

United States Government Accountability Office Washington, DC 20548

### **DOCUMENT FOR PUBLIC RELEASE**

The decision issued on the date below was subject to a GAO Protective Order. This redacted version has been approved for public release.

# **Decision**

Matter of: Toyon Research Corporation

**File:** B-409765

**Date:** August 5, 2014

David P. Metzger, Esq., Kristen E. Ittig, Esq., Steffen G. Jacobsen, Esq., and Thomas D. McSorely, Arnold & Porter LLP, for the protester.

Wade L. Brown, Esq., Tamiesha C. Robinson, Esq., and CPT George P. Farley, Department of the Army, Army Materiel Command; and Laura Eyester, Esq., Small Business Administration, for the agencies.

Matthew T. Crosby, Esq., and Glenn G. Wolcott, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

### **DIGEST**

Protest that agency improperly failed to give preference to protester under solicitation for effort similar to effort protester performed under Department of Defense Small Business Research Innovation (SBIR) program contracts is denied where record reflects that solicitation in challenged procurement and solicitation underlying protester's SBIR contracts share common government-furnished requirements and that original concepts, findings, ideas, or research results that protester generated through performance of SBIR contracts are not reasonably identifiable within solicitation in challenged procurement.

## **DECISION**

Toyon Research Corporation, of Goleta, California, protests the terms of a call for proposals (CFP) issued by the Department of the Army under broad agency announcement (BAA) No. W15P7T-13-R-A424, topic No. S0810, for development of open systems architecture for a distributed aperture satellite communications system for on-the-move vehicular applications. Toyon asserts that the agency improperly failed to give the firm a preference in the procurement based on Toyon's prior research and development of a distributed aperture satellite communications on-the-move system under Department of Defense Small Business Research Innovation program (SBIR) contracts with the agency.

We deny the protest.

## **BACKGROUND**

The SBIR program was established under the Small Business Innovation Development Act of 1982, which is codified in section 9 of the Small Business Act. 15 U.S.C. § 638 (2012). The program was established to assist small business concerns obtain and perform research and development work by requiring that certain federal agencies--including the Department of Defense (DOD)--reserve a portion of their research and development funds for awards to small businesses. See id. § 638(e)(4).

The SBIR program has three phases. Under phase I, small businesses are invited to submit proposals to conduct research on one or more topics specified in the annual SBIR program solicitation. See 15 U.S.C. § 638(e)(4)(A). Under phase II, firms that received phase I awards may submit proposals for further development work on the topic. See id. § 638(e)(4)(B). Regarding phase III, the Small Business Act provides that, "where appropriate," there may be a "third phase for work that derives from, extends, or completes efforts made under prior funding agreements under the SBIR program." Id. § 638(e)(4)(C).

Pursuant to the SBIR/STTR<sup>2</sup> Reauthorization Act of 2011, the Small Business Act was amended to include the following provision:

To the greatest extent practicable, Federal agencies and Federal prime contractors shall issue Phase III awards relating to technology, including sole source awards, to the SBIR and STTR award recipients that developed the technology.

15 U.S.C. § 638(r)(4).

The Small Business Act requires the Small Business Administration (SBA) to issue policy directives for operation of the SBIR program. 15 U.S.C. § 638(j). Under this authority, SBA has promulgated the SBIR Program Policy Directive through notice and comment rulemaking. See 79 Fed. Reg. 1303-09 (Jan. 8, 2014); 77 Fed. Reg. 46,806-55 (Aug. 6, 2012). SBA implemented the above-quoted statutory provision

Page 2 B-409765

<sup>&</sup>lt;sup>1</sup> Unlike phase I and II, phase III does not involve SBIR funds; rather, phase III is funded by commercial or non-SBIR federal sources. 15 U.S.C. § 638(e)(4)(C).

<sup>&</sup>lt;sup>2</sup> STTR refers to the Small Business Technology Transfer program.

<sup>&</sup>lt;sup>3</sup> The current version of the Directive (dated February 14, 2014) is available on SBA's SBIR program website. <u>See</u> SBIR Program Policy Directive, http://sbir.gov/sites/default/files/sbir\_pd\_with\_1-8-14\_amendments\_2-24-14.pdf (last visited July 31, 2014). Citations to the Directive in this decision refer to the sections of the Directive itself, rather than to the pages of the Federal Register.

regarding the phase III awards by amending the SBA SBIR Program Policy Directive to provide as follows:

To the greatest extent practicable, agencies . . . that pursue [research or research and development] or production developed under the SBIR Program, shall issue Phase III awards relating to technology, including sole source awards, to the SBIR awardee that developed the technology. Agencies shall document how they provided this preference to the SBIR awardee that developed the technology.

SBIR Program Policy Directive § 4(c)(7). With this legal framework as background, we turn to the events giving rise to this protest.

In 2009, the agency issued an SBIR BAA that listed numerous research topics. Agency Report (AR), Tab 16, SBIR BAA No. 09.2. Topic No. A09-066 was titled "Distributed Satellite Communications On-the-Move Aperture." Id. at 94. This topic called for development of an "innovative approach" for a vehicle-based satellite communications system. Id. at 94-95. The system was to include multiple apertures (also referred to as "antennas" or "arrays") mounted around a vehicle (i.e., "distributed") that would be capable of communicating with a satellite while the vehicle was moving (i.e., "on-the-move"). See id. at 94. The topic provided numerous specifications as well as an "objective system definition" listing various system components, including a "[m]odem interface [that] will be L band." Id. The topic listed three SBIR phases as follows:

PHASE I: Identify issues and design drivers as well as a trade-off of approaches for the objective system

\* \* \* \* \*

PHASE II: Develop, fabricate, and integrate a distributed aperture prototype. Demonstrate the basic combined performance of distributed apertures (not the entire objective system).

PHASE III: Build and demonstrate entire tactical distributed aperture system to include meeting antenna pointing requirements and environmentals. . . .

<u>ld.</u> at 95.

Toyon submitted a proposal in response to this topic. Supp. Comments, exh. B, Toyon SBIR Proposal for SBIR Topic No. A09-066. Consistent with the topic summary, Toyon proposed to research and develop a distributed aperture satellite communications system for on-the-move vehicles that would use specified bands and incorporate combining architecture. <u>Id.</u> at 2. On December 29, 2009, the

Page 3 B-409765

agency awarded Toyon a phase I contract for "for Research and Development of the 'Distributed Satellite Communications On-the-Move Aperture." AR, Tab 9, Toyon Phase I Contract, at 1-2.

After performing phase I work, Toyon prepared a phase I final report, dated June 11, 2010. AR, Tab 11, Toyon Phase I Final Report. The report detailed the firm's technical findings and included numerous technical recommendations. <u>Id.</u> at 79-81. Toyon's phase I report also included a proposal for phase II. <u>Id.</u> at 82-95. The proposal described the phase II goal as "successful demonstration of a [DELETED] that can achieve [DELETED]." <u>Id.</u> at 83.

On February 15, 2011, the agency awarded Toyon a phase II contract with a two-year period of performance. AR, Tab 10, Toyon Phase II Contract. After performing phase II work, Toyon prepared a phase II year one final report, dated February 15, 2012. AR, Tab 14, Toyon Phase II Year One Final Report. The report reflected that the agency had directed Toyon to focus on development of a digital subarray combiner.<sup>4</sup> Id. at 4.

Following submission of the year one final report, Toyon continued to perform phase II work and prepare reports. The firm also demonstrated a prototype digital subarray combiner system for the agency. <u>See</u> AR, Tab 15, Phase II Overview and Demonstration Summary. In September, 2013, the agency extended the period of performance for Toyon's phase II contract through February, 2015. <u>See</u> Protest at 4; AR at 12.

On May 21, 2013, the agency published BAA No. W15P7T-13-R-A424 on the FEDBIZOPPS website. AR at 5. The BAA provided summaries of numerous research topics for which white papers or proposals could be submitted. AR, Tab 2, BAA. Regarding the evaluation of white papers, the BAA stated:

If a white paper is requested the [agency] will conduct an initial review of its scientific merit and potential contribution to the Army mission . . . . White papers considered not to have sufficient scientific merit or relevance . . . may be declined without further review. Offerors with approved white papers may then be requested to submit full proposals which will be subject to evaluation . . . .

<u>Id.</u> at 65. Regarding the evaluation of proposals, the BAA stated:

Page 4 B-409765

-

<sup>&</sup>lt;sup>4</sup> Throughout the record, the term digital subarray combiner is used interchangeably with the term coherent combiner. These terms refer to a sub-system that combines multiple antenna signals into one signal for use by a modem. <u>See</u> Supp. Comments at 10; Supp. AR at 11.

Evaluation of proposals will be accomplished through a technical review of each proposal. The following criteria in descending order of importance are: (A) Overall scientific and technical merit, (B) Potential contribution and relevance to the DoD mission . . . , (C) Offeror's capabilities, (D) Past Performance (E), The record of accomplishments in specific topic areas including patents and publications, (F) Cost Realism.

AR, Tab 2, BAA, at 64.

Topic No. S0810 within the BAA was titled "Antenna System Research for Satellite Communications On-the-Move." AR, Tab 2, BAA at 22. This topic described the agency's interest in "new technologies that enhance [satellite communications] on-the-move (OTM) performance," with a "specific goal [of] ease of integration . . . on crowded tactical vehicles (e.g. distributed aperture systems that combine multiple smaller apertures for high performance)." Id.

On December 24, 2013, the agency issued a request for information (RFI) soliciting white papers under BAA topic No. S0810. AR, Tab 3, RFI. The RFI provided technical requirements for the system discussed in the BAA topic. <u>Id.</u> at 5-6. The agency subsequently received numerous white papers, including a white paper from Toyon. AR at 7. The agency evaluated the white papers and determined that some had sufficient scientific merit, but others, including Toyon's, did not. <u>Id.</u>

On March 19, 2014, the agency issued a CFP under BAA topic No. S0810 to the firms whose white papers were evaluated as having sufficient scientific merit.<sup>5</sup> AR at 7; AR, Tab 6, CFP. The CFP requested the submission of cost and technical proposals and stated that the agency would use the evaluation procedures in the BAA to select "all, some, or none of the proposals" received for award. AR, Tab 6, CFP at 1-3. The CFP's closing date was April 20. Id. at 1.

The CFP included a lengthy addendum to the RFI's technical requirements. AR, Tab 6, CFP, attach. 1, Addendum to Requirements (hereinafter "CFP Requirements"). The addendum explained that

many turreted vehicles cannot mount today's larger profile . . . antennas on the vehicle surface because the firing lines or mechanical rotation of the turret will hit the larger . . . antenna. Antennas of a distributed terminal can be separated into several smaller ruggedized and lower profile antennas that can be mounted around the vehicle, clear of vehicle obstructions and weapon firing lines.

Page 5 B-409765

<sup>&</sup>lt;sup>5</sup> The CFP is dated March 13. AR, Tab 6, CFP, at 1.

CFP Requirements § 1.3. The addendum further explained that "the Distributed Embedded SATCOM On The Move (SOTM) Standard Terminal Architecture (DESSTA) Development Program . . . is currently researching 'Distributed SATCOM On-the-Move (SOTM) Terminals' (DST) or 'DESSTA DST.'" Id. Thus, the system being sought under the CFP, like the system that was the focus of Toyon's SBIR research effort, was a vehicle-based satellite communications system with multiple apertures (i.e., antennas) mounted around a vehicle (i.e., "distributed") and capable of communicating with satellites while the vehicle was moving (i.e., "on-the-move").

The addendum listed the objectives of the effort as follows:

Develop a DESSTA OSA [open systems architecture<sup>6</sup>]

Validate the DESSTA OSA by test with an actual/realistic DESSTA DST.

Validate [a vehicle trade study's] results and further answer integration questions, by integrating an actual DESSTA DST onto a Bradley M2A3 and demonstrating performance.

Better understand and manage the DESSTA DST solution space, by developing, testing and demonstrating a DESSTA DST.

CFP Requirements § 1.4. Regarding system composition, the addendum stated:

It is envisioned that a DESSTA DST system consists of:

- 1. A Core Terminal
- 2. Ka-Band antennas in sufficient number to meet the DESSTA program requirements
- 3. Interconnecting cables (power, IF [intermediate frequency], control, timing, etc)
- 4. Bradley M2A3 Integration Kits consisting of: mounting hardware for each of the antennas, and Core Terminal onto the Bradley M2A3 vehicle.
- 5. Any ancillary components associated with the offeror's system

Page 6 B-409765

<sup>&</sup>lt;sup>6</sup> Open systems architecture refers to non-proprietary systems architecture. <u>See</u> Supp. AR at 10; Supp. Comments at 9-10.

CFP Requirements § 1.4.1.2. The addendum included two "high-level concept" illustrations depicting the system as "envisioned" by the agency. <u>Id.</u> These illustrations showed the system as including four antennas mounted at approximately 45 degrees around the four sides of a tactical vehicle. <u>Id.</u>

The technical addendum included requirements for the aforementioned core terminal, including the following requirements pertaining to coherent combining:

The DESSTA DST Core Terminal shall coherently combine IF from all antenna systems that provide the same or overlapping coverage such that the system G/T [gain-to-noise-temperature], is maximized in that coverage area.

The DESSTA DST Core Terminal shall convert the coherently combine[d] an[d] OSA compliant IF into an analog L-Band IF for the OSA compliant interface to the modem.

# CFP Requirements §§ 3.1.2.11-12

On March 20, the agency notified Toyon that its white paper was being declined and that a proposal from Toyon would not be requested. Protest, exh. D, Agency E-Mail to Toyon (Mar. 20, 2014), at 1. By a letter to the agency dated March 27, Toyon asserted that the work contemplated under the CFP constituted SBIR phase III work. Protest, exh. E, Toyon Ltr. to Agency (Mar. 27, 2013), at 1, 3. The letter further asserted that based on the above-discussed SBIR Program Policy Directive, the agency "must provide Toyon a preference" for the work. Id. at 4. By a letter to the agency dated April 16, Toyon informed the agency that it was "convert[ing]" its March 27 letter into a formal agency-level protest. Protest, exh. F, Agency Level Protest.

As of April 28, the agency had not acted on Toyon's protest. Therefore, on that date, Toyon filed a protest with our Office.<sup>8</sup>

## PRELIMINARY MATTERS

Prior to submitting an agency report, the agency requested that our Office dismiss the protest, arguing that the agency's decision "whether or not to fund a SBIR

Page 7 B-409765

-

<sup>&</sup>lt;sup>7</sup> The agency describes the core terminal as having two "major functions": coherently combining signals from each antenna; and on-the-move pointing and tracking control. Supp. AR at 10.

<sup>&</sup>lt;sup>8</sup> On May 5, the agency informed Toyon that the agency-level protest "has been dismissed in consideration of Toyon's GAO protest." AR at 8.

phase III project with the SBIR awardee that developed the technology, is not reviewable by the GAO." Request for Dismissal at 11. In support of this argument, the agency cited our decision in <a href="Complere">Complere</a>, Inc., B-406553, June 25, 2012, 2012 CPD ¶ 189 at 3, wherein we expressed the view that our Office has "no jurisdiction to review [a National Aeronautics and Space Administration] decision not to enter a phase III funding agreement in the absence of a competitive procurement."

In considering the agency's request for dismissal, we observe that the circumstances in <u>Complere</u> did not involve a competitive procurement. Further, in <u>Complere</u>, we expressly recognized that an agency may "use non-SBIR federal funds to enter into a phase III funding agreement." <u>Complere, Inc.</u>, <u>supra</u>, at 3. Additionally, we made "no comment regarding our jurisdiction if an agency chooses to conduct a competition to determine who to select for such funding." Id. at 3 n.1.

As is evident from the background facts recited above, there is a critical difference between the procurement here and the one in <u>Complere</u>; namely, here, the agency is conducting a competitive procurement using non-SBIR federal funds. Accordingly, our decision in <u>Complere</u> does not affect our jurisdiction to consider this protest.

Related to another preliminary matter, both Toyon's agency-level protest and its protest before our Office allege that the agency improperly disclosed Toyon-proprietary data in the RFI and CFP. More specifically, Toyon alleges that the agency improperly disclosed data that Toyon "developed under its SBIR contracts." Protest at 13-14.

The agency also requested that we dismiss this claim. We granted the agency's request on the basis that the allegation concerns a contract dispute, which is not reviewable by our Office. 4 C.F.R. § 21.5(a) (2014); Complere, Inc., supra, at 3.

## DISCUSSION

Regarding the merits of Toyon's protest before our Office, Toyon takes the same position it took in its agency-level protest. Namely, Toyon asserts that the work contemplated under the CFP constitutes SBIR phase III work, and, therefore, under the SBIR Program Policy Directive, the agency must afford Toyon a "preference" for the work.

The Small Business Act defines SBIR phase III as follows:

[W]here appropriate, a third phase [is] for work that derives from, extends, or completes efforts made under prior funding agreements under the SBIR program . . . .

Page 8 B-409765

15 U.S.C. § 638(e)(4)(C). Consistent with this provision, the SBIR Program Policy Directive describes phase III work as follows:

SBIR Phase III refers to work that derives from, extends, or completes an effort made under prior SBIR funding agreements, but is funded by sources other than the SBIR Program.

SBIR Program Policy Directive § 4(c). Thus, under both authorities, determining whether work qualifies as a phase III effort requires resolving the question of whether the work "derives from, extends, or completes" a phase I or II effort.

Toyon first argues that CFP work derives from, extends, or completes Toyon's phase I and II work because the CFP calls for "nearly identical system requirements to those Toyon developed in its two SBIR contracts." Protest at 5, 7-10; Comments at 2, 4-5. In support of this argument, Toyon submitted various comparisons to show that numerous specifications and requirements of its phase I and II efforts are the same or nearly the same as the specifications and requirements in the CFP. Protest, exh. F, Agency Level Protest, attach. 1, Toyon Response to RFI.

The agency does not refute Toyon's assertions that the specifications and requirements for Toyon's phase I and II efforts are the same or nearly the same as the specifications and requirements in the CFP. Instead, the agency asserts that the agency, and not Toyon, developed both sets of specifications and requirements; i.e., according to the agency, both sets of requirements are "government furnished." AR at 3, 9-12.

The agency reasons that since Toyon did not develop either set of specifications and requirements, the effort contemplated in the CFP cannot be said to derive from, extend, or complete Toyon's phase I and II work.<sup>9</sup> AR at 1. In this regard, the agency argues that because "the [CFP] requirements are the same as the original Toyon SBIR phase I effort requirements (i.e. the requirements existed before the Toyon SBIR, and did not change as a result of Toyon's SBIR research work) . . . [,] the government's work [under the CFP] does not derive from, extend, or complete Toyon's SBIR work." Id. at 10-11.

We agree with the agency that showing Toyon's SBIR effort and the CFP effort involved essentially identical, government-furnished specifications or requirements

Page 9 B-409765

<sup>&</sup>lt;sup>9</sup> The agency explains as follows: "The requirement currently solicited under the [CFP] is for new research on the same general research topic as Toyon's original SBIR topic, and includes the same requirement specifications as the proposed [research and development] work to be done under Toyon's SBIR contracts." AR at 8. The agency further explains that "the research solicited under the BAA replicates research in the Distributed SOTM systems technology area." Id. at 11.

does not demonstrate that the CFP effort derives from, extends, or completes the SBIR effort. To illustrate, if two efforts are undertaken separately and simultaneously based on the same set of requirements, the two efforts cannot be said to derive from, extend, or complete each other. The same holds true even if the two efforts are performed sequentially, provided, of course, that the requirements of the second effort are the same as the first.

In advancing its argument, Toyon urges our Office to review a "comparison" document that the firm prepared for its agency-level protest. Comments at 5, 8. This document consists of two parts. The first part compares specifications and objectives for Toyon's phase I and II work against specifications and objectives for the CFP work. Protest, exh. F, Agency-Level Protest, attach. 1, Toyon Response to RFI, at 4-8. This comparison shows that dozens of specifications and objectives in the SBIR BAA solicitation underlying Toyon's SBIR contracts are the same as dozens of specifications and objectives in the CFP. Id. at 1-8; see also AR, Tab 16, SBIR BAA 09.2, at 94-95. Thus, this document shows that the solicitation underlying Toyon's SBIR contracts and the CFP share a common set of government-furnished specifications and objectives. 11

As stated above, standing alone, the fact that two efforts share a common set of government-furnished specifications does not show that one effort derives from, extends, or completes the other effort. Accordingly, we decline to find that the CFP constitutes a phase III effort based on Toyon's showing of shared, government-furnished specifications and requirements.

The second part of Toyon's comparison document provides summaries of 21 tasks that Toyon performed under its phase I and II contracts, followed by statements that the CFP effort derives from, extends, or completes Toyon's SBIR work under these tasks. Protest, exh. F, Agency-Level Protest, attach. 1, Toyon Response to RFI, at 9-20. In its comments on the agency report, Toyon supplemented this with comparisons of eight aspects of Toyon's phase I and II work against eight aspects of the CFP effort. Comments, exh. A, Strader Decl., attach. 1, SBIR Data in CFP.

Page 10 B-409765

<sup>&</sup>lt;sup>10</sup> The document actually refers to the specifications and objectives of the RFI rather than the CFP. However, Toyon asserts that there are "no significant or material differences between" the requirements of the RFI and the requirements of the CFP. Comments at 8.

<sup>&</sup>lt;sup>11</sup> Consistent with this finding, Toyon states: "For the Phase II SBIR effort, the Army supplied Toyon with the requirements and specifications . . . that . . . are identical across the SBIR efforts and the DESSTA RFI." Protest, exh. F, Agency-Level Protest, attach. 1, Toyon Response to RFI, at 11.

The SBIR tasks discussed in these two comparison documents appear to have initially been defined in Toyon proposal documents. <u>See</u> Supp. Comments, exh. B, Toyon SBIR Phase I Proposal, § 3.1.1; AR, Tab 14, Toyon SBIR Phase II Year One Final Report, §§ 1.2.2-3. They later were incorporated into the performance work statements (PWS) for Toyon's phase I and II contracts. <u>See</u> AR, Tab 12, Toyon SBIR Phase II PWS, §§ 3.2.2-12; Tab 27, Toyon SBIR phase I PWS, §§ 3.2.1-6. Thus, insofar as these tasks constitute SBIR phase I and II requirements, they were not furnished by the government, but by Toyon. Since Toyon--rather than the agency--furnished the requirements, the agency's position that the SBIR and CFP requirements are common and government-furnished does not address Toyon's arguments regarding these requirements. The framework with which we will analyze Toyon's arguments regarding these requirements is discussed below.

As previously stated, standing alone, the fact that two sequentially issued solicitations share the same set of specifications and requirements does not demonstrate that the second solicitation derives from, extends, or completes the effort of the first. If, however, in addition to including the first solicitation's specifications and requirements, the second solicitation's requirements are refined by incorporating original concepts, findings, ideas, or research results that a contractor generated through performance of a contract that was awarded under the first solicitation, then the effort under the second solicitation can be said to derive from, extend, or complete the effort under the first.

Using this framework, we analyzed Toyon's comparisons of CFP requirements versus tasks and data generated under the firm's SBIR contracts. More specifically, we analyzed each comparison and attempted to find requirements in the CFP that were reasonably identifiable as original concepts, findings, ideas, or research results that Toyon generated through performance of its SBIR work. In short, we find that it is not clear from the record that the CFP incorporates original concepts, findings, ideas, or research results that Toyon generated through its SBIR work to a degree necessary to sustain the protest. We therefore conclude that, based on the record before our Office, Toyon has not shown that the CFP constitutes a phase III effort. To illustrate, we discuss below Toyon's primary comparative analysis arguments.

The majority of Toyon's comparisons juxtapose Toyon phase I and II work regarding Toyon's development of a coherent combiner<sup>12</sup> with CFP requirements that the system's core terminal have a coherent combining capability. <u>See</u> Protest, exh. F, Agency Level Protest, attach. 1, Toyon Response to RFI, at 9-20; Comments at 4-20. In the context of these comparisons, Toyon repeatedly asserts that it

Page 11 B-409765

<sup>&</sup>lt;sup>12</sup> See note 4, supra.

"invented the 'coherent combiner' as applied to the DESSTA requirement." 13 Comments at 4-9; Supp. Comments at 7, 9. Toyon describes the circumstances as follows:

At the beginning of Toyon's SBIR Phase I, the Army was unsure how to architect the system it wanted for a distributed Satellite Communication On the Move ("SOTM") aperture system, and required Toyon to develop such an architecture. During its Phase I, Toyon solved this uncertainty. Toyon showed analytically that a [DELETED] coherent combiner was required [DELETED] and [DELETED] approach was required for the [DELETED]. A "combiner" would control the [DELETED] approach, working with an [DELETED] unit . . . .

### Comments at 9.

As stated in the background section above, the CFP includes requirements that the system's core terminal must "coherently combine IF from all antenna systems that provide the same or overlapping coverage such that the system G/T is maximized in that coverage area" and "convert the coherently combine[d] OSA compliant IF into an analog L-Band IF for the OSA compliant interface to the modem." CFP Requirements §§ 3.1.2.10-11. Toyon asserts that these requirements derive from development of the Toyon coherent combiner. Protest at 10 (referencing Protest, exh. F, Agency Level Protest, attach. 1, Toyon Response to RFI, at 9-20); Comments at 4-20 (referencing same and Comments, exh. A, Strader Decl., attach. 1, SBIR Data in CFP).

The agency responds that Toyon did not invent the concept of applying coherent combining to the distributed aperture satellite communications on-the-move system requirement. Supp. AR at 2-3. In support of this position, the agency points out that the SBIR solicitation underlying Toyon's SBIR contracts (which the agency authored) states that under phase II, the contractor is to "[d]emonstrate the basic combined performance of distributed apertures (not the entire objective system)." Supp. AR at 3 (quoting AR, Tab 16, SBIR BAA 09.2, at 95). The agency asserts:

The use of the word "combined" in this statement implies the concept of coherent combining. The terms combiner and coherent combiner are interchangeable in the context of satellite communications signals. It is common knowledge in the [satellite communications]/Electrical Engineering Industry that combining signals without coherence would

Page 12 B-409765

<sup>&</sup>lt;sup>13</sup> Toyon also claims that the agency's DESSTA program manager acknowledged Toyon's "discovery" by stating that Toyon had "cracked the nut . . . that we [the agency] haven't cracked yet." Protest at 5; Comments at 2, 6, 9, 16, 17.

lead to destructive interference, thereby destroying the communication signal; therefore it is a reasonable assumption that the term "combining" implies coherent combining, in this context.

Supp. AR at 3

We find credible the agency's claim that, from the outset, it envisioned a system with a capability to coherently combine multiple aperture signals. We view the above-quoted SBIR solicitation requirement that the contractor "[d]emonstrate the basic combined performance of distributed apertures" to suggest as much.<sup>14</sup>

Toyon acknowledges that the concept of coherent combining existed before Toyon's SBIR phase I proposal. Supp. Comments at 1. Toyon, however, maintains that it "adapted this broad, theoretical concept to the Army's needs with [Toyon's] innovative, multi-faceted, system-level approach." <u>Id.</u> at 2.

Regarding this position, the agency asserts that:

The DESSTA program requirements only specified that the developers can adapt the concept of coherent combining into the design of the [satellite communications] terminal. It does not require the developer to design the . . . [t]erminal specifically based on Toyon's SBIR phase II specifications. It gives the developers the freedom to adapt the combining concept using their own proprietary technologies.

The similarity between Toyon's SBIR design and the Agency's solicited system ends at the concept level, i.e., the concept of coherent combining.

Supp. AR at 2-3. In other words, the agency maintains that the CFP requires the use of the coherent combining concept, but not Toyon's specific application of that concept and, therefore, the CFP does not derive from, extend, or complete Toyon's SBIR effort.

In the absence of a clear showing that the CFP incorporates coherent combining requirements that are reasonably identifiable as original concepts, findings, ideas,

Page 13 B-409765

<sup>&</sup>lt;sup>14</sup> Consistent with the agency's position, Toyon's SBIR phase I final report includes a statement that at Toyon's phase I kickoff meeting, the agency "informed Toyon that they [the agency] envision the distributed aperture antenna system as solely consisting of [DELETED]." AR, Tab 11, Toyon SBIR Phase I Final Report, at 13. Toyon asserts that the agency was merely "commenting on Toyon's approach . . . to which Toyon had led them." Supp. Comments at 7.

or research results that Toyon generated through performance of its SBIR work, we defer to the agency. For the sake of illustration, we discuss below why we find Toyon's primary arguments on this issue unconvincing.

Toyon states that its application of coherent combining was "unique" because it "used a [DELETED] approach (not an [DELETED] approach), proposed that [DELETED] antennas were critical to system operation, integrated the system with a modem, and proposed a new [DELETED] concept for sending data to the satellite." Supp. Comments at 2. The four "unique" system attributes identified here are a [DELETED] approach; antenna [DELETED]; integration of a modem; and the [DELETED] concept. We address these attributes below in turn.

Although Toyon states that its approach uses "[DELETED] system architecture . . . instead of an inferior [DELETED] design," Supp. Comments at 5, Toyon does not identify a specific CFP requirement that encapsulates the [DELETED] aspect of the firm's approach. Based on our review, the only express references in the CFP to [DELETED] considerations are not requirements; rather, they are terms that give the contractor the discretion to employ a [DELETED] approach. See CFP Requirements, app. I, DST OSA, §§ [DELETED]. Since it is not apparent that the CFP requires a [DELETED] approach or provides substantive information about such an approach, we are not persuaded that the CFP effort can be said to derive from, extend, or complete Toyon's [DELETED] approach.

Regarding antenna [DELETED], as discussed in the background section above, the CFP includes two "high-level concept" figures for the system. CFP Requirements § 1.4.1.2. The figures show the system as "envisioned" to include four antennas mounted at approximately 45 degrees around the four sides of a tactical vehicle. <u>Id.</u>

Toyon asserts that these figures derive from two aspects of the firm's SBIR effort. Comments, exh. A, Strader Decl., attach. 1, SBIR Data in CFP, § 2.2. The first is the following finding that was included in Toyon's phase I final report:

By the end of this phase I effort, it became clear that in addition to [DELETED].

AR, Tab 11, Toyon SBIR Phase I Final Report, at 12. The second is Toyon's use of a laboratory, in conjunction with its phase II demonstration, to "validate operation of [DELETED]." Comments, exh. A, Strader Decl., attach. 1, SBIR Data in CFP, § 2.2.

The record shows that although Toyon may have been researching and developing an antenna [DELETED] that resembles the concept depicted in the CFP, that configuration was not novel. For example, the first figure in the CFP closely resembles a figure of a distributed aperture satellite communications on-the-move system that appears in the phase II proposal of another contractor that was engaged in research and development simultaneous to Toyon. See AR, Tab 33,

Page 14 B-409765

[DELETED] SBIR Phase II Proposal, at 1. As another example, according to Toyon, the agency's program manager informed the firm that the agency had performed a vehicle trade study regarding vehicle/antenna integration and, based on this study, had concluded that mounting antennas around the four sides of the vehicle was required. Comments, exh. A, Strader Decl., ¶¶ 7-8.

In sum, although Toyon was developing a system that had the same general antenna [DELETED] as the one depicted in the CFP, that configuration was very high-level and not novel. Therefore, we are unable to find that the antenna configuration pictured in the CFP derives from, extends, or completes Toyon's approach to antenna positioning.

We next turn to Toyon's assertion that its coherent combining approach "integrated the system with a modem." Supp. Comments at 2. As stated in the background section above, the objective system definition in the SBIR solicitation underlying Toyon's SBIR contracts specified a "[m]odem interface [that] will be L band." AR, Tab 16, SBIR BAA 09.2, at 94. Thus, the agency specified the integration of a modem prior to Toyon's SBIR effort. Toyon makes other assertions about its modem integration. See Protest, exh. F, Agency Level Protest, attach. 1, Toyon Response to RFI at 12-13, 16-17; Comments, exh. A, Strader Decl., attach. 1, SBIR Data in CFP, § 2.6. However, the firm has not adequately explained, and it is not apparent to us, how the CFP manifests modem-related concepts that are unique to the approach that Toyon developed in its SBIR effort. On this record, we cannot conclude that the CFP derives from, extends, or completes Toyon's modem-related efforts.

Finally, we turn to Toyon's assertion that it proposed a "new [DELETED] concept for sending data to the satellite." Supp. Comments at 2. Toyon further describes this concept as a "[DELETED] function that did not [DELETED], but instead, [DELETED] selected the [DELETED] to use based upon the [DELETED]." <u>Id.</u> at 6.

Toyon's SBIR phase I final report included the following recommendation:

# [DELETED]

AR, Tab 11, Toyon SBIR Phase I Final Report, at 81. As stated in the background section above, the CFP included a requirement that the core terminal "shall switch to and dynamically provide the OSA compliant IF to any single transmit antenna which has the best view of the target satellite." CFP Requirements § 3.2.1.12.

We see a correlation between the concept being recommended in Toyon's SBIR phase I final report and this CFP requirement. However, we are not prepared to

Page 15 B-409765

conclude that the CFP derives from, extends, or completes Toyon's SBIR effort based on this singular correlation, particularly given that we see no merit in the numerous other allegations that make up the bulk of Toyon's protest.

The protest is denied. 15

Susan A. Poling General Counsel

Page 16 B-409765

<sup>&</sup>lt;sup>15</sup> Throughout this protest, we sought SBA's views on the issues. In its filings before our Office, SBA takes the position that the CFP contemplates work that derives from, extends, or completes Toyon's SBIR effort and, therefore, the CFP constitutes a phase III effort. The basis for SBA's position is in essence that the "research effort" in the CFP and Toyon's "SBIR Report" are the same. See SBA Comments at 8. We interpret this as an argument that because two sets of requirements are the same, the CFP derives from, extends, or completes the SBIR effort. We are unpersuaded by this argument because, as discussed above, standing alone, the fact that two sequentially issued solicitations share the same set of specifications and requirements does not demonstrate that the second solicitation derives from, extends, or completes the effort of the first. Regarding Toyon's coherent combiner, SBA asserts that Toyon demonstrated the feasibility of a unique approach to meeting the requirement in the CFP, and, therefore, the CFP derives from, extends, or completes Toyon's SBIR work. See SBA Supp. Comments at 2-3. In our view, standing alone, the fact that a contractor first demonstrates the feasibility of a requirement does not necessarily show that one effort derives from, extends, or completes another; instead, to make this showing, it must be evident that the requirements for the second effort incorporated original concepts, findings, ideas, or research results that were generated in the first. As discussed above, we find that this showing was not adequately made in this protest.