

CLAIMS

1. A computer program product for facilitating processing within a computing environment, the computer program product comprising:
 - a computer readable storage medium readable by a processing circuit and storing instructions for execution by the processing circuit for performing a method comprising:
 - collecting time-slice-instrumentation information for a processing unit during execution, the collecting comprising:
 - counting, at least in part, occurrence of a specified processing unit event during a time-slice of the processing unit execution; and
 - retaining counted processing unit events occurring during a first interval of execution within the time-slice and a second interval of execution within the time-slice, the first interval of execution being earlier in the time-slice than the second interval of execution and the counted processing unit events facilitating adjusting performance of the processing unit.
2. The computer program product of claim 1, wherein the time-slice is a contiguous period of time of processing unit execution, and the specified processing unit event comprises a cache event.
3. The computer program product of claim 2, wherein the processing unit interleaves processing of multiple different units of work across multiple contiguous time-slices, and during a single time-slice, a single unit of work of the multiple different units of works is processed by the processing unit.
4. The computer program product of claim 2, wherein the first interval of execution comprises an initial interval of execution within the time-slice, and the second interval of execution comprises a most-recently completed interval of execution within the time-slice, and wherein the first interval of execution and the second interval of execution are of equal duration.
5. The computer program product of claim 4, wherein the second interval of execution comprises a last interval of execution within the time-slice.

6. The computer program product of claim 1, wherein the counting comprises using time-slice-instrumentation counters local to the processing unit in performing the counting of the occurrence of the specified processing unit event during the time-slice of the processing unit execution.
7. The computer program of claim 1, wherein the specified processing unit event comprises a data cache event selected from a group consisting of: a cache miss and a cache hit.
8. The computer program product of claim 1, wherein the collecting is initiated by executing a time-slice-instrumentation on instruction.
9. The computer program product of claim 1, wherein the retaining is initiated by executing a store time-slice-instrumentation counters instruction.
10. A computer system for facilitating processing within a computing environment, the computer system comprising:
 - a memory; and
 - a processor communicatively coupled with the memory, wherein the computer system is configured to perform a method, the method comprising:
 - collecting time-slice-instrumentation information for a processing unit during execution, the collecting including:
 - counting, at least in part, occurrence of a specified processing unit event during a time-slice of the processing unit execution; and
 - retaining counted processing unit events occurring during a first interval of execution within the time-slice and a second interval of execution within the time-slice, the first interval of execution being earlier in the time-slice than the second interval of execution, the counted processing unit events facilitating adjusting performance of the processing unit.
11. The computer system of claim 10, where the time-slice is a contiguous period of time of processing unit execution, and the specified processing unit event comprises a cache event, and wherein the processing unit interleaves processing of multiple different units of work across

multiple contiguous time-slices, and during a single time-slice, a single unit of work of the multiple different units of work is processed by the processing unit.

12. The computer system of claim 11, wherein the first interval of execution comprises an initial interval of execution within the time-slice, and the second interval of execution comprises a most-recently completed interval of execution within the time-slice, and wherein the first interval of execution and the second interval of execution are of equal duration.

13. The computer system of claim 12, wherein the second interval of execution comprises a last interval of execution within the time-slice.

14. The computer system of claim 10, wherein the counting comprises using time-slice-instrumentation counters local to the processing unit in performing the counting of the occurrence of the specified processing unit event during the time-slice of the processing unit execution.

15. The computer system of claim 10, wherein the collecting is initiated by executing a time-slice-instrumentation on instruction, and the retaining is initiated by executing a store time-slice-instrument counters instruction.

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

collecting time-slice-instrumentation information for a processing unit during execution, the collecting comprising:

counting occurrence of a specified processing unit event during a time-slice of the processing unit execution; and

retaining counted processing unit events occurring during a first interval of execution time and a second interval of execution time of the time-slice, the first interval of execution time being earlier in the time-slice than the second interval of execution time, the counted processing unit events facilitating adjusting performance of the processing unit.

17. The computer-implemented method of claim 16, where the time-slice is a contiguous period of time of processing unit execution, and the specified processing unit event comprises a cache event, and wherein the processing unit interleaves processing of multiple different units of work across multiple contiguous time-slices, and during a single time-slice, a single unit of work of the multiple different units of work is processed by the processing unit.
18. The computer-implemented method of claim 17, wherein the first interval of execution comprises an initial interval of execution within the time-slice, and the second interval of execution comprises a most-recently completed interval of execution within the time-slice, and wherein the first interval of execution and the second interval of execution are of equal duration.
19. The computer-implemented method of claim 18, wherein the second interval of execution time comprises a last interval of execution within the time-slice.
20. The computer-implemented method of claim 16, wherein the collecting is initiated by executing a time-slice-instrumentation on instruction, and the retaining is initiated by executing a store time-slice-instrument counters instruction.