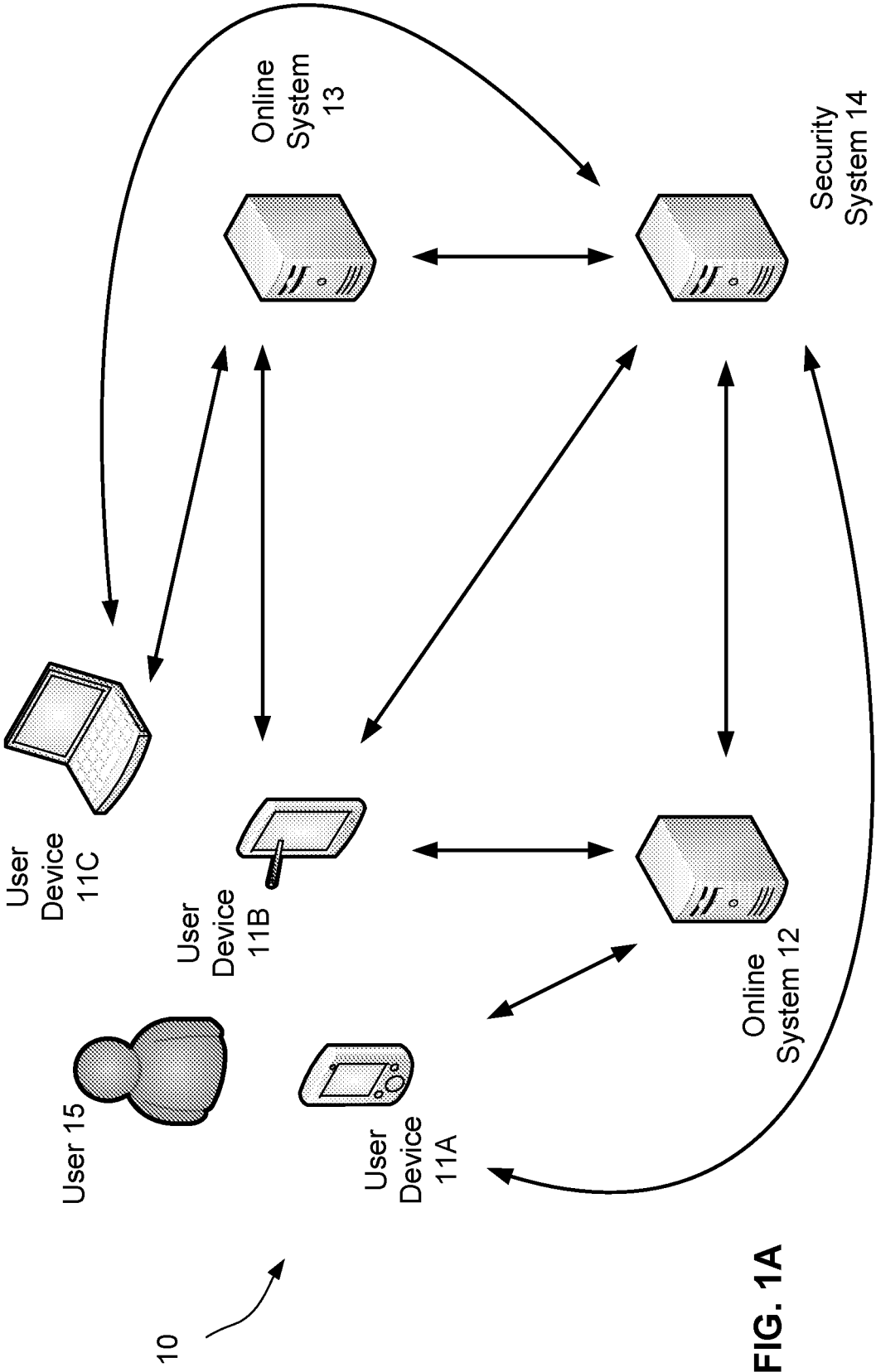




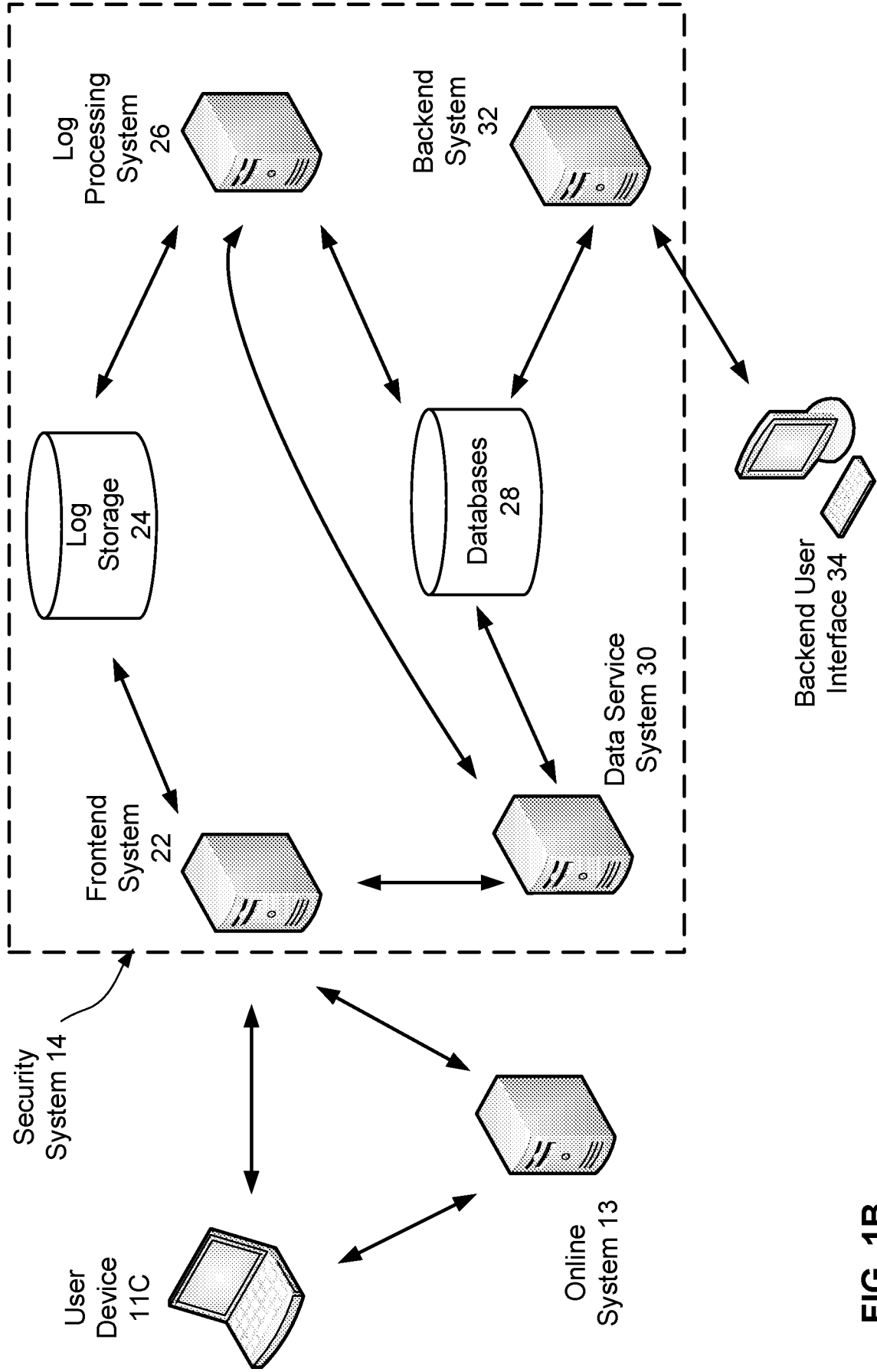
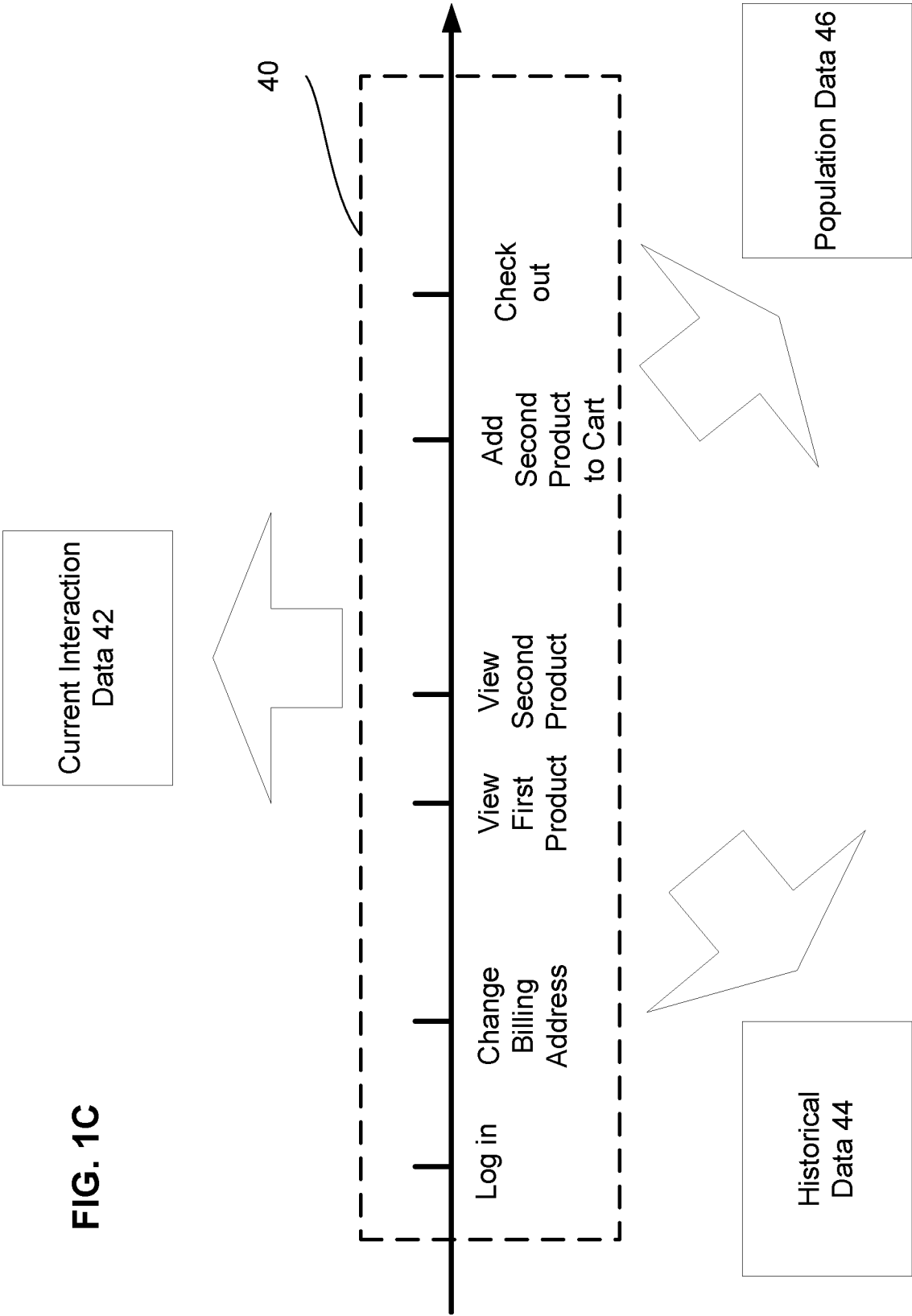


FIG. 1B



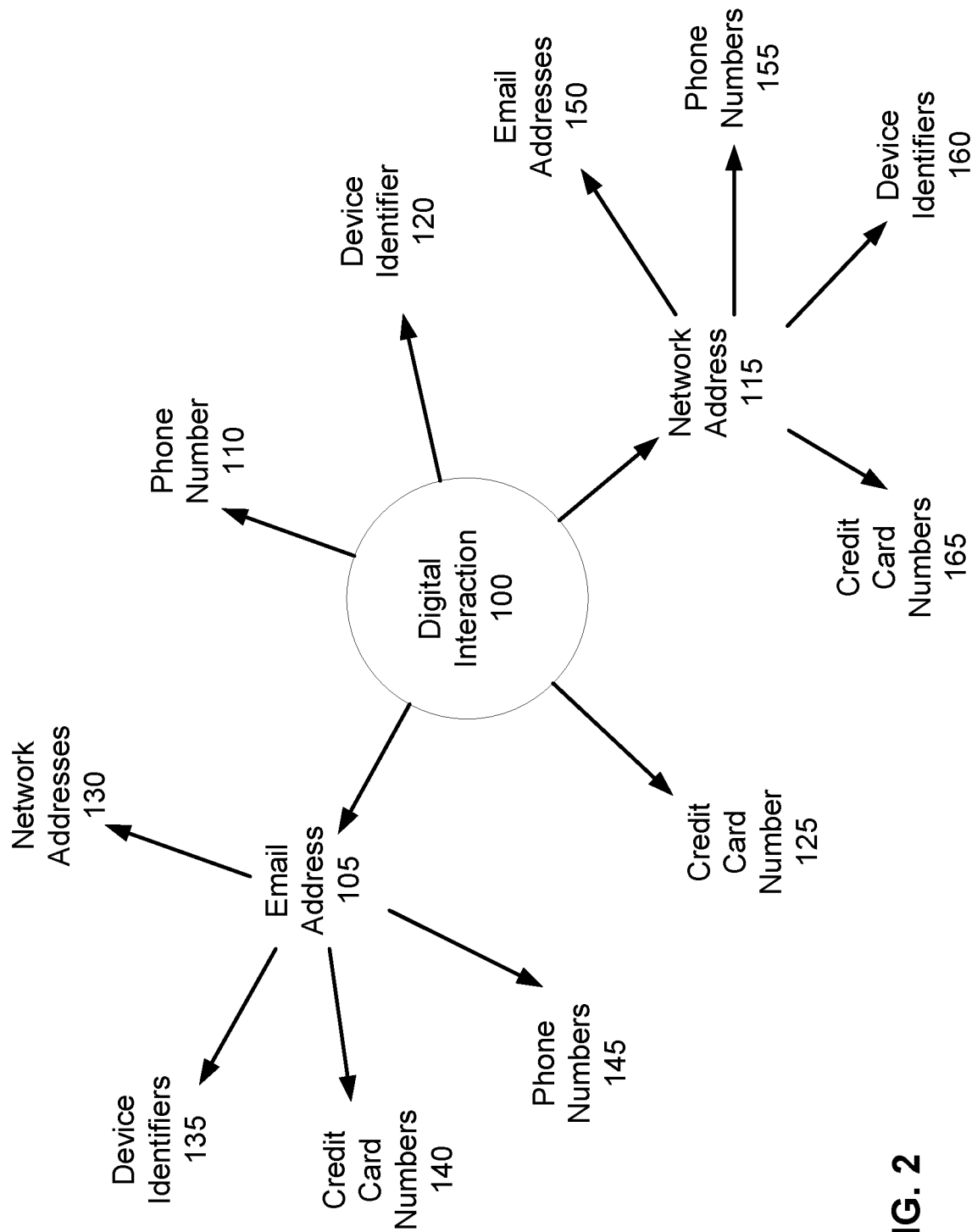


FIG. 2

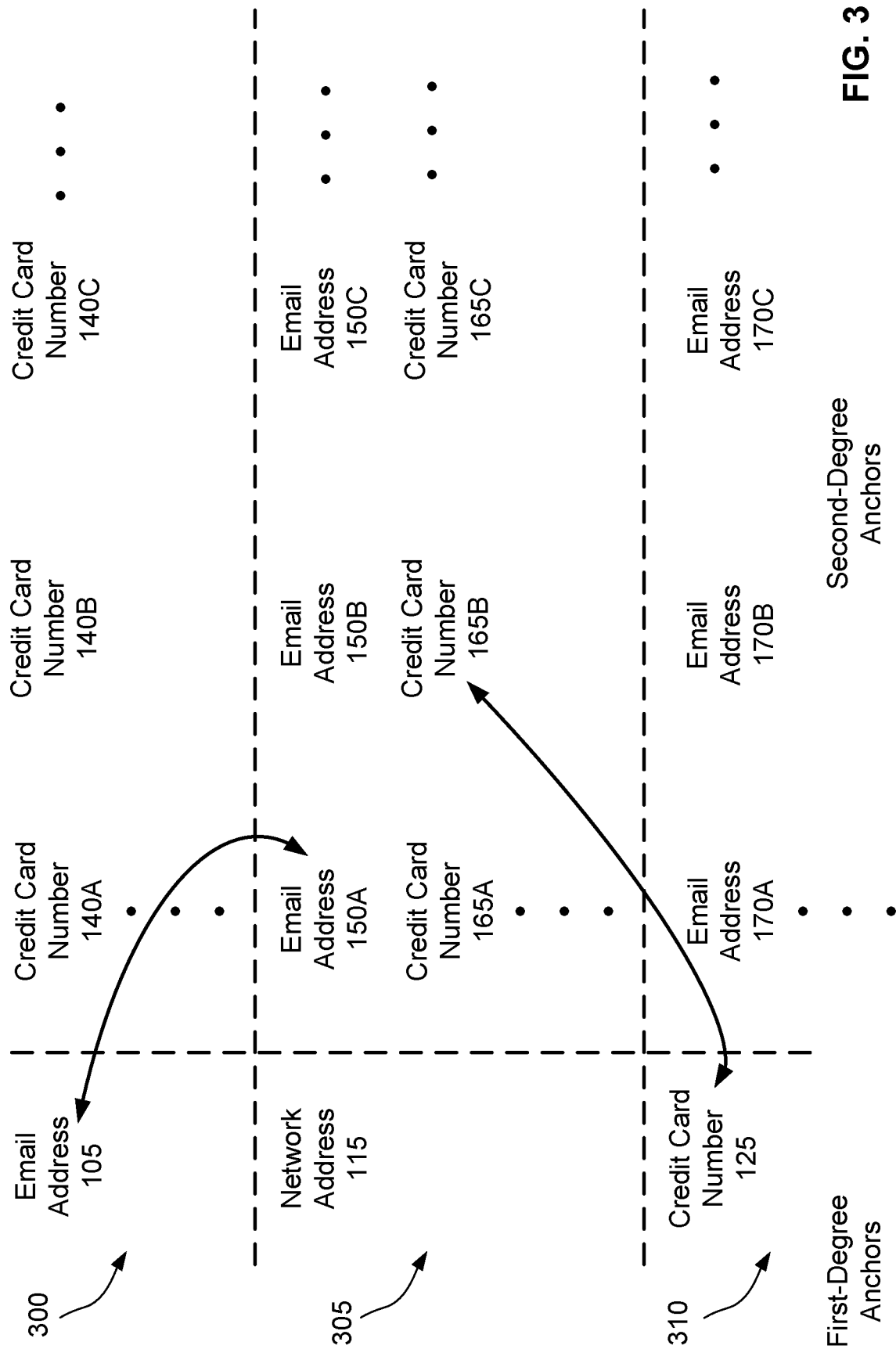


FIG. 3

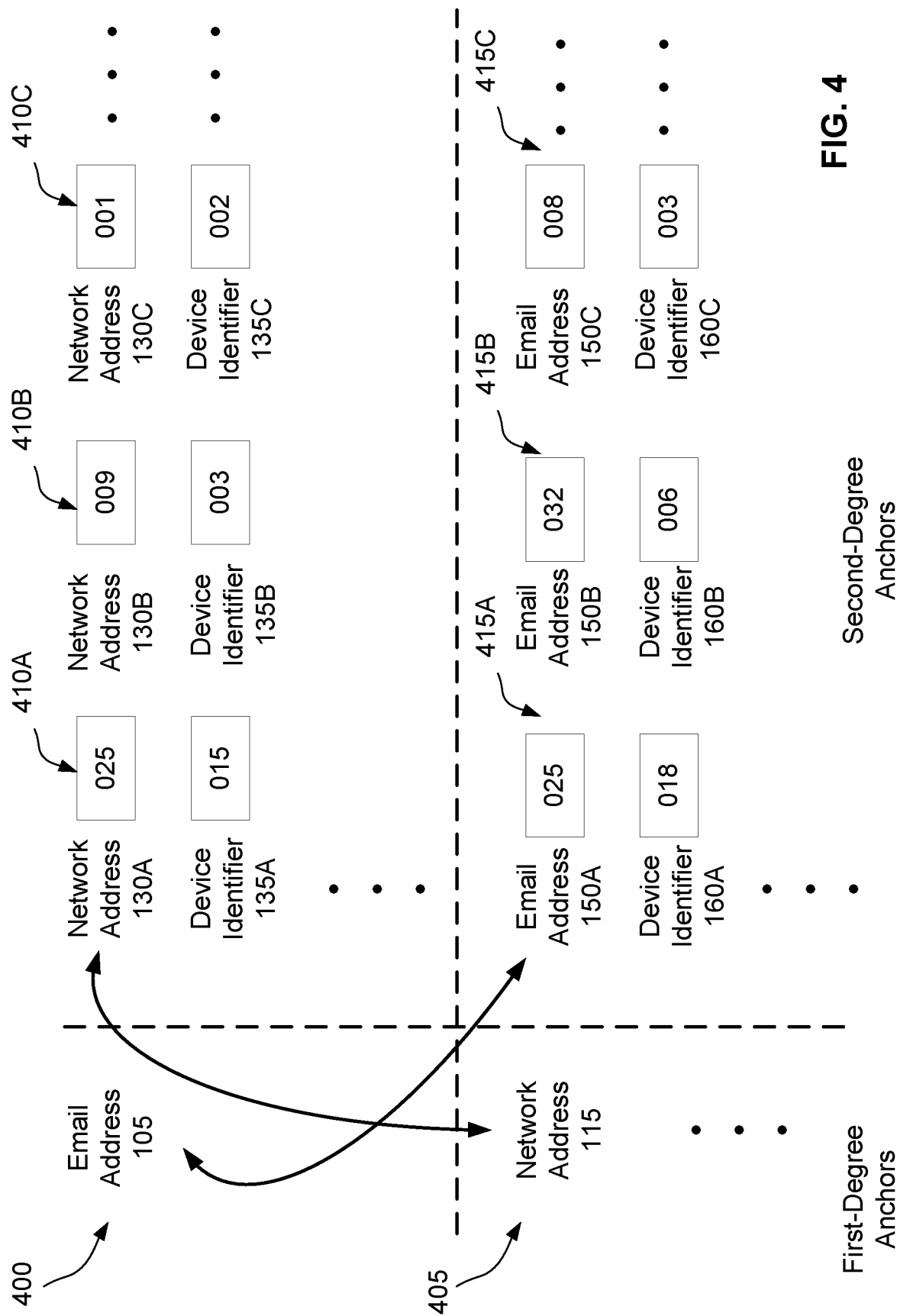


FIG. 4

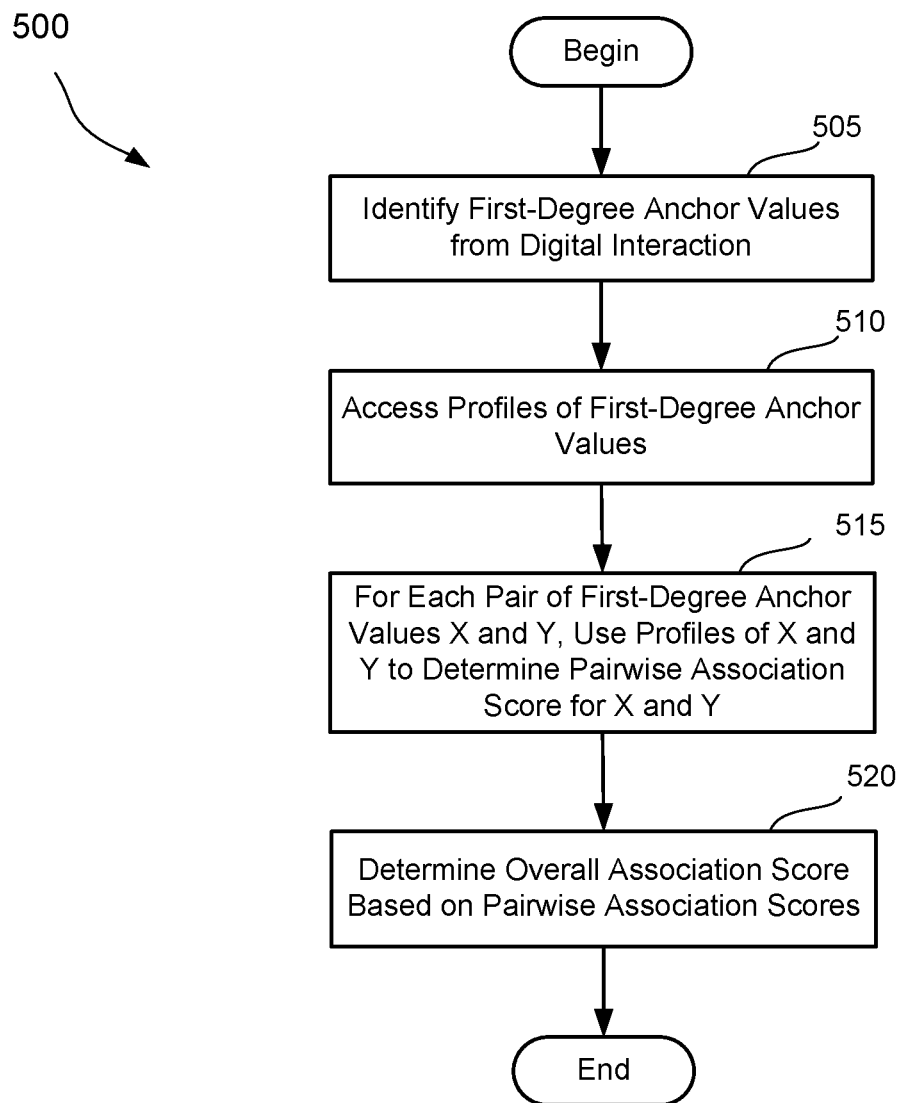


FIG. 5

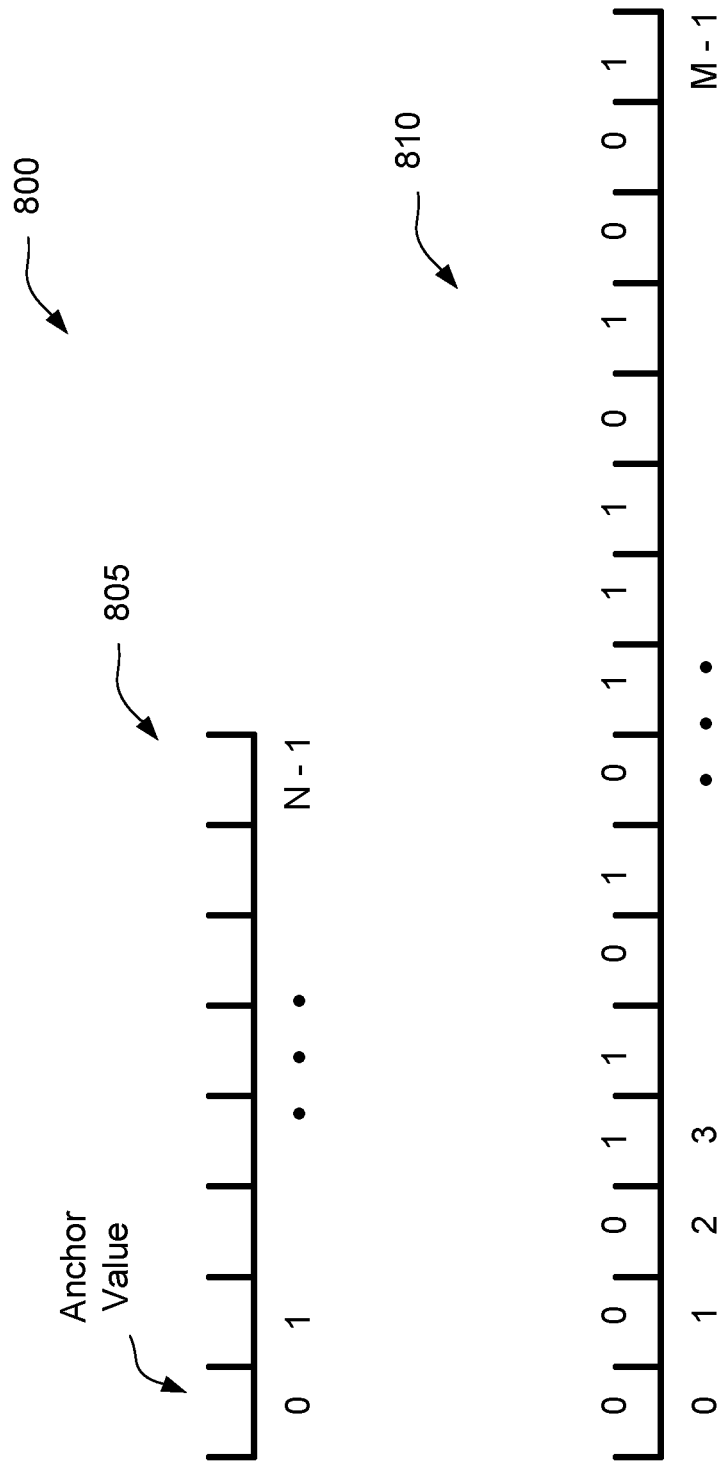


FIG. 8A

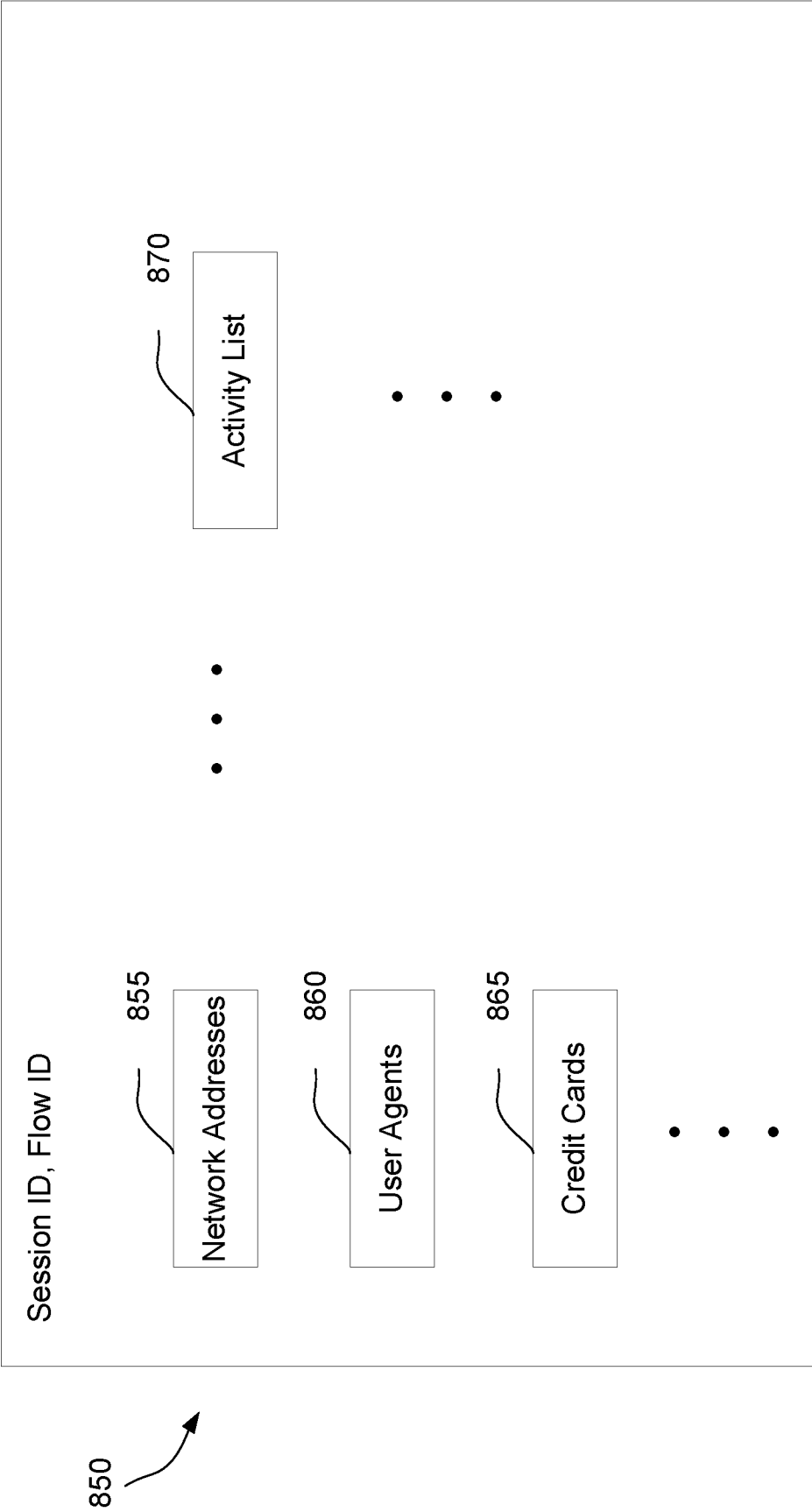
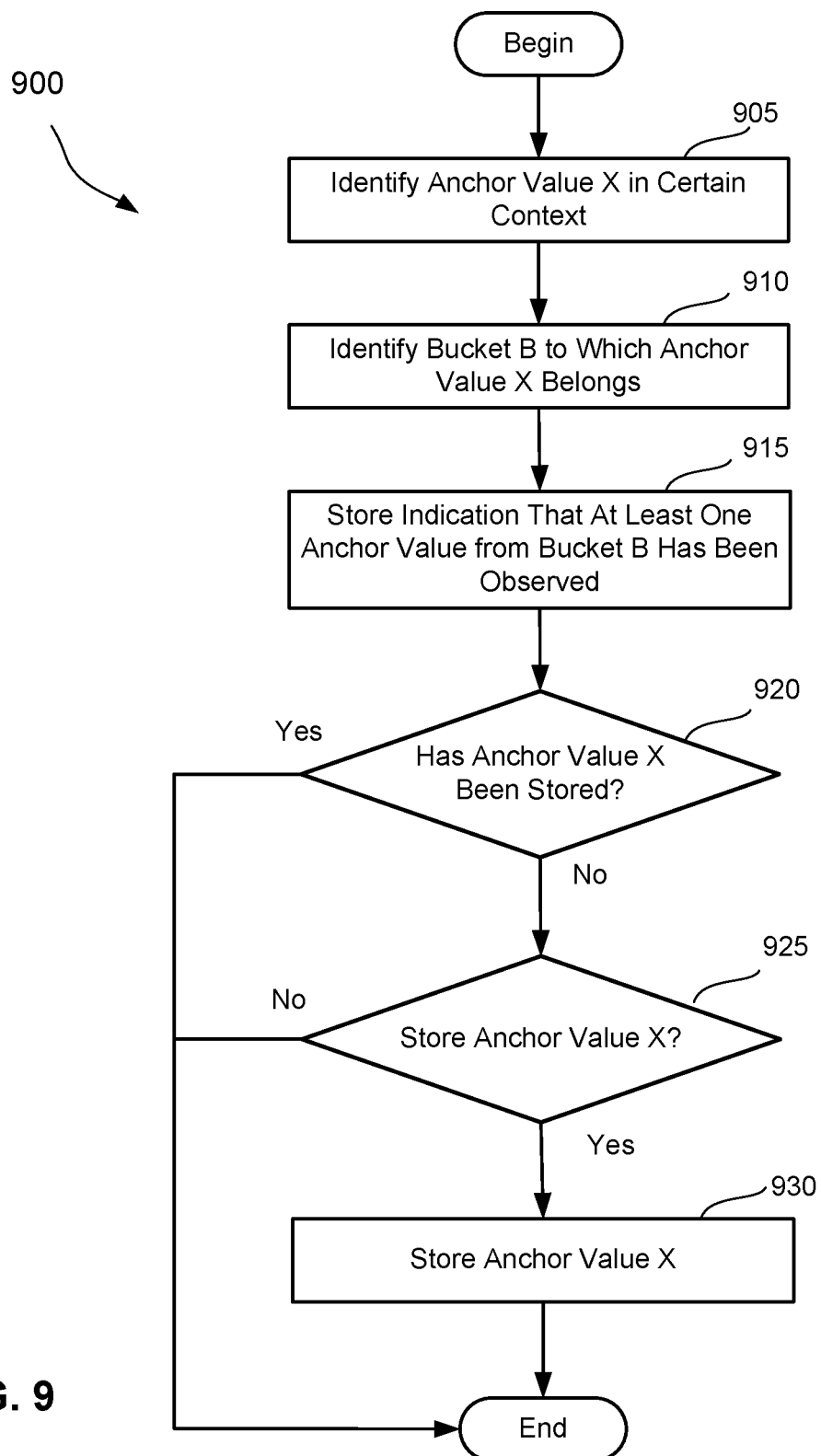


FIG. 8B



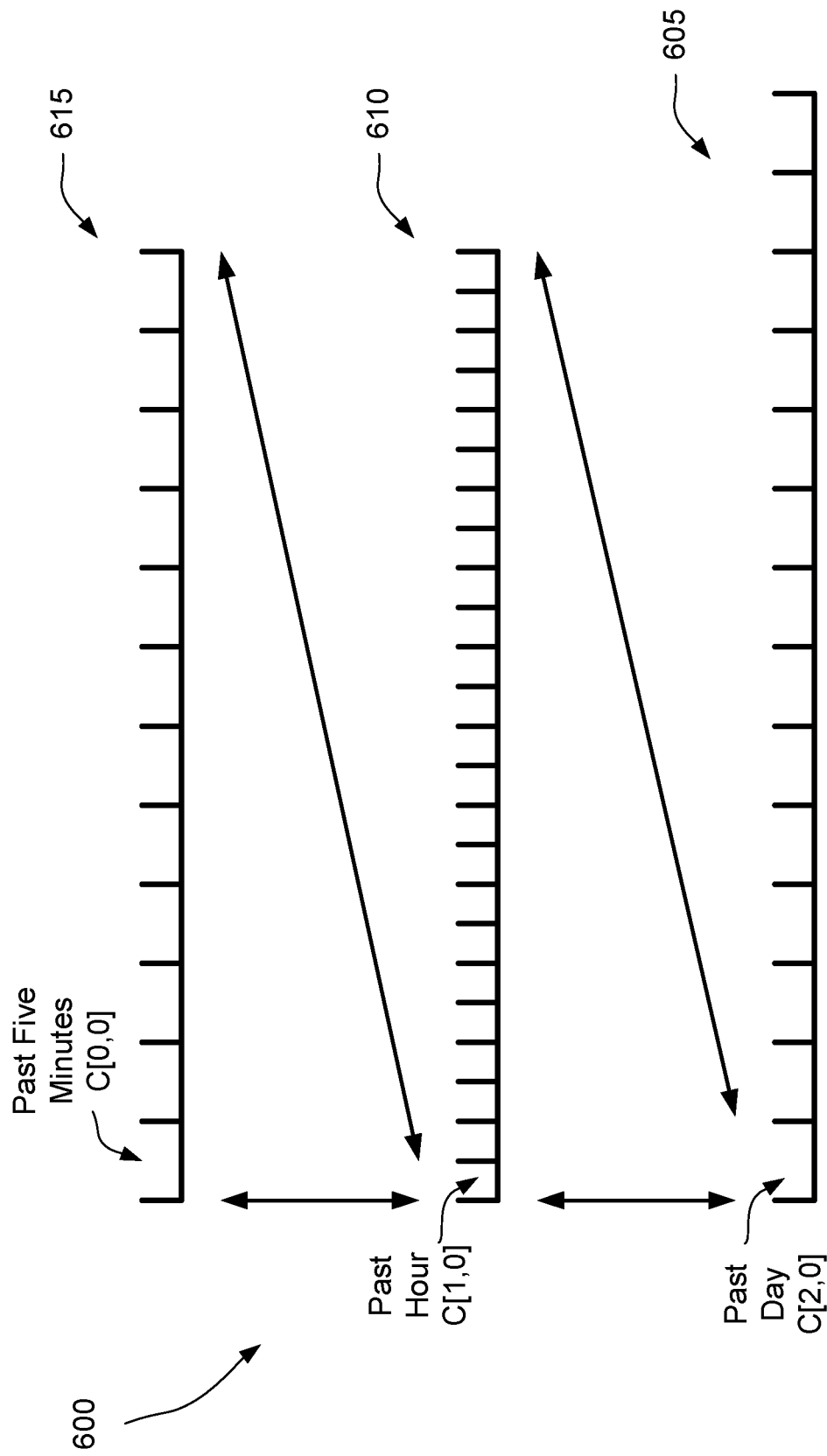


FIG. 6

$M = 3; N_0 = 12; N_1 = 24; N_2 = 14$

FIG. 7A

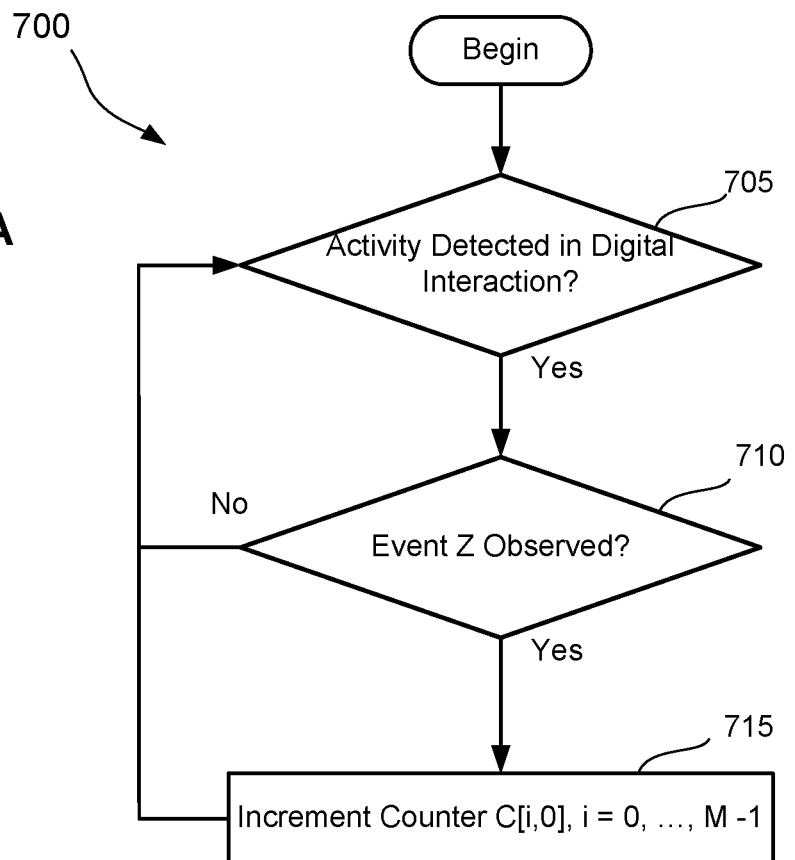
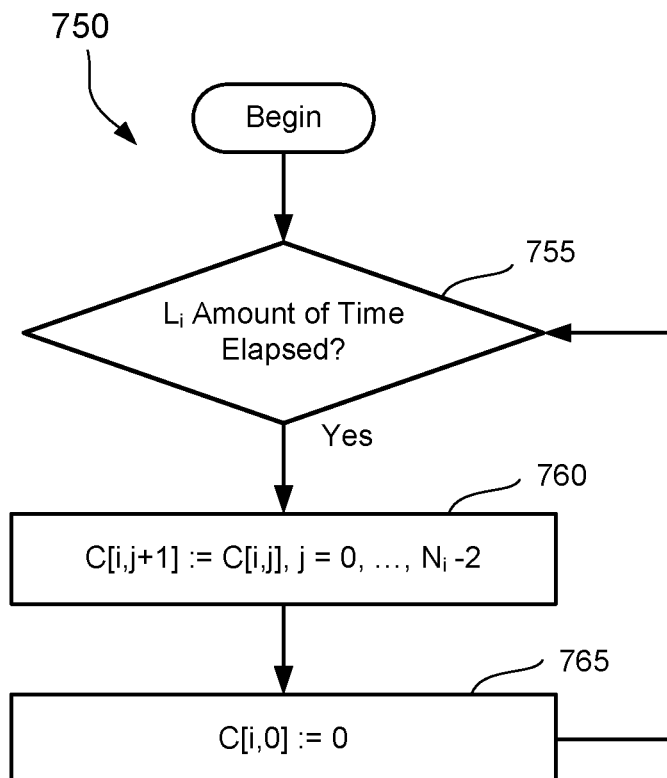
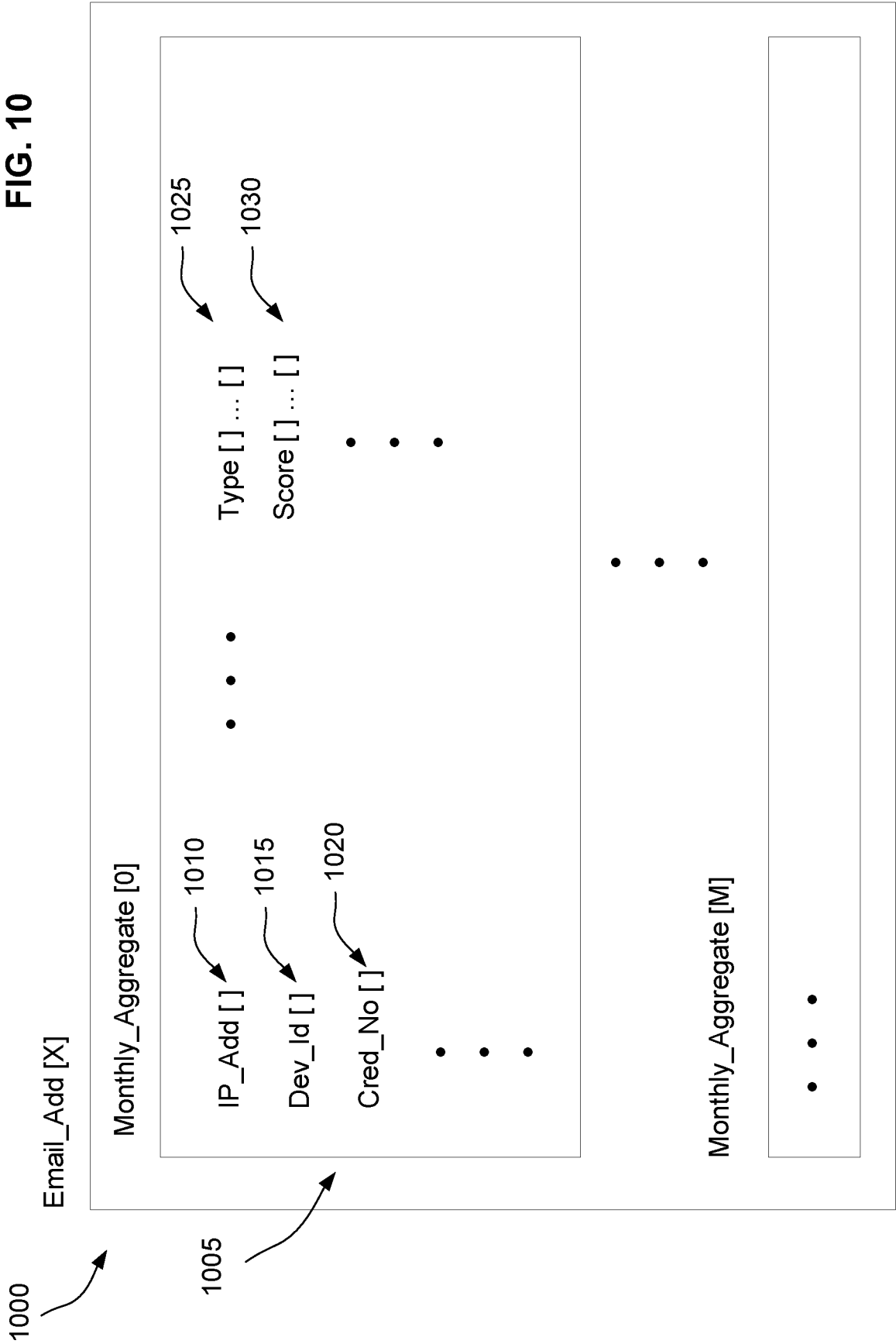
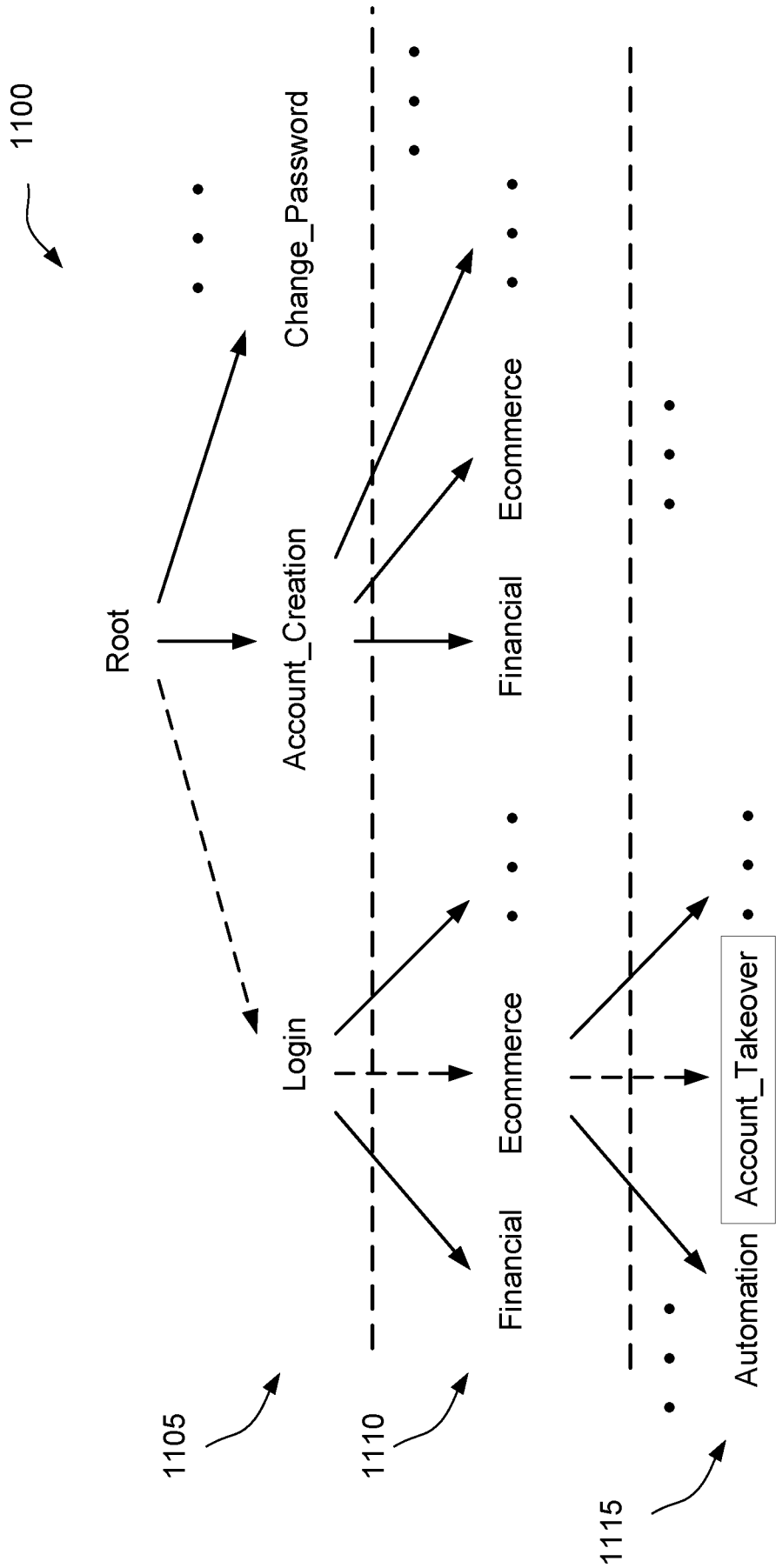


FIG. 7B

FIG. 10

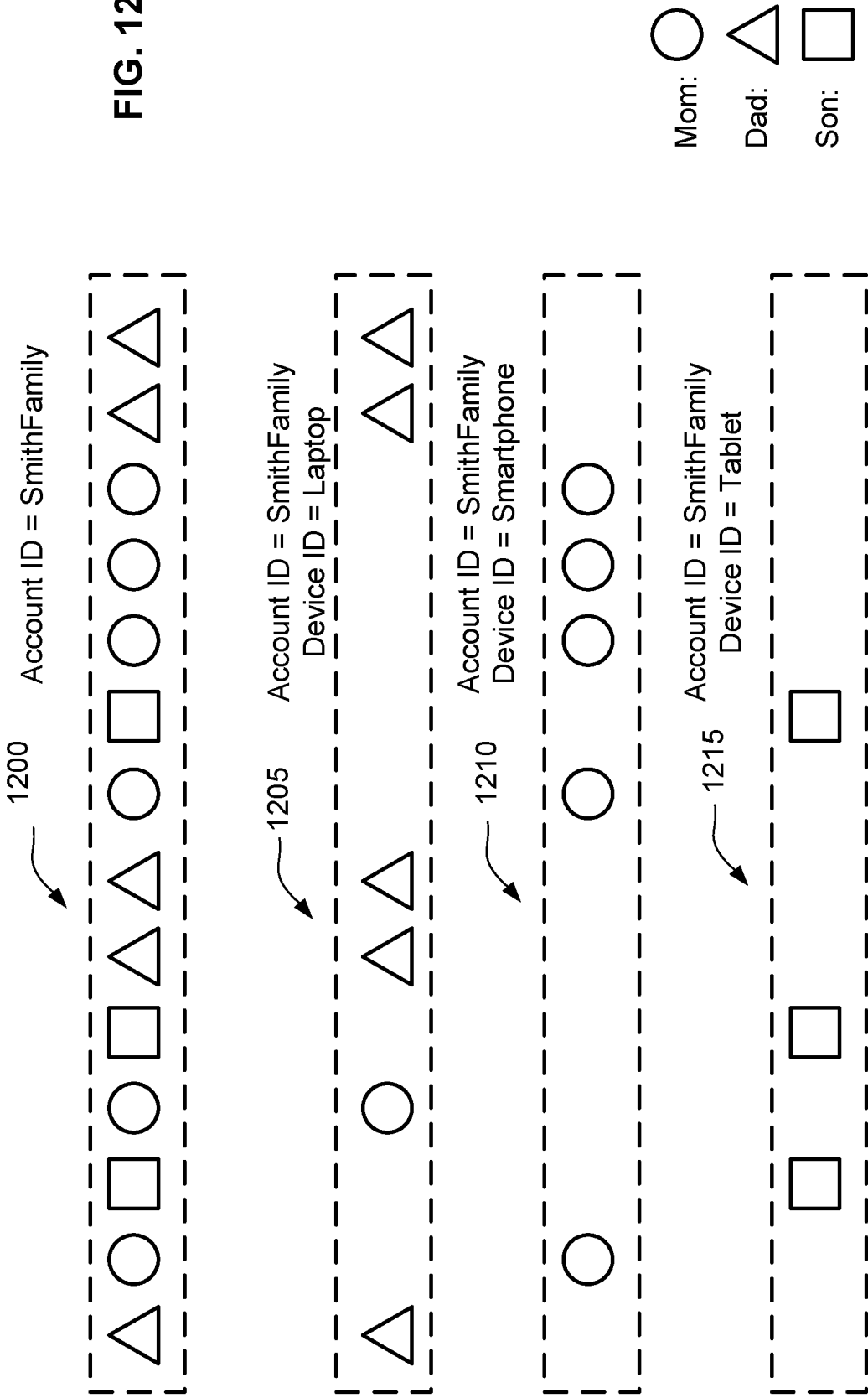




Counter [Login, Ecommerce, Account_Takeover]

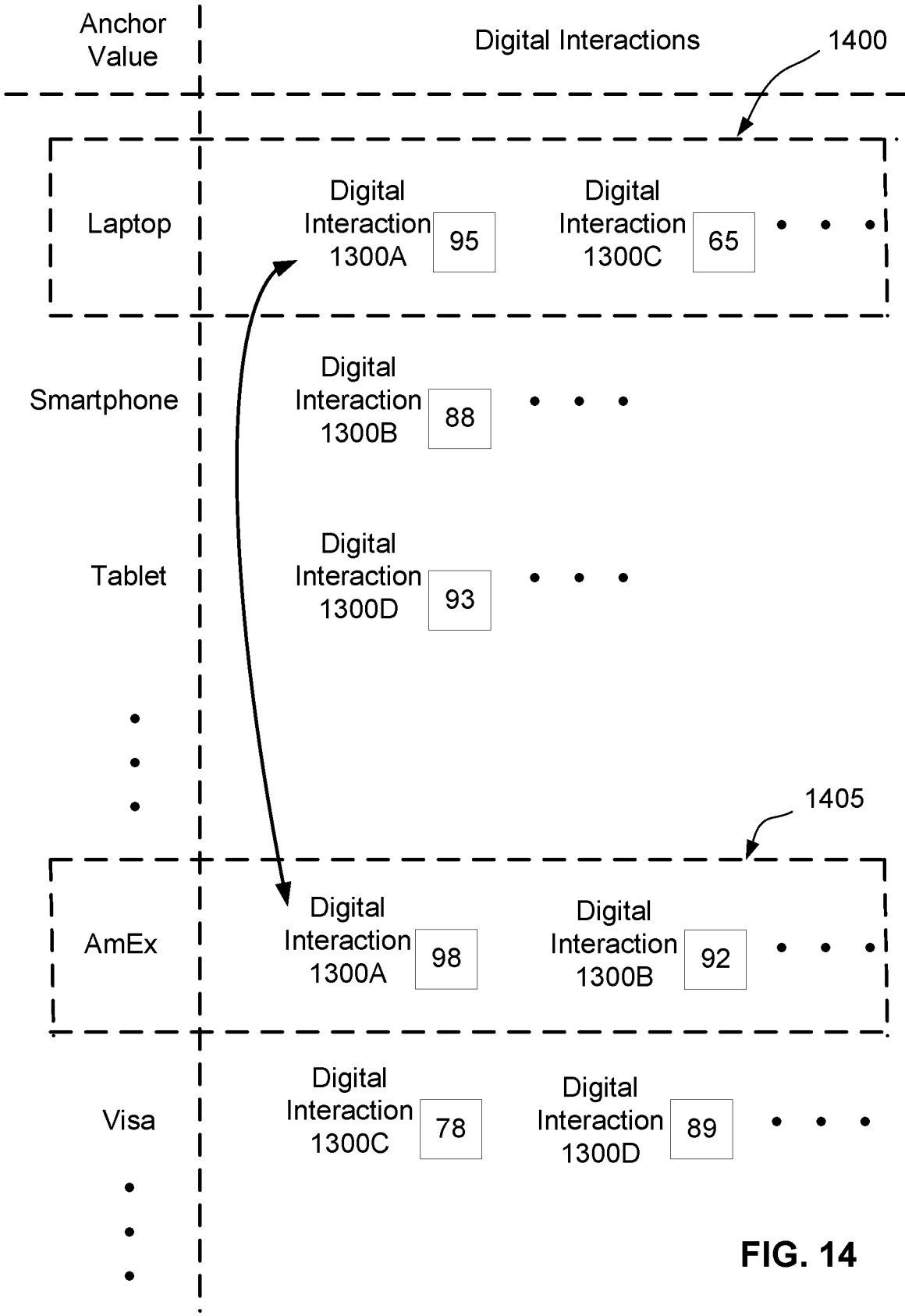
FIG. 11

FIG. 12



	1305 Device ID	Credit Card Number	1310 Network Address	1315 • • • • •	Input Profile Recordings
Digital Interaction 1300A	Laptop	AmEx	32.33.117.251		IPR Array 1320A
Digital Interaction 1300B	Smartphone	AmEx	216.34.181.45		IPR Array 1320B
Digital Interaction 1300C	Laptop	Visa	170.149.161.130		IPR Array 1320C
Digital Interaction 1300D	Tablet	Visa	32.33.117.251		IPR Array 1320D
•					
•					
•					

FIG. 13



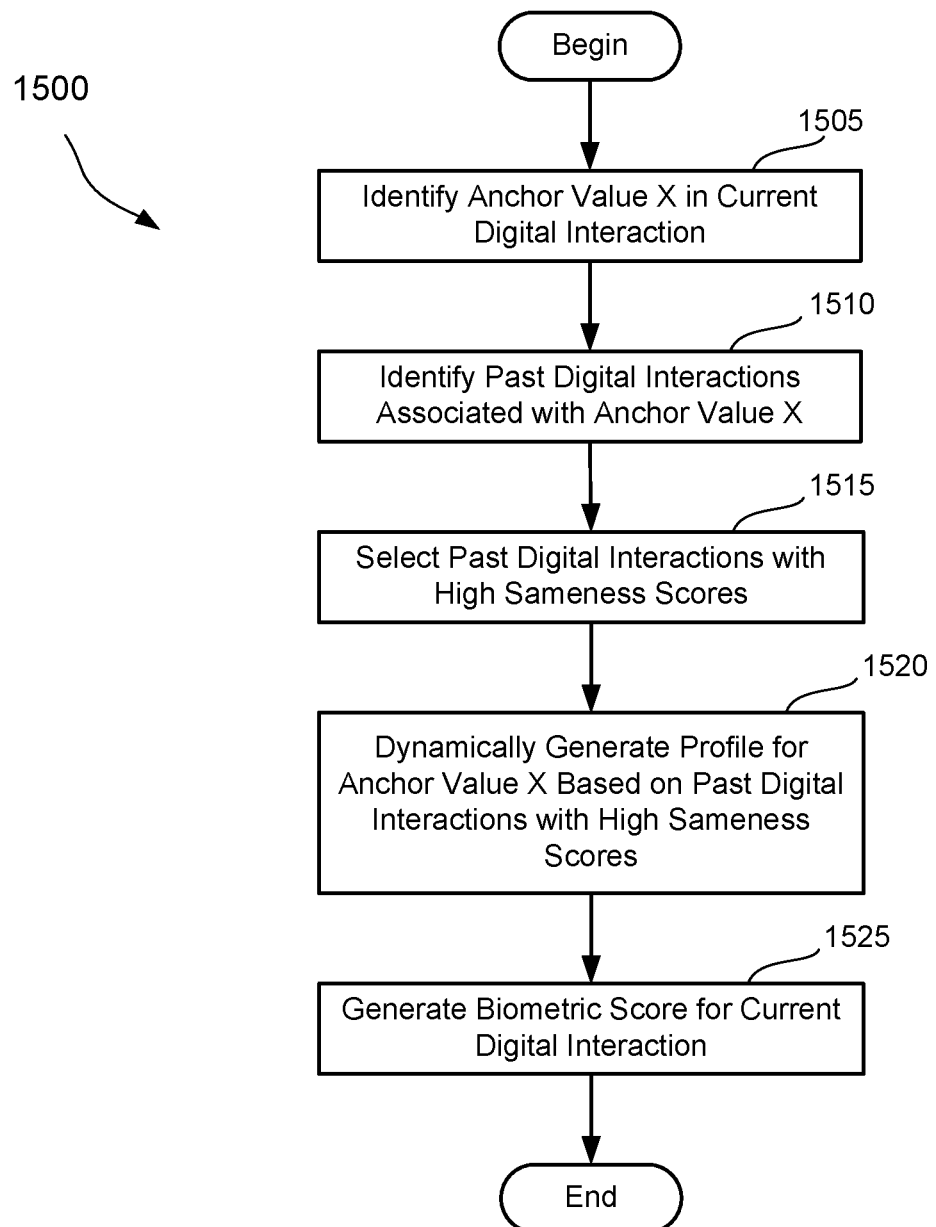
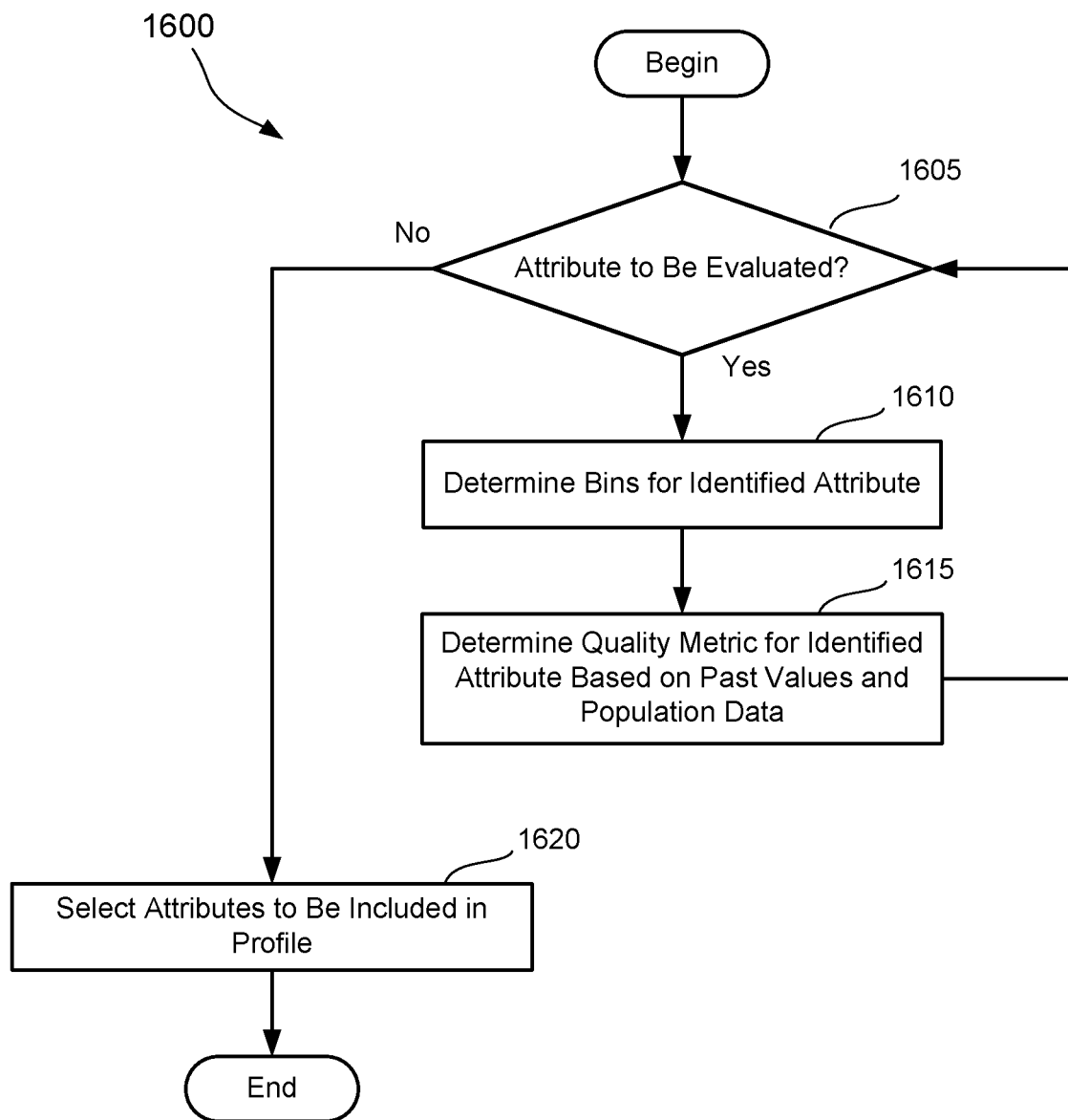


FIG. 15

**FIG. 16**

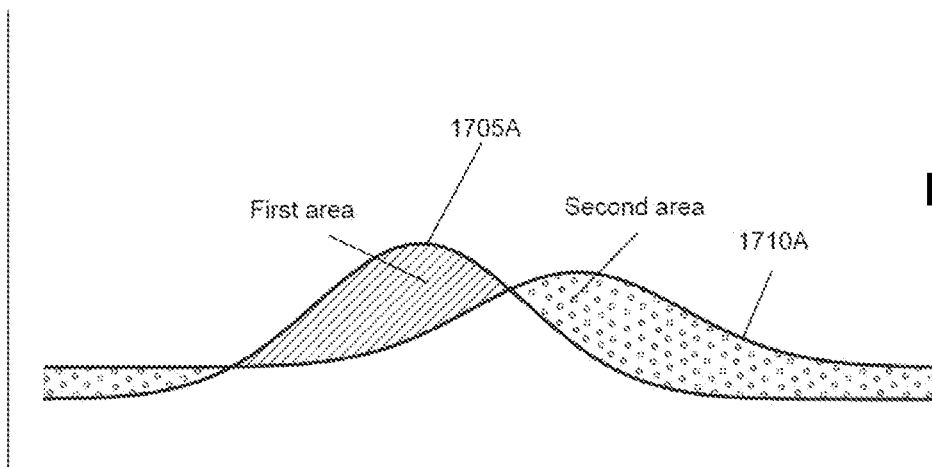


FIG. 17A

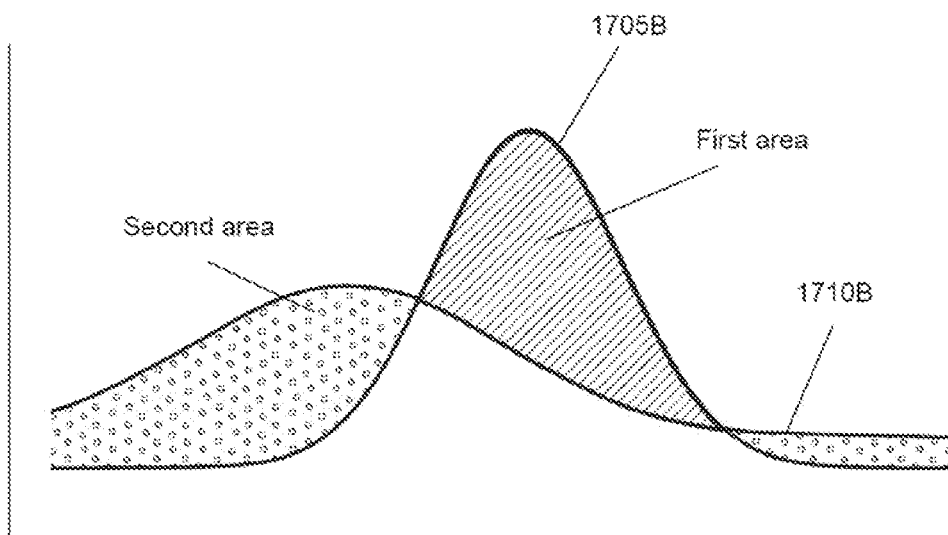


FIG. 17B

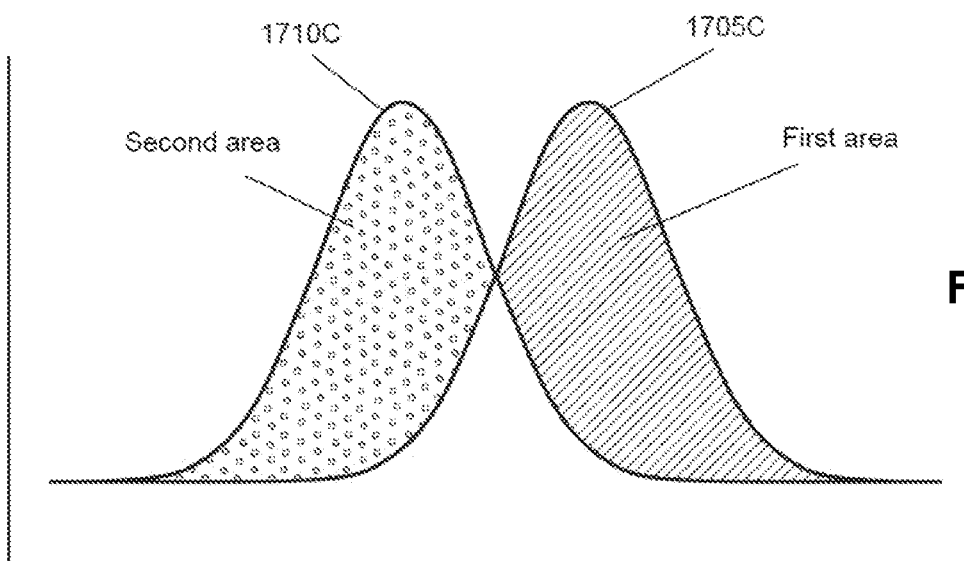
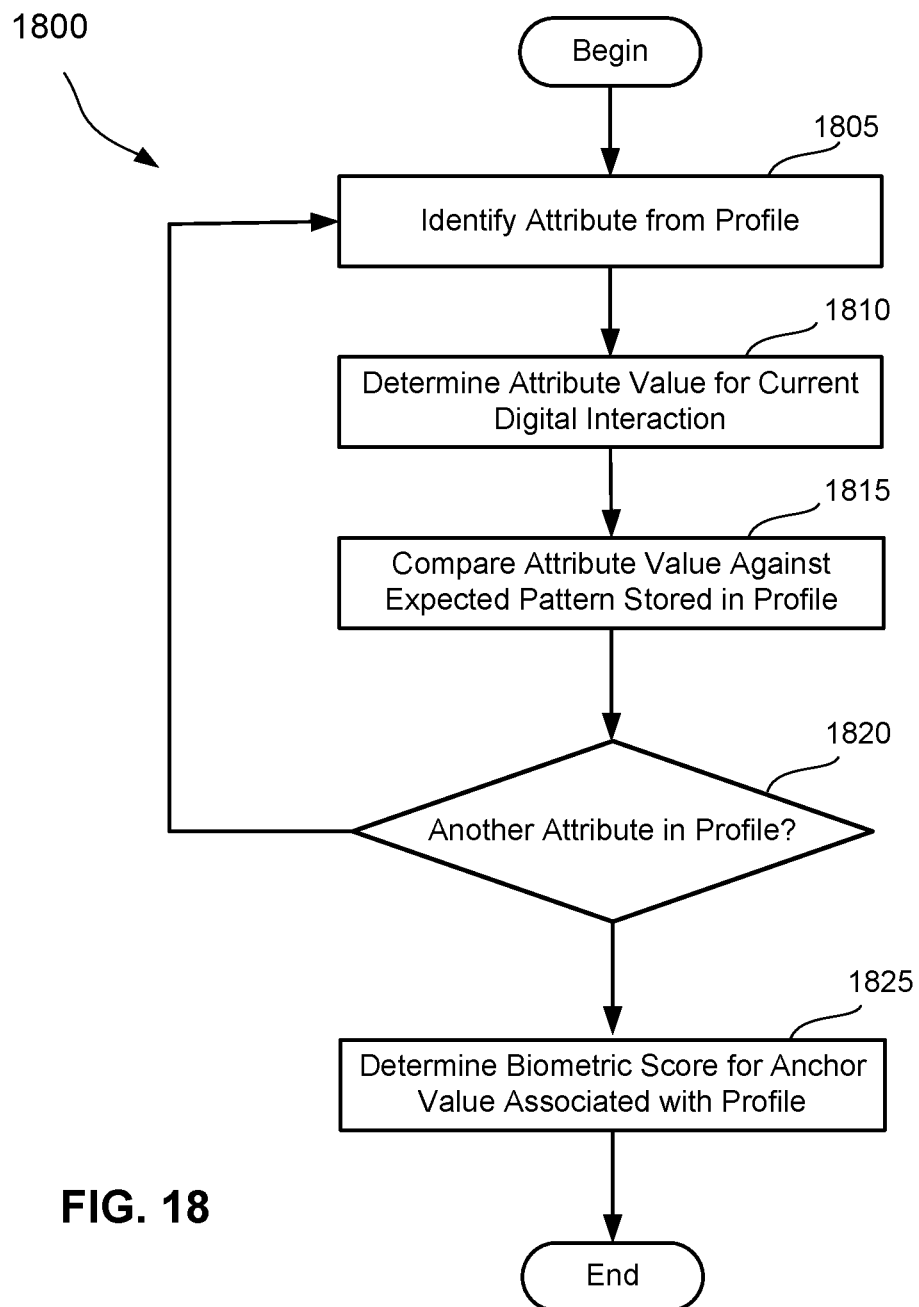
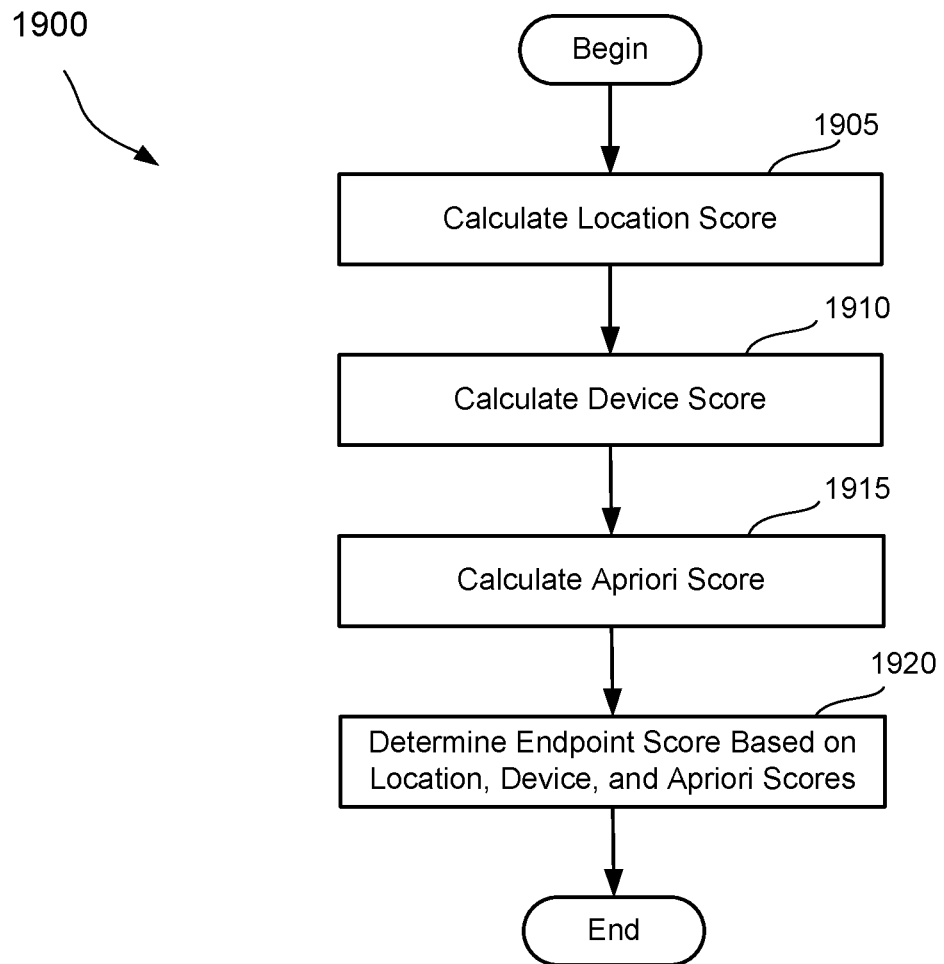
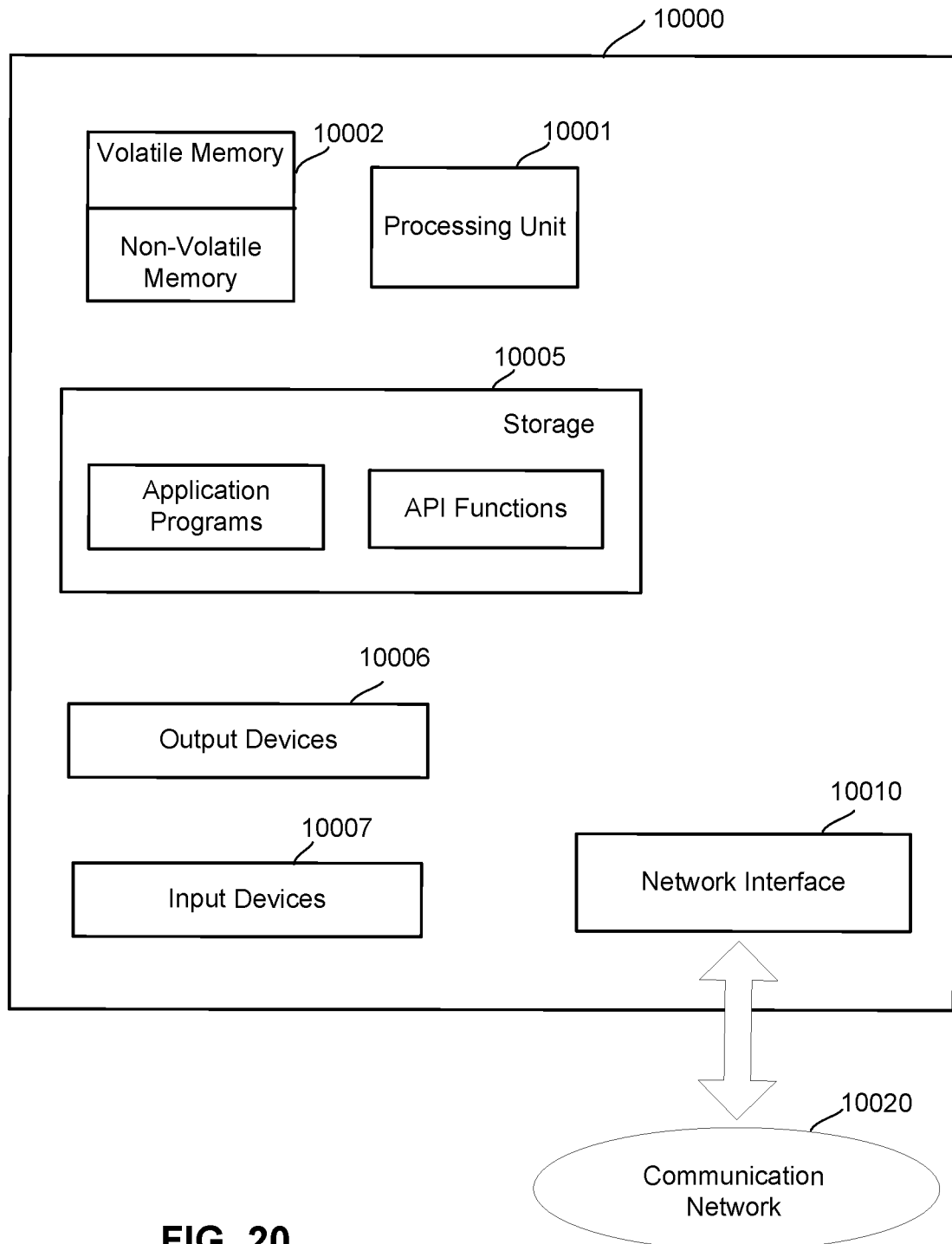


FIG. 17C

**FIG. 18**

**FIG. 19**

**FIG. 20**