148787

Comptroller General
of the United States

Washington, D.C. 20548

Decision

REDACTED VERSION*

Matter of: Westinghouse Electric Corporation

File: B-250486

Date: February 4, 1993

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Col. Kevin E. O'Brien, Esq., Col. Paul Smith, Esq., Maj. Bobby G. Henry, Jr., Esq., and Robert R. Hamilton, Esq., Department of the Army, for the agency.
C. Douglas McArthur, Esq., and Michael R. Golden, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

DIGEST

1. Where solicitation provided for consideration of modularity and commonality between designs for theater and national missile defense systems, protest that awardee's proposal providing to use solid-state technology in theater defense and traveling wave tube technology in national defense should have been rejected is denied where solicitation provided that commonality was only one portion of a comparative evaluation, and record shows that while recognizing lack of commonality as a weakness in the awardee's proposal, evaluators gave a high rating to awardee's proposal based on strengths in other areas.

*The decision was issued on February 4, 1993, and contained proprietary and source-selection sensitive information. It was subject to a General Accounting Office protective order. This version of the decision has been prepared after consideration of the parties' comments identifying those portions of the decision that contained proprietary information.

2. Specific allegations, pertaining to evaluation of protester's proposal, first raised in comments on agency report were untimely filed where not raised within 10 days of learning the basis for protest. In any event, the information forming basis of protest was included in agency document disclosure dated a month prior to the filing of the agency report.

3. Agency "bottoms-up" analysis of cost, which involved breakdown of work and material required for each element of effort, estimate of associated hours and cost, and adjustment of protester's estimated costs based on experience of evaluators supplemented by information obtained from suppliers and other agencies, provided a reasonable basis for determining most probable cost to agency of each proposal.

4. Where record shows that awardee's proposal of mixed-technology approach, offering solid-state technology for theater missile defense radar to be delivered first and traveling wave tube technology for national missile defense radar to be delivered last, was not the agency's preferred solution but only one of many considered in the source selection, agency had no obligation to advise protester of the awardee's approach during discussions. In any event, it would have been improper to disclose competitor's innovative approach to other firms in competitive range.

5. Selection of higher cost, higher rated proposal was consistent with selection factors in solicitation that placed emphasis on technical factors, where proposal was rated significantly higher in technical merit than protester's proposal and was only slightly higher in cost.

DECISION

Westinghouse Electric Corporation protests the award of a contract to Raytheon Company under request for proposals (RFP) No. DASG60-92-R-0008, issued by the Department of the Army for ground-based radar. Westinghouse contends that the agency used a flawed cost model in evaluating the realism of its proposal and that the award to Raytheon violated solicitation requirements.

We deny the protest.

BACKGROUND

On January 30, 1992, the agency issued the solicitation for a cost-plus type contract, with incentive and award fee provisions for demonstration and validation of four radar systems for ballistic missile detection, tracking, and discrimination in defense of military theater operations

and of the continental United States. Contract line item number (CLIN) 0001 was for a demonstration and validation radar to support testing of air defense missiles such as extended range interceptor, Theater High Altitude Area Defense, and Patriot and fire control systems at White Sands Missile Range; CLIN 0003, for development, fabrication, and testing of two theater missile defense systems for user operational evaluation (UOE), designed to meet all requirements including acquisition, tracking, range, and volume, together with C-130 compatibility and road transportability; CLIN 0005, a theater missile defense system to support testing of strategic target interceptors at Kwajalein (USAKA) National Missile Range; and CLIN 0007, for extended operations support at USAKA. CLIN 0009, added by amendment No. 0002 to the RFP dated March 27, provided for design, development, test, demonstration, evaluation, and installation of a national missile defense (NMD) system for UOE and fielding at the SAFEGUARD complex in North Dakota.[1]

The acquisition is part of the Strategic Defense Initiative program for protection against limited nuclear strikes. It is designed as a follow-on to a prior program, originally designated the terminal imaging radar program and renamed the GBR-X (experimental ground-based radar), for development of a radar capable of supporting interceptors against targets in the high endoatmosphere and exoatmosphere. The procurement included technology and functions from those prior programs, including development of a radar to operate in the X-band. Insofar as possible, potential contractors were to offer common technology and functions for a family of radars encompassing both the theater and NMD systems. The solicitation contained the standard Federal Acquisition Regulation § 52.215-16 clause, providing for award on the basis of the offer most advantageous to the government, cost or price and other factors considered. These other factors included technical and management factors. The technical factors were as follows:

Technical

(1) Basic and NMD GBR UOE option

(a) Ground Based Radar approach (traceability and ability to satisfy the requirements of the statement of work, with consideration "given to trade-offs underlying the approach to the identification of key technical objectives . . . ; to the promotion of commonality and modularity among the

[1]CLINs 0002, 0004, 0006, 0008, and 0010 included the associated data requirements.

Family of Radars; and promising technology advances and their associated developmental risk.")

(b) System Detail Design Approach

(c) GBR Hardware Fabrication and Software Development Approach

(d) GBR Test and Evaluation Approach

(e) TMD GBR and TMD GBR UOEs Interface Approach

(f) GBR-T Interface Approach

(g) NMD GBR Interface Approach

(h) MANPRINT Approach (for TMD GBR UOEs)

(2) GBR-T Extended Operations at USAKA-Option

(a) GBR-T Extended Operation at USAKA

(b) GBR-T Extended Operation Test Approach

Factors 1(a), (b), (c), and (d) were equal in weight and more important than factors 1(e), (f), and (g), which were equal in weight; subfactor h was of "least importance." Factor (1) was approximately four times the importance of factor (2). Technical factors were "significantly more important" than management.

The solicitation provided that cost would be a substantial evaluation area, although of less importance than technical or management factors. The solicitation provided for evaluation of cost realism and total evaluated probable cost, defining cost realism as "the likelihood that the technical and management approaches proposed can be accomplished at the cost proposed." The solicitation provided for use of the cost realism evaluation in determining total evaluated probable cost, or "the most probable cost to the government of successfully completing the contract using the technical and management approaches proposed."

The resulting system is to be a phased array; rather than a mechanical dish that is pointed at a target, the phased array consists of thousands of antenna elements and phase shifters from which energy emanates for location and tracking of objects. Some phased arrays use a traveling wave tube (TWT) technology, and others use solid-state technology. The record shows that the solid-state technology offers a potential lower life cost and enhanced maintainability, has more growth potential, and is lighter in

weight. Although solid-state technology is generally expected to replace tube technology, it has not developed to the point where it can consistently replace tube technology in larger applications.

The use of TWT and solid-state technology in phased arrays affects power amplifier technology; with TWT technology, the tube provides power to a large number of channels, with a ferrite phase shifter at the end of each channel; with solid state technology, the source of power is smaller and passes through a series of channels at the end of which is the phase shifter and a power amplifier from which radio frequency energy emanates. The agency believed that the use of solid-state technology would require later delivery than the use of TWT technology, but did not want to forego the technical advantages of solid-state technology if a contractor could offer that technology within a time that the program could accommodate; the RFP therefore encouraged the submission of alternate proposals incorporating solid-state technology.

The agency received seven proposals, including two proposals from Westinghouse--a proposal offering a low power TWT design, and an alternate proposal offering a solid-state design--and three from Raytheon--a solid-state design, a TWT design, and a proposal offering mixed-technology (solid-state for the theater missile defense system and TWT for the NMD system).[2]

The agency conducted discussions and asked each offeror within the competitive range to submit a best and final offer (BAFO). The agency concluded that the offerors had significantly understated their estimated costs, and this subject was discussed with each offeror. The agency's concerns about the cost realism of offers were not resolved by the BAFO submissions, and the agency reopened negotiations, advising offerors of its intention to incorporate a cost-sharing arrangement between the contractor and government into the final contract. As a result, Westinghouse submitted two additional offers, which were "reduced risk" versions of its two initial offers. The protester offered a reduced risk version of its estimated $357.6 million solid-state proposal at an estimated price of $554.3 million, as well as a reduced risk version of its $314.9 million TWT proposal at an estimated price of $389.1 million. Both of those proposals generally increased the level of effort for the program.

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[2]The agency found a fourth alternate proposal from the awardee unacceptable. The third offeror proposed a solid-state design.

The agency evaluators rated the three Raytheon proposals highest, with the TWT and mixed-technology approaches receiving an adjectival rating of "good." The Raytheon solid-state proposal received a rating of "acceptable (high)." Westinghouse's two reduced risk proposals were ranked next, with a rating of "acceptable (low)," while its other two proposals ranked last with a "marginal (high)" rating. The evaluators found all of the proposals lacking in cost realism. The agency adjusted Westinghouse's reduced risk TWT proposal of $389 million upward to $672.9 million. This resulted in an estimate of $614.7 million in total probable cost to the agency after adjustment of fee and cost sharing. The agency also adjusted upward Raytheon's estimated costs of $557.8 million for its TWT proposal and $614.7 million for its mixed-technology proposal, to $721.2 million and $886.2 million, respectively, with a probable estimated cost for the TWT proposal of $635.5 million and for the mixed-technology proposal of $773.4 million.

The source selection advisory council (SSAC) briefed the source selection authority (SSA) on September 14, recommending the Raytheon TWT proposal for award because of concerns over the firm's ability to produce solid-state modules. The cost analysis improvement group of the Office of the Secretary of Defense, however, advised the SSA that the TWT proposal carried a risk in meeting production schedules for phase shifters;[3] acceptance of the mixed-technology proposal, however, would allow simultaneous production of phase shifters and solid-state modules, lowering schedule risk. Based on this advice, the SSA concluded that the relative risks of the mixed-technology and TWT approaches were more equal than the SSAC had believed. The SSA found the technological advantages of obtaining a solid-state approach for the theater missile defense system was worth the greater cost of the mixed-technology approach. The SSA selected the Raytheon mixed-technology proposal for award. This protest followed.

EVALUATION OF AWARDEE'S PROPOSAL

The protester argues first that the evaluation of the awardee's proposal was unreasonable and inconsistent with the evaluation factors set forth in the solicitation. The protester contends that promotion of commonality and modularity between systems was a key evaluation criterion, and that it was inconsistent with the evaluation criteria to give Raytheon a high rating for an approach that used both

[3]Phase shifters are a critical item used in the TWT system to time the beam which is emitted from the radar array to maintain focus on the target.

solid-state and TWT technology. The protester asserts that the RFP required offerors to propose either all of a particular technology or at least compatible technologies for the theater and NMD systems. The protester argues that it was unreasonable to rate the Raytheon approach higher than the Westinghouse approaches, which offered compatible technologies.

In considering protests against an agency's evaluation of proposals, we will examine the record to determine whether the evaluation was reasonable, supported by the record, and consistent with the evaluation criteria. SeaSpace, 70 Comp. Gen. 268 (1991), 91-1 CPD ¶ 179. We find that the evaluation of the Raytheon proposal was consistent with the solicitation, which provided for consideration of trade-offs among key technical objectives, including promotion of commonality and modularity and consideration of promising technology advances. We do not read the solicitation as requiring commonality and modularity between the theater and NMD systems, only as providing for consideration of commonality and modularity as part of the technical evaluation.

The record shows that consistent with this interpretation, the agency evaluators rated the mixture of technology as a weakness in the successful proposal; Raytheon's proposal received its high rating despite being downgraded for this weakness because of its strengths in other areas.[4] The agency points out that commonality and modularity were emphasized originally prior to addition of CLIN 0009 to the solicitation, but that the addition of the NMD system radar made commonality of radars difficult to achieve. In any event, the awardee points out that even with the mixture of technology proposed, there remains a high degree of modularity and commonality in the designs for the two systems. The receiver/exciter, signal processor, data processor, and beam steering generator for the two systems use common designs; the theater missile defense system software is used for the NMD system with slight modification. There are unique designs only for the transmitter and antenna.

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[4]It appears from the record that Raytheon's weakness in this area was discussed in reports under the technical factor 1(c), GBR hardware fabrication, rather than 1(a), GBR approach. The two factors are equal in weight, and there is no evidence of prejudice in this error. Source selection briefings gave consistent prominent mention to lack of commonality and modularity as the significant weakness of the awardee's proposal.

We do not agree with the protester that commonality and modularity were key requirements; rather, the solicitation recognized that commonality and modularity might be weighed along with other favorable features of a proposal. In our view, the evaluation was not unreasonable or inconsistent with the evaluation scheme described in the solicitation.

EVALUATION OF PROTESTER'S PROPOSAL

In its November 23 comments on the agency report, the protester raised several issues related to the evaluation of its own proposal. Specifically, the protester asserted that the agency unreasonably evaluated its production plans, which the protester contends were based on replicating an existing line; that the agency ignored detailed design information including a prototype transmit/receive module provided by Westinghouse in concluding that the design was not mature; that it ignored data showing that the protester's patch radiator represented proven technology; and that it mischaracterized the radome proposed by the protester.

These allegations are untimely. When a protester supplements its protest with new and independent allegations, those allegations must independently satisfy timeliness requirements; applicable regulations do not contemplate the unwarranted piecemeal presentation of protest issues. CH2M Hill Southeast, Inc., B-244707; B-244707.2, Oct. 31, 1991, 91-2 CPD ¶ 413; Berkshire Computer Prods., B-246337, Dec. 18, 1991, 91-2 CPD ¶ 564. The record shows that the protester first learned of some of these issues during a debriefing held on September 25. For example, the protester was advised of the agency's view of the high schedule risk for production of solid-state transmit/receive modules, that its proposed unproven radome design was judged a risk, that the agency was concerned that the radome's performance would degrade in severe weather, and that its patch radiator posed high technical risk in development. Further, in preparing the record and defining the documentation required for this protest, the agency made its files available for review by the protester; essentially all of the technical evaluation material, including the source selection board's final report and briefing charts, were made available by letter of October 20. The source selection materials identify all the major areas in which the protester's offer was downgraded. For example, the patch radiator was identified as a high technical risk item. The evaluators noted the protester's questionable dedication to producing solid-state transmit/receive modules in view of the lack of information provided on the design of the modules and the capabilities of the protester's design. Concern was expressed that the radome design would result in marginal performance in severe weather conditions. The remainder of the agency report was

made available to protester's counsel under protective order on November 2.

Thus, at the time of the September 25 debriefing the protester learned some of the precise grounds for its technical rating, and it knew or should have known all of the technical issues after it received the agency's October 20 document release; any assertion that the technical evaluation was unreasonable was required to be protested within 10 working days of that time. Even if we assumed that the material received at those times did not provide a clear statement of the agency's position, the protester should have raised these technical issues within 10 working days of receipt of the agency's report on November 2, or no later than November 17. The specific grounds for protest of the technical evaluation were not set forth until the protester's November 23 comments on the report. As a result, the agency report responded only to the more general allegations made in the original protest. The protester has not offered a reason for its delay in raising these issues. In these circumstances, Westinghouse's protest that its radome design, transmit/receive module, and patch radiator were misevaluated is untimely. Mennen Med., Inc., B-246764 et al., Apr. 2, 1992, 92-1 CPD ¶ 341.[5] Air-supported radomes have no rigid structure but are supported by

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[5]While the record was not fully developed on these untimely issues, it appears that there is no merit to the protester's contentions. Regarding production plans, [DELETED] percent of protester's transmit/receive module production was planned for a production line that does not currently exist; despite the protester's assertion that the line would be identical to an existing one, we think the agency's concern was reasonable since the actual production line, including the personnel proposed for that line, was not yet in existence. The record also shows that the protester provided several inconsistent designs for the module and that the prototype was apparently yet another version; further, the protester states that none of the submitted designs corresponded to its planned design. Data submitted regarding the patch radiator did not cover dual polarization as required and was based on a theoretical paper, not actual experience; the protester's proposal and responses to inquiries during discussions failed to allay the agency's concerns.

Errors in describing the protester's radome design had no effect on the evaluation; the significant weakness of the Westinghouse radome related to its survivability, and the design of the radome did not create the problem; rather, the agency's concern had to do with the exposure of electronic components to the elements in the event the radome was blown away.

low-pressure air, as in tennis courts; a space-frame radome includes a rigid lattice to support the dome covering. The protester proposed an air-supported radome, as some evaluators apparently understood; some evaluators apparently understood the design to be space frame, but the agency states that the "space frame" description is essentially meaningless in the context in which it appears.

COST REALISM

In its initial protest, Westinghouse challenged the agency's cost realism methodology, contending that the agency used a flawed--inaccurate and out of date--triservice cost model in estimating certain costs. The protester stated that the agency had admitted the flaws in its cost model and the unreasonableness of the methodology was evidenced by the agency's conclusion that three such sophisticated offerors had submitted unrealistically low cost proposals. The agency report establishes that the model did not constitute the agency's primary methodology for evaluating cost realism. The agency had performed a "bottoms-up" analysis, by which evaluators assigned to specific portions of the proposals estimated the cost of performance as proposed for each offeror. The cost model, which the agency contends is not flawed, was only used along with other models to verify the "bottoms-up" analysis.

The solicitation provided for consideration of cost realism both in the technical evaluation and in the calculation of a most probable cost to the government for consideration in the selection decision. When a cost-reimbursement contract is to be awarded, the offerors' estimated costs of contract performance should not be considered as controlling since the estimates may not provide valid indications of final actual costs, which, within certain limits, the government is required to pay. D.O.N. Protective Servs., Inc., B-249066, Oct. 23, 1992, 92-2 CPD ¶ 277. The agency's evaluation of estimated costs thus should be aimed at determining the extent to which the offerors' estimates represent what the contract should cost, assuming reasonable economy and efficiency. Science Applications Int'l Corp., B-232548; B-232548.2, Jan. 23, 1989, 89-1 CPD ¶ 52. An evaluation of this nature necessarily involves the exercise of informed judgment, and we limit our review to consideration of whether the agency's cost realism determination is reasonable. Grey Advertising, Inc., 55 Comp. Gen. 1111 (1976), 76-1 CPD ¶ 325. We conclude that the cost realism methodology used here is reasonable.

The agency made significant adjustments in the protester's proposed costs, both for the TWT proposal and the solid-state proposal,[6] adjusting the former upward by nearly $284 million, from $389 million to $673 million, and the latter by roughly $236 million, from $554 million to $790 million. Of the $284 million adjustment to the TWT proposal, $261 million came in three areas--$53 million in material costs, $37 million in subcontract costs, and $171 million in interdivisional transfer costs (costs of contracting between the corporation and its affiliates). Of the $236 million adjustment to the solid-state proposal, the corresponding adjustments amounted to $209 million--$52 million, $32 million, and $125 million respectively.

In its October 20 document disclosure, the agency furnished the protester its price analysis memorandum detailing adjustments in cost elements which were subsequently challenged in the protester's November 23 comments. We conclude, as we did regarding the protester's objections to the specifics of the technical evaluation, that the protest grounds first asserted in its November 23 comments are untimely. We therefore limit ourselves to a general discussion of the cost evaluation in response to Westinghouse's original timely protest. In order to determine the reasonableness of the agency's "bottoms-up" cost methodology, we convened a factfinding hearing under our Bid Protest Regulations, 4 C.F.R. § 21.5, asking the agency to describe its methodology, with emphasis upon explaining those areas of the adjustment to which the protester took exception in its comments.

The agency increased labor hours for interdivisional costs by substantial amounts--[DELETED] hours for the TWT proposal and [DELETED] for the solid-state proposal. At the hearing, the agency discussed its methodology for estimating interdivisional costs under the radar element, beginning with work breakdown structure for the control processor. The agency identified nine components of material cost and labor for the control processing unit and applied them to the offerors' proposals. As the first component of this cost, the signal processor was estimated at $4.9 million, and offerors' proposed costs were adjusted upward to reflect

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[6]In the ensuing discussion, it should be noted that direct labor hours were essentially the same for both the TWT and the solid-state proposals; Westinghouse increased by similar amounts the hours in the reduced risk proposals, both of which proposed [DELETED] in direct labor hours; the evaluation of all four proposals resulted in adjustment by the agency to the same figure, [DELETED] hours of direct labor. Our analysis addresses the adjustments made to the reduced risk proposals.

this estimated cost--the protester, by $4.2 million, from $700 thousand, and Raytheon by the entire $4.9 million, since the agency could find no provision for this cost in the awardee's proposal.

There were eight other components for the control processing unit--software, data-processing equipment, the high speed recorder, the display console, the communicator, calibration and alignment, timing control element, and trailer. The agency examined proposals to determine whether the effort for each unit had been addressed elsewhere in the proposal, and if not, adjusted the offerors' prices upward to the agency's estimate. The protester's cost was increased by nearly $10 million, mostly for the signal processor and data processing hardware, which the agency believed were unrealistically priced, and for the communicator, display, and timing control element, which were not included in the cost proposal at all. Similarly, the awardee's cost was adjusted upward by more than $12 million, generally in the same areas. A similar effort was addressed to the control processing units under CLINs 0003, 0005, and 0009, with some adjustment for differences in the offerors' approaches and variations in the required effort. In addition, agency personnel visited Computer Data Corporation (CDC), which was teamed with Westinghouse, and discussed the potentialities and cost of CDC's signal processors coming into the marketplace, to confirm the agency's cost assumptions.

Also, a considerable portion of the cost adjustment, both under subcontracts and interdivisional costs, resulted from the agency's analysis of the likely costs for transmit/receive modules. The record shows that there are more than a quarter of a million of these modules, with the protester planning to produce [DELETED] percent through an affiliate; the remaining [DELETED] percent to be obtained by subcontract with Texas Instruments. The protester estimated the cost of the modules at [DELETED]; the agency's estimate was $1,251.

The protester based its estimate on a module being produced for the F-22. That module costs approximately [DELETED] for a quantity of 22,000; the protester believes that higher volume will reduce its costs on that program to [DELETED]. According to the protester, since the GBR module is only [DELETED], it should cost no more than $613; with higher yields and the institution of a 4-inch MMIC (monolithic microwave integrated circuit) line, costs should be reduced further, the protester argues, to approximately [DELETED].

The agency increased the cost of module production by 140 percent in its analysis, increasing the direct labor hours from [DELETED] to [DELETED] and the estimated cost of the protester's subcontract with Texas Instruments from

[DELETED] to [DELETED]. The agency's testimony established that this increase was based partially on a component count, which showed that the protester had omitted certain components from its calculations, and partly from information from industry and the Air Force's Manufacturing Technology program at Wright-Patterson Air Force Base. This information showed that the protester had underestimated its material costs by roughly half--[DELETED] for chips and [DELETED] for other material, versus the agency's estimate of [DELETED] and [DELETED] respectively; further, the agency estimated [DELETED] in labor costs--assembly, testing, quality control, and support, versus the protester's estimate of [DELETED].

The agency notes that the protester's estimate was based on production rates not yet achieved under the F-22 program, and further it presumed a waiver of quality specifications by the Air Force currently being sought under the F-22 program; the F-22 program was also reported 6 months behind schedule. Part counts submitted with the protester's proposal appeared inconsistent with the proposed designs; the fixed-price quotes cited by the protester did not cover the total quantity of material required.[7] Independent models, including one run by Air Force experts at Wright-Patterson Air Force Base and another provided by an independent contractor, also confirmed the "bottoms-up" cost for the modules. The agency notes that the estimates of other offerors, including the price offered by Texas Instruments to the awardee--$1,117--was in line with this estimate, which was further verified by Air Force and private contractor cost models.

Finally, the agency estimated the protester's system engineering effort under interdivisional costs at 1,104,080 hours, an increase of approximately [DELETED] hours from the [DELETED] hours proposed for the TWT design.[8] Of these hours, the agency estimated 321,480 for CLIN 0001, the theater missile defense system designed for use in the interceptor test; these hours are [DELETED] more than the [DELETED] hours that the protester allocated to system engineering for CLIN 0001. The evaluators' worksheets show, as major adjustments, that evaluators found the protester underestimated the alignment and calibration effort by 36,000 hours, the discrimination, target designation, and definition of algorithms by 24,000 hours,

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[7]For an estimated quantity of a quarter million, the protester had quotes for less than half of the quantity needed.

[8]The adjustment was basically the same for the solid-state proposal.

electronic countermeasure effort, including threat assessment and GBR performance evaluation by 20,000 hours, and simulation and modeling by 30,000 hours.

In its comments, the protester took specific exception to adjustments in the area of reliability and maintainability engineering, survivability analysis, and alignment/calibration engineering. Regarding survivability analysis and alignment/calibration, the protester asserted that it had priced the entire effort under CLIN 0001, as stated in its proposal, and that there was no basis for adding costs associated with those efforts under other CLINs.

Agency witnesses testified that of 16 reliability tasks, the protester had provided labor for only 7, omitting 9; of 13 tasks related to maintainability, the protester had addressed only 1, the maintainability demonstration. Witnesses also testified that contrary to the protester's assertions, the agency did not find it reasonable to assume that no further alignment and calibration or survivability analysis effort would be needed after delivery of CLIN 0001. The agency witnesses pointed out that the UOE antenna for the CLIN 0003 system is twice as big as the antenna used in the demonstration/validation of CLIN 0001, so that the units have different weighting and structures; in addition, the larger antenna has greater phase differences in electrical scanning. For the USAKA and NMD systems, radar tracking ranges are significantly greater, "propagating" the effect of errors; the system at Grand Forks will in turn not have the other radar and optics available to align and calibrate at USAKA. In view of the Army's analysis of the required tasks for reliability and maintainability, and the overall system engineering effort, we have no basis to conclude that the agency's adjustments in the area of system engineering were unreasonable.

Agency witnesses also addressed increases in subcontracts with Electro-Magnetic Systems (EMS) (manufacturer of the phase shifter proposed for the TWT technology), Texas Instruments (manufacturer of [DELETED] percent of the transmit/receive modules), and Radiation Systems, Inc (RSI) (manufacturer of the antenna mounts). Contrary to assertions that the protester had fixed-price proposals, the agency produced correspondence from subcontractors identifying risk areas and contingencies in their prices. A letter from EMS indicated that the subcontract was of a cost-plus-fixed-fee type. The agency's own estimate was developed from experience with the GBR-X program; as with the modules, there was also a part count and the total price for phase shifters was developed from the cost of its components and assembly. A letter previously provided by the protester also indicated that RSI's price was contingent upon certain assumptions about the program; the agency's

adjustment of $5 million to this subcontract again resulted from its own bottoms-up analysis of parts associated with the antenna mount and costs.

Based on the hearing testimony and extensive agency documentation supporting the cost adjustments, we think that the cost adjustments were reasonable. [DELETED] Although the protester later sought to interject doubts concerning the validity of the hearing testimony and agency documentation in post-hearing comments, the agency's reasons, as explained in its experts' testimony, remain basically uncontroverted. The agency has provided detailed documentation supported by detailed testimony concerning its cost adjustments, its assumptions, and methodology. While the protester disagrees with them, it has not established on this record that the adjustments are erroneous.

DISCUSSIONS

In its initial protest, Westinghouse concedes that the agency advised it of concerns that the protester was underestimating the effort involved in completing the statement of work. In fact, the record shows that the agency advised the protester in the course of discussions that its system engineering requirement should be increased by 407 percent, that its costs for antenna mounts were low by approximately $4 to 10 million, that the costs for the transmit/receive module needed to be increased by approximately [DELETED] percent, and that program management man-hours, subcontractor hours, and test program man-hours all should be approximately doubled. In response to these concerns, the protester submitted its reduced risk proposals, which resulted in its technical score being increased from marginal to acceptable. Nevertheless, the protester argues that the agency failed to conduct meaningful discussions, principally because it failed to advise the protester that it desired or would accept a proposal offering mixed-technology, as the successful proposal did.[9]

Agencies must generally conduct written and oral discussions with all offerors within a competitive range, advising them of weaknesses, excesses, or deficiencies in their proposals, unless doing so would result either in disclosure of one

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[9]The protester also asserted that the agency failed to alert it to a deficiency concerning Westinghouse's control processing efforts. This issue was essentially abandoned when the agency report showed it to have no factual basis--that its concerns lay principally with the estimated cost of the control processor. The protester's final proposal contained a detailed cost proposal from CDC that satisfied the agency's concerns.

offeror's technical approach to another or in technical leveling, and providing them the opportunity to satisfy the government's requirements. tg Bauer Assocs., Inc., B-229831.6, Dec. 2, 1988, 88-2 CPD ¶ 549. The actual content and extent of discussions are matters of judgment primarily for determination by the agency involved, and our Office will review the agency's judgments only to determine if they are reasonable. Tidewater Health Evaluation Center, Inc., B-223635.3, Nov. 17, 1986, 86-2 CPD ¶ 563.

The record does not support the protester's assumption that the mixed-technology approach was preferred by the agency. As noted earlier, one of the chief concerns that evaluators had with the awardee's proposal was precisely the lack of commonality and modularity that the protester criticizes; the Raytheon proposal was selected for award despite this weakness, not because of it. Nor do we believe that the agency was obligated to advise the protester of the Raytheon approach; the items to be discussed during negotiations are the weaknesses in the offeror's own proposal relative to solicitation requirements, not the merits of a competitor's offer or how to help the offeror bring its proposal up to the level of other proposals. Maytag Aircraft Corp., B-237068.3, Apr. 26, 1990, 90-1 CPD ¶ 430. It would have been improper to disclose to other competitors one offeror's innovative approach or solutions to problems. Aydin Vector Div., B-243430, July 22, 1991, 91-2 CPD ¶ 79. The agency's failure to suggest a mixed-technology approach to the protester was not unreasonable.

In its comments, the protester also argued that the agency failed to advise Westinghouse of what were considered key deficiencies regarding the use of government-owned software, as well as the other weaknesses noted in the technical evaluation. For the reasons discussed earlier concerning the protest of specific technical and cost evaluation issues, the lack of discussion on technical issues was not timely raised in the protester's comments on the agency report.[10] See Berkshire Computer Prods., supra.

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[10]The record was not developed on this untimely issue. However, we note that it appears the agency met its obligation to conduct meaningful discussions. Regarding the GBR-X software, developed under the prior terminated contract, the source selection board specifically identified the "extensive reuse of GBR-X software architecture design and code [as] an advantage." The record shows that the agency did have a concern that the protester was assuming that only minor modification of the software would meet theater missile defense system needs. During discussions, the agency identified its concern that Westinghouse was

(continued...)

SELECTION DECISION

The protester contends that the SSA unreasonably selected the Raytheon proposal for award despite its higher price. It argues that, considering the awardee's failure to offer common technology for the theater and NMD systems, Raytheon's proposal can be considered no more than equal to Westinghouse's proposal in technical merit, and, based on the protester's significantly lower estimated cost, the Westinghouse proposal is the one "most advantageous" to the government.

In a negotiated procurement, there is no requirement that award be made on the basis of lowest cost; cost/technical may be made, and the extent to which one may be sacrificed for the other is governed by the test of rationality and consistency with the established evaluation factors. Central Tex. College, 71 Comp. Gen. 164 (1992), 92-1 CPD ¶ 121. Even where a source selection official does not specifically discuss the technical/price tradeoff in the selection decision document, we will not object to the tradeoff if clearly supported by the record. Varian Assocs., Inc., B-238452.4, Dec. 11, 1990, 90-2 CPD ¶ 478. The awardee contends that the protester is not an interested party to challenge the cost/technical tradeoff, because a review of the source selection board report shows that all three Raytheon proposals were ranked above the Westinghouse

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[10](...continued)
underestimating the code conversion and size and had not addressed all software functions. The protester's actual complaint seems to be that the agency did not respond adequately to its requests for information on the status of the software. Such an issue should have been raised, at the latest, prior to the receipt of BAFOs, if not prior to the submission of initial proposals. 4 C.F.R. § 21.2(a)(1).

The agency asked the protester to address transmit/receive module performance and architecture information not provided in the design notebook portion of its proposal. The agency stated that the Westinghouse proposal contained four versions of transmit/receive module architecture which were inconsistent and asked which version was correct. It advised that evaluation of module performance and risk depended on module architecture. Although additional information would have been necessary to resolve the question of discussion adequacy about the protester's patch radiator design, the agency did advise the protester about its concerns with the design, which was rated as a "high technical risk item."

proposal; the awardee argues that since Westinghouse has not challenged the evaluation of the other two proposals, which would be in line for award in the event the protest were sustained, Westinghouse is not an interested party.

Two proposals were rated noticeably higher than the others--the Raytheon mixed-technology proposal and the Raytheon TWT proposal. Raytheon's solid-state proposal ranked third technically, with the protester's two reduced risk proposals rated equal to the proposal of the other offeror. Originally, the SSAC recommended selection of the TWT version, which was only $20 million higher in probable cost than the protester's reduced risk TWT proposal; it is clear from the source selection decision memorandum that the tradeoff decision was made between the mixed-technology proposal and the Raytheon TWT proposal. Thus, even if we were to conclude that the selection of the much more costly mixed-technology proposal ($159 million or slightly over one-fourth higher than the protester's TWT proposal) was unreasonable, Raytheon's TWT proposal was next in line for award. The Raytheon TWT and solid-state proposals not only received higher technical ratings than the Westinghouse TWT and solid-state proposals, good and acceptable (high) respectively, versus acceptable (low) for the Westinghouse reduced risk proposals, but were comparable in cost, the TWT proposal being only 3 percent higher than the protester's TWT baseline proposal.

In explaining his selection decision, the SSA accepted the evaluators' results, noting the consistently high ratings earned by the Raytheon proposals and the proposals' good system performance, which exceeded requirements in several respects and provided a good basis for expected improvements in capabilities. The use of solid-state technology for the theater missile defense system presented technical advantages but created a risk because of earlier required delivery of the theater missile defense system; the SSA found however that the schedule risk amounted to only a month and a half delay for the third theater missile defense radar and that the awardee's plans for parallel production of phase shifters for the TWT design and solid state modules reduced the risk presented by a production rate for phase shifters that had initially appeared over-optimistic. Noting also that technical and management factors were worth 80 percent in the evaluation, the extra cost for the extra performance capabilities and relatively lower risk approach of Raytheon

was worth the moderate additional cost. This analysis was consistent with the evaluation factors listed in the solicitation, and we are unable to conclude that it is unreasonable.

The protest is denied.

James F. Hinchman
General Counsel