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Comptroller General
of the United States

United States General Accounting Office
Washington, DC 20548

Decision

Matter of: DRS Systems, Inc.

File: B-289928.3; B-289928.7

Date: September 18, 2002

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DIGEST

Agency reasonably considered in the evaluation the extent to which the awardee's proposed thermal sight system (for light armored vehicle) exceeded the stated required and desired range performance by furnishing better resolution and discernment of finer details; where a solicitation contains evaluation criteria that allow for qualitative or graduated assessments of proposals, rather than pass/fail evaluations, it is proper to give a proposal more credit for superiority under one of those evaluation criteria.

DECISION

DRS Systems, Inc. protests the Army Materiel Command's (AMC) award of a contract to the Raytheon Company, under request for proposals (RFP) No. DAAE07-01-R-M005, for development and production of an Improved Thermal Sight System (ITSS) for a United States Marine Corps light armored vehicle (LAV), the LAV-25. DRS asserts that the evaluation failed to adequately account for the superiority of its proposed system and was otherwise unreasonable.

We deny the protest.

BACKGROUND

Marine Light Armored Reconnaissance battalions are equipped with the LAV family of vehicles, including the LAV-25, an all-terrain, all-weather wheeled vehicle equipped with a 25mm chain gun and a machine gun. As part of a service life extension and upgrade program for the LAV-25s, which were first introduced in the early 1980s, the current thermal imaging system will be replaced with an ITSS providing thermal (night vision) imaging, day/night sight optics, and an integrated laser range finder (LRF). The ITSS will provide at least a 55-percent increase in target recognition range and a 35-percent increase in target identification range relative to the current system.

The ITSS Purchase Description (PD) included in the RFP established required minimum performance ranges for the ITSS thermal channel at 0° elevation under 16 conditions, including: (1)-(4) wide field of view detection of target in moderate weather, adverse weather, CL 2 (white phosphorous smoke), or fog oil; (5)-(8) narrow field of view detection of target under the same four environmental conditions; (9)-(12) narrow field of view recognition of target under the same four environmental conditions; and (13)-(16) narrow field of view identification of target under the same four environmental conditions. In addition, the PD provided: "It is also desired that the 0° elevation range requirements for each of the sixteen given conditions be met or exceeded over the full elevation excursion of the LAV-25 main gun (i.e., -8° to 60°)." PD ¶ 3.3.2.2.1.[1] As discussed below, thermal channel performance for these 16 scenarios was calculated for each of six gun elevation angles (-8°, 0°, 15°, 30°, 45°, and 60°), for a total of 96 individual scenarios (as well another 96 individual scenarios when performance with electronic boost was considered). The PD required the LRF to display target location range to within +/-10 meters with a 99-percent probability of successfully ranging on standard North Atlantic Treaty Organization targets from 200 to 7,995 meters given a visibility of 8,000 meters with no precipitation and to 9,995 meters given a visibility of 23,000 meters with no precipitation. The PD also established a desired accuracy of +/-5 meters. PD ¶ 3.3.2.3.

Award was to be made to the offeror whose proposal represented the "best value." The RFP provided for proposals to be evaluated in three areas--technical, cost, and program management. Technical was significantly more important than cost and program management combined, while cost was more important than program management. The technical area consisted of: (1) ITSS performance, including

[1] The PD defined "detection" as the perception or sensing of the presence of a target of potential military interest; "recognition" as discrimination between targets of different classes (e.g., between a truck and tank); and "identification" as discrimination between targets within a class (e.g., between different models of tanks). (The PD also specified a test for each level of knowledge.) PD ¶ 3.3.2.2.1.

consideration of key performance parameters, which was significantly more important than other performance requirements and desired performance enhancements; and (2) supportability, including consideration of provisioning/supply support, technical manuals, training, test measurement diagnostic equipment (TMDE), configuration management, and test support. There were five key performance parameters: (1) thermal channel performance (as described above), which was more important than (2) LRF performance (as described above), which was as important as (3) reliability, (4) availability and (5) maintainability combined. Beyond these weighted considerations, the RFP also provided for consideration, under the technical area, of proposed measures to reduce operation and support (O&S) costs.

Following receipt of initial proposals, discussions and receipt and evaluation of final proposal revisions (FPR), AMC initially awarded a contract to DRS in December 2001. Raytheon thereupon filed an agency-level protest, and then filed a protest with our Office challenging the award. Upon determining that it had credited DRS with a higher level of performance and design maturity than DRS's proposal warranted, and that it had failed to evaluate proposed operation and support cost savings, AMC proposed to take corrective action in the form of amending the solicitation and reopening discussions. We dismissed Raytheon's protest as academic. B-289928, B-289928.2, Mar. 21, 2002.

After requesting revised proposals and conducting discussions with offerors, AMC requested second FPRs. Second FPRs were received from DRS, Raytheon and a third offeror (not relevant here). Both Raytheon and DRS received an overall excellent rating under the technical performance element of the technical factor. Although DRS's proposal was evaluated as having an advantage with respect to desired performance enhancements (being rated excellent, in contrast to Raytheon's good rating), the source selection authority (SSA) determined that Raytheon's proposal was superior overall for technical performance, based on advantages with respect to the key performance parameters, which were significantly more important than other performance requirements and desired performance enhancements combined. The Source Selection Decision (SSD) recognized that DRS's LRF approach provided "slightly" better capability than Raytheon's based on DRS's having "a tighter [laser] beam divergence ([DELETED]), which allows DRS to mark a target with less risk of hitting the ground and creating false returns," and a greater range capability. SSD at 5. While DRS's proposal, like Raytheon's, also was rated excellent for thermal channel operational performance, the most important key performance parameter subelement, Raytheon's approach was considered to be more advantageous. As explained in the SSD, while both Raytheon's and DRS's thermal channel exceeded all the range requirements at the 0° elevation angle, and both met or exceeded the desired range requirements at 0° in 8 of the 16 mission cases without electronic boost and 10 with boost, only Raytheon's thermal channel offered the desired range performance across the full excursion of the elevation angles (-8°, 0°, 15°, 30°, 45°, and 60°) in all 16 mission cases (whether boosted or

not). In contrast, DRS's thermal channel offered the desired range performance across the full excursion of the elevation angles in only 8 of 16 conditions unboosted, and 9 conditions boosted, due to a failure to offer the desired performance in all cases at the [DELETED]° elevation. In addition, the agency determined that Raytheon's thermal channel offered superior high frequency performance such that it would provide better resolution and discernment of finer details. Finally, while DRS's proposal was more advantageous with respect to maintainability, AMC determined that Raytheon's proposal was more advantageous with respect to reliability and availability. Based on its advantages with respect to thermal channel performance, reliability and availability, Raytheon's overall technical performance was found to be superior to DRS's.

Raytheon's proposal also held an advantage with respect to supportability (the other element of the technical area), for which it received an excellent rating, while DRS's received only a good rating. In explaining the evaluation in this regard, the SSD noted that for provisioning and support, the most important factor under the supportability element, DRS's final proposal received only a good rating, on the basis that it had "proposed a level of CLS [contractor logistics support] spares that, when considered along with their proposed Service reps approach, results in a risk, or lack of confidence, that DRS will be able to meet the follow-on support requirements in a timely or efficient manner." SSD at 7. In contrast, Raytheon's proposal received an excellent rating for provisioning and support based upon having a robust contractor logistics support package, with an outstanding plan to support the fielded systems with very low risk. In addition, not only did Raytheon's proposed O&S cost savings ($[DELETED]), based on an improved mean time between failure, exceed DRS's proposed O&S savings ($[DELETED]), but Raytheon also was credited in the technical area for proposing an [DELETED], which would result in another $[DELETED] million in savings. Both Raytheon's and DRS's proposal received an excellent rating for program management.

Raytheon's evaluated cost ($[DELETED]) was higher than DRS's ($[DELETED]), but the SSA determined that, given Raytheon's proposal's technical superiority, including advantages with respect to technical performance and supportability, "Raytheon's advantages, as well as the probable $[DELETED] in O&S cost savings justify the Government's payment of the [DELETED] . . . cost premium over the DRS proposal." SSD at 10.

Upon learning of the resulting award to Raytheon, DRS filed this protest with our Office challenging the award on several grounds. Based on our review of the record, including testimony taken at a hearing our Office conducted in this matter, we find no basis to question the award to Raytheon. We discuss the most significant arguments below.

THERMAL CHANNEL PERFORMANCE

DRS asserts that, in its thermal channel evaluation, AMC did not adequately credit DRS's proposal for having superior range performance at a majority of the individual scenarios. In addition, DRS argues that evaluating high frequency performance amounted to a departure from the evaluation approach set forth in the RFP and that, moreover, Raytheon's evaluated advantage in this regard was illusory.

In reviewing an agency's evaluation of proposals and source selection decision, our review is confined to a determination of whether the agency acted reasonably and consistent with the stated evaluation factors and applicable procurement statutes and regulations. United Def. LP, B-286925.3 et al., Apr. 9, 2001, 2001 CPD ¶ 75 at 10-11; Main Bldg. Maint., Inc., B-260945.4, Sept. 29, 1995, 95-2 CPD ¶ 214 at 4. Based on our review of the record, we find no basis for questioning AMC's determination that Raytheon's proposed thermal channel offered superior performance.

Excursion of Angles

DRS's focus on the number of individual scenarios for which its evaluated range exceeded that of Raytheon's system ignores the RFP's focus on overall performance across the full excursion of ranges. As noted above, the PD provided that: "[I]t is also desired that the 0° elevation range requirements for each of the sixteen given condition be met or exceeded over the full elevation excursion of the LAV-25 main gun (i.e., -8° to 60°)." PD ¶ 3.3.2.2.1. In response to a concern expressed by DRS during the procurement that the agency's intended evaluation approach would only consider whether the desired range was met collectively for all six elevations (-8°, 0°, 15°, 30°, 45°, and 60°), rather than evaluate thermal channel range performance at each elevation, AMC responded (prior to the closing time for receipt of second FPRs) that:

> Optimally, the thermal channel range performance should be demonstrated over the full range of elevations. The SSA will be made aware of the thermal channel performance at each of the 6 discrete angles under 4 meteorological conditions and 4 fields of view.

DRS letter to AMC, May 8, 2002, at 5-8; AMC Letter to DRS, May 9, 2002, at 1. As discussed above, only Raytheon's thermal channel offered the desired range performance across the full excursion of the elevation angles in all 16 conditions (whether boosted or not); DRS's thermal channel offered the desired range performance across the full excursion of the elevation angles in only 8 of 16 conditions unboosted and 9 conditions boosted. This shortcoming reflected an inherent limitation in DRS's system. DRS's thermal channel included a smaller aperture than Raytheon's and, as a result, suffered more thermal sight vignetting, that is, a reduction in intensity of illumination near the edge of an optical

instrument's field of view caused by obstruction of light rays by the edge of the aperture. This can cause increasing degradation in thermal channel range performance with higher head-mirror elevation angles. Agency Comments, Aug. 7, 2002, at 5 n.2; Hearing Transcript (Tr.) at 74-75, 119-20, 125-26, 200.[2]

Consistent with the agency's advice to DRS that it would make the SSA aware of the thermal channel performance at each of the individual scenarios, thus indicating that performance in this regard would be accorded some, lesser weight in the evaluation, the record indicates that the agency in fact took into account DRS's performance in this regard. As noted in the Source Selection Evaluation Board (SSEB) report, DRS's "proposed ITSS meets the majority of the range predictions . . . by significant margin, and this is . . . true over more than 90 percent of the LAV-25's gun angle excursion"; noting that DRS's performance therefore "warrants substantial credit," the SSEB determined that DRS's thermal channel rating, previously a "strong good," had "edged into the rating category of excellent for its operational performance." SSEB Report at 2. Likewise, the SSA recognized that "DRS was considered able to maintain range performance up to about a [DELETED]° elevation . . . ." SSD at 4. However, it remains that only Raytheon offered the preferred level of performance, that is, offered the desired range performance across the full excursion of the elevation angles in all 16 mission cases (whether boosted or not). The agency has reasonably determined that Raytheon's thermal channel was superior in this respect.

Moreover, even had thermal channel performance at each of the individual scenarios been accorded greater weight, it is not clear that DRS's system in fact was clearly superior in this respect. Although DRS's thermal channel was evaluated as having a greater range for more scenarios (50) than was Raytheon's (43) when unboosted performance is considered, Raytheon's thermal channel was evaluated as having a greater range for more scenarios (49) than was DRS's (45) when boosted performance is considered. Agency Comments, Aug. 16, 2002, at 3-6. (In response to DRS's complaint that the agency's intended evaluation approach would not consider electronic, digital boost when evaluating range performance, AMC had responded that "[f]or offerors committing to the boosted values the [SSA] will be advised of these values, in addition to the baseline values," that is, the unboosted values. DRS Letter to AMC, May 8, 2002, at 2-5; AMC Letter to DRS, May 9, 2002, at 1.) Further, Raytheon's thermal channel was evaluated as offering superior range for 12 of 16 conditions unboosted and 9 of 16 conditions boosted at 0° elevation, the elevation which is the region of the main gun elevation continuum which represents the highest operational frequency (and which was the only elevation for which the RFP

[2] In this regard, we note that when asked with respect to the draft PD whether "vignetting [was] allowed for extreme look-up angles," AMC responded that "[i]t is desired that there be no vignetting during operation of the system." Question and Answer No. 17, Draft RFP, June 16, 2000.

established performance range requirements). Tr. at 66; DRS Comments, July 29, 2002, Declaration of Technical Consultant, at 5-6; Agency Comments, Aug. 7, 2002, at 10.[3]

High Frequency Performance

Based on the output of its thermal channel models, AMC determined that Raytheon's thermal channel offered superior high frequency performance such that it would provide better resolution and discernment of finer details. In this regard, in evaluating the thermal channel performance of the proposed ITSS systems, the agency first obtained detailed system information from the offerors. After running an optical system modeling program, system data (including, e.g., detector sensitivity and optical characteristics) was input into the Night Vision and Electronic Sensors Directorate's NVTHERM thermal imager performance modeling program to generate minimum resolvable temperature (MRT) difference data. In this regard, in general, the smaller the minimum temperature differential--that is, the difference in temperature between a target (or elements of a target) and the background in a viewed scene--a thermal device can sense, the finer the resolution and the sharper the image that can be obtained from the system.[4] The MRT difference data then was plotted to create an MRT curve (shown below in an illustrative figure furnished by AMC) which characterizes the imaging system's resolving power, or ability to perform imaging tasks, based on relative spatial frequency (cycles on target) and the differential temperature sensitivity associated with the object being imaged. Spatial frequency increases across a plotted MRT curve moving left to right across the horizontal axis to represent the increasing degree to which fine details in a scene being imaged can be discerned. The increasing frequency along the horizontal axis also is related to range; as the MRT curve moves further to the right along the horizontal axis, it represents an ability to perform the same imaging task at a greater distance. The vertical axis represents an increasing temperature delta, that is, the difference in temperature between the target and its background; as the MRT curves here move to the right towards higher frequencies and detail, they also tend to move

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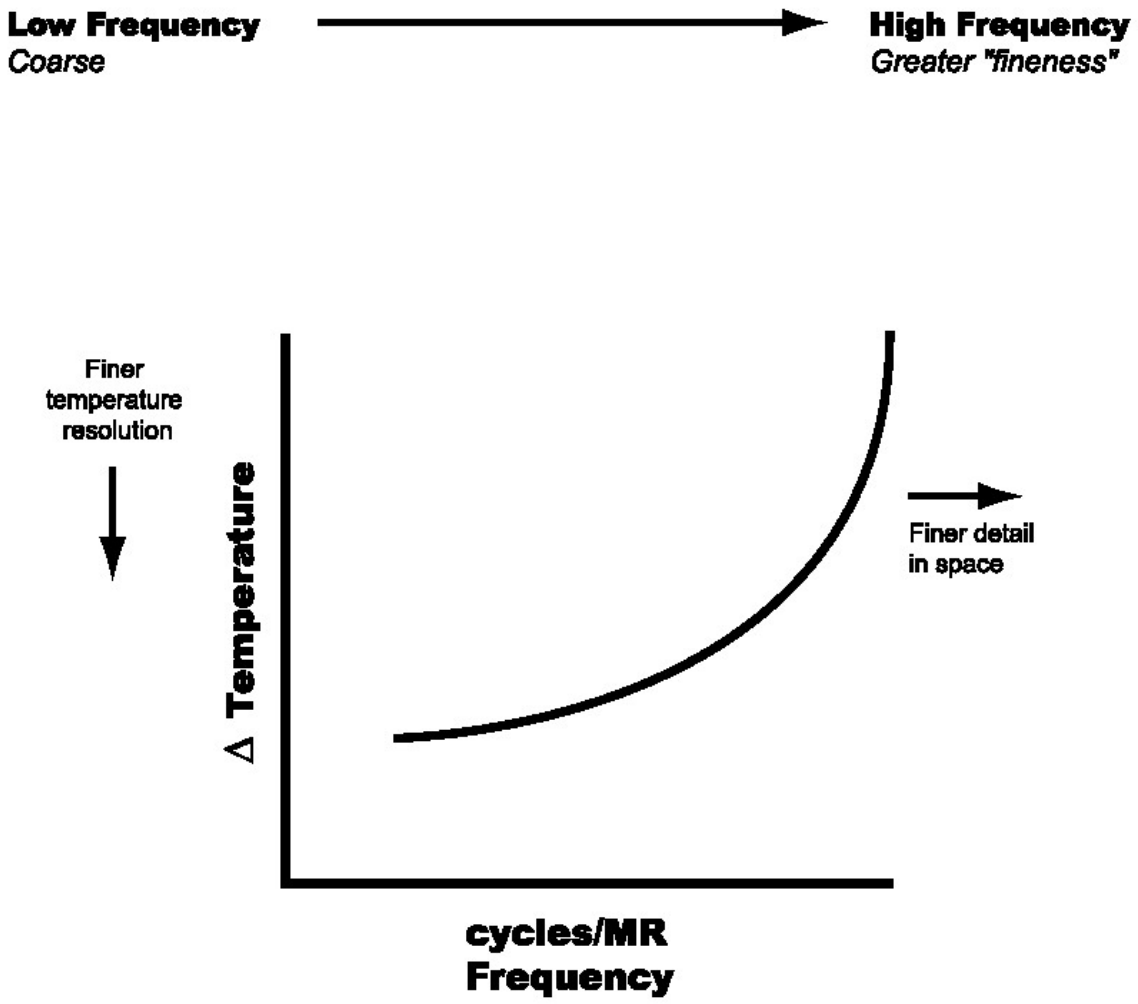
[3] The record also indicates that, unlike Raytheon's, DRS's evaluated range performance, which (as discussed below) was based on system information furnished by DRS, did not reflect the vignetting that would occur at the [DELETED]° elevation (approximately [DELETED]), in the system as described in DRS's proposal, from [DELETED]. Although DRS claims to have a design fix for this vignetting, it has furnished no data demonstrating the effects on performance of an addition to its described system. Tr. at 259, 572-78; Agency Comments, Aug. 31, 2002, at 2 n.1, 11.

[4] The MRT difference data from the NVTHERM modeling runs was then input into the ACQUIRE software model, which is based on field tests, and which predicts the range performance of the thermal imaging system corresponding to the MRT differences. Tr. at 24-26, 31, 36; Contracting Officer's Statement at 12-13.

upward, representing the fact that resolving target and scene details viewable in the higher frequencies requires greater temperature differences. In sum, AMC maintains, and the record indicates, that an MRT curve describes the overall range performance capabilities of the thermal imager. Tr. at 11-35; Agency Comments, Aug. 31, 2002, at 4-5; 8; Contracting Officer's Statement at 12-13.



Here, although the MRT curves of Raytheon's and DRS's ITSS thermal channel performance generally coincided at the low to mid frequencies (at elevations [DELETED]), with the curves reflecting a mid-frequency DRS advantage [DELETED], but indicating very similar overall performance at low to mid frequencies, the MRT curves also generally indicated an increasing Raytheon advantage--that is, a curve further to the right along the horizontal, frequency axis, representing an increased resolving power--generally commencing at the mid-frequency range, increasing with frequency, and becoming more pronounced in

the wide field of view, boosted and high elevation cases. Agency Comments, Aug. 31, 2002, at 4, MRT Curves; Tr. at 57-58, 77, 161-62, 195, 266-67, 202.[5]

DRS, however, argues that focusing on Raytheon's high frequency performance, and the associated evaluated greater resolving power and resulting finer detail, as shown by the MRT curves, was inconsistent with the RFP's focus on range performance at low-to-mid frequency. In any case, according to the protester, Raytheon's evaluated superiority in high frequency performance was illusory.

DRS's position is not persuasive. As an initial matter, we note that hearing testimony supports AMC's position that the agency's NVTHERM thermal imager performance modeling program, from which the MRT curves are derived, is the generally accepted Army and industry standard for calculating thermal imager performance; and that the model has resulted from continual improvement and validation over time. Tr. at 12, 36-40, 539-40, 589-94. Indeed, DRS's own ITSS program manager testified that, in designing its system, DRS looked to the NVTHERM model and ACQUIRE, describing them as Army accepted standard tools, and DRS's consultant agreed in his testimony that NVTHERM was the standard model in industry and government, which "[e]veryone uses." Tr. at 392, 429, 539-40. Further, the record indicates that offerors were on notice that the agency would use NVTHERM to perform its thermal analysis. Tr. at 254-55, 278. Although AMC instructed DRS not to include MRT curves in the PD to be included in its proposed contract, DRS's program manager testified that DRS understood that "MRT obviously is part of the evaluation," and that the agency would look at MRTs in evaluating its proposal; he testified further that DRS in fact furnished "MRT data" to the agency. Tr. at 421-23, 429-30. Thus, the record indicates that, not only did NVTHERM and MRT data furnish a reasonable basis for evaluating the thermal channel performance of the proposed ITSS systems, but it also was the evaluation approach a reasonable offeror should have expected and, indeed, was the approach that the protester itself understood would be employed.

Where, as here, a solicitation contains evaluation criteria that allow for qualitative or graduated assessments of proposals, rather than pass/fail evaluations, it is proper to give a proposal more credit for superiority under one of those evaluation criteria. AdvanChip Corp., B-282571, July 29, 1999, 99-2 CPD ¶ 35 at 4 n.3; F2M-WSCI, B-278281, Jan. 14, 1998, 98-1 CPD ¶ 16 at 7-8. We agree with the agency that considering whether one proposed ITSS system offered superior resolving power essentially amounted to determining whether that system exceeded the requirements in a stated evaluation area, thermal channel performance, in a manner beneficial to the agency.

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[5] The MRT curves reflect a mid-frequency DRS advantage at the [DELETED]° elevation but, as discussed above, DRS's input data for that elevation failed to reflect vignetting in the system (as described in DRS's proposal) caused by [DELETED].

In any case, while agencies are required to identify the major evaluation factors in a solicitation, they are not required to identify all areas of each factor that might be taken into account, provided that the unidentified areas are reasonably related to or encompassed by the stated criteria. S3 LTD, B-288195, Sept. 10, 2001, 2001 CPD ¶ 164 at 10. Here, a system's high frequency performance was indicated by the model (NVTHERM) the offerors knew would be used in the evaluation, and increasing frequency was related to range in that it indicated an ability to perform the same task at a greater range. Tr. at 29-30, 193. At a minimum, in these circumstances, high frequency performance was reasonably related to the thermal channel performance specified in the RFP.

As noted above, the MRT output from the accepted NVTHERM model indicated a decided advantage for Raytheon with respect to high frequency performance. Further, persuasive testimony from agency and other witnesses confirmed that this was a meaningful advantage. Tr. at 28-32, 61, 67-68, 77, 83, 112-13, 172, 179-85, 192-93, 196-200, 261-63, 267-69, 642-47, 652, 659-63. DRS, however, points out that the ability to resolve finer detail at higher frequency requires greater temperature difference between the target area and its background as the detail gets finer. Tr. at 29, 90, 174-75; Agency Comments, Aug. 31, 2002, at 8. In this regard, while the RFP specified a standard vehicle target (2.3 meters x 2.3 meters), frontal view, at a target-to-background temperature difference of 1.25° Celsius, the study done during the evaluation that set forth Raytheon's high frequency performance superiority assumed a smaller target, a hull defilade armored fighting vehicle (i.e., only the turret is visible), with an inherent temperature differential of 5° Celsius. PD ¶ 3.3.2.2.1; Best Value Opinion, Thermal Channel, May 20, 2002, at 3. DRS, noting that this temperature differential was higher than the 1.25° Celsius assumed in the RFP, asserts that the higher temperature differentials required to discern finer detail are unlikely to be encountered. However, testimony at the hearing, including that of DRS's own consultant, confirmed that assuming temperature differentials of at least 5° Celsius was realistic. Tr. at 89, 179-85, 261-63, 284, 512.[6] In any case, we note that the MRT curves for the systems begin to diverge in Raytheon's favor at a temperature differential below 5° Celsius. Agency Comments, Aug. 31, 2002, at 10.

We conclude that AMC reasonably evaluated Raytheon's ITSS as offering superior high frequency thermal channel performance, representing an increased resolving power and ability to discern finer details, and that the agency acted reasonably in taking this advantage into account in the evaluation. In this regard, as noted by the agency, recognition and identification of hostile and friendly forces is often done using thermal cues or hot spots, including engine location and size, exhaust location and size, structural shapes and curvatures, suspension, track details, drive wheels,

[6] DRS's consultant testified that a temperature differential 5° Celsius between a turret and its background will happen. Tr. at 512.

number and relative size of road wheels, gun length, and muzzle flash suppressors. See, e.g., Combat Vehicle Identification Guide (Thermal), vol. 2 (Eval. 1.0). AMC maintains, and the record does not show otherwise, that thermal sight systems that provide better high frequency capability are able to resolve finer details that are critical in identifying targets at longer range, thereby improving stand-off distances and survivability and increasing the quality of reconnaissance information. Tr. at 80-81, 87-88; Agency Comments, Aug. 31, 2002, at 4. In these circumstances, and given Raytheon's advantage with respect to furnishing the desired performance throughout the excursion of gun elevations, we find that Raytheon was reasonably evaluated as offering superior thermal channel performance.

Signal Intensity Transfer Function

DRS asserts that AMC failed to recognize the superiority and the effect on thermal system performance of its [DELETED] Signal Intensity Transfer Function (SITF). SITF essentially is an algorithm that assigns image intensity levels on a display screen, which has only a limited number of display levels available, across ranges of temperature differentials encountered in a given observable scene.

This argument is without merit. As noted by the agency, the PD provided that thermal channel performance would be calculated "with a clear filter, without electronic zoom, and without frame integration." PD ¶ 3.3.2.2.1. To further clarify its intent in this regard, AMC advised DRS in writing as follows:

> The Government's evaluation of range performance (PD paragraph 3.3.2.2.1) is being conducted without including effects of such image enhancing features as e-zoom, frame integration, LACE [local area contrast enhancement], digital boost filtering, etc. The Government's evaluation will acknowledge such features as advantageous; however, the Government's thermal channel operational performance assessment will be performed without including such features.

E-mail from AMC to DRS, May 1, 2002. DRS responded: "This part understood." E-mail from DRS to AMC, May 1, 2002. AMC determined--and DRS has not shown otherwise--that DRS's [DELETED] SITF was an image enhancement feature. Agency Comments, Aug. 31, 2002, at 17-18; Tr. at 402, 405-07. As such, consistent with the PD and the quoted e-mail correspondence, the SITF was not considered in the thermal channel operational performance assessment. In any case, we note that the SITF curve does not affect MRT results, which, as discussed above, DRS understood would be used in the evaluation. Tr. at 205, 258. This being the case, we agree with the agency that there was no reasonable basis for DRS to expect that its SITF would be used to modify the reported thermal channel performance of its proposed ITSS. As for the agency's advice that it would otherwise consider proposed image enhancement features in the evaluation, the record indicates that the agency in fact evaluated DRS's proposed SITF approach, in conjunction with its proposed [DELETED], as an "advantage" which "can enhance operational effectiveness of the

ITSS." SSEB Report at 23. Further, while DRS's proposal included pictures reportedly depicting the effect of its [DELETED] SITF when used on another system, it did not include supporting quantifiable data demonstrating the likely performance when used on the proposed ITSS; thus, there is no basis for finding that DRS's proposal should have been accorded an even greater advantage in this regard. DRS Technical Proposal at 4-11 to 4-13, 4-115A, 4-115D to 4-115F.

LRF

DRS asserts that AMC did not fully consider the superiority of its proposed LRF system. In this regard, the SSD rated DRS's LRF approach capability "slightly" better than Raytheon's based on DRS's LRF having (1) "a tighter [laser] beam divergence ([DELETED]), which allows DRS to mark a target with less risk of hitting the ground and creating false returns," and (2) a greater range capability, reflecting an approximate [DELETED] percent performance margin beyond the RFP range requirements, as compared to Raytheon's [DELETED] percent margin. SSD at 5; SSEB Report at 139; LAV ITSS Final Briefing to SSA, May 28, 2002, at 10; Tr. at 679, 692, 694. DRS asserts that AMC failed to take into account the fact that DRS's narrower laser beam divergence would be less likely to encounter false returns from clutter (clutter rejection), that is, a false range reading based on a return of the reflected laser beam from an object other than the target.

We find no basis to question AMC's evaluation in this area. Again, DRS's proposal was assigned a strength on account of its tighter proposed beam divergence, which was viewed as reducing the likelihood of false range returns, and indeed was evaluated as offering a (somewhat) more advantageous LRF. SSD at 5; Tr. at 679, 692. Although DRS believes that its LRF approach should have received even more credit for avoiding clutter rejection, the record supports AMC's determination not to assign a greater strength in this regard. As an initial matter, it is clear that, given the numerous potential variables involved, including the size, reflectivity, range, range distribution, and relative placement of the clutter, among other considerations, modeling the effects of clutter would be very complex. As a result, there is no validated quantitative model that measures the effects of clutter--and indeed, apparently, no validated quantitative model that measures all of the considerations that could affect laser performance--and the evaluation did not calculate the effect of clutter in measuring LRF performance. Tr. at 681-704, 724-25, 810-11; Contracting Officer's Statement at 32.

In any case, the record indicates that the choice of a laser beam divergence figure involves a tradeoff between clutter rejection and aiming error; while a narrower, tighter beam divergence focuses more concentrated energy on the target and reduces spilling over of the beam onto clutter, thereby decreasing clutter rejection, the tighter laser beam is more susceptible to aiming error. Tr. at 684, 699, 727; Agency Comments, Aug. 31, 2002, at 27. In this regard, LRF aiming accuracy can be affected by such factors as pointing jitter caused by operator control, platform motion, engine vibration, turret movement and vehicle movement, boresight error,

and turbulence and other atmospheric effects. Tr. at 695-700, 726; Agency Comments, Aug. 31, 2002, at 26-27.[7] Of particular note is the fact that the LAV-25 is an older platform with a minimal stabilization system, which may create a pointing jitter problem for a tight laser beam. Tr. at 753; Agency Comments, Aug. 31, 2002, at 26.[8] AMC concludes, and DRS's own consultant testified, that given its narrower laser beam divergence, DRS's laser beam was more likely to miss the target than Raytheon's beam, with its wider beam divergence. Tr. at 699-700, 873-74, 880; Agency Comments, Aug. 31, 2002, at 26.

We also note that, even where the laser beam overspills the target and is reflected off of clutter, the record indicates that this need not result in acceptance of a false range report. Raytheon's proposed LRF (and most LRF systems) includes a First/Last logic response function, which allows the LRF user to focus on either the image that appears in the foreground of the scene or in the background of the scene. Thus, for example, if clutter were in front of the target, the LRF user could select the last return as the one most likely to represent the range to the target rather than to the clutter. In addition, the LRF operator can overcome clutter to accurately determine target range by using the First/Last logic response function to illuminate the target more than once from different angles; the target range is the common value between the first and last returns that were taken at different angles. Tr. at 684-88, 779, 792-800; Agency Comments, Aug. 31, 2002, at 26. In this regard, we consider it significant that, according to AMC, experience with fielded LRFs has not shown there to be a significant false ranging problem. Agency Comments, Aug. 7, 2002, at 22. We conclude that the agency reasonably did not assign DRS's narrower laser beam divergence advantage greater weight in the evaluation.

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[7] Although DRS notes that it proposed a [DELETED], and furnished recent test data that the agency found indicated that its assumptions in this regard "were reasonable, if not conservative," SSEB Report at 3, as noted above, the record indicates that [DELETED] error is only one of a number of potential causes of aiming error. (We also note that the agency still assigned DRS's proposal a minor risk in this regard, with the evaluators noting in the briefing to the SSA that there was "[s]ome risk in LRF design modifications and need to maintain [DELETED]." LAV ITSS Final Briefing to SSA, May 28, 2002, at 10.)

[8] Although DRS's consultant suggested during the hearing that aiming inaccuracy can be reduced by stopping the vehicle and turning off the engine, Tr. at 845, 862-63, we find reasonable the agency's position that this mitigation approach would be inconsistent with the fact, specified in the PD, that the vehicle will be operating in a dynamic environment 70 percent of the time. According to the PD, when operating in a dynamic environment, the LAV-25 can be expected to move 100 miles in a 2-day mission, illuminating with the LRF 10 times every 2 hours. PD ¶ 3.3.1.9.1.

CONTRACTOR LOGISTICS SUPPORT (CLS)

Noting that its proposal had previously been rated excellent for provisioning and support, the most important evaluation factor under the supportability element, DRS questions the final rating of its proposal for this factor as only good. In this regard, the RFP required that the contractor provide CLS in accordance with Attachment 009 of the RFP, which set forth "the government's concept for Contractor Logistics Support (CLS) services/maintenance, which can be used as guidance, in the preparation of the contractor's proposed CLS . . . ." RFP, Attach. 009, at 2. Attachment 009 listed 12 tasks for which the contractor will be responsible, including Task J: "Provide intermediate level repair through Depot repair of major ITSS system components." Id. Further, the attachment requires that repair parts be delivered within 48 hours in the event of priority 1 or 2 requisitions, 2 working days for priority 3 requisitions, and 5 working days for priority 4 through 15 requisitions. Id. at 3.

As noted by the agency, DRS proposed a [DELETED] CLS approach under which, [DELETED]. DRS Technical Proposal at 9-66 to 9-66B. In its first FPR, DRS proposed an $[DELETED] fixed price for the overall CLS task, and allocated $[DELETED] to Task J. DRS First FPR Cost Proposal at 2-109F to 2-109G. DRS's Task J allocation in its first FPR in turn was divided among three subtasks: (1) [DELETED]; (2) [DELETED]; and (3) [DELETED]. Id. In its second FPR, however, DRS reduced its overall CLS price from $[DELETED] to $[DELETED], and reduced its Task J allocation from $[DELETED] to $[DELETED]. Most of the Task J reduction resulted from a reduction in the cost of repair. According to DRS's second FPR cost proposal:

> We evaluated our CLS repair costs using the [DELETED] model in response to Amendment 0007. This reduced our projected repair costs in our 5 Year CLS.
>
> . . . . .
>
> We revised the estimate for the cost of repairs from $[DELETED] to $[DELETED] based on the results of the in-depth analysis of O&S costs we conducted in response to Amendment 0007 to the RFP. Based on this analysis, we estimate annual repair costs of $[DELETED] to support normal failure modes of our ITSS equipment. In addition to these equipment repairs, the CLS program provides for repairs of externally induced failures, for which we have no firm data to project. We have estimated this level of repair to be approximately equal to [DELETED]. This provides a 5-year repair cost estimate of $[DELETED].

DRS Second FPR, Cost Proposal, at 2-107, 2-109h.[9] In addition, DRS's second FPR included an "ITSS Cost Detail" in which an overall entry for "CLS Services," previously allocated $[DELETED] and described as "Estimate for repair activities, supply support, services," was replaced by an allocation of $[DELETED] as the "Estimate for supply support, and other services," that is, without reference to repair activities. DRS First FPR, ITSS Cost Detail, Contract Line Item No. (CLIN) 2005AA; DRS Second FPR, ITSS Cost Detail, CLIN 2005AA.

Although AMC was able to ascertain the basis for, and resolve its concerns (raised by the overall extent of the CLS reduction) with respect to, most of the overall CLS reduction in DRS's second FPR, the agency determined that DRS had not adequately supported the $[DELETED] reduction (from $[DELETED] to $[DELETED]) in the repair and refurbishment allocation. In addressing the reduction in this area, the SSEB determined that DRS had "[d]eleted approximately 50% of the spare parts support at the repair facility." SSEB Report at 58. According to the agency:

> The quantity of repair parts on hand at the repair facility is related proportionally to the operational availability of the equipment in the field. . . . A reduction of the parts on hand may lead to increased logistics delay time awaiting parts from procurement.

SSEB Report at 58; see LAV ITSS Final Briefing to SSA, May 28, 2002, at 30. Likewise, in explaining the reduction in DRS's provisioning and support rating from excellent to good, the SSA noted that DRS had "proposed a level of CLS spares that, when considered along with their proposed Service reps approach, results in a risk, or lack of confidence, that DRS will be able to meet the follow-on support requirements in a timely or efficient manner." SSD at 7.

DRS asserts that the reduced evaluation rating was based on the mistaken assumption that DRS was proposing to reduce the number of spare/repair parts in inventory by approximately 50 percent. DRS notes in this regard that the cost detail for CLS in its second FPR specified a quantity of [DELETED] for most ITSS assemblies, which was only a minor reduction in quantity from the [DELETED] specified in its first FPR. DRS First FPR, ITSS Cost Detail, CLIN 2005AA; DRS Second FPR, ITSS Cost Detail, CLIN 2005AA. In addition, DRS argues that the agency's analysis ignores the fact that the CLS CLIN was a firm, fixed-price CLIN under which DRS was obligated to furnish the promised services at the CLIN price.

The evaluation in this area was reasonable. As an initial matter, the solicitation specifically warned that the agency would perform a risk analysis that would take

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[9] RFP amendment No. 0007 added instructions with respect to describing the basis for an offeror's proposed O&S cost savings and clarified the PD's provisions with respect to thermal channel performance.

into account unrealistically low pricing, stating that a "risk analysis will be conducted to evaluate the Offeror's capability to successfully execute its proposal to deliver a product meeting performance requirement[s] within proposed cost and schedule requirements." RFP ¶ M.2.6. The RFP warned further that "[a]ny proposal which is unrealistic in terms of technical or schedule commitments, or unrealistically high or low in price may be considered reflective of an inherent lack of technical competence or a failure to comprehend the complexity and risks of the Government's requirements, and may be rejected." RFP ¶ M.2.4; see NLX Corp., B-288785, B-288785.2, Dec. 7, 2001, 2001 CPD ¶ 198 at 198 (agency reasonably may consider risk associated with low proposed fixed prices where the risk appropriately relates to the offeror's understanding); The Cube Corp., B-277353, Oct. 2, 1997, 97-2 CPD ¶ 92 at 4 (agency may provide for price realism analysis in the solicitation for such purposes as measuring an offeror's understanding of the solicitation requirements or to avoid the risk of poor performance from a contractor who is forced to provide services at little or no profit).[10]

The record indicates that DRS's price reduction was not adequately explained. Although DRS stated in its second FPR, submitted on May 14, that it had "evaluated our CLS repair costs using the [DELETED] model"--presumably a reference to the [DELETED]--and that "[t]his reduced our projected repair costs," DRS Second FPR, Cost Proposal, at 2-107, DRS has not pointed to anything in its proposal specifically describing the model, or explaining its use of the model or all of the inputs into the model. (Even in its protest, DRS has not explained its use of the model or all of the inputs into the model.) In his hearing testimony, DRS's consultant generally referred to the discussion in DRS's second FPR concerning an assumed hardware usage rate of 84 hours and a predicted mean time between failure of [DELETED] hours. Tr. at 980-990. However, DRS cited the very same numbers in its first FPR, for which the allocated repair cost was more than twice that in its second FPR. DRS First FPR, Cost Proposal, at 2-108; DRS Second FPR, Cost Proposal, at 2-108. DRS's second FPR also did not explain the basis for its formula, which assumed $[DELETED] [DELETED]. In summary, while DRS claimed in both its first and second FPRs that it had "done significant bottoms-up pricing of our hardware and cost to support this hardware under a CLS program," id., the analysis in its first FPR assumed a repair cost of $[DELETED], while the analysis in its second FPR assumed a repair cost of $[DELETED], without any meaningful explanation as to how two such thorough reviews arrived at such dramatically different results. Given DRS's failure to adequately support its second FPR price reduction in this area, there is no basis for concluding that AMC misevaluated the price reduction. It is well established that an offeror is responsible for submitting an adequately written proposal, and runs the

[10] The RFP also stated that "the total Acquisition Cost of each Offeror's proposal is the sum of all priced CLINs in Section B, and the total proposed cost for all options," and specifically provided that "[t]he total acquisition cost element shall be evaluated for reasonableness and realism." RFP ¶ M.4.

risk that its proposal will be evaluated unfavorably where it fails to do so. Carlson Wagonlit Travel, B- 287016, Mar. 6, 2001, 2001 CPD ¶ 49 at 3.[11]

The protest is denied.

Anthony H. Gamboa
General Counsel

[11] In a May 1 submission to the agency during discussions, shortly before the May 14 submission of its second FPR, DRS indicated that it was reducing its Task J allocation for the cost of repairs from $[DELETED] to $[DELETED] "based on the results of the in-depth analysis of O&S costs we conducted in response to Amendment 0007 to the RFP." DRS Response, No. IFD-CAD115R1, May 1, 2002, at 4. In a July 11 supplemental protest, DRS asserted for the first time that the agency had failed to conduct adequate discussions in this regard. However, DRS was aware as of its June 6 debriefing that the agency had reduced the final rating of its proposal under the provisioning and support factor on account of an alleged factual error with respect to the number of spares it was proposing, Protest, June 11, 2002, at 16. DRS's argument with respect to discussions therefore is untimely because it was not filed within 10 days after the debriefing. 4 C.F.R. 21.2(a)(2) (2002).