

Bonnell Pipeline

| Memory+Integer | | |
|----------------|-------------------------------------|---------|
| 1 | Instruction Fetch | IF1 |
| 2 | | IF2 |
| 3 | | IF3 |
| 4 | Instruction Decode | ID1 |
| 5 | | ID2 |
| 6 | | ID3 |
| 7 | Instruction Dispatch | SC |
| 8 | | IS |
| 9 | Source Operand Read | IRF |
| 10 | Address Generation | AG |
| 11 | Data Cache Access | DC1 |
| 12 | | DC2 |
| 13 | Execute | EX1 |
| 14 | Exceptions and Multithread handling | FT1 |
| 15 | | FT2 |
| 16 | Commit | IWB/DC1 |

13-cycle Branch Mispredict Latency

Silvermont Pipeline

| Integer | | Memory Access | |
|---------|--------------------|---------------|-----|
| 1 | Instruction Fetch | IF1 | |
| 2 | | IF2 | |
| 3 | | IF3 | |
| 4 | Instruction Decode | ID1 | |
| 5 | | ID2 | |
| 6 | | ID3 | |
| 7 | Allocate Rename | AR1 | |
| 8 | | AR2 | |
| 9 | Schedule | RSV | RSV |
| 10 | Execute | EX | AG |
| 11 | Retire | RB1 | DC1 |
| 12 | | RB2 | DC2 |
| 13 | Commit | RB3 | |
| 14 | | RB4 | |

10-cycle Branch Mispredict Latency