FIG. 1

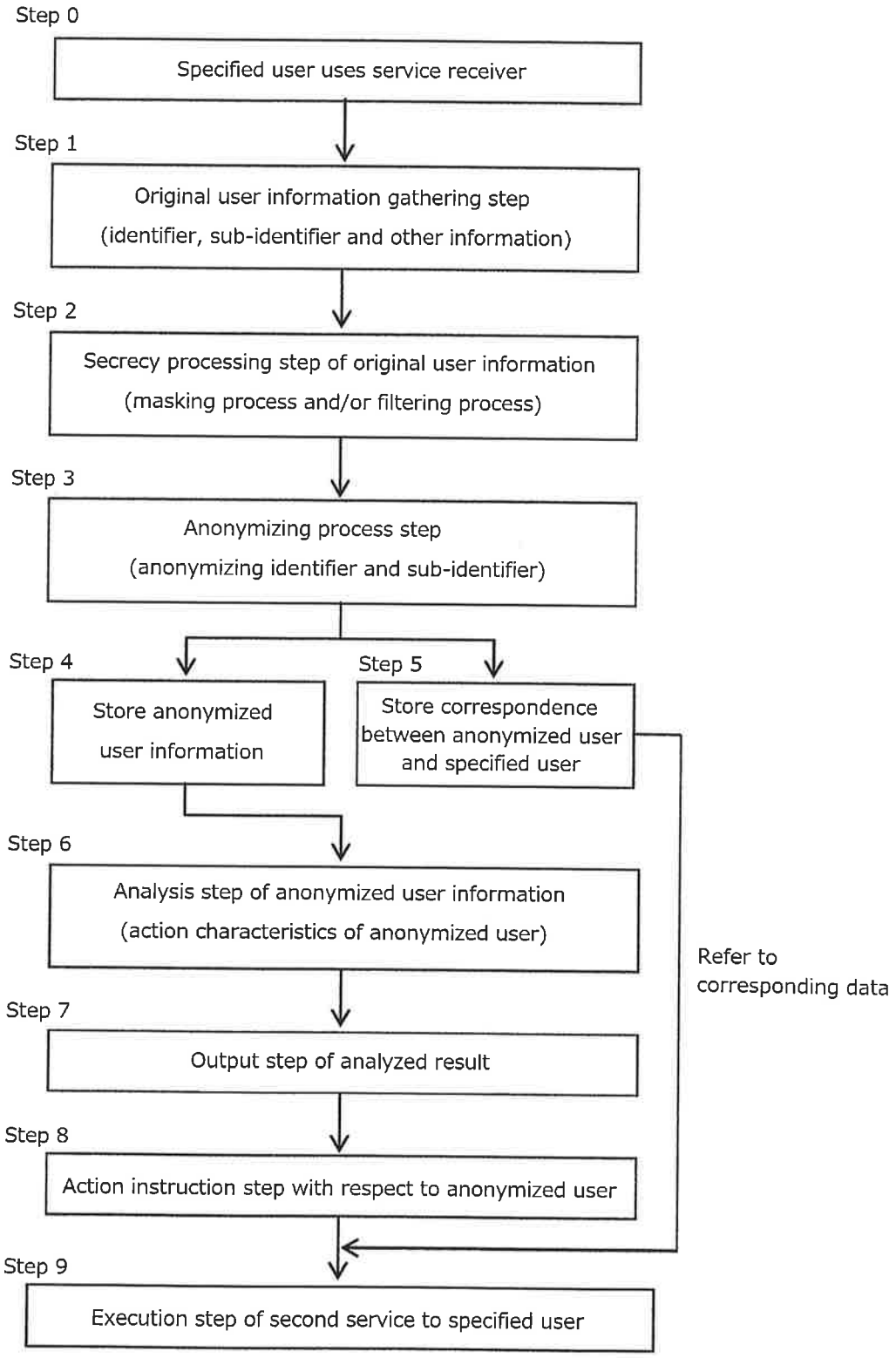

Step 0
Specified user uses service receiver
Step 1
Original user information gathering step
(identifier, sub-identifier and other information)
Step 2
Secrecy processing step of original user information
(masking process and/or filtering process)
Step 3
Anonymizing process step
(anonymizing identifier and sub-identifier)
Step 4
Store anonymized user information
Step 5
Store correspondence between anonymized user and specified user
Step 6
Analysis step of anonymized user information
(action characteristics of anonymized user)
Step 7
Output step of analyzed result
Step 8
Action instruction step with respect to anonymized user
Step 9
Execution step of second service to specified user
Refer to corresponding data

FIG. 2

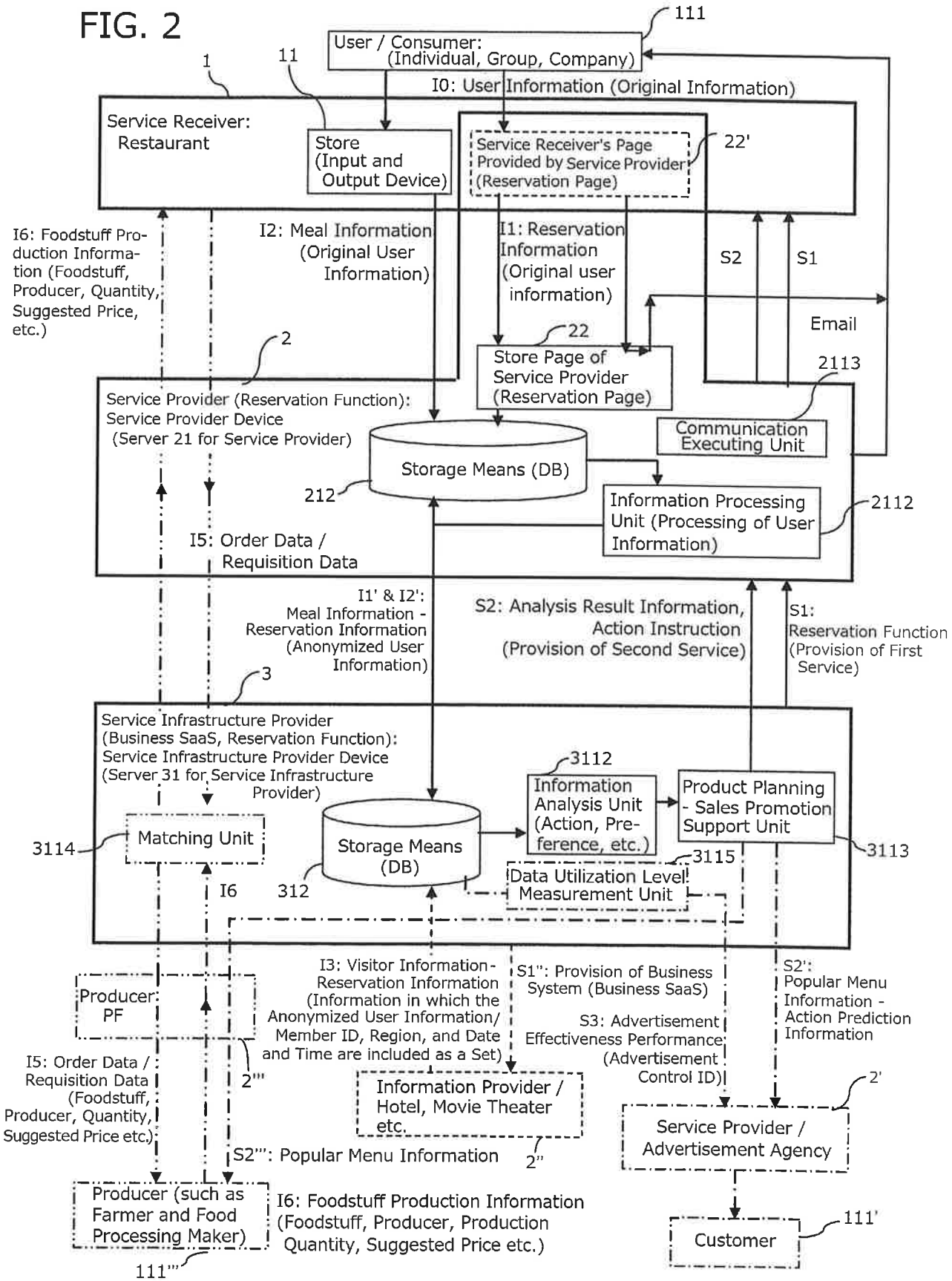

111
User / Consumer: (Individual, Group, Company)
1
11
I0: User Information (Original Information)
Service Receiver: Restaurant
Store (Input and Output Device)
Service Receiver's Page Provided by Service Provider (Reservation Page)
22'
I6: Foodstuff Production Information (Foodstuff, Producer, Quantity, Suggested Price, etc.)
I2: Meal Information (Original User Information)
I1: Reservation Information (Original user information)
S2
S1
Email
2
22
Store Page of Service Provider (Reservation Page)
2113
Service Provider (Reservation Function): Service Provider Device (Server 21 for Service Provider)
Communication Executing Unit
Storage Means (DB)
212
Information Processing Unit (Processing of User Information)
2112
I5: Order Data / Requisition Data
I1' & I2': Meal Information - Reservation Information (Anonymized User Information)
S2: Analysis Result Information, Action Instruction (Provision of Second Service)
S1: Reservation Function (Provision of First Service)
3
Service Infrastructure Provider (Business SaaS, Reservation Function): Service Infrastructure Provider Device (Server 31 for Service Infrastructure Provider)
3112
Information Analysis Unit (Action, Preference, etc.)
Product Planning - Sales Promotion Support Unit
3113
3114
Matching Unit
Storage Means (DB)
312
3115
Data Utilization Level Measurement Unit
I6
I3: Visitor Information - Reservation Information (Information in which the Anonymized User Information/ Member ID, Region, and Date and Time are included as a Set)
S1'': Provision of Business System (Business SaaS)
S3: Advertisement Effectiveness Performance (Advertisement Control ID)
S2': Popular Menu Information - Action Prediction Information
Producer: PF
2'''
I5: Order Data / Requisition Data (Foodstuff, Producer, Quantity, Suggested Price etc.)
Information Provider / Hotel, Movie Theater etc.
2''
2'
Service Provider / Advertisement Agency
S2''': Popular Menu Information
Producer (such as Farmer and Food Processing Maker)
I6: Foodstuff Production Information (Foodstuff, Producer, Production Quantity, Suggested Price etc.)
111'
Customer
111'''

FIG. 3

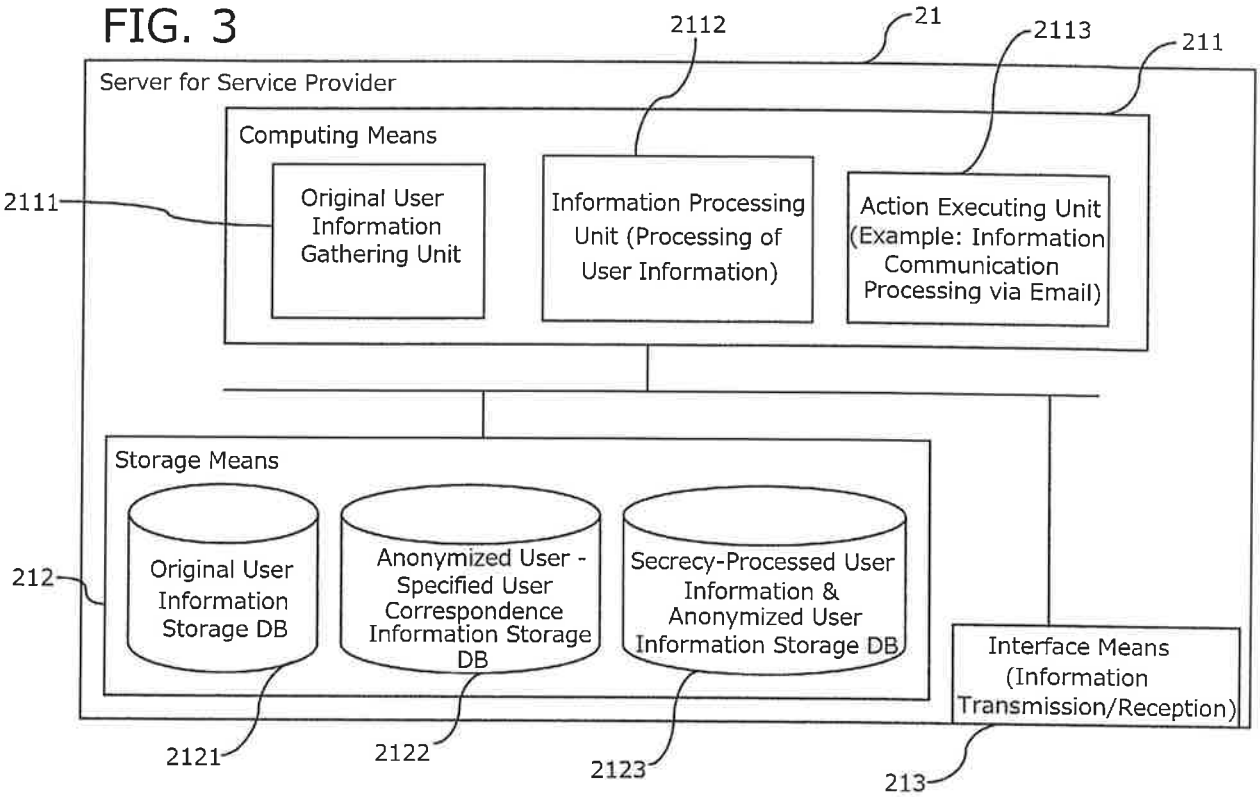

Server for Service Provider
Computing Means
Original User Information Gathering Unit
Information Processing Unit (Processing of User Information)
Action Executing Unit (Example: Information Communication Processing via Email)
Storage Means
Original User Information Storage DB
Anonymized User - Specified User Correspondence Information Storage DB
Secrecy-Processed User Information & Anonymized User Information Storage DB
Interface Means (Information Transmission/Reception)
2111
2112
21
2113
211
212
2121
2122
2123
213

FIG. 4

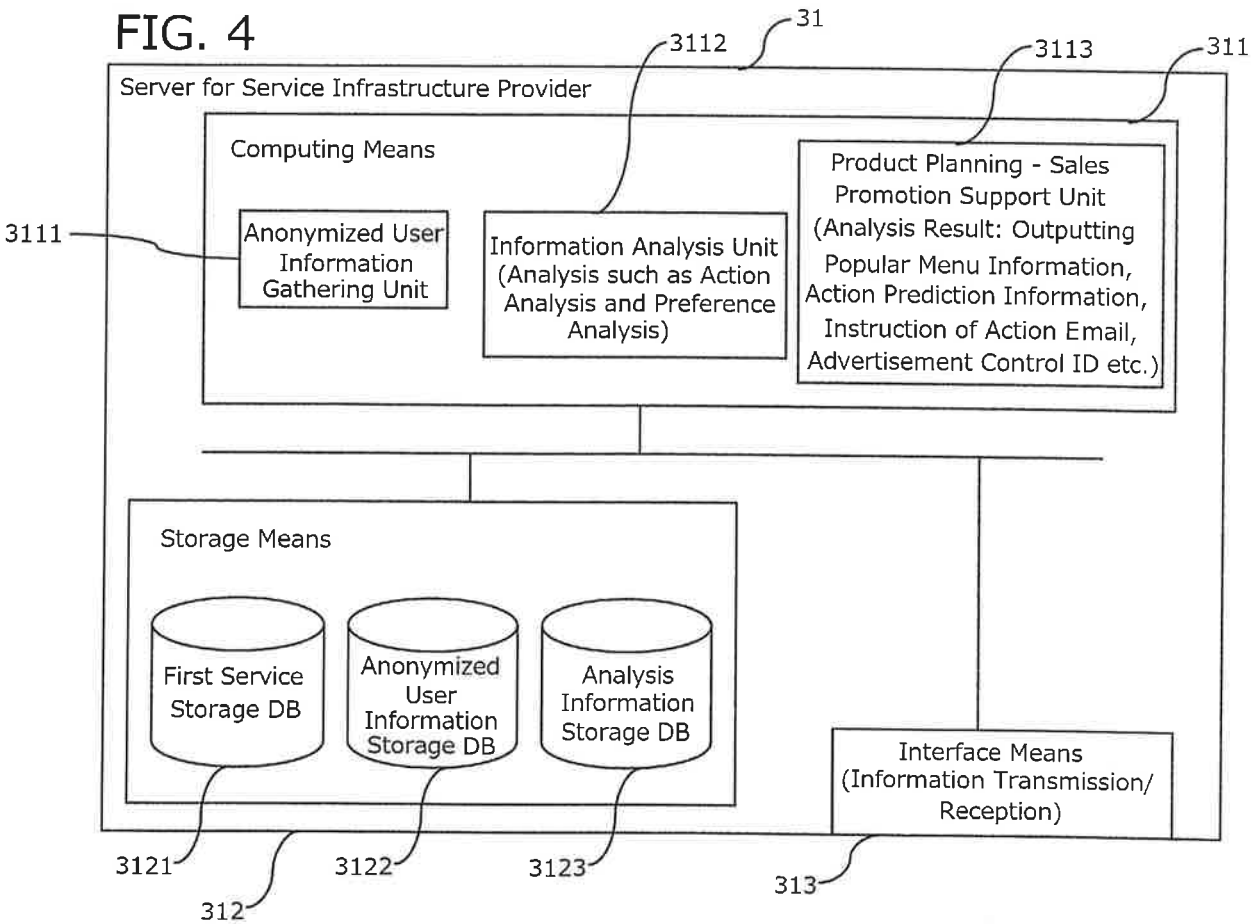

Server for Service Infrastructure Provider
Computing Means
Anonymized User Information Gathering Unit
Information Analysis Unit (Analysis such as Action Analysis and Preference Analysis)
Product Planning - Sales Promotion Support Unit (Analysis Result: Outputting Popular Menu Information, Action Prediction Information, Instruction of Action Email, Advertisement Control ID etc.)
Storage Means
First Service Storage DB
Anonymized User Information Storage DB
Analysis Information Storage DB
Interface Means (Information Transmission/ Reception)
3111
3112
31
3113
311
3121
3122
3123
312
313

FIG. 5

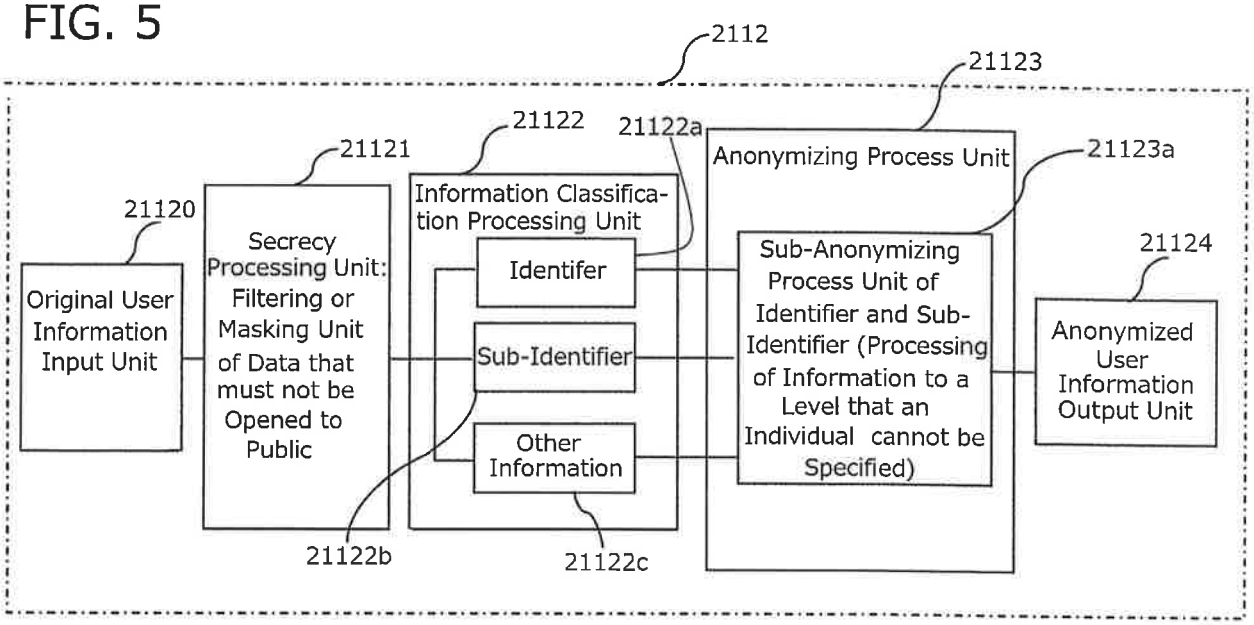

2112
21123
21122
21122a
21121
Anonymizing Process Unit
21123a
21120
Information Classifica-tion Processing Unit
Secrecy Processing Unit: Filtering or Masking Unit of Data that must not be Opened to Public
Identifer
Sub-Anonymizing Process Unit of Identifier and Sub-Identifier (Processing of Information to a Level that an Individual cannot be Specified)
21124
Original User Information Input Unit
Sub-Identifier
Anonymized User Information Output Unit
Other Information
21122b
21122c

FIG. 6

Specified User A	Original User Information	Anonymized User X	Anonymized User Information
	Identifier (Name, ID, Email Address, Address and so on) (Example: ID 12345)		Anonymize Identifier and Create Sub-identifier ID is Changed to Another ID Incapable of Specifying Individual Outside System (Example: ID xxxxx)
	Sub-Identifier (Sex, Age, Address) (Example: Street Address, Yokohama-Shi, 65, Male)		Sub-identifier is Processed so that Specification is Impossible (Example: 60s, Male, Living in Yokohama)
	Other Information Example: Meal Information - Reservation Information *1 (Visit Information - Reservation Information *2)		Filing or Masking of Other Information that must not be Opened to Public Meal Information - Reservation Information *1 (Visit Information - Reservation Information *2)
Specified User B	Original User Information	Anonymized User Y	Anonymized User Information
	Identifier (Name, ID, Email Address, Address and so on) (Example: ID 67890)		Convert Identifier (Anonymize ID and so on) (Example: ID yyyyy)
	Sub-Identifier (Sex, Age, Address) Street Address, Shinagawa-ku, Tokyo, 35, Female		Sub-identifier is Processed so that Specification is Impossible (Example: 30s, Female, Living in Tokyo)
	Other Information Example: Meal Information - Reservation Information *1 (Visit Information - Reservation Information *2)		Filing or Masking of Other Information that must not be Opened to Public Meal Information - Reservation Information *1 (Visit Information - Reservation Information *2)

*1 Meal Information - Reservation Information:
Store Number, Menu Number, Date and Time, Number of People/Configuration, Code for Advertisement Control

*2 Visit Information - Reservation Information:
Information including Member ID, Location and Date and Time as a Set

FIG. 7

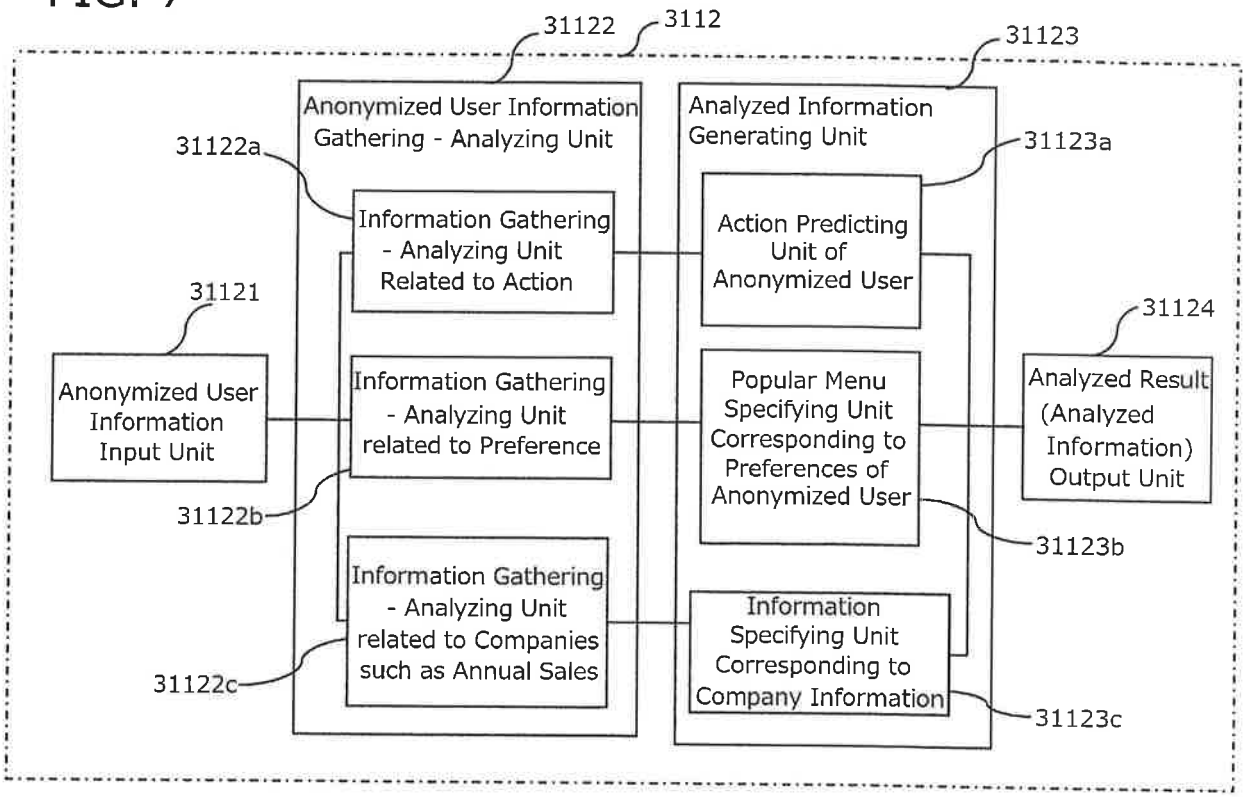


FIG. 8

1001 Anonymized User Information having Processed the Original User Information	1002 Analyzed Results
Meal Information, Reservation Information, Other Information	Action Prediction Result (Action Prediction Information) Preference Analysis Result (Popular Menu Information)

FIG. 9

1101 Anonymized User Information having Processed the Original User Information	1102 Analyzed Results
Meal Information, Reservation Information, Other Information	Manufacturers having annual sales of 10 to 20 billion yen spend one million yen per month as advertising expenses
	Company employees in their 40s that work for major companies having an annual sales of 100 billion yen or higher often dine out on Wednesdays

FIG. 10

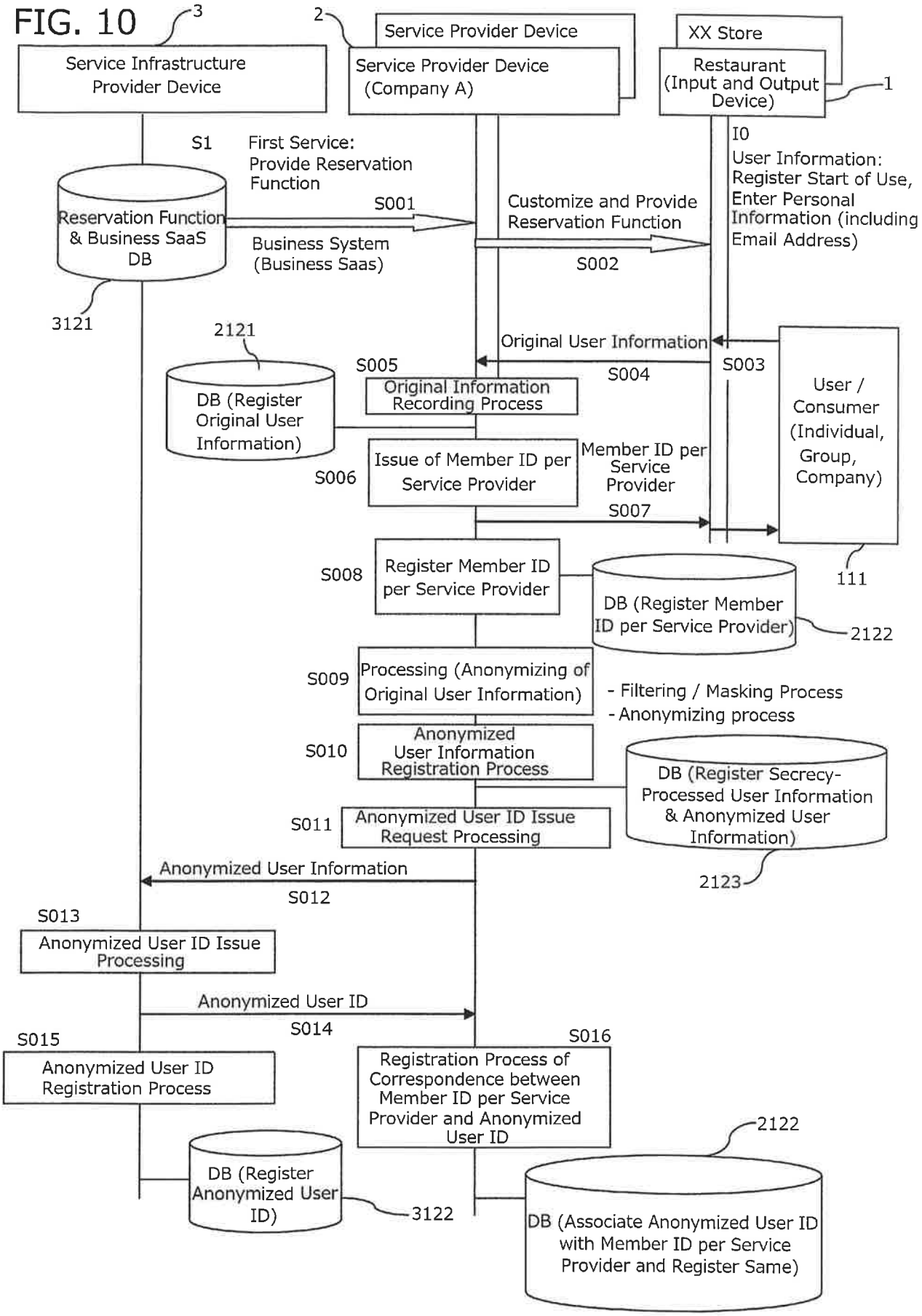
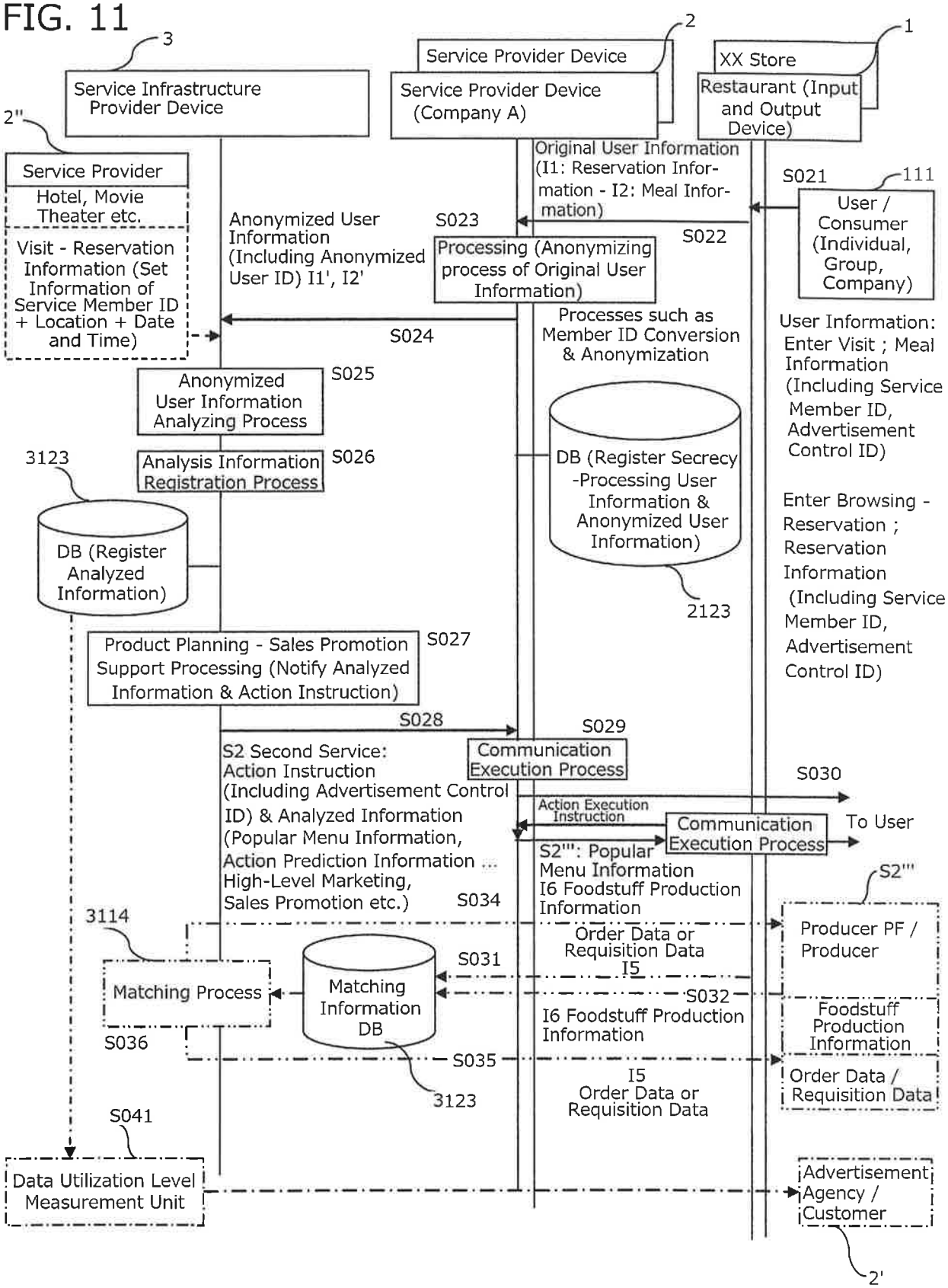

3
Service Infrastructure Provider Device
2
Service Provider Device
Service Provider Device (Company A)
XX Store
Restaurant (Input and Output Device)
1
S1
First Service: Provide Reservation Function
Reservation Function & Business SaaS DB
3121
S001
Business System (Business Saas)
Customize and Provide Reservation Function
S002
I0
User Information: Register Start of Use, Enter Personal Information (including Email Address)
2121
DB (Register Original User Information)
S005
Original Information Recording Process
Original User Information
S004
S003
User / Consumer (Individual, Group, Company)
111
S006
Issue of Member ID per Service Provider
Member ID per Service Provider
S007
S008
Register Member ID per Service Provider
DB (Register Member ID per Service Provider)
2122
S009
Processing (Anonymizing of Original User Information)
- Filtering / Masking Process
- Anonymizing process
S010
Anonymized User Information Registration Process
DB (Register Secrecy-Processed User Information & Anonymized User Information)
2123
S011
Anonymized User ID Issue Request Processing
Anonymized User Information
S012
S013
Anonymized User ID Issue Processing
Anonymized User ID
S014
S015
Anonymized User ID Registration Process
S016
Registration Process of Correspondence between Member ID per Service Provider and Anonymized User ID
2122
DB (Register Anonymized User ID)
3122
DB (Associate Anonymized User ID with Member ID per Service Provider and Register Same)

FIG. 11


3
Service Infrastructure Provider Device
2
Service Provider Device
Service Provider Device (Company A)
1
XX Store
Restaurant (Input and Output Device)
2"
Service Provider
Hotel, Movie Theater etc.
Visit - Reservation Information (Set Information of Service Member ID + Location + Date and Time)
Original User Information (I1: Reservation Information - I2: Meal Information)
S021
111
User / Consumer (Individual, Group, Company)
S022
S023
Processing (Anonymizing process of Original User Information)
Anonymized User Information (Including Anonymized User ID) I1', I2'
S024
Processes such as Member ID Conversion & Anonymization
User Information: Enter Visit ; Meal Information (Including Service Member ID, Advertisement Control ID)
Enter Browsing - Reservation ; Reservation Information (Including Service Member ID, Advertisement Control ID)
S025
Anonymized User Information Analyzing Process
3123
Analysis Information Registration Process
S026
DB (Register Secrecy -Processing User Information & Anonymized User Information)
2123
DB (Register Analyzed Information)
Product Planning - Sales Promotion Support Processing (Notify Analyzed Information & Action Instruction)
S027
S028
S029
S2 Second Service: Action Instruction (Including Advertisement Control ID) & Analyzed Information (Popular Menu Information, Action Prediction Information ... High-Level Marketing, Sales Promotion etc.)
Communication Execution Process
S030
Action Execution Instruction
Communication Execution Process
To User
S2''': Popular Menu Information I6 Foodstuff Production Information
S2'''
3114
S034
Order Data or Requisition Data I5
Producer PF / Producer
S031
S032
Matching Process
Matching Information DB
I6 Foodstuff Production Information
Foodstuff Production Information
S036
S035
3123
I5 Order Data or Requisition Data
Order Data / Requisition Data
S041
Data Utilization Level Measurement Unit
Advertisement Agency / Customer
2'