

The image displays a 10x10 grid of 100 small dot patterns. Each pattern is a unique visual representation of a 10-bit binary string. The patterns are arranged in a grid where each row contains 10 patterns and each column contains 10 patterns. The patterns are generated by a random process, resulting in a diverse set of visual representations for each 10-bit binary string. The patterns are arranged in a grid where each row contains 10 patterns and each column contains 10 patterns. The patterns are generated by a random process, resulting in a diverse set of visual representations for each 10-bit binary string.

The figure shows a sequence of 10 diagrams, each representing a pattern of black dots on a grid. The patterns evolve from left to right, starting with a single dot and growing into a complex, branching structure. The dots are arranged in a way that suggests a fractal-like growth, with each step adding more dots to the existing pattern.

The figure consists of five diagrams illustrating the construction of a 2D grid from a 1D sequence of points. The diagrams are arranged horizontally and show the following steps:

- Diagram 1:** A 1D sequence of points. The first column has 4 points, the second has 1 point, the third has 2 points, the fourth has 3 points, and the fifth has 2 points.
- Diagram 2:** The points are grouped into columns. The first column has 4 points, the second has 1 point, the third has 2 points, the fourth has 3 points, and the fifth has 2 points.
- Diagram 3:** The points are arranged into rows. The first row has 4 points, the second has 1 point, the third has 2 points, the fourth has 3 points, and the fifth has 2 points.
- Diagram 4:** The points are arranged into rows. The first row has 4 points, the second has 1 point, the third has 2 points, the fourth has 3 points, and the fifth has 2 points.
- Diagram 5:** The points are arranged into rows. The first row has 4 points, the second has 1 point, the third has 2 points, the fourth has 3 points, and the fifth has 2 points.

The figure consists of 10 sub-diagrams arranged horizontally, each showing a pattern of black dots on a grid. The patterns evolve from left to right, starting with a small cluster of 3 dots and growing into a complex, branching structure of 25 dots.

The sequence of diagrams illustrates the construction of a 5x5 grid of dots. Each diagram shows a new dot being added to the previous configuration, with the final state being a complete 5x5 grid.

The figure consists of 10 sub-diagrams arranged in a single row, each showing a pattern of black dots on a grid. The patterns evolve from left to right. The first pattern is a small cluster of 5 dots. The second pattern is a 2x2 square of 4 dots. The third pattern is a 3x2 rectangle of 6 dots. The fourth pattern is a 4x2 rectangle of 8 dots. The fifth pattern is a 5x2 rectangle of 10 dots. The sixth pattern is a 6x2 rectangle of 12 dots. The seventh pattern is a 7x2 rectangle of 14 dots. The eighth pattern is a 8x2 rectangle of 16 dots. The ninth pattern is a 9x2 rectangle of 18 dots. The tenth pattern is a 10x2 rectangle of 20 dots.

Figure 1 consists of six sub-diagrams, labeled (a) through (f), each showing a 2x10 grid of dots. The dots are arranged in two rows of five. The partitions are as follows:

- (a) Top row: 1 dot in column 1, 4 dots in column 2. Bottom row: 5 dots in column 1.
- (b) Top row: 1 dot in column 1, 1 dot in column 2, 3 dots in column 3. Bottom row: 5 dots in column 1.
- (c) Top row: 1 dot in column 1, 1 dot in column 2, 1 dot in column 3, 2 dots in column 4. Bottom row: 5 dots in column 1.
- (d) Top row: 2 dots in column 1, 1 dot in column 2, 2 dots in column 3. Bottom row: 5 dots in column 1.
- (e) Top row: 1 dot in column 1, 1 dot in column 2, 1 dot in column 3, 1 dot in column 4, 1 dot in column 5. Bottom row: 5 dots in column 1.
- (f) Top row: 1 dot in column 1, 1 dot in column 2, 1 dot in column 3, 1 dot in column 4, 1 dot in column 5. Bottom row: 5 dots in column 1.

The diagrams illustrate the construction of a 5x5 grid. Each diagram shows a grid of dots with a new dot added to the previous grid. The dots are arranged in a 5x5 grid, with the new dot added to the previous grid. The diagrams are numbered 1 through 12, showing the progression from a single dot to a full 5x5 grid.

The figure consists of 10 sub-diagrams arranged horizontally, each showing a pattern of black dots on a grid. The patterns evolve from left to right, starting with a small cluster of dots and growing into a more complex, branching structure.

The figure consists of 10 small diagrams arranged horizontally, each showing a pattern of black dots on a grid. The patterns evolve from left to right:

- Diagram 1: A single dot at the top-left position.
- Diagram 2: A 2x2 square of dots.
- Diagram 3: A 3x3 square of dots.
- Diagram 4: A 4x4 square of dots.
- Diagram 5: A 5x5 square of dots.
- Diagram 6: A 6x6 square of dots.
- Diagram 7: A 7x7 square of dots.
- Diagram 8: A 8x8 square of dots.
- Diagram 9: A 9x9 square of dots.
- Diagram 10: A 10x10 square of dots.

The image displays a 15x15 grid of black dots on a white background. The dots are arranged in a pattern that suggests a banded structure, with higher density along the main diagonal and some off-diagonal elements, particularly in the lower-left and upper-right quadrants. This visual representation likely corresponds to the sparse matrix A mentioned in the text, which is used to illustrate the performance of the proposed algorithm compared to the standard LU decomposition.