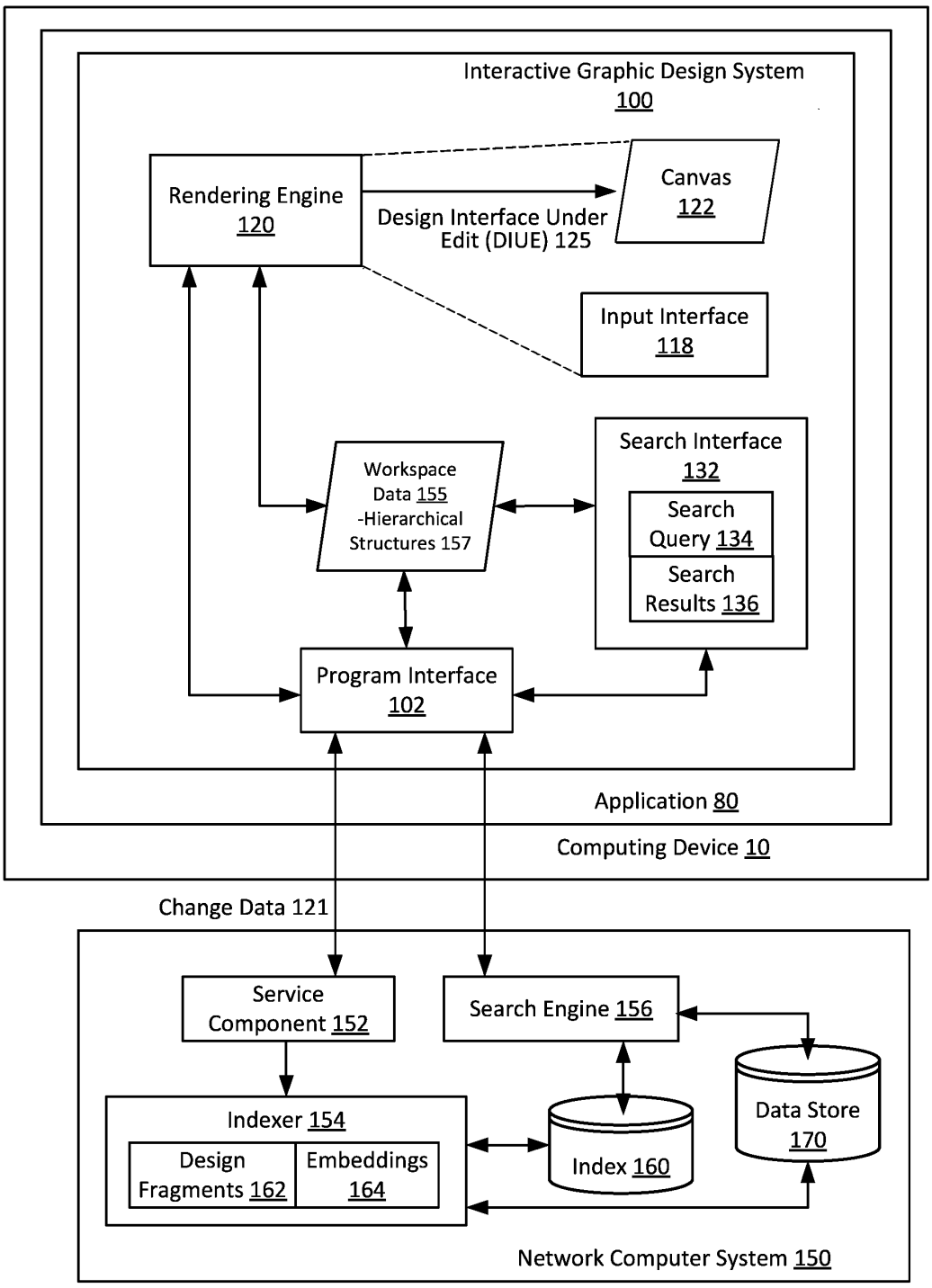

Interactive Graphic Design System
100
Rendering Engine
120
Canvas
122
Design Interface Under
Edit (DIUE) 125
Input Interface
118
Search Interface
132
Workspace
Data 155
-Hierarchical
Structures 157
Search
Query 134
Search
Results 136
Program Interface
102
Application 80
Computing Device 10
Change Data 121
Service
Component 152
Search Engine 156
Indexer 154
Design
Fragments 162
Embeddings
164
Index 160
Data Store
170
Network Computer System 150

FIG. 1

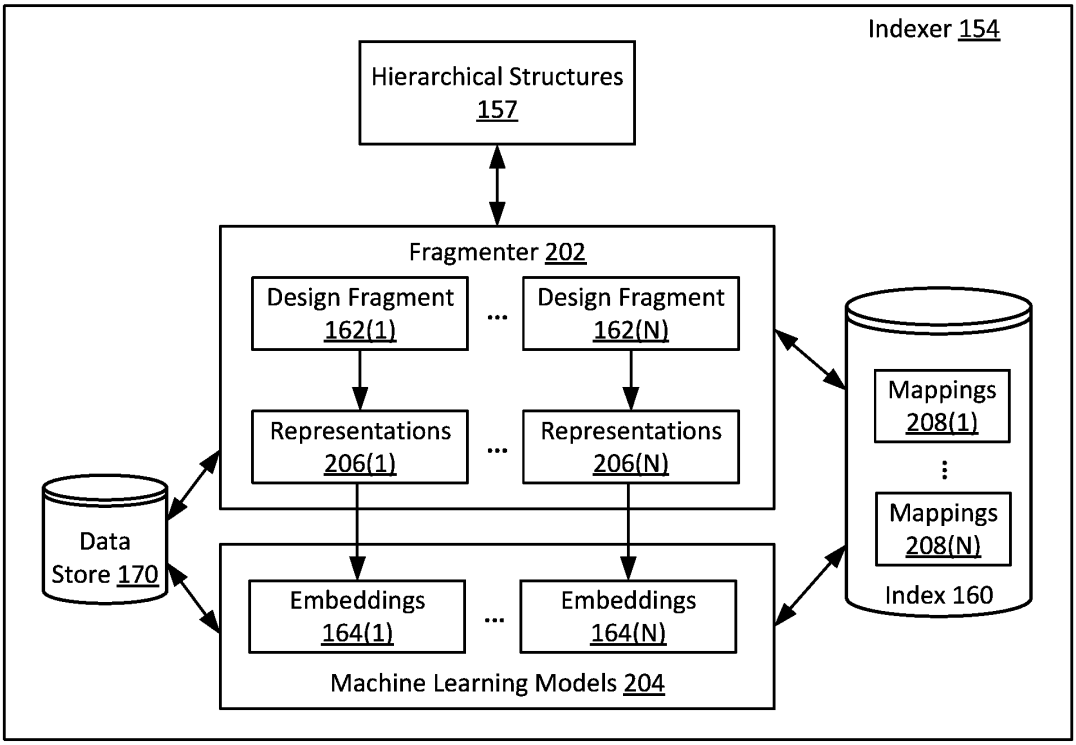

Indexer 154
Hierarchical Structures 157
Fragmenter 202
Design Fragment 162(1)
Design Fragment 162(N)
Representations 206(1)
Representations 206(N)
Data Store 170
Embeddings 164(1)
Embeddings 164(N)
Machine Learning Models 204
Mappings 208(1)
Mappings 208(N)
Index 160

FIG. 2A

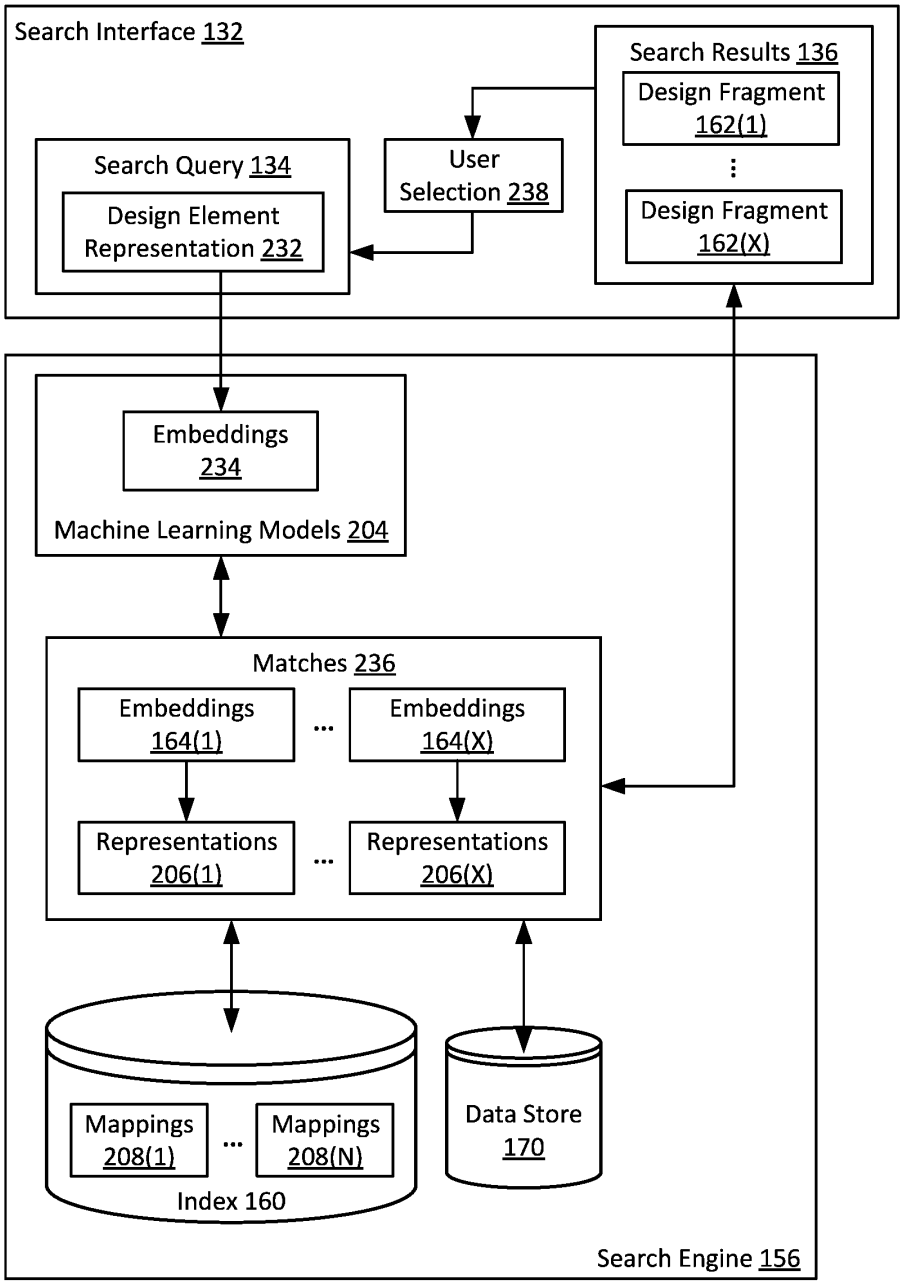

Search Interface 132
Search Results 136
Design Fragment 162(1)
Design Fragment 162(X)
Search Query 134
Design Element Representation 232
User Selection 238
Embeddings 234
Machine Learning Models 204
Matches 236
Embeddings 164(1)
Embeddings 164(X)
Representations 206(1)
Representations 206(X)
Mappings 208(1)
Mappings 208(N)
Index 160
Data Store 170
Search Engine 156

FIG. 2B

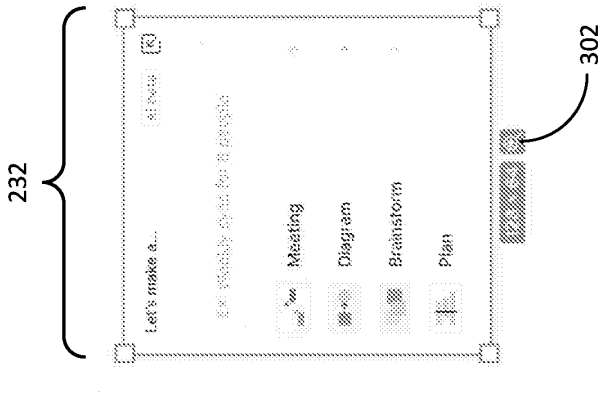


FIG. 3A

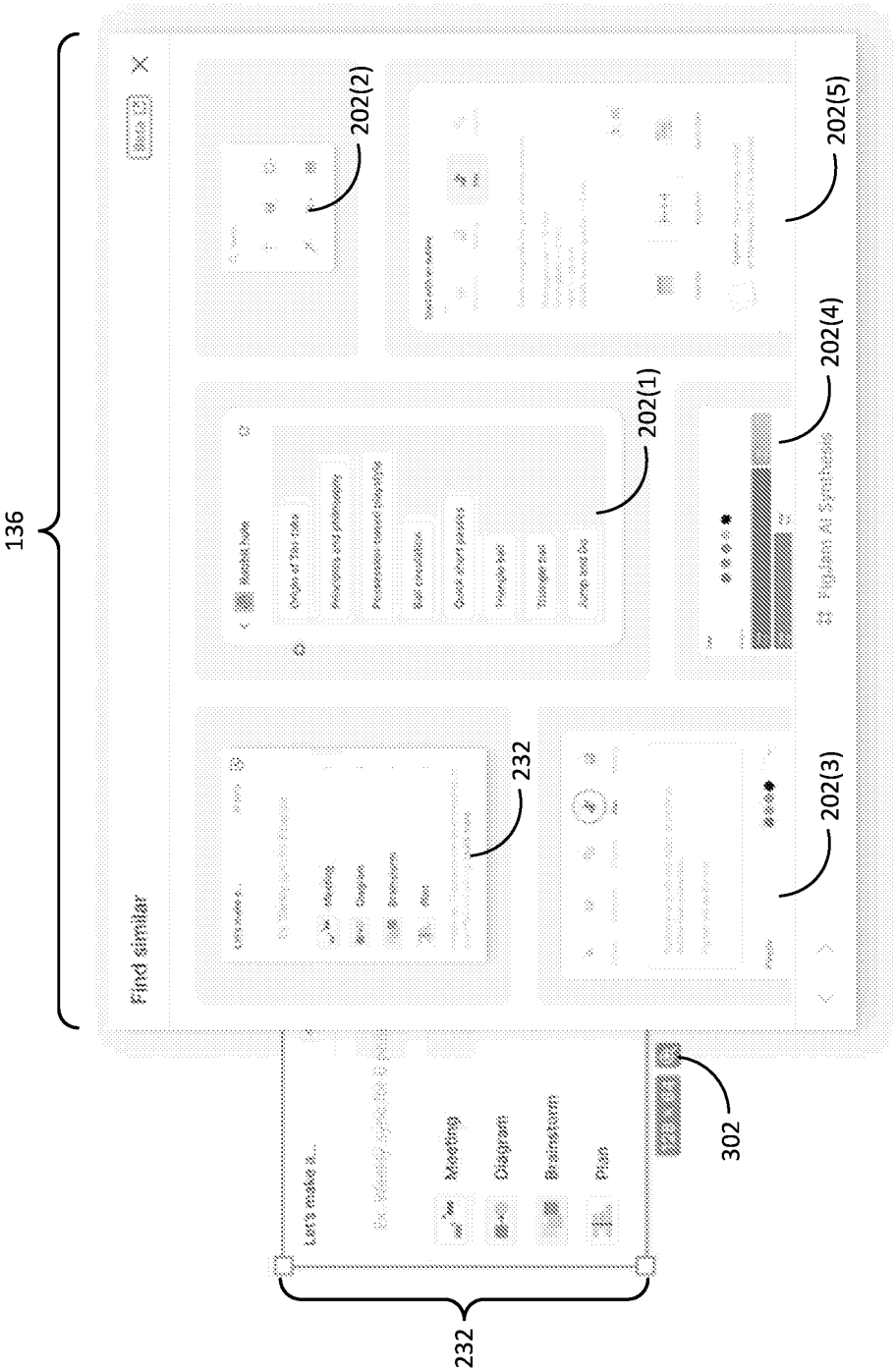

136
202(2)
202(5)
202(1)
202(4)
202(3)
232
232
302
Find similar
Meeting
Diagram
Brainstorm
Plan

FIG. 3B

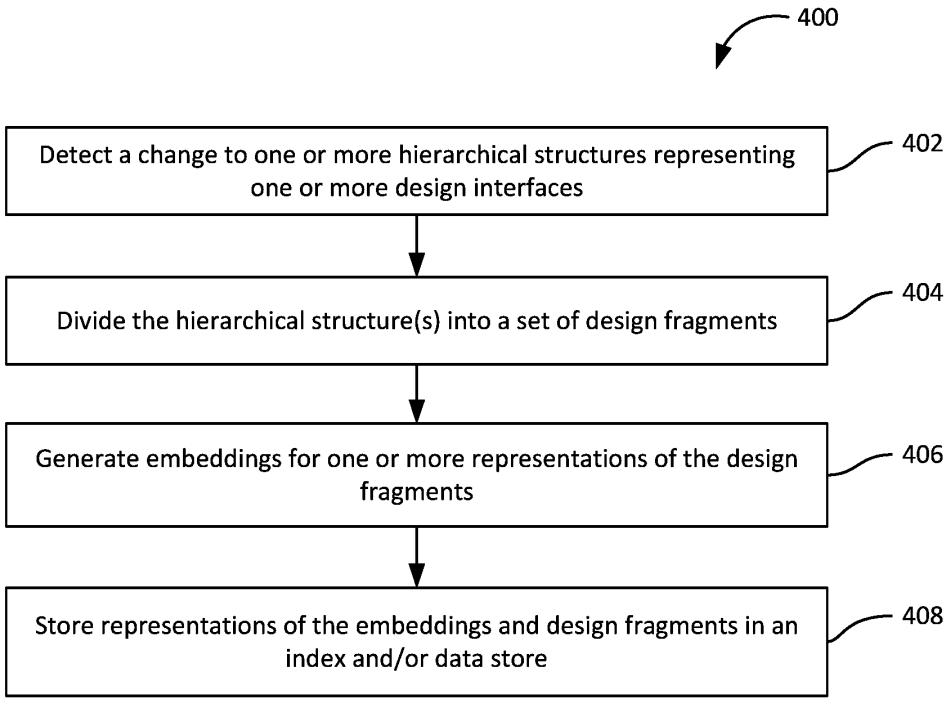

400
Detect a change to one or more hierarchical structures representing one or more design interfaces
402
Divide the hierarchical structure(s) into a set of design fragments
404
Generate embeddings for one or more representations of the design fragments
406
Store representations of the embeddings and design fragments in an index and/or data store
408

FIG. 4A

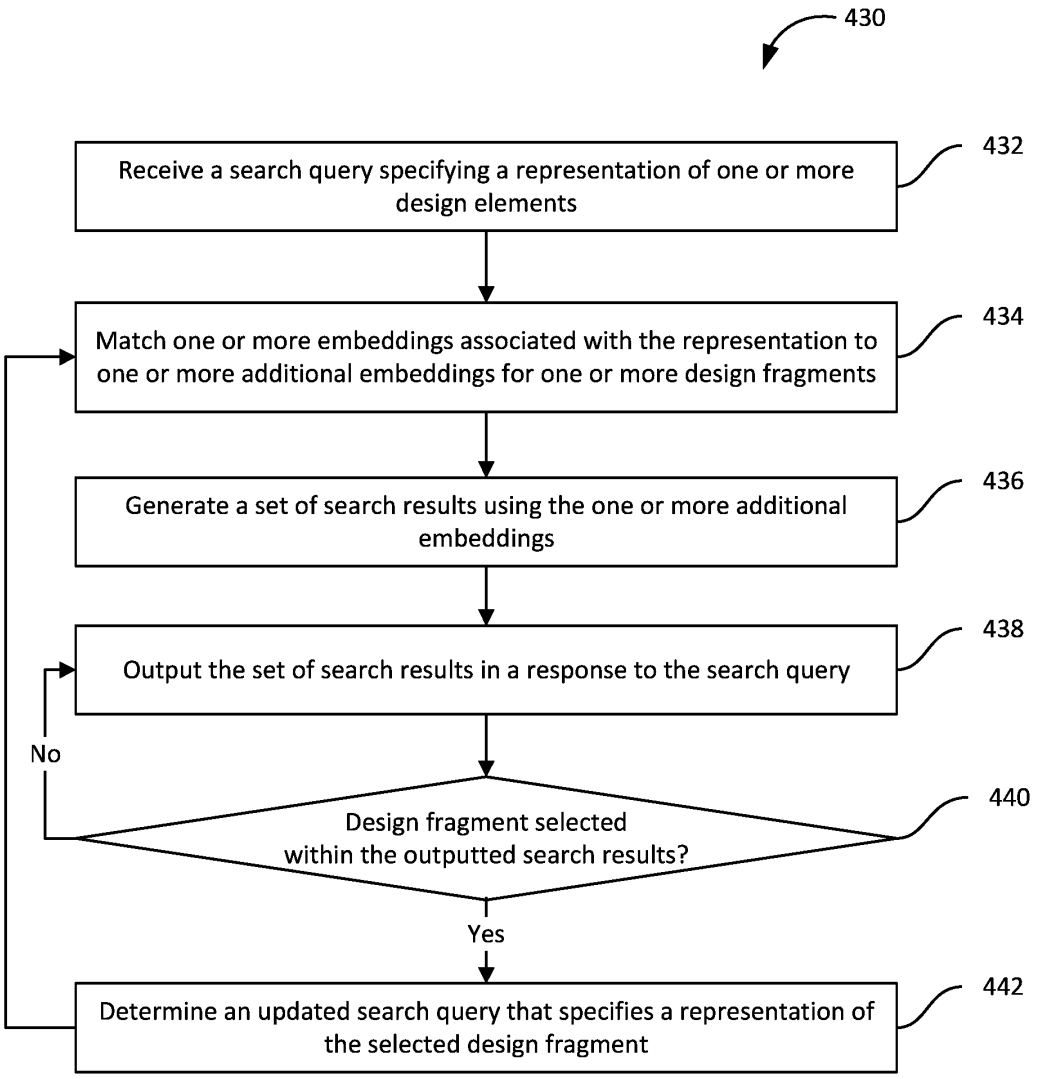

430
Receive a search query specifying a representation of one or more design elements
432
Match one or more embeddings associated with the representation to one or more additional embeddings for one or more design fragments
434
Generate a set of search results using the one or more additional embeddings
436
Output the set of search results in a response to the search query
438
No
Design fragment selected within the outputted search results?
440
Yes
Determine an updated search query that specifies a representation of the selected design fragment
442

FIG. 4B

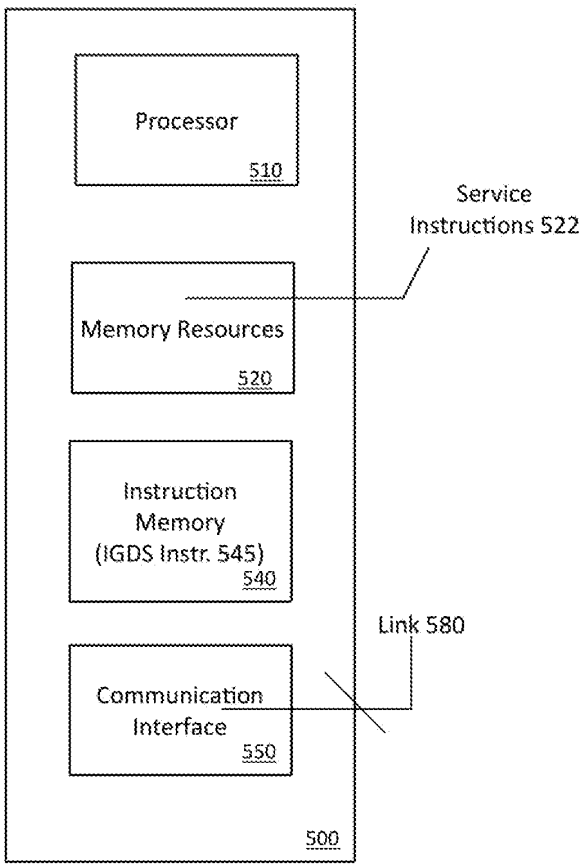

Processor
510
Service
Instructions 522
Memory Resources
520
Instruction
Memory
(IGDS Instr. 545)
540
Link 580
Communication
Interface
550
500

FIG. 5

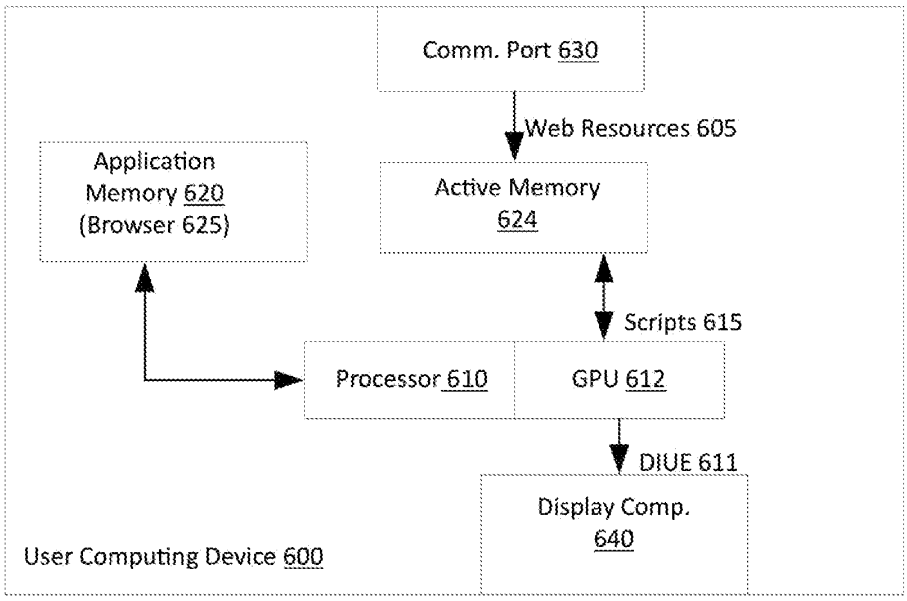

Comm. Port 630
Web Resources 605
Application Memory 620 (Browser 625)
Active Memory 624
Scripts 615
Processor 610
GPU 612
DIUE 611
Display Comp. 640
User Computing Device 600

FIG. 6