Pietrovito

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Decision

REDACTED VERSION'

Matter of: ARINC Research Corporation

File: B-248338

Date: August 19, 1992

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Office of the General Counsel, GAO, participated in the
preparation of the decision.

DIGEST

The competitive range exclusion of the protester's proposal
for an automated surveillance vessel tracking system was
reasonable where the agency reasonably determined, in light
of the information available to it at the time of its deter-
mination, that the proposed system contained evaluated defi-
ciencies that would require major revisions to the system in
order for the proposal to be considered acceptable.

DECISION

ARINC Research Corporation protests the exclusion of its
proposal from the competitive range under request for
proposals (RFP) No. DTCG23-91-R-721001-2, issued by the
United States Coast Guard, Department of Transportation, for
an automated surveillance system that will monitor vessel
traffic in Prince William Sound, Alaska.

We deny the protest.[1]

'The decision issued on August 19, 1992, contained proprie-
tary information and was subject to a General Accounting
Office protective order. This version of the decision has
been redacted. Deletions in text are indicated by "[dele-
ted]."

[1]A protective order was issued in this case, and ARINC's
counsel was admitted under the protective order and received
access to protected materials. Counsel for Raytheon Company
(continued...)

BACKGROUND

The RFP contemplated the award of a fixed-price contract for an automated dependent surveillance (ADS) tracking system in Prince William Sound.[2] The required system will correlate and fuse radar data from existing, government-owned radar and dependent surveillance[3] data from shipborne equipment for presentation on an electronic chart display at the Vessel Traffic Center (VTC) in Valdez.

Offerors were informed that the agency sought an open-architecture, modularized system that emphasized the reuse of existing, documented non-proprietary software. The RFP, as amended, set forth detailed design, performance, and function specifications, which described the system as consisting of the following components: (1) a decision support system (DSS) to permit operators at the VTC to monitor vessel traffic; (2) a shipborne subsystem that reports vessel identification and time and position information to the VTC; (3) technical data extractors to digitize and extract target data[4] from the existing radar sets; (4) a data communication system that included a wide area network (WAN), a local area network (LAN), and other equipment; and (5) an external interface to permit data exchange with other offices or users.

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[1](...continued)
and GTE Government Services did not seek protective order admission and were not provided access to protected materials.

[2]The Oil Pollution Act of 1990, 33 U.S.C.A. § 2734 (West Supp. 1992), requires that the agency establish and operate a vessel surveillance and monitoring system in Prince William Sound. This statute was enacted in response to the March 24, 1989, grounding and rupture of the oil tanker Exxon Valdez in Prince William Sound.

[3]"Dependent surveillance" refers to monitoring that requires the active participation of vessels to report their identities and positions to the vessel traffic center. Shipborne equipment will establish the vessel's location through a global positioning system and broadcast the vessel's position, with its time mark, along with the vessel's unique identification number.

[4]"Target data" was defined by the RFP as digitized data that must include the vessel identification, position, time mark, sensor ID (identification) and sensor type.

The solicitation specifications required the DSS to be composed of the target information processing system (TIPS), the vessel traffic information system (VTIS), and the geographic display system (GDS). The TIPS correlates track data from multiple sensors and fuses the data into targets for presentation on the GDS, manipulates data (i.e., dead reckoning),[5] and records all target data. The VTIS is a multi-user data base management system for managing vessel identification information and track data.[6] The GDS provides a visual display of electronic chart information that is integrated with target data from system sensors.

Among other things, the specifications identified the required target data that must be processed and recorded by the system and the response times of the system to process and display the acquired data. In this regard, the specifications allowed "data latency" in the system performance; that is, there could be up to a 10 second delay between when the system sensors acquired target data and when the information appeared on the VTC display.[7] The RFP also required that the DSS use a unix operating system.[8]

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[5]"Dead reckoning" is a linear extrapolation of a future position for a vessel using a known position and time, course and speed.

[6]"Track data" is defined by the specifications to be "[a] nearly chronological listing for all vessels tracked by all sensors containing target data in the order of arrival at the VTC. [It] [i]ncludes target position (latitude/ longitude), time mark of position, vessel ID, sensor ID or type and may include course (true) and speed (in knots)."

[7]Also, the RFP specifications defined "real time" to be the "[d]isplay of information on the [visual display] to the operator that is derived from target data with a time mark less than 10 seconds earlier."

[8]"Unix" is an easy-to-use multi-user, multi-programming operating system that was originally developed by Bell Laboratories. See Webster's New World Dictionary of Computer Terms at 395-96 (3rd Ed. 1988). An "operating system" consists of software that controls the execution of computer programs, and that may provide scheduling, debugging, input/output control, accounting, compilation, storage assignment, data management, and related services. Id. at 262.

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The RFP provided that award would be made to offeror whose proposal was determined to be most advantageous to the government considering technical, program management, business and cost factors. The technical evaluation factor was stated to be more important than any of the other factors combined. Detailed proposal instructions for each of the evaluation factors were provided. Regarding the technical evaluation factor, offerors were informed that the agency sought specific detailed proposals that demonstrated the offerors' understanding of the proposed effort, and that identified potential problems and offered proposed solutions. Technical proposals, however, were limited to 100 pages.

The Coast Guard received seven timely proposals, including those of ARINC, GTE and Raytheon. Only GTE's and Raytheon's proposals were found to be in the competitive range.⁹ ARINC's proposal was evaluated as containing numerous technical deficiencies, the correction of which, in the agency's view, would require major revisions, and that rendered the proposal technically unacceptable. ARINC timely protested to the agency its exclusion from the competitive range. After the Coast Guard denied ARINC's agency-level protest, this protest to our Office followed.

The crux of ARINC's protest is that its proposal should have been included in the competitive range and its eva' ated deficiencies made the subject of discussions. AR contests each of the identified deficiencies, argu ; that either they were the result of misevaluation or that they could be easily corrected.¹⁰

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⁹(Deleted). Discussions have been conducted with Raytheon and GTE, and best and final offers received. No award has been made pending our decision in this matter.

¹⁰ARINC also contends that the agency's evaluation was defective because not all of the agency's five evaluators on the technical evaluation team (TET) scored all sections of ARINC's proposal. The agency admits that three of its five TET members did not evaluate all of ARINC's proposal because of the extensive deficiencies they identified in ARINC's technical approach and design. The TET, however, unanimously concurred in their recommendation that ARINC's proposal was technically unacceptable and would require major revisions to become acceptable. Since, as noted below, ARINC's proposal was reasonably excluded from the competitive range, ARINC was not prejudiced by the failure of some evaluators to evaluate all of its proposal.

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The evaluation of proposals and the resulting determination as to whether an offeror is in the competitive range are matters within the discretion of the contracting activity, since it is responsible for defining its needs and for deciding on the best methods of accommodating them. Abt Assocs. Inc., B-237060.2, Feb. 26, 1990, 90-1 CPD ¶ 223. Offers that are technically unacceptable as submitted and that would require major revisions to become acceptable are not required to be included in the competitive range. DBA Sys., Inc., B-241048, Jan. 15, 1991, 91-1 CPD ¶ 36. In reviewing an agency's evaluation, we will not evaluate the technical proposals anew but instead will examine the agency's evaluation to ensure that it was reasonable and in accordance with the RFP criteria. Abt Assocs. Inc., supra.

The Coast Guard identified more than [deleted] deficiencies in ARINC's technical proposal. Approximately [deleted] deficiencies were identified as "fatal flaws" that would each require a major proposal or system revision, and would each alone justify the exclusion of ARINC's proposal from the competitive range. Another [deleted] deficiencies were identified as "critical"; these deficiencies, in the agency's view, taken alone would not render ARINC's proposal unacceptable and outside the competitive range but taken together would require major revisions in ARINC's proposed system. The remaining deficiencies were either conceded by the agency after ARINC provided further explanation during the protest or the record indicates that they could be corrected without a major revision.

The deficiencies identified as "fatal flaws" in ARINC's proposal involve ARINC's failure to: [deleted].[11]

From our review of the record, we find that the Coast Guard reasonably determined that ARINC's proposed system failed to satisfy several critical RFP specification requirements and that correction of these deficiencies wou ⁻equire a major revision to ARINC's proposal. These defi .cies are ARINC's failure to: (1) provide a unix op ..ating system for its DSS design, (2) provide a system design that satisfied the TIPS rebooting requirements, and (3) satisfy system

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[11][Deleted].

security requirements. Because we find that the Coast
Guard's exclusion of ARINC's proposal from the competitive
range was reasonable considering only these deficiencies, we
need not address the remaining deficiencies identified in
ARINC's proposal.

Each of these three critical deficiencies is discussed
below.

UNIX OPERATING SYSTEM

Paragraph C-3.5.1.2.3 of the specifications provides that
"[t]he DSS shall use a unix operating system." The DSS is
defined in paragraph C-3.5.1 of the specifications as being
composed of the TIPS, VTIS, and GDS.

The Coast Guard contends that this specification requires
that unix be the only operating system for the DSS. Video
Transcript of Hearing (VT) 10:06.[12] ARINC disagrees that
the specifications require that unix be the only operating
system for the DSS. Rather, in ARINC's view, as stated at
the hearing and in its post-hearing comments, the specifi-
cation only requires that a unix operating system be used
somewhere in the DSS.[13] VT 14:11-12.

Where a dispute exists as to the meaning of solicitation
language, we resolve the matter by reading the solicitation
as a whole and in a manner that gives effect to all provi-
sions of the solicitation. See Lithos Restoration, Ltd.,
71 Comp. Gen. 367 (1992), 92-1 CPD ¶ 379. To be reasonable,
an interpretation must be consistent with the solicitation
when read as a whole and in a reasonable manner. Id.

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[12]A hearing was conducted pursuant to 4 C.F.R. § 21.5 (1992)
to receive testimony regarding the parties' interpretations
of the solicitation specifications and arguments concerning
the identified deficiencies in ARINC's proposal.

[13]This interpretation of the specifications is different
than ARINC's earlier interpretation as stated in its com-
ments on the agency's report where the protester asserts
that "the RFP require[d] that the primary operating system
of the DSS be unix-based," and in its pre-hearing reply to
the agency's response to its comments where it again states
that the RFP requires that the primary operating system of
the DSS be unix-based and further contended that its
"[s]oftware for all elements of the DSS will run on the Unix
operating system."

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Applying this standard here, we find that the only reasonable reading of the specification, as supported by its plain language, is that all of the DSS must operate under the unix operating system. First, the solicitation is unambiguous in defining the DSS as being composed of three subsystems--the TIPS, VTIS, and GDS; indeed, the DSS exists only as the sum of these subsystems. Thus, when the specification states that the DSS must operate under the unix operating system, it necessarily requires that the subsystem?--the TIPS, VTIS, and GDS--also operate under the same unix operating system.

The structure of the solicitation specifications also compels this conclusion; the requirements for the DSS are described in paragraphs under C-3.5.1, and thus the requirements in this section, including the one for a unix operating system, apply to the DSS as a whole. In contrast, the individual requirements for the TIPS, VTIS, and GDS subsystems are described at solicitation paragraphs C-3.5.3, C-3.5.4, and C-3.5.5, respectively. In our view, the only reasonable reading that gives full effect to all the solicitation provisions is that the DSS (including the TIPS, VTIS, and GDS) was required to operate under a unix operating system, and that this requirement cannot be satisfied if only one element of DSS, e.g. the VTIS, operates under a unix operation system while other parts of the DSS have a different operating system.

The record supports the agency's identification of ARINC's proposed DSS operating system as a deficiency because ARINC proposed a system in which only the [deleted] operates under the unix operating system, and the [deleted] operate under an [deleted]. In this regard, ARINC's proposal stated [deleted].

The agency considered this to be a critical deficiency. The agency's representative testified that unix was chosen as the DSS operating system to promote standardization, transportability, and openness. VT 9:55. In the agency's view, unix is a more reliable and maintainable operating system than other available operating systems. VT 9:55. At the hearing, ARINC recognized the relative advantages of a unix operating system, when its representative testified that the tradeoff between using only a unix operating system, as opposed to its offer of a real-time operating system, was one of reliability versus performance. VT 14:35.

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We also find that the agency reasonably determined that correction of this deficiency would require a major revision to ARINC's proposal.[14] The revision of ARINC's proposal to offer a unix operating system as a part of its DSS design would require the selection of an appropriate version of unix[15] to work with ARINC's integrated design and additional software programming to make the operating system work with the real-time application programs proposed by ARINC. The Coast Guard reasonably viewed these revisions as major ones. In this regard, ARINC's representative's hearing testimony was (deleted), VT 14:13, 14:29, and (deleted). VT 14:35. ARINC also testified that revisions to its proposed hardware would also be required because use of a unix operating system in the DSS requires more processing and memory capabilities than it had offered. VT 14:13, 14:36-37. All of this would require revisions in ARINC's cost proposal. VT 14:34.

TIPS REBOOT

Paragraph C-3.5.1.7 of the specifications provides that:

> "The contractor shall provide a single function switch to allow the supervisor to reboot the (DSS) after a failure. The cold reboot process shall take no longer than one minute from time of initiation to time of completion. The warm reboot process shall take no longer than 15 seconds from time of initiation to time of completion. Reboot shall be complete when the GDS shows the chart of the VTS area, the current positions of participating tank vessels in the area of coverage and the system is ready to respond to user commands."[16]

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[14]An agency's determination of the extent of proposal or system revisions required to become acceptable is reviewed in light of the information that was reasonably available to the agency at the time of its determination. See generally Electronic Sys. USA, Inc., B-246110, Feb. 14, 1992, 92-1 CPD ¶ 190.

[15]Although various versions of unix operating system software are available in the marketplace, the RFP did not require any particular version of unix. Rather, offerors were required to choose the unix operating system they believed appropriate for their proposed integrated design. VT 10:07.

[16]"Cold reboot" is defined in the specifications as beginning when the main power switch is closed while "warm reboot" begins when the reset button is pressed.

The Coast Guard states that ARINC's proposed DSS design fails to comply with this mandatory requirement because its TIPS cannot reboot within the specified time requirements. In this regard, ARINC's proposal states that:

[Deleted].

ARINC contends that it generally satisfied the specification requirement because its GDS and VTIS processors will meet the reboot time requirements and it offered [deleted].[17] At the same time, ARINC recognized that if [deleted]. In this regard, ARINC's representative testified that given the unavailability of off-the-shelf software, its TIPS would not cold reboot within 1 minute, as required. VT 15:54.

We agree with the Coast Guard that ARINC's proposal failed to satisfy the mandatory reboot requirements. That ARINC's GDS and VTIS processors can independently meet the reboot requirements does not satisfy the requirement that the DSS reboot within the required time limits since the system is not ready to process information or respond to operator commands until the TIPS has successfully rebooted. Contrary to ARINC's contentions, [deleted]. VT 15:53-54.

We also find that the agency reasonably concluded that correction of this deficiency, if possible, would require a major revision in ARINC's system. First, as noted above, ARINC unequivocally stated in its proposal that its TIPS cannot meet the reboot specification requirements. Also, as noted above, ARINC's representative, in his hearing testimony, stated that the TIPS cold boot requirements could not be met with existing, off-the-shelf software. VT 15:54. In fact, ARINC offered no technical solution or fix that would allow its DSS to meet the required reboot times until one was suggested at the hearing. VT 15:56. However, ARINC has not stated how it would accomplish this fix and what hardware or software revisions would be required to accomplish it.

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[17]Interestingly, ARINC recognized that the reboot specification requirements for the DSS applied equally to the TIPS, VTIS, and GDS, despite its arguments against the general applicability of the requirement for a unix operating system.

SYSTEM SECURITY

Paragraph C-3.5.1.2 of the specifications provides that:

> "The DSS shall comply with the Automated Informa-
> tion System (AIS) security requirements of
> COMDTINST (Commandant Instruction Coast Guard)
> M5500.13A. The contractor supplied system shall
> operate at the C2 level of access control."

COMDTINST M5500.13A provides general policy and procedures
guidelines for the Coast Guard's automated information
system security system. In part, this instruction provides
that the necessary security requirements should conform to
the computer system and that the requisite security should
be designed into the hardware/software system from its
inception, and not added on.

"C2 level of access control" refers to the C(2) classifi-
cation set forth by the Department of Defense (DOD) in its
Trusted Computer System Evaluation Criteria, DOD Publication
No. CSC-STD-001-83. This publication sets forth various
specific security feature requirements for various classi-
fications of computer systems. Class C(2) systems are
required to provide both discretionary (need-to-know)
protection and controlled access through log-in procedures.

The Coast Guard states that while ARINC offered a password
system for operators[18] and supervisors,[19] ARINC did not
provide access control for the system's required external
interface, VT 16:01, and that this did not satisfy the C2
level of controlled access requirements. ARINC contends
that its proposed external interface presented no security
risks because [deleted]. VT 16:06.

Paragraph C-3.4 of the solicitation specifications requires
the following for the system's "external interface":

> "The system shall be capable of creating, format-
> ting, transmitting, receiving and processing
> information in USMTF (U.S. message text format)
> format (or other format approved by the contract-
> ing officer) to exchange digitized radar video,

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[18]"Operator" is defined in the specifications to be Coast
Guard personnel in the VTC.

[19]"Supervisor" is defined in the specifications to be the
person in charge of VTC operations during a watch.

> digitized target data and other information. . . .
> The intent of this requirement is to permit data
> exchange with the Alyeska Pipeline Terminal,
> the Valdez Emergency Operations Center, the
> Seventeenth Coast Guard District, Juneau, AK,
> Commander, PACAREA, Alameda, CA, other VTCs and
> other CG information centers or the contractor-
> provided VTS equipment suite located at the CG
> Electronics Engineering Center, Wildwood, NJ."

The Coast Guard's interpretation of this specification, as
supported by the section's plain meaning, is that outside
offices (in addition to VTC operators and supervisors)
must have the ability to enter the system and provide and
acquire data and information. VT 16:08. ARINC's now
asserted interpretation of the specification, that the
external interface would not provide for data exchange, is
in error. The Coast Guard reasonably found that this out-
side access to the system requires access control measures
that under the specifications must be compliant with the C2
level of access control. While ARINC contends in its post-
hearing comments that it proposed a dial-back security
system for its external interface,[20] its proposal does not
discuss dial-back security for its external interface;
rather, the proposal states that (deleted). Therefore, we
find reasonable the agency's determination that ARINC's
proposal was deficient in failing to provide C2 level of
access control security for its external interface.

The failure to provide for C2 level access control for the
external interface was reasonably found by the Coast Guard
to require a major system revision to correct. The Coast
Guard representative testified at the hearing that he was
unaware of any off-the-shelf software that would provide the
requisite security for the external interface for this
system. VT 16:11. ARINC has not suggested that software
is readily available to provide the necessary security
protection or even that software alone would satisfy the
security requirements. Under the circumstances, the Coast
Guard's assessment that this is a major deficiency is
reasonable.

CONCLUSION

In sum, we find that the Coast Guard reasonably determined
that ARINC's proposed system failed to satisfy several
critical RFP specification requirements and that correction
of these deficiencies would require a major revision to

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[20]It appears that this would satisfy the C2 requirements,
while merely allowing access to any external source that has
entered a password would not.

ARINC's proposed system and that ARINC's proposal was therefore reasonably excluded from the initial competitive range. Because we find that ARINC's exclusion from the competitive range was reasonable, looking only at the above discussed deficiencies, we need not address the remaining deficiencies identified in ARINC's proposal.[21]

The protest is denied.

James F. Hinchman
General Counsel

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[21]We note, however, that many of the other deficiencies were informational in nature and that the agency's complaint about these deficiencies was that ARINC failed to provide detailed descriptions as to how its required system would satisfy the specification requirements. We find anomalous the repetitive nature of the agency's complaints in this regard since the agency imposed a severe 100-page limitation for the technical proposals of a complicated system that required 56 pages of specifications to describe the agency's requirements. This page limitation necessarily invited generic responses in some areas of all the offerors' proposals and is inconsistent with the solicitation requirement that offerors provide elaborate and complete descriptions of their offered systems. See generally E.H. Pechan & Assocs., Inc., B-221508, Mar. 20, 1986, 86-1 CPD ¶ 278. Nevertheless, ARINC competed without any protest of this requirement.