Branches

Introduction

Branch in a Pipelin

Branch Prediction Requirements

Branch Prediction Accuracy

Branch Prediction Benefit Quiz

Performance with Not Taken Prediction

Multiple Predictions Quiz

Predict Not Taken

Why We Need Better Prediction

Predictor Impact Quiz

Why We Need Better Prediction 2

Better Prediction How

BTB Branch Target Buffer

Realistic BTB

BTB Quiz

Direction Predictor

BTB and BHT Quiz 1

BTB and BHT Quiz 2

BTB and BHT Quiz 3

BTB and BHT Quiz 4

BTB and BHT Quiz 5

Problems with 1 Bit Predictions

2 Bit Predictor

2 Bit Predictor Initialization

2 Bit Predictor Quiz

1BP - 2BP

History Based Predictors

1 Bit History with 2 Bit Count

1 Bit History Quiz

2 Bit History Predictor

2 Bit History Predictor 2

N Bit History Predictor Quiz

History Predictor Quiz

History with Shared Counters 1