

FIG. 1
RELATED ART

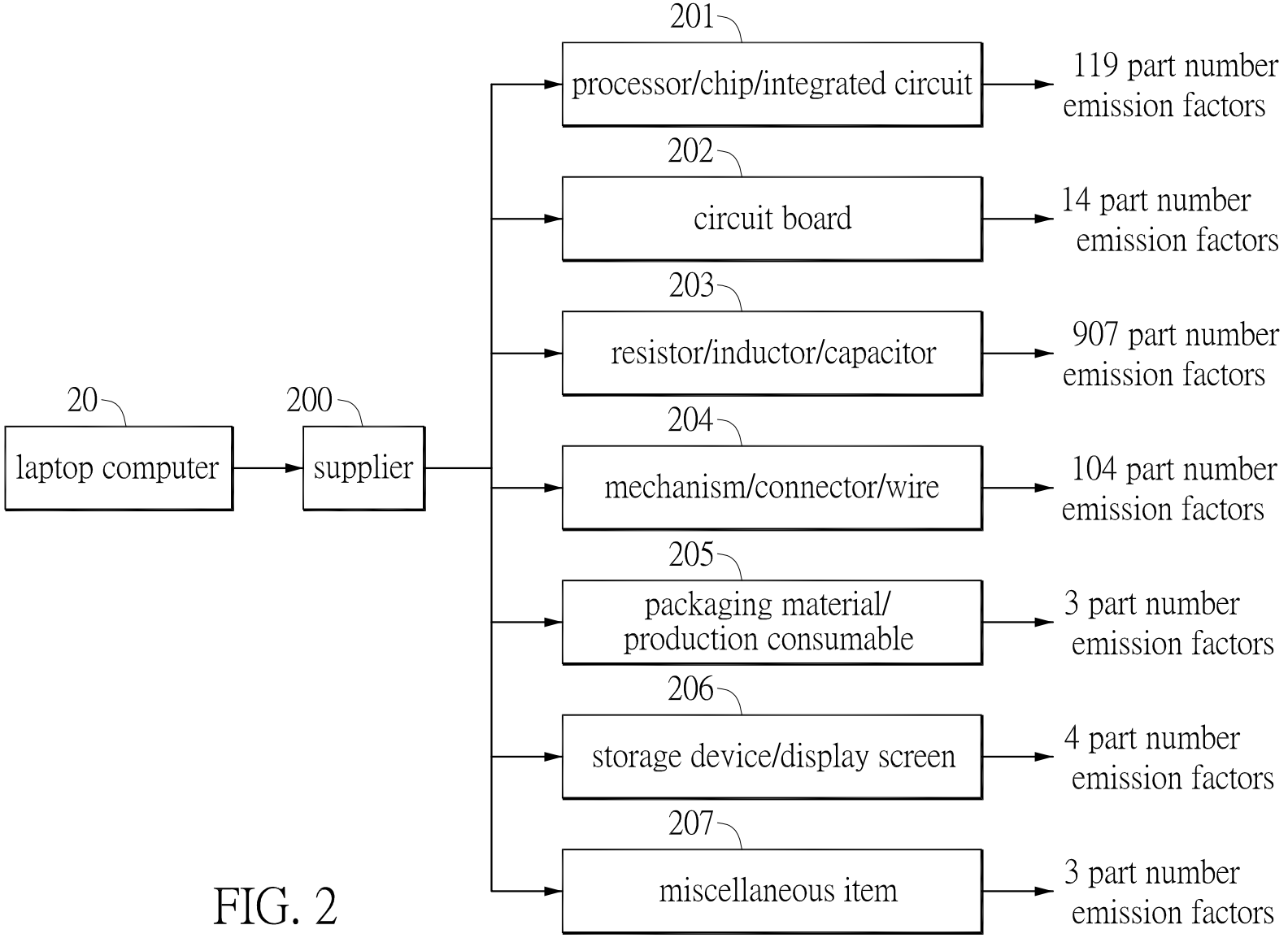


FIG. 2
RELATED ART

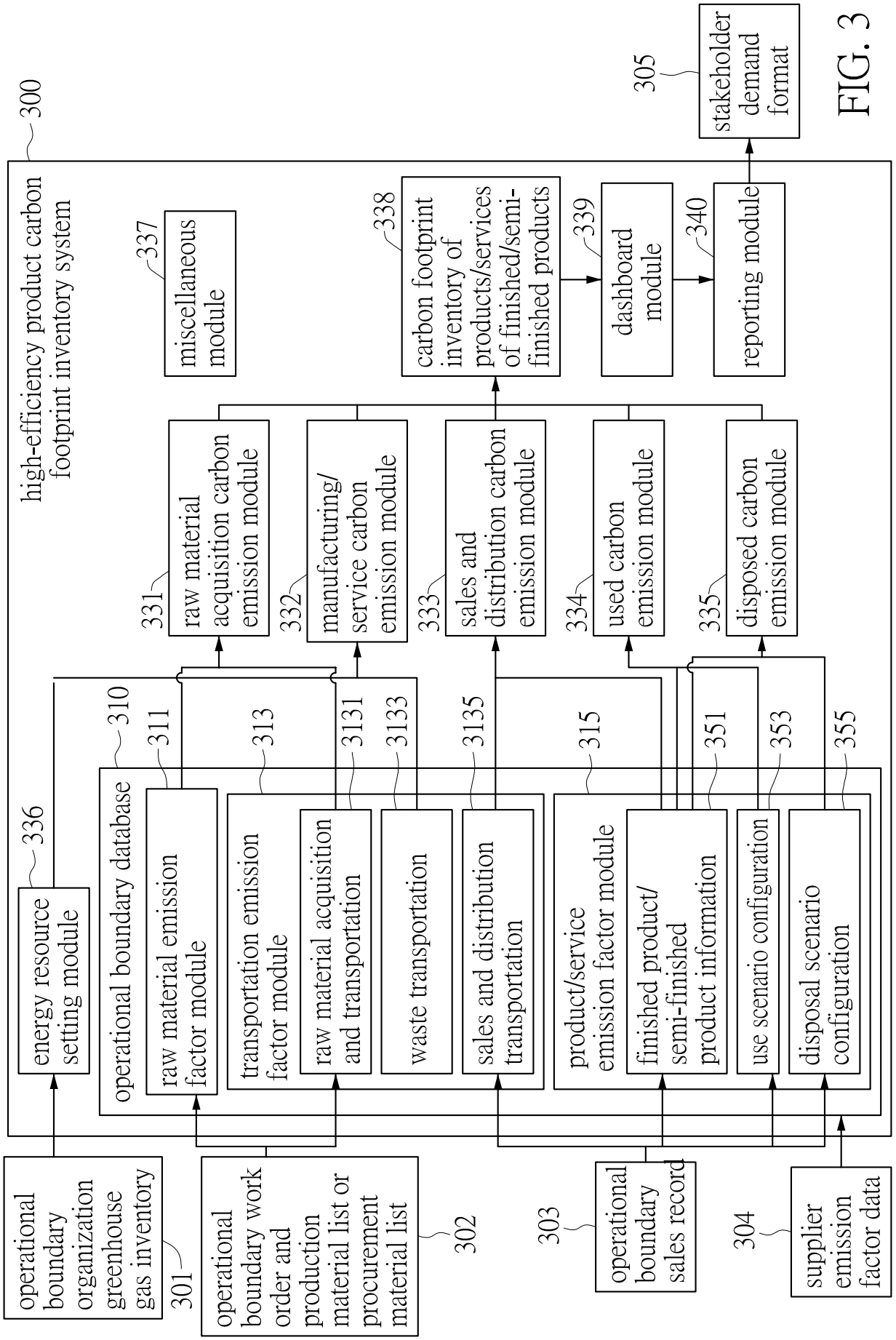

300
high-efficiency product carbon footprint inventory system
operational boundary organization greenhouse gas inventory
301
operational boundary work order and production material list or procurement material list
302
operational boundary sales record
303
supplier emission factor data
304
energy resource setting module
336
operational boundary database
310
raw material emission factor module
311
transportation emission factor module
313
raw material acquisition and transportation
3131
waste transportation
3133
sales and distribution transportation
3135
product/service emission factor module
315
finished product/ semi-finished product information
351
use scenario configuration
353
disposal scenario configuration
355
raw material acquisition carbon emission module
331
manufacturing/ service carbon emission module
332
sales and distribution carbon emission module
333
used carbon emission module
334
disposed carbon emission module
335
miscellaneous module
337
carbon footprint inventory of products/services of finished/semi-finished products
338
dashboard module
339
reporting module
340
stakeholder demand format
305

FIG. 3

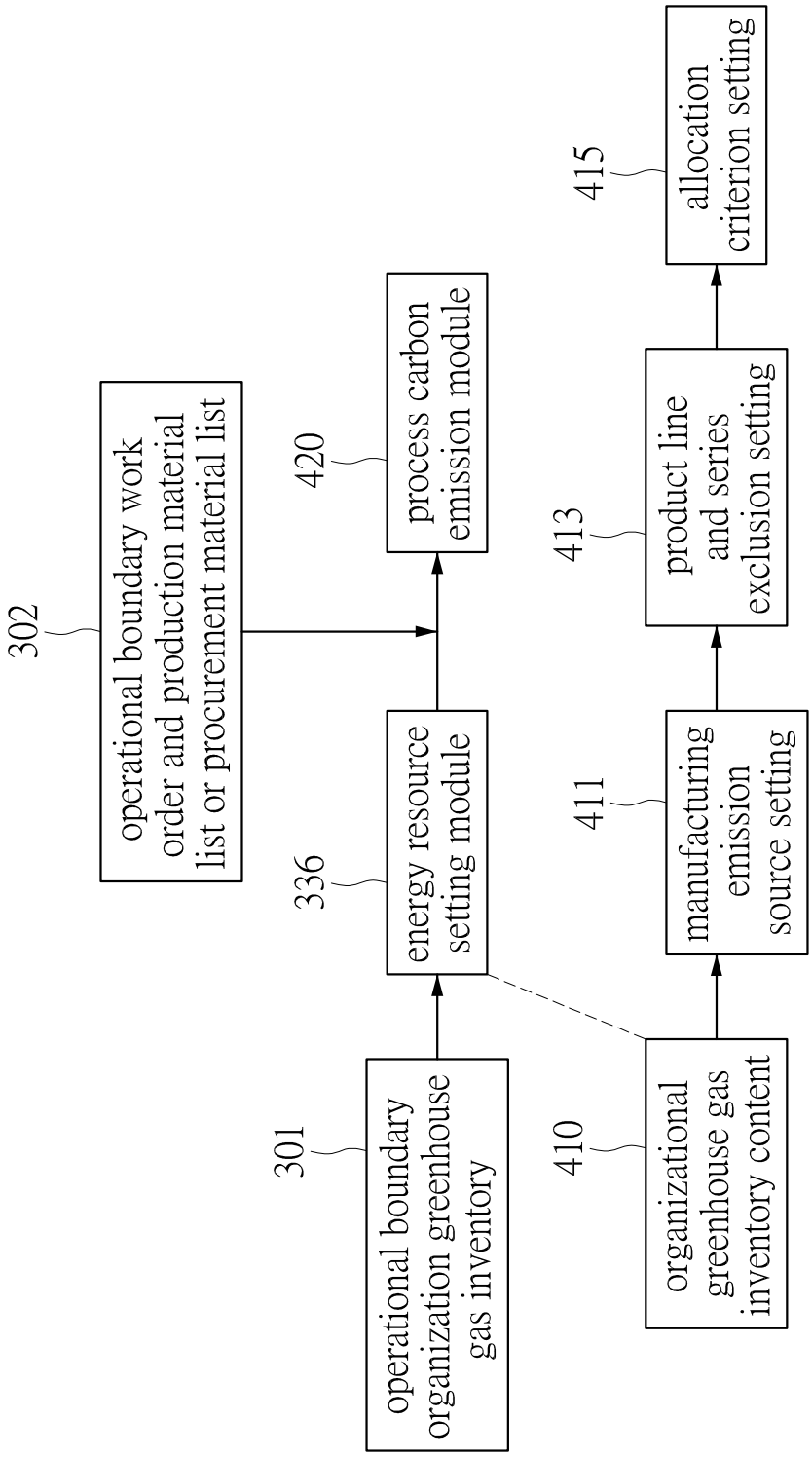

operational boundary organization greenhouse gas inventory
301
energy resource setting module
336
operational boundary work order and production material list or procurement material list
302
process carbon emission module
420
organizational greenhouse gas inventory content
410
manufacturing emission source setting
411
product line and series exclusion setting
413
allocation criterion setting
415

FIG. 4

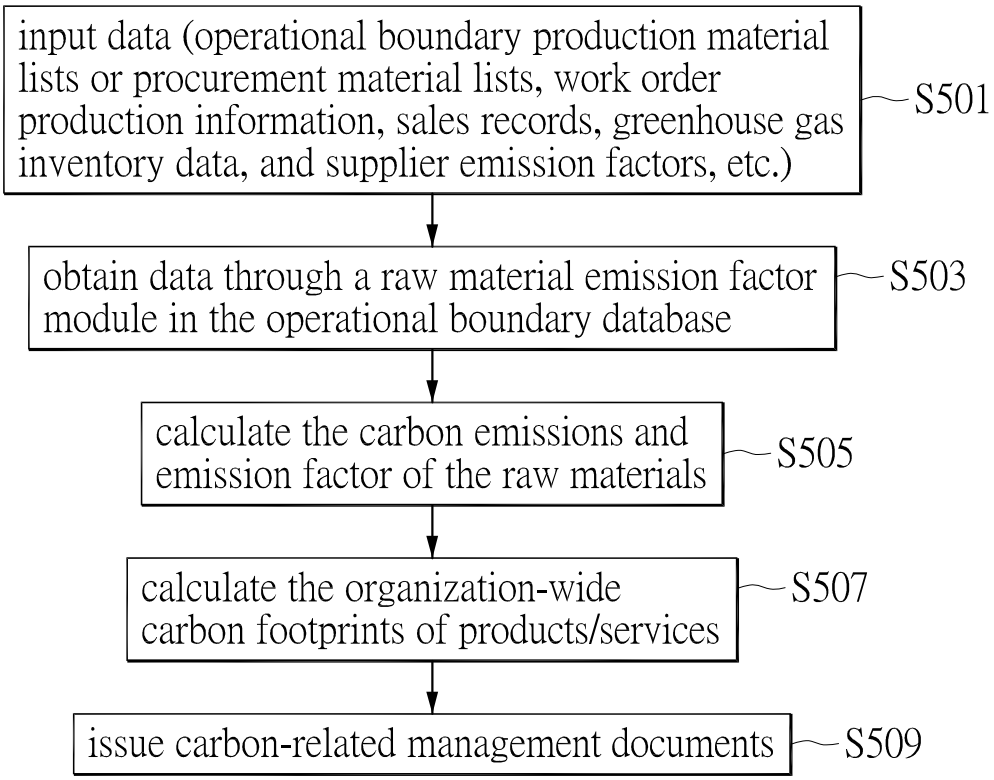

input data (operational boundary production material lists or procurement material lists, work order production information, sales records, greenhouse gas inventory data, and supplier emission factors, etc.)
S501
obtain data through a raw material emission factor module in the operational boundary database
S503
calculate the carbon emissions and emission factor of the raw materials
S505
calculate the organization-wide carbon footprints of products/services
S507
issue carbon-related management documents
S509

FIG. 5

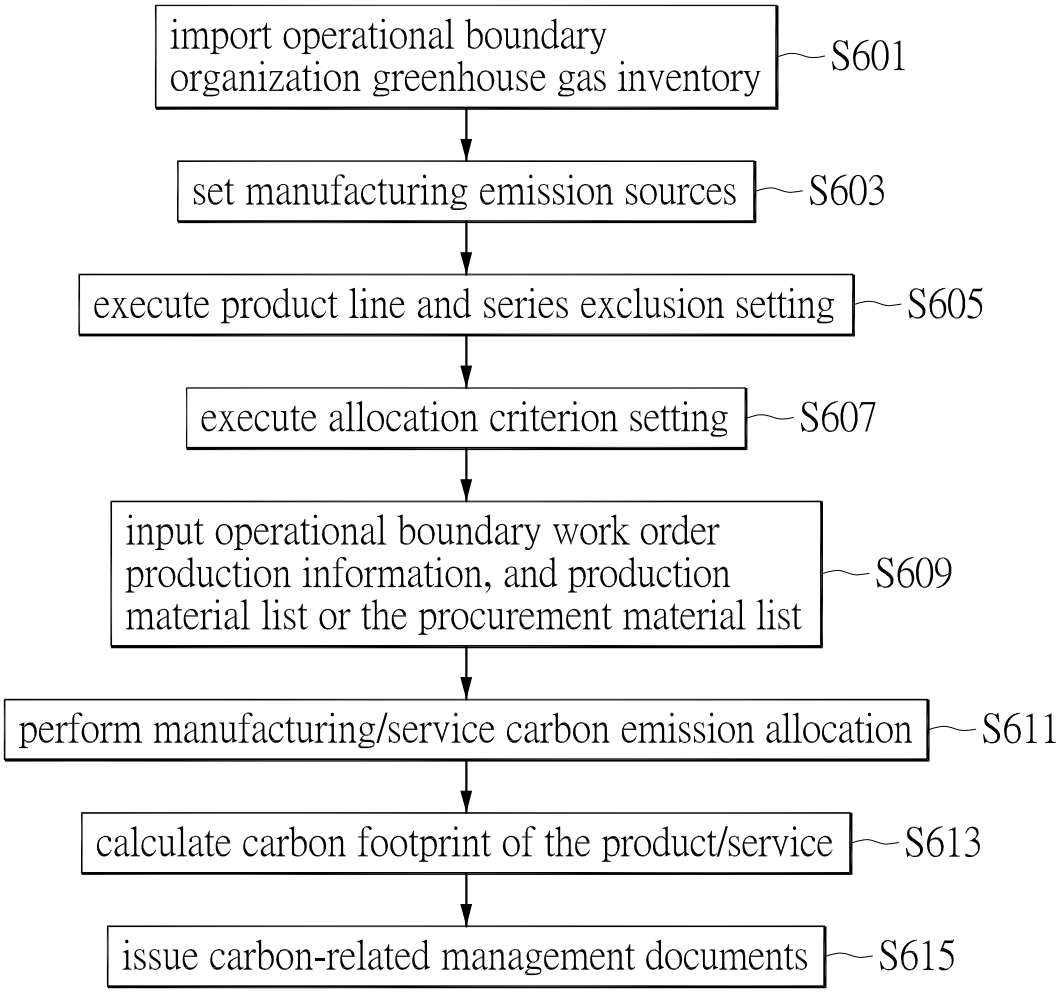

import operational boundary organization greenhouse gas inventory
S601
set manufacturing emission sources
S603
execute product line and series exclusion setting
S605
execute allocation criterion setting
S607
input operational boundary work order production information, and production material list or the procurement material list
S609
perform manufacturing/service carbon emission allocation
S611
calculate carbon footprint of the product/service
S613
issue carbon-related management documents
S615

FIG. 6