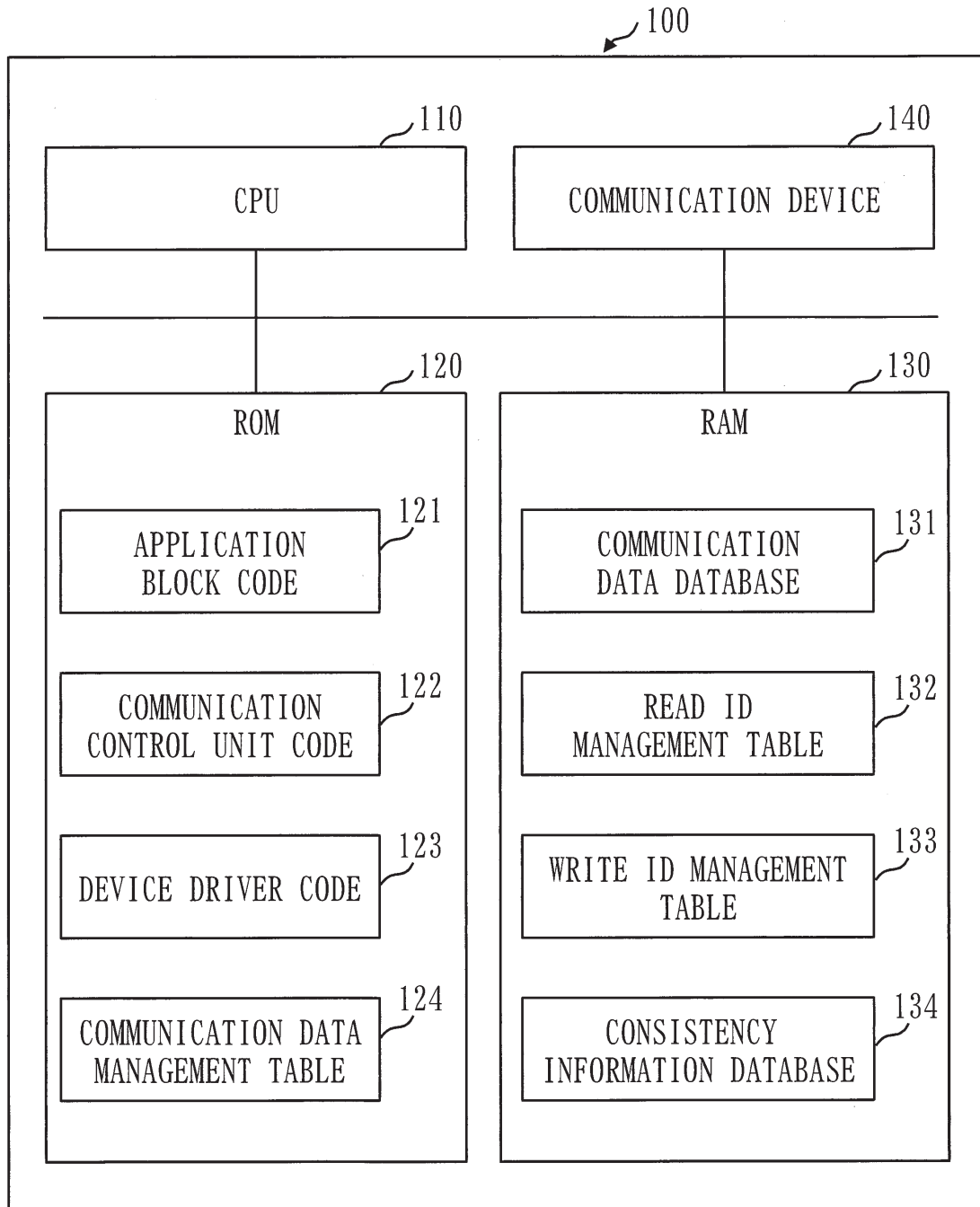
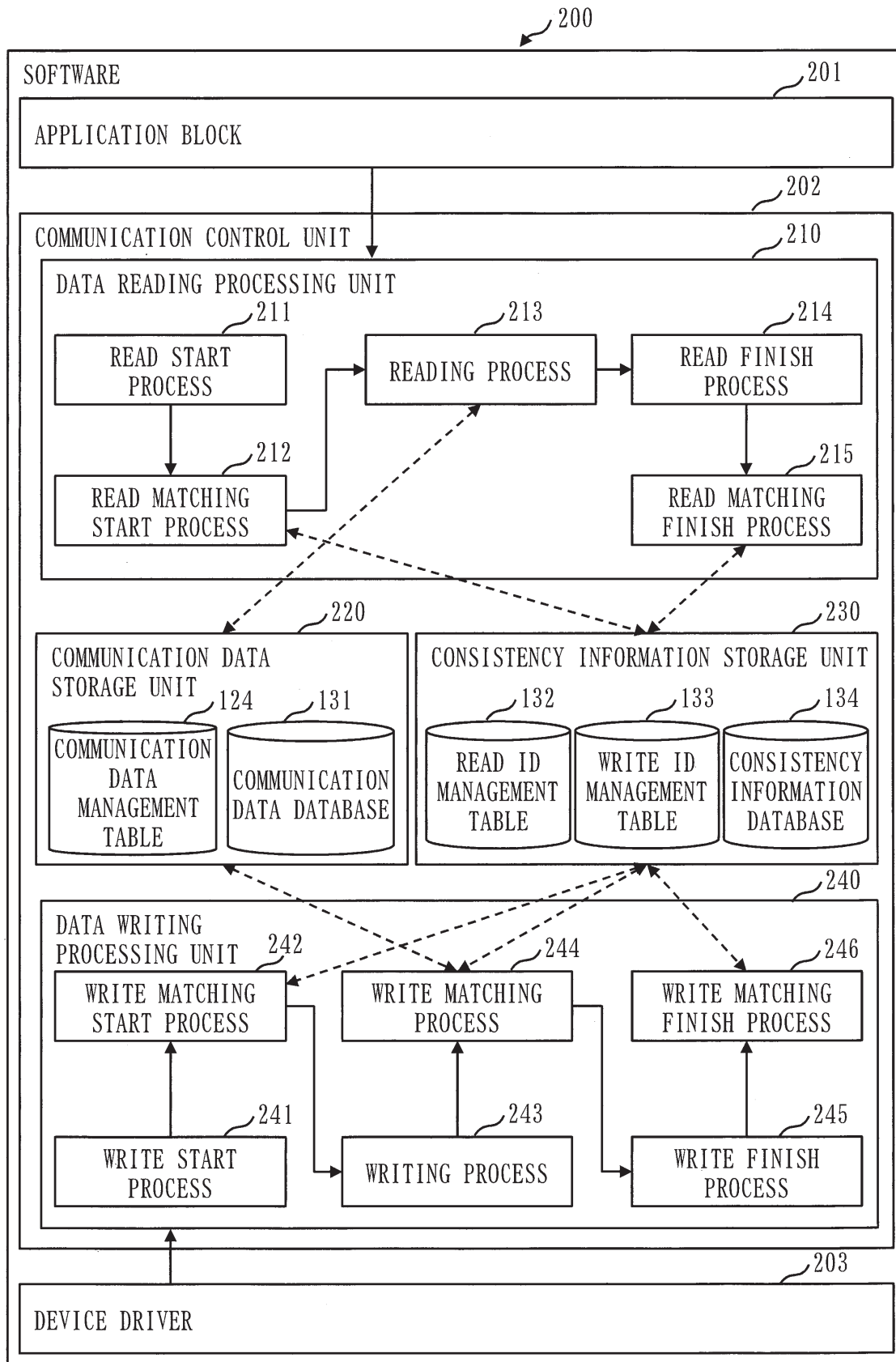


1/22
Fig. 1



2/22
Fig. 2



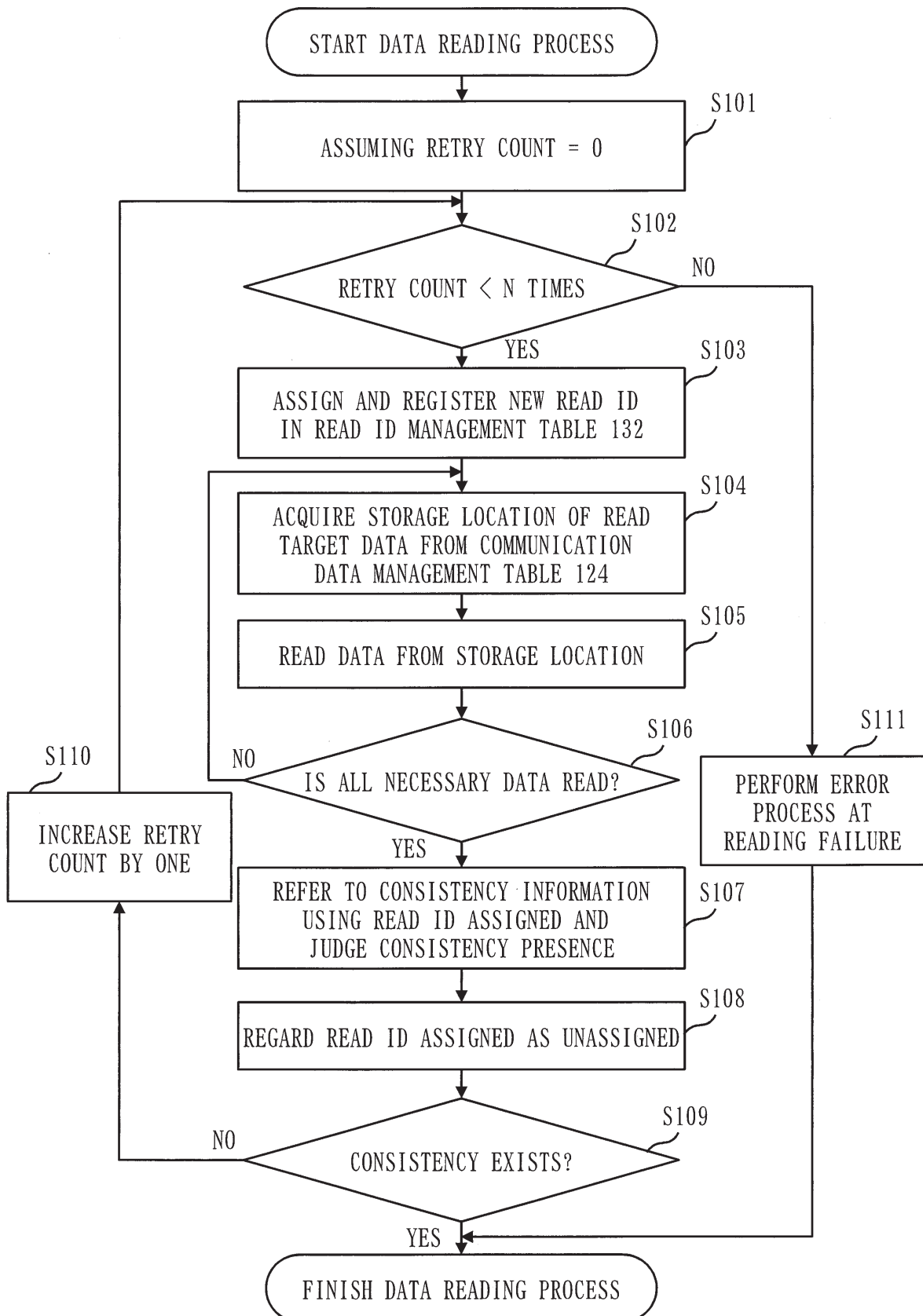
3/22
Fig. 3

	COMMON DATA ADDRESS INSIDE COMMUNICATION DATA DATABASE 131	COMMON DATA SIZE INSIDE COMMUNICATION DATA DATABASE 131
DATA 1	H' 000400	2 BYTE
DATA 2	H' 000402	4 BYTE
• • •	...	...
DATA N	H' 000564	1 BYTE

Fig. 4

WRITE-START COUNT	DATA WRITING- IN-PROGRESS FLAG	READING-IN- PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

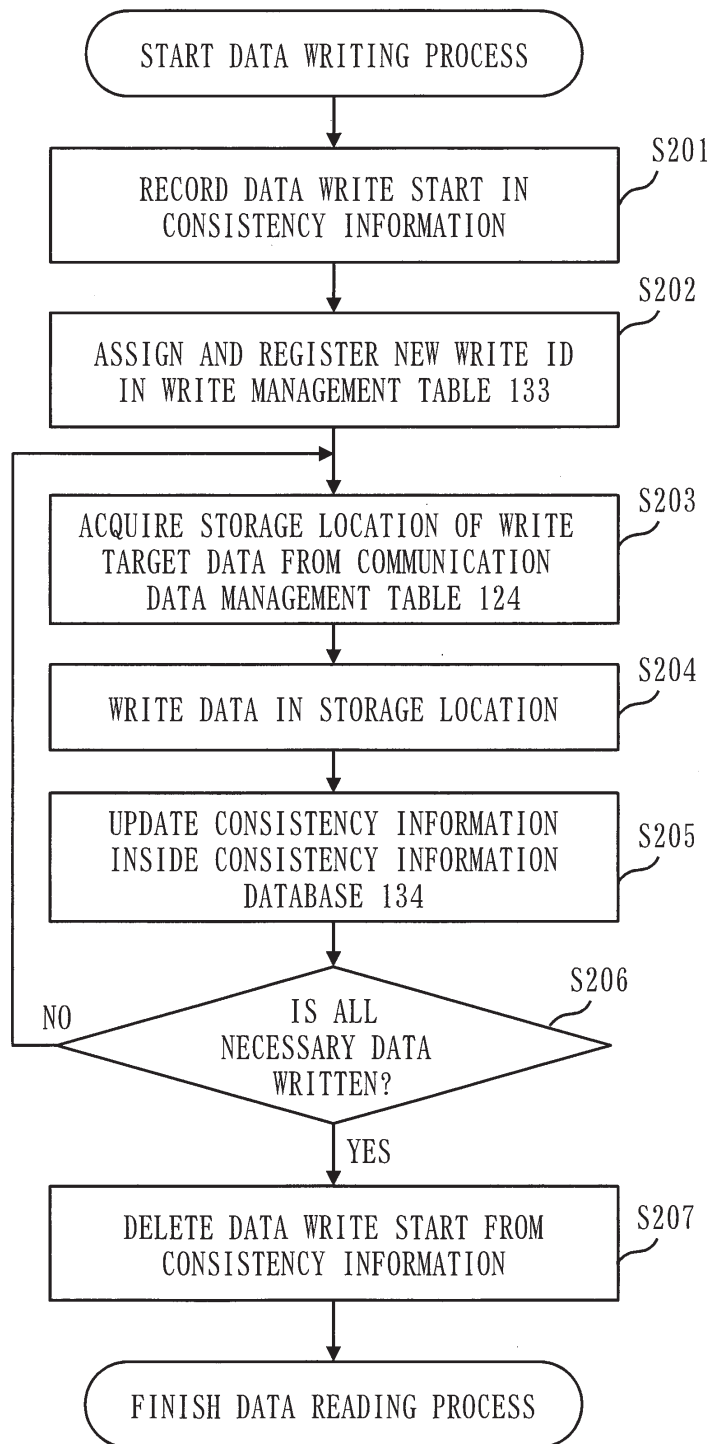
4/22
Fig. 5



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Fig. 6

READ ID	SET OF READ DATA
1	DATA 1, DATA 2, DATA 5
2	DATA 3, DATA 4

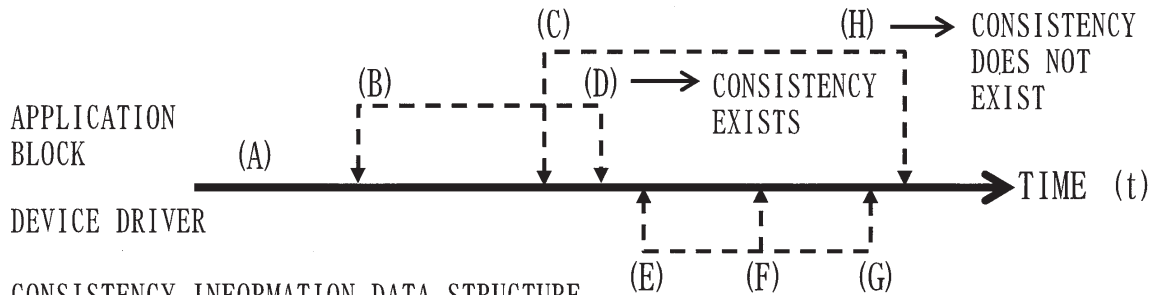
6/22
Fig. 7



7/22
Fig. 8

WRITE ID	SET OF WRITE DATA
1	DATA 1, DATA 3, DATA 6
2	DATA 2, DATA 4, DATA 5

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Fig. 9



WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	1	1	0

(C) START READING [READ ID = 2]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	2	2	0

(D) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	1	2	0

(E) START WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	1	2	0

(F) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	1	2 COPY VALUE 2	

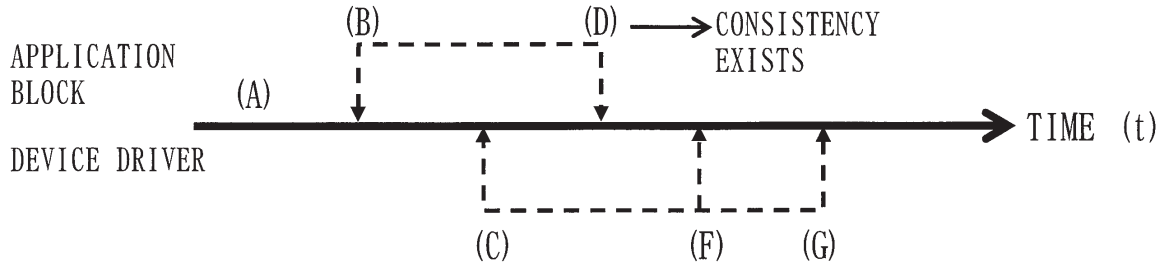
(G) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	1	2	2

(H) FINISH READING [READ ID = 2]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

9/22
Fig.10



CONSISTENCY INFORMATION DATA STRUCTURE

(A) PRECONDITION

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>1</u>	<u>1</u>	0

(C) START READING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>1</u>	FALSE	1	1	0

(D) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>0</u>	<u>0</u>	<u>0</u>

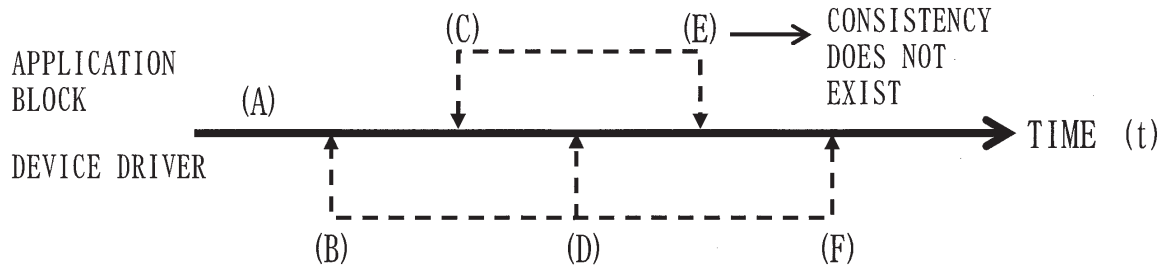
(E) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	<u>TRUE</u>	0	0	0

(F) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>0</u>	<u>FALSE</u>	0	0	0

10/22
Fig.11



CONSISTENCY INFORMATION DATA STRUCTURE

(A) PRECONDITION

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START READING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	FALSE	0	0	0

(C) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	FALSE	1	1	0

(D) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	1	1	1

COPY VALUE

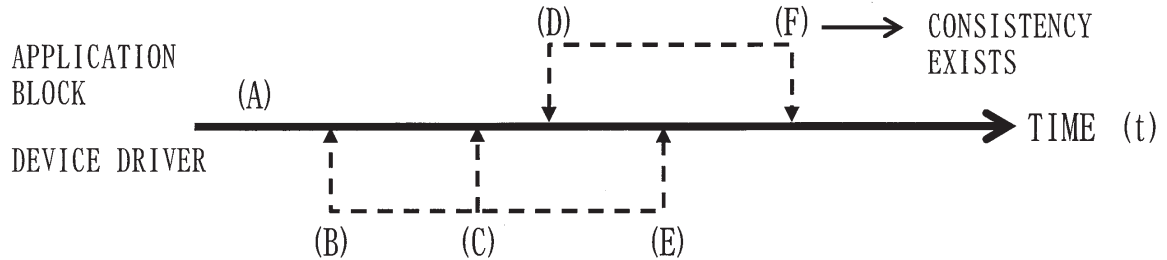
(E) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	0	0	0

(F) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

11/22
Fig.12



CONSISTENCY INFORMATION DATA STRUCTURE

(A) PRECONDITION

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START READING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>1</u>	FALSE	0	0	0

(C) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	<u>TRUE</u>	0	0	0

COPY VALUE →

(D) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	<u>1</u>	<u>1</u>	0

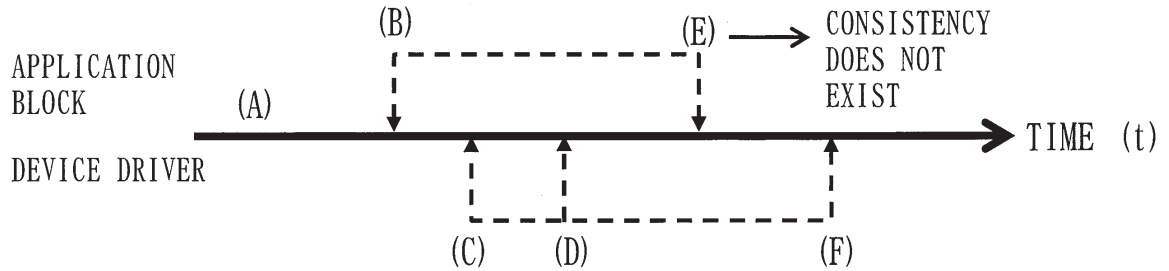
(E) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>0</u>	→ <u>FALSE</u>	1	1	→ 0

(F) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>0</u>	<u>0</u>	<u>0</u>

12/22
Fig.13



CONSISTENCY INFORMATION DATA STRUCTURE

(A) PRECONDITION

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>1</u>	<u>1</u>	0

(C) START READING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>1</u>	FALSE	1	1	0

(D) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	1	1	<u>1</u>

1 COPY VALUE 1

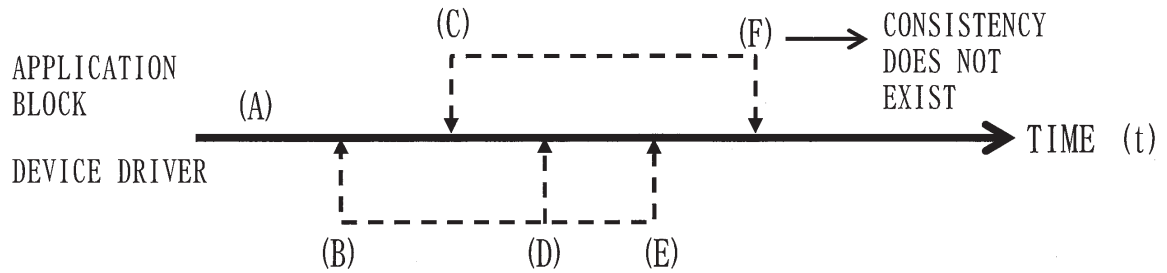
(E) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	<u>0</u>	<u>0</u>	<u>0</u>

(F) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>0</u>	FALSE	0	0	0

13/22
Fig.14



CONSISTENCY INFORMATION DATA STRUCTURE

(A) PRECONDITION

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START READING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>1</u>	FALSE	0	0	0

(C) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	FALSE	<u>1</u>	<u>1</u>	0

(D) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	<u>TRUE</u>	1	1	1

COPY VALUE

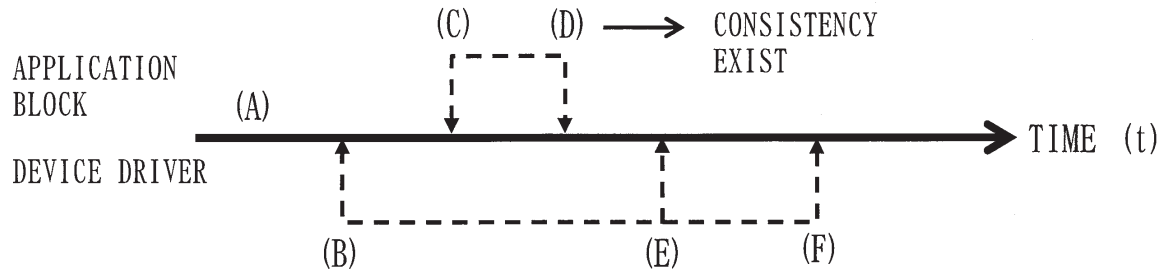
(E) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>0</u>	<u>FALSE</u>	1	1	1

(F) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>0</u>	<u>0</u>	<u>0</u>

14/22
Fig.15



CONSISTENCY INFORMATION DATA STRUCTURE

(A) PRECONDITION

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START READING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	FALSE	0	0	0

(C) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	FALSE	1	1	0

(D) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	FALSE	0	0	0

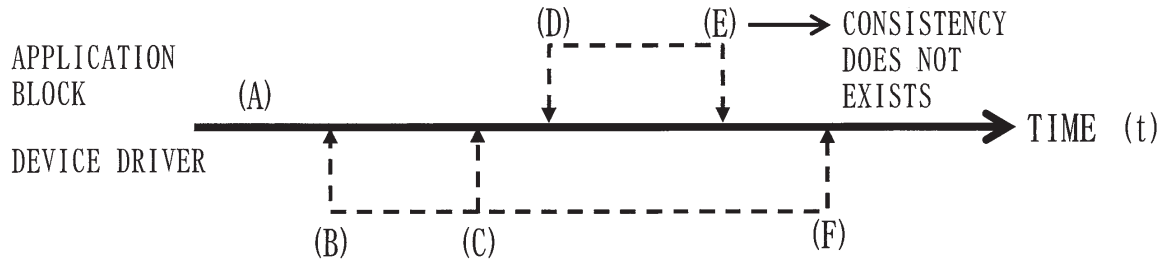
(E) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	0	0 COPY VALUE 0	0

(F) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

15/22
Fig.16



CONSISTENCY INFORMATION DATA STRUCTURE

(A) PRECONDITION

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>1</u>	FALSE	0	0	0

(C) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	<u>TRUE</u>	0	0	0

0 COPY VALUE → 0

(D) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	→ <u>TRUE</u>	<u>1</u>	<u>1</u>	→ 0

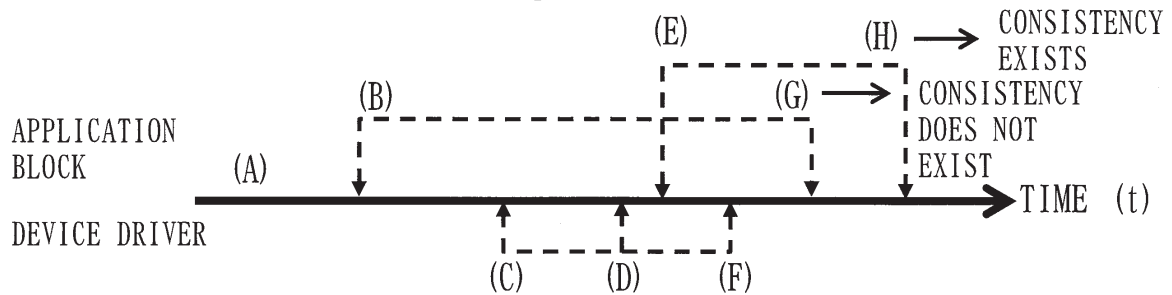
(E) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	<u>0</u>	<u>0</u>	<u>0</u>

(F) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>0</u>	<u>FALSE</u>	0	0	0

16/22
Fig.17



CONSISTENCY INFORMATION DATA STRUCTURE

(A) PRECONDITION

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>1</u>	<u>1</u>	0

(C) START WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>1</u>	FALSE	1	1	0

(D) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	<u>TRUE</u>	1	1	<u>1</u>

COPY VALUE

(E) START READING [READ ID = 2]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	TRUE	<u>2</u>	<u>2</u>	1

(F) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>0</u>	FALSE	2	2	1

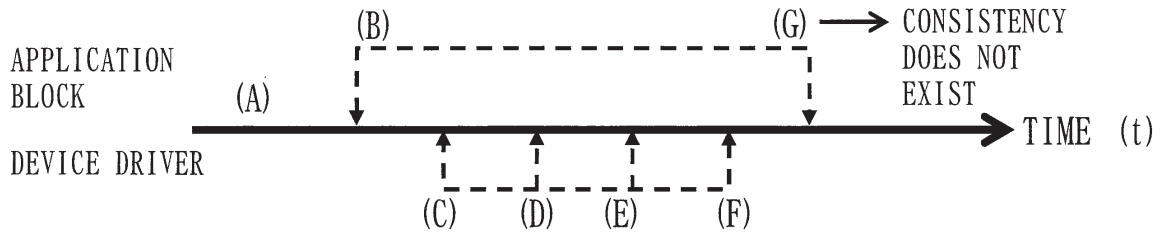
(G) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>1</u>	2	1

(H) FINISH READING [READ ID = 2]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>0</u>	<u>0</u>	<u>0</u>

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Fig.18



CONSISTENCY INFORMATION DATA STRUCTURE

(A) PRECONDITION

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	0	0	0

(B) START READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>1</u>	<u>1</u>	0

(C) START WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>1</u>	FALSE	1	1	0

(D) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	<u>TRUE</u>	1	1	<u>1</u>

COPY VALUE 1

(E) WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
1	<u>TRUE</u>	1	1	<u>1</u>

COPY VALUE 1

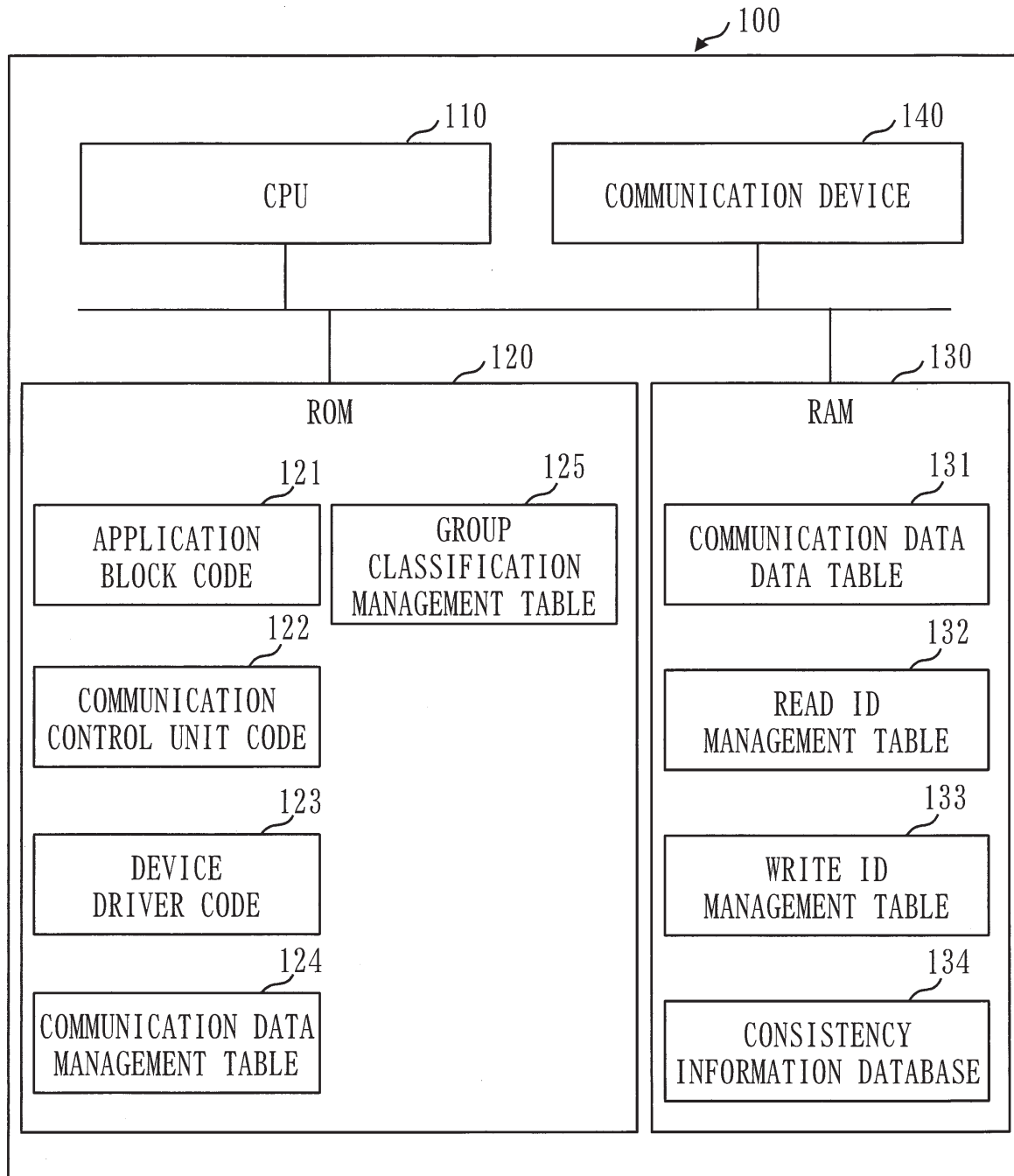
(F) FINISH WRITING

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
<u>0</u>	<u>FALSE</u>	1	1	1

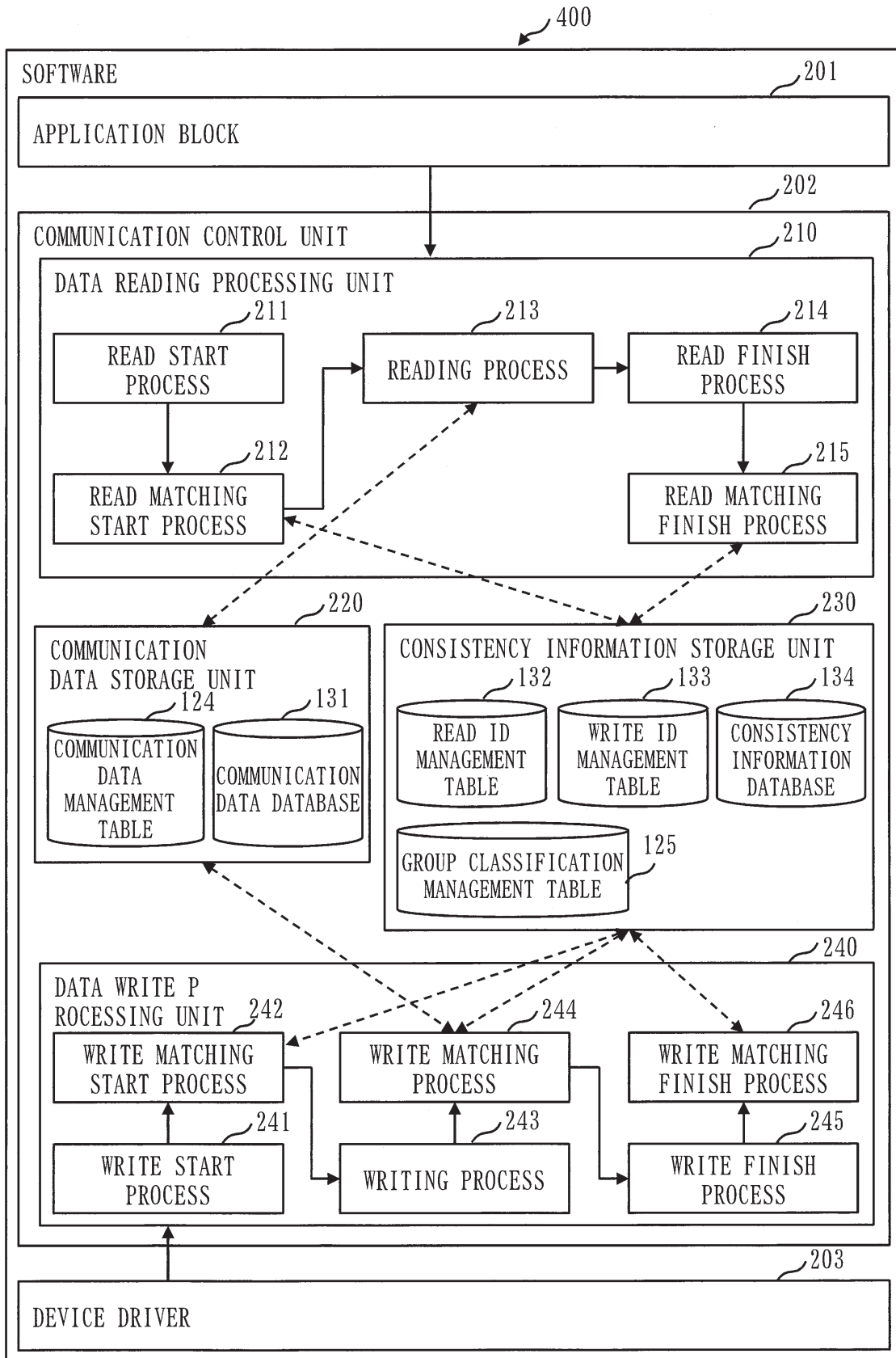
(G) FINISH READING [READ ID = 1]

WRITE-START COUNT	DATA WRITING-IN-PROGRESS FLAG	READING-IN-PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
0	FALSE	<u>0</u>	<u>0</u>	<u>0</u>

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Fig.19



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Fig.20



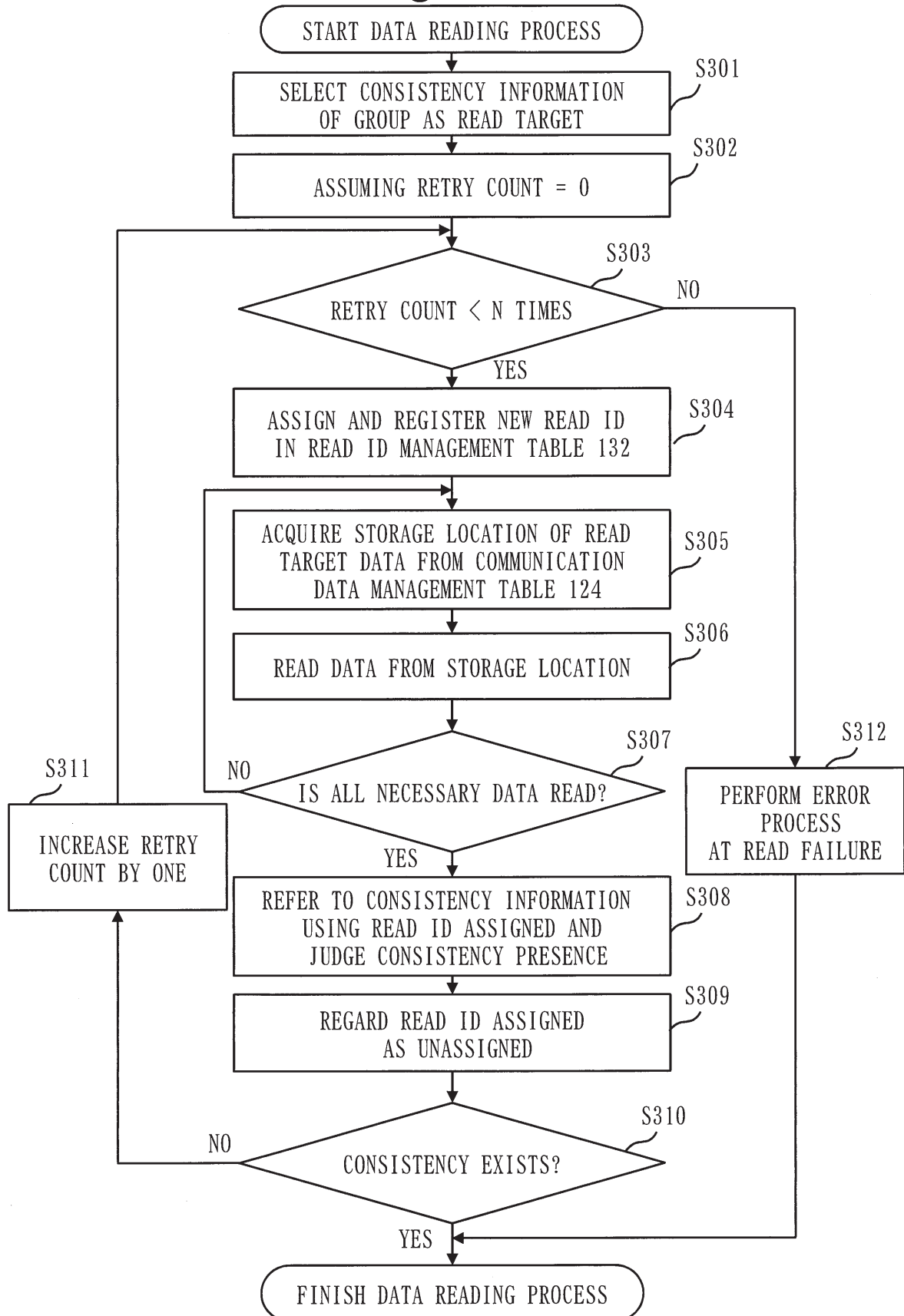
20/22
Fig.21

	SET OF READ DATA
GROUP 1	DATA 1, DATA 3, ...
GROUP 2	DATA 2, DATA 4, ...
GROUP 3	DATA 6, DATA 8, ...
GROUP 4	DATA 5, DATA 7, ...

Fig. 22

	WRITE-START COUNT	DATA WRITING-IN- PROGRESS FLAG	READING-IN- PROGRESS ID NUMBER	READ ID NUMBER	WRITING TIME ID NUMBER
GROUP 1	0	FALSE	0	0	0
GROUP 2	0	FALSE	0	0	0
GROUP 3	0	FALSE	0	0	0
GROUP 4	0	FALSE	0	0	0

21/22
Fig.23



22/22
Fig.24

