

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

|   |   |                        |
|---|---|------------------------|
| In the Matter of                              | ) | IB Docket No. 08-143   |
|   | ) |                        |
| Robert M. Franklin, Trustee, Inmarsat plc     | ) | DA 08-1659             |
| And Stratos Global Corporation                | ) |                        |
|   | ) | FCC File Nos.:         |
|   | ) |                        |
| Applications for Consent to Transfer of       | ) | ITC-T/C-20080618-00276 |
| Control of Stratos Global Corporation and Its | ) |                        |
| Subsidiaries from an Irrevocable Trust        | ) | ITC-T/C-20080618-00275 |
| To Inmarsat plc, and Petition for a           | ) | SES-T/C-20080618-00818 |
| Declaratory Ruling                            | ) | SES-T/C-20080618-00821 |
|   | ) | SES-T/C-20080618-00820 |
|   | ) | SES-T/C-20080618-00819 |
|   | ) | 0003453455             |
|   | ) | ISP-PDR-20080618-00013 |

To: The Commission

**REPLY OF VIZADA INC. AND VIZADA SERVICES LLC TO OPPOSITIONS  
OF INMARSAT PLC AND STRATOS GLOBAL CORPORATION**

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ATTACHMENT A:

*“The Mobile Satellite Services Business: Competitive Structure, Size, Segments, and The Unique Role of Inmarsat in Certain Segments,”* Tim Farrar, President, Telecom, Media and Finance Associates

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Vizada, Inc. (formerly Telenor Satellite Services, Inc.) and VIZADA Services LLC (formerly FTMSC US, LLC) (hereafter together “Vizada”) hereby submit their Reply to the Oppositions submitted by Inmarsat plc (“Inmarsat”) and Stratos Global Corporation (“Stratos”). 1/

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1/ The Bureau extended Vizada’s deadline for filing this reply until September 10, 2008. Order, DA 08-2017 (IB Aug. 28, 2008).

## SUMMARY

Inmarsat and Stratos would have the Commission rubber stamp their proposed transaction despite its significant anti-competitive implications for distributors and consumers of mobile satellite services (“MSS”). The Parties would have the Commission turn a blind eye to the fact that Inmarsat holds dominant positions, facing no significant facilities-based competition, in key maritime, aeronautical, and land mobile wholesale markets -- markets representing over 57% of Inmarsat’s current revenues.

In these markets Inmarsat currently has complete power to dictate wholesale prices (and discounts), and consequently the power to place a floor on the retail prices that will be paid by important groups of vulnerable customers. But today Inmarsat’s power is kept partly in check by the terms of agreements Inmarsat has with independent distributors such as Stratos and Vizada. These independent distributors use wholesale Inmarsat inputs, combined with their own competitive value-added services and marketing ingenuity, to foster a vibrant and crucial *intra-brand* competition in the sale of Inmarsat-based services, particularly those services as to which *inter-brand* competition is lacking. It is the innovative and energetic competition of the independent distributors who stand between Inmarsat and end users that protects those customers from Inmarsat effectively raising end user prices and otherwise adversely affecting competition and public welfare.

In this proceeding Inmarsat proposes to acquire Stratos, the largest of its distributors, at the very time when key contractual restrictions on its market power will expire. Vizada has demonstrated in its Petition to Deny the public interest damage that is threatened by this transaction. Without adequate safeguards to prevent Inmarsat from engaging in discrimination, misuse of independent distributors' proprietary information, and other anti-competitive raising-rivals-cost strategies, distributors that are dependent on access to wholesale Inmarsat service will be marginalized or driven from the marketplace and consumers will lose the benefit of intra-brand competition. Given the pending expiration of agreements between Inmarsat and its distributors -- agreements that contain protections against discrimination, information misuse, and other anti-competitive actions -- the content of the future agreements on these matters is directly at issue in this transfer of control proceeding.

The Commission should reject Inmarsat's procedural ploys designed to lure the Commission into a quick and cursory review of this proposed transaction. Inmarsat claims, for example, that its marketplace position is not impacted by the acquisition of Stratos because it could enter the retail distribution arena anyway once the current restrictions on its doing so expire in April 2009. This superficial argument is easily dismissed. It would be one thing for Inmarsat to join the competitive fray at the retail level while it still holds a dominant wholesale position

on its own. But it is quite another (and far more dangerous) thing for Inmarsat to acquire its largest distributor directly, as Inmarsat proposes here. In one fell swoop Inmarsat seeks to reinforce its dominant position at the wholesale level and to eliminate the largest rival it would otherwise face in the retail marketplace.

Inmarsat also takes issue with the well-established standard of review governing applications such as this, *viz.*: “whether the merger will accelerate the decline of market power by dominant firms in the relevant communications markets.” Inmarsat tries to argue that the standard only applies if the relevant firm is regulated as a dominant carrier, but this is wrong. The Commission has invoked the same public interest standard in many cases, such as the EchoStar-DirecTV merger, where neither party was regulated as a dominant firm.

Inmarsat asserts that it lacks dominance in the MSS business as a whole and, by implication, in any relevant MSS product markets. This broad brush contention disregards the persisting legacy advantages of Inmarsat’s former legalized monopoly status. More importantly, however, the argument ignores the fact that Inmarsat has an extraordinarily high (sometimes nearly 100 percent) share of customers and revenues in key MSS sectors and that it will retain such high shares long into the future because of the critical distinguishing characteristics of its satellite services (*e.g.*, global coverage, the unique ability to provide the only approved safety feature as part of its maritime low speed data service, true high

speed capacity for its maritime, aeronautical, and land-based broadband, and small easy-to-use portable terminals), plus the major financial, operational, and technical entry/expansion barriers facing any possible rivals. Vizada is not suggesting that Inmarsat dominates every MSS market. But Inmarsat has failed to meet its burden of demonstrating that it lacks market power in key MSS market segments that today and for the foreseeable future only Inmarsat can effectively serve. Inmarsat retains the ability to harm competition through discrimination and other anti-competitive practices against rivals, especially if it is allowed to absorb its largest distributor.

Vizada contends that the Commission cannot reasonably evaluate this transaction without first examining the relevant terms of the new distribution agreements that Inmarsat seeks to impose on unaffiliated distributors effective as of the same date that it intends to acquire Stratos. Inmarsat and Stratos predictably try to argue that the new distribution agreements are merely private contractual matters separate from their transaction. This is clearly wrong. The distribution agreements relate directly to the key public interest question here: Will competition in MSS markets “accelerate” -- or more likely regress -- if Inmarsat is permitted to acquire its largest distributor while Inmarsat remains so dominant? To the extent that those new distribution agreements facilitate

Inmarsat discrimination in favor of Stratos post-acquisition, the agreements are especially relevant to this transaction.

Finally, Inmarsat argues that even if the transaction would enhance its market power, the remedies proposed by Vizada should be rejected as inefficient. Of course, one obvious answer is that, if there are no adequate structural or conduct remedies, then the Application simply should be rejected. That would leave Inmarsat free to enter the distribution market in April 2009 on its own -- subject to compliance with relevant competition law -- without eliminating its largest rival, Stratos, as an independent competitor. Competition authorities could then monitor how Inmarsat acts as a dominant carrier in these circumstances.

However, under the Communications Act this Commission faces a different and more immediate public interest issue. Certainly the Commission cannot approve Inmarsat's acquisition of Stratos without assuring that safeguards are in place to prevent Inmarsat from either discriminating in favor of itself, or anticompetitively raising rivals costs, with regard to the wholesale services over which it remains dominant. Similarly, safeguards are needed to prevent a vertically integrated Inmarsat from abusing confidential information it receives in its capacity as wholesale vendor of services that are required by its retail competitors.

The Commission has ample time to consider these matters carefully because even Inmarsat concedes it will not close its acquisition of Stratos until April 2009 at the earliest. The bottom line, however, remains: If the Commission cannot find the transaction -- with appropriate conditions -- to be in the public interest, the Communications Act requires that this Application be denied.

**I. THE COMMISSION SHOULD REJECT THE PARTIES' ARGUMENTS FOR QUICK APPROVAL WITHOUT A FULL PUBLIC INTEREST REVIEW**

This proceeding goes to the heart of the MSS marketplace and requires careful Commission analysis of the transaction's impact upon wholesale and retail MSS markets. Inmarsat started years ago as a worldwide government-sanctioned (and largely government-owned) monopolist with many government-owned distributors and end-users. Almost ten years ago Inmarsat was forced to give up its legal monopoly position and privatize. Even now there are only a handful of MSS companies that are beginning to overcome technical and economic barriers and create some facilities-based alternatives to Inmarsat. These new entrants are limited in their ability to address certain regions of the world, certain services and/or certain customer requirements.

Whatever progress there has been cannot obscure the fact that in many important markets Inmarsat continues to enjoy a dominant position, with the power to raise prices for consumers. Currently more than half (57%) of Inmarsat's

revenues come ultimately from end-users who do not yet have an effective alternative to Inmarsat. Even if one optimistically assumes unusual success by rival MSS operators, Inmarsat will still collect a near-majority of its revenues from monopoly services in the year 2011. <sup>2/</sup>

To date Inmarsat's market power has been checked in important respects by the ability of downstream distributors to compete against one another on a value-added basis using wholesale Inmarsat capacity. But Inmarsat's proposed acquisition of Stratos would represent a fundamental change in this market dynamic. Inmarsat seeks to acquire the largest distributor of its wholesale services just as competitive safeguards in its agreements with other distributors will lapse. For end users, this means that they will lose Stratos as an independent distributor at the very time that Inmarsat's incentives and ability to discriminate against other distributors will sky rocket.

Inmarsat and Stratos, however, would have the Commission quickly rubber stamp this application. This rush to judgment is telling given that they cannot close their transaction until April 2009. It suggests that they fear what the Commission would find if it conducted the rigorous analysis required by the

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<sup>2/</sup> These matters are discussed in more detail in Section III below and in the attached Expert Statement of Telecom Media and Finance Associates. Tim Farrar, The Mobile Satellite Services Business: Competitive Structure, Size, Segments and the Unique Role of Inmarsat in Certain Segments, 2-3 (and Figure 1), 17-18 (Sept. 9, 2008) ("TMF Associates Expert Statement") (Attachment A).

Communications Act. It also suggests that they would prefer that the Commission decide this matter quickly before it has key information on future distribution agreements, and without reference to the pending Harbinger application to combine Inmarsat with Skyterra and MSV.

In any event, rather than meet its burden of documenting the impact of the transaction on various MSS markets, the Parties rely heavily on arguments as to why little or no Commission scrutiny is required. None of these claims has merit.

**A. Vizada Correctly Articulated The Standard Of Review Applicable To This Transaction**

**1. Contrary to the Parties' Arguments, the Commission Must Consider Whether the Transaction Will Lead to a Reduction in Market Power**

First of all, the Parties attempt to avoid Commission review by minimizing the well-known standard of review required by the Communications Act and FCC policy. Indeed, Inmarsat is notably defensive (Opp. at 18-19) with respect to the *verbatim* quotation from that part of the standard which requires the Commission to determine “whether the merger will accelerate the decline of market power by dominant firms in the relevant communications markets.” (Pet. at 16) This is one of the most important factors in distinguishing the Commission’s consideration of competition issues from the role of the Justice Department’s Antitrust Division on

the same mergers. <sup>3/</sup> Inmarsat contends the quoted proposition only applies if the acquiring entity is “regulated as a dominant carrier” in some formal sense. (Opp. at 19.) Not so. For example, the Commission used just this language in its decision involving the proposed merger of two direct broadcast satellite companies, neither of which has ever been regulated as a “dominant carrier” in the DBS field (or in the broader multichannel video distribution field generally). <sup>4/</sup> Moreover, exactly the same standard appears in many other merger cases not involving entities formally regulated as “dominant.” <sup>5/</sup>

Regardless of whether or not Inmarsat is subject to dominant carrier regulation in the MSS field, Vizada establishes in its Petition and this Reply that in

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<sup>3/</sup> See *In the Matter of News Corp. and The DirecTV Group, Inc., Transferors, and Liberty Media Corp., Transferee*, 23 FCC Rcd 3265, 3278-79 ¶ 25 (2008) (“*Liberty Media / DirecTV*”).

<sup>4/</sup> *EchoStar Communications Corp., General Motors Corp. and Hughes Electronics Corp.*, Hearing Designation Order, 17 FCC Rcd 20559, 20575 ¶ 27 (2002) (“*EchoStar-DIRECTV HDO*”).

<sup>5/</sup> See, e.g., *Liberty Media / DirecTV*, 23 FCC Rcd 3265, 3278-79 ¶ 25 (acquisition of interest in DBS operator by entity owning programming networks); *Applications for Consent to the Assignment and/or Transfer of Control of Licenses from Adelphia Communications Corp. to Time Warner Cable, Inc. and Comcast Corp.*, 21 FCC Rcd 8203, 8218-19 ¶ 25 (2006) (“*Adelphia*”) (acquisition of one cable system operator by two other cable system operators that also own programming networks); *Applications of Western Wireless Corporation and ALLTEL Corporation For Consent to Transfer Control of Licenses and Authorizations*, 20 FCC Rcd 13053, 13065 ¶ 20 (2005) (acquisition of one CMRS operator by another); *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations*, 19 FCC Rcd 21522, 21544-45 ¶ 42 (2004) (“*Cingular / AT&T Wireless*”) (acquisition of one CMRS operator by another).

major MSS business segments which constitute relevant product markets, Inmarsat continues to have strong market power. Inmarsat has been free to attempt to contest these claims on the merits. There is no warrant, however, for Inmarsat to argue that the Commission may approve a merger where there is a *prima facie* factual showing that Inmarsat has undue economic power in relevant product markets, and that the proposed merger will *enhance and extend* that power rather than accelerate its decline.

## **2. The Standard Does Not Presume Vertical Mergers Involving Firms with Market Power Are Pro-Competitive**

Inmarsat also is wrong when it argues that there is a “presumption” that vertical mergers involving a firm with market power “benefit the public interest.” (Opp. at 18) Whatever may be the latest economic thinking from some academic quarters regarding the “potential” of some vertical mergers to be “efficiency-enhancing” (Opp. at 17), the Commission has made crystal clear that the presence of market power in a vertical merger changes the calculus dramatically: “[W]here a firm that has market power in an input market acquires a firm in the downstream output market, the acquisition may increase the incentive and ability of the integrated firm to raise rivals’ costs either by raising the price at which it sells the

input to downstream competitors or by withholding supply of the input from competitors.” [6/](#)

Inmarsat and Stratos sprinkle their Oppositions with general rhetoric regarding the MSS marketplace. However, they completely fail to meet their burden of demonstrating competition in all MSS markets in which Inmarsat provides wholesale service to Stratos. As discussed in the Petition to Deny and explained further below, Inmarsat has market power in at least four relevant wholesale product markets -- maritime low speed data, maritime broadband, aeronautical broadband, and remote land-based broadband -- representing more than 57% of Inmarsat’s wholesale service revenues. [7/](#) These are critical input markets for distributor resellers like Stratos, Vizada, and others. Inmarsat obviously may advance evidence in an effort to disprove that it has market power in any or all of these relevant product markets. But Inmarsat is *not* entitled to a “get out of jail free card” in the form of some imagined presumption that all vertical mergers, including this one, are on balance pro-competitive and efficiency-enhancing.

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[6/](#) *Liberty Media/DirecTV*, 23 FCC Rcd 3265, 3294-95 ¶ 66. In providing this analysis, which was the economic foundation for the merger conditions in that case, the Commission relied upon literature authored by some of the very same economists (Salop and Riordan) whose views Inmarsat conveniently quotes out of context.

[7/](#) See *infra* discussion at III.B., see also TMF Associates Expert Statement (Attachment A) at 6-15.

**B. The Commission Has Not Already Ruled On The Merits Of This Transaction Because Inmarsat And Stratos Expressly Reserved The Issues Here In The Prior Application.**

Finally, Inmarsat raises the baseless claim that the Commission already has decided this matter on the merits, and that Vizada is “taking its second bite at the proverbial apple.” (Opp. at ii.) If clichés are in order, it is more accurate to say that Inmarsat is playing a shell game to hide the ball. When applications were made to move Stratos into a Trust, Inmarsat repeatedly argued that issues related to its acquisition of Stratos were not germane, and would be relevant only if and when Inmarsat exercised its option to acquire Stratos later. <sup>8/</sup> Vizada, for one, agreed with that position. While we foreshadowed some of the public interest concerns that

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<sup>8/</sup> In the Application for consent to transfer Stratos to the Trust, the parties stated that: “Since there is no application to transfer control to anyone other than the Trustee, and since the eventual acquirer is not known, considerations of the qualifications of CIP Canada or Inmarsat Finance would be premature. Indeed, it is likely that the competitive environment and other public interest considerations will be different in April 2009 than they are in April 2007.” See Application, *In the Matter of Stratos Global Corp. and Robert M. Franklin, Trustee, Applications for Consent to Transfer of Control and Petition for Declaratory Ruling*, WC Docket No. 07-73, Narrative at 14 (filed Apr. 30, 2007). Inmarsat emphasized the same point in that proceeding: “The Commission need not reach the issue of the competitive impact of Inmarsat Finance's possible future exercise of its option to acquire control over Stratos (something which cannot occur for nearly two years, and which may never occur), because further Commission consent must be obtained before Inmarsat Finance could acquire control of Stratos.” Inmarsat Opposition, WC Docket No. 07-73, at 11 (filed July 9, 2007); accord, Stratos Opposition, WC Docket No. 07-73, at 20 (filed July 9, 2007)(If Inmarsat later exercises its option, “[t]he Commission will have a full opportunity to review any competition or other public interest issues” then when the “the relevant competition facts . . . will be different from today,” and “the Commission should accordingly defer any consideration of any Inmarsat-related competitive or public interest issues” to that proceeding).

would arise if Inmarsat controlled Stratos, we expressly reserved a full discussion of the issue. <sup>9/</sup> The issue was not ripe.

In these circumstances, any decision at that time on the merits of this “in-the-future” Application would have been a violation of fundamental procedural and substantive due process rights, the Administrative Procedure Act, and the Communications Act. Inmarsat can cite whatever *dictum* it wants, but the pending acquisition must be evaluated on the basis of the facts and law developed in *this* proceeding -- just as the Parties argued in the Trust context. Similarly, Vizada does not have some special burden of demonstrating “marketplace changes in the last eight months” since the Commission approved the acquisition by CIP and the Trustee. (Opp. at ii.) Moreover, circumstances *have* changed, most notably the pending expiration of the distribution agreements, the pending Harbinger transaction, and further economic uncertainties facing developing businesses in all markets. Indeed, these factors only underscore why any prior Commission decision would have been premature as a matter of prudence, as well as a matter of law.

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<sup>9/</sup> See Vizada Reply, WC Docket No. 07-73, at 22-23 (filed July 31, 2007)(“Vizada generally will withhold further comment on this subject [adverse competitive effects] until Inmarsat makes its own application. However, the Commission should not take that limited response for acceptance of Inmarsat's argumentation as to why the public would benefit from its taking control of Stratos.”); *accord, id.* at 27 (agreeing that the Commission should defer consideration of the public interest questions presented by Inmarsat’s acquisition of Stratos until Inmarsat files for consent to do so, but adding that at that time the Commission “will find that the issue is complicated, with serious implications for mobile satellite service providers.”).

## II. THE NEW INMARSAT DISTRIBUTION AGREEMENTS ARE DIRECTLY RELEVANT TO THIS TRANSACTION

### A. The Commission Should Reject Inmarsat's Rhetorical Attempts To Disparage The Significance Of The Distribution Agreements.

Vizada demonstrated in its Petition that the Commission could not adequately evaluate the public interest issues raised by this transaction until it saw how Inmarsat would treat distributors under the new distribution agreements that will take effect on or about the time of the proposed acquisition of Stratos.

Inmarsat attempts to divert attention from these agreements by arguing that they are only private contractual matters. This is incorrect, as Inmarsat well knows.

Rather these agreements are fundamental to the ability of independent parties to use wholesale Inmarsat service inputs to compete (including after April 2009 with Inmarsat itself) in the provision of value-added services in various MSS markets.

To distract attention from the troublesome merits of its proposed acquisition, Inmarsat tries to paint itself in a white hat and distributors like Vizada in black hats. This portrayal distorts history, blinks economic reality, and disserves the goals of this important merger review process. The implication that the current distribution agreements, *which were entered into less than five years ago*, were the price Inmarsat had to pay in order to privatize itself (Opp. at 6) ignores the fact that Inmarsat was privatized in 1999. <sup>10/</sup> In 2004, *an already privatized* Inmarsat

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<sup>10/</sup> Inmarsat acknowledges that for many years distributors like Vizada have made “significant investment in the construction and operation” of “expensive”

agreed to those contracts. At that time presumably Inmarsat recognized the value to *it* of having financially sound and incentivized distributors. Contractual protections against discrimination and other market power abuses assured distributors of Inmarsat-based services the continued ability to recover a return on their many investments and improvements in required land earth stations, [11/](#) and incentivized their development of innovative value-added services. [12/](#) Those protections thus ensured vibrant intra-brand competition in Inmarsat-based services.

Inmarsat's response is to label entities like Vizada, Stratos, and others that compete head-to-head against one another as monopoly "gatekeeper[s]" (Opp. at 2) protected by "exclusivity arrangements" (Opp. at 5). The Commission will not have

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earth station facilities in order to make possible the widespread and successful distribution of Inmarsat's traditional services. Opp. at 5 n.6. And, of course, Inmarsat itself has greatly benefited from those expensive investments by such land earth station operators ("LESO") as Vizada and Stratos.

[11/](#) Inmarsat concedes it became a "private company in 1999" (Opp. at 4), but then goes on to make the illogical claim that its proposed acquisition of Stratos *ten years later* is somehow "[t]he last commercial step in Inmarsat's evolution from an IGO [Inter-Governmental Organization]" (Opp. at 5). Plainly Inmarsat is stretching the concept of "privatization," with that term's generally positive connotations, to cover commercial objectives that that term simply does not denote.

[12/](#) Inmarsat's attempt (Opp. at 25 n.70) to denigrate the value of such output enhancements fostered by intra-brand rivalry falls flat. For example, Vizada's provision of a software tool to enable its own resellers more effectively and efficiently to "perform billing and activation-related activities" necessarily benefits those reseller customers and their ultimate end-users.

difficulty seeing through this rhetoric, ironic as it is coming from a former legal monopolist. To say that customers for Inmarsat’s wholesale services are conducting themselves as a “distribution cartel” (Opp. at 25) is to pretend falsely that vibrant intra-brand competition does not exist. [13/](#) For Inmarsat to imply that those distributors act like monopoly PTTs conspiring together in an “elite club” ignores the fact that Stratos and Vizada, among others, are privately owned entities that compete vigorously against each other for many of the same customers, in the same geographies, for sales of the same or very similar products, without one hint of cartel-like behavior. [14/](#)

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[13/](#) Although in certain quarters of the world an Inmarsat distributor may function as a monopoly or quasi-monopoly, distributors like Vizada, Stratos and many others do not have “exclusive” distributorships for particular Inmarsat products in particular Inmarsat territories free from competition between and among each other. The reality is that these distributors compete head to head with each other all the time using the very same Inmarsat branded products and in the very same territories.

[14/](#) No doubt, the vigor of intra-brand competition between Stratos and Vizada is strengthened even more as a result of the mergers and acquisitions to which Inmarsat refers disparagingly as the “rolling up [of] Inmarsat distributors” into two firms distributing “approximately 80% of Inmarsat’s services.” (Opp. at 25) Stratos informed its investors that competition with Vizada’s predecessors (and others) for sales of Inmarsat services had led to “downward pressure on pricing and margins” and that the formation of Vizada naturally “could increase competition and pricing pressures.” Stratos’ SEC Form 40-F at 28 (March 29, 2007) quoted in Vizada’s Petition at 30.

**B. The Commission Needs To Know The Content Of The Forthcoming Distribution Agreements Before It Can Properly Address The Anti-Competitive Effects Of The Proposed Stratos Transaction**

Incredibly, Inmarsat asserts that “the forthcoming changes in Inmarsat’s distribution structure . . . are entirely independent of the proposed transaction” to acquire one of its most important distributors and therefore should not figure in this proceeding. (Opp. at 4) However, the acquisition of Stratos and the post-acquisition relationships between Inmarsat and its distributors are closely linked, as we explain below. Moreover, Inmarsat is not credible in implying that its “plans” (Opp. at 20) for distribution after April 2009 (features of which “plans” Inmarsat selectively reveals or conceals in its Opposition) were long ago cast in stone and are unaffected by the stark change in incentives and collusive abilities engendered by the prospective Stratos acquisition. Inmarsat’s claim that Vizada’s competition concerns regarding distribution issues post acquisition are not “transaction specific” (Inmarsat Opp. at 19) but “private contractual matters” that the Commission should totally ignore (*Id.* at ii) is equally preposterous, as we also discuss *infra*.

**1. The Distribution Agreements Are Not “Independent of” or Irrelevant to This Transaction**

Inmarsat argues that because the current distribution agreements will expire in April 2009 whether or not it acquires Stratos, those agreements somehow are entirely separate and “independent” matters. This claim is seriously misleading.

To begin with, the scheduled April 2009 expiration of the distribution agreements barring Inmarsat from acquiring, owning, or operating a distribution business itself is, of course, what makes possible Inmarsat's Application to acquire Stratos in the first place. The change in the governing distribution arrangements is the condition precedent, the critical gating event.

Moreover, Inmarsat is not simply entering the market *de novo* (subject to compliance with general competition restrictions on a dominant firm). It wants to acquire Stratos, one of its largest distributors, and all of its tangible assets, commercial relationships, customer contracts, marketing expertise, and experienced personnel. This action would simultaneously eliminate an independent rival and put Inmarsat from "Day One" in immediate, major, direct competition on par with all its remaining independent distributors (including Vizada). [15/](#)

Vizada acknowledges that its current Inmarsat distribution agreements, and presumably those of Inmarsat's other distributors including Stratos, "expire on April 14, 2009, whether or not the proposed Stratos transaction ever closes."

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[15/](#) An Inmarsat that purchases one of its largest, longest-established, and most experienced distributors would be a fundamentally different (and anti-competitively dangerous) enterprise as contrasted with an Inmarsat that has simply become free on that date to *expand internally* into the downstream distribution business. In this proceeding, Vizada certainly is not asking the Commission to prohibit such internal expansion that would put Inmarsat in competition on the downstream side with its own existing distributors. That form of vertical integration by internal expansion, where Inmarsat would be competing downstream *against Stratos* as well as Vizada and other established distributors of its services, is not this case.

(Inmarsat Opp. at 6.) But that certainty of expiration hardly makes the content of the post-April 2009 distribution agreements “independent of” or irrelevant to the Commission’s analysis of whether to allow Inmarsat to buy Stratos and whether to impose competitive safeguards. Indeed, the extent to which those new agreements fail or succeed in addressing potential competitive abuses (*e.g.*, refusals to deal, discrimination, and information misuse) that a vertically integrated Inmarsat-Stratos would be enabled and incentivized to accomplish is highly relevant to the question of whether the acquisition should be permitted in the first place.

## **2. The Transaction Will Cause a Fundamental Change in Inmarsat’s Anti-Competitive Incentives and Abilities**

In this regard, it should be obvious that Inmarsat’s acquisition of its major independent distributor cannot help but change its incentives dramatically -- incentives that in the past were purely those of a wholesaler, albeit one with dominance in key business segments. Going forward, the vertically integrated firm will wear two hats. With the Stratos acquisition, Inmarsat can totally control and collude directly with its largest distributor. This ability to adversely affect intra-brand competition, and entrench its own upstream market power at the same time, will arise overnight. In a nutshell, this is why the content of Inmarsat’s new (and currently uncompleted) distribution agreements -- as contrasted with the content of the expiring agreements -- will be highly relevant to the Commission in addressing the likely competitive effects of the Stratos acquisition. The presence or absence in

those new agreements of the former agreements' protections against (i) temporary or longer-term refusals to deal, (ii) unreasonable discrimination, and (iii) misuse of rival distributors' proprietary information, will be highly instructive.

### **3. Inmarsat's Selective and Self-Serving Assertion of Potential New Distribution Terms Is No Substitute for Review of the Agreements Themselves**

By selectively revealing a few features of what it "intends" the new distribution regime to include (Opp. at 6-7), Inmarsat implies that its distribution strategy will be exactly the same after April 2009 regardless of whether it owns Stratos or not. Inmarsat's argument should be rejected for several reasons. First, the argument is not credible. It ignores the fact, discussed *supra*, that Inmarsat's ownership of Stratos inevitably will change Inmarsat's and its wholly-owned distributor's incentives at their respective levels, and will enable various collusive strategies (consistent with those new incentives) to extend Inmarsat's wholesale-level market power downstream, while further insulating that upstream power from challenge. No amount of skillful brief writing can make these fundamental changes in incentives and collusive abilities disappear.

Nor can Inmarsat say with a straight face that its distribution strategy, whatever its full blown details, has been developed in ignorance that the company has been holding an option (since 2007) to acquire Stratos on or after April 15,

2009. [16/](#) The prospective ownership of Stratos most certainly influences Inmarsat’s current strategy and intentions after April 2009 with respect to selling directly to end users, selling to particular customers, appointing more distributors, offering an end-to-end network for traditional services, changing its volume discounts, or delivering land services through particular gateways, [17/](#)

Second, the argument confuses what Inmarsat unilaterally “intends” with what Inmarsat’s distributors and Inmarsat together may eventually agree upon. In the negotiations so far, independent distributors such as Vizada have differed strenuously with Inmarsat as to what is needed to ensure the very “robust, global, value-added distribution network that includes a variety of third party distributors” which Inmarsat says it “intends” to have. (Opp. at 6.)

Third, it is unfair and duplicitous for Inmarsat to selectively disclose in its Opposition only pieces of its total proposed distribution structure without including all the other pertinent pieces. Nor is it necessary to rely on the self-serving claim that “Inmarsat’s stated business plans do not favor one distributor over another.” (Opp. at 21.) Rather than trust Inmarsat’s innocent-sounding protestation that all it wants is a “robust . . . network that includes . . . third party distributors” meeting

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[16/](#) Inmarsat began discussions of new distribution agreements in February 2008, well after it acquired its option for Stratos.

[17/](#) Inmarsat Opp. at 6-7.

customers' needs, [18/](#) the Commission is entitled to read the new distribution agreements itself to verify and ensure that the Stratos deal will not undercut "robust" intra-brand competition.

#### **4. The Commission Has Ample Authority and Responsibility To Address the Content of the Distribution Agreements Before Ruling on the Acquisition**

Vizada recognizes, of course, that the eventual distribution agreements for the post-merger period will constitute commercial contracts between privately owned entities, except to the extent that the Commission imposes additional public policy conditions as part of any transfer-of-control approval order. However, Inmarsat's argument that the Commission has a policy "not to consider" any such "private contractual matters" in a "merger review" (Opp. at ii) is just plain wrong. The unremarkable fact that distribution agreements entail commercial negotiation and dispute resolution between privately owned entities does not oust the Commission of investigative jurisdiction or make the actual or prospective content of such agreements irrelevant to the merger review process. Far from it.

When Inmarsat challenged the proposed combination that led to the formation of Vizada, Inmarsat itself contended (1) that "the Commission has . . . continuing oversight authority with respect to the distribution arrangements of Inmarsat," (2) that there is "no barrier to the Commission taking a continuing interest in the effectiveness of competitive distribution channels" for Inmarsat

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[18/](#) Inmarsat Opp. at 6.

services, (3) that the Commission must consider the effect of the proposed transaction on competitive “incentives” with respect to Inmarsat distribution, and (4) that the Commission’s “general reluctance to become enmeshed ‘in private contractual matters’” such as distribution agreements has no application in this context. [19/](#) Although the Commission rejected Inmarsat’s effort to prevent that particular combination of Inmarsat distributors, it did not say that distribution arrangements and competitive incentives relating to distribution of Inmarsat services were private contract matters unsuitable for Commission consideration. [20/](#)

Moreover, in a wide variety of transfer of control cases the Commission has not avoided as “private contractual matters” questions about whether third parties might be adversely affected after the merger in their ability to maintain (or obtain) fair, non-discriminatory contractual relationships with the integrated enterprise. Instead, the Commission has consistently considered on the merits whether to impose conditions to protect third parties from vertical harms with respect to distribution/programming access, programming carriage, channel leasing, access to

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[19/](#) Reply of Inmarsat Global Ltd, *In the matter of Telenor ASA, Transferor, and Inceptum I AS, Transferee, Consolidated Application for Consent to Transfer of Control and Petition for Declaratory Ruling*, IB Docket No. 06-225, February 6, 2007, at 2-4.

[20/](#) *Telenor ASA, Transferor, and Inceptum I AS, Transferee, Consolidated Application for Consent to Transfer of Control and Petition for Declaratory Ruling*, Public Notice, 22 FCC Rcd 9325, 9327-28 (IB, WTB, OET, rel. May 23, 2007).

lines and facilities, and roaming agreements. <sup>21/</sup> Furthermore in these cases, it was irrelevant that the merger party controlling the critical input needed by third parties was legally and contractually free to build its own downstream business from scratch rather than buy the key downstream distributor. <sup>22/</sup> Even where *internal expansion downstream was contractually possible*, the Commission did not disregard the anticompetitive effect on the powerful upstream supplier's relationships with independent distributors when that supplier *sought to expand downstream via major acquisition*. <sup>23/</sup>

In short, when one of the commercial parties to distribution or other vertical contractual arrangements has market power, as Inmarsat has here, the Commission is obligated by its public interest mandate and its own precedents to address the public interest aspects of the situation. Where the market power arises from control of wholesale inputs necessary to competition, the Commission has two choices. It may deny the combination, preventing harm to consumers that way. Or

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<sup>21/</sup> See, e.g., *Liberty Media/DirecTV*, 23 FCC Rcd 3265, 3294 ¶¶ 64-84; *Adelphia* 21 FCC Rcd 8203, 8273-78 ¶¶ 69-191 ; *AT&T Inc. and BellSouth Corp. Application for Transfer of Control*, 22 FCC Rcd 5662, 5675-87 ¶¶ 26-51 and App. F (2007)(“*AT&T-BellSouth*”); *Cingular/AT&T Wireless*, 19 FCC Rcd 21522, 21586-93 ¶¶ 166-82; *General Motors Corp. and Hughes Elec. Corp., Transferors, and The News Corp. Ltd., Transferee, for Authority to Transfer Control*, 19 FCC Rcd 473, 509-87 ¶¶ 76-258 (2004)(“*News Corp.-Hughes*”).

<sup>22/</sup> See *supra* note 21.

<sup>23/</sup> See *supra* note 21.

alternatively, it may impose merger conditions and other restrictions affecting the commercial contractual relationships between the prospective vertically merged entity and third parties. Either way, the future relationships between Inmarsat and Stratos, and between Inmarsat and its other distributors, are *not* “purely . . . contractual matter(s) that Commission policy provides should be handled privately” (Opp. at 21.) Those future relationships are at the heart of this proceeding to assess whether the Stratos acquisition is in the public interest.

### **III. DESPITE THE APPLICANTS’ FAILURE PROPERLY TO DEFINE MARKETS, THE RECORD SHOWS INMARSAT HAS MARKET POWER IN FOUR IMPORTANT RELEVANT PRODUCT MARKETS AFFECTED BY THIS TRANSACTION**

#### **A. The Parties Failed to Fulfill Their Obligation to Define with the Required Specificity the Affected Relevant Markets**

Inmarsat and Stratos prefer to obfuscate rather than confront head-on the proposition that Inmarsat holds unquestionable market power in key service and customer segments that constitute relevant product markets under Commission and antitrust standards. The burden of proof is on the Applicants to demonstrate, among other things, that in *each* of the relevant markets in which one or the other (or both firms) operates (or where Inmarsat will operate beginning in April 2009), there will be no net harm to competition. [24/](#) The Applicants have the obligation at

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[24/](#) See, e.g., *Applications of Nextel Communications, Inc. and Sprint Corp.*, 20 FCC Rcd 13967, 13980-90 ¶¶ 26-50; *Echostar-DIRECTV HDO*, 17 FCC Rcd 20559, 20605-09 ¶¶ 106-16.

the outset to identify and define the relevant product markets in which they operate using the analytical tools that, under binding Commission precedents, govern the market definition process in transfer of control proceedings. [25/](#)

The Commission has made it abundantly clear that, in a vertical as well as a horizontal merger, market definition must follow the methodology set forth in the Department of Justice / Federal Trade Commission Merger Guidelines. [26/](#) That methodology requires that markets be defined from the demand or buyer side

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[25/](#) *Id.*

[26/](#) “We define the [relevant] product market according to the analytical framework and principles outlined by the U.S. Department of Justice and the Federal Trade Commission in the *Horizontal Merger Guidelines*.” *Liberty Media/DirectTV*, 23 FCC Rcd 3265, 3280 ¶ 31. Inmarsat is dead wrong in suggesting that the relevant market definition sections of the DOJ/FTC Horizontal Merger Guidelines “are not relevant in this *vertical* transaction” (Opp. at 3 n.3). This Commission (*see, e.g., Liberty Media/DirectTV, supra*) and the antitrust enforcement agencies use the market definition methodology that is set out in the “horizontal” guidelines for vertical transactions as well as horizontal combinations.

In 1984, the Merger Guidelines issued by the DOJ covered both horizontal and non-horizontal (*i.e.*, vertical and conglomerate) mergers. When the horizontal guidelines were revised periodically and became a joint publication for both DOJ and FTC, the vertical guidelines that were part of the previously combined DOJ guidelines were not changed and now appear separately on the DOJ’s web page. *See* DOJ Non-Horizontal Merger Guidelines available at <http://www.usdoj.gov/atr/public/guidelines/2614.htm>. DOJ and FTC have no separate standards for defining relevant markets in vertical or conglomerate cases, but rely upon the market definition methodology set out in the current version of the horizontal guidelines. The text of the section on relevant product market definition appears in DOJ/FTC, *Horizontal Merger Guidelines* (April 2, 1992, revised April 8, 1997) ¶¶ 1.1-1.12, available at <http://www.usdoj.gov/atr/public/guidelines/hmg.htm#11> .

beginning with the smallest possible hypothetical relevant market. [27/](#) In any given transaction, at the end of the market definition exercise there may be multiple distinct relevant product markets. Each such market then must be considered separately to see if the transaction may lead to a net negative effect upon competition in that particular market. [28/](#)

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[27/](#) “The Guidelines define the relevant product market as the smallest group of competing products for which a hypothetical monopoly provider of the products could profitably impose at least a ‘small but significant and non-transitory price increase,’ presuming no change in the terms of sale of other products.” *Liberty Media/DirecTV*, 23 FCC Rcd 3265, 3280 ¶ 31. Market definition “focuses solely on demand substitution factors -- *i.e.*, possible consumer responses.” *Horizontal Merger Guidelines* ¶ 1.0. “Supply substitution factors” are not part of defining the market but figure later in the competitive analysis. *Id.* Instead the focus is upon determining whether “in the eyes of a sufficiently large number of consumers” a product lacks any “reasonable substitute.” *Liberty Media/DirecTV*, 23 FCC Rcd 3265, 3280 ¶ 31.

[28/](#) Inmarsat claims Vizada defined the relevant product market differently in a European proceeding. Opposition at 8-9. European competition authorities do not always follow the same analytical approach as the *Horizontal Merger Guidelines* and, for example, will take supply-side circumstances into account in defining the relevant product market(s). Consequently, there is nothing untoward for Vizada’s predecessors, in responding to a Norwegian competition authority inquiry, to have defined the product market affected by their proposed combination in terms of supply-side concepts, such as what the satellite operators have to supply (*i.e.*, capacity) and the universe of places to which those operators transmit (globally to land, sea, and air). In any case, that proceeding involved a combination of entities that operated on the same reseller/distributor level, making it unnecessary to determine whether any particular satellite operator, such as Inmarsat, was the only operator to which one or more groups of end-users (or end-users’ suppliers) could turn to satisfy unique needs. In contrast, this transaction involves a former monopolist upon whom MSS distributors depend for key MSS inputs.

The Application Narrative makes no effort to identify and define affected relevant product markets from the customer side as required by Commission precedent and the Merger Guidelines. The Narrative speaks from a very broad supply-side perspective and simply lumps all of Inmarsat’s services together regardless of communications function served, customer location (*e.g.*, sea, air, land), geography covered, price, speed, capacity, quality, etc. The Narrative speaks of Inmarsat’s present or projected relevant products variously as “satellite services,” “innovative MSS services around the world,” “one of the most advanced commercial mobile communications satellite systems,” “mobile services,” and “wholesale and retail satellite services.” [29/](#) The Narrative notes competition from Fixed Satellite Services for provision of “mobile services” to “ships, airplanes and vehicles.” [30/](#) At one point, the Application speaks in the plural of the “*markets* for commercial communications satellite services.” [31/](#) The Application even contains an impressive list of “users *who rely on Inmarsat services for their critical communications needs*,” including US military, homeland security, and executive and legislative authorities, the NY City Fire Department, the Red Cross, major news media organizations, and “nearly every major airline and shipping line

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[29/](#) Application, Narrative at 4, 7, 8.

[30/](#) *Id.* at 7.

[31/](#) *Id.* at 7 (emphasis added).

throughout the world.” [32/](#) But nowhere are anything like antitrust-relevant product and geographic markets defined. [33/](#)

In their Oppositions, the Parties take umbrage at the notion that they have *any* burden to provide greater product market specificity and they basically refuse to provide any real clarity on the subject. The Applicants claim (incorrectly) that the Commission has closed the door on debate and irrevocably lumped all Inmarsat services -- no matter which generation of Inmarsat satellites provides them, no matter what specific customer/functional needs are served, no matter what terminal equipment is used, and regardless of how those services are otherwise differentiated among themselves -- into a single relevant product market for all regulatory purposes, including any analysis of the competitive effects of this specific transaction. But even then, the Parties persist in using vague but substantively different generalizations when alternative approaches serve their purposes, *e.g.*, speaking first of a “market of international mobile satellite services,” presumably

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[32/](#) *Id.* at 4 (emphasis added).

[33/](#) To be sure, the Application does a slightly better although not especially helpful job in defining Stratos’s non-MSS service customers, needs and geographies, *e.g.*, FSS VSAT services consisting of resold capacity of Intelsat and SES, terrestrial microwave services for oil and gas facilities in the Gulf of Mexico, and competitive local exchange, competitive access, and interexchange services for Louisiana and Texas oil and gas customers.

meaning just MSS suppliers, but later referring to a “marketplace” in which “FSS alternatives are a significant source of competition to all MSS providers.” [34/](#)

Frustrated with the Parties’ total abdication of their responsibility to define up front in the Application each of the distinct relevant product markets affected by this transaction, Vizada’s Petition identified various product characteristics that Inmarsat offers and noted in its Petition that no other entity today provides comparable products with the same or reasonably close substitute characteristics. [35/](#) In its Opposition, Stratos jumps to the insupportable conclusion that Vizada is describing a single unified relevant product market and that such a market definition was “gerrymander[ed]” for this case. [36/](#) To the contrary, Inmarsat’s and Stratos’s own promotional literature and the many statements of Inmarsat officials to investors and industry press confirm the very product market distinctions that we pointed out in the Petition. [37/](#)

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[34/](#) Inmarsat Opposition at 8, 12.

[35/](#) Petition to Deny at 3-5, 16-7, 22-8, 33-4.

[36/](#) Stratos Opposition at 3, 9.

[37/](#) Petition to Deny at 5 n.4, 25-7. *See, e.g.*, Inmarsat's homepage dividing its products among user categories (*i.e.*, land mobile, maritime, and aeronautical, <http://www.inmarsat.com/> ) and then by product functional characteristic (*e.g.*, voice, lower speed data, higher speed/broadband) <http://www.inmarsat.com/Services/?language=EN&textonly=False>. Inmarsat reports its financial results by “maritime,” “land mobile,” and “aeronautical” as well as “leasing.” *See* Inmarsat Form 20-F for year ended December 31, 2007 at 26 (filed

Nowhere did Vizada suggest that there was one single relevant market for purposes of analyzing the anti-competitive effects of this proposed acquisition. Vizada did, however, suggest that there are a number of important distinguishable relevant markets, defined on the basis of standard antitrust economic analysis. <sup>38/</sup> Vizada also explained that even within a particular candidate product market, under the Merger Guidelines there may well be a customer segment that effectively constitutes its own “discrimination” market or submarket. That is to say, Inmarsat would be able to identify a smaller subset of all buyers of a particular Inmarsat product who, through economic lock-in or some other reason, are unable or far less likely than the remaining buyers to switch to a substitute product in the face of a small but significant and non-transitory increase in price (SSNIP). <sup>39/</sup> All of that is consistent with the market definition methodology set out in the Guidelines and endorsed by the Commission.

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April 29, 2008) available at <http://www.sec.gov/Archives/edgar/data/1291396/000119312508095004/d20f.htm>. For its “higher bandwidth” or “broadband” services, Inmarsat distinguishes these services in terms of functionality and price, *i.e.*, as being “supported by terminals that are smaller, more profitable and cheaper than the terminals used to access our other services.” Stratos reports its financial results by “maritime,” “land,” and “aeronautical” and further divides “maritime” and “land” into “voice” and “data.” Stratos Global Form 40-F for year ended December 31, 2006, available at <http://www.sec.gov/Archives/edgar/data/1178832/000095013307001460/w32567exv99w3.htm>.

<sup>38/</sup> *Id.* at 20-21.

<sup>39/</sup> *Id.* at 27-8.

## **B. Inmarsat Has Significant Market Power In Key Relevant Product Markets**

Vizada contends that Inmarsat has substantial market power in a number of distinct relevant product markets. In support thereof Vizada submits with this Reply the Expert Statement of Dr. Tim Farrar, President of Telecom, Media and Finance Associates (“TMF Associates”), a California consultancy that publishes the most (and perhaps the only truly) comprehensive research service on mobile satellite service providers and distributors. Dr. Farrar has consulted widely for participants in the MSS field and is intimately familiar with both the MSS business and developments in Fixed Satellite Services and terrestrial or other communications services that affect MSS providers and distributors. In the course of his consultancy work, Dr. Farrar has compiled extensive data on the estimated size of various business segments, the technical and economic differences and similarities between different segments, the specific needs of customers, and the shares of various providers and distributors.

Dr. Farrar explains that maritime, aeronautical, and land-based MSS users “have distinct product and service requirements” and face “very different competitive environments.” <sup>40/</sup> As a result, it is appropriate to think of maritime, aeronautical, and land-based customers as situated differently from each other. Within each customer category, he further divides users according to the service

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<sup>40/</sup> TMF Associates Expert Statement (Attachment A) at 4.

requirements they have and/or the functions they need their communications to perform, *e.g.*, voice (or voice with low speed data), low speed data only, low speed data that also satisfies a safety requirement, and high speed data. [41/](#) Dr. Farrar further notes that some customers need coverage in one or more specific geographic regions while others need global coverage. [42/](#)

### **1. Inmarsat Dominates Maritime Low Speed Data Services**

As Inmarsat and Stratos know well, the International Maritime Organization (“IMO”) requires ships of more than 300 gross tons to have on board a Global Maritime Distress and Safety System (“GMDSS”) to alert the US Coast Guard and comparable rescue authorities in other jurisdictions when there is a safety emergency. [43/](#) Inmarsat is the only supplier of an IMO-certified satellite-based GMDSS service, and Dr. Farrar estimates that Inmarsat will continue to have that monopoly at least until 2012 and maybe longer. [44/](#) The IMO could consider eventually certifying an alternative satellite-based GMDSS supplier, but would not do so unless and until it was reasonably confident that the second supplier will have

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[41/](#) *Id.* at 5.

[42/](#) *Id.* at 8, 9, 11, 13, 14.

[43/](#) *Id.* at 6.

[44/](#) *Id.* at 7.

a satellite system that will reliably deliver the GMDSS service. [45/](#) Iridium might be a candidate for GMDSS certification down the road, but the IMO is unlikely to certify Iridium until Iridium secures adequate funding for its second generation constellation of satellites and is well along in deploying the full complement of new satellites. [46/](#) Until at least 2012, there is too great a concern, based largely on Iridium's past bankruptcy and substantial future funding requirements, for the IMO to allow 300-ton ships to go without an Inmarsat GMDSS system. [47/](#)

Inmarsat does not charge for its GMDSS service. This capability is provided with an Inmarsat C terminal. These terminals also support a low speed data service (basically text messaging) for which Inmarsat does charge. Inmarsat currently has deployed in excess of 80,000 active Inmarsat C maritime terminals that, in turn, account for about 90 percent of Inmarsat's total maritime low speed data revenues. [48/](#) Dr. Farrar estimates that up to 80 percent of those 80,000+ Inmarsat C customers have installed an Inmarsat C terminal in order to comply with GMDSS requirements. Inmarsat also offers D+ (now called M2M) terminals that provide low data rate maritime service for tracking applications and faces some

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[45/](#) *Id.*

[46/](#) *Id.*

[47/](#) *Id.*

[48/](#) *Id.* at 6 and n.7.

competition from Iridium. But as to low speed data services for maritime customers overall, Dr. Farrar explains that Inmarsat is dominant and, due to its GMDSS monopoly for satellite-based service, will remain dominant for at least four more years and perhaps longer -- well beyond the proposed Stratos acquisition [49/](#). As Dr. Farrar points out, the fact that Inmarsat today faces some Iridium competition in the maritime *voice* market (which does not involve the GMDSS low speed data application) has no bearing on Inmarsat's continued dominance in maritime low speed data services. [50/](#) Given the substantially higher prices charged for high speed data services, whether provided by Inmarsat or someone else (see below), such satellite broadband service clearly is not an adequate alternative to low speed for those customers who want and need only low speed.

The bottom line is that for quite a number of years after the Stratos acquisition, Inmarsat will have essentially unchallengeable market power in the wholesale provision of low data rate service for approximately 64,000 end users. Today those 64,000 customers do benefit from intra-brand competition among Stratos, Vizada, and other distributors; but after Inmarsat gains control of Stratos, as discussed here and in the Petition, the situation changes dramatically for the worse.

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[49/](#) *Id.* at 7.

[50/](#) *Id.*

## 2. Inmarsat Dominates Maritime Broadband Services

Dr. Farrar also explains that Inmarsat is the only MSS operator today providing high speed (*i.e.*, 64 kbps plus) data services to maritime customers, although Iridium (the sole other global MSS provider) is close to launching a somewhat capacity constrained high speed data service called OpenPort. [51/](#) Iridium's first generation satellites have limited marketable capacity for high speed data services in contrast to Inmarsat's fully launched I-4 constellation.

Iridium's marketable capacity for OpenPort is likely to be less than one-twentieth (1/20) of the capacity available on the Inmarsat 4 system, once Inmarsat's Alphasat satellite is launched in 2011 or 2012. [52/](#) As a consequence, unless and until Iridium's second generation satellites are up and running (which will not be before 2016), Iridium can compete for the high speed data service needs only of those currently Inmarsat-equipped ships that actually transmit and receive relatively small amounts of high speed data. Dr. Farrar estimates that until 2016 at the earliest, Iridium can expect to become a competitive threat for those maritime customers who supply no more than 18 percent of Inmarsat's high speed data revenues and not for the rest. [53/](#)

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[51/](#) *Id.* at 8.

[52/](#) TMF Associates Expert Statement (Attachment A) at 8.

[53/](#) *Id.*

Currently approximately 30,000 ships using Inmarsat high speed data services do not have a cost-effective C-band or Ku-band satellite alternative or a non-Inmarsat MSS alternative. <sup>54/</sup> Roughly 15,000 of those ships, according to Dr. Farrar, have limited needs for high speed data services and may eventually consider Iridium OpenPort to be an alternative to which they might be willing to switch, provided Iridium's launch goes smoothly and the OpenPort service begins to attract customers in the way Iridium's voice service eventually did over a several-year introductory period. <sup>55/</sup> Approximately 15,000 of the ships from this 30,000 ship universe, however, have needs greater than Iridium's pre-2016 capacity and thus will have no MSS (or other satellite) alternative to Inmarsat until 2016 at the

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<sup>54/</sup> *Id.* at 9-10. Dr. Farrar estimates that as of September 2008 there are approximately 33,000 ships are equipped with Inmarsat B and Fleet terminals. Last year Inmarsat told its investors that such an Inmarsat B- or Fleet-equipped ship begins to become economically attracted to VSAT as an alternative if the ship is incurring charges which equal or exceed \$1500 per month in wholesale revenues to Inmarsat. Analyzing expenditure information provided by Inmarsat, Dr. Farrar calculates that only 10 percent of the Inmarsat B- and Fleet-equipped ships generated that level of expenditure in 2007. Consequently, reasonably assuming that the percentage of such ships potentially attracted economically to VSAT has remained constant, Dr. Farrar determines that only 10 percent of the 33,000 ships equipped with Inmarsat B or Fleet as of September 2008, *i.e.*, only 3000 such ships, have an economically appealing alternative in VSAT. That, of course, leaves aside the question of whether those ships view VSAT as adequate on technical and geographical coverage grounds.

<sup>55/</sup> *Id.*

earliest. [56/](#) With respect to these 15,000 ships with high speed data needs (and the number of such ships with these needs naturally will continue to grow), Inmarsat will have continuing market power until at least 2016. (No MSS provider, such as Globalstar, Thuraya, MSV, or Orbcomm has a deep sea broadband service that would be an adequate alternative to Inmarsat (or Iridium in 2016)). [57/](#) It is these 15,000 ships (and new ones with comparable needs) that will depend on this Commission not allowing Inmarsat's proposed Stratos acquisition to diminish, distort, or eliminate intra-brand competition.

Dr. Farrar explains why C-band and Ku-band VSAT FSS high speed data services are not an adequate alternative for these 15,000 Inmarsat-served ships (or the other roughly 15,000 Inmarsat-served ships as to which Iridium's OpenPort may eventually become an alternative). C-band generally is not a practical solution because of the comparatively larger size (4-meter dish radius), weight (several tons), and cost (around \$90,000) of the terminal equipment (*i.e.*, only very large vessels can fit the antennas on board) [58/](#) and high flat-rate service costs. [59/](#) Based on

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[56/](#) *Id.*

[57/](#) *Id.* at 10 n. 18.

[58/](#) *Id.* at 9. The FCC has recognized that only larger vessels are able to accommodate large antennas, such as those using C-band. In fact, the Commission (consistent with ITU Recommendations) has adopted a minimum vessel size of 300 gross tons for Earth Stations on Board Vessels to utilize the C-band. *See In the Matter of Procedures to Govern the Use of Satellite Earth Stations on Board Vessels*

data Dr. Farrar has for an oil company's tankers that use C-band for high speed services, such services cost approximately \$8,000 per month. [60/](#) Although flat-rate C-band pricing can become attractive at some usage levels, only a few hundred vessels today use C-band. [61/](#)

Ku-band terminals are smaller than C-band, requiring less space and weighing less. Ku-band also offers flat-rate shared bandwidth services that can be more economical than C-band. Ku-band VSAT terminals, however, are larger and more expensive than Inmarsat's Fleet and FleetBroadband terminals. [62/](#) Although Ku-band may have throughput exceeding Inmarsat's high speed data services, Ku-band is often not a functionally adequate substitute for Inmarsat high speed data services, particularly for ships traveling between one coast and one or more distant coasts, such as ocean-going cargo vessels. [63/](#) The owner of a fleet of such vessels needs to take into account that Ku-band VSAT provisioning is very

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*in the 5925-6425 MHz/3700-4200 MHz Bands and 14.0-14.5 GHz/11.7-12.2 GHz Bands*, Report and Order, 20 FCC Rcd 674, 700 ¶ 61 (2004).

[59/](#) TMF Associates Expert Statement (Attachment A) at 8.

[60/](#) *Id.* at 8.

[61/](#) *Id.*

[62/](#) *Id.* at 9.

[63/](#) *Id.* at 8-9.

fragmented, with different providers and different regulatory schemes in each country or region of the world, and with some heavily traveled regions such as the South Atlantic and Indian Oceans entirely lacking the requisite Ku-band service suppliers. [64/](#) But where adequate Ku-band capacity for the particular customer's need is present, and the transactional and regulatory costs and uncertainties can be surmounted, Ku-band may be an alternative to Inmarsat. [65/](#) In any event, however, that is still a fairly small sliver of the maritime customers served by Inmarsat's high speed data services. [66/](#)

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[64/](#) *Id.* at 8 n.13.

[65/](#) Stratos incorrectly asserts that Vizada's WaveCall maritime Ku-band VSAT service is "global." Stratos Opposition at 12. The Vizada website says there is only "regional coverage" and lists the regions. See [http://www.vizada.com/819\\_1](http://www.vizada.com/819_1). The coverage map to which Stratos refers plainly shows only regional coverage, *i.e.*, certain regional coastal areas and the North Pacific. <http://www.vizada.com/818> (Product Documentation and coverage map accessed in upper right corner).

Stratos asserts "the U.S.Navy has already begun to migrate its ships with requirements for high bandwidth from Inmarsat B HSD [high speed data] to VSAT." Stratos Opposition at 12. But indications are that the Navy will continue to use Inmarsat. See, *e.g.*, Communications Program Office (PMW/A 170), U.S. Navy Commercial SATCOM Review, Navy SATCOM Roadmap (slide 9) (June 12, 2008) available at [http://files.messe.de/www.cebit-america.com/cms\\_bin/1660831\\_TH10am1pmTang,Kai.pdf](http://files.messe.de/www.cebit-america.com/cms_bin/1660831_TH10am1pmTang,Kai.pdf)

[66/](#) By Dr. Farrar's calculations, Ku-band becomes a reasonable economic alternative to Inmarsat's new FleetBroadband high speed data service only when that customer has sufficient high speed data needs to project retail spending of approximately \$3000 per month for the Ku-band service. When Inmarsat set its pricing structures for FleetBroadband, the company offered steep discounts for customers who would commit to spending upwards of \$3000, expecting that those

Dr. Farrar estimates that in 2007 Inmarsat had wholesale services revenue from maritime customers (low speed as well as broadband) of \$349 million, of which \$189 million or 54 percent was generated from customers for whom there was no MSS or other alternative to Inmarsat. [67/](#) Among MSS operators, only Iridium generated any maritime revenues, a mere \$35 million or 9 percent of the MSS revenues for maritime low speed and high speed combined. [68/](#)

### 3. Inmarsat Dominates Aeronautical Broadband Services

Dr. Farrar makes clear that Inmarsat is the *only* MSS operator currently offering high speed data services for use aboard government and corporate business jets. [69/](#) Inmarsat's Swift 64 product has experienced rapid take up, numbering about 1800 terminals in use at the end of 2007. [70/](#) Although Iridium is beginning to provide an MSS alternative to Inmarsat with respect to voice and low speed data

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were the customers for whom Ku-band might be a tempting alternative. *Id.* at 9. No such discounts were available for customers spending a lesser amount. *Id.* As of March 2008, flat rate pricing for shared bandwidth Ku-band from three suppliers ranged between \$2570 and \$3500 per month. *Id.* Inmarsat's \$3000 figure for starting the steep Fleet Broadband discounts, not surprisingly, falls right near the median of those Ku-band rates.

[67/](#) *Id.* at 10 and Figure 2.

[68/](#) *Id.*

[69/](#) *Id.* at 11.

[70/](#) *Id.* See Inmarsat Press Release, "Inmarsat Swift 64 reaches 3,000 Channels" (Sept. 9, 2008) (3,000 installations on aircraft worldwide) available at <http://www.inmarsat.com/About/Newsroom/Press/00024263.aspx>.

services (and has received authorization to offer some safety services) for use on corporate business jets and general aviation, Iridium does not have the capacity to offer high speed data services to aeronautical customers. [71/](#)

Due to the weight and size of the antennae, C-band obviously is not an alternative for aeronautical uses. According to Dr. Farrar, Ku-band VSAT is a possible supplier of aeronautical high speed data services in only narrow circumstances, *i.e.*, when the plane is flying domestically in a country like the US that has adequate over land and coastal Ku-band coverage, or when the plane is flying internationally just on those small number of routes such as the North Atlantic where oceanic Ku-band coverage is adequate. [72/](#) For most planes that will be flying in other areas, Inmarsat is the only choice for high speed data services. As a consequence, Dr. Farrar estimates that today only approximately 100 corporate business jets and government aircraft are actually equipped with Ku-band technology. [73/](#) Moreover, as Dr. Farrar observes, the cost and complexity of switching a plane to equip it for a Ku-band VSAT solution constitutes a real “barrier” in the form of costs “up to \$350,000.” [74/](#)

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[71/](#) TMF Associates Expert Statement (Attachment A) at 11-12.

[72/](#) *Id.* at 11.

[73/](#) *Id.*

[74/](#) *Id.* at 12. See Vizada Petition to Deny at 24-6.

In North America, Dr. Farrar suggests that AirCell's recently launched terrestrial wireless broadband service may become a cost-effective alternative to Inmarsat high speed data, but only for planes that will not be flown internationally and possibly only for newer planes that do not already have Inmarsat avionics. [75/](#) Dr. Farrar estimates that approximately 900 of the 1800 Inmarsat Swift 64 terminals that were operating on planes in 2007 were used in international flights where AirCell is not an alternative. [76/](#) Moreover, the cost and complexity of installing AirCell terminals (ranging around \$100,000) can constitute a significant financial barrier to switching away from Inmarsat on planes where Inmarsat equipment already is present. [77/](#)

In sum, Inmarsat is and will remain the only viable supplier of aeronautical high speed data services for most customers well into the future. With respect to those customers, Inmarsat has and will continue to have market power, thus making it critical to consumer welfare that the vigorous intra-brand competition between and among Stratos, Vizada, and other distributors not be distorted, diminished, or eliminated by Inmarsat's purchase of Stratos.

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[75/](#) *Id.* at 11.

[76/](#) *Id.*

[77/](#) *Id.* at 12.

Dr. Farrar estimates that in 2007 Inmarsat generated \$61 million in revenues from low speed as well as broadband aeronautical customers, of which \$24 million or 39% was derived from customers who had no practicable MSS or VSAT alternative to Inmarsat. Among MSS operators, Iridium was the only operator besides Inmarsat to generate aeronautical revenues, and those revenues were all in the voice and low speed data sector. <sup>78/</sup> Just considering MSS operators and excluding VSAT, Inmarsat had a dominant aeronautical share of 82% and Iridium a modest 18%. <sup>79/</sup>

#### **4. Inmarsat Dominates Broadband Services to Remote Land-Based Locations**

As the Commission knows, there are many places on land around the globe where news media, mineral mining and oil and gas exploration firms, the military, and others have the need on an urgent basis to transmit and/or receive large quantities of digital information, including video, numerical and graphical data, etc., along with voice. Terrestrial high speed data lines may not exist in places where communications capabilities are required. Due to size, weight, and cost restrictions, C-band satellite is out of the question. Ku-band VSAT terminals, being heavier, less portable, and much more costly than MSS terminals, are not an adequate alternative to MSS, at least not for short-term applications such as rush

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<sup>78/</sup> *Id.* at 12 and Figure 3.

<sup>79/</sup> *Id.*

newsgathering, roaming data collection, and similar transient uses. <sup>80/</sup> As Dr. Farrar says, “VSAT essentially serves a different market segment [from Inmarsat’s BGAN] where capacity demands are expected to be longer term (months or years in duration).” <sup>81/</sup> For instance, when the international news media rush to a new crisis spot such as Georgia, it is the highly portable Inmarsat BGAN terminals that they bring first. <sup>82/</sup> Only if the crisis persists might it make economic sense later to bring in Ku-band communications technology for coverage in the more populated areas. Even then, it is Vizada’s experience that the MSS terminals typically then

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<sup>80/</sup> *Id.* at 14.

<sup>81/</sup> *Id.* at 15.

<sup>82/</sup> See e.g., Inmarsat Press Release “TSF sets up satellite call service for Georgia conflict victims,” available at <http://www.inmarsat.com/Services/Land/News/00024241.aspx>; ; Asia-Pacific Broadcasting, “Powerful transmission in a backpack,” May 2, 2008, available at [http://www.apb-news.com/index.php?option=com\\_content&task=view&id=209&Itemid=44](http://www.apb-news.com/index.php?option=com_content&task=view&id=209&Itemid=44) (“The terminals for BGAN . . . are reportedly far cheaper to buy than Ku- or Ka-band satellite newsgathering rigs, and yield significant employee cost savings as no trained technical personnel are required to operate them. \* \* \* More importantly for CNN, BGAN satellite newsgathering allows reporters to begin broadcasting without waiting for flyaway Ku- or Ka-band earth stations — or help from technical expertise. ‘BGAN terminals are lightweight, portable and can be hand-carried to a breaking-news location for immediate contribution to the news coverage,’ says Richard Stokes, systems engineer for CNN International. ‘In the field, [these] terminals offer remote connectivity without requiring a large amount of technical know-how, as they are reasonably straightforward to operate.’ \* \* \* Unlike some Ku- and Ka-band satellite newsgathering systems, BGAN is generally unaffected by the weather.”).

are relocated to new remote locations for continued use, once again meeting a need that the Ku-band technology cannot satisfy. [83/](#)

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[83/](#) BGAN is the only practicable means for news reporting from many newsworthy locations where Ku-band VSAT simply is not a useful alternative. *See, e.g.*, Inmarsat press release, “BGAN to rescue as high winds wreck BBC shoot” (Jan. 5, 2007) available at <http://www.inmarsat.com/Services/Land/News/00022377.aspx?language=EN&textonly=False> (live broadcast from wind farm accomplished via BGAN after VSAT ripped from roof of newsgathering vehicle); News Technology Update e-newsletter, “BGAN portable terminal transmits BBC coverage of Philippine mudslide,” (Mar. 1, 2006) available at <http://broadcastengineering.com/newsrooms/BBC-BGAN-Inmarsat-20060301/> (Inmarsat’s BGAN service “enable[s] journalists to send live television and radio reports from anywhere in the world. \* \* \* [T]he BGAN terminal “deliver[s] data speeds up to 492 kb/s[,] . . . is about the size of a small laptop PC [, and] . . . can be set up and shut down in minutes without special technical expertise.”).

*Accord*, Asia-Pacific Broadcasting News, “Satellite broadband delivers news” (Oct. 10, 2006) available at [http://www.apb-news.com/index.php?option=com\\_magazine&func=show\\_article&id=30&Itemid=1](http://www.apb-news.com/index.php?option=com_magazine&func=show_article&id=30&Itemid=1) (“News teams are discovering the benefits of BGAN services to deliver the latest news updates from remote areas in the region. \* \* \* Because the site of the landslide would make heavy newsgathering equipment dangerous, only lightweight systems were allowed. \* \* \* As the BGAN terminal can handle full-quality voice and Internet data transmissions, it also allowed the [broadcast] team to leave its Iridium satellite telephones behind, thus reducing costs and, as the Iridium phones are nearly as heavy as a BGAN terminal, adding little to the total weight. \* \* \* Size and convenience are the main reasons [the broadcaster] chose BGAN, Park said. ‘Because it is ultra portable and has a high-speed data rate. Besides, the price of the equipment is much cheaper, and the service rates are cheaper too.’ \* \* \* “Much of the growth has been in use of [Inmarsat’s] BGAN service by the news media, said [Inmarsat] CEO Andrew Sukawaty. ‘In the Middle east, you’d be hard-pressed to see a single news programme which is not using a BGAN terminal for broadcasting.’”).

According to Dr. Farrar, in most cases no MSS alternative to Inmarsat's BGAN service is available or will likely become available anytime soon. <sup>84/</sup> Inmarsat's BGAN service offers speeds up to 492 kbps and basically covers the globe. <sup>85/</sup> In the past several years, BGAN has achieved strong growth and served 15,800 terminals at the end of 2007. <sup>86/</sup> Users of Inmarsat's somewhat lesser speed GAN (up to 64 kbps per terminal) and R-BGAN (up to 144 kbps) accounted for another 18,200 terminals at the time. <sup>87/</sup> Dr. Farrar estimates that of Inmarsat's approximately 34,000 land-based high speed data GAN, R-BGAN, and BGAN customers, around 90 percent or 30,600 of those customers have no access to a readily available satellite alternative. <sup>88/</sup> He further calculates that the total BGAN/GAN customer base will grow to 50,000 terminals by 2011, and that 80 percent of those terminals will be used by customers for whom there will still be no adequate competitive alternative. <sup>89/</sup>

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<sup>84/</sup> TMF Associates Expert Statement (Attachment A) at 14.

<sup>85/</sup> *Id.* at 13. See Inmarsat description of its BGAN service's "global coverage." <http://www.inmarsat.com/Services/Land/BGAN/Benefits.aspx?language=EN&textonly=False>.

<sup>86/</sup> TMF Associates Expert Statement (Attachment A) at 14.

<sup>87/</sup> *Id.*

<sup>88/</sup> *Id.*

<sup>89/</sup> *Id.* at 14.

By contrast, MSS provider Thuraya's DSL high speed service has fewer than 1000 terminals in use, according to Dr. Farrar, reflecting the product's slow speed offering only up to 144 kbps and its limited coverage area (only the Middle East along with certain parts of Europe, Africa, Asia, and Australasia, and no coverage in the Americas). [90/](#) Even when and if Thuraya is eventually able to implement the ThurayaIP service now in development and promoted as offering up to 444 kbps, Dr. Farrar believes that Thuraya's continued limited geographic coverage and restricted spectrum allocation will leave it unable to offer a competitive alternative to Inmarsat. [91/](#) Although Thuraya expanded from the Middle East to East Asia and Australasia with its January 2008 launch of a new satellite, Thuraya has never announced any plans to expand to the Americas. [92/](#) Even if Thuraya were to consider such an expansion, it would have to spend enormous sums relative to its current modest revenue base, and would need access to L-band spectrum that is already licensed to Inmarsat and MSV. [93/](#) In Dr. Farrar's view, Thuraya is unlikely ever to compete with Inmarsat for that large portion of BGAN customers

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[90/](#) *Id.* at 13

[91/](#) *Id.*

[92/](#) *Id.*

[93/](#) *Id.*

that require global coverage. [94/](#) Similarly, MSV and TerreStar, which like Thuraya will not offer global coverage, will be able to compete only for the small fraction of Inmarsat's BGAN customers (20 percent or less) whose coverage needs will remain less than global.

Iridium will also be a weak alternative. Iridium will not have its new MSS constellation deployed until 2016 (if then). Indeed, Inmarsat's CEO has been outspoken in explaining why Iridium's expansion is technologically ill-conceived and may never be funded. [95/](#) Those new Iridium satellites will be Low Earth Orbit (like the current ones) and thus constantly in motion, requiring the customer to use a high gain antenna capable of scanning horizon to horizon and having a clear view of the sky in all directions. [96/](#) To find the requisite operational environment, the user will have to place the Iridium antenna on top of a building, vehicle, or other elevated platform. [97/](#) In contrast, the directional antenna for Inmarsat's existing

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[94/](#) *Id.* at 13-14.

[95/](#) See Interview of Andrew Sukawaty, Inmarsat CEO, "While Others Discuss Consolidation," *Satellite News*, Vol. 31, No. 32 (Aug. 13, 2008) ("I would not throw stones at other people's business plans at this stage, but the one I will throw stones at is the [low-earth orbit satellite] operator, because I think they are a flawed concept. They are too expensive and will offer the same applications that [geostationary satellites] will serve. If they get funding for a second constellation, they will take a hit for the second time.").

[96/](#) TMF Associates Expert Statement (Attachment A) at 14.

[97/](#) *Id.*

geostationary system can be set up easily in a great many ordinary locations (e.g., on the balcony of a hotel room) and then quickly removed to another location, making the BGAN service far more practicable for most users than Iridium's potential future system. [98/](#) Consequently, Inmarsat will remain largely unchallenged in this MSS sphere (except for perhaps very limited competition from Thuraya) for many years. [99/](#)

Of Inmarsat's total wholesale revenues of \$136 million from land-based customers, Dr. Farrar calculates that \$96 million or 71 percent is from the land-based broadband relevant product market where Inmarsat faces effectively no competition. [100/](#)

In conclusion, as with the other distinct relevant product markets discussed above, remote land-based broadband is a market in which Inmarsat has and will retain overwhelming market power. Accordingly, it is crucial for consumers and the public interest that the Commission acts to ensure that the proposed Inmarsat-Stratos combination does not eliminate, distort, or diminish the vibrant intra-brand competition that now exists in the sale of Inmarsat high speed data services to remote land-based users.

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[98/](#) *Id.*

[99/](#) *Id.*

[100/](#) *Id.* at 15 and Figure 4.

#### **IV. STRONG NON-DISCRIMINATION CONDITIONS ARE REQUIRED IF THIS MERGER IS TO GO FORWARD**

##### **A. The Applicants Have Failed To Offer Any Credible Concrete Assurance That The Combined Company Will Not Exploit Its Market Power To The Detriment Of Competition And The Public Interest**

Given Inmarsat's market power, without stringent competition safeguards its acquisition of Stratos will lead inexorably to refusals to deal, discrimination, misuse of competitive information, other anti-competitive conduct, and the rapid decline of merits-based intra-brand competition. The combined company would have the heightened incentive and the enhanced ability to abuse its dominant power by raising prices and impairing competition by employing various anti-competitive strategies such as permanent or temporary foreclosure, raising rivals' costs through price and non-price discrimination, and misuse of proprietary information. We have shown in this Reply and the attached Expert Statement that those endangered product markets include: (1) maritime low speed data services, (2) maritime broadband services, (3) aeronautical broadband services, and (4) broadband services to remote land-based locations.

These public interest risks are likely to first become evident in the new distribution agreements that Inmarsat imposes effective next April when it wishes to acquire Stratos. That is why it is so important for the Commission to evaluate those new agreements before completing its review of this transaction. But even then, it will be necessary for the Commission at a minimum, to impose competitive

safeguards in the form of very explicit comprehensive, auditable, and enforceable conduct conditions.

Inmarsat and Stratos present no satisfactory arguments as to how the public will be protected from higher prices without such conditions to preserve intra-brand competition in the MSS markets where Inmarsat still is dominant. The Applicants simply make generalized and insupportable contentions that there is only one very broad relevant market, that such a market is not dominated by Inmarsat, and that the alleged vertical harms in any arguable relevant market are not transaction-specific. The Applicants proffer no concrete safeguards to prevent the various forms of harm to competition that threaten increased prices to end users. Inmarsat asserts that any foreclosure of Vizada's or other non-Stratos distributors' access to Inmarsat capacity and services is "speculation," but quickly goes on to say that "whether and how" Inmarsat chooses to distribute through Vizada and other non-owned distributors is a matter of Inmarsat's choice and should not be subject to "any legal compulsion," despite the acquisition of Stratos and despite Inmarsat's market power. [101/](#)

With respect to Vizada's concern that Inmarsat will have the incentive to discriminate in favor of its wholly owned subsidiary (Stratos) by raising Vizada's costs, Inmarsat simply concedes that it intends to reduce Vizada's volume

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[101/](#) Inmarsat Opp. at 23-6.

discounts [102/](#) while keeping for itself some portion of the prior discount, *i.e.*, *effectively raising prices to the downstream markets.* [103/](#) This intention illustrates Inmarsat's capability to exploit its ownership of its largest distributor for its own gain, and dilute intra-brand competition by indirectly sabotaging unaffiliated distributors' ability to secure and maintain a customer base. The consumer who requires an Inmarsat service for which there is no true alternative becomes the victim of any pricing discrimination that Inmarsat may elect to implement.

As for Inmarsat's post-merger incentive and ability to misuse confidential Vizada-proprietary information, Inmarsat self-servingly promises that it will follow its "historic practices" and the so-called "normal practice of the marketplace," never coming to grips with the critical changed circumstance that now Inmarsat would own Stratos, with the incentive and ability to pass Stratos the information of Vizada and others.

In short, despite its markedly changed incentives, Inmarsat is asking the Commission simply to trust Inmarsat and not impose enforceable conditions that will actually protect confidential information. If Inmarsat had already ensured that the post-April 2009 distribution agreements will effectively guarantee confidentiality for independent distributors, Vizada would not be pressing the point

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[102/](#) *Id.* at 25.

[103/](#) *Id.* at 21.

now. This is a perfect example of why the Commission needs to see the final agreements and impose conditions that will put meat on the bones of any confidentiality pledge, and will contain concrete mechanisms to verify Inmarsat's performance despite its contrary monopolistic incentives. [104/](#)

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[104/](#) Inmarsat asserts that its ownership of Stratos “has cleared the HSR process” and therefore cannot possibly threaten anti-competitive harms or the antitrust authorities would have intervened. Inmarsat Opposition at 23. This Commission, of course, has its own independent statutory obligation to consider and decide these competition issues as part of its public interest responsibilities and cannot simply defer to the silence of the antitrust authorities.

Moreover, Inmarsat provides no documentary proof of HSR clearance, such as grant of an early termination of the HSR waiting period set forth on the FTC Premerger Notification Office's webpage. Even assuming Inmarsat's acquisition (as opposed to just the CIP/Trustee acquisition) of Stratos was notified under HSR and the 30-day waiting period allowed to expire, there is no indication that DOJ or FTC notified interested parties such as Vizada that the actual Inmarsat acquisition of Stratos was being considered. Nor is there any evidence to indicate that DOJ or FTC investigated or otherwise considered the important market power and competitive harm points set forth in this Reply and the Petition to Deny.

In any case, HSR clearances expire after one year if the notified transaction is not consummated within that time. 16 C.F.R. § 803.7(a) (“Notification with respect to an acquisition shall expire 1 year following the expiration of the waiting period. If the acquiring person's holdings do not, within such time period, meet or exceed the notification threshold with respect to which the notification was filed, the requirements of the act must thereafter be observed with respect to any notification threshold not met or exceeded.”). If Inmarsat and Stratos filed their HSR notifications around the same time in mid-2007 when the CIP/Trustee application was filed at this Commission, a brand new HSR notification would be required for a transaction that is only capable of consummation in April 2009.

## **B. The Proposed Remedies Are Necessary To Eliminate The Risk Of Competitive Harm**

The Applicants also argue that Vizada’s requested remedial measures are unnecessary, “inefficient,” and “anti-competitive.” Their preferred alternative is to ignore that the transaction enhances anti-competitive incentives and abilities, disregard Inmarsat’s dominant power in four significant relevant product markets, and request the Commission simply to trust that Inmarsat will do the right thing going forward. In analogous contexts, faced with similar arguments, the Commission has done its duty and imposed stringent conditions to ensure there will be no anti-competitive temporary or permanent refusals to deal, discrimination, or misuse of confidential information. [105/](#) Trusting a company to act against its own anti-competitive incentives is not normally what the Commission does in these circumstances.

To be sure, the Parties could have improved the atmosphere before filing their Application by first negotiating with Vizada and others to a satisfactory conclusion mutually acceptable distribution agreements that on their face would assure against improper refusals to deal, guarantee non-discriminatory treatment for all distributors, prevent favoritism for the in-house distributor, guard against other raising-rivals’-cost strategies, and erect firewalls and other protocols to assure proprietary information is not misused. At this juncture and with neither

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[105/](#) *Liberty Media/DirecTV*, 23 FCC Rcd 3265, 3334-35 ¶¶ 153-58; *Adelphia*, 21 FCC Rcd 8203, 8326-27 ¶¶ 294-98.

negotiated agreements nor voluntary proffers of pro-competitive safeguards, however, the proper remedy would seem to be denial of the Application or at least designating it for hearing. The Commission need not reach the topic of remedies and conditions unless and until it has developed a complete evidentiary record before an administrative law judge. [106/](#)

With respect to our proposal for structural separation, the Commission has found in the past that such an approach is ideal, because it is more readily audited and enforced and because it avoids the necessity for many more detailed conduct restrictions. [107/](#) Whatever the reasons for dismantling structural separation requirements in other contexts where competition had begun providing alternatives to dominant carriers, we have shown here that Inmarsat currently dominates and for a substantial time into the future will continue to dominate the provision of services to most or nearly all customers in key relevant product markets, markets that represent over half of Inmarsat's wholesale revenues. Protecting intra-brand competition when there is no real inter-brand competition is essential to ensuring that choice, innovation, diversity, and consumer welfare do not dissipate. As for the

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[106/](#) *Echostar-DIRECTV HDO*, 17 FCC Rcd 20559, 20665-66 ¶¶ 289-93.

[107/](#) *See Changes in the Corporate Structure and Operations of the Communications Satellite Corporation*, Memorandum Opinion and Order, 90 FCC 2d 1159 (1983), *recon.*, 93 FCC 2d 701 (1984), *recon.*, 99 FCC 2d 1040 (1984), Report and Order, FCC 85-178, 50 Fed. Reg. 18304 (Apr. 30, 1985).

merits of structural or functional separation, there are a number of foreign regulatory jurisdictions that are strong advocates for the approach and have considerable actual positive experience to share with the Commission. <sup>108/</sup> Other federal regulatory agencies also have chosen structural separation as a sensible compromise course between too detailed conduct regulation and allowing market power to be abused.

## V. CONCLUSION

For the foregoing reasons, the Commission should reject the Oppositions and dismiss the Application or postpone further processing until Inmarsat has completed new distribution agreements to take effect after April 2009, and until the current questions regarding the MSS industry and Inmarsat's future ownership are

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<sup>108/</sup> See, e.g., the functional separation established in the UK and New Zealand. Undertakings given to Ofcom by BT pursuant to the Enterprise Act 2002, available at: <http://www.ofcom.org.uk/telecoms/btundertakings/btundertakings.pdf>, UK Office of Communications, Impact of the Telecoms Strategic Review Evaluation (10 December 2007) [http://www.ofcom.org.uk/telecoms/btundertakings/tsr\\_statement/tsr\\_statement.pdf](http://www.ofcom.org.uk/telecoms/btundertakings/tsr_statement/tsr_statement.pdf); Telecom New Zealand, Telecom Separation Undertakings (25 March 2008) available at: <http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/OperationalSeparationofTelecom/ContentFiles/Documents/Telecom%20Separation%20Undertakings.pdf>; New Zealand Commerce Comm'n, Implementation of the Undertakings available at: <http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/OperationalSeparationofTelecom/implementationoftheundertakings.aspx#982>.

clarified. [109/](#) In the event that the Commission nevertheless continues to process the Application, the Application should be denied outright or designated for hearing to resolve the serious competition and public interest concerns raised therein and discussed above. At the least, the Application cannot be granted without conditions (1) requiring structural separation of Stratos (and any Inmarsat entity engaged in direct distribution) from Inmarsat network operations, (2) restricting discrimination among distributors in favor of Stratos, and (3) preventing the sharing of proprietary information of unaffiliated distributors with Stratos or with persons within

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[109/](#) As foreshadowed in our Petition at 13, Harbinger and SkyTerra have now filed an Application with the Commission seeking to acquire Inmarsat and combine it with MSV. *In the Matter of Sky Terra Communications, Inc., Transferor, Harbinger Capital Partners Funds, Transferee, Applications for Authority to Transfer Control of Mobile Satellite ventures Subsidiary LLC and The Current Shareholders of Inmarsat plc, Transferor, Harbinmger Capital Partners Funds, Transferee, Applications for Authority to Transfer Control of Inmarsat Hawaii inc. and Inmarsat, Inc.*, SAT-T/C-20080822-00157 (filed Aug. 25, 2008).

Inmarsat except as necessary for Inmarsat to provide the relevant satellite communications service.

Respectfully submitted,

**VIZADA, INC.**  
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September 10, 2008

## DECLARATION

I, Robert M. Baker, President of Vizada, Inc. and VIZADA Services LLC, hereby declare under penalty of perjury that I have reviewed the foregoing Reply of Vizada Inc. and VIZADA Services Inc. to Oppositions of Inmarsat plc and Stratos Global Corporation, and that the factual statements made therein are true and correct to the best of my knowledge, information, and belief.

By:   
Robert M. Baker, President  
Vizada, Inc.  
VIZADA Services LLC

September 10, 2008

# **ATTACHMENT A**

# The Mobile Satellite Services Business: Competitive Structure, Size, Segments, and the Unique Role of Inmarsat in Certain Segments

*Tim Farrar*

*President, Telecom, Media and Finance Associates*

## **1 Introduction**

I have been asked by Vizada to provide comments on the competitive structure and size of the Mobile Satellite Services (MSS) business, plus the extent and nature of any competition that MSS providers face from each other and from non-MSS satellite or non-satellite sources. I also have been asked to identify different segments of the MSS business based upon, amongst other factors, the distinct characteristics of the services in such segments and the specialized needs of the customers for those services. Further, I have been asked to determine whether there are MSS customers in any segment for whom Inmarsat provides the only practical solution to their communications needs. Additionally, I have been asked to provide quantitative data on the overall size of the MSS business and estimate the size of particular segments, especially any segment that is dependent upon Inmarsat and does not currently experience inter-brand competition (i.e. between Inmarsat and other MSS operators and/or Fixed Satellite Services (FSS) and terrestrial alternatives).

For the sake of simplicity in this report, I use the term “market” in its loose business parlance sense to refer to the MSS business and sometimes individual segments of that business. I understand that antitrust economists generally define markets from the demand (or customer) side based on functional substitutability, demand cross-elasticity, and other economic factors. I further understand that segments of the MSS business, due to the foregoing factors, may well constitute their own relevant product markets for antitrust analysis purposes and that other segments of the MSS business may be included in relevant markets that also encompass FSS alternatives and/or terrestrial alternatives. My use of the term “market” as a convenience to refer to the MSS business as a whole is not meant to imply that segments of the MSS business are not distinct relevant product markets or that non-MSS services do not sometimes compete with MSS services in certain segments.

I am President of Telecom, Media and Finance Associates (TMF Associates), a consultancy company based in Menlo Park, CA which specializes in MSS issues. We publish the only comprehensive research service on MSS, which is purchased by MSS operators, distributors and equipment vendors

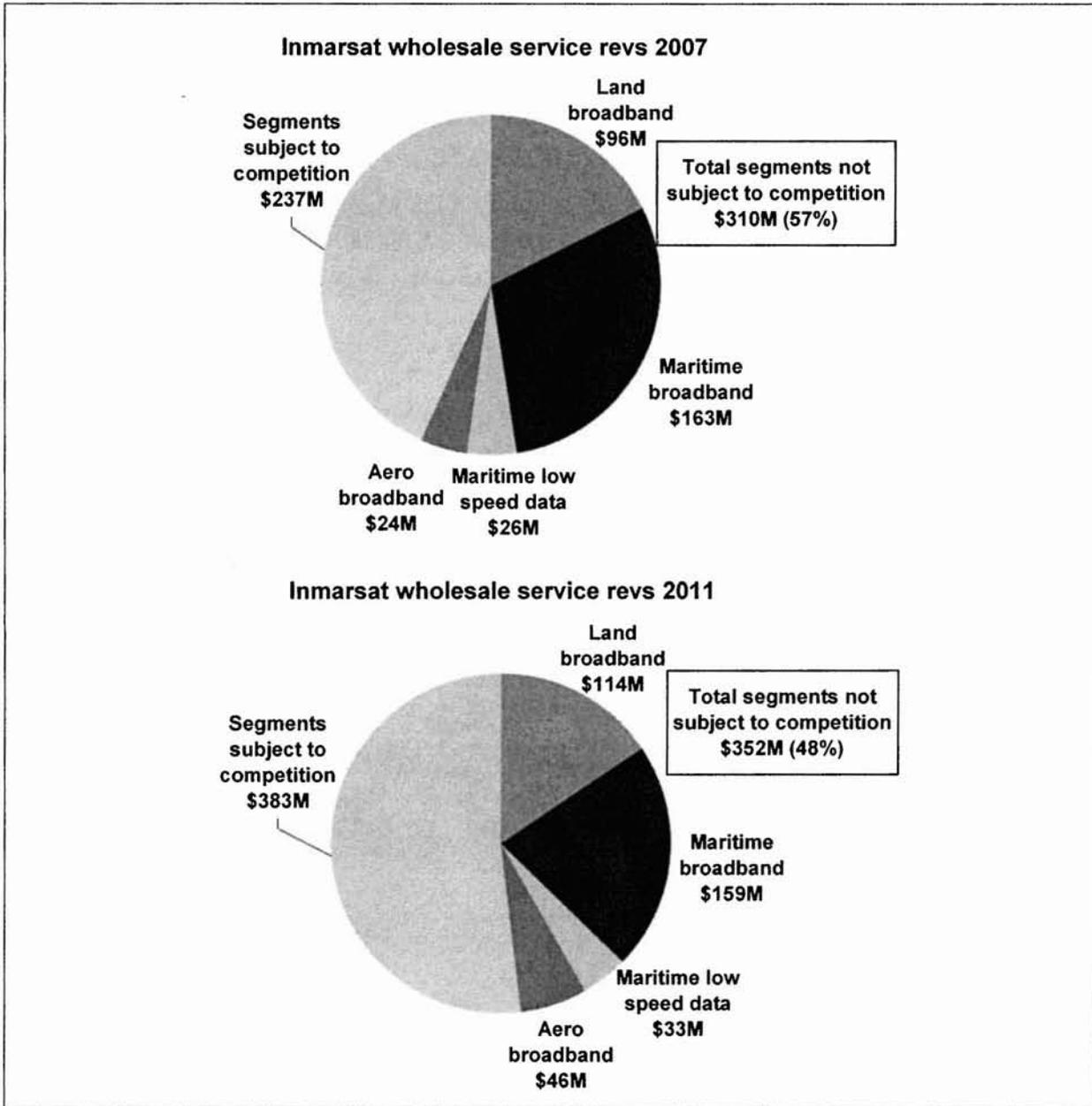


accounting for over 80% of total industry revenues. I have consulted for almost all of the leading MSS operators over the last 12 years, including Inmarsat, Globalstar, Iridium and MSV, as well as many equipment manufacturers and distributors in the MSS sector. I am frequently invited to speak on MSS issues at conferences, including the industry conferences organized by MSS providers themselves, and have chaired numerous conference sessions with the CEOs of MSS companies. In addition I am often asked to provide market data for business planning purposes and to support due diligence for financial investors in the sector. As such, I believe I am highly qualified to comment on the competitive landscape in the MSS market and provide market sizing data, which I understand will be provided to the Federal Communications Commission, among others, in connection with the review of the proposed acquisition by Inmarsat of Stratos Global Corporation.

## 2 Summary

Our analysis shows that Inmarsat does not face competition from other mobile or fixed satellite services (or terrestrial services) for a significant proportion of its users and wholesale service revenues in four segments of the MSS market. These segments are maritime low speed data, maritime broadband, aeronautical broadband, and land broadband. In total, across these four segments, the estimated proportion of Inmarsat's wholesale service revenues which are not subject to competition is 57% (some \$310M) in 2007. Even if new services such as Iridium OpenPort establish themselves successfully over the next three years, an estimated 48% of Inmarsat's wholesale service revenues (\$352M) will still not be subject to competition in 2011. Figure 1 below contains two pie charts illustrating graphically Inmarsat's wholesale revenues for 2007 and estimated for 2011, the portion of such revenues subject to competition and the revenues not subject to competition in total and by category, i.e., maritime low speed data, and the three broadband segments, land, maritime, and aero. Additional details on the derivation of these estimates are given in Sections 3 and 4 of this analysis below.

Figure 1: Inmarsat wholesale service revenues not subject to competition, in 2007 and in 2011 (assuming successful development of new services by Inmarsat's competitors) [Source: TMF Associates estimates<sup>1</sup>]



1 These estimates are based substantially on Inmarsat's published results, and data disclosed by the company to analysts during Inmarsat's IPO and at its September 2007 investor day. Estimates have been made to sub-divide certain reporting categories used by Inmarsat into revenues by product and to project future growth in product revenues.

### 3 The competitive structure of the MSS market business and its segments

MSS operators provide a wide range of service offerings across three main market segments: namely land, maritime and aeronautical. This high level segmentation is used by Inmarsat as the basis of its public financial reporting. Despite minor difficulties in classifying a few users as to whether they are in one category or another<sup>2</sup>, it is a useful way to start analyzing the markets. Moreover, in my experience, this segmentation is also used by other MSS operators besides Inmarsat in their internal analyses, even if they do not publicly report their financial results within these precise categories. Most importantly, it is helpful to consider land, maritime and aeronautical users separately because they have distinct product and service requirements and very different competitive environments.

For example, for land-based services, many terminals (such as satellite phones or Inmarsat's BGAN terminals) must be highly portable because they are carried and used by an individual while on travel, whereas in the maritime and aeronautical markets terminals are typically affixed to a ship or airplane and therefore have less onerous miniaturization requirements. In contrast to aero and maritime MSS, land-based MSS terminals must address a competitive environment in which terrestrial wireless alternatives may be widely available, such that there will be direct competition between MSS and terrestrial wireless services (for example within the asset tracking market) and at other times MSS is a "last resort" solution when terrestrial solutions are not physically available or economically practicable. Similarly, on land, ease of portability may be such an important requirement that most users would not consider C- or Ku-band VSAT to be a suitable alternative. In contrast, maritime and aeronautical services usually do not face substantial terrestrial competition, except in a few limited examples, such as the new Aircell air-to-ground aeronautical broadband communications service being deployed in North America, or where ships (such as small fishing boats) do not go beyond coastal waters and so can access terrestrial cellular and VHF networks. However, some small percentage of users may have the option to use C-band or Ku-band VSATs where their vessel or plane can accommodate these larger terminals and the users' specific needs are geographically confined enough so that the coverage limits associated with Ku-band service are not a problem.

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<sup>2</sup> For example, a satellite phone may be used for recreational purposes at different times on a skiing vacation and on a boating trip. However, operators and analysts (including myself) typically classify handheld satellite phones within land-based services.

Within the individual land, maritime, and aeronautical segments, there are also significant distinctions in the specific customer needs served and the applicable competitive landscapes for voice-oriented services (often with low speed data as a companion service), low speed data-only services (often used for asset tracking) and high speed data service. (In my experience 64kbps or above is considered “high speed” by MSS users<sup>3</sup>). On land, the provision of voice-oriented services is dominated by handheld satellite phones offered by providers such as Globalstar, Iridium, Thuraya and (to a lesser extent) Inmarsat. In the maritime sector, most revenues come from fixed terminals, such as the Inmarsat mini-M and the Iridium SC4000 maritime unit, which are often used for crew calling. A range of low speed data-only services are offered by Inmarsat, Iridium, Globalstar and Orbcomm, some of which are one-way (simplex) services and others are two-way. Certain low speed data services (specifically Inmarsat C) are required to be installed on particular vessels so that those vessels will comply with maritime safety regulations. High speed data services serve customers with a need to transmit large quantities of data, and in this case Inmarsat is the only substantial L-band provider<sup>4</sup>, with VSAT providing an alternative for some maritime and aeronautical users.

Given these significant distinctions between market segments and between voice, low speed and high speed data services, I believe it is highly important for any analysis of the MSS market to consider separately the individual segments and services, as we have done in our previous TMF Associates’ research publications and presentations<sup>5</sup>. The sections below provide a more detailed assessment of the competitive landscape within each market segment.

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3 Although Inmarsat’s new BGAN services operate at much higher speeds (up to 492kbps), most of Inmarsat’s revenues are still derived from older services such as GAN, B, Fleet and Swift64 which (with the exception of Fleet77) operate at a maximum of 64kbps from a single terminal, although a significant number of GAN and Swift64 users (particularly in the government sector) bond their terminals together to achieve 128kbps or higher data rates.

4 Thuraya has offered its ThurayaDSL service capable of up to 144kbps for several years, but this has achieved only very limited take-up, with (by our estimate) less than 1000 units currently in service.

5 See for example my June 6, 2008 presentation entitled “Perspectives on MSS and ATC/CGC” at <http://www.tmfassociates.com/ESAworkshop.pdf>.

### 3.1 The maritime MSS market

Inmarsat has historically been the leading provider of satellite services to the maritime community, by virtue of its original role (as the International Maritime Satellite Organization) providing safety services to ships at sea. It continues to dominate **low speed maritime data services** by virtue of the International Maritime Organization (IMO) requirement that ships of more than 300 gross tons must carry Global Maritime Distress and Safety System (GMDSS) equipment<sup>6</sup>. Vessels whose routes are limited to coastal waters can meet this requirement through VHF and/or MF systems, but vessels travelling beyond MF range (approximately 150 miles from shore), must carry at least one Inmarsat terminal type approved for GMDSS operation (i.e., Inmarsat B, F77, or C). Due to the considerably lower terminal costs of Inmarsat C, compared to B or Fleet 77 terminals, many vessels choose to meet this requirement by installing Inmarsat C terminals.

Although ships do not pay for the GMDSS service itself (as distinguished from the terminal), the Inmarsat C messaging service which is a capability embedded in these terminals, and is frequently used to provide position reporting and other two-way text messages, does produce revenues for Inmarsat. The foregoing considerations have resulted in considerable demand for Inmarsat C service. By our estimate, there are now in excess of 80,000 active Inmarsat C maritime terminals. Although other operators such as Iridium do provide low rate data services for tracking applications (an application which Inmarsat also supports with its D+ (now M2M) terminals), Inmarsat has a dominant share of the maritime low data rate market at present. Moreover, those customers who have installed low data rate terminal equipment at least in significant part to comply with GMDSS requirements (by our assessment up to 80% of the 80,000+ Inmarsat C users<sup>7</sup>) essentially did not

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6 GMDSS is an internationally agreed upon set of safety procedures, equipment types, and communications protocols used to increase safety and assist in the rescue of distressed vessels and aircraft. For example, GMDSS provides alerts to the Coast Guard and similar rescue authorities in an emergency.

7 According to data provided by Inmarsat at the time of its IPO, there were just under 50,000 active Inmarsat C maritime terminals at the end of 2001. Alternative lower cost satellite low speed data solutions without GMDSS capability (such as Inmarsat D+ and Iridium LBT terminals) have been available since that time, during which period Inmarsat has added more than 30,000 net new active Inmarsat C terminals, and if 10% of the previously active Inmarsat C terminals are replaced each year, then an additional 34,000 older Inmarsat C terminals would have been replaced over the last seven years. We consider that the vast majority of these users are likely to have chosen Inmarsat C because of its GMDSS capabilities, otherwise they would presumably have selected a lower cost solution, and thus even if none of the earlier customers selected Inmarsat C for this reason (an extremely unlikely situation) at least 64,000 of the current Inmarsat C terminals have been installed primarily because of their GMDSS capability. Notably, by our estimates, Inmarsat C still accounts for close to 90% of Inmarsat's total wholesale maritime low speed data service revenues.

have a practicable alternative to Inmarsat. (And, for owners of such vessels, it would not have been an economically prudent choice to acquire an Inmarsat terminal for GMDSS and also acquire an Iridium low data rate terminal for other communications purposes.) This dependence on Inmarsat by existing ships and new ships will persist as long as Inmarsat remains the sole satellite provider of IMO-sanctioned GMDSS compatible services. In TMF Associates' view, Inmarsat's GMDSS satellite monopoly does not appear likely to change until Iridium has secured funding for its second generation network and is well along the path towards deployment of that second generation system (which Iridium does not even expect to start launching until 2013). In our view, the IMO will not want to risk the scenario where IMO has certified Iridium equipment for GMDSS, vessel owners install Iridium terminals instead of Inmarsat low data rate equipment, the second generation Iridium system ultimately is not completed, and the Iridium equipped ships are left without an adequate GMDSS service<sup>8</sup>. As a result we believe Inmarsat is likely to maintain its monopoly of satellite-based GMDSS provision (and therefore its dominance of low speed maritime data) until approximately 2012 at the earliest (when there will begin to be more clarity about the sustainability of Iridium's network) and, in any event, the number of ships with no practicable alternative to the installation of Inmarsat C will increase over the intervening period.

In contrast, the **maritime voice** market has seen much greater competition since the re-launch of Iridium in 2001, and by our estimate Iridium has now captured around one third of the maritime voice traffic on MSS networks. Globalstar has provided some services to maritime customers (mainly in the handheld market) although with its recent decline in satellite performance for two-way services, Globalstar cannot currently be regarded as an active competitor in the maritime voice market. Additional competition has come from VSAT systems as a by-product of their installation to serve high speed data applications (discussed below) and as a result of competition from Iridium and to a lesser extent VSAT, retail voice pricing has dropped significantly over the last five years. We therefore conclude that despite Inmarsat's continued strong position in the maritime voice market, virtually all maritime voice customers have a choice of different satellite providers<sup>9</sup>.

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8 Other low data rate services such as Orbcomm and Globalstar are not expected to be candidates for GMDSS provision because of Orbcomm's relatively high latency and Globalstar's lack of complete oceanic coverage.

9 The few customers that do not have a choice of providers are those operating in polar regions beyond the coverage of geostationary satellites.

Inmarsat is the only MSS operator providing **high speed (64kbps plus) services to the maritime community** at present, although Iridium is close to launching its new maritime OpenPort product that could compete for some Inmarsat maritime customers in the next two to three years. However, OpenPort may have relatively limited capacity prior to deployment of Iridium's second generation constellation, which is scheduled for 2016. By our estimates, Iridium's saleable capacity for OpenPort is likely to be less than one twentieth of the capacity available on Inmarsat's I4 system, once Inmarsat's Alphasat satellite is launched in 2011 or 2012<sup>10</sup>. As a result, Iridium is likely to address only the lower end of Inmarsat's maritime customer base where ships use relatively modest amounts of data. We estimate that this represents half of Inmarsat's ships, but only 18% of Inmarsat's high speed maritime data revenues<sup>11</sup>.

Inmarsat has faced some competition from VSAT services in certain segments of the maritime market in recent years, as smaller Ku-band VSAT terminals offering flat rate shared bandwidth services have been developed and a few customers with the requisite space and load carrying ability have opted for more expensive global C-band VSAT services, which can cost as much as \$8000 per month<sup>12</sup>. Despite the extra expense, the ability to improve crew welfare (by access to email and the Internet) and the benefit of flat-rate VSAT pricing has been recognized by some ship operators and used to justify this investment (although only a few hundred ships currently use C-band VSAT services). However, it has been difficult for Ku-band providers to acquire the near-global oceanic coverage<sup>13</sup> required by Inmarsat's large core customer base of oceangoing cargo ships. Consequently, take-up of Ku-band has been predominantly by ships which only operate in coastal waters (particularly in

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10 Inmarsat has contracted with Astrium to build the Alphasat satellite, which will add significant incremental capacity, particularly in Europe, the Middle East and Africa to the current network of three Inmarsat 4 satellites, at least partly through use of extended L-band frequencies (1518-1525MHz and 1668-1675MHz).

11 Based on data presented at Inmarsat's investor day in September 2007.

12 This represents our estimate of the monthly cost of the C-band service used by BP on its oil tankers.

13 These difficulties are partly due to lack of availability in some regions (such as the South Atlantic and Indian Oceans), but also due to the fact that it would be uneconomic to acquire sufficient Ku-band transponders to provide global coverage unless a provider can attract thousands of ships to its service in a very short period of time: a considerable challenge given the conservatism of many maritime customers and the fragmented maritime VSAT market. A key reason for the failure of Connexion-by-Boeing in 2006 (and why it has not been revived on a commercial basis since that time, despite attempts by a number of players) was the high cost of transponder capacity and associated network operating costs, which we estimated at the time was in excess of \$50M per year. Although Inmarsat notes in its comments that the Connexion network still services (a handful of) US government aircraft, we understand that this operation does not provide any profit for Boeing. As a result, it will be equally difficult for new providers, such as Panasonic and Viasat/KVH, who are seeking to provide global Ku-band VSAT service (whether for aeronautical or maritime customers or both) to justify the costs of acquiring significant oceanic coverage in less popular regions.

Europe due to the availability of Ku-band coverage in the North Sea, Baltic and Mediterranean). Certainly ships that require global coverage do not find Ku-band to be an adequate substitute for Inmarsat services. C-band terminals are expensive (around \$90,000) and very large (typically 4 meters in diameter and weighing several tons) and thus are only suitable for a limited number of large ships that have very substantial communications requirements. Ku-band VSAT terminals are also more expensive and larger than Inmarsat's Fleet and FleetBroadband terminals. Even though the Ku-band terminals offer much greater data throughput than Inmarsat, and are somewhat less expensive and smaller than C-band terminals, they are generally only a competitive option for ships willing to spend roughly \$3000 and upwards each month on communications services<sup>14</sup>.

This limited addressable market for VSAT has been explicitly acknowledged by Inmarsat in the pricing structures it has set for the new FleetBroadband services, which offer substantial discounts (over 50% on a per Mbyte basis) to customers willing to commit to spending a minimum of \$3000 (retail) per vessel per month. As noted above, this is precisely the level of spending where VSAT would be a potentially cost-effective alternative if coverage is adequate, and no such volume discounts are available to customers spending a lesser amount. According to figures provided by Inmarsat at its investor day in September 2007, around one third of wholesale revenue from Inmarsat B and Fleet customers comes from ships generating wholesale revenue of \$1500 or more per month (which according to Inmarsat are those customers who might be lost to VSAT) although based on our analysis of the breakdown of spend levels given by Inmarsat, we estimate this is equal to just 10% of the roughly 26,500 Inmarsat B and Fleet terminals in use in March 2007 when Inmarsat's analysis was made. As a result, unless and until Iridium's OpenPort product becomes established in the market (which based on historic experience with Iridium's entry into the maritime voice market will take a minimum of two to three years even if everything goes smoothly with the launch<sup>15</sup>), there are now around 30,000 ships<sup>16</sup> using Inmarsat high speed data services who do not have a cost-effective alternative source of satellite services. Even once OpenPort becomes established (assuming Iridium

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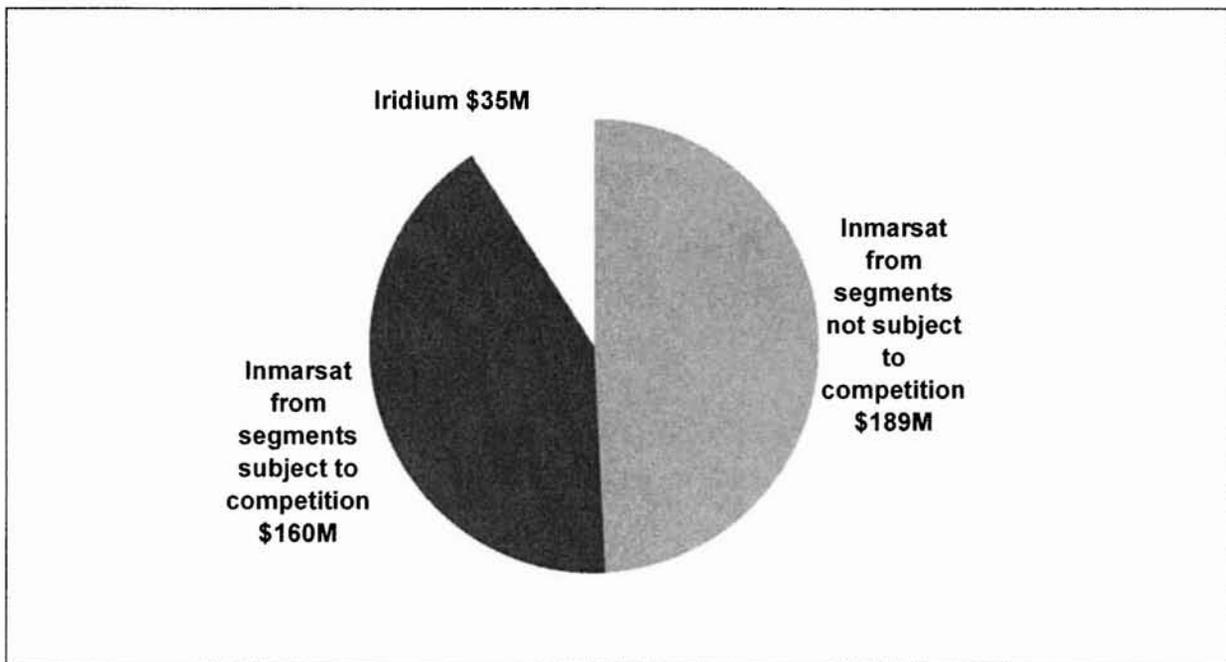
14 Flat rate pricing for shared bandwidth Ku-band services (excluding terminal costs) with 512kbps downlinks and 128kbps uplinks from KVH, MTN and Vizada ranged from \$2570 to \$3500 per month as of March 2008.

15 Based on historic migration patterns for Inmarsat A, B and Fleet services, it is likely to take 12-18 months after service launch before meaningful deployment of new maritime services occurs and up to 10 years for half of the customer base to migrate from the previous generation of services.

16 This figure of 30,000 is 90% of the roughly 33,000 ships that we estimate are equipped with Inmarsat B and Fleet terminals as of September 2008, assuming the same proportion spend more than \$1500 as in Inmarsat's March 2007 analysis.

continues to operate its system successfully), there will be at least 15,000 Inmarsat ships who do not have an alternative because their needs are greater than Iridium’s limited capacity can support, and these ships generate roughly half of Inmarsat’s maritime high speed data revenues<sup>17</sup>.

Figure 2: Maritime wholesale service revenues by MSS operator, 2007 [Source: TMF Associates estimates]



As shown in Figure 2 above, Inmarsat commands an estimated 91% share of wholesale maritime service revenues received by MSS operators in 2007, with competition from Iridium in the voice and low speed data segments<sup>18</sup>. Within Inmarsat’s total of \$349M in wholesale maritime service revenue, \$189M (or 54%) is derived from those parts of the low speed and broadband data segments where Inmarsat does not face competition, even from VSAT.

17 It should be noted that many of the ships which do not have a competitive alternative to Inmarsat B/Fleet are in the same situation with respect to Inmarsat C, and thus the total number of ships with no competitive alternative to Inmarsat is less than the sum of the low speed and high speed ships with no alternative.

18 Globalstar, Thuraya, MSV and Orbcomm do not have any deep sea service offering which is a realistic alternative to Inmarsat and Iridium and so all of their revenues are attributed to land segments, although some limited usage of their services takes place in coastal waters

### 3.2 The aeronautical MSS market

The **aeronautical voice and low data rate** markets can most easily be treated as a single market, since most terminals in use offer both services together, including certain low data rate safety services. Within this market, Iridium is beginning to offer increased competition to Inmarsat, building on its strengths in offering voice services (primarily to business jets and general aviation) and its recent authorization to offer some Aeronautical Mobile Satellite (Route) Service (AMS(R)S) safety services<sup>19</sup>. Inmarsat remains dominant for the time being amongst passenger aircraft (and any migration will be slow, given the cost of installing aeronautical terminals), but these users generally do now have a choice of satellite providers.

The situation within the **aeronautical high speed data** market is different, since Inmarsat is the only MSS operator to offer such services at present and has seen rapid growth within the government and business jet markets for its Swift 64 product, there being around 1800 Swift 64 terminals in use at the end of 2007. A small number of corporate and government aircraft (on the order of 100) are equipped with Ku-band VSAT technology, but as discussed above, it is difficult to provide oceanic coverage, except on a small number of routes such as the North Atlantic, so VSAT is not an appropriate solution when international coverage is a priority<sup>20</sup>. Recently Aircell has launched a terrestrial wireless broadband service in North America, using spectrum acquired in an FCC auction in 2006 and this will provide another (likely cheaper) option for domestic aeronautical users in the future. We estimate that around half of current Swift 64 equipped terminals (i.e. 900 terminals, although a slightly smaller number of aircraft, since some have multiple terminals) require international coverage for a significant part of their operations and thus, even with Aircell in service, do not have a viable alternative to Inmarsat<sup>21</sup>. In the high speed data market there is also potentially much more of a

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19 Because of the much greater importance of polar routings (where Iridium is the only option) for aeronautical users, we believe that it was somewhat easier for Iridium to obtain approval to offer aeronautical safety services than it will be for Iridium to obtain similar maritime GMDSS authorizations. Even so, it has taken almost a decade for Iridium to receive these approvals.

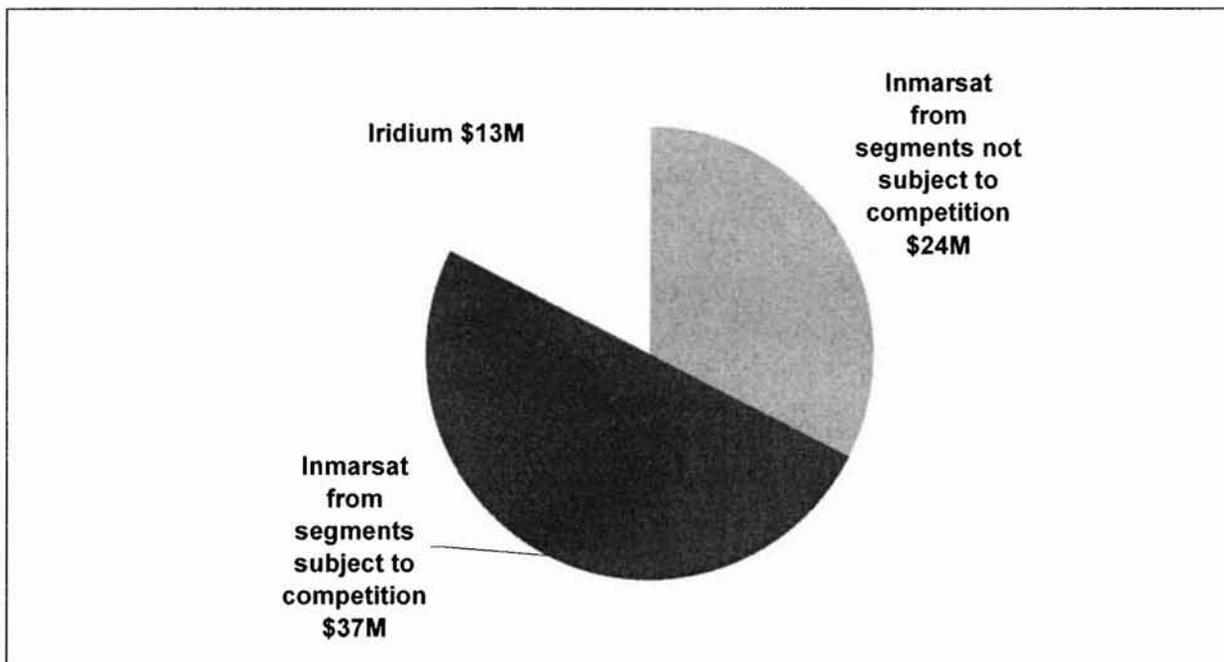
20 Some larger corporate and government aircraft fit both VSAT and Inmarsat, but these are a small part of the overall market, since VSAT is a more expensive solution and has achieved only limited market penetration to date.

21 Historically, around three-quarters of business jets have been delivered to North American customers, although this share has declined in recent years as demand in other regions has grown (see [http://www.rolls-royce.com/civil\\_aerospace/overview/market/outlook/downloads/busjet06.pdf](http://www.rolls-royce.com/civil_aerospace/overview/market/outlook/downloads/busjet06.pdf)). On this basis we estimate that around one quarter of the Swift64 market is outside North America and at least one third of the North American business jets and government aircraft equipped with Swift64 require international coverage, and thus only half the total Swift64 market would be satisfied with Aircell's purely North American coverage or the limited domestic and transatlantic coverage available from VSAT solutions at present.

barrier to switching, because of the cost and complexity of terminal installations, which range from \$100,000 for Aircell, up to \$350,000 plus for VSAT solutions.

As shown in Figure 3 below, Inmarsat commands an estimated 82% share of wholesale aeronautical service revenues received by MSS operators in 2007, with competition from Iridium solely in the voice and low speed data segments (and virtually no competition from other MSS providers). Within Inmarsat’s total of \$61M in wholesale aeronautical service revenue, \$24M (or 39%) is derived from that part of the broadband data segment where Inmarsat does not face competition, even from VSAT or terrestrial alternatives.

Figure 3: Aeronautical wholesale service revenues by MSS operator, 2007 [Source: TMF Associates estimates]



### 3.3 The land-based MSS market

The **low data rate land-based MSS** market is not driven by safety mandates in the same manner as the maritime market, and supports a wide range of tracking and monitoring applications using a range of MSS systems. Orbcomm is a major provider in this sector based on terminal counts, followed by

MSV, Globalstar and Iridium, and Inmarsat only has a modest share of the market. Although different systems offer slightly different products and price points (e.g. Globalstar offers a low cost simplex data service, Iridium offers a low latency global coverage solution), customers generally have a range of satellite options available to them.

Similarly the **land-based MSS voice** market is relatively competitive, with Thuraya, Iridium and Globalstar all having substantial customer bases. With Globalstar's current satellite problems affecting its two-way voice services, users in North America who require handheld satellite phone service can at present only use Iridium, although this will change once Inmarsat launches its global satellite phone service in 2009 and Globalstar completes its second generation constellation. We conclude that Inmarsat does not have any market dominance in this sector.

The **high data rate land-based MSS** market, by contrast, has a much more limited range of current options available and in many cases no alternative to Inmarsat is available. Inmarsat's BGAN service (offering speeds of up to 492kbps) has achieved strong growth in the last two years, reaching 15,800 users at the end of 2007. In contrast, Thuraya's DSL product (which offers up to 144kbps service in a much more limited coverage area, i.e., the Middle East plus parts of Europe, Africa, Asia and Australasia) has captured only a very modest number of users (by our estimate less than 1000). Although Thuraya is in the process of developing a new ThurayaIP service offering up to 444kbps, its limited geographic coverage and restricted spectrum allocation will persist and this leads us to the conclusion that Thuraya is unlikely to mount a meaningful challenge to Inmarsat with the possible exception of domestic use in certain Middle Eastern countries, where it has historically had strong backing from incumbent telecom operators<sup>22</sup>. As a result we conclude that around 90% of Inmarsat's roughly 34,000 GAN (up to 64kbps per terminal), R-BGAN (up to 144kbps) and BGAN users (as of the end of 2007) do not have access to a readily available satellite alternative. Although Thuraya is expanding to East Asian and Australasian markets, since the launch of its new satellite in January 2008, it does not have any announced plans to expand to the Americas. In our view, Thuraya is very unlikely to do so in the future, since this would require access to highly constrained L-band spectrum (used by Inmarsat and MSV in North America) as well as substantial investments of time and money (out of proportion to its relatively modest current revenue base). As a result it is unlikely ever to be

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22 However, given Thuraya's disappointing results in recent years, including a substantial decline in revenues, it is unclear whether the company will continue to receive strong backing from these partners.

able to compete with Inmarsat for the significant number of BGAN customers requiring global coverage. A similar situation applies to next generation MSS systems being developed in North America by MSV and TerreStar, which will also not offer global coverage and thus are unlikely to compete for more than a small fraction of Inmarsat's BGAN customer base<sup>23</sup>. Inmarsat's BGAN customer base is expected to grow over the next three years to around 50,000 total BGAN and GAN terminals by the end of 2011, and we estimate that due to the lack of any similar global offering, 80% of these users will still not have an adequate competitive alternative available at that time.

Even in its next generation system, which is not expected to enter commercial service until 2016, it will be difficult if not impossible for Iridium to offer comparable broadband services to BGAN, because with a Low Earth Orbit (LEO) system, Iridium's satellites are constantly in motion and thus any high gain antenna must be capable of scanning from horizon to horizon with a clear view of the sky in all directions. This is likely to restrict Iridium's broadband services to fixed or semi-fixed applications where the terminal can be placed on top of a building, vehicle or other platform, rather than the directional antennas used for geostationary systems such as Inmarsat, which can simply be pointed towards the serving satellite and can be used (for example) from the balcony of a hotel room or easily set up and removed in an emergency situation.

Another option for some end users where data speed is more important than portability, is to use flyaway VSAT terminals<sup>24</sup>. BGAN, however, has a distinct niche in applications requiring very high levels of portability, and rapid setup times, and customers pay a significant premium (on a per Mbyte basis) for this capability. As such, VSAT services are no longer a direct competitive alternative to BGAN despite their lower price point, although VSAT terminals may constrain the degree to which BGAN can extend its reach into applications where portability is less important, and terminals remain in place for weeks or months at a time. For example, BGAN has no practicable competitor for worldwide quick satellite news gathering, transitory servicing of remote mining locations or energy platforms, and other applications, where it is not practical or reasonable to install much more expensive and cumbersome VSAT capability, which often requires time consuming site licensing

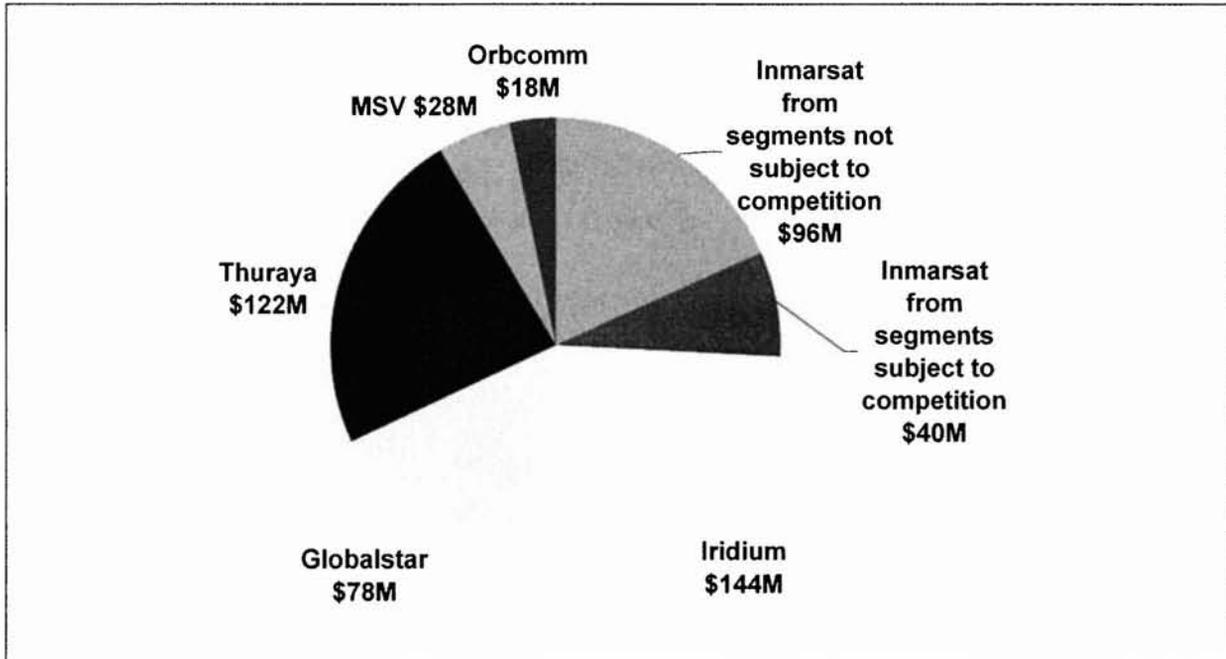
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23 According to data presented at Inmarsat's investor day in September 2007, only 8% of BGAN usage was in the US and Canada.

24 Flyaway VSAT terminals are designed for repeated assembly and disassembly, breaking down for transport into numerous suitcases and taking 30 minutes or more to set up. Some terminals are also designed to be mounted on light trucks or SUV's.

procedures. VSAT essentially serves a different market segment where capacity demands are expected to be longer term (months or years in duration).

Figure 4: Land-based wholesale service revenues by MSS operator, 2007 [Source: TMF Associates estimates]



As shown in Figure 4 above, Inmarsat commands an estimated 26% share of wholesale land-based service revenues received by MSS operators in 2007, with competition from Iridium, Globalstar, Thuraya and MSV in the voice and low speed data segments, from Orbcomm in the low speed data segment and (to a limited degree) Thuraya in the broadband segment. However, within Inmarsat’s total of \$136M in wholesale land-based service revenue, \$96M (or 71%) is derived from that part of the broadband data segment where Inmarsat does not face competition from MSS or FSS alternatives.

#### 4 The size of the MSS market

According to our published July 2008 analysis<sup>25</sup>, the leading MSS operators (Inmarsat, Iridium, Globalstar, Thuraya, MSV and Orbcomm) had a total of 1.6M active terminals at the end of 2007, and between them generated wholesale service revenues (excluding equipment sales) of \$985M in that year. However, it would be totally misleading to look at all MSS terminals in operation or all MSS revenues for all operators and think that is a fair representation of the extent or lack of competition. From the perspective of customers with distinct and different needs, the dominant position of Inmarsat amongst MSS operators and the absence of competition in key segments is clear when examining the individual market segments and services discussed in Section 3 above. As shown in Figures 5 and 6 below, Inmarsat has a near 100% share of MSS wholesale service revenues in land, maritime and aeronautical broadband, and a very strong position in maritime low data rate services. Moreover, as explained above, Inmarsat users accounting for the vast majority of wholesale service revenues within the maritime low data rate segment have no practicable alternative (including Iridium) due to Inmarsat's effective monopoly in satellite GMDSS.

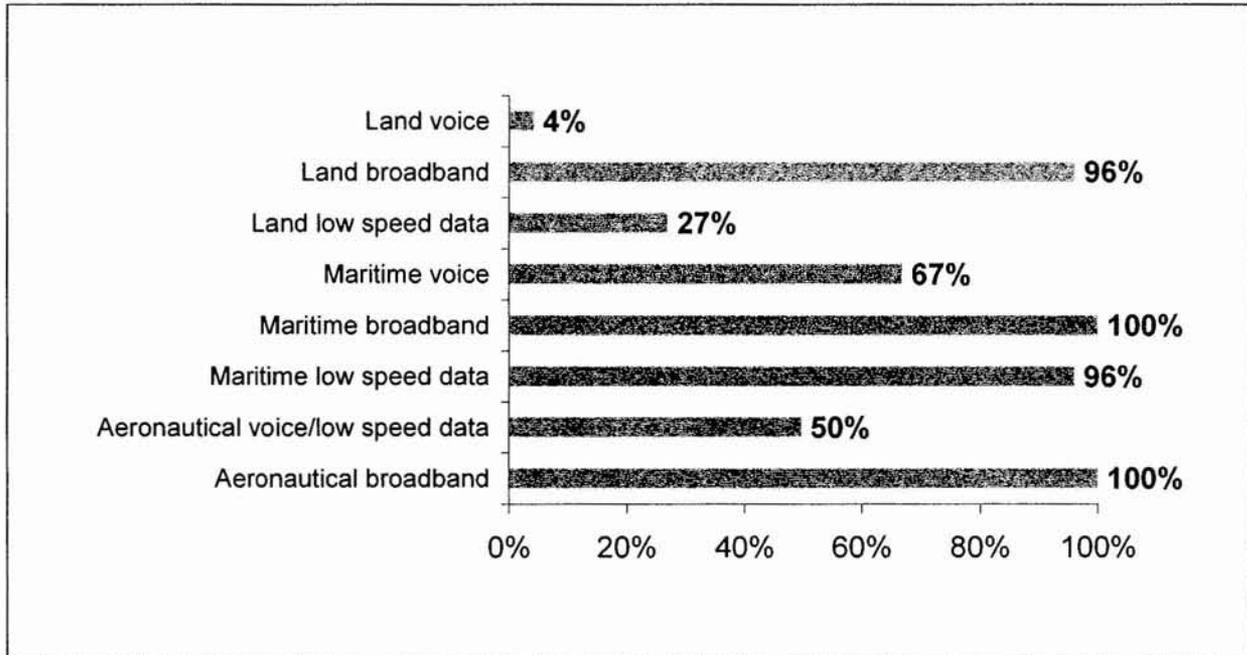
Figure 5: Wholesale MSS service revenues by operator and type, 2007 [Source: TMF Associates estimates<sup>26</sup>]

| MSS service revenues 2007 (\$M)   | Inmarsat | Iridium | Globalstar | Thuraya | MSV | Orbcomm | Total |
|-----------------------------------|----------|---------|------------|---------|-----|---------|-------|
| Land voice                        | 16       | 139     | 74         | 118     | 18  | -       | 365   |
| Land broadband                    | 107      | -       | -          | 4       | -   | -       | 111   |
| Land low speed data               | 13       | 4       | 4          | -       | 10  | 18      | 50    |
| Maritime voice                    | 68       | 34      | -          | -       | -   | -       | 101   |
| Maritime broadband                | 244      | -       | -          | -       | -   | -       | 244   |
| Maritime low speed data           | 38       | 2       | -          | -       | -   | -       | 39    |
| Aeronautical voice/low speed data | 13       | 13      | -          | -       | -   | -       | 26    |
| Aeronautical broadband            | 48       | -       | -          | -       | -   | -       | 48    |
| Total                             | 547      | 192     | 78         | 122     | 28  | 18      | 985   |

25 MSS industry perspectives, published July 17, 2008.

26 Data on total wholesale service revenue is published by Inmarsat, Orbcomm, MSV and Globalstar. Iridium publishes its total revenue, although the allocation between service and equipment revenue is estimated by TMF Associates. All breakdowns of revenue by service type are based on TMF Associates estimates. For operators without a competitive deep sea service offering (Globalstar, Thuraya, MSV and Orbcomm) all revenues are attributed to land segments, although some usage may take place in coastal waters.

Figure 6: Inmarsat share of wholesale MSS service revenues by type, 2007 [Source: TMF Associates estimates]



Based on our analysis in Section 3 above, which considered competition from both other MSS and FSS systems, we conclude that roughly two-thirds of Inmarsat’s maritime broadband revenue and 70% of Inmarsat’s maritime low speed data revenue come from customers who do not have an effective choice of satellite options. The other one third of maritime broadband revenue comes from customers who spend enough to consider VSAT a possible alternative. The remaining 30% of maritime low speed data revenue comes from customers who are not primarily motivated by the need to install Inmarsat-C terminals to meet GMDSS compliance requirements and thus could use Iridium instead. In addition, 50% of aeronautical broadband and 90% of land-based broadband users (and revenues) are in the same position, with the remaining 50% of aeronautical broadband revenue coming from customers who are potentially able to use Aircell or VSAT in North America, and the remaining 10% of land-based broadband revenue coming from customers who could use Thuraya. **Thus in total we estimate around \$310M of Inmarsat’s 2007 wholesale revenue (57% of its total wholesale service revenue) comes from customers who do not have a readily available satellite alternative.**

In 2011, we estimate that at least 50% of Inmarsat's maritime broadband revenue and 70% of Inmarsat's maritime low speed data revenue will still come from customers who do not have an effective choice of satellite options, even assuming a successful launch for Iridium's OpenPort. In addition, 50% of aeronautical broadband and 80% of land-based broadband users (and revenues) will be in the same position, based on our assessment that it will be hard for VSAT providers to address aircraft that require truly global coverage and an increasing proportion of aeronautical demand will come from cellphone use on passenger aircraft in international markets, and that most BGAN users will require global coverage that will not be available from other systems. We project Inmarsat will derive \$318M of revenue from maritime broadband, \$47M from maritime low speed data, \$93M from aeronautical broadband and \$143M from land-based broadband out of total wholesale service revenue of \$735M in 2011, and thus around *\$352M of Inmarsat's 2011 wholesale revenues (48% of its total wholesale service revenues) will come from customers who do not have a readily available satellite alternative.*

**Certification**

I, Timothy Martin Farrar, declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

A handwritten signature in cursive script that reads "Tim Farrar".

Executed this 9th day of September, 2008

Timothy Martin Farrar  
President  
Telecom, Media and Finance Associates, Inc.

The logo for Telecom, Media and Finance Associates, Inc. (TME), consisting of the letters "TME" in a bold, serif font, enclosed within a rectangular border.

## CERTIFICATE OF SERVICE

I, Kimberly Reindl, hereby certify that on this 10<sup>th</sup> day of September, 2008, I caused to be served a true copy of the foregoing "Reply of Vizada Inc. and VIZADA Services LLC to Oppositions of Inmarsat plc and Stratos Global Corporation" by electronic mail and by first-class, postage-prepaid U.S. mail upon the following:

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A handwritten signature in black ink, appearing to read "K. Reindl", is written over a horizontal line.