Publishing a Book

1st edition

Publishing a Book

1st edition
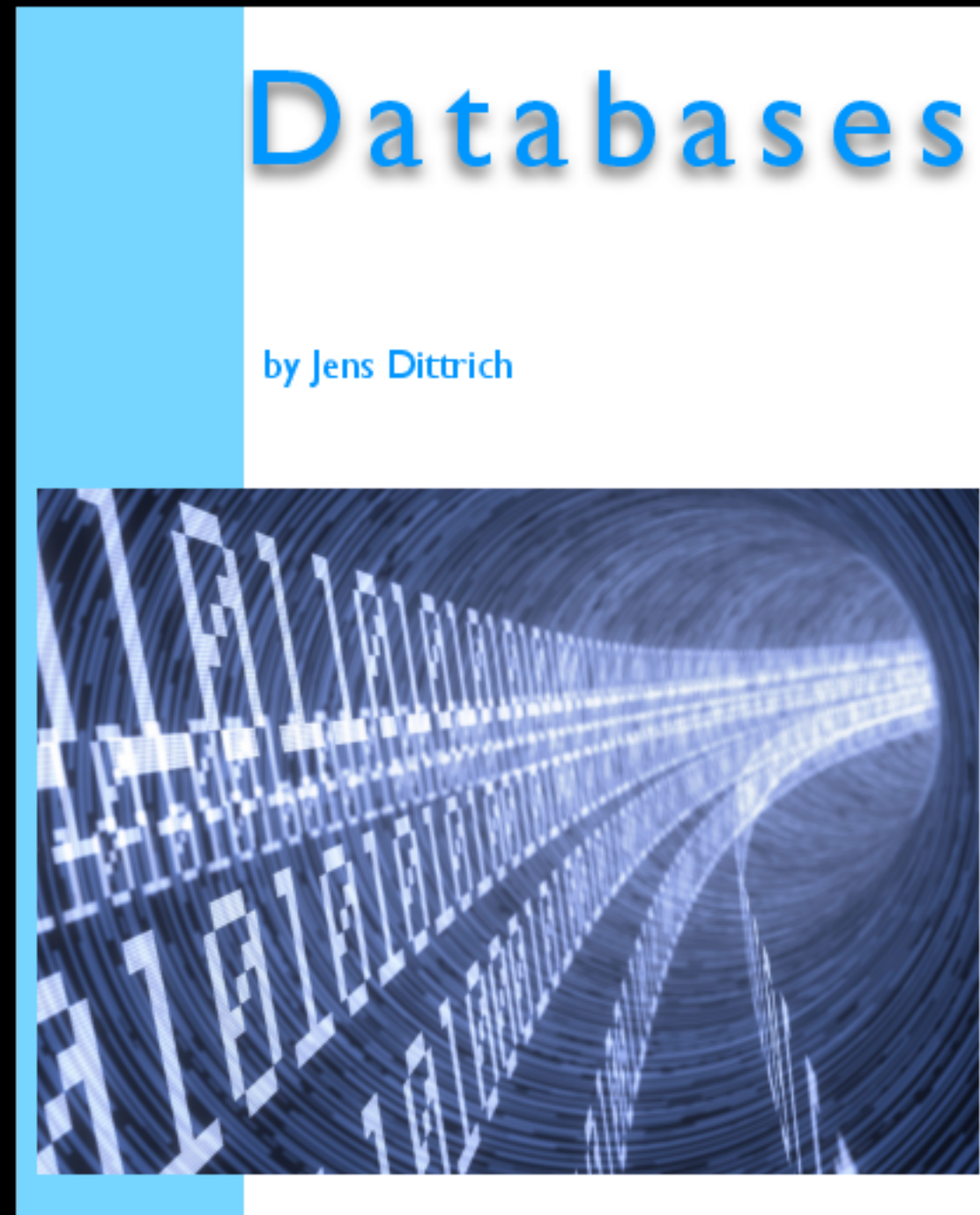

Databases

by Jens Dittrich
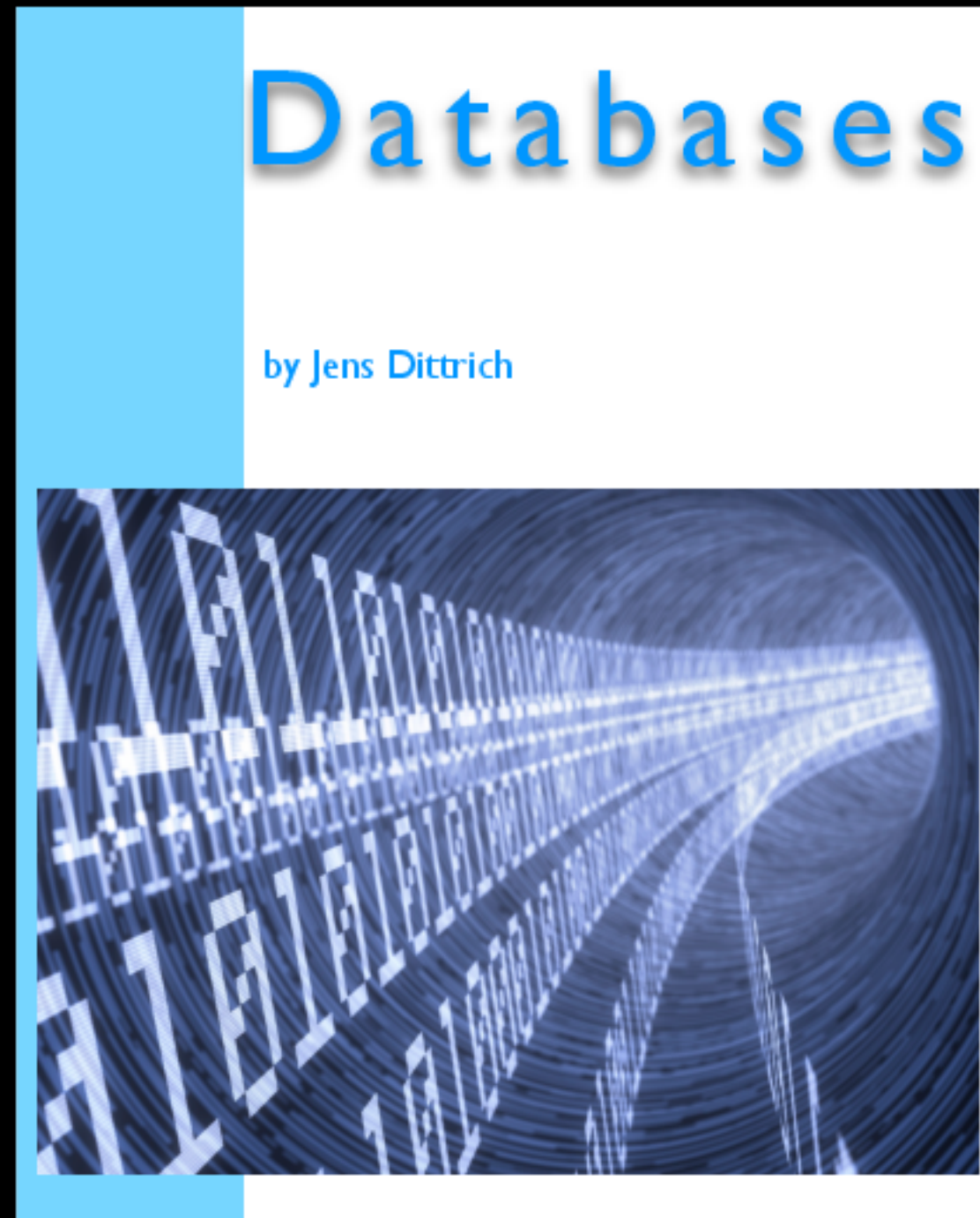
changes:

Publishing a Book

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Databases

by Jens Dittrich

changes:

page 23:
"datbase" → "database"

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Databases
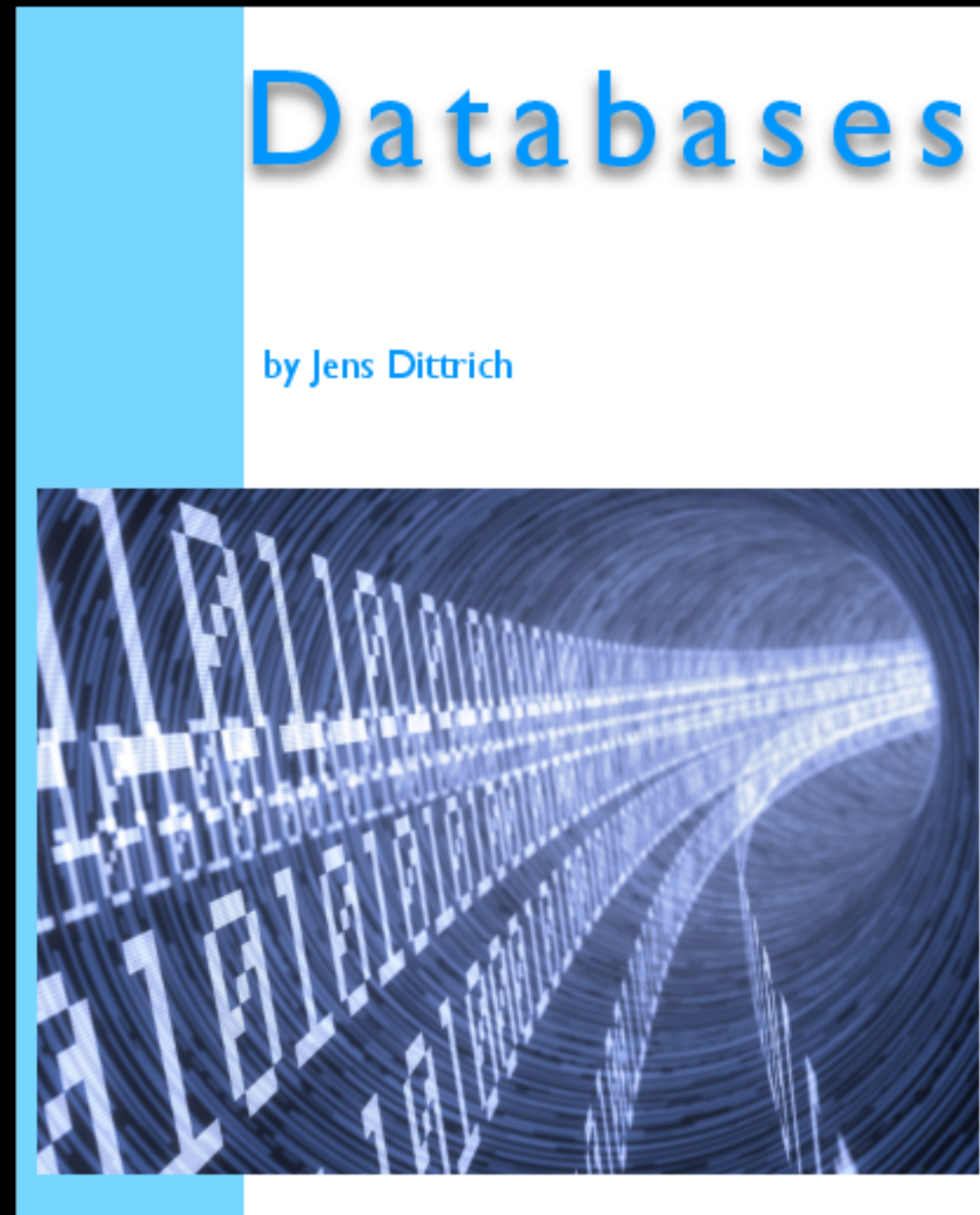
by Jens Dittrich

changes:

page 23:
"datbase" → "database"
page 345:
"idex" → "index"
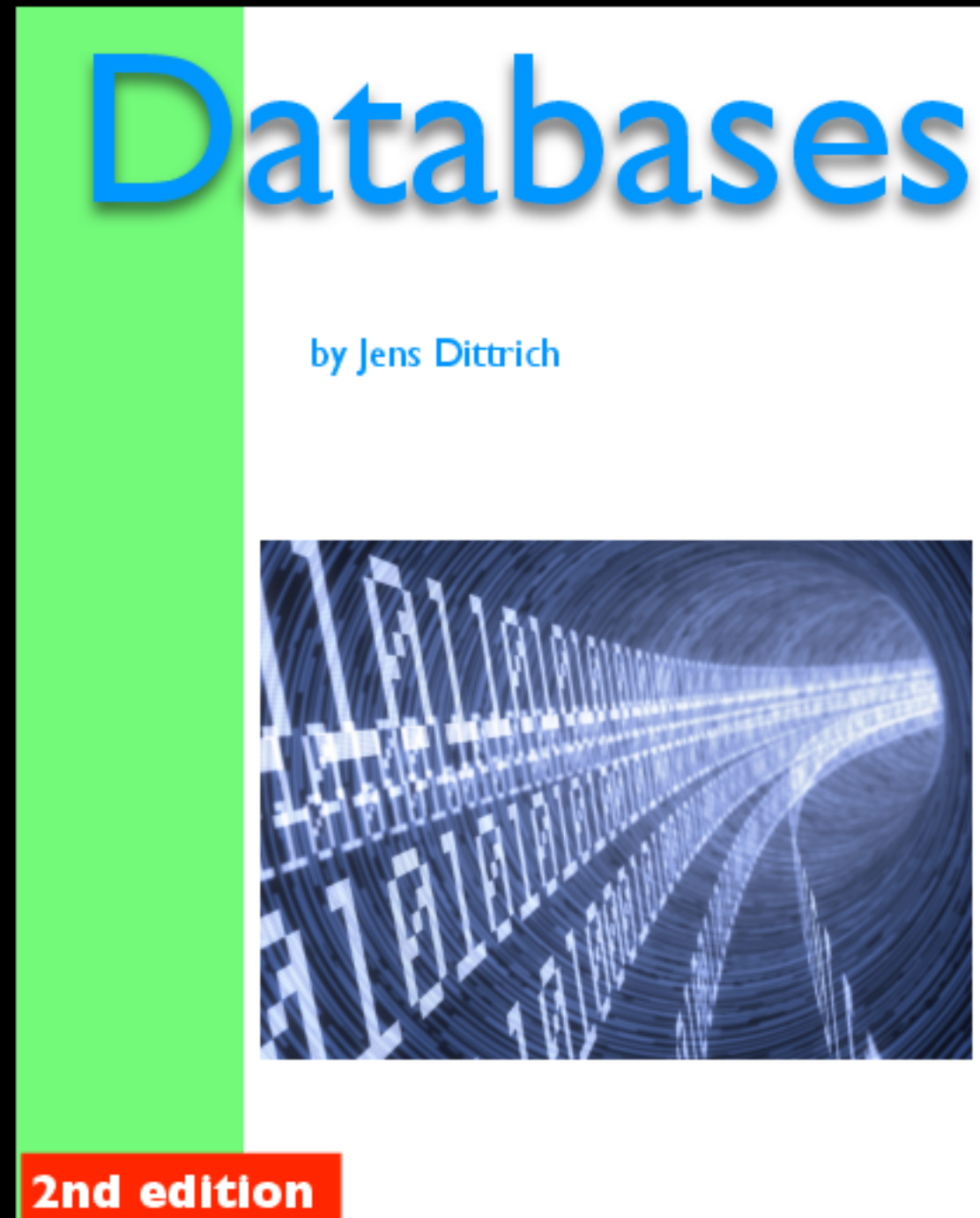
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changes:

page 23:
"datbase" → "database"
page 345:
"idex" → "index"
page 77:
"idex" → "index"

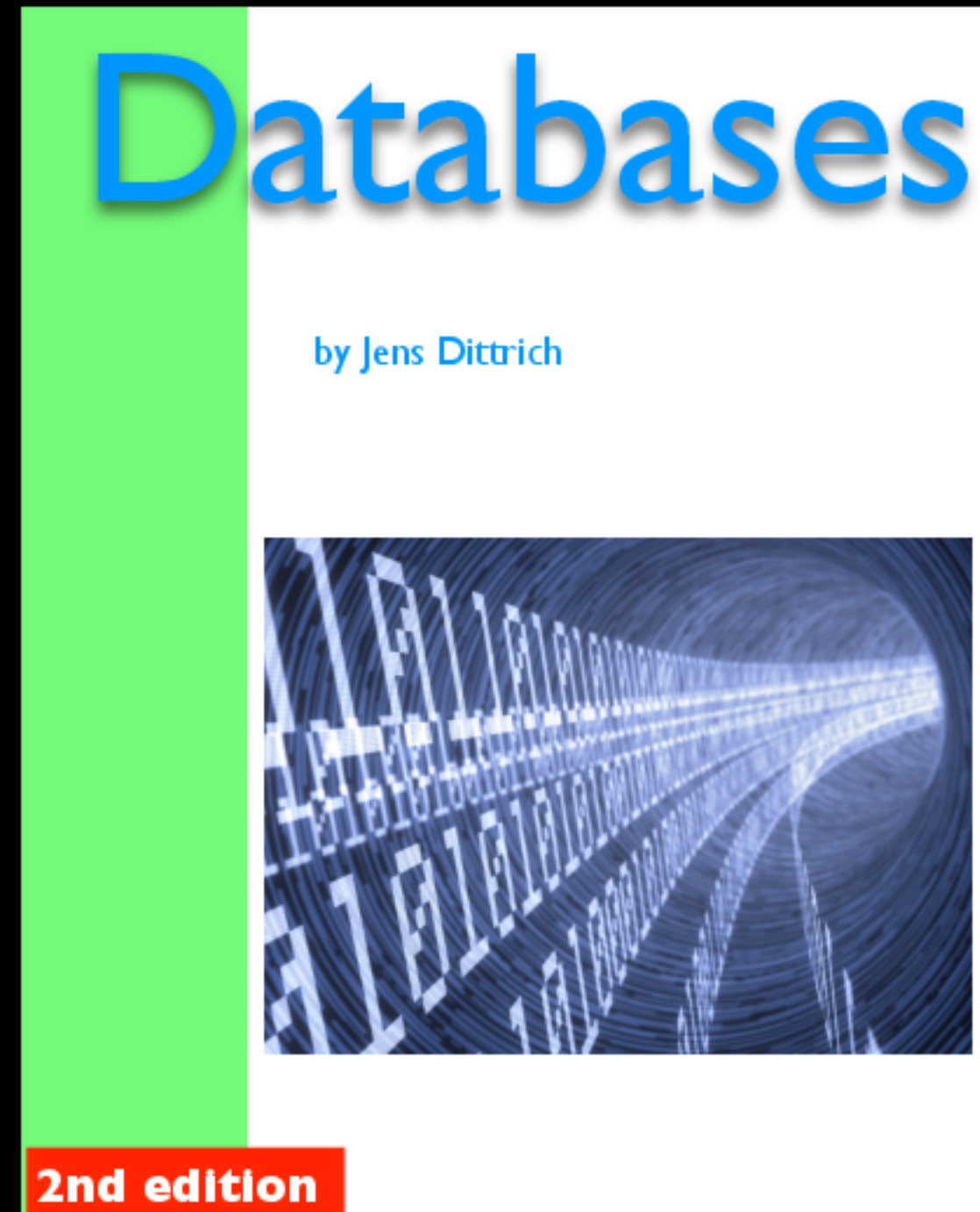2nd edition

Create a 2nd Edition

2nd edition

changes:
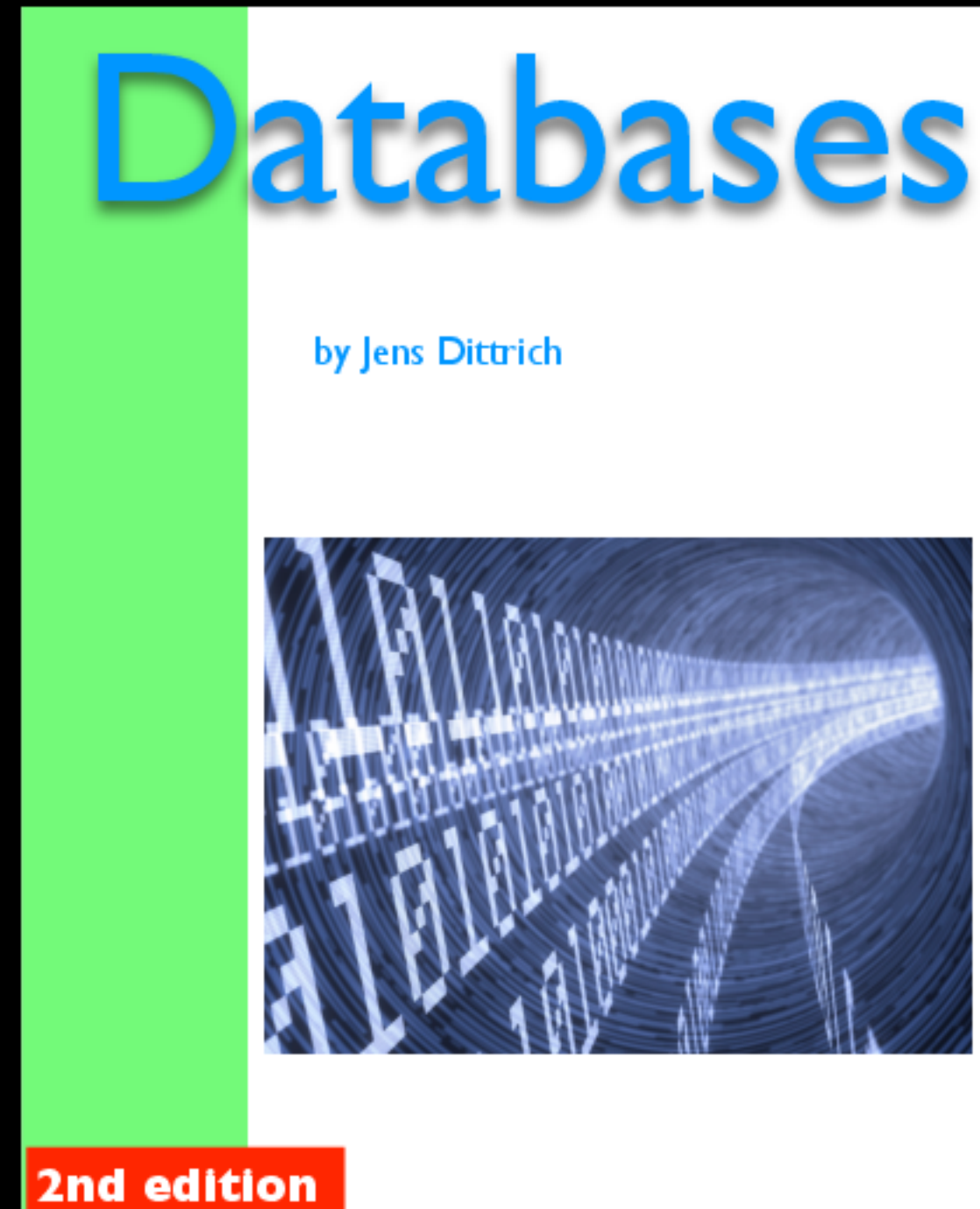
Create a 2nd Edition

2nd edition

Databases

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2nd edition

changes:

page 75:
"kamera" → "camera"

Create a 2nd Edition

2nd edition

Databases
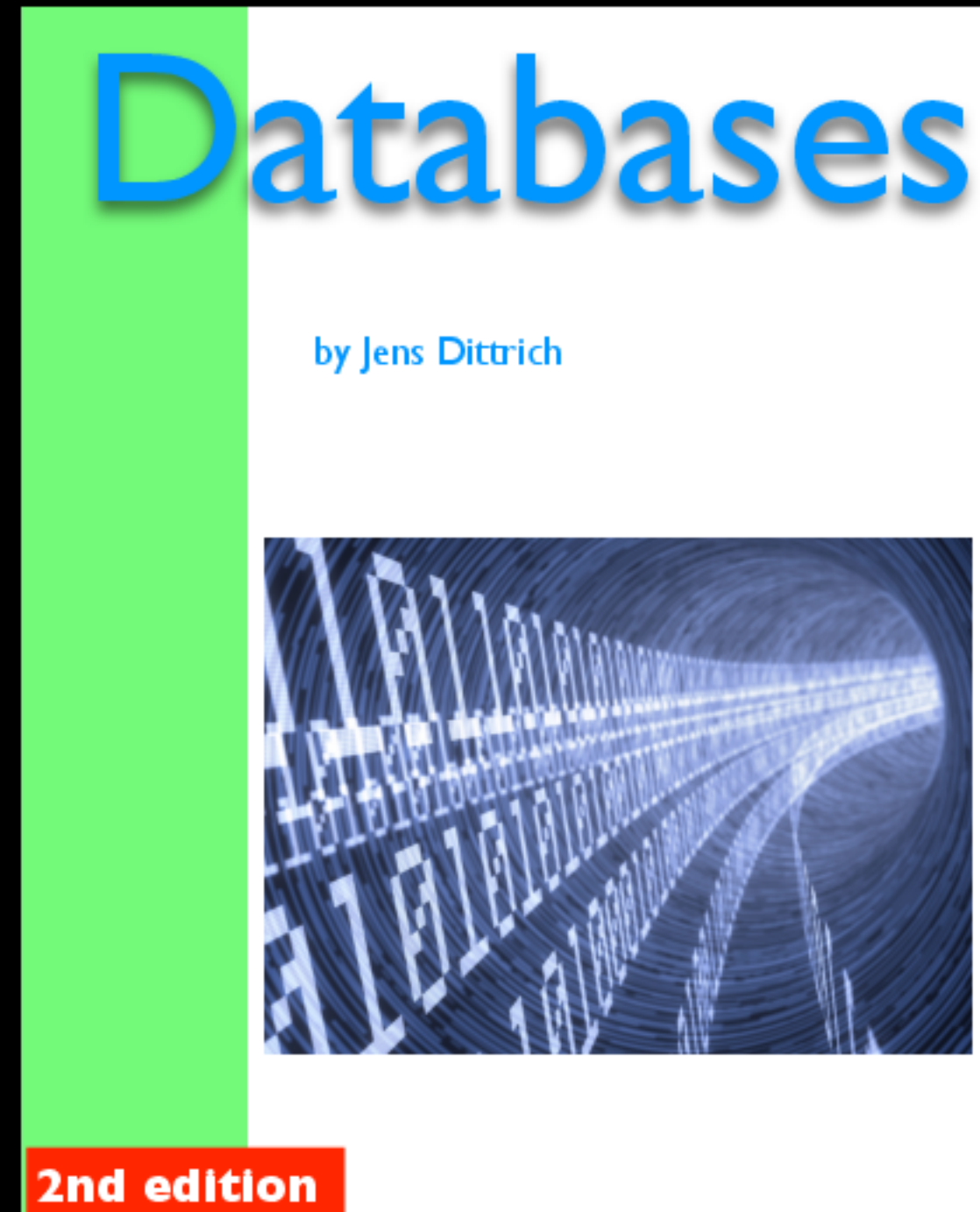
by Jens Dittrich

2nd edition

changes:

page 75:
"kamera" → "camera"
page 143:
"big date" → "big data"

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2nd edition

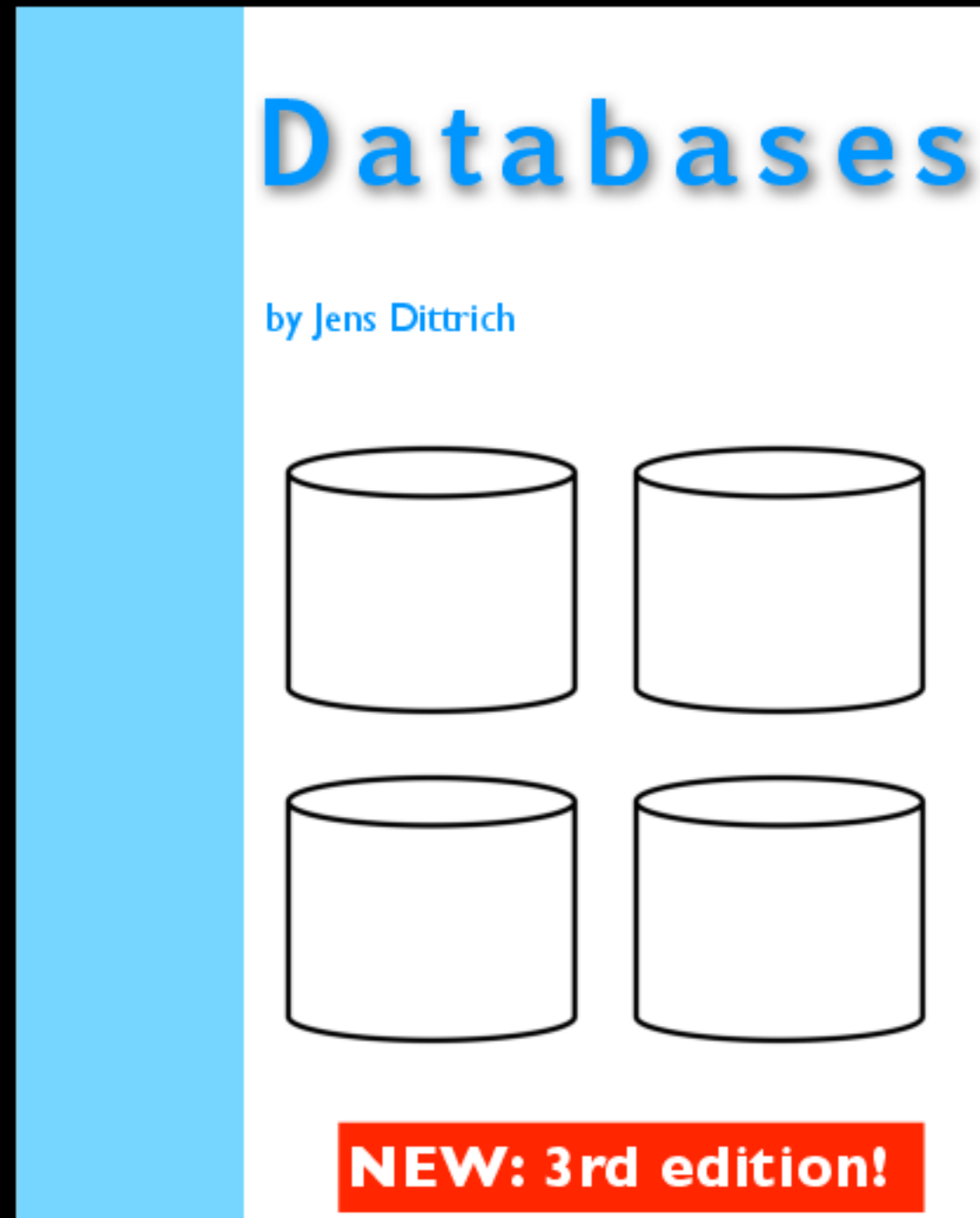

changes:

page 75:
"kamera" → "camera"
page 143:
"big date" → "big data"
new chapter on "tools"

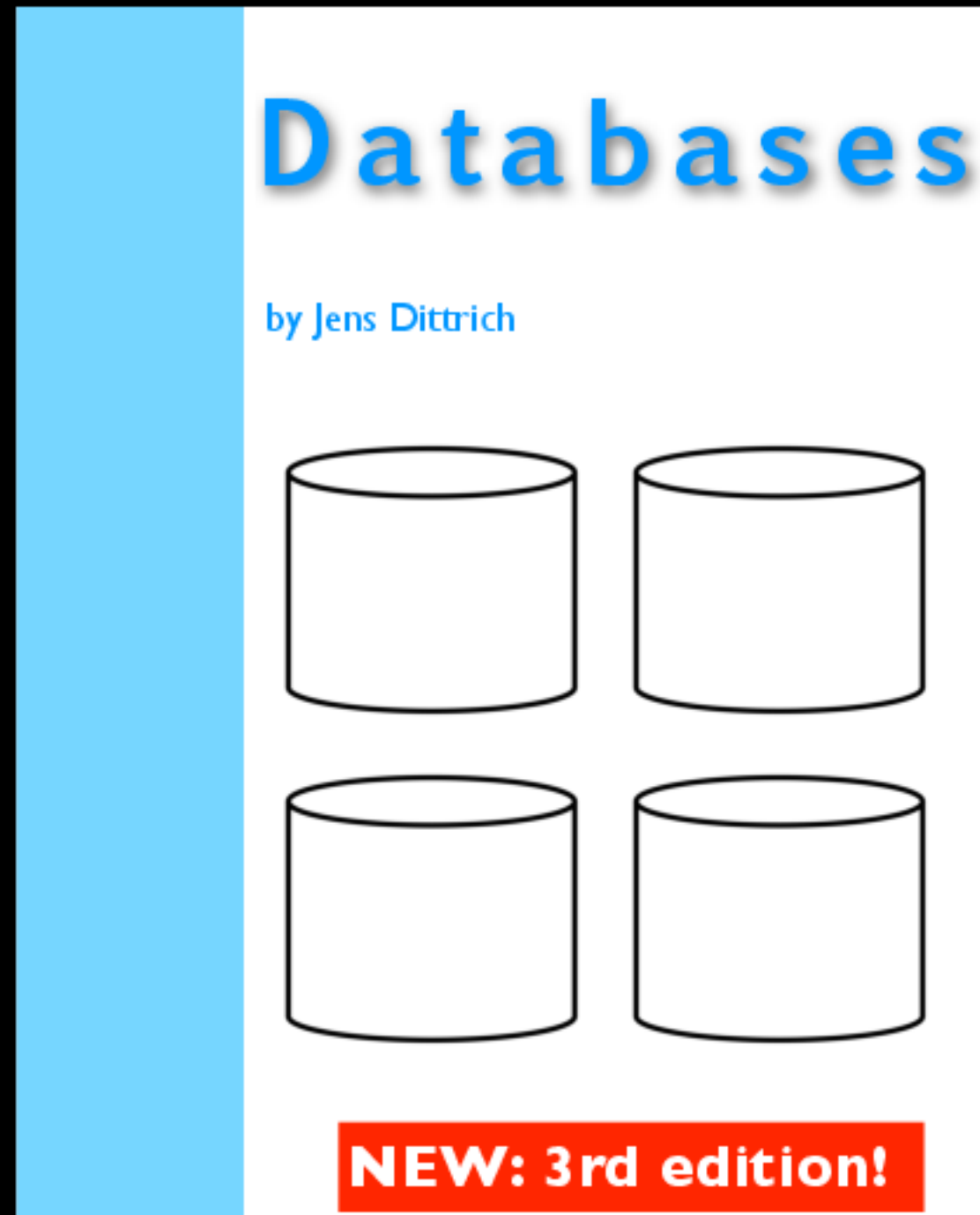# Create a 3rd Edition

3rd edition

Databases

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NEW: 3rd edition!

changes:

Create a 3rd Edition

3rd edition

Databases

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NEW: 3rd edition!

changes:

page 55:
"profi" → "profile"

Differential "File"

current edition

Read-only
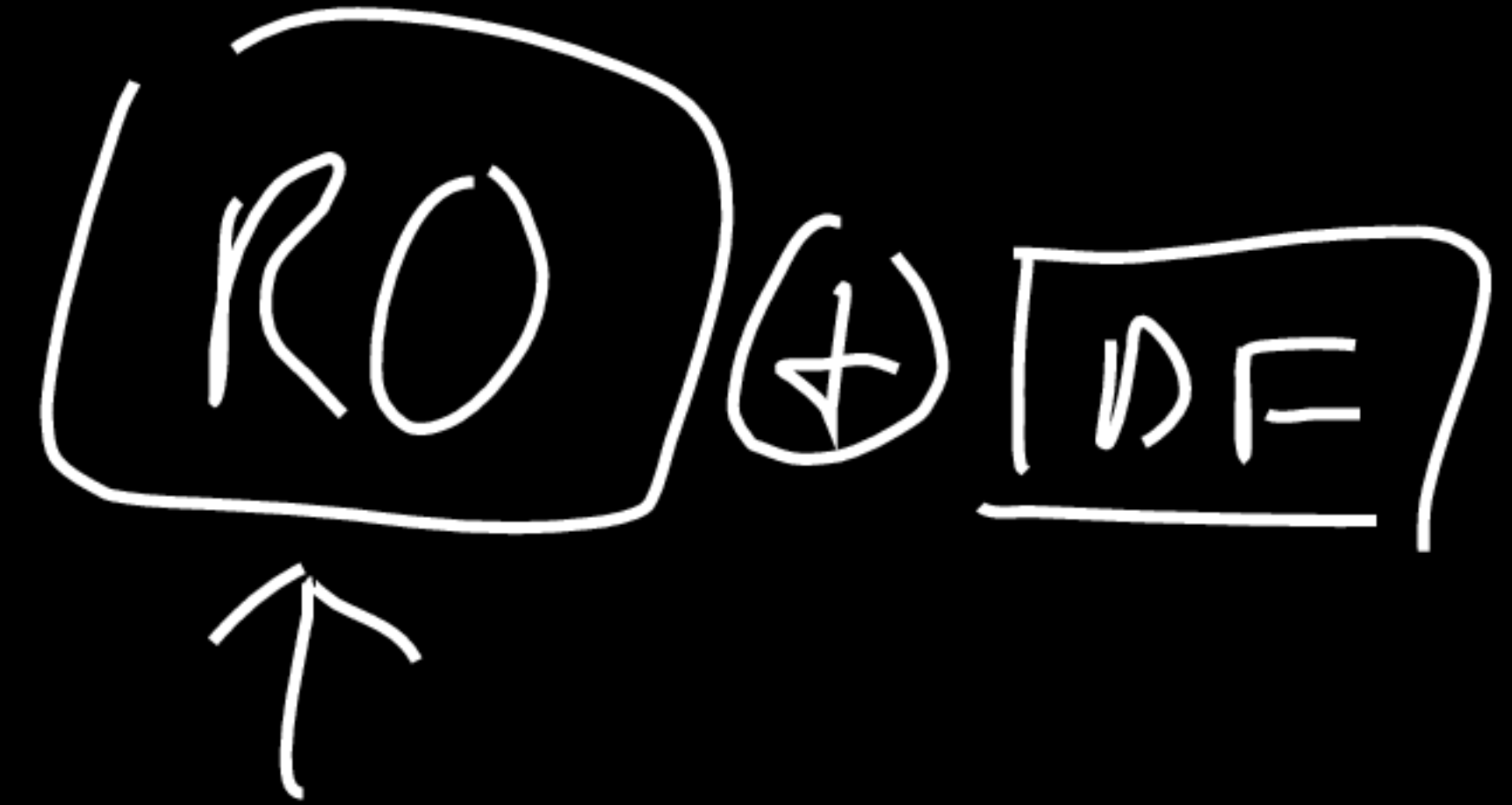File

changes:

Read/Write
DiffFile

= yet another instance of: The Batch Pattern and The All Levels are Equal Pattern

Advantages

may be applied at almost any level, e.g. entire databases, files, indexes (disk or main memory), tables, blocks, pages, rows, ...

cheap writes (not necessarily sequential)

DiffFile corresponds to incremental backup

Advantages

may be applied at almost any level, e.g. entire databases, files, indexes (disk or main memory), tables, blocks, pages, rows, ...

cheap writes (not necessarily sequential)
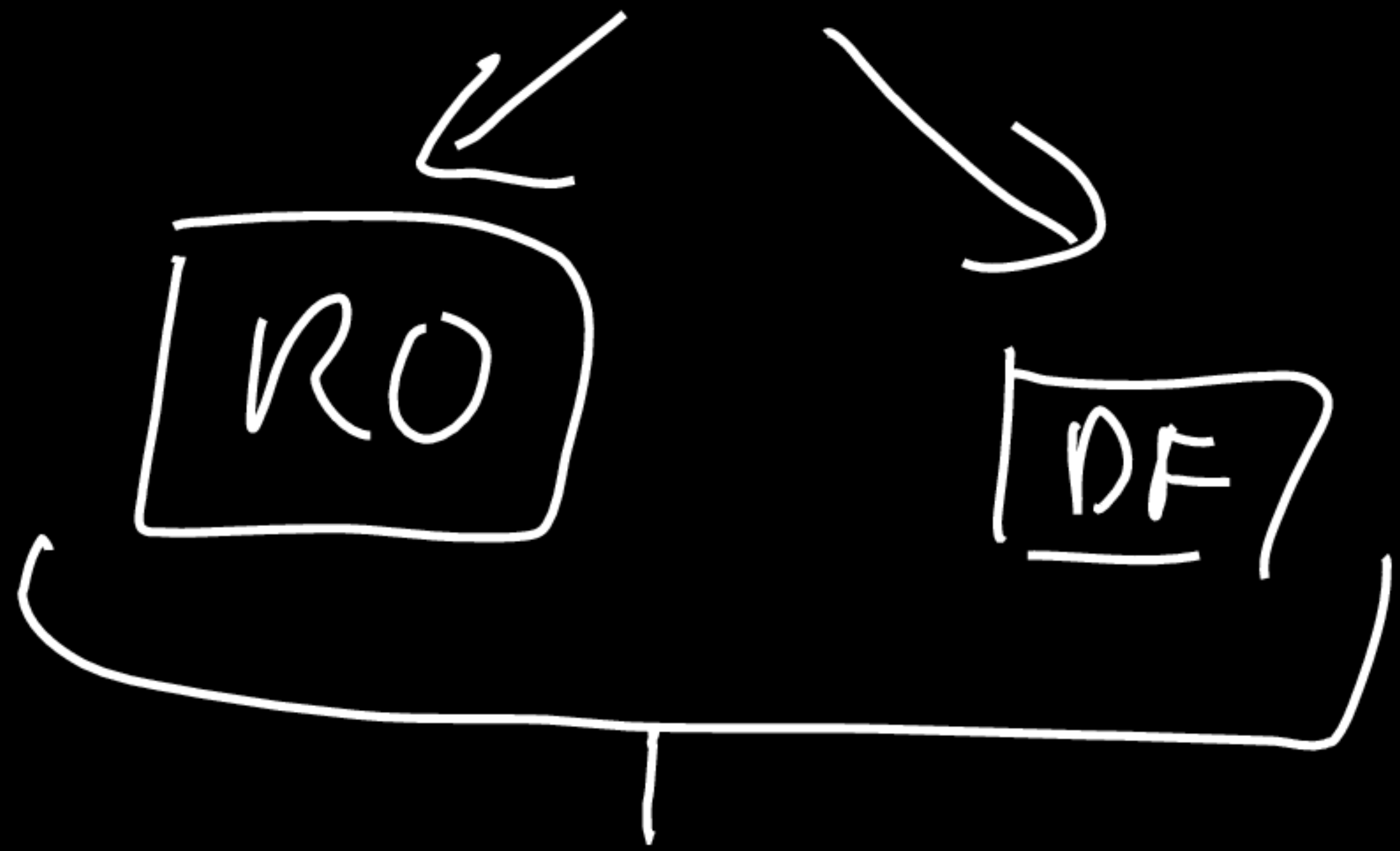
DiffFile corresponds to incremental backup

Read-only File corresponds to snapshot

merge -> defragment blocks on storage medium

easy to implement

Drawbacks

expensive reads

RO

DF

Drawbacks

expensive reads

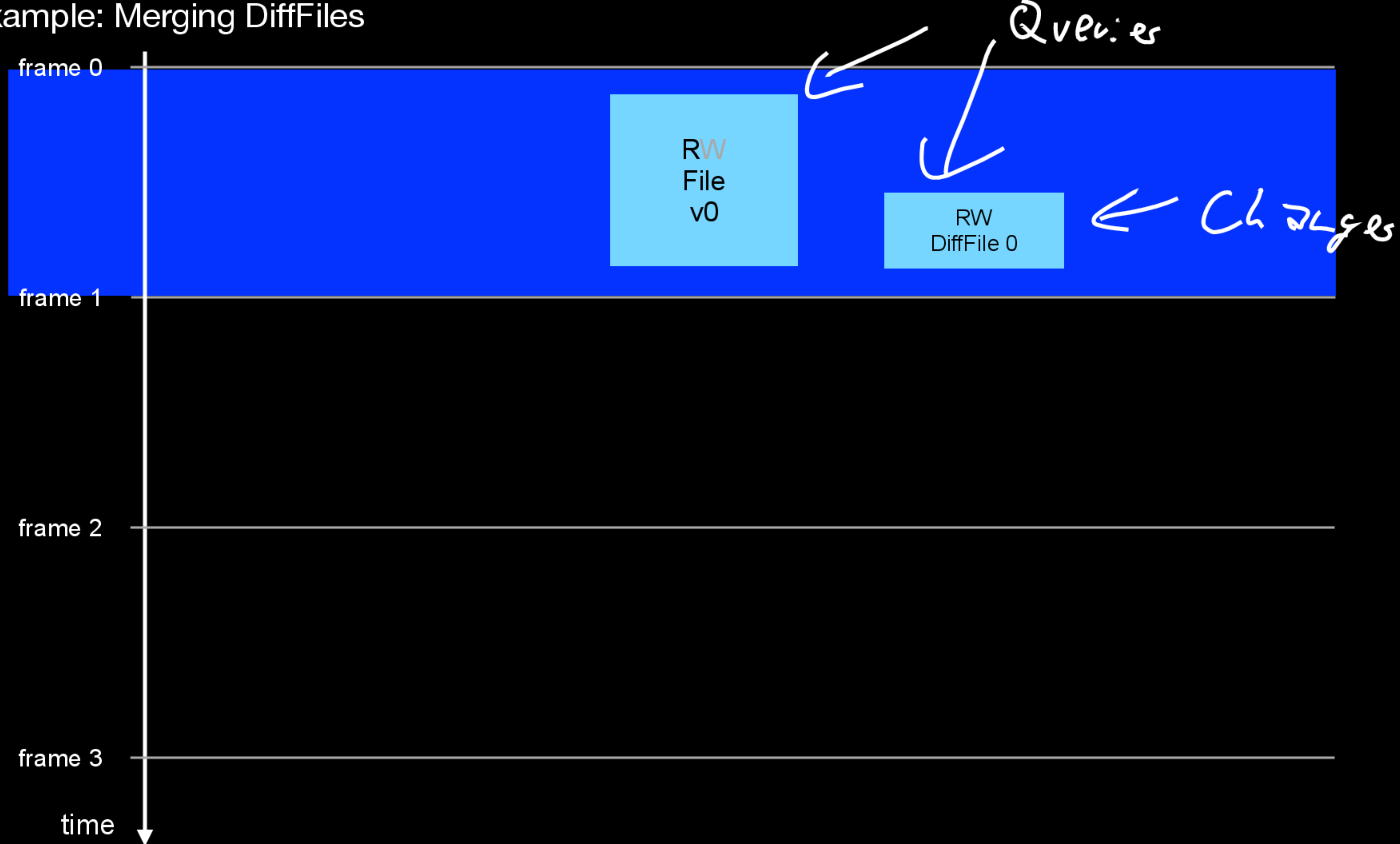additional write costs: merge costs need to be amortized!

extra storage space

"truth" = Read-only File + DiffFile(s)

Example: Merging DiffFiles

Queries

frame 0

RW
File
v0

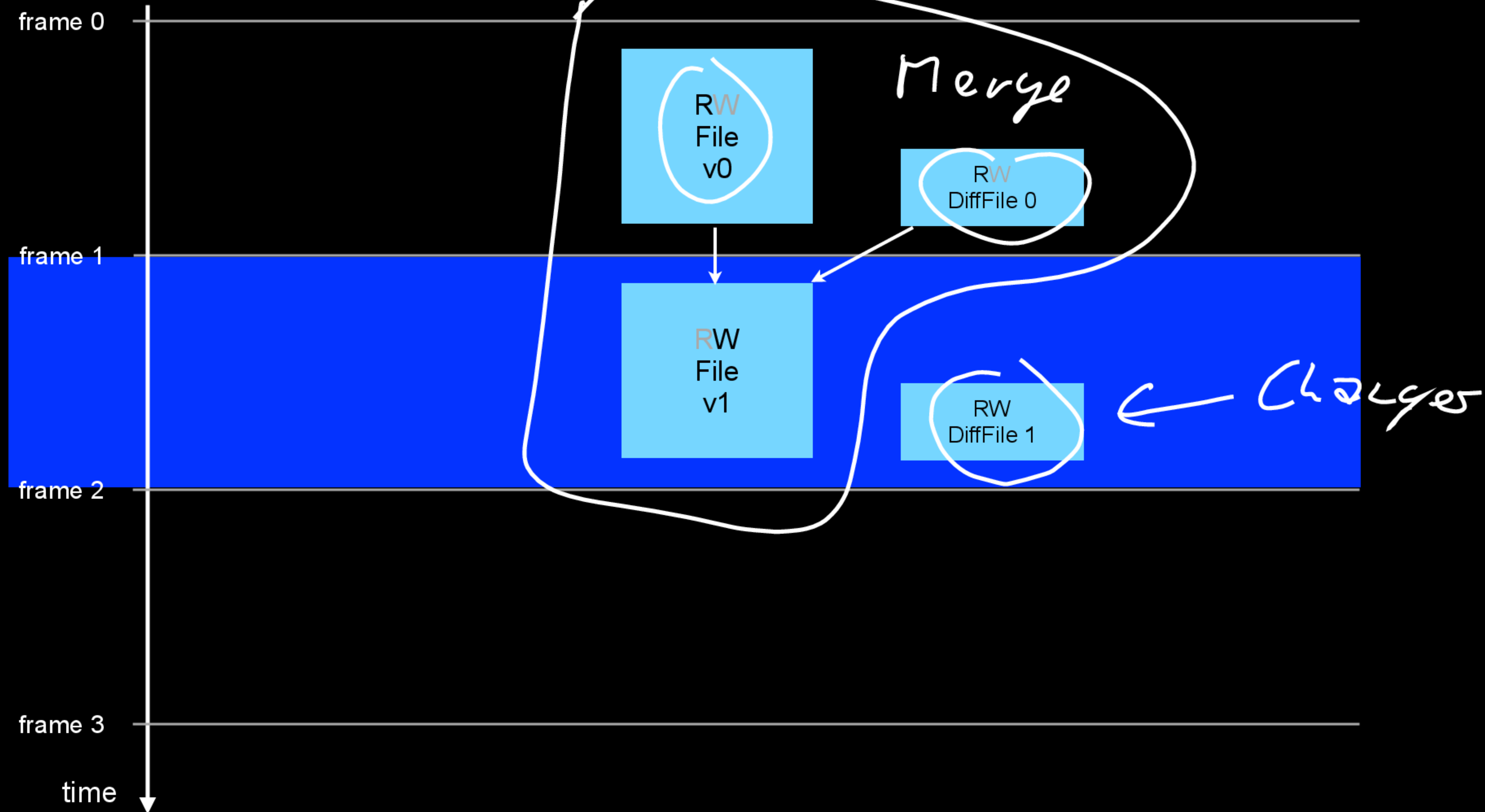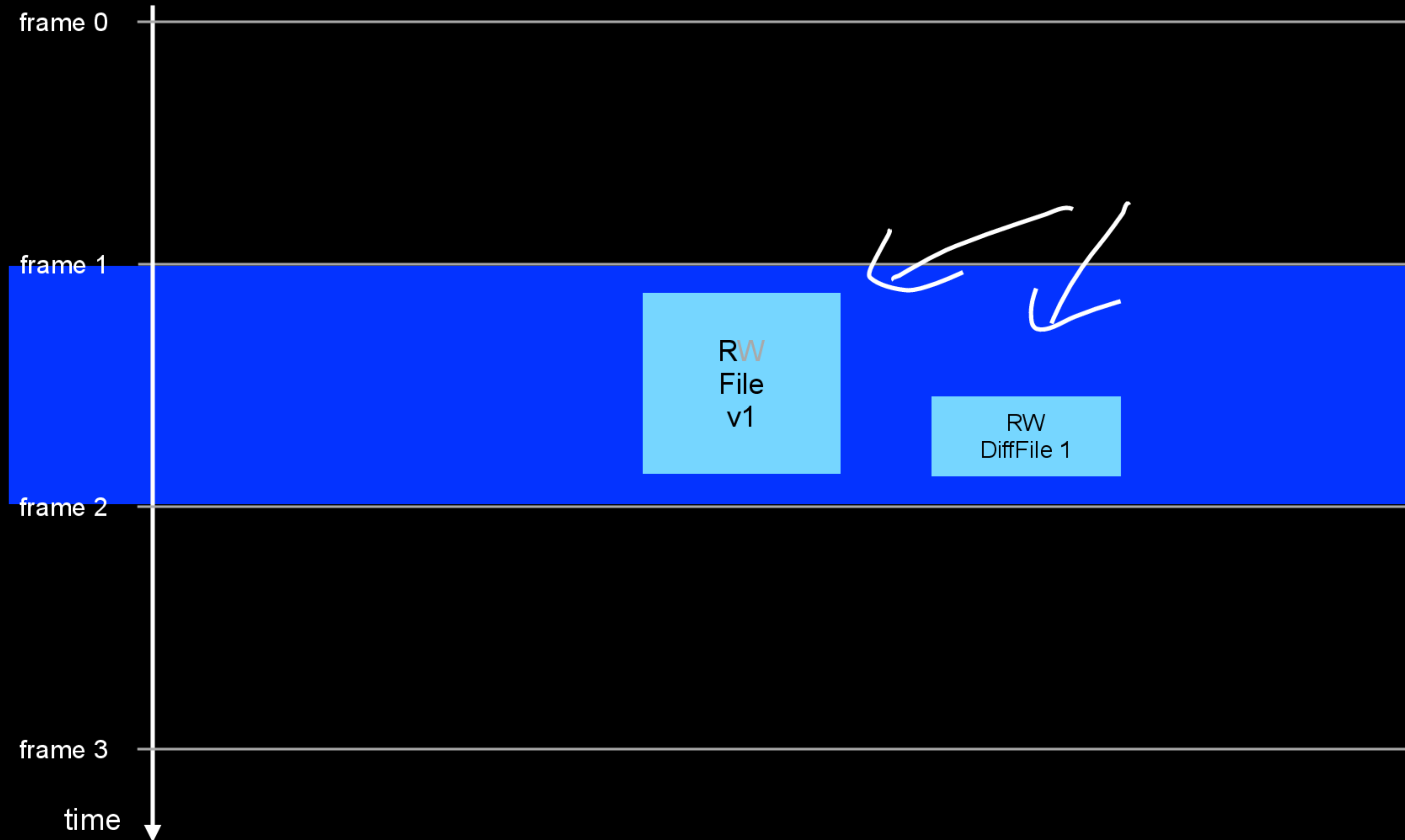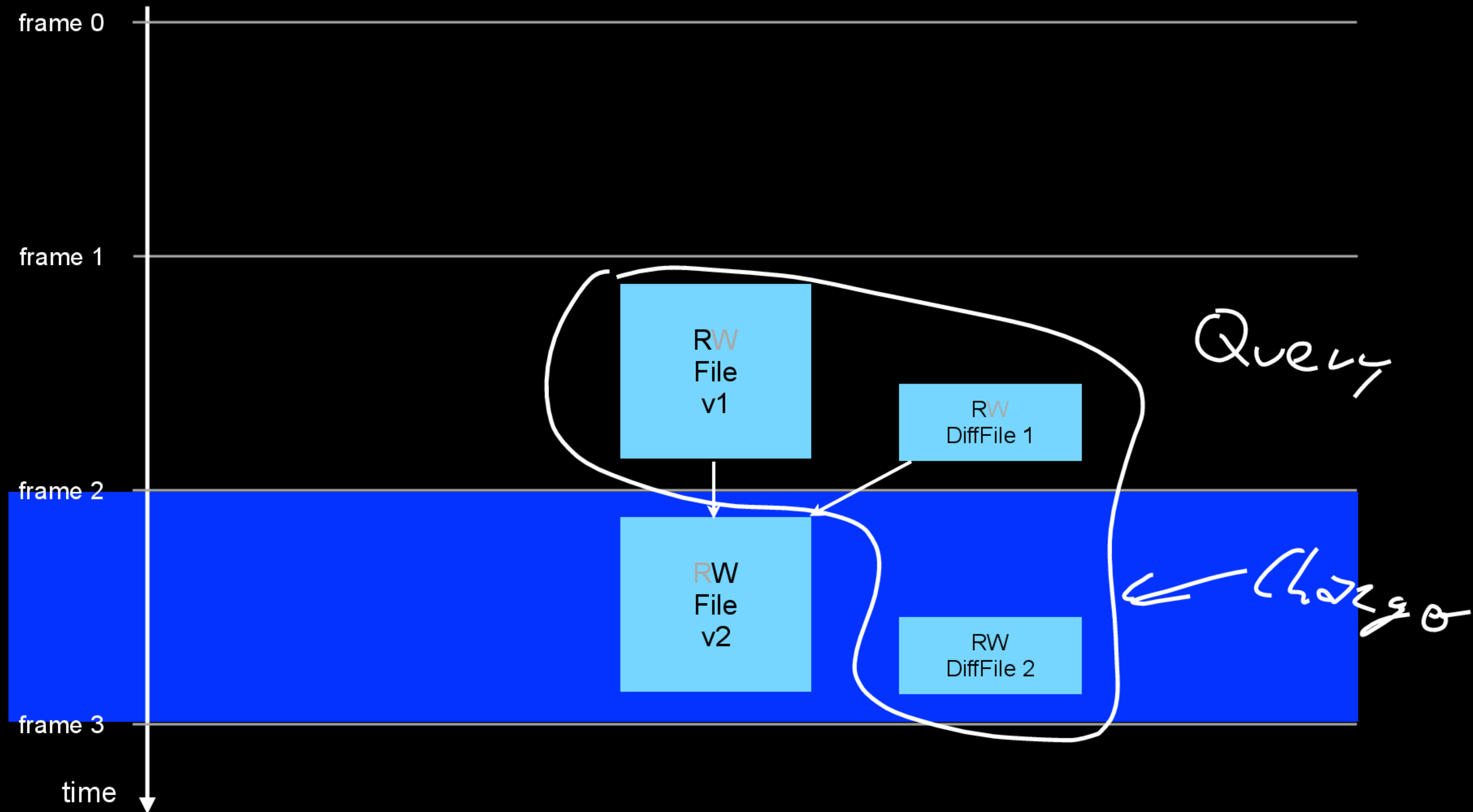RW
DiffFile 0

← Changes

frame 1

frame 2

frame 3

time

Example: Merging DiffFiles

Example: Merging DiffFiles
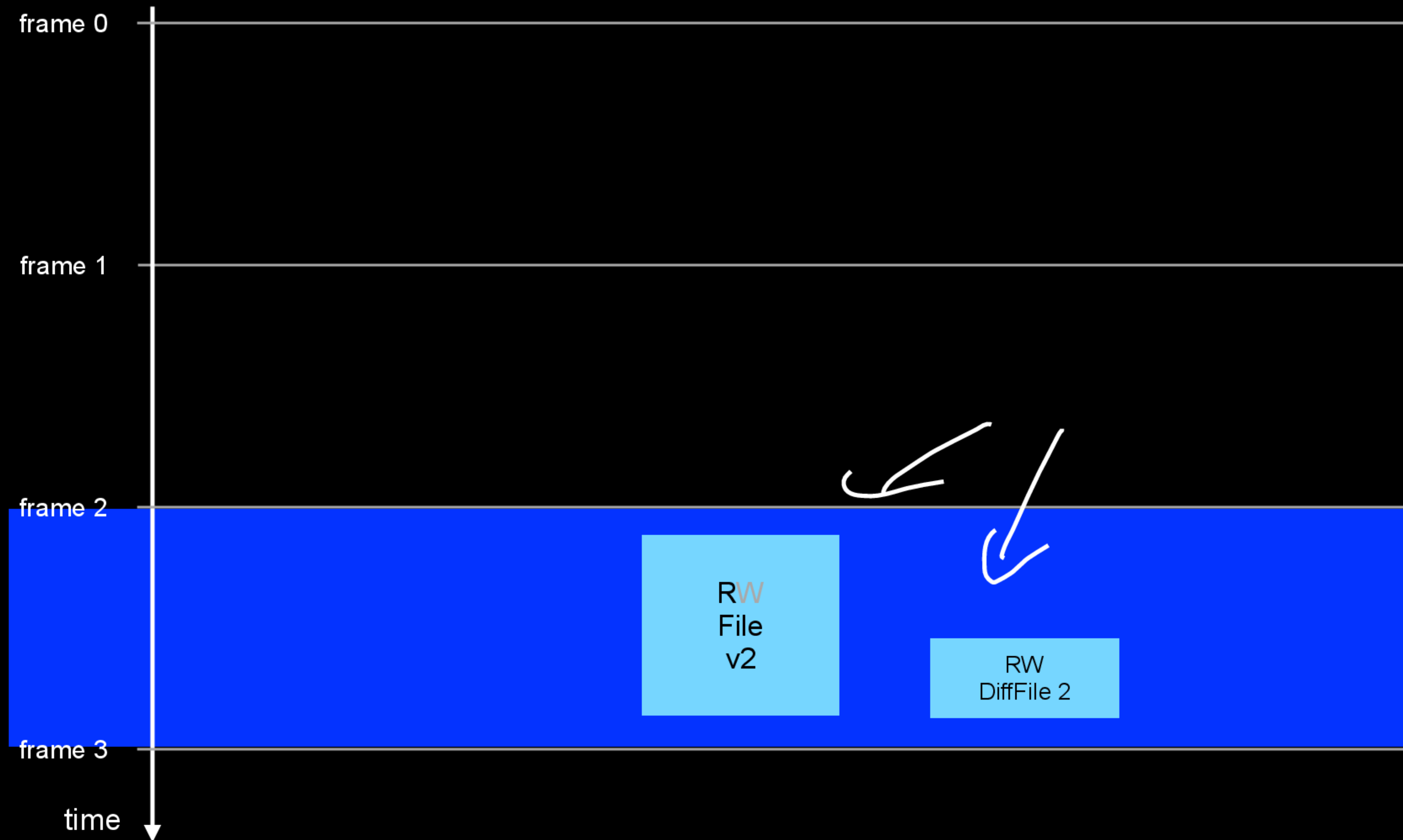
Example: Merging DiffFiles

Example: Merging DiffFiles

frame 0

frame 1

frame 2

RW
File
v2

RW
DiffFile 2

frame 3

time

Copyrights