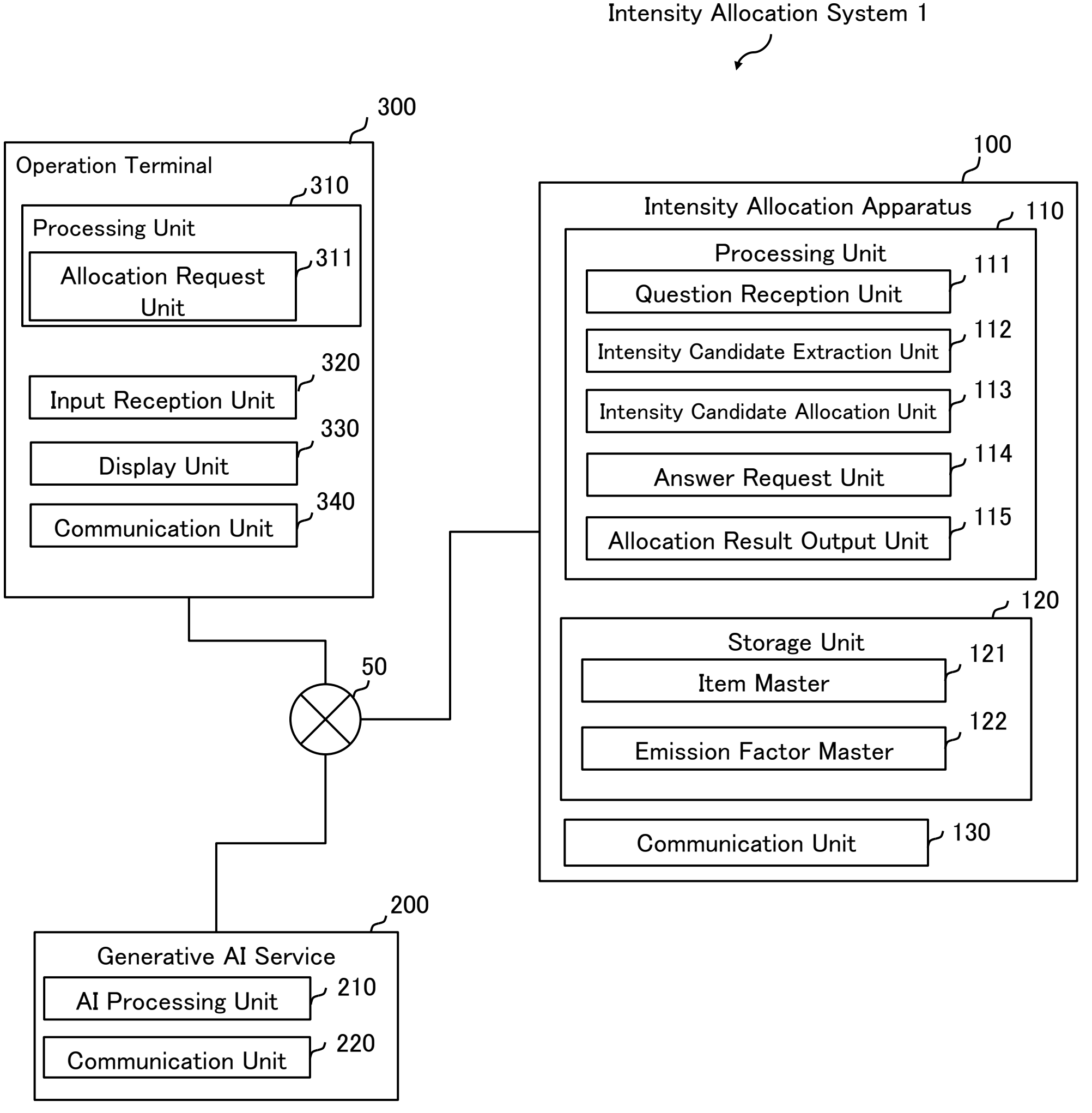

Intensity Allocation System 1
300
Operation Terminal
310
Processing Unit
311
Allocation Request Unit
320
Input Reception Unit
330
Display Unit
340
Communication Unit
50
100
Intensity Allocation Apparatus
110
Processing Unit
111
Question Reception Unit
112
Intensity Candidate Extraction Unit
113
Intensity Candidate Allocation Unit
114
Answer Request Unit
115
Allocation Result Output Unit
120
Storage Unit
121
Item Master
122
Emission Factor Master
130
Communication Unit
200
Generative AI Service
210
AI Processing Unit
220
Communication Unit

Fig. 1

Item Master 121

121a 121b 121c

Item Name	Item Group	HS Code
Dark chocolate drops 50% (1 kg)	Cake ingredients	HS180632
...	...	...

Fig. 2

Emission Factor Master 122

122a	122b	122c	122d	122e
Inventory Database	Item Name	Location	Emission Factor	Effective Period
3EID	Chocolate	JP	1.9 $kgCO_2e$/kilogram	yyyy/mm/dd～yyyy/mm/dd
…	…	…	…	…

Fig. 3

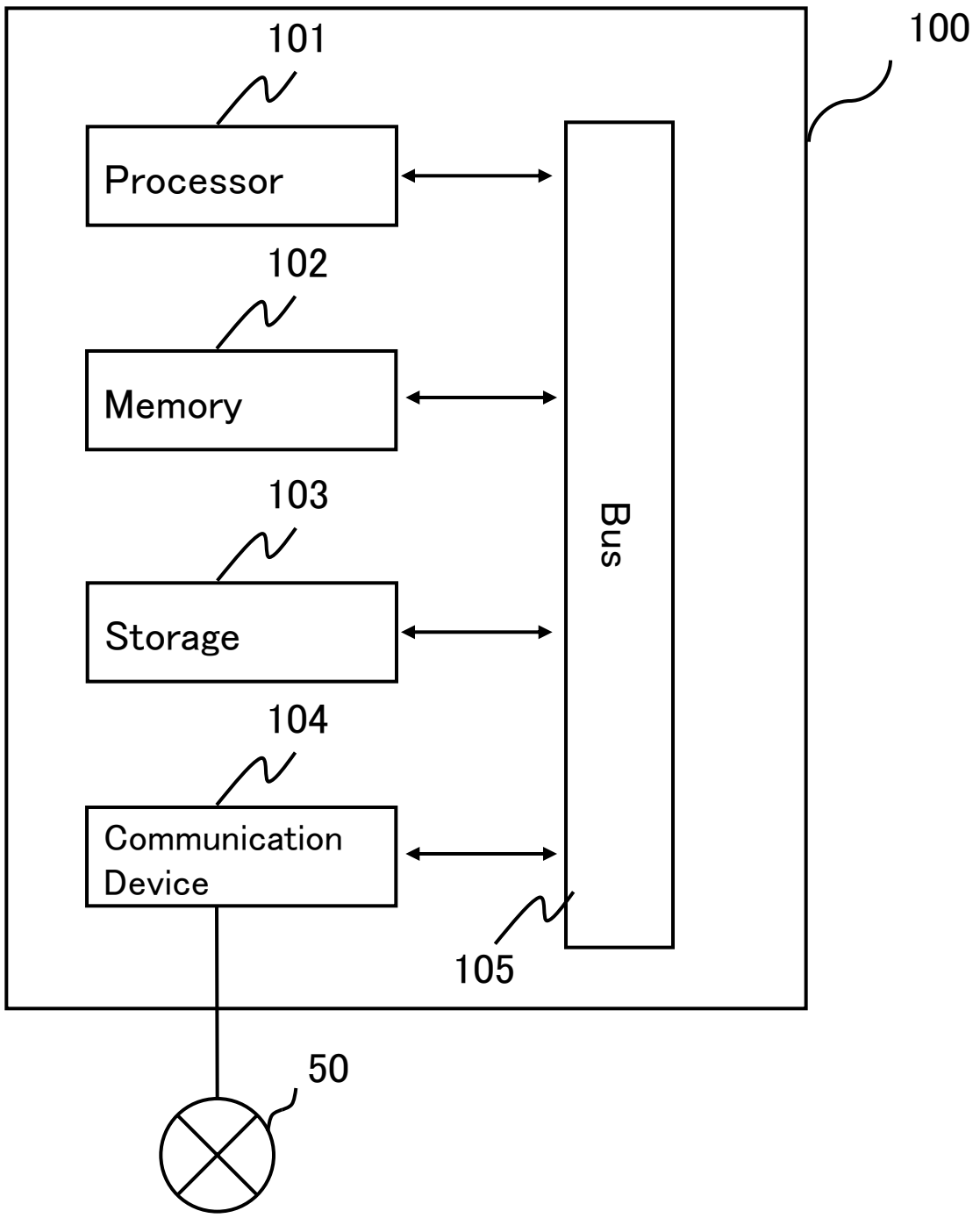

100
101
Processor
102
Memory
103
Storage
104
Communication
Device
Bus
105
50

Fig. 4

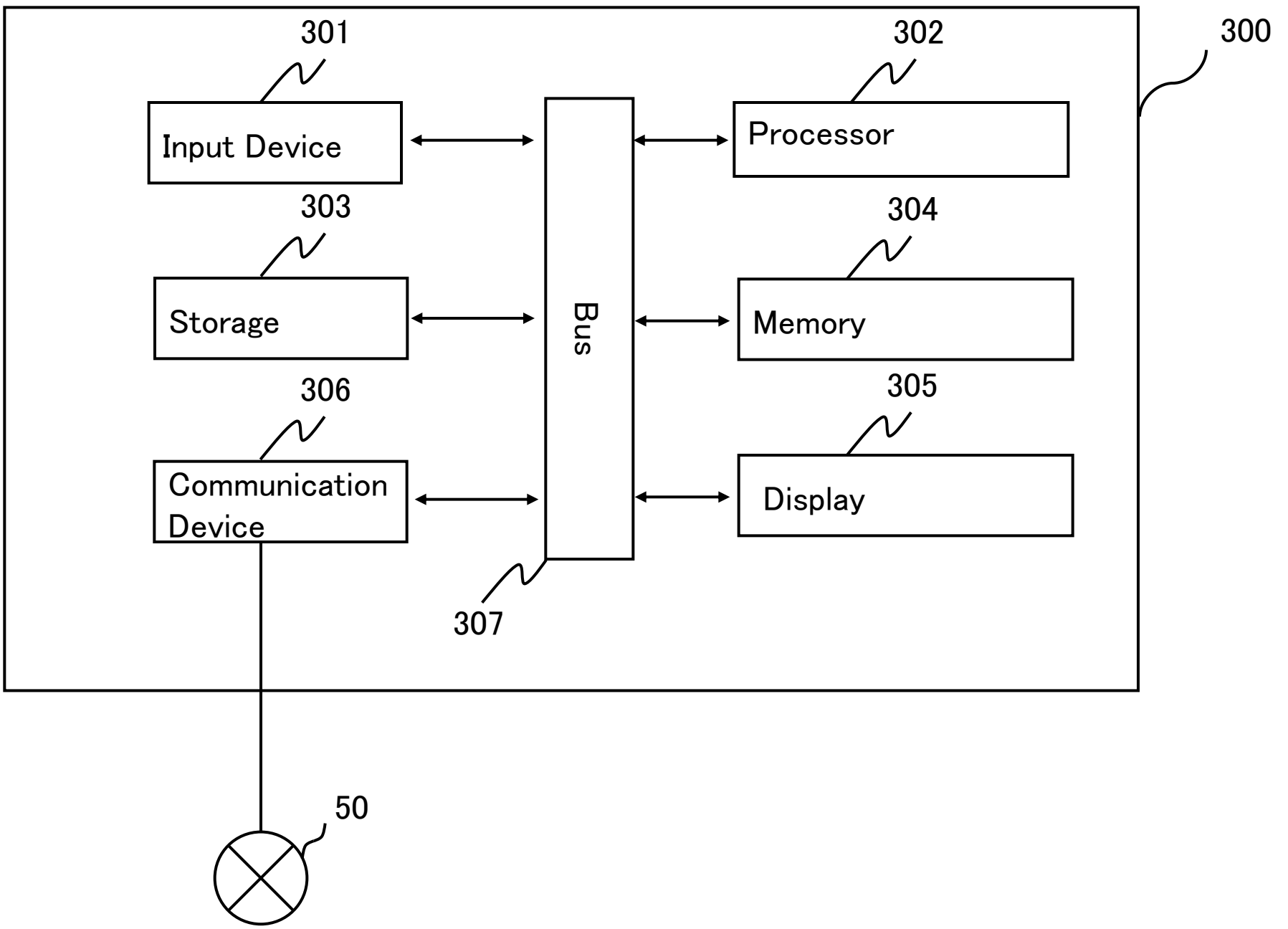

301
302
300
Input Device
Processor
303
304
Storage
Bus
Memory
306
305
Communication Device
Display
307
50

Fig. 5

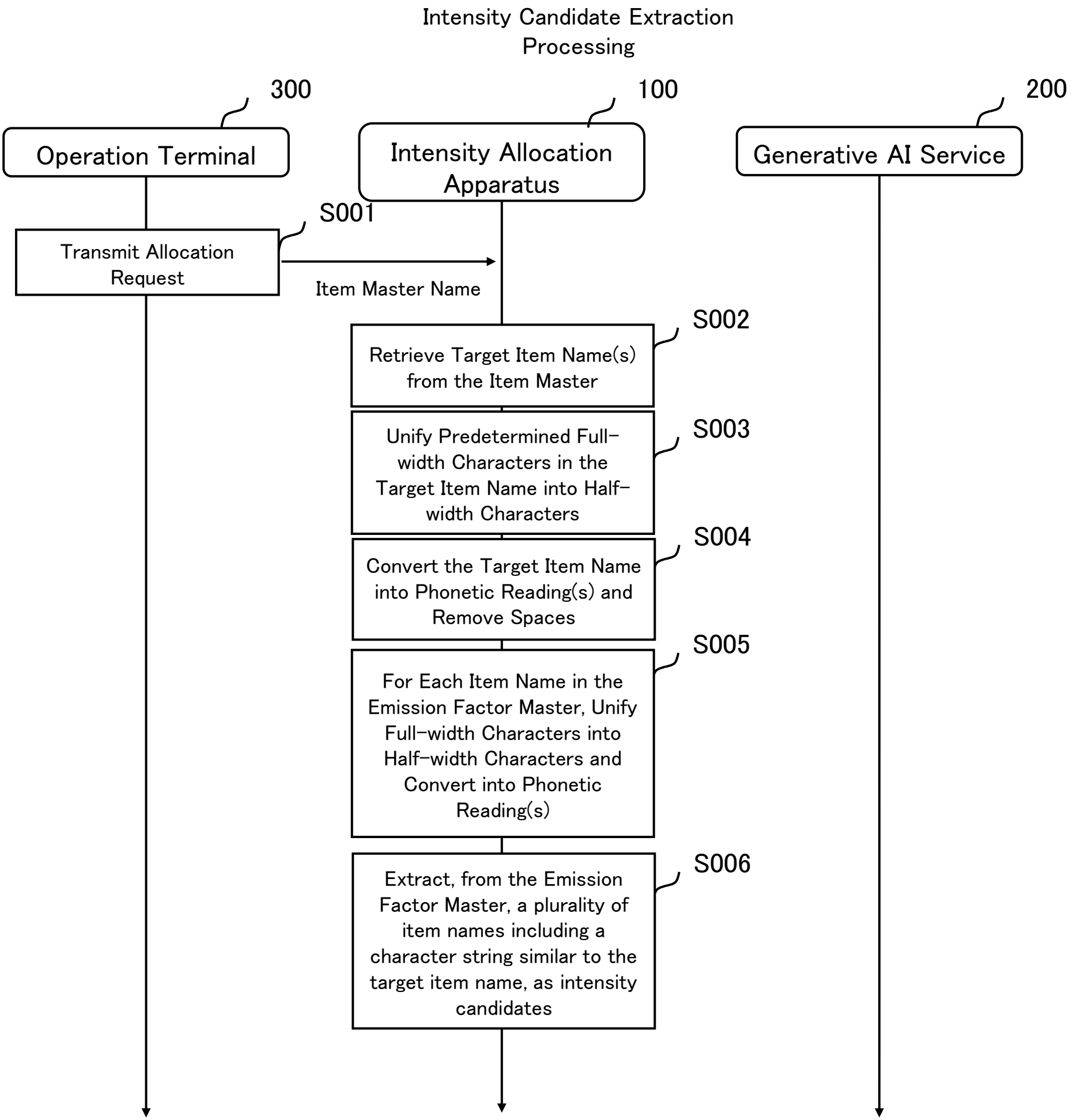

Intensity Candidate Extraction Processing
300
Operation Terminal
100
Intensity Allocation Apparatus
200
Generative AI Service
S001
Transmit Allocation Request
Item Master Name
S002
Retrieve Target Item Name(s) from the Item Master
S003
Unify Predetermined Full-width Characters in the Target Item Name into Half-width Characters
S004
Convert the Target Item Name into Phonetic Reading(s) and Remove Spaces
S005
For Each Item Name in the Emission Factor Master, Unify Full-width Characters into Half-width Characters and Convert into Phonetic Reading(s)
S006
Extract, from the Emission Factor Master, a plurality of item names including a character string similar to the target item name, as intensity candidates

Fig. 6

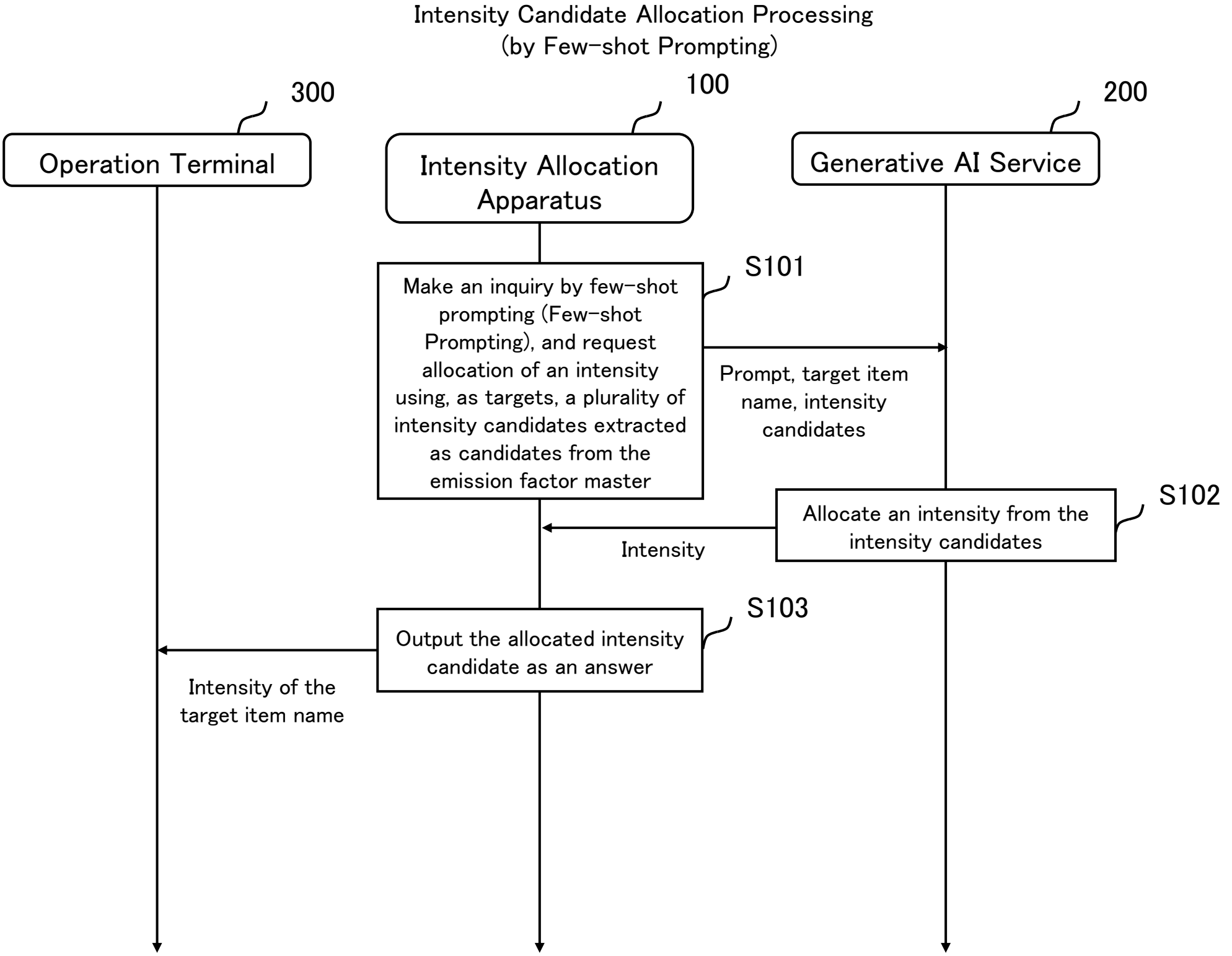

Intensity Candidate Allocation Processing
(by Few-shot Prompting)
300
Operation Terminal
100
Intensity Allocation Apparatus
200
Generative AI Service
S101
Make an inquiry by few-shot prompting (Few-shot Prompting), and request allocation of an intensity using, as targets, a plurality of intensity candidates extracted as candidates from the emission factor master
Prompt, target item name, intensity candidates
S102
Allocate an intensity from the intensity candidates
Intensity
S103
Output the allocated intensity candidate as an answer
Intensity of the target item name

Fig. 7

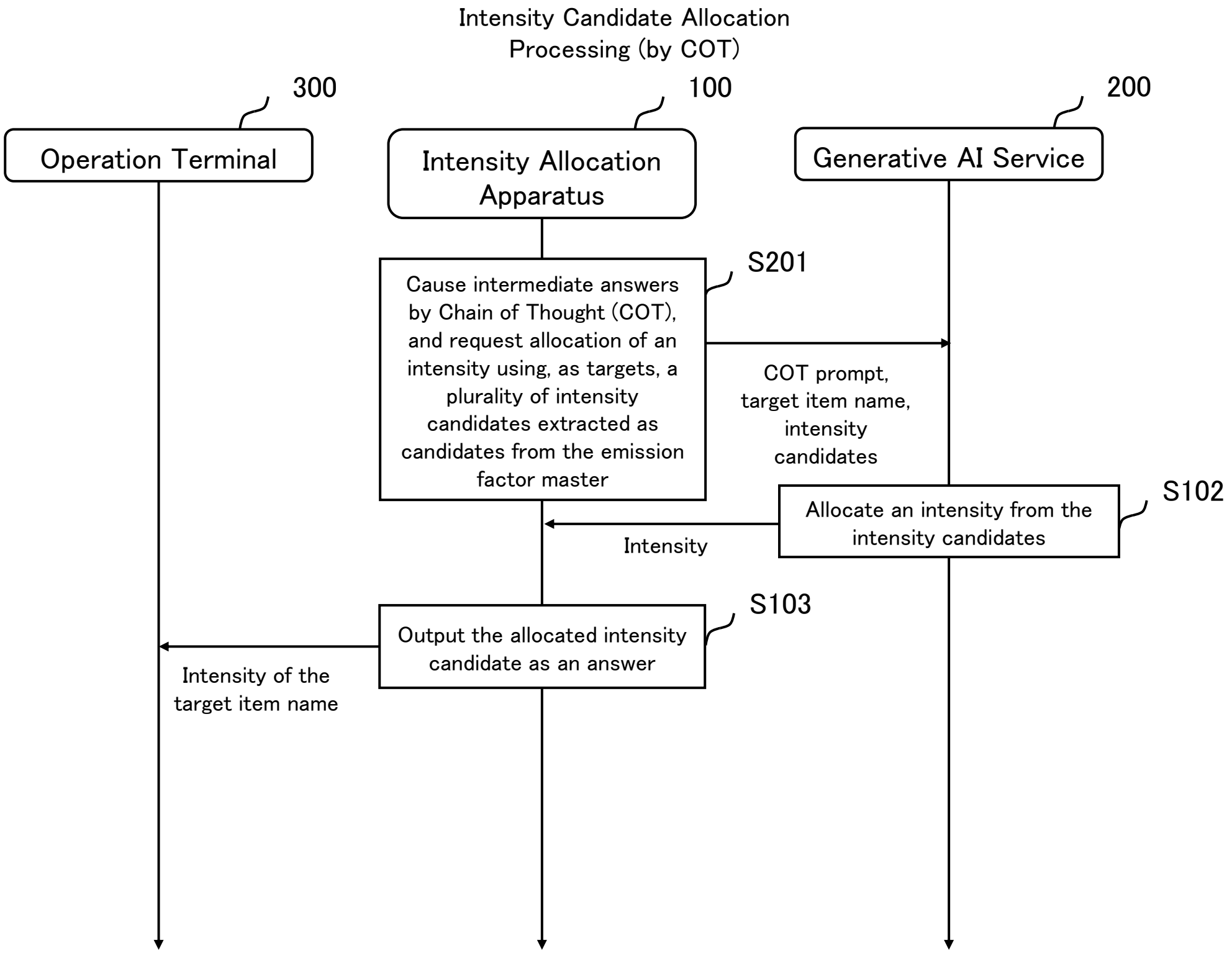

Intensity Candidate Allocation Processing (by COT)
300
Operation Terminal
100
Intensity Allocation Apparatus
200
Generative AI Service
S201
Cause intermediate answers by Chain of Thought (COT), and request allocation of an intensity using, as targets, a plurality of intensity candidates extracted as candidates from the emission factor master
COT prompt, target item name, intensity candidates
S102
Allocate an intensity from the intensity candidates
Intensity
S103
Output the allocated intensity candidate as an answer
Intensity of the target item name

Fig. 8

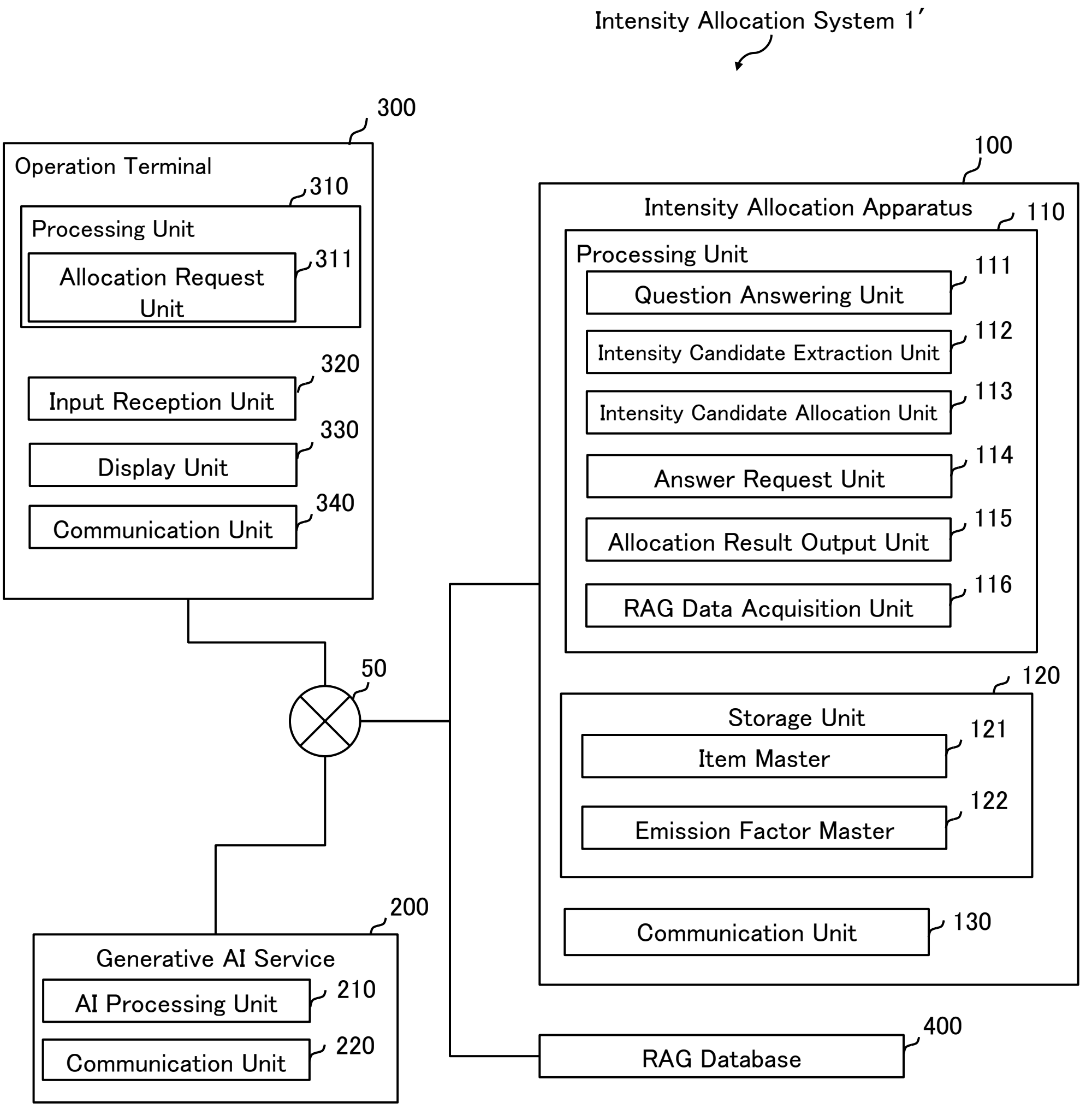

Intensity Allocation System 1′
300
Operation Terminal
310
Processing Unit
311
Allocation Request Unit
320
Input Reception Unit
330
Display Unit
340
Communication Unit
50
200
Generative AI Service
210
AI Processing Unit
220
Communication Unit
100
Intensity Allocation Apparatus
110
Processing Unit
111
Question Answering Unit
112
Intensity Candidate Extraction Unit
113
Intensity Candidate Allocation Unit
114
Answer Request Unit
115
Allocation Result Output Unit
116
RAG Data Acquisition Unit
120
Storage Unit
121
Item Master
122
Emission Factor Master
130
Communication Unit
400
RAG Database

Fig. 9

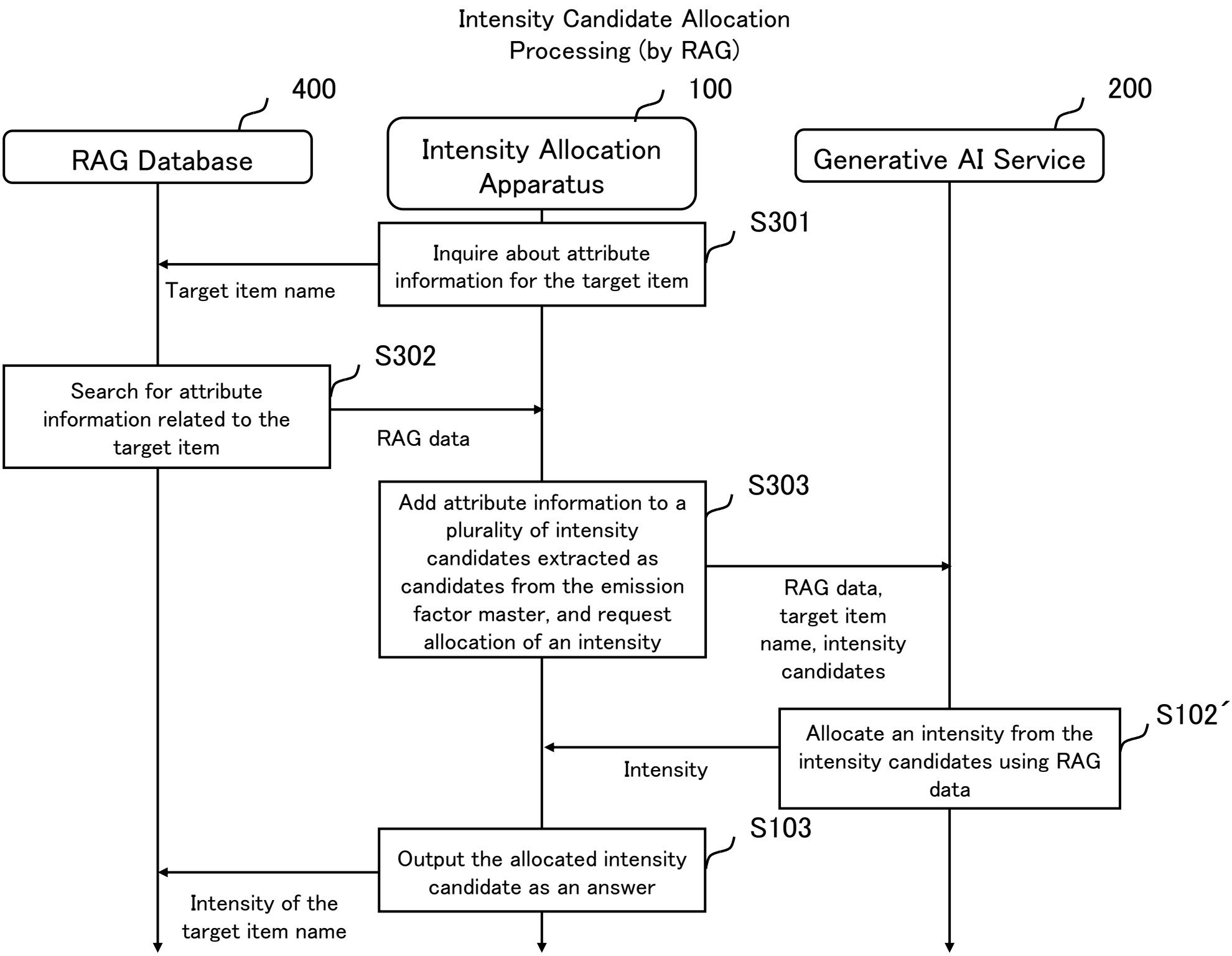

Intensity Candidate Allocation Processing (by RAG)
400
RAG Database
100
Intensity Allocation Apparatus
200
Generative AI Service
S301
Inquire about attribute information for the target item
Target item name
S302
Search for attribute information related to the target item
RAG data
S303
Add attribute information to a plurality of intensity candidates extracted as candidates from the emission factor master, and request allocation of an intensity
RAG data, target item name, intensity candidates
S102´
Allocate an intensity from the intensity candidates using RAG data
Intensity
S103
Output the allocated intensity candidate as an answer
Intensity of the target item name

Fig. 10