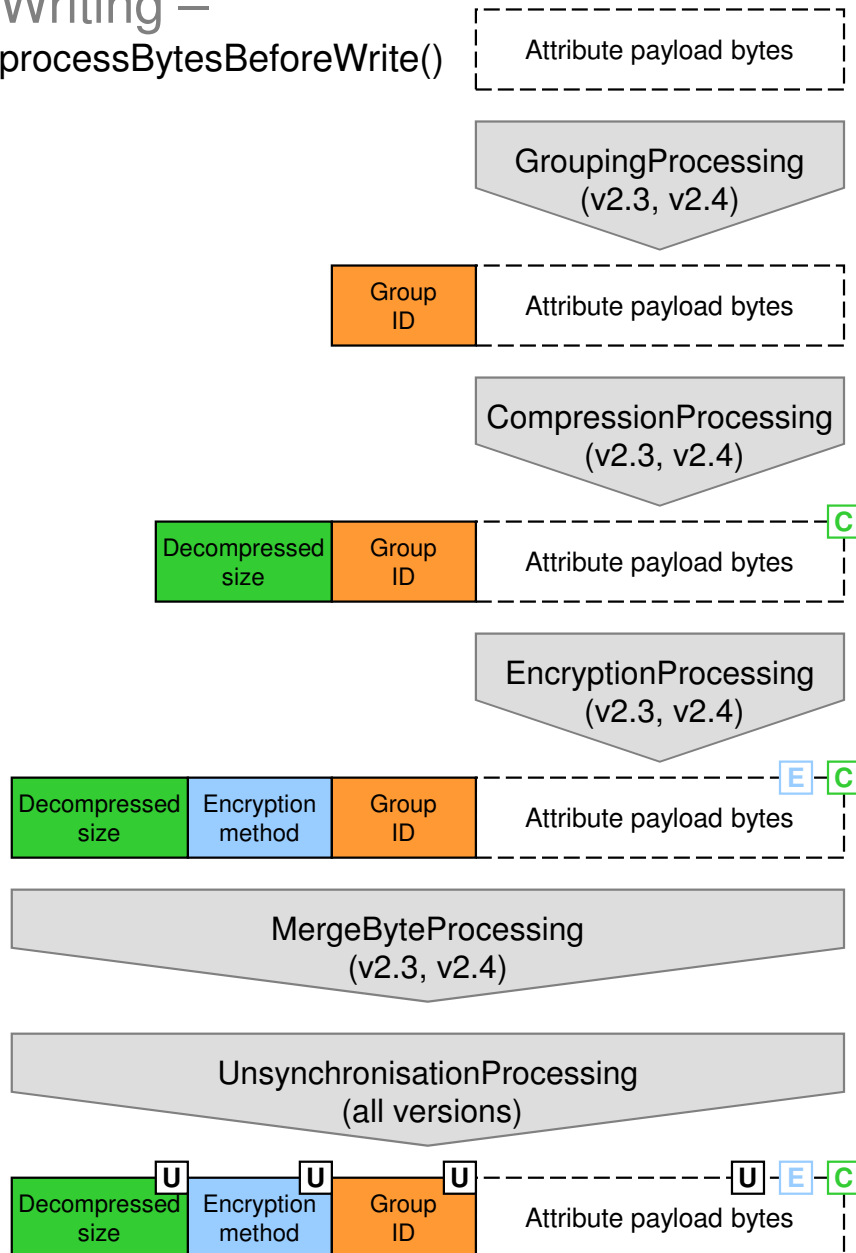


Formula for retrieving ID3v2 size to write



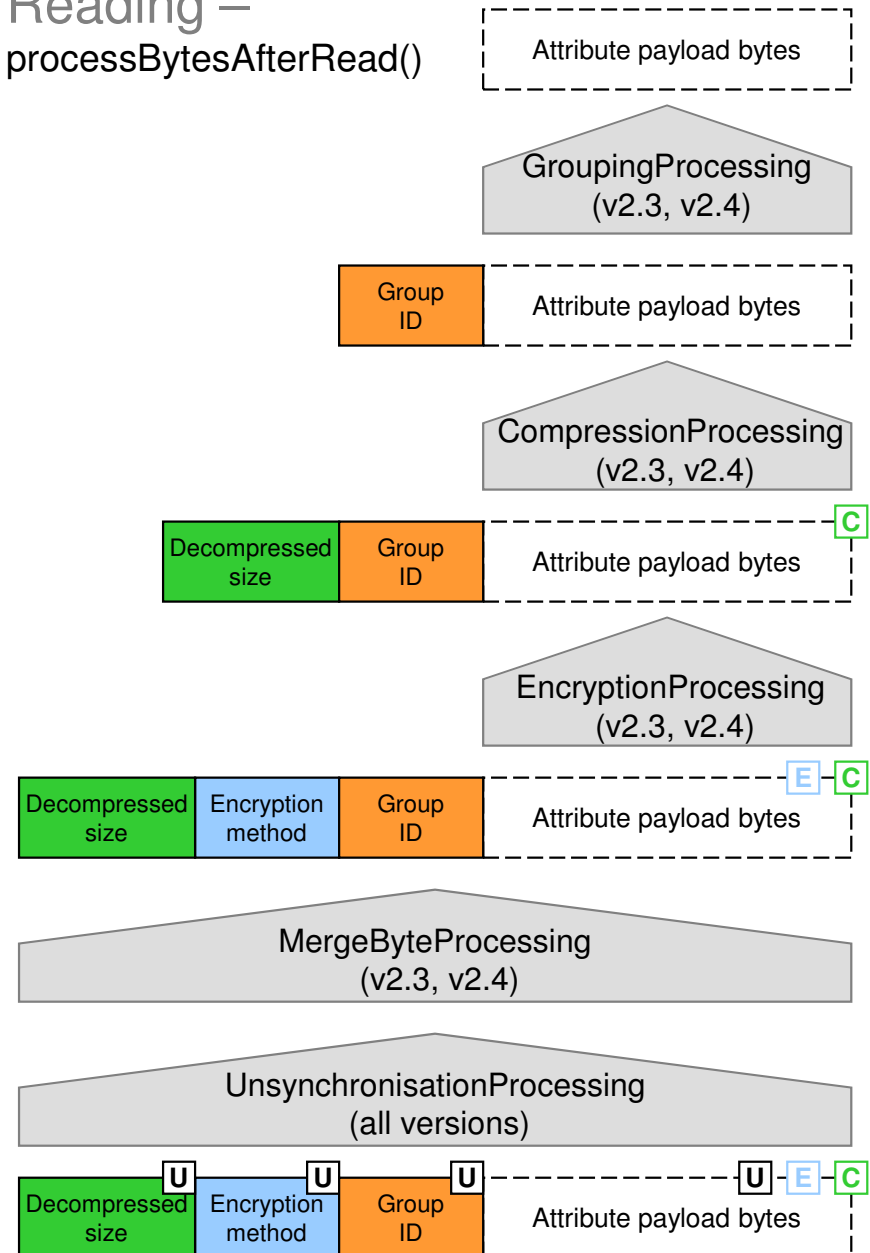
Writing –

processBytesBeforeWrite()



Reading –

processBytesAfterRead()



Example Flag Spec

Flag Bytes

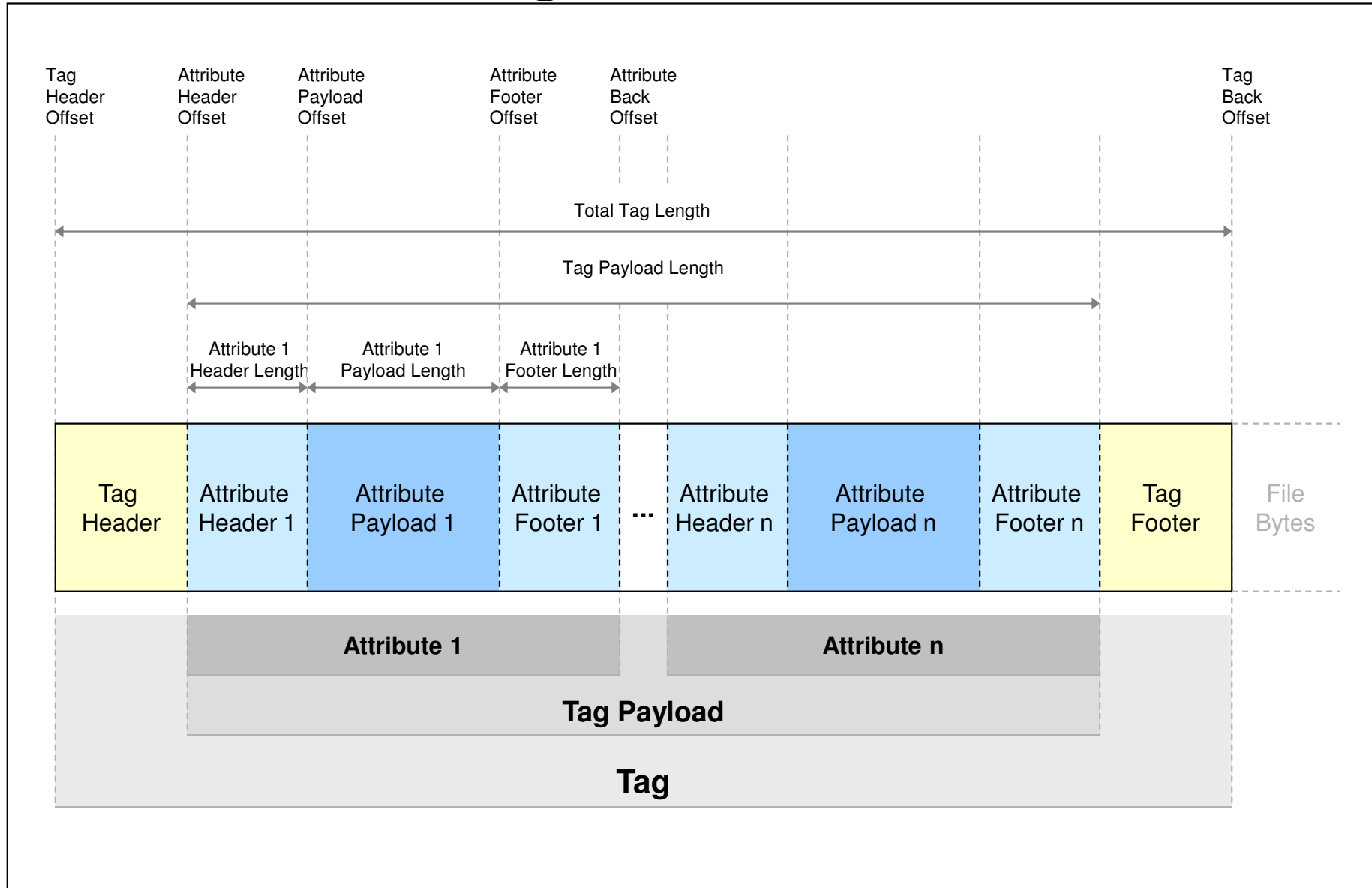
abc0 0000

Byte length = 1

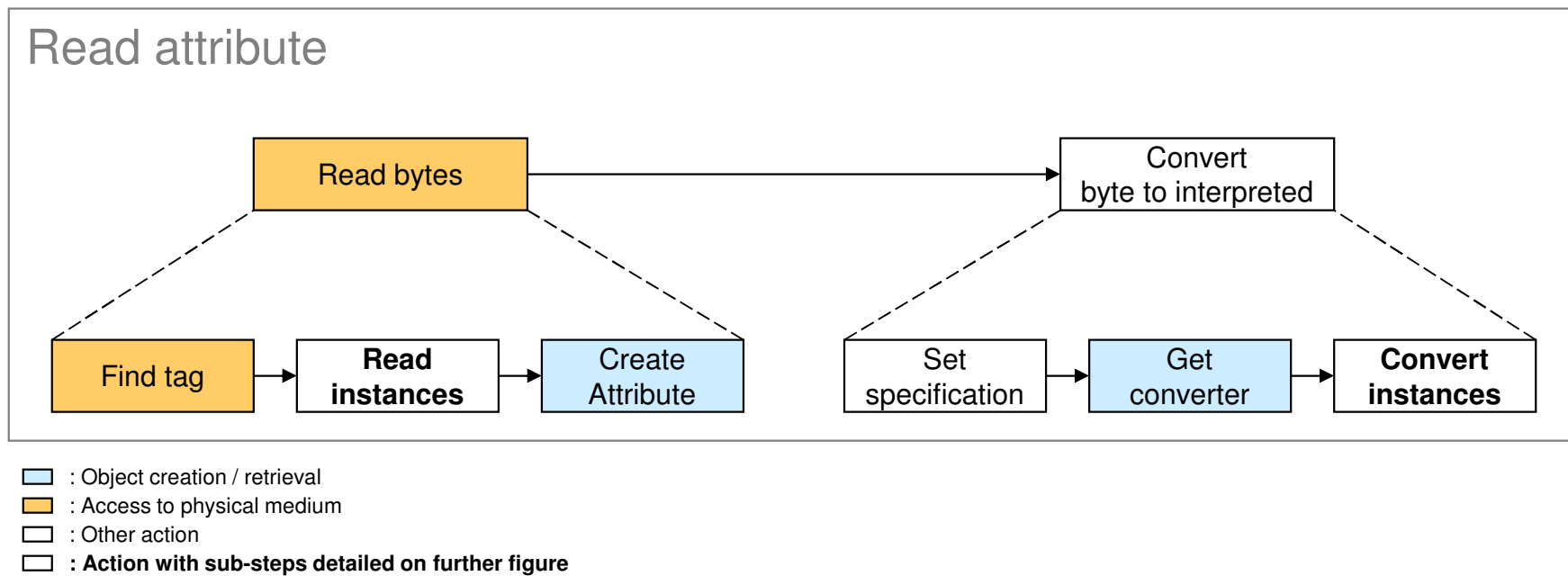
Byte order = Big Endian

Flag	Bit Address
a = Compression	(1, 1)
b = Footer available	(1, 2)
c = Experimental	(1, 3)

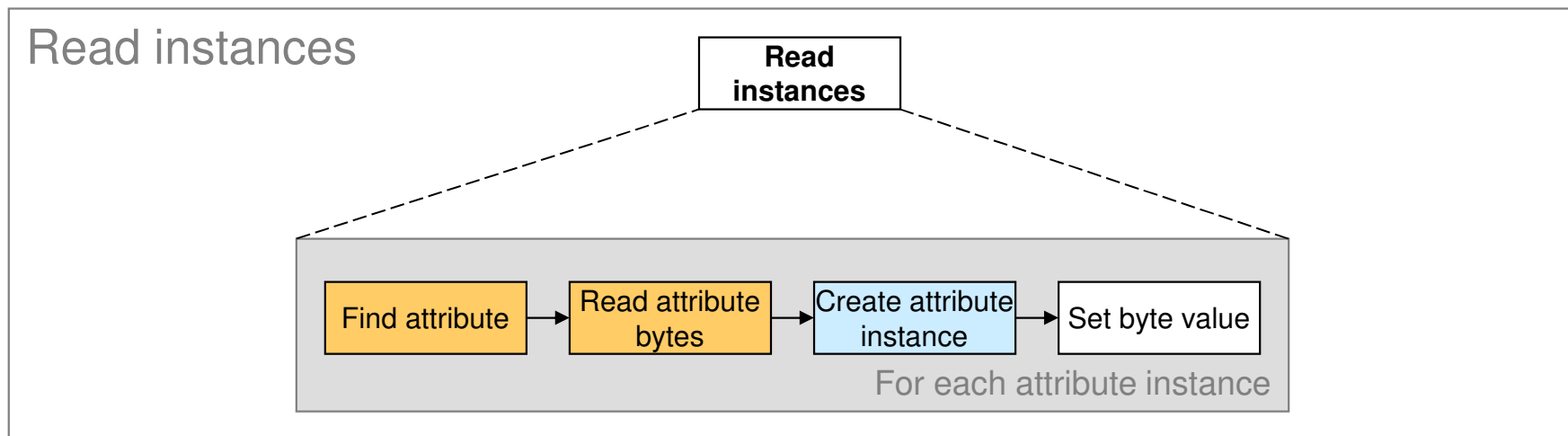
Tag Structure



Read attribute

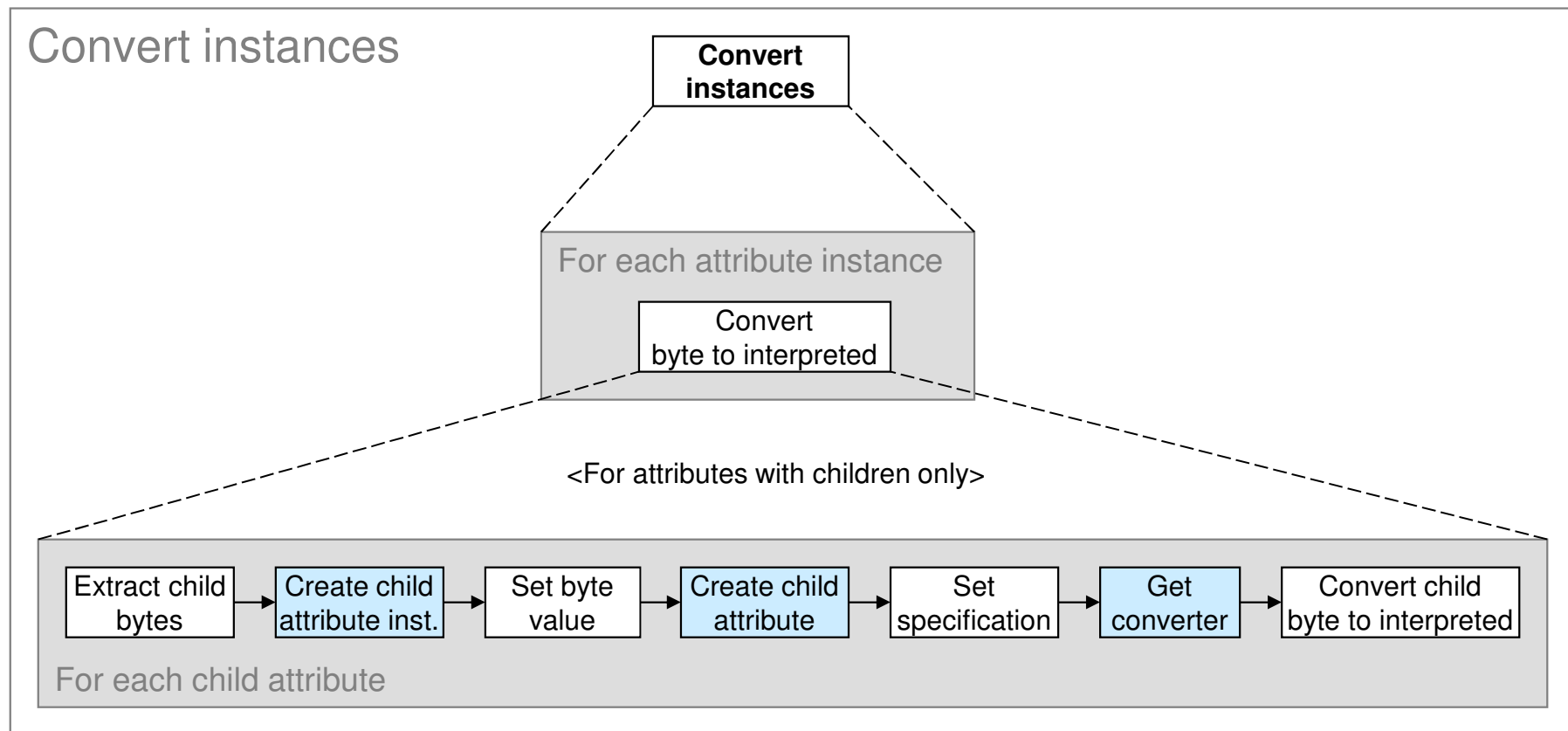


Read instances



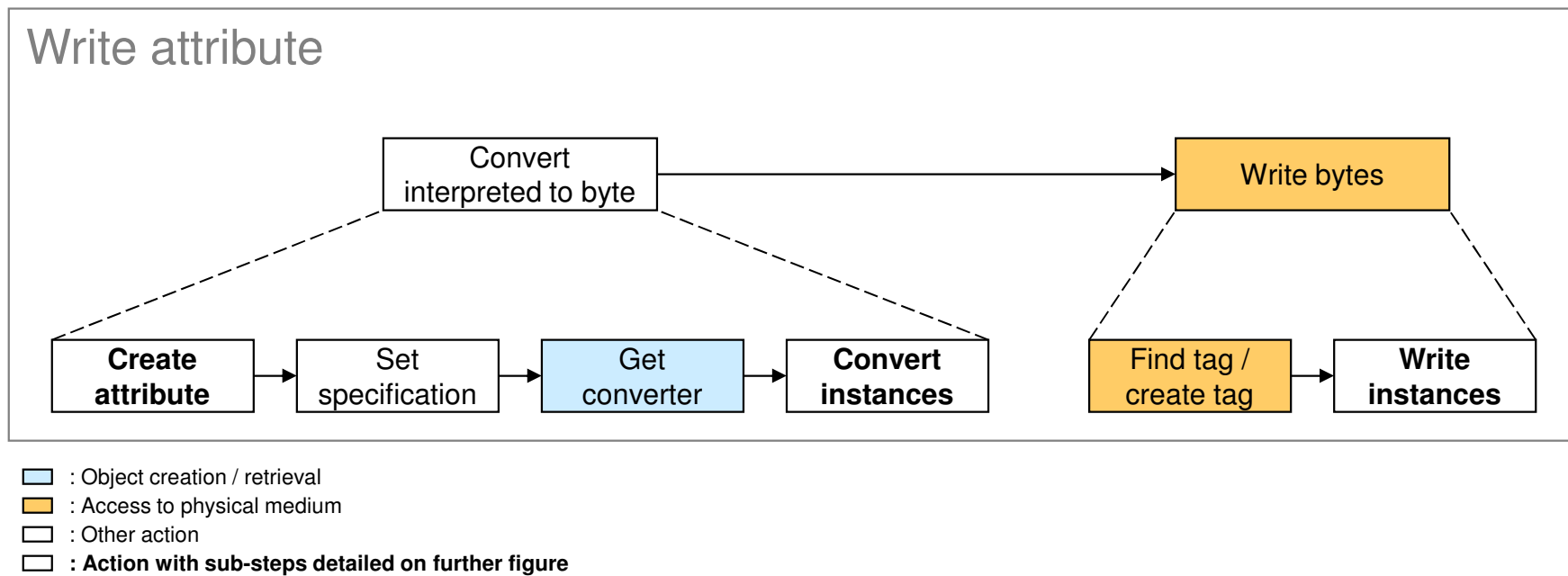
- : Object creation / retrieval
- : Access to physical medium
- : Other action
- : **Action with sub-steps detailed on further figure**

Convert instances (Reading)

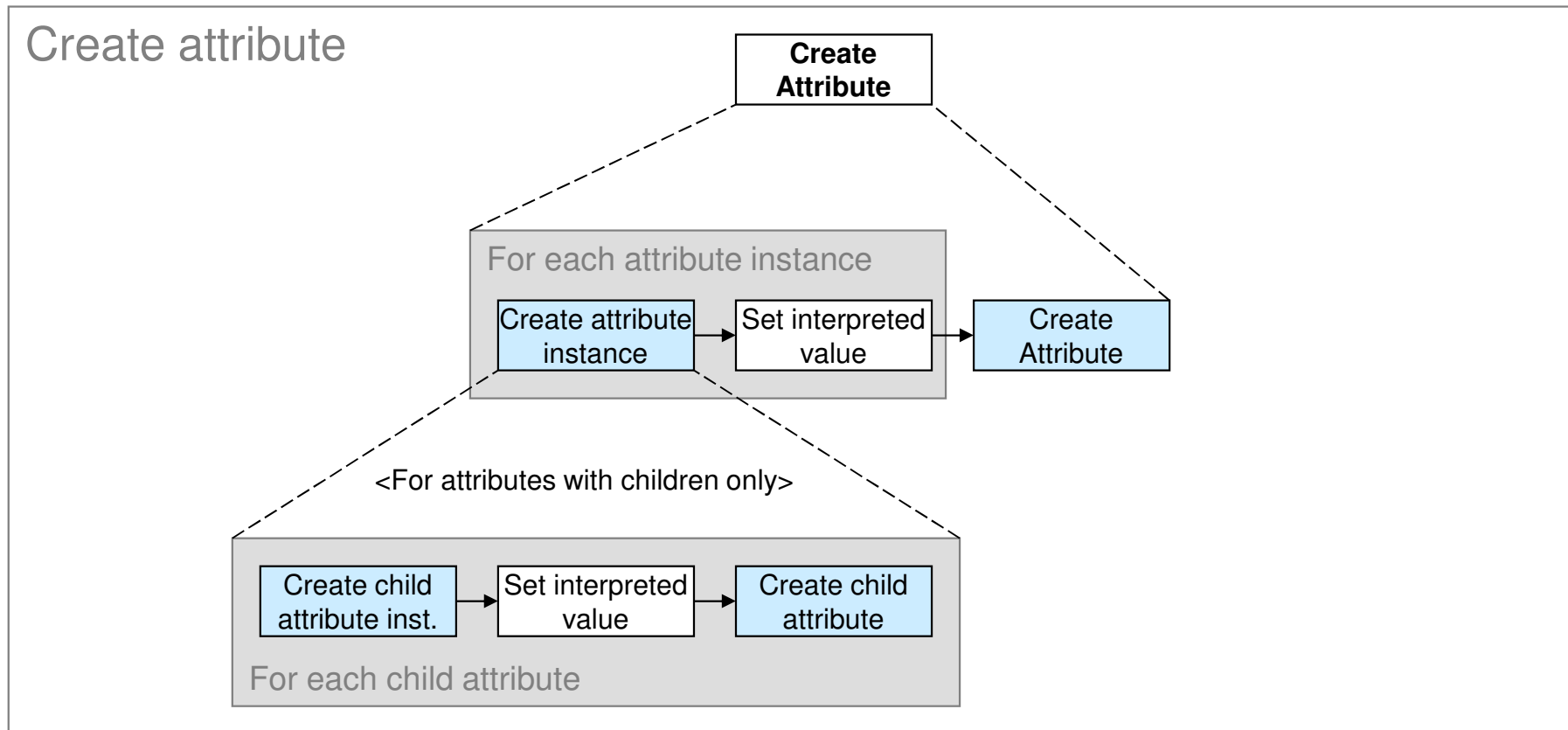






- : Object creation / retrieval
- : Access to physical medium
- : Other action
- : **Action with sub-steps detailed on further figure**

Write attribute

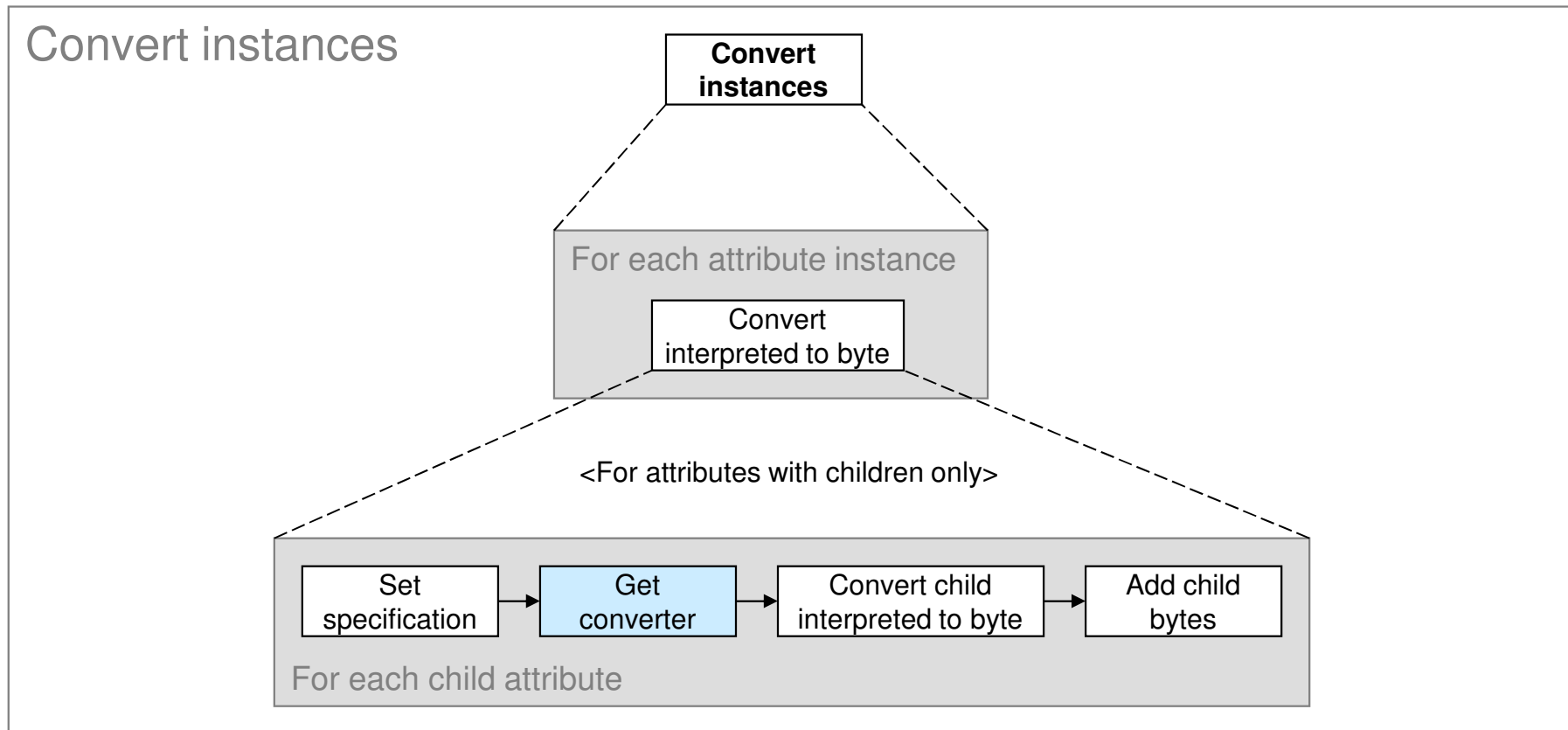


Create attribute (Writing)



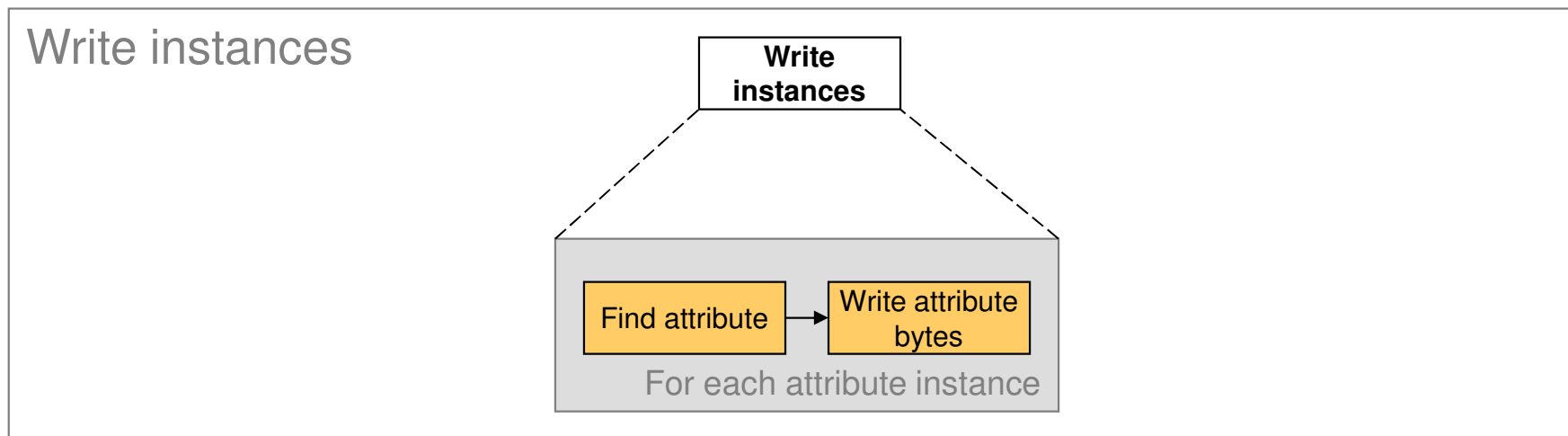
-  : Object creation / retrieval
-  : Access to physical medium
-  : Other action
-  : **Action with sub-steps detailed on further figure**





Convert instances (Writing)



- : Object creation / retrieval
- : Access to physical medium
- : Other action
- : **Action with sub-steps detailed on further figure**

Write instances



-  : Object creation / retrieval
-  : Access to physical medium
-  : Other action
-  : **Action with sub-steps detailed on further figure**

Template



Hallo