

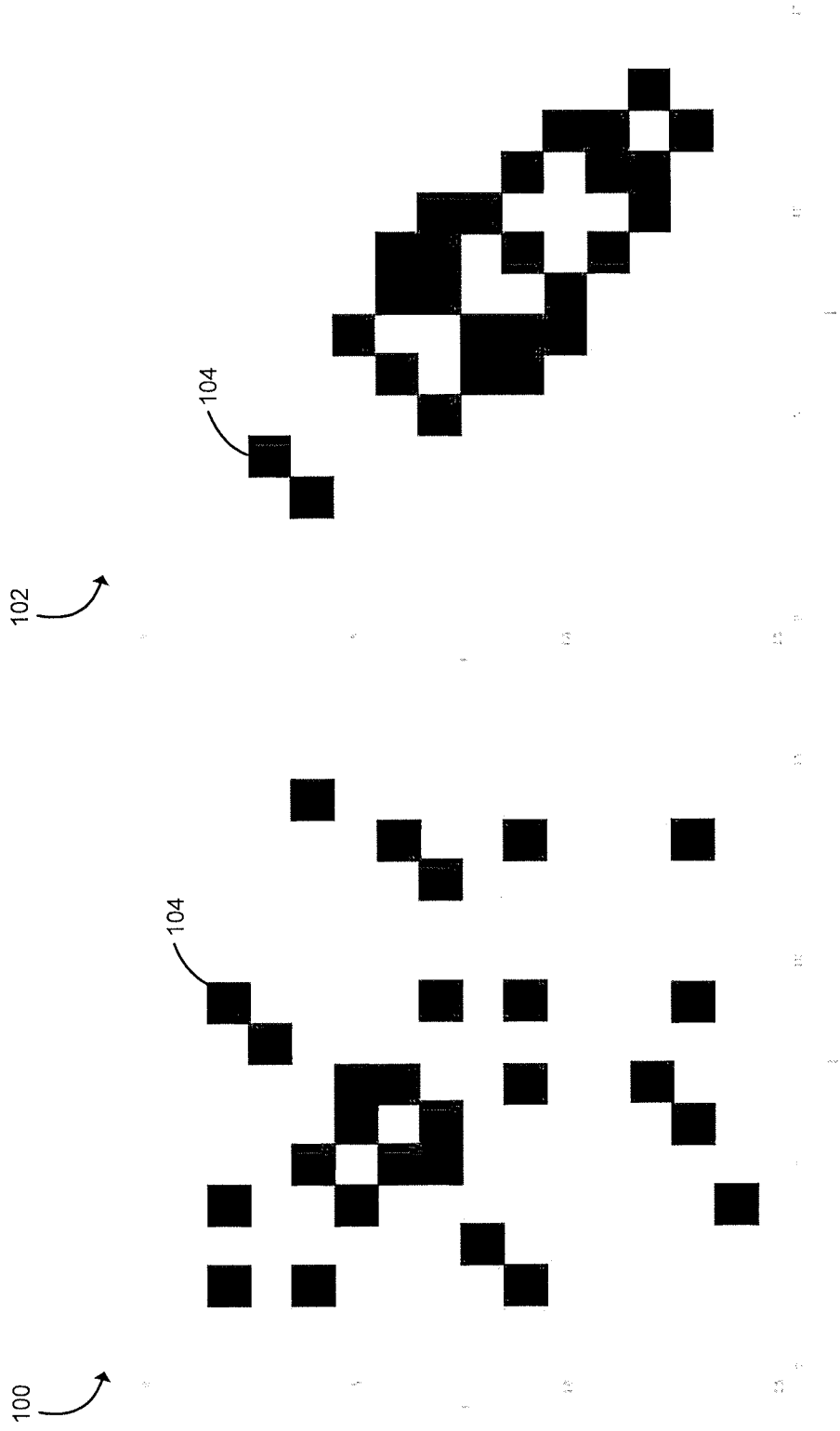


FIG. 1A
(PRIOR ART)

FIG. 1B
(PRIOR ART)

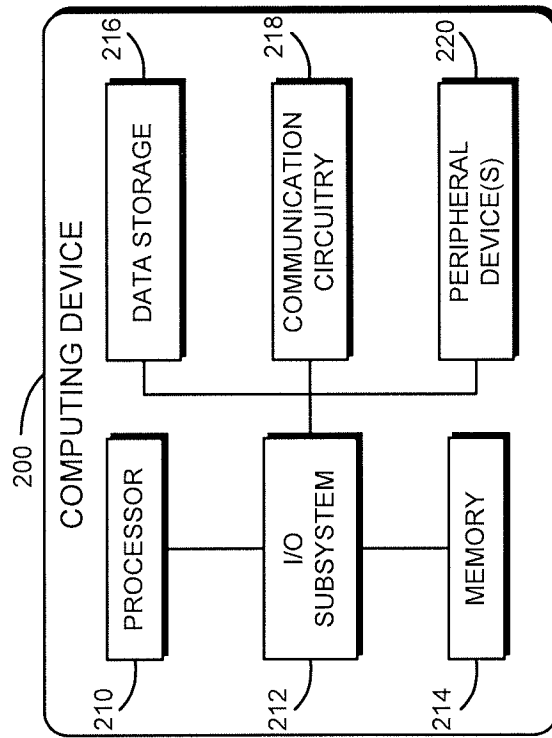


FIG. 2

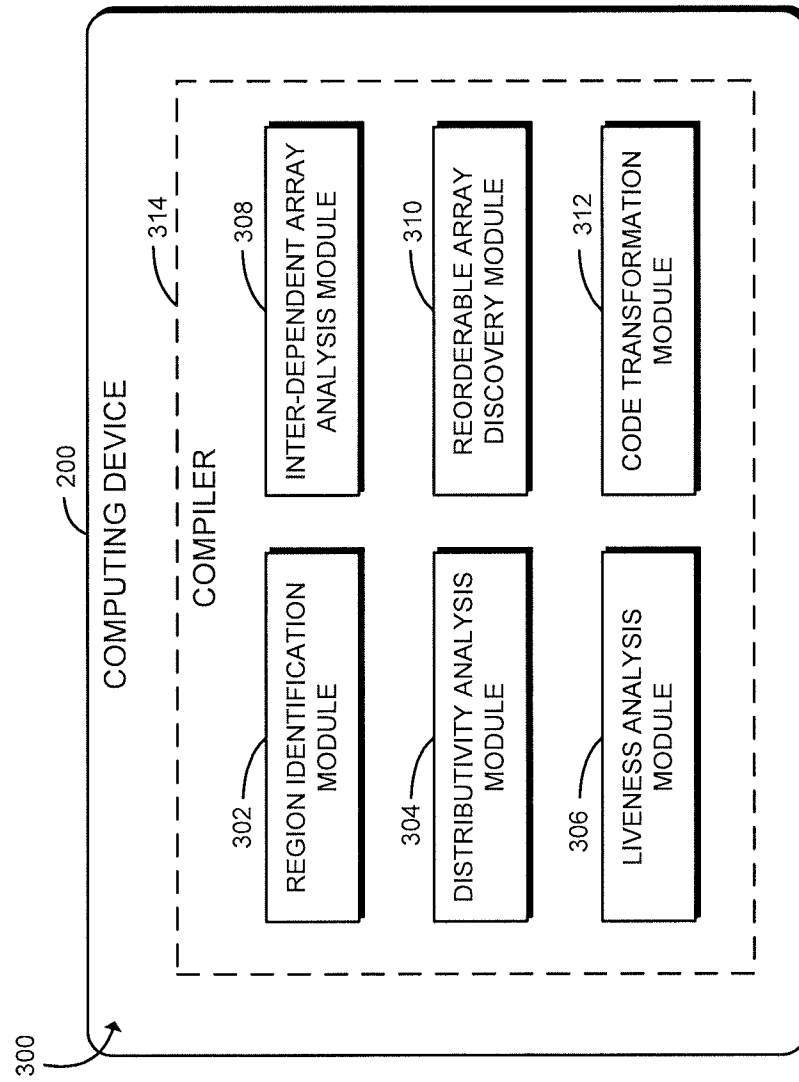


FIG. 3

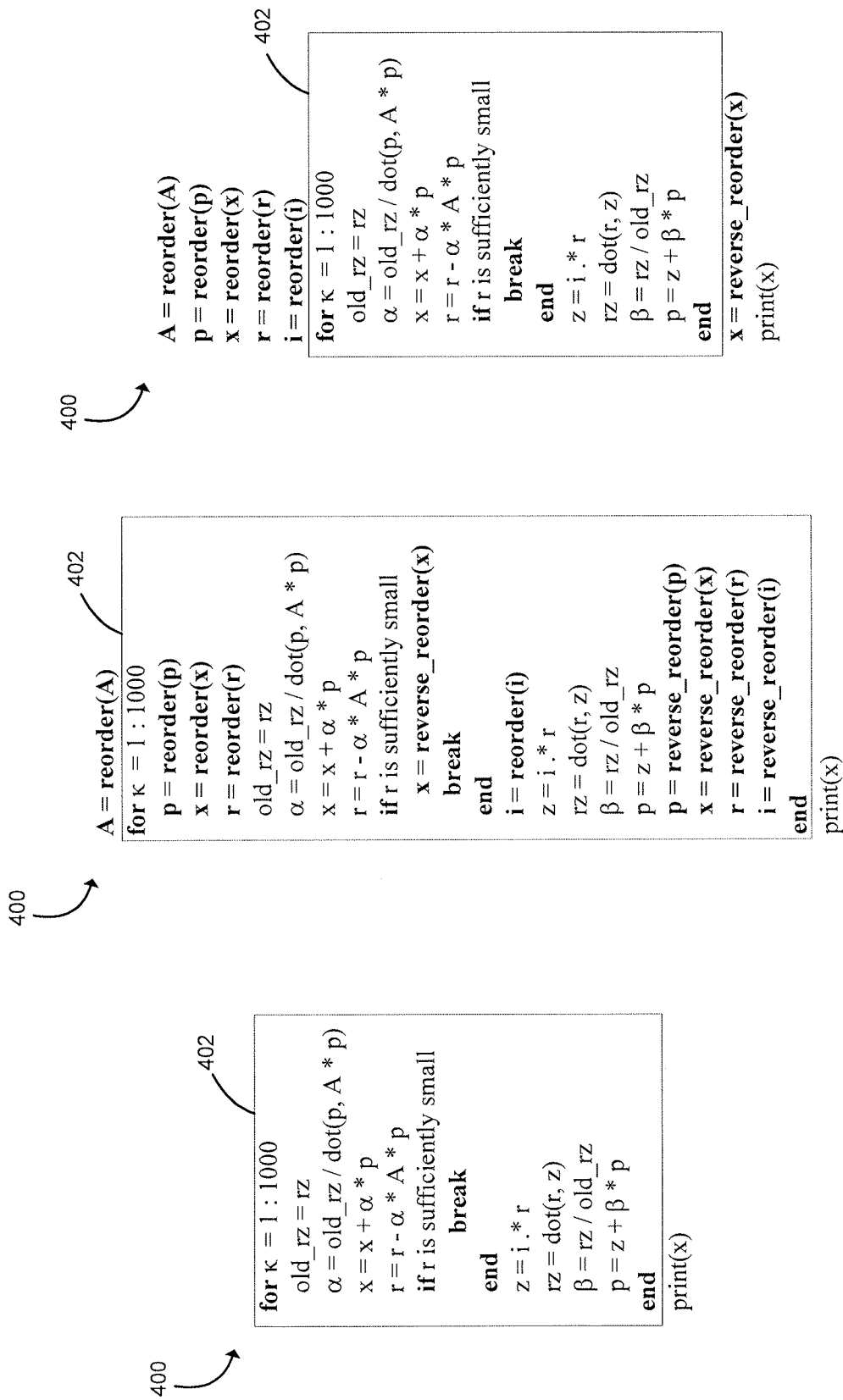


FIG. 4A

FIG. 4B

FIG. 4C

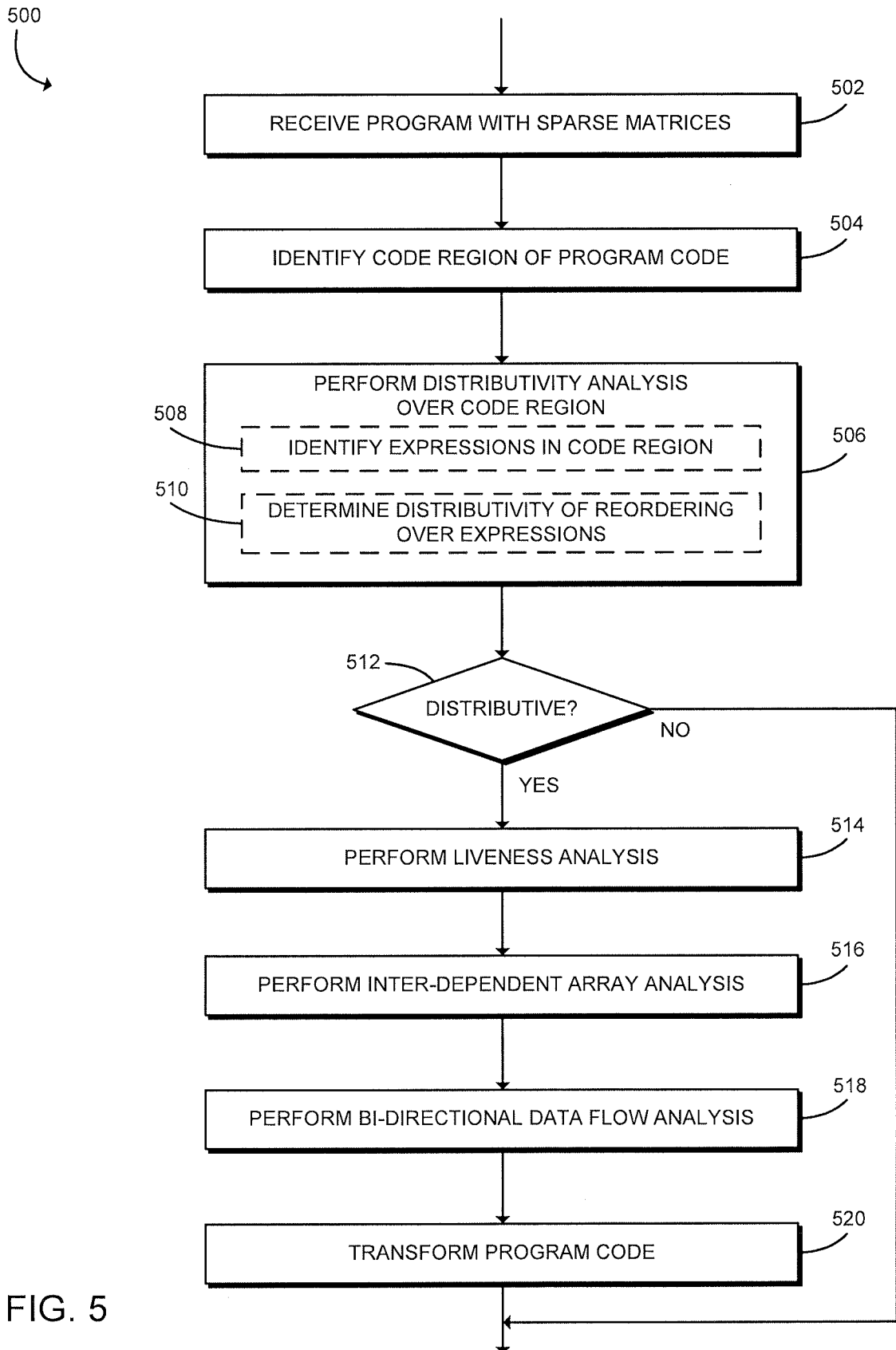


FIG. 5

600

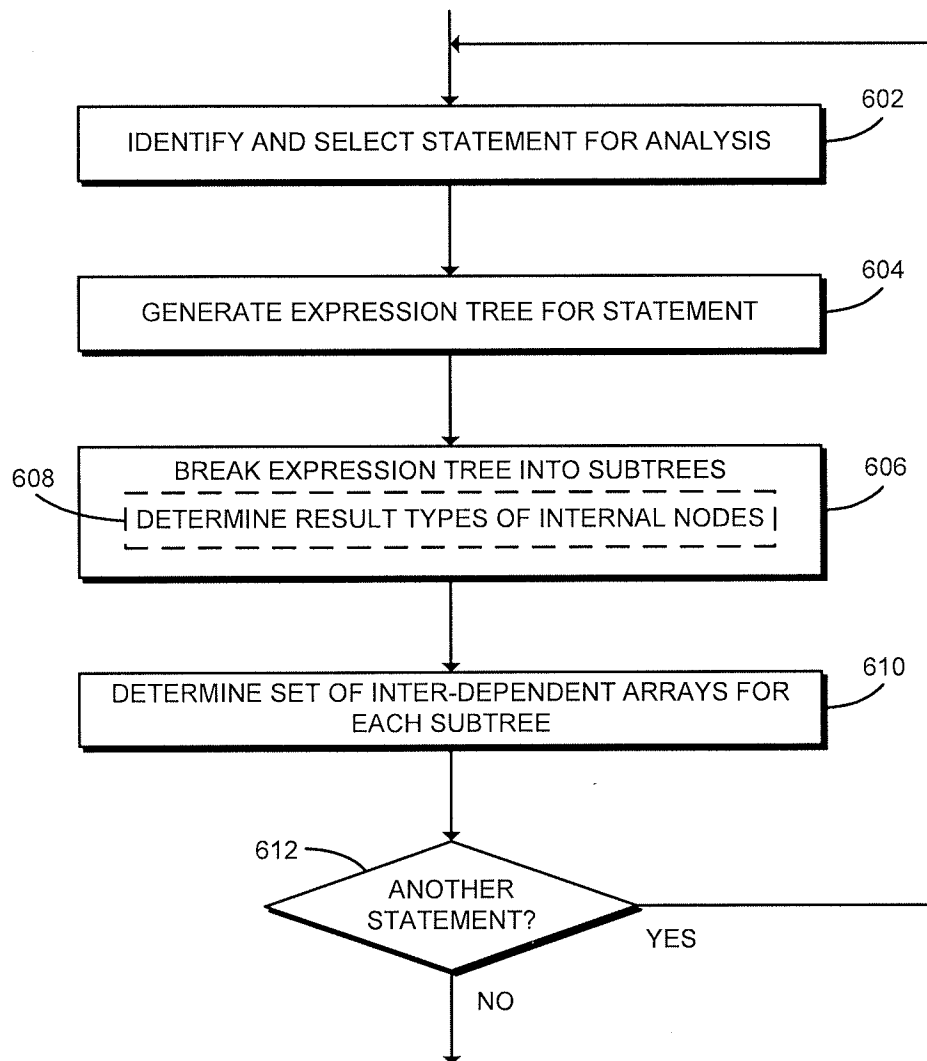
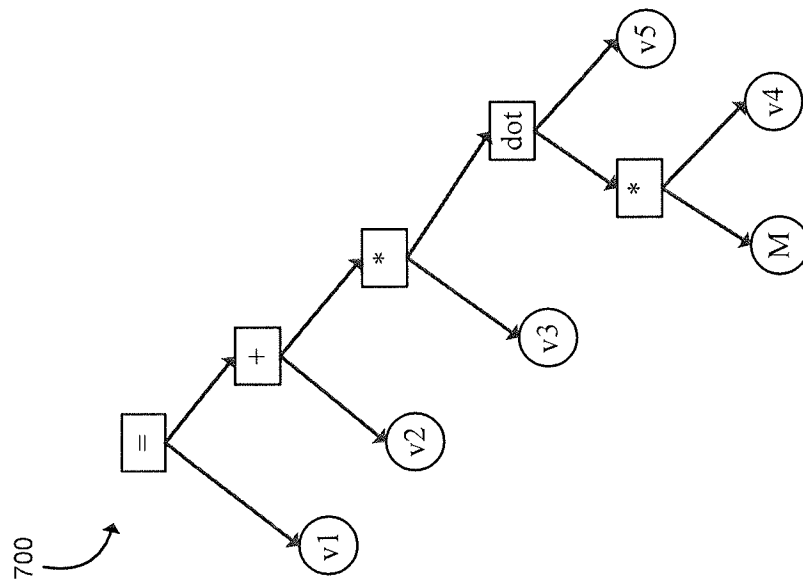
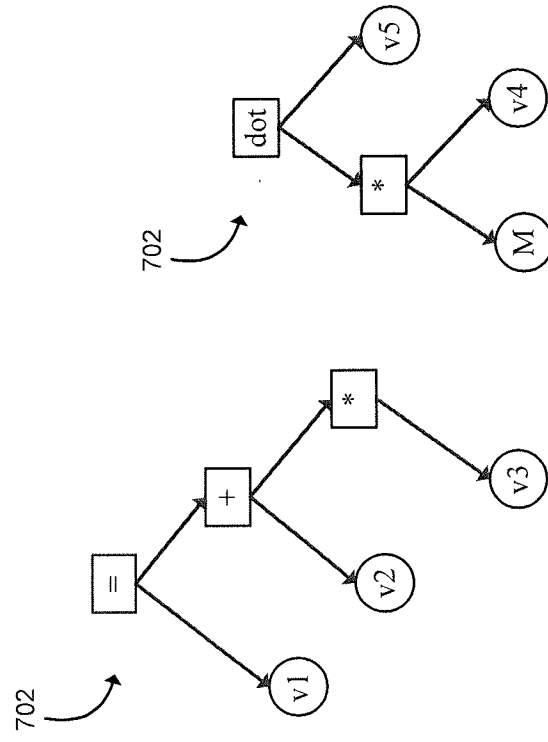


FIG. 6



800

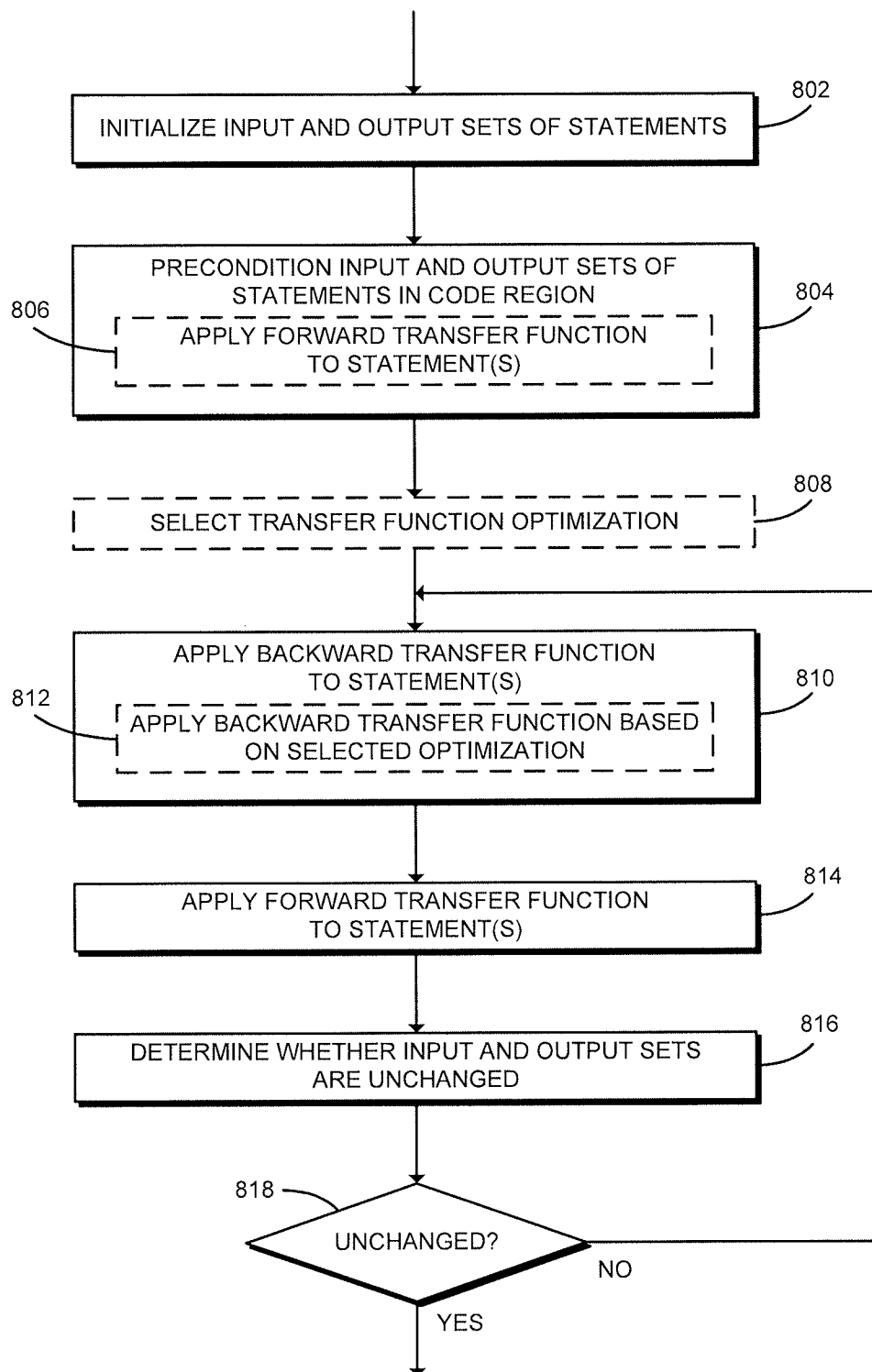


FIG. 8

900

Block	State	Initial state	Preconditioning	Growth			
				Backward pass	Forward pass	Backward pass	Forward pass
B1: F=E	In			{E, G}	{E, G}		
	Out	{F}	{F}	{F, G}	{F, E, G}	No change	No change
B2: H=F+G	In		{F}	{F, G}	{F, E, G}		
	Out	U	{F, G, H}	{F, G, H}	{F, G, E, H}		

902

904

FIG. 9

1000

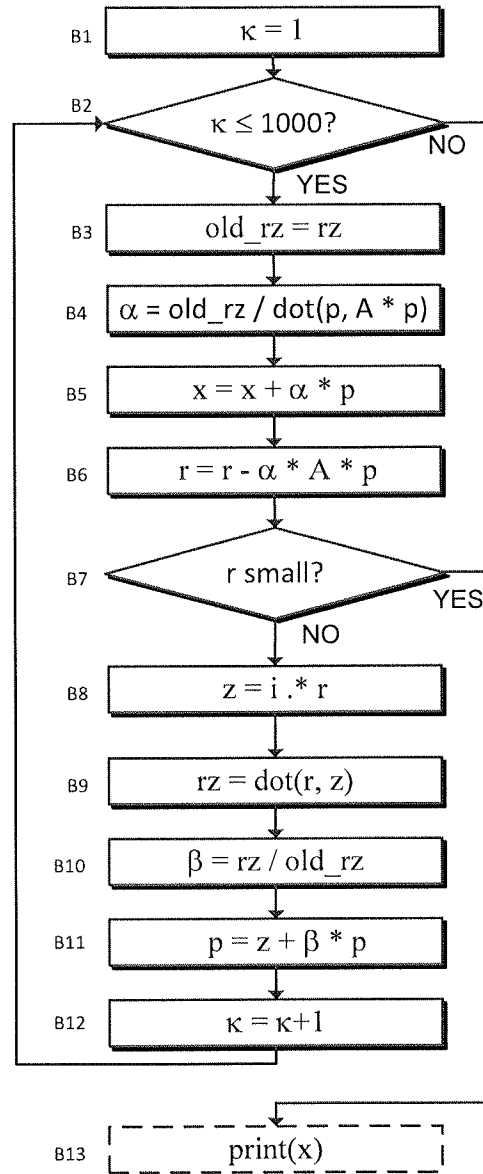


FIG. 10

1100



Node	State	Initialization	Preconditioning	1st backward pass
B1	IN			{A}
	OUT	{A}	{A}	{A}
B2	IN		{A}	{A}
	OUT	U	{A}	{A}
B3	IN		{A}	{A, p, x, r}
	OUT	U	{A}	{A, p, x, r}
B4	IN		{A}	{A, p, x, r}
	OUT	U	{A, p}	{A, p, x, r}
B5	IN		{A, p}	{A, p, x, r}
	OUT	U	{A, p, x}	{A, p, x, r}
B6	IN		{A, p, x}	{A, p, x, r}
	OUT	U	{A, p, x, r}	{A, p, x, r}
B7	IN		{A, p, x, r}	{A, p, x, r}
	OUT	U	{A, p, x, r}	{A, p, x, r}
B8	IN		{A, p, x, r}	{A, p, x, r, l}
	OUT	U	{A, p, x, r, l, z}	{A, p, x, r, l, z}
B9	IN		{A, p, x, r, l, z}	{A, p, x, r, l, z}
	OUT	U	{A, p, x, r, l, z}	{A, p, x, r, l, z}
B10	IN		{A, p, x, r, l, z}	{A, p, x, r, l, z}
	OUT	U	{A, p, x, r, l, z}	{A, p, x, r, l, z}
B11	IN		{A, p, x, r, l, z}	{A, p, x, r, l, z}
	OUT	U	{A, p, x, r, l, z}	{A, p, x, r, l, z}
B12	IN		{A, p, x, r, l, z}	{A, p, x, r, l, z}
	OUT	U	{A, p, x, r, l, z}	{A, p, x, r, l, z}
B13	IN	∅	∅	∅
	OUT	∅	∅	∅

FIG. 11

1200

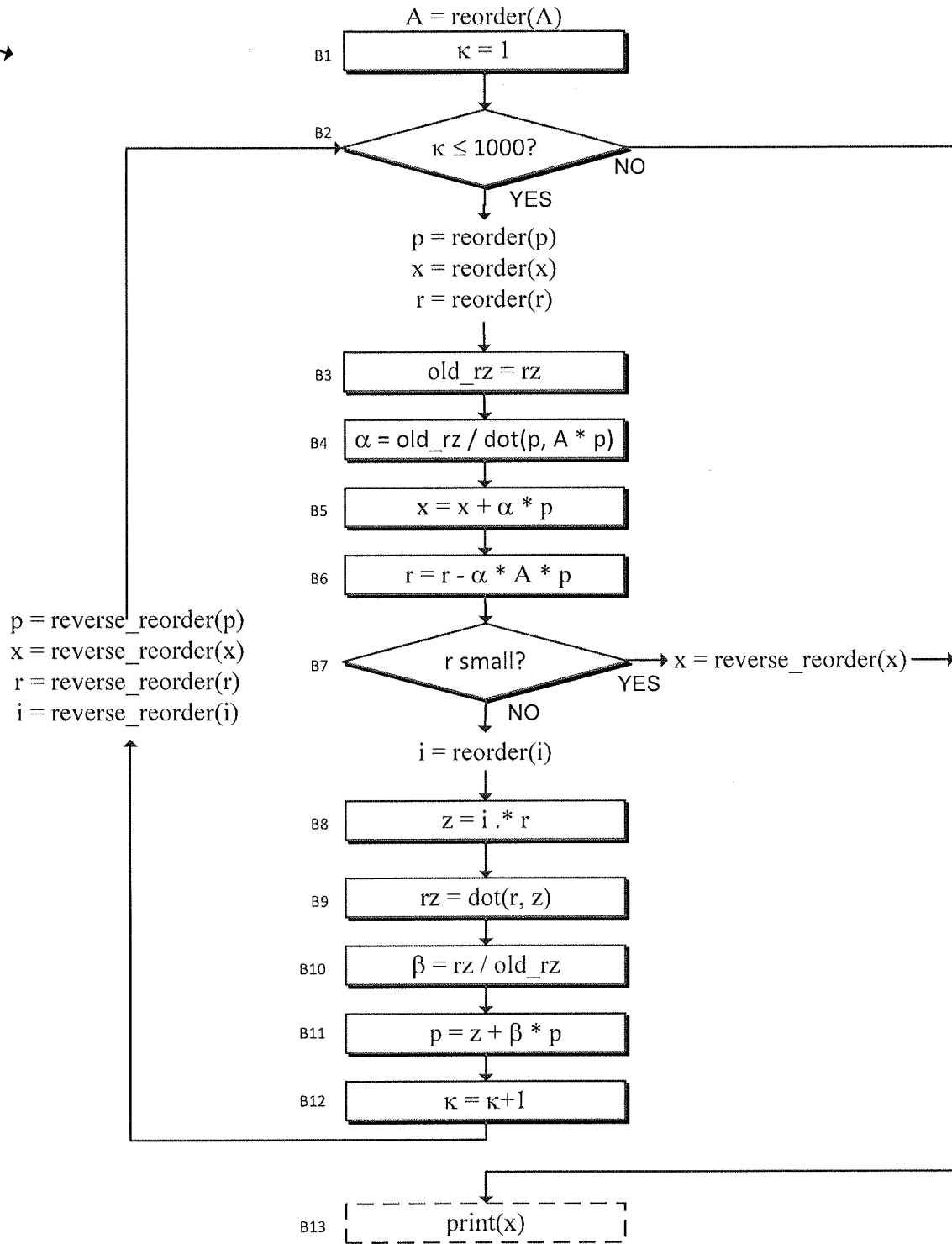


FIG. 12

1300



Node	State	Initialization	Preconditioning	1st backward pass
B1	IN OUT	{A}	{A}	{A, p, r, i} {A, p, r, i}
B2	IN OUT	U	{A} {A}	{A, p, r, i} {A, p, r, i}
B3	IN OUT	U	{A} {A}	{A, p, x, r, i} {A, p, x, r, i}
B4	IN OUT	U	{A} {A, p}	{A, p, x, r, i} {A, p, x, r, i}
B5	IN OUT	U	{A, p} {A, p, x}	{A, p, x, r, i} {A, p, x, r, i}
B6	IN OUT	U	{A, p, x} {A, p, x, r}	{A, p, x, r, i} {A, p, x, r, i}
B7	IN OUT	U	{A, p, x, r} {A, p, x, r}	{A, p, x, r, i} {A, p, x, r, i}
B8	IN OUT	U	{A, p, x, r} {A, p, x, r, i, z}	{A, p, x, r, i} {A, p, x, r, i, z}
B9	IN OUT	U	{A, p, x, r, i, z} {A, p, x, r, i, z}	{A, p, x, r, i, z} {A, p, x, r, i, z}
B10	IN OUT	U	{A, p, x, r, i, z} {A, p, x, r, i, z}	{A, p, x, r, i, z} {A, p, x, r, i, z}
B11	IN OUT	U	{A, p, x, r, i, z} {A, p, x, r, i, z}	{A, p, x, r, i, z} {A, p, x, r, i, z}
B12	IN OUT	U	{A, p, x, r, i, z} {A, p, x, r, i, z}	{A, p, x, r, i, z} {A, p, x, r, i, z}
B13	IN OUT	$\emptyset$ $\emptyset$	$\emptyset$ $\emptyset$	$\emptyset$ $\emptyset$

FIG. 13

1400

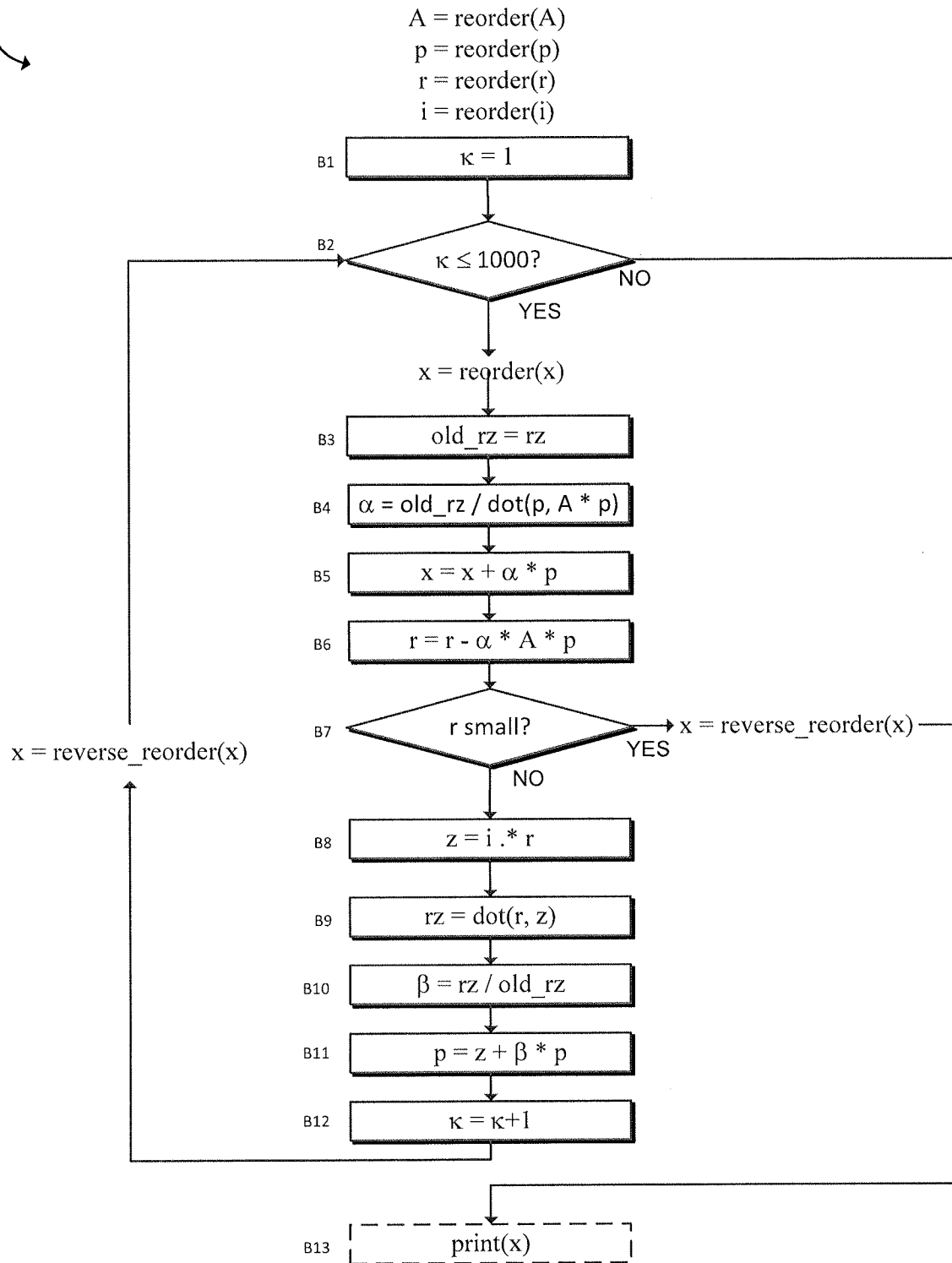


FIG. 14

1500



Node	State	Initialization	Preconditioning	1st backward pass
B1	IN OUT	{A}	{A}	{A, p, x, r, i} {A, p, x, r, i}
B2	IN OUT	U	{A} {A}	{A, p, x, r, i} {A, p, x, r, i}
B3	IN OUT	U	{A} {A}	{A, p, x, r, i} {A, p, x, r, i}
B4	IN OUT	U	{A} {A, p}	{A, p, x, r, i} {A, p, x, r, i}
B5	IN OUT	U	{A, p} {A, p, x}	{A, p, x, r, i} {A, p, x, r, i}
B6	IN OUT	U	{A, p, x} {A, p, x, r}	{A, p, x, r, i} {A, p, x, r, i}
B7	IN OUT	U	{A, p, x, r} {A, p, x, r}	{A, p, x, r, i} {A, p, x, r, i}
B8	IN OUT	U	{A, p, x, r} {A, p, x, r, i, z}	{A, p, x, r, i} {A, p, x, r, i, z}
B9	IN OUT	U	{A, p, x, r, i, z} {A, p, x, r, i, z}	{A, p, x, r, i, z} {A, p, x, r, i, z}
B10	IN OUT	U	{A, p, x, r, i, z} {A, p, x, r, i, z}	{A, p, x, r, i, z} {A, p, x, r, i, z}
B11	IN OUT	U	{A, p, x, r, i, z} {A, p, x, r, i, z}	{A, p, x, r, i, z} {A, p, x, r, i, z}
B12	IN OUT	U	{A, p, x, r, i, z} {A, p, x, r, i, z}	{A, p, x, r, i, z} {A, p, x, r, i, z}
B13	IN OUT	$\emptyset$ $\emptyset$	$\emptyset$ $\emptyset$	$\emptyset$ $\emptyset$

FIG. 15

1600

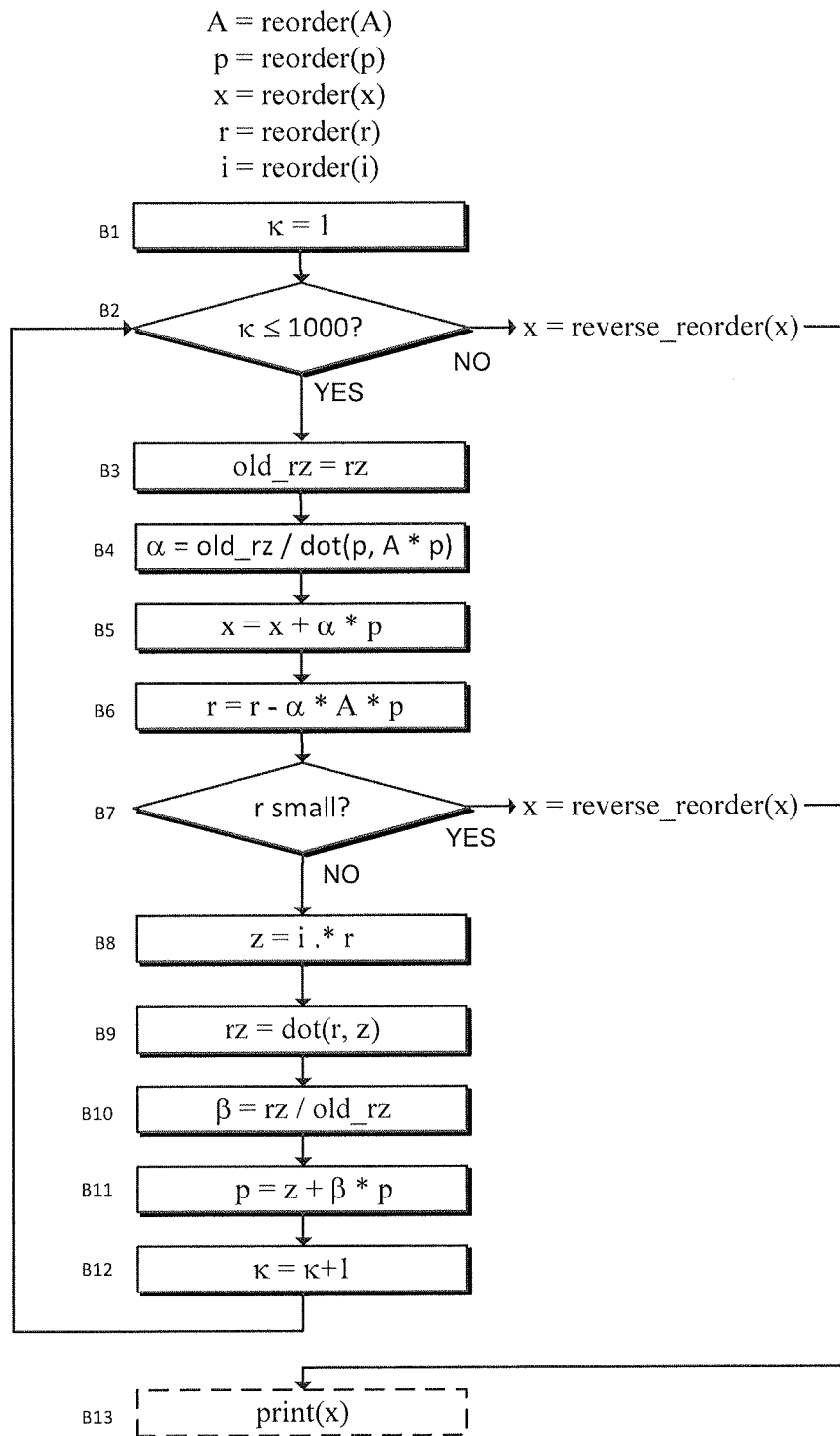


FIG. 16