

**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA**

UNITED STATES OF AMERICA  
U.S. Department of Justice  
Antitrust Division  
450 Fifth Street N.W., Suite 8700  
Washington, DC 20530,

Plaintiff,

v.

ODYSSEY INVESTMENT PARTNERS  
FUND V, LP,  
590 Madison Ave., 39<sup>th</sup> Floor  
New York, NY 10022,

COMMUNICATIONS AND POWER  
INDUSTRIES LLC,  
811 Hansen Way  
Palo Alto, CA 94303,

and

GENERAL DYNAMICS CORPORATION  
11011 Sunset Hills Road  
Reston, VA 20190,

Defendants.

**COMPLAINT**

The United States of America (“United States”), acting under the direction of the Attorney General of the United States, brings this civil antitrust action against Defendants Odyssey Investment Partners Fund V, LP (“Odyssey”), Communications and Power Industries LLC (“CPI”), and General Dynamics Corporation (“General Dynamics”) to enjoin CPI’s

proposed acquisition of General Dynamics SATCOM Technologies, Inc. (“GD SATCOM”), a subsidiary of General Dynamics. The United States complains and alleges as follows:

**I. NATURE OF THE ACTION**

1. Pursuant to a purchase agreement dated July 22, 2019, CPI intends to acquire GD SATCOM from its parent company, General Dynamics.

2. CPI and GD SATCOM are the only two significant suppliers of large (four meters in diameter and above) ground station antennas for geostationary satellites (hereinafter “large geostationary satellite antennas”) for use by the United States military and commercial customers in the United States. Large geostationary satellite antennas are a key component of communications networks utilized by the U.S. Department of Defense (“DoD”) as well as commercial customers, such as broadband internet suppliers, in areas that lack access to the main telecommunications grid.

3. Competition between CPI and GD SATCOM has led to lower prices, higher quality products, and innovative new solutions for large geostationary satellite antennas. The proposed merger would eliminate this competition and leave DoD and commercial customers without meaningful competitive alternatives, likely resulting in higher prices, lower quality, and diminished innovation in the development of these important products.

4. As a result, the proposed acquisition likely would substantially lessen competition in the market for the design, manufacture, and sale of large geostationary satellite antennas in the United States in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18.

**II. THE DEFENDANTS**

5. Odyssey, a private equity fund managed by Odyssey Investment Partners, is a Delaware limited partnership with its headquarters in New York, New York. Odyssey

Investment Partners has raised over \$5 billion since its inception and invests in a wide array of industries, including aerospace and defense.

6. CPI is a portfolio company of Odyssey. It is a Delaware corporation with its headquarters in Palo Alto, California. CPI is a global manufacturer of electronic components and subsystems focused primarily on communications and defense markets. CPI had sales of approximately \$500 million in 2019 and sells satellite communication antennas through its subsidiary, CPI ASC Signal Division Inc. (“ASC Signal”), a business it acquired in 2017.

7. General Dynamics is a Delaware corporation with its headquarters in Reston, Virginia. General Dynamics’s subsidiary, GD SATCOM, designs, manufactures, and sells satellite communications systems used in commercial, defense, and scientific applications and provides related products such as amplifiers and antennas. GD SATCOM earned between \$200 million and \$300 million in revenues in 2019.

### **III. JURISDICTION AND VENUE**

8. The United States brings this action under Section 15 of the Clayton Act, 15 U.S.C. § 25, as amended, to prevent and restrain Defendants from violating Section 7 of the Clayton Act, 15 U.S.C. § 18.

9. Defendants design, manufacture, and sell large geostationary satellite antennas throughout the United States, and their activities in these areas substantially affect interstate commerce. This Court therefore has subject matter jurisdiction over this action pursuant to Section 15 of the Clayton Act, 15 U.S.C. § 25, and 28 U.S.C. §§ 1331, 1337(a), and 1345.

10. Defendants have consented to venue and personal jurisdiction in this judicial district. Venue is therefore proper in this district under Section 12 of the Clayton Act, 15 U.S.C. § 22 and under 28 U.S.C. § 1391(c).

#### **IV. LARGE GEOSTATIONARY SATELLITE ANTENNAS**

##### **A. Background**

11. Satellite communications networks enable secure communications links in remote areas that lack access to the main telecommunications grid. For example, DoD uses satellite communications networks to communicate with military bases in theaters of war, where access to the communications grid may be intermittent or even non-existent. Similarly, where it is too expensive to run traditional communications lines, commercial network operators provide satellite communications networks that individual users—or clusters of users in a central location—can use to access the internet, television, and voice communications services.

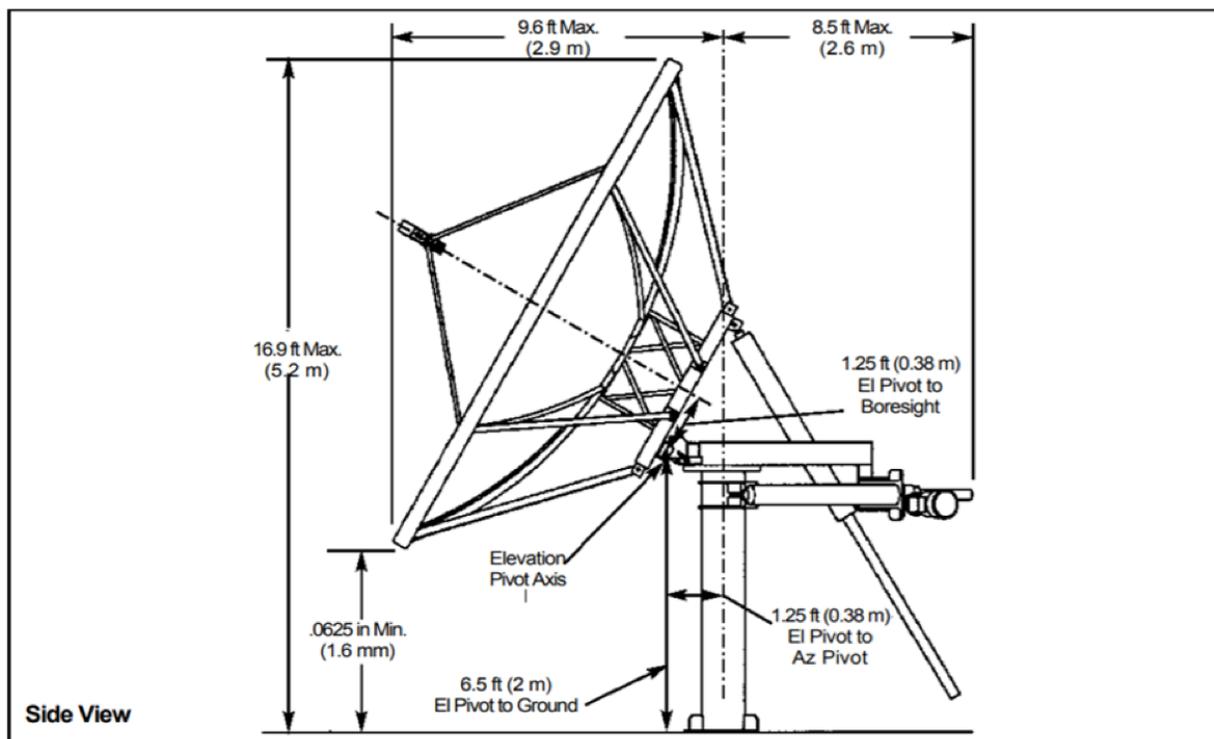
12. Both commercial and military satellite communications networks operate in the same way: information is transmitted from a remote user through a satellite in orbit and back down through a ground station that is connected to a traditional communications grid. This process is reversed as information returns to the remote user. At both ends of the satellite communication link, there must be an antenna that can “see” the satellite(s) with which the ground stations are interfacing.

13. The satellite is the most critical, and expensive, element of a satellite communications network. Satellite-based design constraints, such as the power of the transmission signal (which is directly impacted by limitations on size and weight) and the orbit in which the satellite will operate, thus drive other significant design decisions for the entire satellite communications network.

14. The other key component of a satellite communications network is the ground station antenna, which connects the satellite to the communications grid. As shown below, the ground station antenna consists of a parabolic dish, the structure on which the dish is mounted,

and any motors or other equipment needed to move, or “point,” the dish at the satellite(s) in its network.

**Figure 1. Diagram of a Large Geostationary Satellite Antenna**



Source: ASC Signal Foundation Specifications  
For 4.5-4.6 meter Earth Station Antennas

15. Several characteristics differentiate ground station antennas, but the two most important are the size of the antenna (which is typically measured by the diameter of its parabolic dish) and the ability of the antenna to track satellites that change their position relative to the Earth (as described below, some antennas remain pointed in the same direction while others track satellites as they cross the sky).

16. Antenna size is important because larger antennas can receive fainter signals (i.e., signals impacted by rain, clouds, or other atmospheric conditions) than smaller antennas. As a result, satellite networks using larger antennas are more reliable than networks using smaller

antennas. Additionally, because larger antennas can receive fainter signals, the power requirements for the transmitting satellite (which must be supplied through batteries and/or solar generation) are diminished as compared to transmission to smaller antennas. Satellites for larger antennas therefore need not be as large or expensive as satellites for smaller antennas. Larger antennas thus decrease the overall cost of the satellite communications system.

17. The other major factor differentiating between types of ground station antennas is their ability to track satellites that change their position relative to the Earth. For example, satellites in geostationary orbit remain in a fixed position relative to the Earth's rotation and are more than 20,000 miles above Earth. Antennas for geostationary satellites are therefore "fixed" and point in one direction. Low-earth orbit ("LEO") and mid-earth orbit ("MEO") satellites, by contrast, are multiple thousands of miles closer to earth and rotate the earth every 70 minutes. LEO and MEO satellites thus frequently "cross" the sky as they orbit and antennas used to communicate with them must be "full-motion" in order to track the LEO and MEO satellites as they move relative to the antennas' positions. While full motion antennas duplicate some of the capabilities of fixed antennas, they are typically only used for LEO and MEO satellites because they are significantly more expensive due to the motors and structural design elements necessary to ensure accurate full-motion pointing. Fixed antennas are thus more cost-effective than full-motion antennas.

**B. Relevant Markets**

**1. Product Market**

18. For DoD customers, satellite communications networks provide vital communications links for the battlefield and other remote locations. For many uses, DoD requires large geostationary satellite antennas in order to guarantee reliable communications

connections. DoD cannot switch to smaller geostationary antennas without compromising the reliability and usefulness of its network. Because switching to smaller geostationary antennas would effectively render a satellite communications network unfit for its intended use, DoD is unlikely to switch to smaller geostationary antennas in response to a small but significant increase in price for large geostationary satellite antennas.

19. Commercial customers—whose reliability requirements are not as rigid as DoD’s—are also unlikely to switch to smaller geostationary antennas in the event of a small but significant increase in price for large geostationary satellite antennas because, like DoD, doing so would decrease the reliability of their network. Further, switching to smaller geostationary antennas would require a satellite communications network with a larger—and significantly more expensive—satellite at its core, thus increasing the overall cost of the network.

20. Similarly, DoD and commercial customers with geostationary satellites are unlikely to switch from fixed to full-motion antennas—like those used for MEO and LEO satellites—in response to a small but significant increase in price of fixed antennas. Even when full-motion antennas have similar capabilities to fixed antennas, they are significantly more expensive due to the additional motors and equipment necessary to ensure accurate full-motion pointing.

21. For the foregoing reasons, customers will not substitute to smaller or full-motion antennas in response to a small but significant and non-transitory increase in the price of large geostationary satellite antennas. Accordingly, the design, manufacture, and sale of large geostationary satellite antennas is a relevant product market and line of commerce under Section 7 of the Clayton Act, 15 U.S.C. § 18.

## **2. Geographic Market**

22. For national security reasons, DoD prefers domestic suppliers of large geostationary satellite antennas when it is deciding on potential antenna sources. Similarly, commercial customers prefer domestic suppliers of large geostationary satellite antennas, in part because they resell network access to DoD and other government customers that prefer to avoid having foreign suppliers for components in the transmission chain for sensitive national security-related information. For these reasons, neither DoD nor commercial customers are likely to turn to any foreign suppliers in the face of a small but significant and non-transitory price increase by domestic suppliers of large geostationary satellite antennas.

23. The United States is therefore a relevant geographic market within the meaning of Section 7 of the Clayton Act, 15 U.S.C. § 18.

### **C. Anticompetitive Effects of the Proposed Transaction**

24. CPI, through its subsidiary ASC Signal, and GD SATCOM are the only two significant suppliers that design, manufacture, and sell large geostationary satellite antennas in the United States. The merger would give the combined firm an effective monopoly, leaving customers, including DoD, without a meaningful competitive alternative for this critical component of satellite communications networks.

25. CPI and GD SATCOM compete for sales of large geostationary satellite antennas on the basis of quality, price, and contractual terms such as delivery times. This competition has resulted in higher quality, lower prices, and shorter delivery times. The combination of CPI and GD SATCOM would eliminate this competition and its future benefits to customers, including DoD. Post-acquisition, the merged firm likely would have the incentive and ability to increase prices and offer less favorable contractual terms.

26. Competition between CPI and GD SATCOM has also fostered important industry innovation, leading to antennas that are more durable, can withstand more extreme environments, and operate at higher bandwidths. The combination of CPI and GD SATCOM would eliminate this competition and its future benefits to customers, including DoD. Post-acquisition, the merged firm likely would have less incentive to engage in research and development efforts that lead to innovative and high-quality products.

27. The proposed acquisition, therefore, likely would substantially lessen competition in the design, manufacture, and sale of large geostationary satellite antennas in the United States in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18.

**D. Difficulty of Entry**

28. Entry of additional competitors into the market for the design, manufacture, and sale of large geostationary satellite antennas in the United States is unlikely to prevent the harm to competition that is likely to result if the proposed acquisition is consummated. Production facilities for large geostationary satellite antennas require a substantial investment in both capital equipment and human resources. A new entrant would need to set up a factory to produce parabolic dishes, design the complex electronic assemblies and components necessary to point the antenna, and build assembly lines and testing facilities. Engineering and research personnel would need to be assigned to design, test, and troubleshoot the complex manufacturing process that is necessary to produce large geostationary satellite antennas. Any new products manufactured by such an entrant would also require extensive testing and qualification before they could be used by the U.S. military. Accordingly, entry would be costly and time-consuming.

29. As result of these barriers, entry into the market for the design, manufacture, and sale of large geostationary satellite antennas in the United States would not be timely, likely, or sufficient to defeat the anticompetitive effects likely to result from CPI's acquisition of GD SATCOM.

## **V. VIOLATIONS ALLEGED**

30. CPI's acquisition of GD SATCOM likely would substantially lessen competition in the design, manufacture, and sale of large geostationary satellite antennas in the United States in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18.

31. Unless enjoined, the acquisition likely would have the following anticompetitive effects, among others, related to the relevant market:

- (a) actual and potential competition between CPI and GD SATCOM would be eliminated;
- (b) competition generally likely would be substantially lessened; and
- (c) prices likely would increase, quality and innovation would likely decrease, and contractual terms likely would be less favorable to customers.

## **VI. REQUEST FOR RELIEF**

32. The United States requests that this Court:

- (a) adjudge and decree that CPI's acquisition of GD SATCOM would be unlawful and violate Section 7 of the Clayton Act, 15 U.S.C. § 18;
- (b) preliminarily and permanently enjoin and restrain Defendants and all persons acting on their behalf from consummating the proposed acquisition of GD SATCOM by CPI, or from entering into or carrying out

any other contract, agreement, plan, or understanding, the effect of which would be to combine CPI with GD SATCOM;

- (c) award the United States its costs for this action; and
- (d) award the United States such other and further relief as the Court deems just and proper.

Dated: May 28, 2020

Respectfully submitted,

FOR PLAINTIFF UNITED STATES:

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