CLAIMS

1. A computer program product for facilitating processing in a computing environment, said computer program product comprising:

at least one computer readable storage medium readable by at least one processing circuit and storing instructions to perform a method comprising:

obtaining an instruction to perform a conditional branch to an indirectly specified location; and

executing the instruction, the executing comprising:

obtaining a branch address from a location in memory, the location in memory designated by the instruction, wherein contents of one register specified in an index field of the instruction plus contents of another register specified in a base field of the instruction added to a displacement specified in the instruction provide an address in memory defining the location in memory;

determining based on a condition code of another instruction whether a branch is to occur, the determining using the condition code to index into a mask provided by the instruction to determine whether the branch is to occur; and

branching to the branch address obtained from the location in memory, based on determining that the branch is to occur, wherein the branching is performed absent pre-loading the branch address into a register.

2. The computer program product of claim 1, wherein the displacement is provided in one or more displacement fields of the instruction.

3. The computer program product of claim 2, wherein the one or more displacement fields comprise a first displacement field and a second displacement field used to provide a signed binary integer added to the contents of the one register and the other register to provide the location in memory to obtain the branch address.

4. The computer program product of claim 1, wherein program event recording zero address detection is performed for the branch address.

5. The computer program product of claim 1, wherein the method further comprises obtaining the condition code from a control register.

6. The computer program product of claim 1, wherein the determining whether the branch is to occur comprises:

using the condition code to select a unit in the mask associated with the instruction;

checking a value of the unit; and

indicating branching, based on the checking determining that the value is a particular value.

7. The computer program product of claim 6, wherein the mask is a field of the instruction.

8. The computer program product of claim 6, wherein the unit is a bit.

9. The computer program product of claim 1, wherein the instruction comprises an operation code to designate the conditional branch to an indirectly specified location operation, and a mask field to be used in the determining whether the branch is to occur.

10. The computer program product of claim 1, wherein the branching comprises:

replacing an instruction address in a control register with the branch address obtained directly from the location in memory; and

proceeding to the branch address to continue processing.

11. A computer system for facilitating processing in a computing environment, said computer system comprising:

a memory; and

a processor in communication with the memory, wherein the computer system is configured to perform a method, said method comprising:

obtaining an instruction to perform a conditional branch to an indirectly specified location; and

executing the instruction, the executing comprising:

obtaining a branch address from a location in memory, the location in memory designated by the instruction, wherein contents of one register specified in an index field of the instruction plus contents of another register

specified in a base field of the instruction added to a displacement specified in the instruction provide an address in memory defining the location in memory;

determining based on a condition code of another instruction whether a branch is to occur, the determining using the condition code to index into a mask provided by the instruction to determine whether the branch is to occur; and

branching to the branch address obtained from the location in memory, based on determining that the branch is to occur, wherein the branching is performed absent pre-loading the branch address into a register.

12. The computer system of claim 11, wherein the displacement is provided in one or more fields of the instruction.

13. The computer system of claim 11, wherein the determining whether the branch is to occur comprises:

using the condition code to select a unit in the mask associated with the instruction;

checking a value of the unit; and

indicating branching, based on the checking determining that the value is a particular value.

14. The computer system of claim 13, wherein the mask is a field of the instruction, and wherein the unit is a bit.

15. The computer system of claim 11, wherein the branching comprises:

replacing an instruction address in a control register with the branch address obtained directly from the location in memory; and

proceeding to the branch address to continue processing.

16. A computer-implemented method of facilitating processing in a computing environment, said computer-implemented method comprising:

obtaining an instruction to perform a conditional branch to an indirectly specified location; and

executing, by at least one processor, the instruction, the executing comprising:

obtaining a branch address from a location in memory, the location in memory designated by the instruction, wherein contents of one register specified in an index field of the instruction plus contents of another register specified in a base field of the instruction added to a displacement specified in the instruction provide an address in memory defining the location in memory;

determining based on a condition code of another instruction whether a branch is to occur, the determining using the condition code to index into a mask provided by the instruction to determine whether the branch is to occur; and

branching to the branch address obtained from the location in memory, based on determining that the branch is to occur, wherein the branching is performed absent pre-loading the branch address into a register.

17. The computer-implemented method of claim 16, displacement is provided in one or more fields of the instruction.

18. The computer-implemented method of claim 16, wherein the determining whether the branch is to occur comprises:

using the condition code to select a unit in the mask associated with the instruction;

checking a value of the unit; and

indicating branching, based on the checking determining that the value is a particular value.

19. The computer-implemented method of claim 18, wherein the mask is a field of the instruction, and wherein the unit is a bit.

20. The computer-implemented method of claim 16, wherein the branching comprises:

replacing an instruction address in a control register with the branch address obtained directly from the location in memory; and

proceeding to the branch address to continue processing.