Instruction Scheduling to Mitigate Inductive Noise

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Introduction

Instruction Scheduling

Inductive Noise

Circuit Level

Architecture Level

Conclusion
Introduction

- Instruction scheduling
  - Creates a feasible schedule
  - Maps to target architecture
- Challenges
- Goals to be achieved
Instruction Scheduling

1. Possible goals
Instruction Scheduling

1. Possible goals
2. To achieve the high speed
1. Possible goals
2. To achieve the high speed
3. To lower the power consumption
Inductive Noise

- Circuit level issue
- Hard to solve at circuit level
- Architecture is also not very flexible

Insert power supply circuit here
Inductive Noise at Circuit Level

- Hard to solve at circuit level
- Architecture is also not very flexible

Insert power supply circuit here
Inductive Noise at Architecture Level

- Hard to solve at circuit level
- Architecture is also not very flexible

Insert power supply circuit here
1. Compiler can help in solving some of the circuit problems.
Conclusion

1. Compiler can help in solving some of the circuit problems.
2. We have much higher flexibility is higher level.
Conclusion

1. Compiler can help in solving some of the circuit problems.
2. We have much higher flexibility is higher level.
3. Instruction Scheduling should not only target speed.