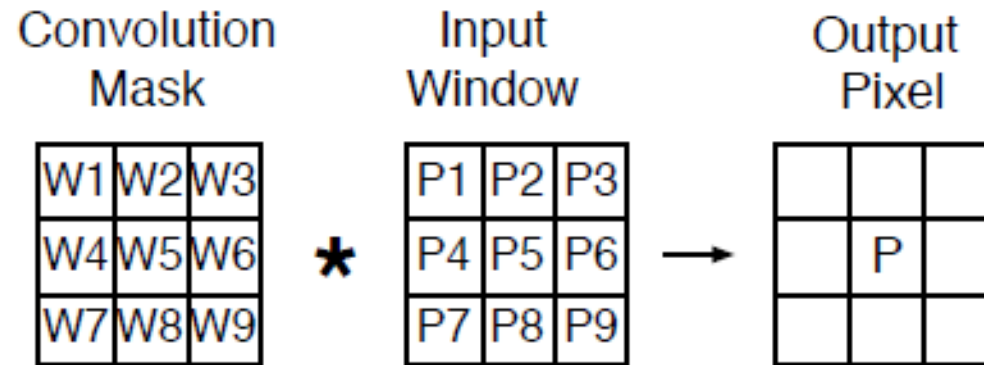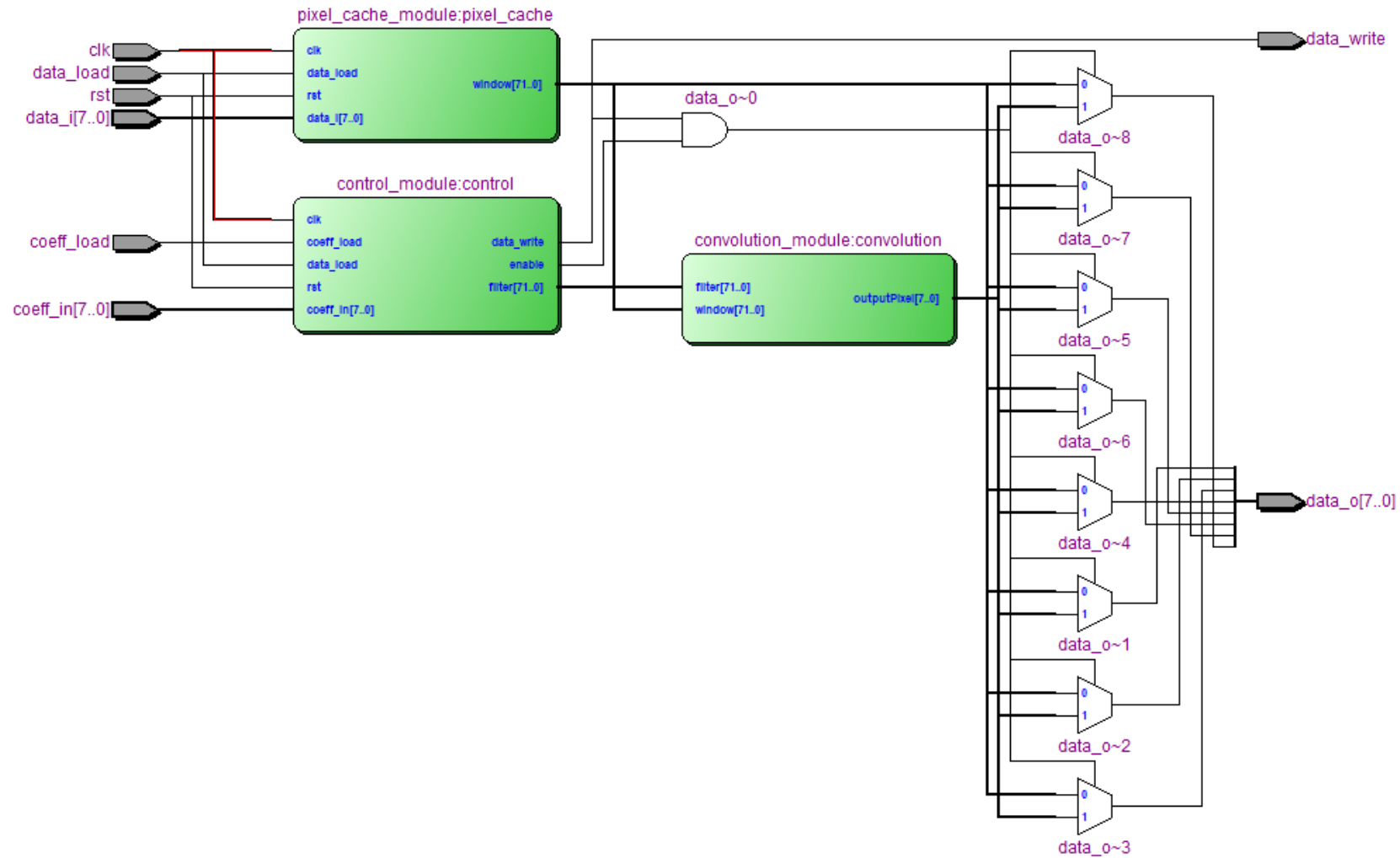# VLSI Project
Convolution Accelerator in images

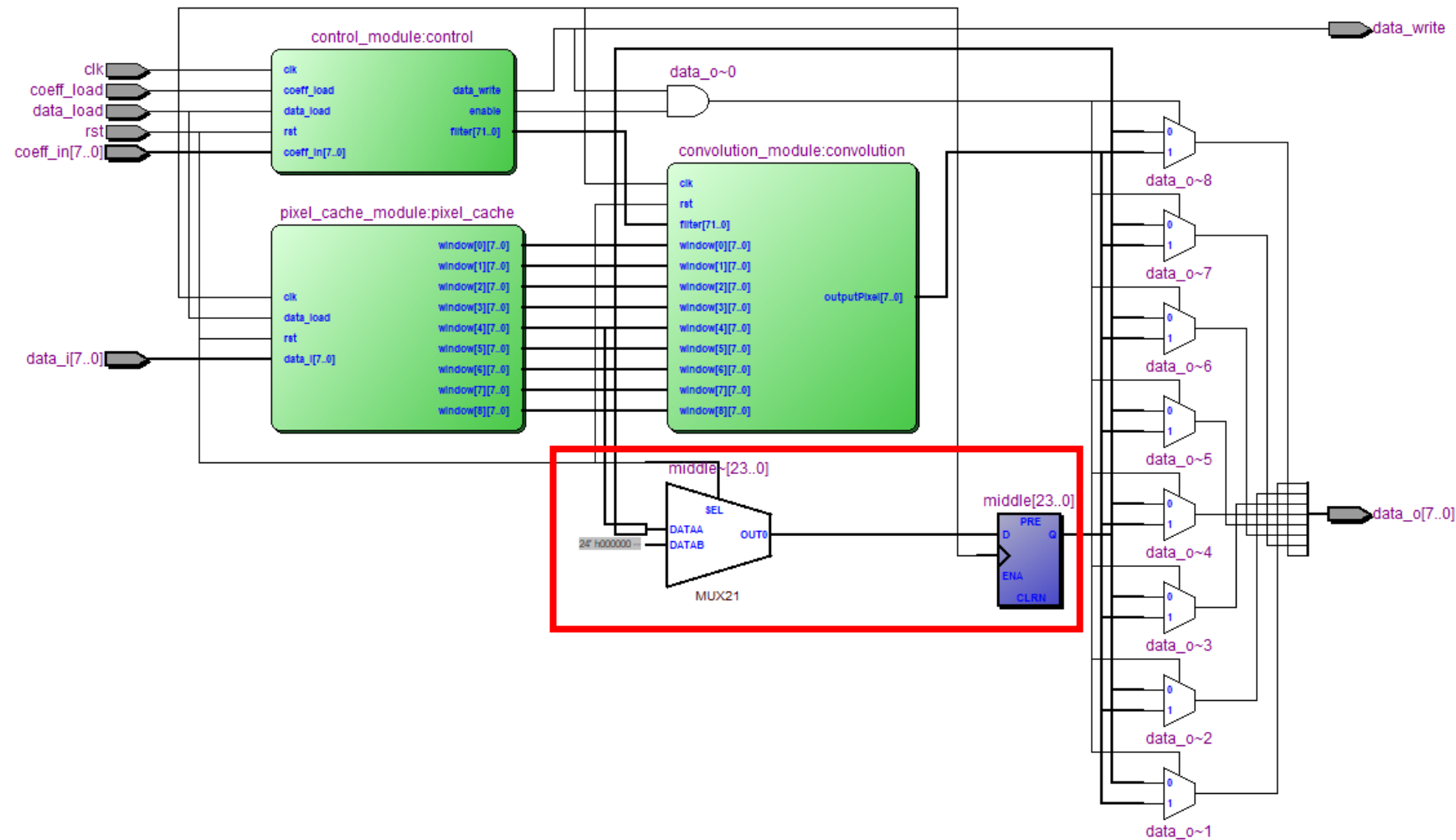Anagnostou Pantazis

Karypidis Stathis

Contents

- Version 1 (Without Pipeline)
- Version 2 (With Pipeline)
- Basic Modules:
  - Pixel Cache
  - Convolution
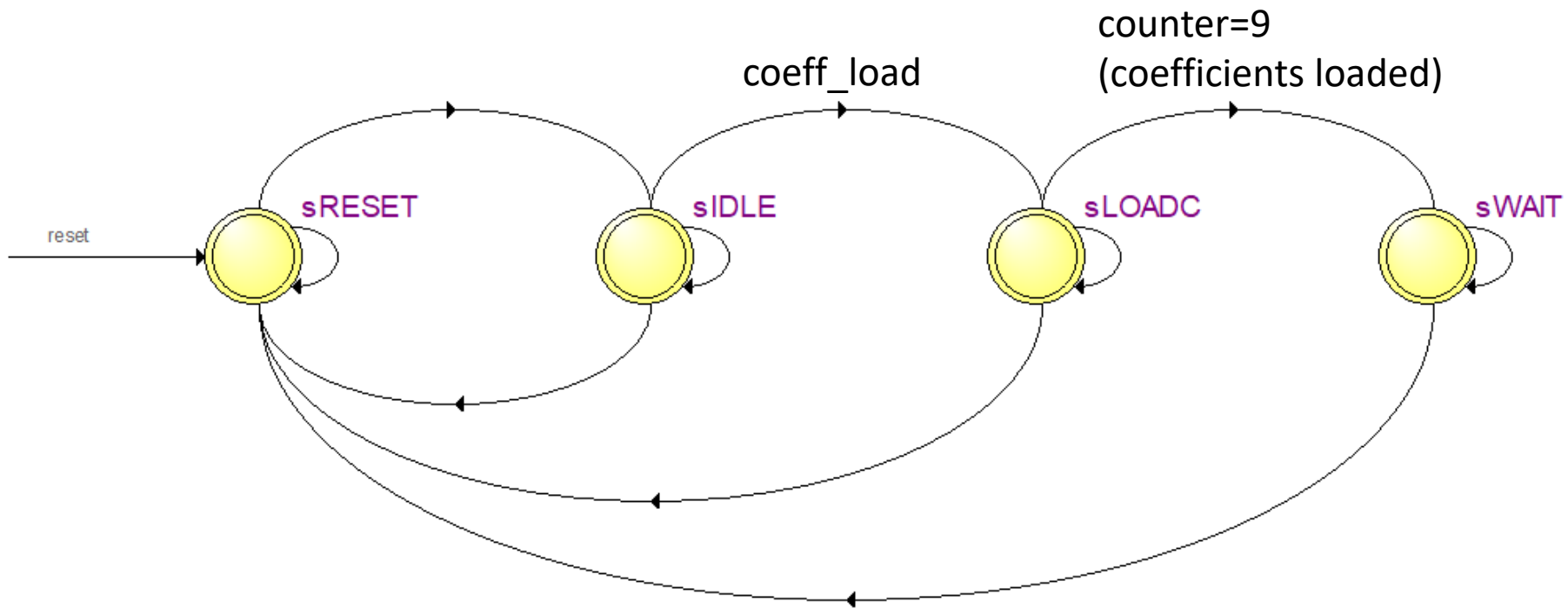 - Control
- Testing-Visualization
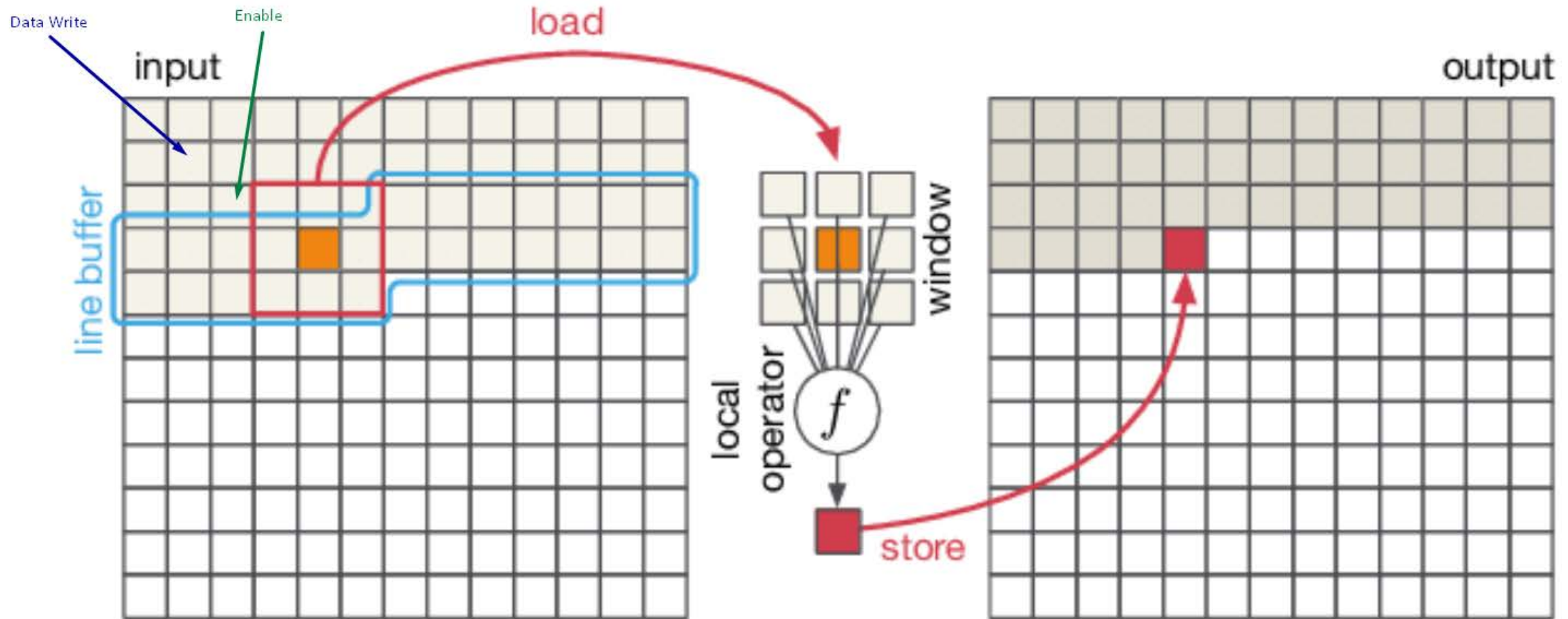- Results

Version 1 (Without Pipeline)

Version 2 (With Pipeline)

Basic Modules: Control (FSM)

Control Signals (Enable & Data Write)

Testing-Visualization

- Grayscale Images:
  - 32x32
  - 512x512
- Used Box Blur Kernel

$$\frac{1}{9} \begin{array}{|c|c|c|} \hline 1 & 1 & 1 \\ \hline 1 & 1 & 1 \\ \hline 1 & 1 & 1 \\ \hline \end{array}$$

Results

Original

Blurred

Results

Original

Blurred