

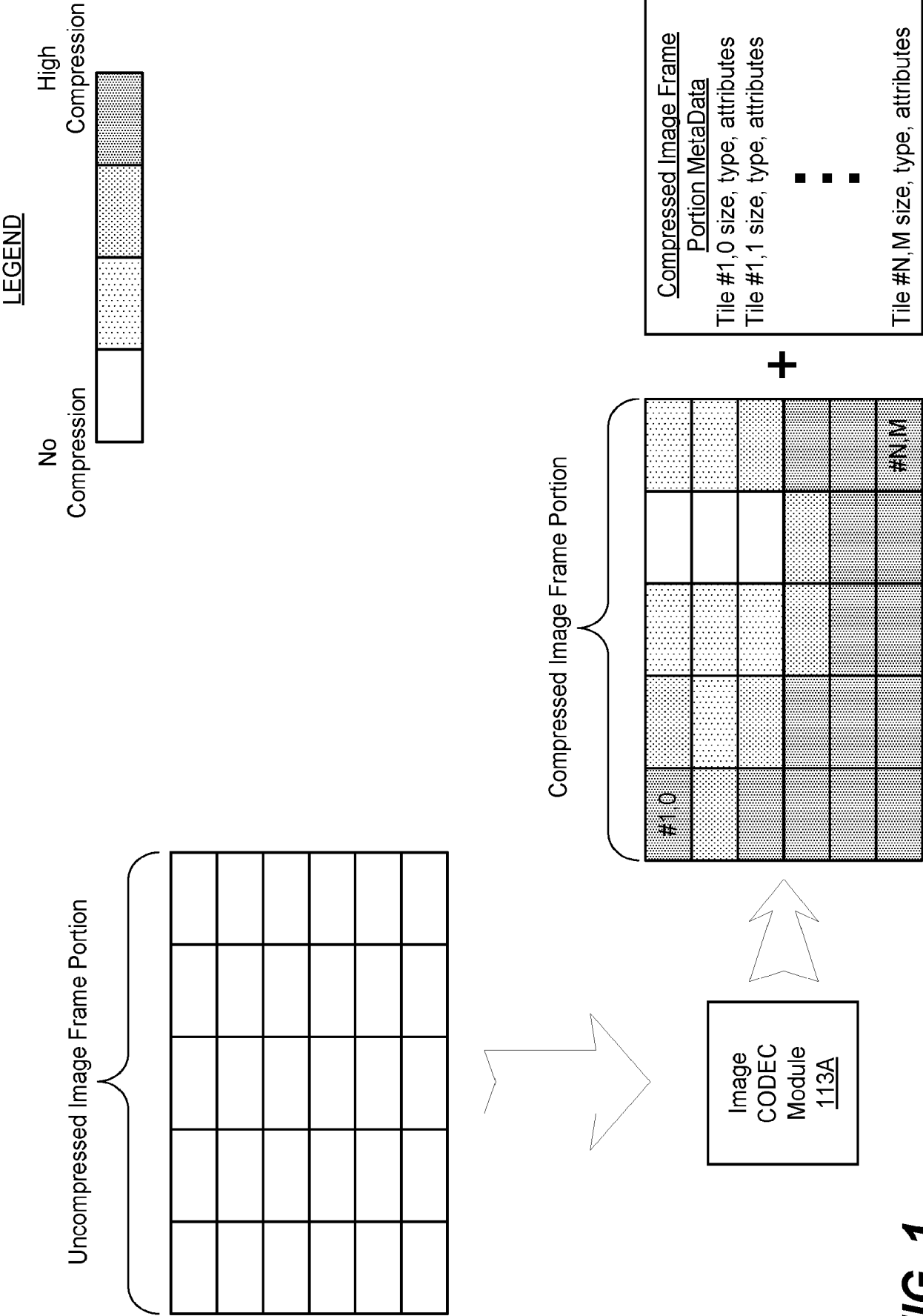
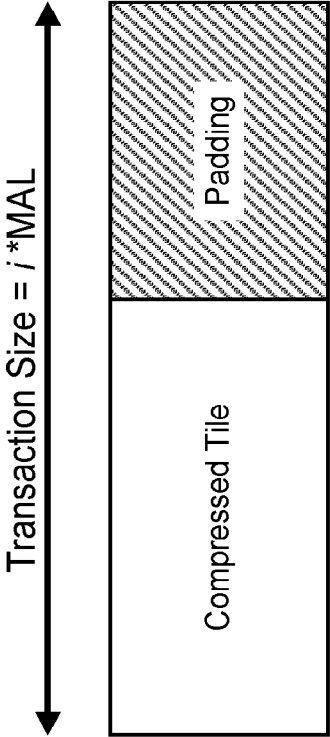


FIG. 1

LEGEND

MAL = Minimum Access Length allowed by DRAM



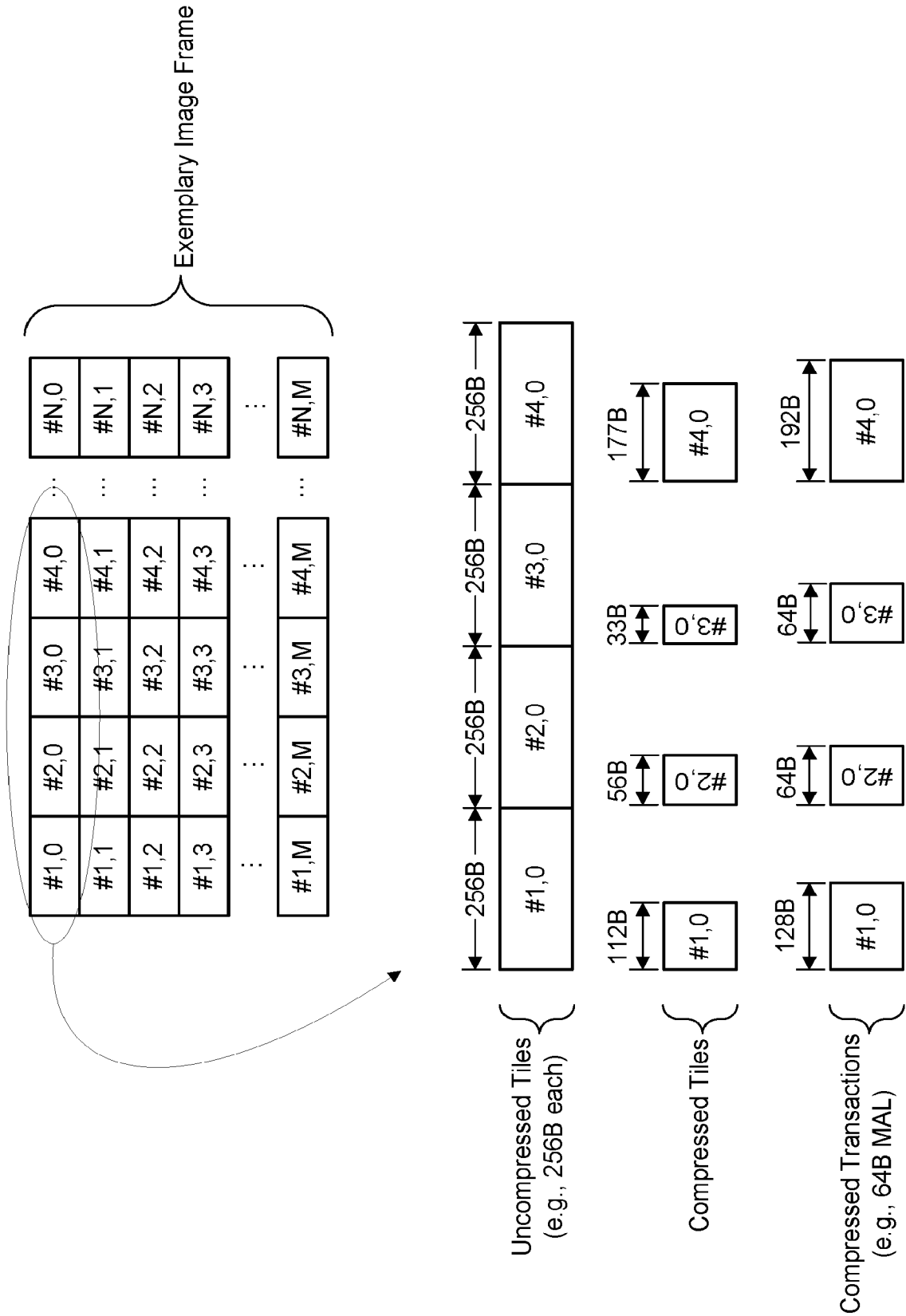


FIG. 3

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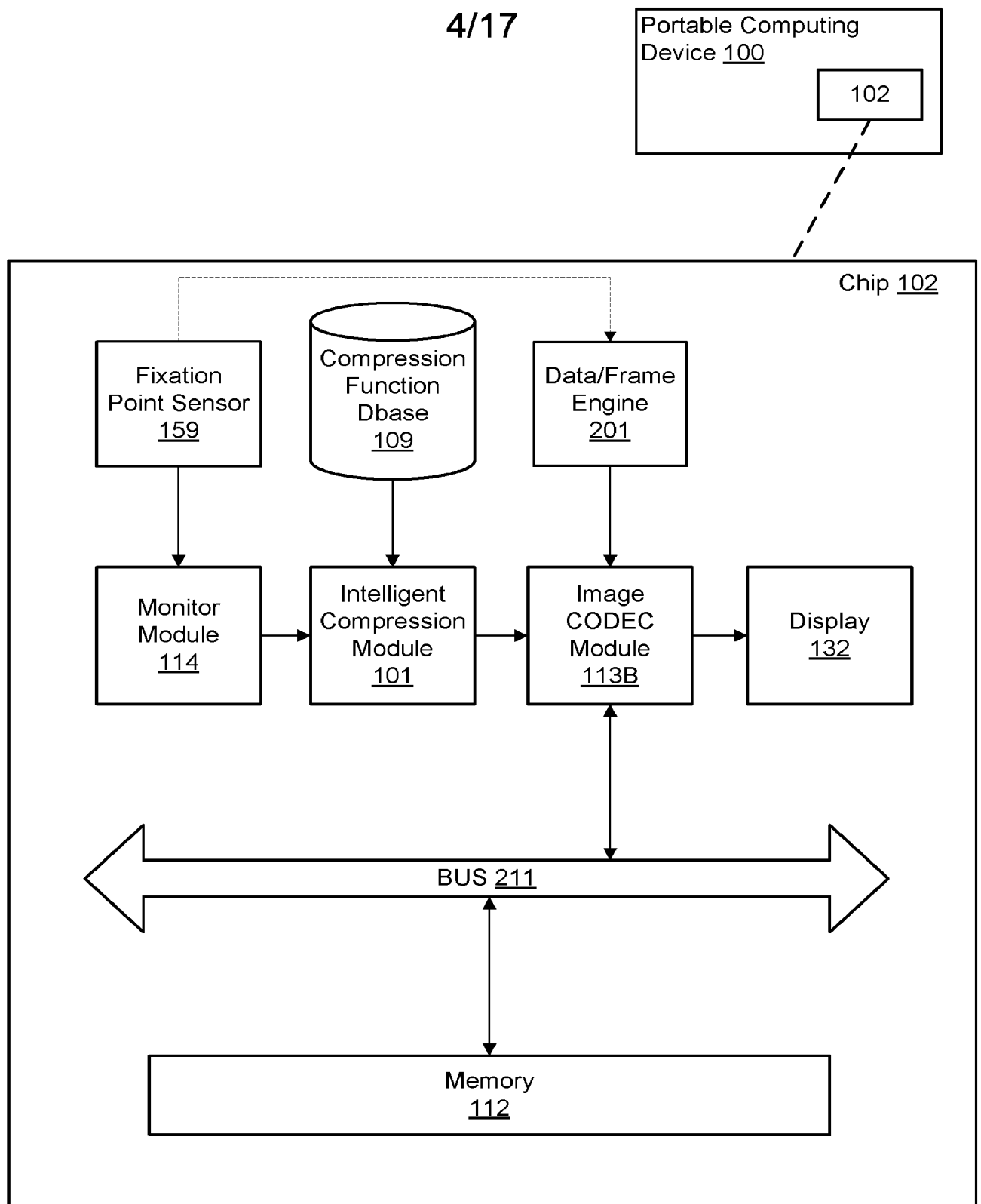
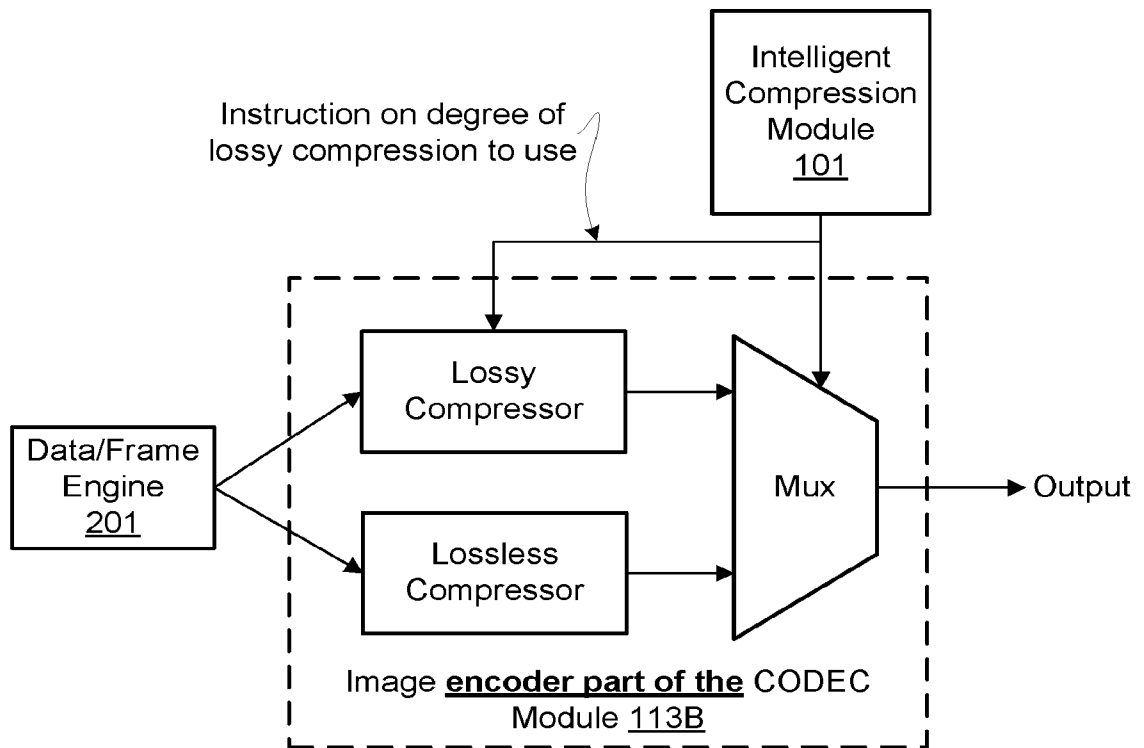
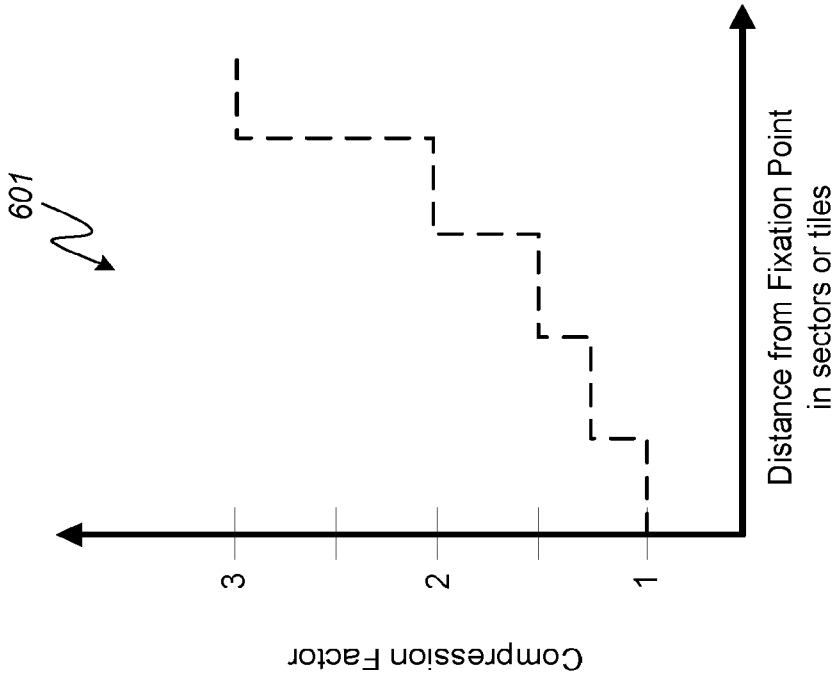


FIG. 4

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**FIG. 5**

Exemplary Compression Ratio Function



602

Absolute Distance from Fixation Point		Compression Factor
X	Y	
0	0	1
1	1	1.25
2	2	1.5
3	3	2
4	4	3
...	...	...

FIG. 6

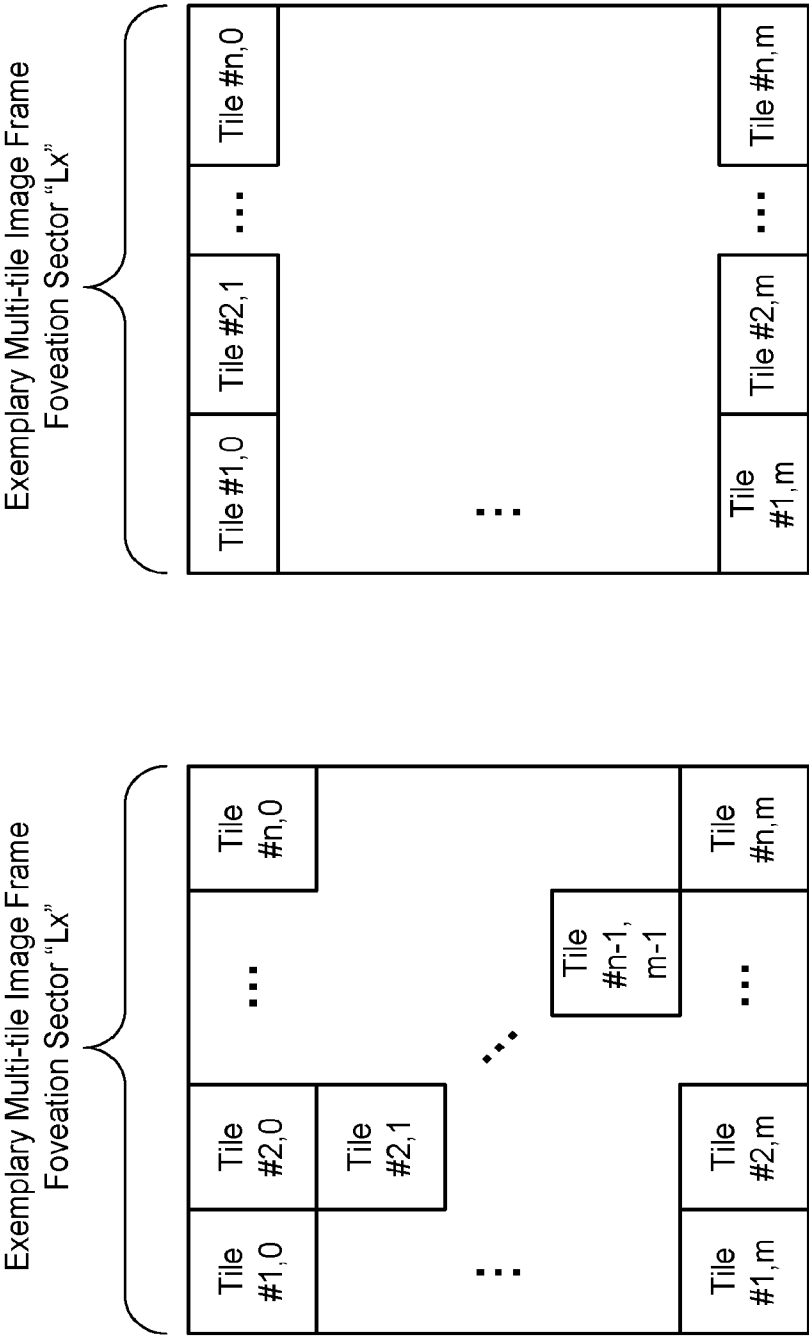


FIG. 7

LEGEND

- ★ = Fixation Point
- L1 = Lossless compression or Lossy compression w/ low loss factor
- L2 = Lossy compression with loss factor higher than L1 loss factor
- L3 = Lossy compression with loss factor higher than L2 loss factor
- L4 = Lossy compression with loss factor higher than L3 loss factor
- L5 = Lossy compression with loss factor higher than L4 loss factor
- L6 = Lossy compression with loss factor higher than L5 loss factor
- ⋮
- Ln = Lossy compression with loss factor higher than L(n-1) loss factor

800

Sectored Image Frame compressed according to an exemplary Square-Grid Foveated-Compression Pattern

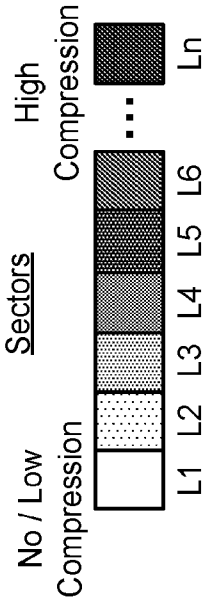
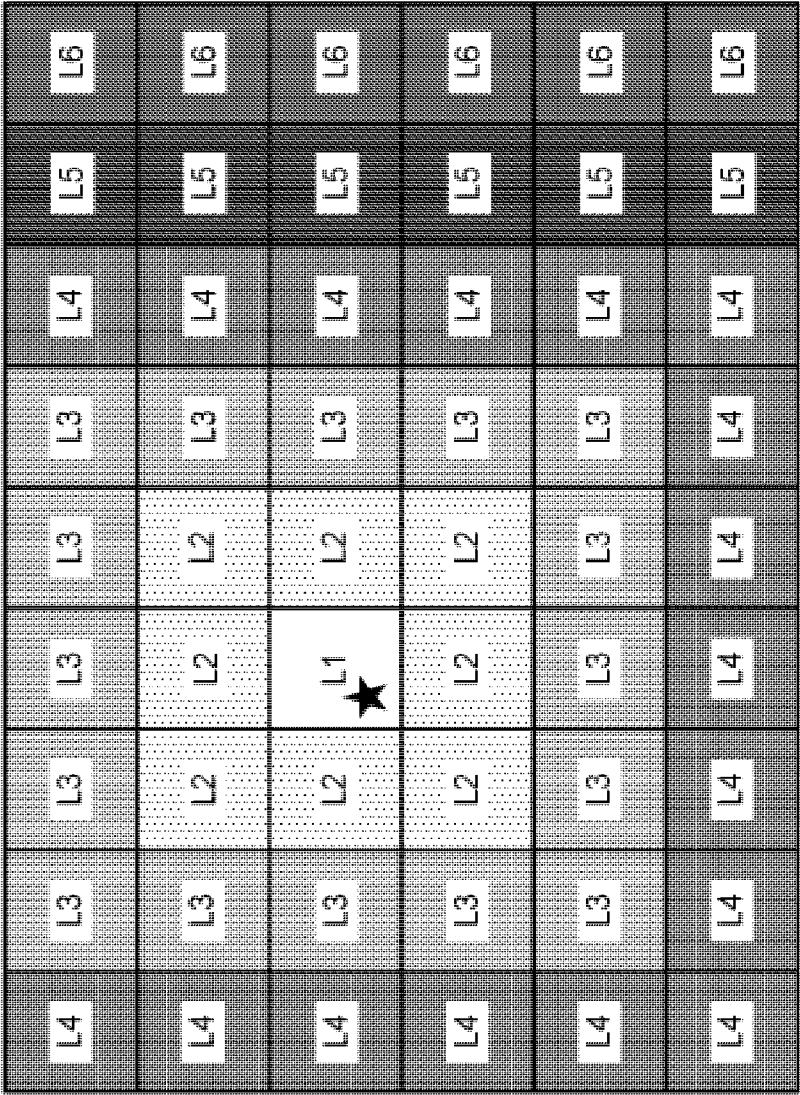


FIG. 8

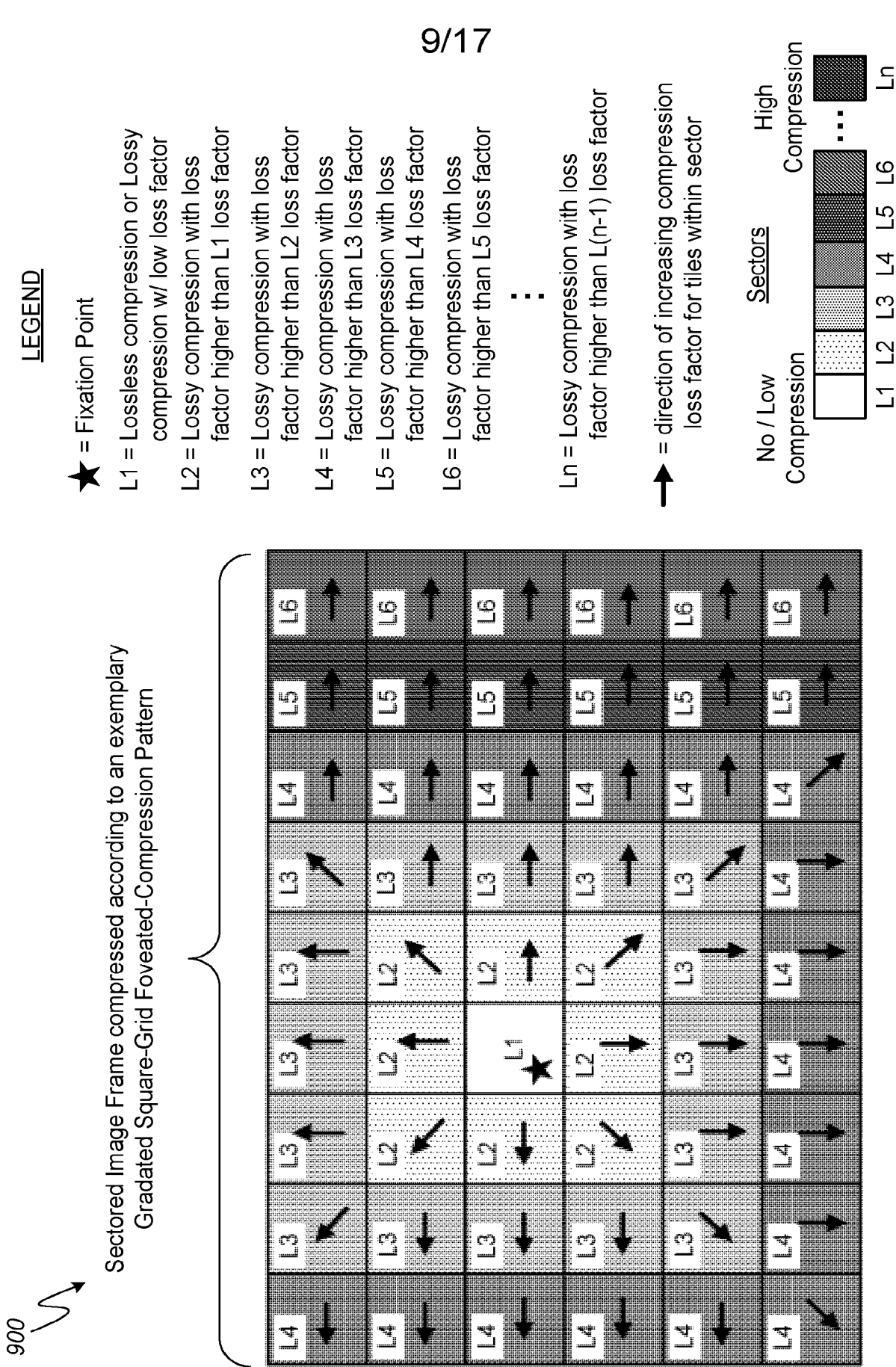
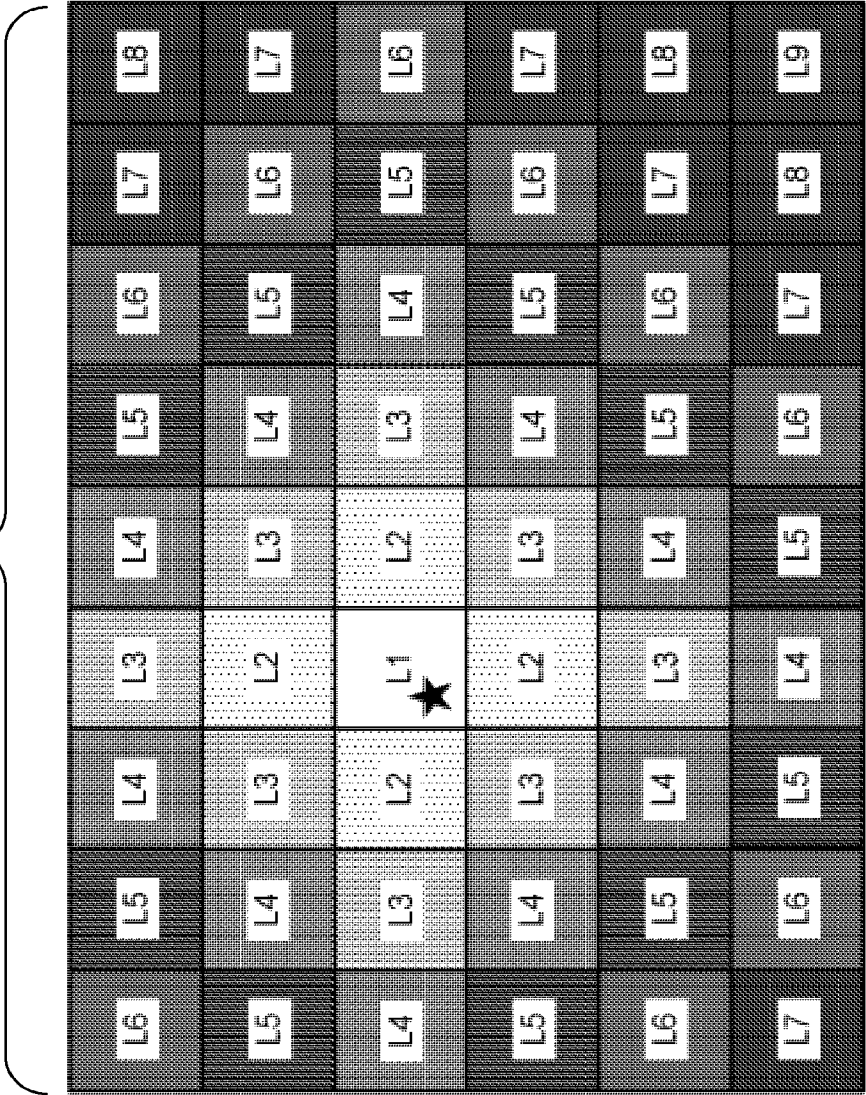


FIG. 9

1000

Sectored Image Frame compressed according to an exemplary Cross-Grid Foveated-Compression Pattern



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LEGEND

- ★ = Fixation Point
- L1 = Lossless compression or Lossy compression w/ low loss factor
- L2 = Lossy compression with loss factor higher than L1 loss factor
- L3 = Lossy compression with loss factor higher than L2 loss factor
- L4 = Lossy compression with loss factor higher than L3 loss factor
- L5 = Lossy compression with loss factor higher than L4 loss factor
- L6 = Lossy compression with loss factor higher than L5 loss factor
- ⋮
- Ln = Lossy compression with loss factor higher than L(n-1) loss factor

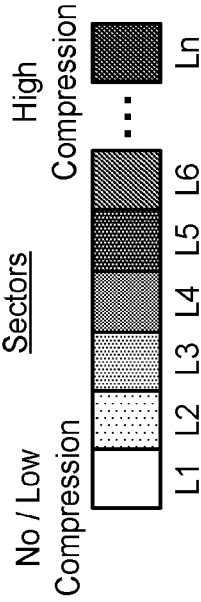
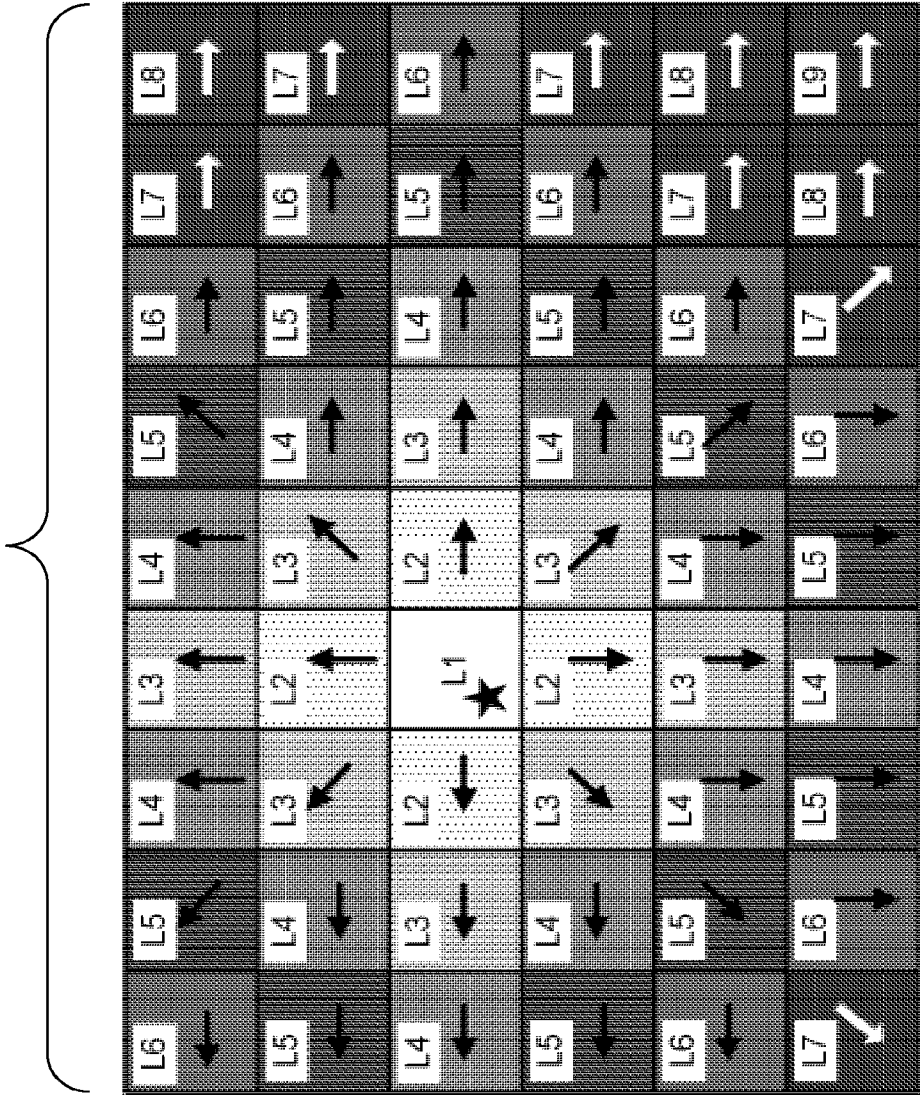


FIG. 10

1100



Sectored Image Frame compressed according to an exemplary
Gradated Cross-Grid Foveated-Compression Pattern



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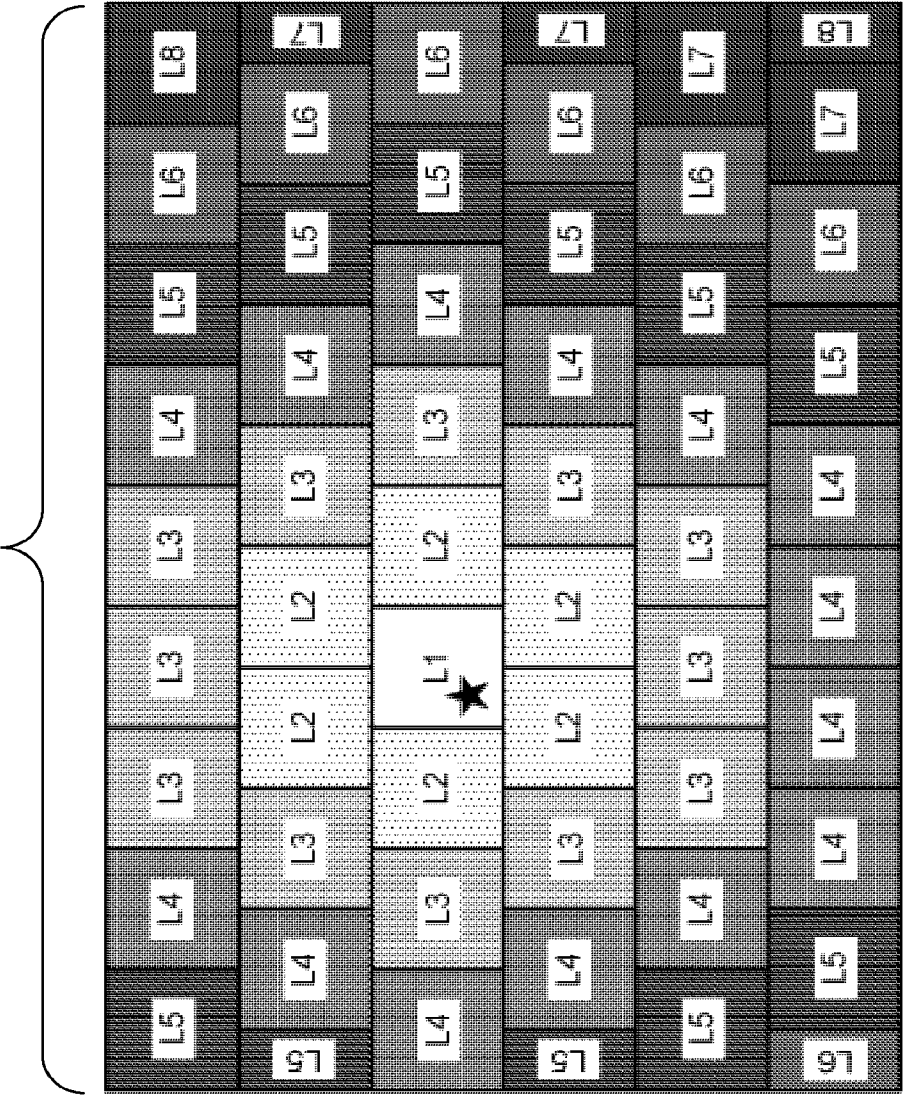
LEGEND

- ★ = Fixation Point
- L1 = Lossless compression or Lossy compression w/ low loss factor
- L2 = Lossy compression with loss factor higher than L1 loss factor
- L3 = Lossy compression with loss factor higher than L2 loss factor
- L4 = Lossy compression with loss factor higher than L3 loss factor
- L5 = Lossy compression with loss factor higher than L4 loss factor
- L6 = Lossy compression with loss factor higher than L5 loss factor
- ⋮
- Ln = Lossy compression with loss factor higher than L(n-1) loss factor
- = direction of increasing compression loss factor for tiles within sector
- ↗ = direction of increasing compression loss factor for tiles within sector
- No / Low Compression
- Sectors
- High Compression
- L1 L2 L3 L4 L5 L6 L7 L8 L9 Ln

FIG. 11

1200 ↗

Sectored Image Frame compressed according to an exemplary Honeycomb Foveated-Compression Pattern



LEGEND

- ★ = Fixation Point
- L1 = Lossless compression or Lossy compression w/ low loss factor
- L2 = Lossy compression with loss factor higher than L1 loss factor
- L3 = Lossy compression with loss factor higher than L2 loss factor
- L4 = Lossy compression with loss factor higher than L3 loss factor
- L5 = Lossy compression with loss factor higher than L4 loss factor
- L6 = Lossy compression with loss factor higher than L5 loss factor
- ⋮
- Ln = Lossy compression with loss factor higher than L(n-1) loss factor

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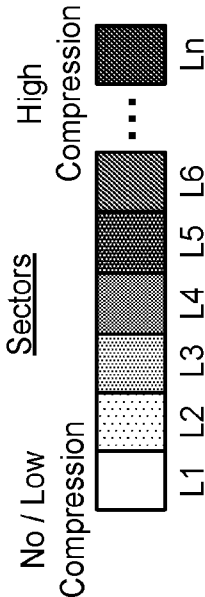
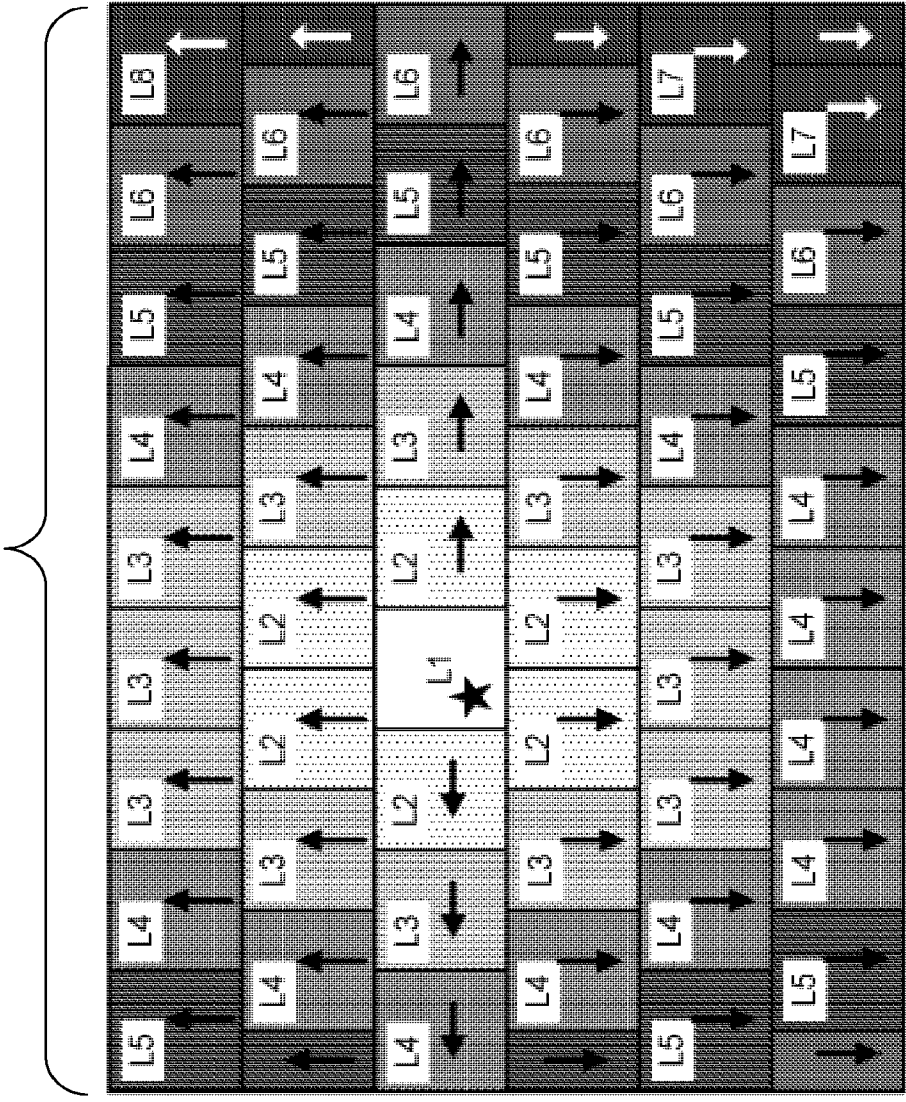


FIG. 12

1300



Sectored Image Frame compressed according to an exemplary
Gratedated Honeycomb Foveated-Compression Pattern



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LEGEND

- ★ = Fixation Point
 - L1 = Lossless compression or Lossy compression w/ low loss factor
 - L2 = Lossy compression with loss factor higher than L1 loss factor
 - L3 = Lossy compression with loss factor higher than L2 loss factor
 - L4 = Lossy compression with loss factor higher than L3 loss factor
 - L5 = Lossy compression with loss factor higher than L4 loss factor
 - L6 = Lossy compression with loss factor higher than L5 loss factor
 - ⋮
 - Ln = Lossy compression with loss factor higher than L(n-1) loss factor
 - = direction of increasing compression
 - ⇨ = loss factor for tiles within sector
- No / Low Compression Sectors High Compression
- L1 L2 L3 L4 L5 L6 ... Ln

FIG. 13

LEGEND

★ = Fixation Point

L1 = Lossless compression or Lossy compression w/ low loss factor

L2 = Lossy compression with loss factor higher than L1 loss factor

L3 = Lossy compression with loss factor higher than L2 loss factor

L4 = Lossy compression with loss factor higher than L3 loss factor

L5 = Lossy compression with loss factor higher than L4 loss factor

L6 = Lossy compression with loss factor higher than L5 loss factor

■ ■ ■

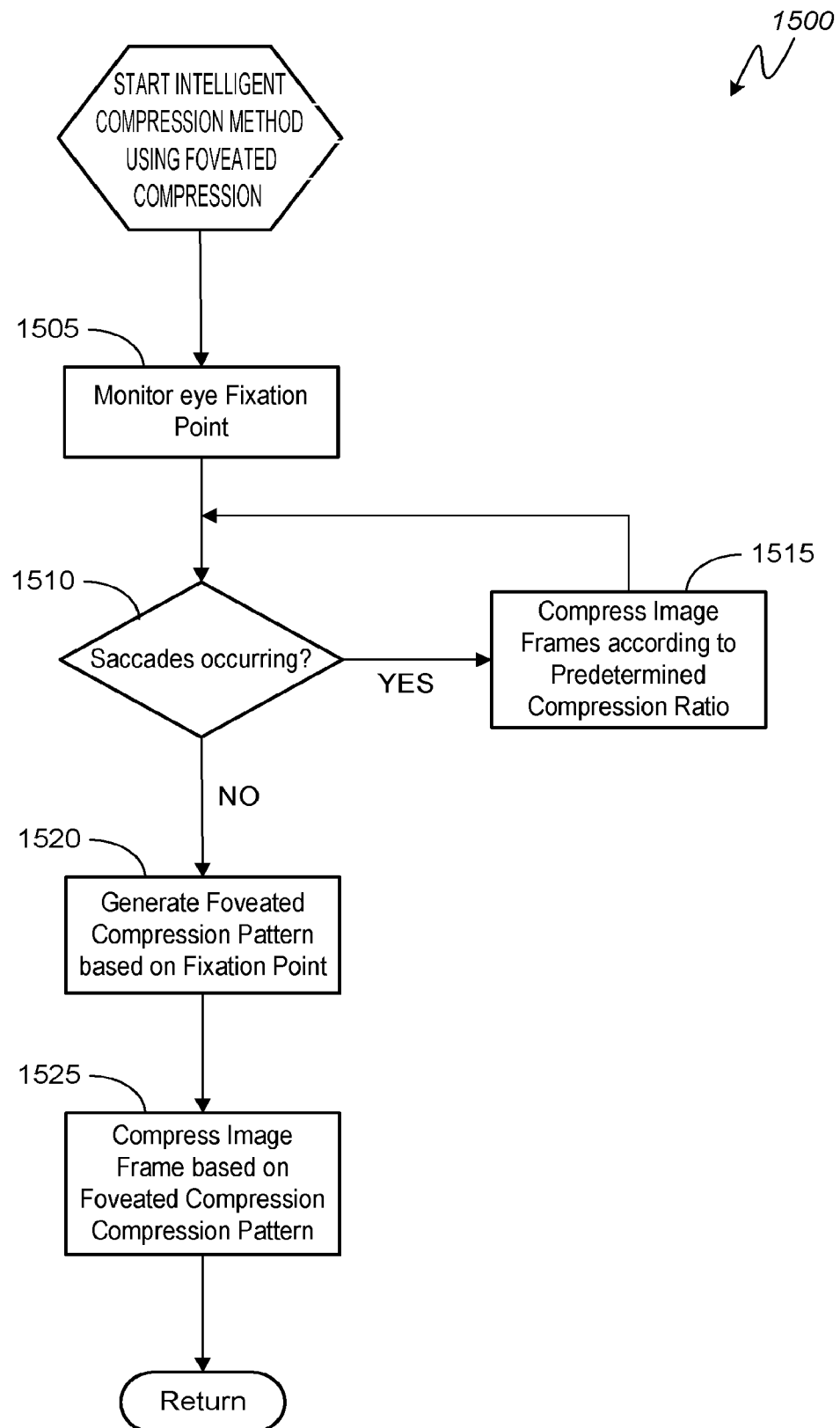
L_n = Lossy compression with loss factor higher than $L_{(n-1)}$ loss factor

→ = direction of increasing compression

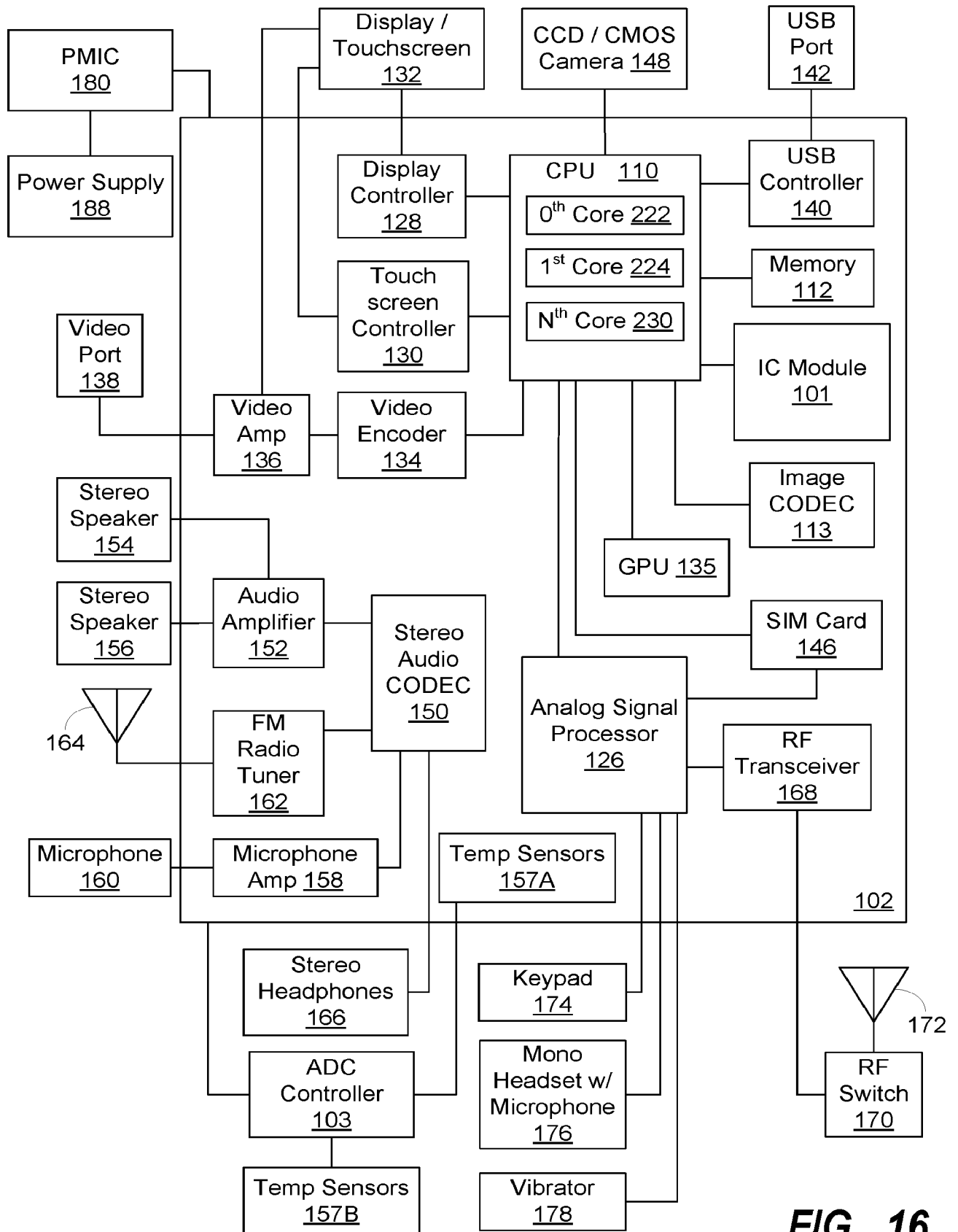
loss factor for tiles within sector

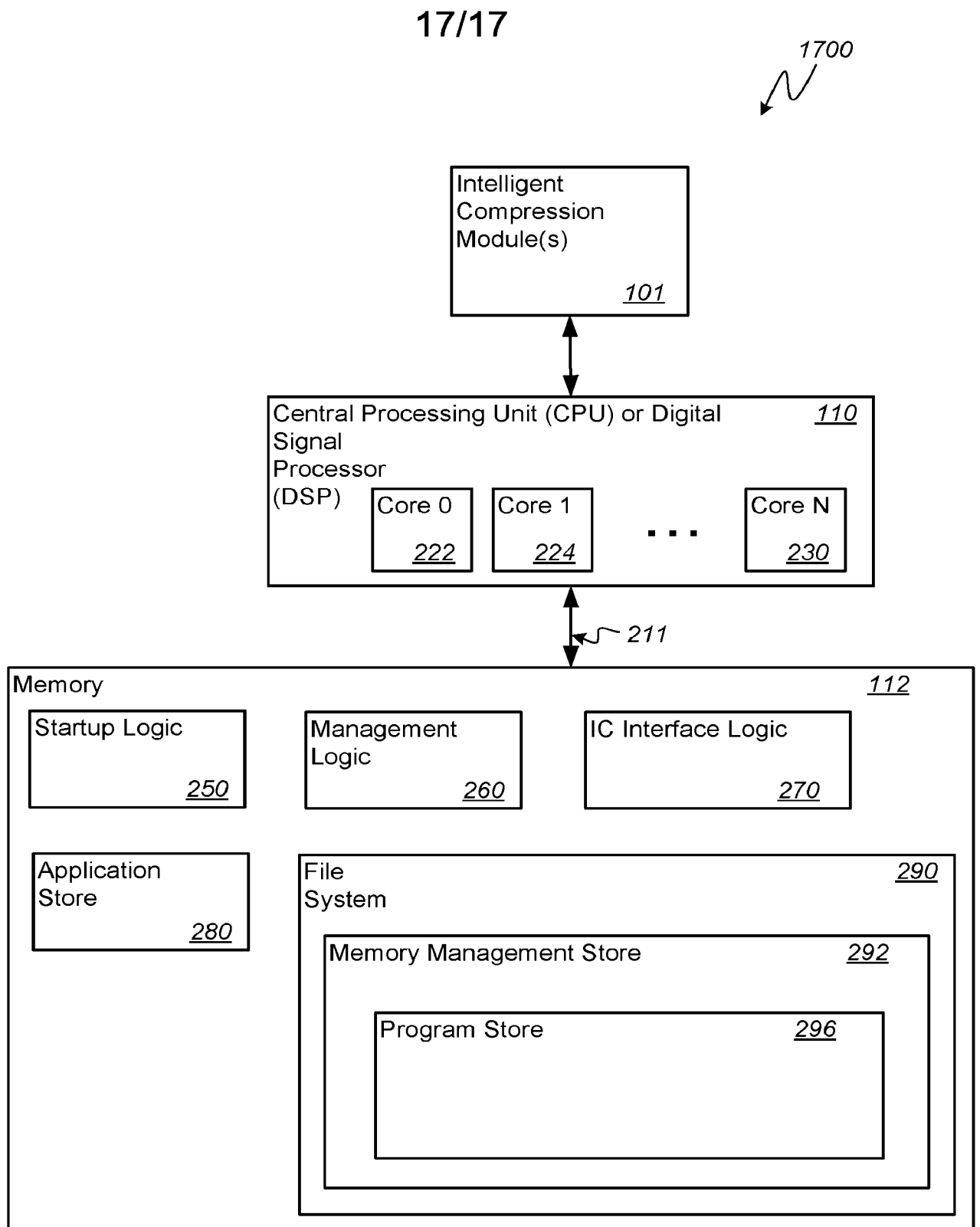
FIG. 14

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**FIG. 15**

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100**FIG. 16**

**FIG. 17**