FIG 1

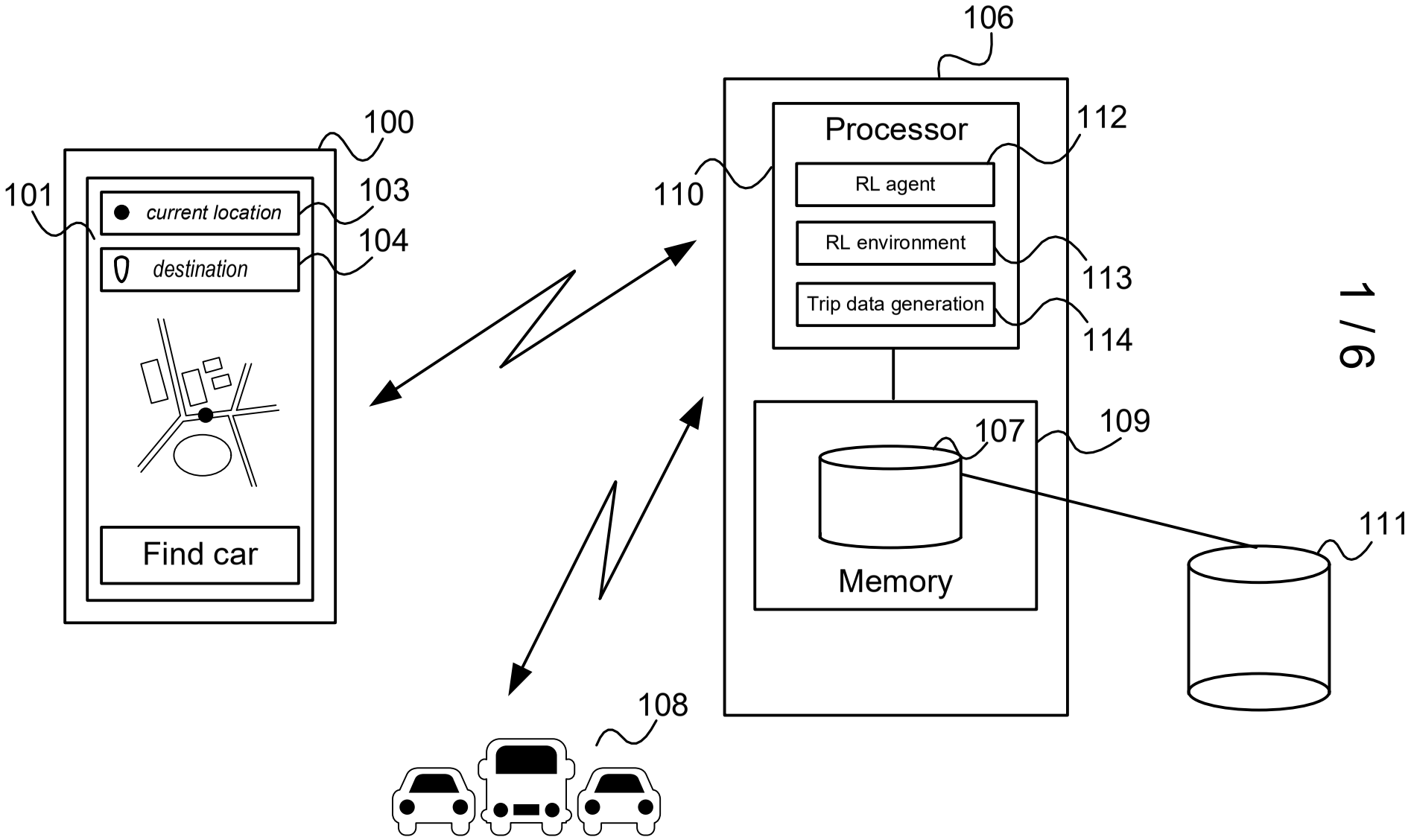

106
100
101
current location
103
destination
104
Find car
110
Processor
112
RL agent
RL environment
113
Trip data generation
114
107
109
Memory
111
108

FIG 2

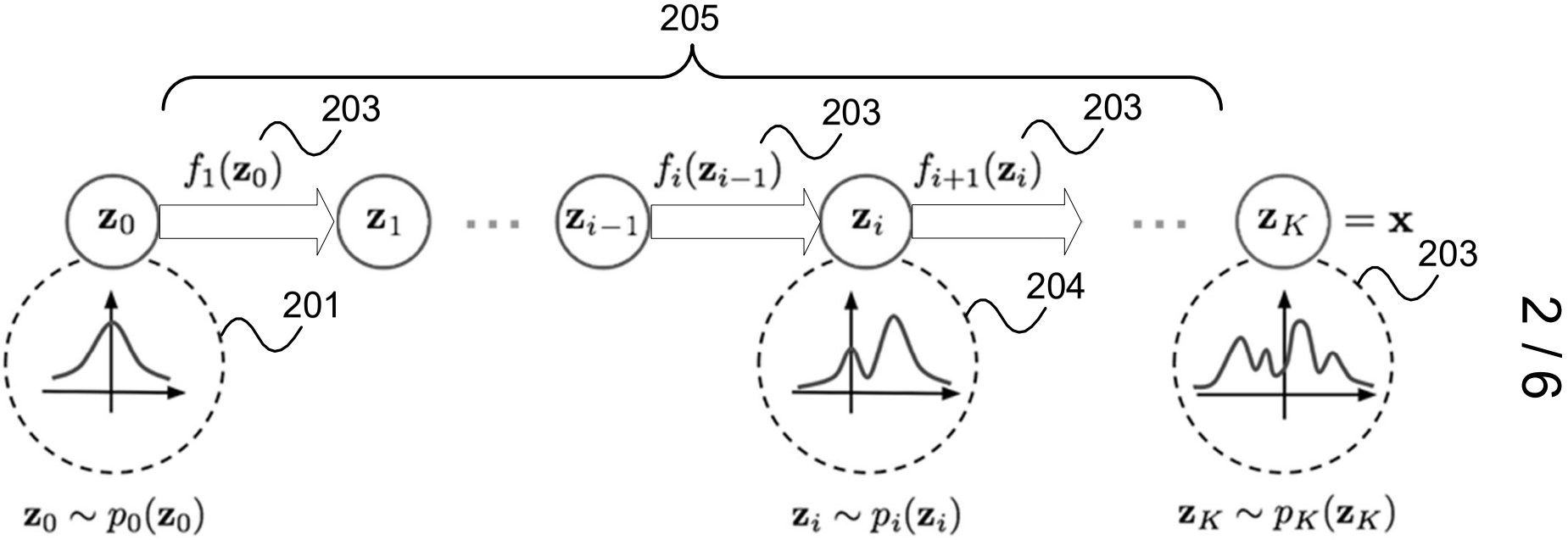

205
203
203
203
$f_1(\mathbf{z}_0)$
$f_i(\mathbf{z}_{i-1})$
$f_{i+1}(\mathbf{z}_i)$
$\mathbf{z}_0$
$\mathbf{z}_1$
$\mathbf{z}_{i-1}$
$\mathbf{z}_i$
$\mathbf{z}_K = \mathbf{x}$
201
204
203
$\mathbf{z}_0 \sim p_0(\mathbf{z}_0)$
$\mathbf{z}_i \sim p_i(\mathbf{z}_i)$
$\mathbf{z}_K \sim p_K(\mathbf{z}_K)$

FIG 3

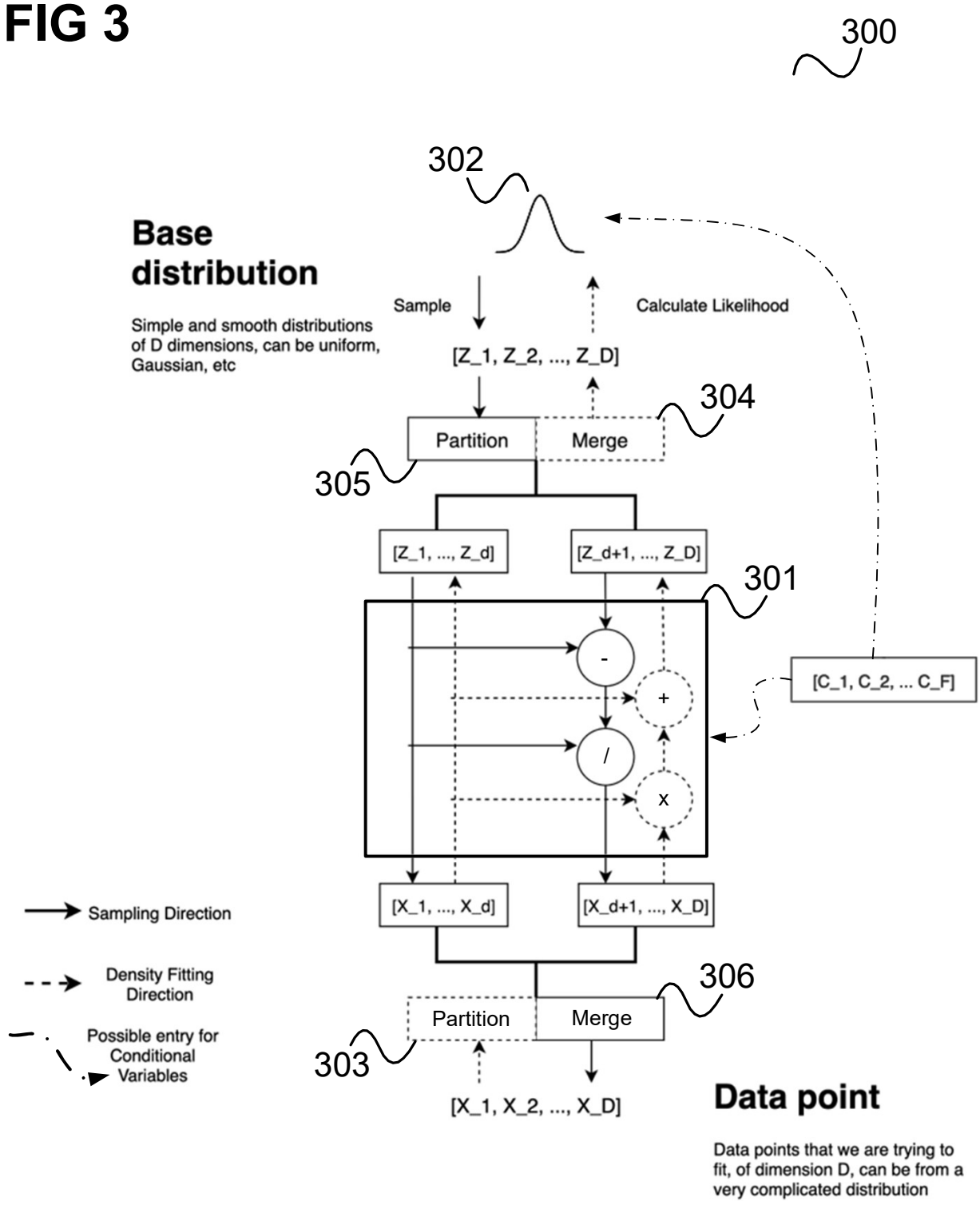

300
302
Base distribution
Simple and smooth distributions of D dimensions, can be uniform, Gaussian, etc
Sample
Calculate Likelihood
[Z_1, Z_2, ..., Z_D]
304
Partition
Merge
305
[Z_1, ..., Z_d]
[Z_d+1, ..., Z_D]
301
-
+
/
x
[C_1, C_2, ... C_F]
[X_1, ..., X_d]
[X_d+1, ..., X_D]
306
Partition
Merge
303
[X_1, X_2, ..., X_D]
Data point
Data points that we are trying to fit, of dimension D, can be from a very complicated distribution
Sampling Direction
Density Fitting Direction
Possible entry for Conditional Variables

FIG 4

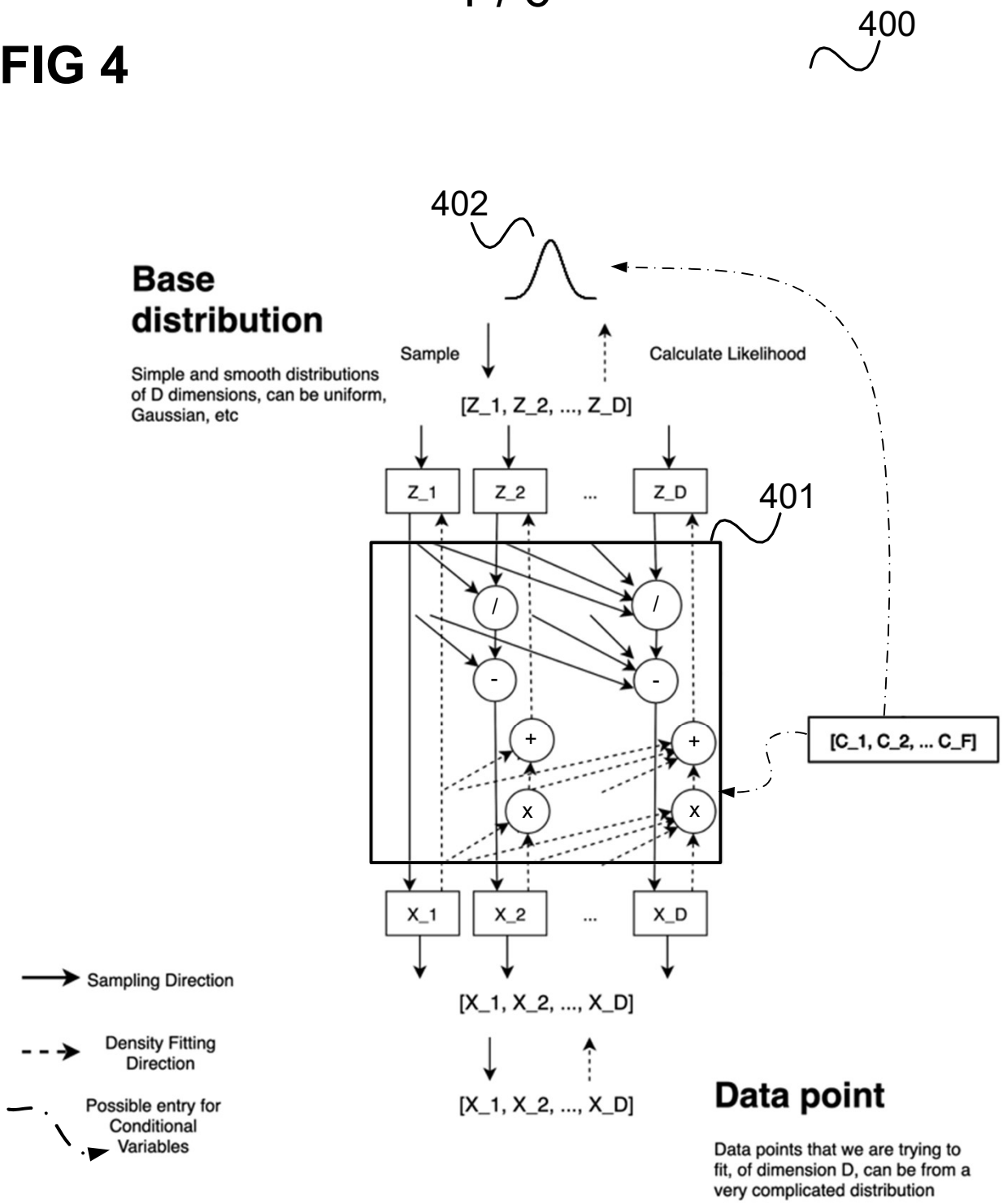
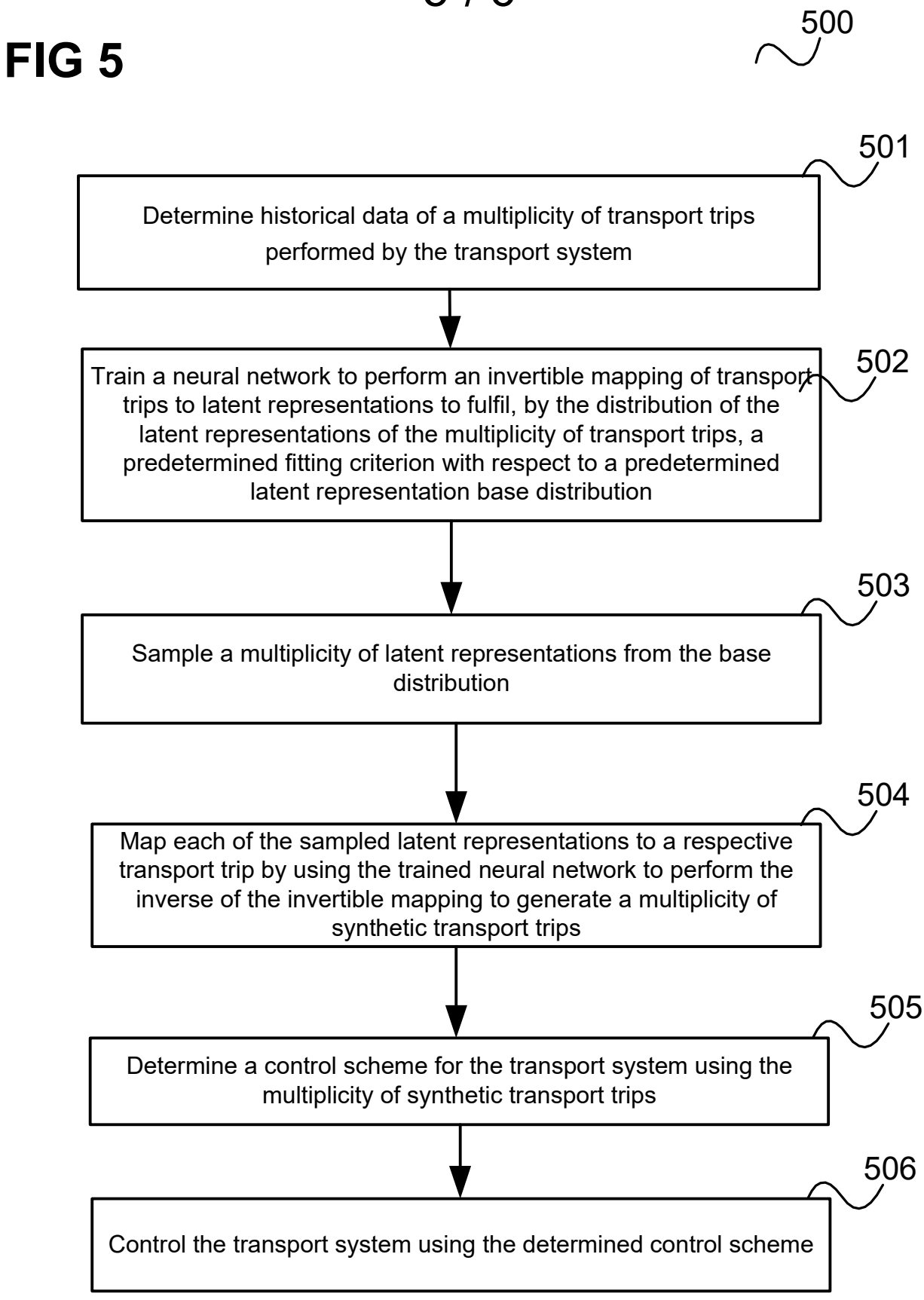

400
402
Base distribution
Simple and smooth distributions of D dimensions, can be uniform, Gaussian, etc
Sample
Calculate Likelihood
[Z_1, Z_2, ..., Z_D]
Z_1
Z_2
...
Z_D
401
/
-
+
x
[C_1, C_2, ... C_F]
X_1
X_2
...
X_D
[X_1, X_2, ..., X_D]
[X_1, X_2, ..., X_D]
Data point
Data points that we are trying to fit, of dimension D, can be from a very complicated distribution
Sampling Direction
Density Fitting Direction
Possible entry for Conditional Variables

FIG 5


500
501
Determine historical data of a multiplicity of transport trips performed by the transport system
502
Train a neural network to perform an invertible mapping of transport trips to latent representations to fulfil, by the distribution of the latent representations of the multiplicity of transport trips, a predetermined fitting criterion with respect to a predetermined latent representation base distribution
503
Sample a multiplicity of latent representations from the base distribution
504
Map each of the sampled latent representations to a respective transport trip by using the trained neural network to perform the inverse of the invertible mapping to generate a multiplicity of synthetic transport trips
505
Determine a control scheme for the transport system using the multiplicity of synthetic transport trips
506
Control the transport system using the determined control scheme

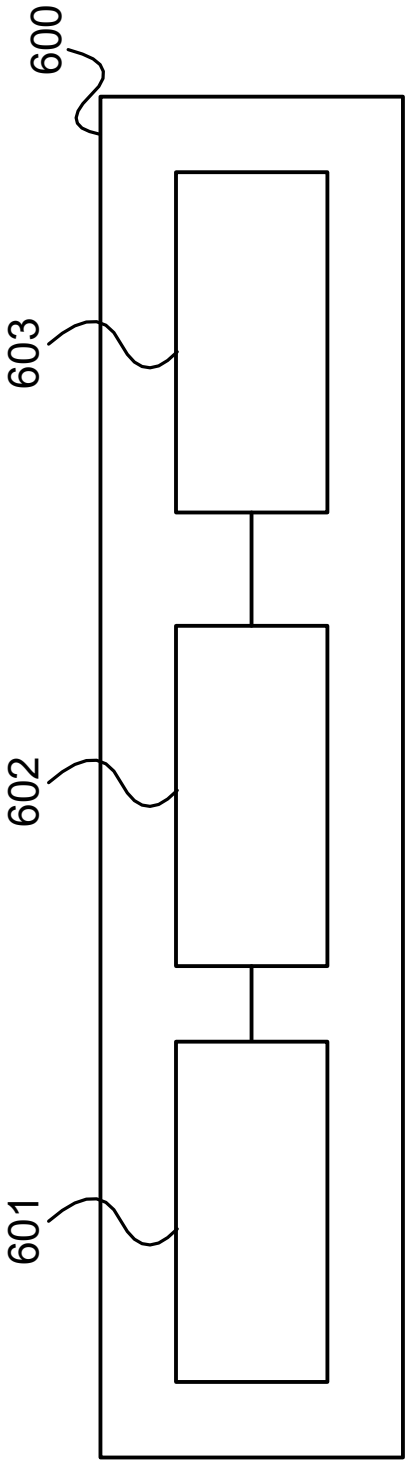


FIG 6