

DECISION



**THE COMPTROLLER GENERAL
OF THE UNITED STATES**
WASHINGTON, D. C. 20548

FILE: B-212979.2 **DATE:** August 22, 1985
MATTER OF: Centennial Computer Products, Inc.--
Reconsideration

DIGEST:

Prior decision is modified on reconsideration to sustain protest against the rejection of the protester's offer based on the results of a second benchmark the agency had argued indicated that the protester violated the terms of the solicitation by fine-tuning its computer equipment and by failing to protect against loss of data in case of a power failure. The agency's statements in response to the protester's request for reconsideration establish that significant changes from the first benchmark in fact were made in running the second benchmark and, consequently, the test results from the second benchmark cannot be compared to the test results of the first benchmark to substantiate the agency's conclusions, especially since there are other logical, acceptable explanations for the second benchmark results.

Centennial Computer Products, Inc., requests reconsideration of our decision in Centennial Computer Products, Inc., B-212979, Sept. 17, 1984, 84-2 C.P.D. ¶ 295, denying the firm's protest against the rejection of its proposal under request for proposals (RFP) IRS-83-053 issued by the Department of the Treasury, Internal Revenue Service (IRS), for the lease of tape, disk, and cache/disk sub-systems to enhance the computer system at the IRS's Detroit Data Center.

For the reasons set forth below, we are modifying our prior decision and sustaining Centennial's protest.

Reconsideration

The IRS rejected Centennial because the rate of access to cache memory during the benchmarking of

Centennial equipment exceeded the RFP's limitations. "Cache" memory is a form of solid state memory whose use can increase the speed of a computer system's operation by reducing the amount of time that would otherwise be necessary in a disk search for needed data. When the computer needs to obtain particular data that is commonly used, it first requests that data from the faster cache memory, and if the data is found in cache memory (i.e., the system has scored a "cache hit") the slower disk need not be accessed. The RFP required that cache memory offer a 50 percent increase in speed over noncache (disk) operation under specified criteria.

In our prior decision, we held that the IRS had improperly determined from a second benchmark of Centennial's equipment that the company's "cache hit rate" did not meet the RFP's requirement. We also held, however, that the results of the second benchmark supported the IRS's assertion that, in violation of the RFP, the company "fine tuned" its equipment before the second benchmark, that is, slowed the noncache operation from the first benchmark speed to ensure that the cache memory operation was 50 percent faster as required. We also found support for the IRS's position that Centennial failed to have a required data save device on its cache controller to prevent data from being lost in the event of a power failure.

Fine Tuning

Centennial contends that we erred in our prior decision with regard to our use of the results of the second benchmark in resolving the fine tuning issue. We found that because the input/output rate per second decreased during the second benchmark, noncache operations should have been completed more quickly, on the average, than they were during the first benchmark. The fact that just the opposite happened in Centennial's case suggested that the firm had slowed noncache speed, instead of increasing cache speed, between benchmarks. Centennial, in addition to referring to the same arguments on the issue that we considered in our prior decision, alleges that the awardee's second benchmark time for noncache operation was, like Centennial's, slower than the awardee's time for its first benchmark.

In finding in our prior decision that the results of Centennial's second benchmark supported the IRS's assertion that Centennial fine tuned its equipment by deliberately

slowing the speed of the noncache operations during the second benchmark, we relied on the IRS's statements that the same testing procedures were used for both benchmarks and that the same files were placed on the disk units in the same manner for both benchmarks. In response to Centennial's reconsideration request, however, the IRS now indicates that certain important changes were in fact made in running the second benchmark. Specifically, the IRS states that the primary change for the second benchmark was that the offeror's disk subsystem was required to access and transfer only an 896 wordblock sequentially in 30 milliseconds or less, whereas for the first benchmark the RFP required the offeror to have the disk system access and transfer a 1792 wordblock sequentially in 20 milliseconds or less. Since the procedures for conducting the first and second benchmarks on the offerors' disk subsystems thus were quite different, and since our analysis shows that this difference logically could account for the different test results, we no longer find it appropriate to rely on comparisons of results of the two benchmarks to show that Centennial improperly fine-tuned its equipment. Therefore, we find that the rejection of Centennial's proposal cannot be justified on this ground.

Data Save

Centennial contends that our resolution of the data save issue also is in error. The company reiterates that its system does not need a data save device because any data in cache memory also is permanently on disk, so that a power failure would not result in the loss of any data. In our prior decision, we found that position questionable in view of the faster cache performance speeds for cache "write" operations in the second benchmark as compared with the first. We concluded that if Centennial's system, in fact, was writing to disk as well as cache, performance speed should have decreased. The only possible explanation for the increased performance time was, in our opinion, that Centennial was writing solely to cache during the second benchmark.

Centennial argues that the reason for the greater cache performance speeds in the second benchmark was that the company used superior equipment the second time, and not because data was being entered solely in cache. Specifically, Centennial alleges that it used a prototype cache interface board in the first benchmark, and an improved

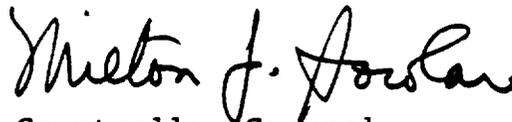
board in the second. Centennial claims that as a consequence of using the improved board in the second benchmark the speeds of writing data to cache increased significantly. Centennial argues that the increased speeds for cache write operations thus provided no basis for us to conclude in our prior decision that data could not have been entered on the computer disks at the same time it was being entered in cache.

Centennial's argument as to why its improved board increased the speed of writing to cache is based on its representation that for the second benchmark the improved board had a "32 bit transfer" capability as opposed to the "16 bit transfer" cache board Centennial used for the first benchmark. In its response to the reconsideration request, the IRS states that it has no way to verify Centennial's claim in the absence of a comparison of the serial numbers of the equipment Centennial used in the first benchmark with the serial numbers of the equipment Centennial used in the second benchmark. In any event, the IRS admits that an improved cache board would improve the speed of data written to cache.

More importantly, as was the case for the offerors' disk subsystem, certain procedural changes were made in running the offerors' cache subsystem in the second benchmark. The offerors were required to access and transfer an 896 wordblock sequentially in 15 milliseconds or less, while for the first benchmark the offerors were required to have their cache subsystem access and transfer a 1792 wordblock sequentially in 10 milliseconds or less. Since there is another adequate explanation for Centennial's faster cache performance besides writing solely to cache, we cannot dispute the possibility that Centennial was also writing data to disk at the same time that it was writing to cache in the second benchmark. Under the circumstances, Centennial's proposal should not have been rejected without actually testing for the data save capability or at least permitting the company to explain how it expected to provide for protection against data loss other than through the use of a data save device; we note that the IRS did not at any time during the 3 days the second benchmark was being run bring to Centennial's attention the fact that its equipment lacked the device.

Centennial's protest is sustained.

The contract awarded under the RFP provides for renewal by the contracting officer by giving written notice prior to October 1 of each year or within 30 days after funds for the particular fiscal year become available, whichever date is later. The contract, including the exercise of options, is not to extend beyond 60 months--the anticipated life of the UNIVAC computer system. We recognize that the first option period is nearly over, and it is not be feasible for the IRS to resolicit for the upcoming year. Therefore, we are recommending to the IRS that it not renew the contract for future option years, and instead resolicit its cache/disk subsystem requirements for these years.



Acting Comptroller General
of the United States