研究背景

- Videos everywhere \( \downarrow \) compression technique
- Complexity problem \( \downarrow \) speedup algorithm
- Impact of pipeline \( \downarrow \) hardware dataflow
- Expansion of image size \( \downarrow \) throughput issue

研究内容

- Hardware Algorithm Level
  - Architecture Level
    - Algorithm Level
      - Image Size
        - QCIF
        - 1080p
        - 4kx2k
        - 4kx4k

Hardware oriented algorithm

- Reduction
  - Temporal Difference
  - Motion Detection
  - Further Reduction

Software algorithm

- ME or motion and model
  - Edge detection analysis
  - 4x4 block matching
  - Shift ME process
  - ME or model
  - Blocks overlap or smooth flag
  - End of ME

主な発表論文

- 8 IEICE Journals, 1 IPSJ Journal, 1 SCI Indexed Chinese Journal
- 30 International conference papers, including ICIP, MMSP, ICME, MMM, EUSIPCO, DSP, GLSVLSI, ISCAS, APCCAS, ASICON, ISOCC, etc