UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One):

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.**

For the quarterly period ended March 31, 2020

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.**

For the transition period from __________ to __________

Commission File Number: 001-35975

Gogo Inc.
(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of Incorporation or Organization)**	**27-1650905** **(I.R.S. Employer Identification No.)**

111 North Canal St., Suite 1500
Chicago, IL 60606
(Address of principal executive offices)

Telephone Number (312) 517-5000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Class	Trading Symbol	Name of Each Exchange on Which Registered
Common stock, par value $0.0001 per share	**GOGO**	**NASDAQ Global Select Market**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Ye ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of May 7, 2020, 83,770,421 shares of $0.0001 par value common stock were outstanding.

Gogo Inc.

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Gogo Inc. and Subsidiaries
Unaudited Condensed Consolidated Balance Sheets
(in thousands, except share and per share data)

	March 31, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 214,229	$ 170,016
Accounts receivable, net of allowances of $3,970 and $686, respectively	92,619	101,360
Inventories	123,179	117,144
Prepaid expenses and other current assets, net of allowances of $997 and $0, respectively	36,462	36,305
Total current assets	466,489	424,825
Non-current assets:		
Property and equipment, net	505,584	560,318
Goodwill and intangible assets, net	75,083	76,499
Operating lease right-of-use assets	58,085	63,386
Other non-current assets, net of allowances of $6,111 and $0, respectively	86,229	89,672
Total non-current assets	724,981	789,875
Total assets	$ 1,191,470	$ 1,214,700
Liabilities and Stockholders' deficit		
Current liabilities:		
Accounts payable	$ 35,995	$ 17,160
Accrued liabilities	176,238	174,111
Deferred revenue	28,472	34,789
Deferred airborne lease incentives	30,718	26,582
Total current liabilities	271,423	252,642
Non-current liabilities:		
Long-term debt	1,124,713	1,101,248
Deferred airborne lease incentives	145,172	135,399
Non-current operating lease liabilities	82,975	77,808
Other non-current liabilities	53,793	46,493
Total non-current liabilities	1,406,653	1,360,948
Total liabilities	1,678,076	1,613,590
Commitments and contingencies (Note 13)	—	—
Stockholders' deficit		
Common stock, par value $0.0001 per share; 500,000,000 shares authorized at March 31, 2020 and December 31, 2019; 83,825,592 and 88,292,821 shares issued at March 31, 2020 and December 31, 2019, respectively; and 83,773,648 and 88,240,877 shares outstanding at March 31, 2020 and December 31, 2019, respectively	8	9
Additional paid-in-capital	1,081,955	979,499
Accumulated other comprehensive loss	(5,127)	(2,256)
Treasury stock, at cost	(98,857)	—
Accumulated deficit	(1,464,585)	(1,376,142)
Total stockholders' deficit	(486,606)	(398,890)
Total liabilities and stockholders' deficit	$ 1,191,470	$ 1,214,700

See the Notes to Unaudited Condensed Consolidated Financial Statements

Gogo Inc. and Subsidiaries
Unaudited Condensed Consolidated Statements of Operations
(in thousands, except per share amounts)

	For the Three Months Ended March 31, 2020	2019
Revenue:		
Service revenue	$150,782	$165,012
Equipment revenue	33,693	34,537
Total revenue	184,475	199,549
Operating expenses:		
Cost of service revenue (exclusive of items shown below)	70,755	68,121
Cost of equipment revenue (exclusive of items shown below)	26,040	29,731
Engineering, design and development	22,863	24,728
Sales and marketing	9,652	12,318
General and administrative	27,166	22,454
Impairment of long-lived assets	46,389	—
Depreciation and amortization	32,670	30,749
Total operating expenses	235,535	188,101
Operating income (loss)	(51,060)	11,448
Other (income) expense:		
Interest income	(606)	(1,149)
Interest expense	31,174	32,554
Other (income) expense	2,993	(3,365)
Total other expense	33,561	28,040
Loss before income taxes	(84,621)	(16,592)
Income tax provision	157	207
Net loss	$ (84,778)	$ (16,799)
Net loss attributable to common stock per share—basic and diluted	$ (1.04)	$ (0.21)
Weighted average number of shares—basic and diluted	81,205	80,446

See the Notes to Unaudited Condensed Consolidated Financial Statements

Gogo Inc. and Subsidiaries
Unaudited Condensed Consolidated Statements of Comprehensive Loss
(in thousands)

	For the Three Months Ended March 31,	
	2020	2019
Net loss	$(84,778)	$(16,799)
Currency translation adjustments, net of tax	(2,871)	410
Comprehensive loss	$(87,649)	$(16,389)

See the Notes to Unaudited Condensed Consolidated Financial Statements

Gogo Inc. and Subsidiaries
Unaudited Condensed Consolidated Statements of Cash Flows
(in thousands)

	For the Three Months Ended March 31, 2020	2019
Operating activities:		
Net loss	$ (84,778)	$ (16,799)
Adjustments to reconcile net loss to cash provided by (used in) operating activities:		
Depreciation and amortization	32,670	30,749
Loss on asset disposals, abandonments and write-downs	1,098	1,241
Provision for expected credit losses	6,764	84
Impairment of long-lived assets	46,389	—
Impairment of cost-basis investment	3,000	—
Deferred income taxes	45	44
Stock-based compensation expense	3,995	4,327
Amortization of deferred financing costs	1,419	1,249
Accretion and amortization of debt discount and premium	3,326	4,774
Changes in operating assets and liabilities:		
Accounts receivable	5,085	10,551
Inventories	(6,035)	(1,118)
Prepaid expenses and other current assets	1,038	3,015
Contract assets	(10,622)	(6,175)
Accounts payable	16,399	2,843
Accrued liabilities	(18,291)	(19,381)
Deferred airborne lease incentives	2,345	(3,923)
Deferred revenue	1,378	2,257
Accrued interest	26,413	(19,514)
Warranty reserves	(526)	(588)
Other non-current assets and liabilities	6,915	208
Net cash provided by (used in) operating activities	38,027	(6,156)
Investing activities:		
Purchases of property and equipment	(13,202)	(23,154)
Acquisition of intangible assets—capitalized software	(2,108)	(4,557)
Redemptions of short-term investments	—	39,323
Other, net	89	95
Net cash provided by (used in) investing activities	(15,221)	11,707
Financing activities:		
Proceeds from credit facility draw	22,000	—
Repurchase of convertible notes	(2,498)	—
Payment of debt issuance costs	—	(557)
Payments on financing leases	(247)	(125)
Stock-based compensation activity	(397)	(58)
Net cash provided by (used in) financing activities	18,858	(740)
Effect of exchange rate changes on cash	51	(276)
Increase in cash, cash equivalents and restricted cash	41,715	4,535
Cash, cash equivalents and restricted cash at beginning of period	177,675	191,116
Cash, cash equivalents and restricted cash at end of period	$219,390	$195,651
Cash, cash equivalents and restricted cash at end of period	$219,390	$195,651
Less: current restricted cash	560	1,535
Less: non-current restricted cash	4,601	5,426
Cash and cash equivalents at end of period	$214,229	$188,690
Supplemental Cash Flow Information:		
Cash paid for interest	$ 66	$ 46,163
Cash paid for taxes	1	41
Noncash Investing and Financing Activities:		
Purchases of property and equipment in current liabilities	$ 6,411	$ 19,951
Purchases of property and equipment paid by commercial airlines	5,580	5,016

See the Notes to Unaudited Condensed Consolidated Financial Statements

Gogo Inc. and Subsidiaries
Unaudited Condensed Consolidated Statements of Stockholders' Equity (Deficit)
(in thousands, except share data)

	For the Three Months Ended March 31, 2020							
	Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Treasury Stock		
	Shares	Par Value	Capital	Loss	Deficit	Shares	Amount	Total
Balance at January 1, 2020	88,240,877	$ 9	$ 979,499	$ (2,256)	$(1,376,142)	—	$ —	$(398,890)
Net loss	—	—	—	—	(84,778)	—	—	(84,778)
Currency translation adjustments, net of tax	—	—	—	(2,871)	—	—	—	(2,871)
Stock-based compensation expense	—	—	3,995	—	—	—	—	3,995
Issuance of common stock upon vesting of restricted stock units and restricted stock awards	522,490	—	—	—	—	—	—	—
Tax withholding related to vesting of restricted stock units	—	—	(682)	—	—	—	—	(682)
Issuance of common stock in connection with employee stock purchase plan	87,681	—	285	—	—	—	—	285
Settlement of prepaid forward shares	(5,077,400)	(1)	98,858			5,077,400	(98,857)	—
Impact of the adoption of new accounting standards	—	—	—	—	(3,665)	—	—	(3,665)
Balance at March 31, 2020	83,773,648	$ 8	$1,081,955	$ (5,127)	$(1,464,585)	5,077,400	$(98,857)	$(486,606)

	For the Three Months Ended March 31, 2019							
	Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Treasury Stock		
	Shares	Par Value	Capital	Loss	Deficit	Shares	Amount	Total
Balance at January 1, 2019	87,560,694	$ 9	$ 963,458	$ (3,554)	$ (1,228,674)	—	$ —	$ (268,761)
Net loss	—	—	—	—	(16,799)	—	—	(16,799)
Currency translation adjustments, net of tax	—	—	—	410	—	—	—	410
Stock-based compensation expense	—	—	4,327	—	—	—	—	4,327
Issuance of common stock upon vesting of restricted stock units and restricted stock awards	161,667	—	—	—	—	—	—	—
Tax withholding related to vesting of restricted stock units	—	—	(351)	—	—	—	—	(351)
Issuance of common stock in connection with employee stock purchase plan	75,253	—	293	—	—	—	—	293
Impact of the adoption of new accounting standards	—	—	—	—	(3,093)	—	—	(3,093)
Balance at March 31, 2019	87,797,614	$ 9	$ 967,727	$ (3,144)	$ (1,248,566)	—	$ —	$ (283,974)

See the Notes to Unaudited Condensed Consolidated Financial Statements

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements

1. Basis of Presentation

The Business - Gogo ("we," "us," "our") is the global leader in providing broadband connectivity solutions and wireless in-flight entertainment to the aviation industry. We operate through the following three reportable segments: Commercial Aviation North America, or "CA-NA," Commercial Aviation Rest of World, or "CA-ROW," and Business Aviation, or "BA." Services provided by our CA-NA and CA-ROW businesses include Passenger Connectivity, which allows passengers to connect to the Internet from their personal Wi-Fi-enabled devices; Passenger Entertainment, which offers passengers the opportunity to enjoy a broad selection of in-flight entertainment options on their personal Wi-Fi enabled devices; and Connected Aircraft Services ("CAS"), which offers airlines connectivity for various operations and currently include, among other services, real-time credit card transaction processing, electronic flight bags and real-time weather information. Services are provided by CA-NA on commercial aircraft flying routes that generally begin and end within North America, which for this purpose includes the United States, Canada and Mexico. CA-ROW provides service on commercial aircraft operated by foreign-based commercial airlines and flights outside of North America for North American-based commercial airlines. The routes included in our CA-ROW segment are those that begin and/or end outside of North America (as defined above) on which our international service is provided. BA provides in-flight Internet connectivity and other voice and data communications products and services and sells equipment for in-flight telecommunications to the business aviation market. BA services include Gogo Biz, our in-flight broadband service, Passenger Entertainment, our in-flight entertainment service, and satellite-based voice and data services through our strategic alliances with satellite companies.

Basis of Presentation - The accompanying unaudited condensed consolidated financial statements and notes have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and in conformity with Article 10 of Regulation S-X promulgated under the Securities Act of 1933, as amended (the "Securities Act"). Accordingly, they do not include all of the information and notes required by GAAP for complete financial statements and should be read in conjunction with our annual audited consolidated financial statements and the notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2019 as filed with the Securities and Exchange Commission ("SEC") on March 13, 2020 (the "2019 10-K"). These unaudited condensed consolidated financial statements reflect, in the opinion of management, all material adjustments (which include normal recurring adjustments) necessary to fairly state, in all material respects, our financial position, results of operations and cash flows for the periods presented.

The results of operations and cash flows for the three month period ended March 31, 2020, including the impact of COVID-19, are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2020.

We have one class of common stock outstanding as of March 31, 2020 and December 31, 2019.

During March 2020, approximately 5.1 million shares of common stock were delivered to us in connection with the Forward Transactions (as defined and described in Note 10, "Long-Term Debt and Other Liabilities"). We accounted for these shares as Treasury Stock and reclassified $98.9 million from Additional Paid-In Capital to Treasury Stock, at cost, in our unaudited condensed consolidated balance sheet. See Note 10, "Long-Term Debt and Other Liabilities," for additional information.

Reclassifications – To conform with the current year presentation, $84 thousand of bad debt expense has been reclassified to a separate line from accounts receivable for the three month period ended March 31, 2019.

Use of Estimates - The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, management evaluates the significant estimates and bases such estimates on historical experience and on various other assumptions believed to be reasonable under the circumstances. However, actual results could differ materially from those estimates.

2. Impact of COVID-19 Pandemic

In December 2019, a novel strain of coronavirus ("COVID-19") was reported in Wuhan, China, and the World Health Organization (the "WHO") subsequently declared COVID-19 a "Public Health Emergency of International Concern." The COVID-19 pandemic has caused a significant decline in commercial and business air travel, which has materially and adversely affected our business. Approximately 60% of our revenue comes from our two

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

commercial airline segments, CA-NA and CA-ROW. Passenger traffic declined significantly in April 2020 compared to March 2020, resulting in an expected significant reduction in service revenue in April 2020 as compared to the monthly service revenue in the first quarter of 2020. The approximate remaining 40% of our revenue comes from our business aviation segment, BA, which has also seen a sharp decrease in flight activity. Additionally, since many business aircraft are flying less frequently, there was an increase in requests for one-month account suspensions and a significant decrease in new plan activations in April 2020 compared to March 2020.

In response to the COVID-19 pandemic and resulting developments, we developed, and continue to refine on an ongoing basis, a range of projections based on estimated market conditions, and have implemented measures to protect our employees, ensure the business has adequate liquidity and maintain the value of our business segments, while at the same time continuing to make the interest payments on our outstanding debt. These measures include, but are not limited to, the following:

- *Employee and customer safety* – Our employees are our most important resource and we are focused on the safety of our people and our customers. Every country in which we operate has issued work from home orders and over 1,000 of our employees are working remotely, with limited personnel in place for certain location-specific activities.
- *Personnel actions* – We implemented several cost-cutting measures related to personnel, including implementing a hiring freeze, suspending 2020 merit salary increases and deferring the Chief Executive Officer's 2019 bonus payout.

  Additionally, we furloughed approximately 54% of our workforce and reduced compensation for most other employees, starting May 4, 2020. The furloughs impact approximately 600 employees across the entire company. The time and duration of the furloughs will vary based on workload in individual departments. Salary reductions begin at 30% for the Chief Executive Officer, then 20% for the executive leadership team and reducing downward by staff level from there. In addition, the compensation for the members of our Board of Directors has been reduced by 30%. Certain types of employees, such as hourly workers, have not had their compensation reduced.
- *Expense management* – We have identified responsive action plans / levers that we are implementing, or considering implementing as needed, to dramatically reduce costs in order to ensure our long-term viability, including the following:
  - Renegotiating terms with suppliers, including satellite capacity providers;
  - Deferring purchases of capital equipment;
  - Delaying aircraft equipment installations;
  - Reducing marketing, travel and other non-essential spend; and
  - Renegotiating terms with airline partners.
- *Financing* – In March 2020, we drew $22 million under the ABL Credit Facility.
- *Government assistance* – We applied for an $81 million grant and a $150 million loan under the recently enacted Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). If we receive such assistance, we will be subject to certain restrictions and will be required to modify the personnel actions discussed above to comply with the terms of the government assistance. Additionally, receipt of funds may require the consent of a majority of the holders of the 2024 Senior Secured Notes and the consent of the lenders under the ABL Credit Agreement to amend the terms governing such indebtedness.

We expect COVID-19 to continue to have a significant negative impact on our revenue and we are unable to predict how long that impact will continue. The extent of the impact of COVID-19 on our CA and BA businesses and our financial and operational performance will depend on future developments, including the duration, spread and severity of the outbreak, the duration and geographic scope of related travel advisories and restrictions and the extent of the impact of COVID-19 on overall demand for commercial and business aviation travel, all of which are highly uncertain and cannot be predicted. We are unable to predict how long the pandemic and its negative impact will persist, what additional measures may be introduced by governments or private parties or what effect any such additional measures may have on air travel, our business partners and our business. Not only is the duration of the pandemic and future combative measures unknown, the overall situation is extremely fluid, and it is impossible to predict the timing of future material changes in the situation and whether the Company's actions in response will be sufficient or successful.

Impairment assessments - We review our long-lived assets and indefinite-lived intangible assets for potential impairment whenever events indicate that the carrying amount of such assets may not be recoverable. We conducted a review as of March 31, 2020 in light of the COVID-19 outbreak and its impact on air travel, and recorded an impairment charge with respect to certain long-lived assets. We are continuously monitoring the COVID-19 pandemic and its impact. If the impact of the pandemic exceeds management's estimates, we could incur additional material impairment charges in future periods. See Note 7, "Composition of Certain Balance Sheet Accounts," for additional information on our long-lived assets and Note 8, "Intangible Assets," for additional information on our indefinite-lived assets.

Credit Losses — We regularly evaluate our accounts receivable and contract assets for expected credit losses and recorded credit losses for the three month period ended March 31, 2020. We are continuously monitoring our assumptions used to determine our expected credit losses, including the impact of the COVID-19 pandemic, which could cause us to record additional material credit losses in future periods. See Note 9, "Composition of Certain Reserves and Allowances," for additional information.

3. Recent Accounting Pronouncements

Accounting standards adopted:

On January 1, 2020, we adopted ASU 2016-13, *Financial Instruments-Credit Losses (ASC 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost.

The cumulative effect adjustment from using the modified retrospective approach for the adoption of ASC 326 impacted our unaudited condensed consolidated balance sheet as of January 1, 2020 by the recognition of allowance for credit losses as summarized below:

	Balance at December 31, 2019	Impact of ASC 326	Balances with Adoption of ASC 326
Assets			
Accounts receivable	101,360	(1,386)	99,974
Prepaid and other current assets	36,305	(356)	35,949
Other non-current assets	89,672	(1,923)	87,749
Equity			
Accumulated deficit	(1,376,142)	(3,665)	(1,379,807)

See Note 9, "Composition of Certain Reserves and Allowances," for additional information.

On January 1, 2020, we adopted ASU 2018-15, *Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* ("ASU 2018-15"), which requires an entity in a hosting arrangement that is a service contract to follow the guidance in Subtopic 350-40 to determine which implementation costs to capitalize as an asset related to the service contract and which costs to expense. Adoption of this standard did not have a material impact on our unaudited condensed consolidated financial statements.

On January 1, 2020, we adopted ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which modifies the disclosure requirements related to recurring or nonrecurring fair value measurements. Currently all of our fair value measurements are classified as Level 2 within the fair value hierarchy, and as such, the adoption of this standard did not have an impact on our unaudited condensed consolidated financial statements. See Note 14, "Fair Value of Financial Assets and Liabilities," for additional information.

New pronouncements:

In March 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting* ("ASU 2020-04"), which provides optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships and other transactions affected by the discontinuation of the London Interbank Offered Rate (LIBOR) and other interbank offered rates. This guidance is effective beginning on March 12, 2020 through December 31, 2022. We do not currently believe that the adoption of this standard will have a material impact on our consolidated financial statements.

4. Revenue Recognition

Arrangements with commercial airlines

For CA-NA and CA-ROW, pursuant to contractual agreements with our airline partners, we place our equipment on commercial aircraft operated by the airlines in order to deliver our service to passengers on the aircraft. We currently have two types of commercial airline arrangements: turnkey and airline-directed. Under the airline-directed model, we have transferred control of the equipment to the airline and therefore the airline is our customer in these transactions. Under the turnkey model, we have not transferred control of our equipment to our airline partner and, as a result, the airline passenger is deemed to be our customer. Transactions with our airline partners under the turnkey model are accounted for as an operating lease of space on an aircraft. See Note 12, "Leases," for additional information on the turnkey model.

Remaining performance obligations

As of March 31, 2020, the aggregate amount of the transaction price in our contracts allocated to the remaining unsatisfied performance obligations was approximately $585 million, most of which relate to our commercial aviation contracts. Approximately $109 million represents future equipment revenue that is expected to be recognized within the next one to three years. The remaining $476 million primarily represents connectivity and entertainment service revenues which are recognized as services are provided, which is expected to occur through the remaining term of the contract (approximately 5-10 years). We have excluded from this amount: all variable consideration derived from our connectivity or entertainment services that is allocated entirely to our performance of obligations related to such services; consideration from contracts that have an original duration of one year or less; revenue from passenger service on airlines operating under the turnkey model; and revenue from contracts that have been executed but under which have not yet met the accounting definition of a contract since the airline has not yet determined which products in our portfolio it wishes to select, and, as a result we are unable to determine which products and services will be transferred to the customer.

Disaggregation of revenue

The following table presents our revenue disaggregated by category *(in thousands)*:

	For the Three Months Ended March 31, 2020			
	CA-NA	CA-ROW	BA	Total
Service revenue				
Connectivity	$68,869	$ 18,029	$56,975	$143,873
Entertainment, CAS and other	4,959	1,199	751	6,909
Total service revenue	$73,828	$ 19,228	$57,726	$150,782
Equipment revenue				
ATG	$ 4,396	$ —	$ 9,624	$ 14,020
Satellite	1,832	14,184	3,374	19,390
Other	80	—	203	283
Total equipment revenue	$ 6,308	$ 14,184	$13,201	$ 33,693
Customer type				
Airline passenger and aircraft owner/operator	$43,702	$ 6,517	$57,726	$107,945
Airline, OEM and aftermarket dealer	26,258	25,399	13,201	64,858
Third party	10,176	1,496	—	11,672
Total revenue	$80,136	$ 33,412	$70,927	$184,475

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

	For the Three Months Ended March 31, 2019			
	CA-NA	CA-ROW	BA	Total
Service revenue				
Connectivity	$79,818	$ 18,854	$52,685	$151,357
Entertainment, CAS and other	12,209	918	528	13,655
Total service revenue	$92,027	$ 19,772	$53,213	$165,012
Equipment revenue				
ATG	$ 2,872	$ —	$11,335	$ 14,207
Satellite	630	13,159	5,235	19,024
Other	540	—	766	1,306
Total equipment revenue	$ 4,042	$ 13,159	$17,336	$ 34,537
Customer type				
Airline passenger and aircraft owner/operator	$54,349	$ 5,851	$53,213	$113,413
Airline, OEM and aftermarket dealer	30,913	25,491	17,336	73,740
Third party	10,807	1,589	—	12,396
Total revenue	$96,069	$ 32,931	$70,549	$199,549

Contract balances

Our current and non-current deferred revenue balances totaled $57.9 million and $56.7 million as of March 31, 2020 and December 31, 2019, respectively. Deferred revenue includes, among other things, equipment, multi-pack and subscription connectivity products, sponsorship activities and airline-directed equipment and connectivity and entertainment service.

Our current and non-current contract asset balances totaled $70.8 million and $64.2 million as of March 31, 2020 and December 31, 2019, respectively. The contract asset balance as of March 31, 2020 was net of allowances of $7.1 million. See Note 9, "Composition of Certain Reserves and Allowances," for additional information regarding allowances. Contract assets represent the aggregate amount of revenue recognized in excess of billings for our airline-directed contracts.

Capitalized STC balances for our airline-directed contracts were $16.5 million and $17.5 million as of March 31, 2020 and December 31, 2019, respectively. The capitalized STC costs are amortized over the life of the associated airline-directed contracts as part of our engineering, design and development costs in our unaudited condensed consolidated statements of operations. Total amortization expense was $0.8 million and $0.3 million, respectively, for the three month periods ended March 31, 2020 and 2019.

5. Net Loss Per Share

Basic and diluted net loss per share have been calculated using the weighted average number of common shares outstanding for the period.

The shares of common stock effectively repurchased in connection with the Forward Transactions (as defined and described in Note 10, "Long-Term Debt and Other Liabilities") are considered participating securities requiring the two-class method to calculate basic and diluted earnings per share. Net earnings in future periods will be allocated between common shares and participating securities. In periods of a net loss, the shares associated with the Forward Transactions will not receive an allocation of losses, as the counterparties to the Forward Transactions are not required to fund losses. Additionally, the calculation of weighted average shares outstanding as of March 31, 2020 and 2019 excludes approximately 2.1 million shares and 7.2 million shares, respectively, associated with the Forward Transactions.

As a result of the net loss for the three month periods ended March 31, 2020 and 2019, all of the outstanding shares of common stock underlying stock options, deferred stock units and restricted stock units were excluded from the computation of diluted shares outstanding because they were anti-dilutive.

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

The following table sets forth the computation of basic and diluted earnings per share for the three month periods ended March 31, 2020 and 2019; however, because of the undistributed losses, the shares of common stock associated with the Forward Transactions are excluded from the computation of basic earnings per share in 2020 and 2019 as undistributed losses are not allocated to these shares (*in thousands, except per share amounts*):

	For the Three Months Ended March 31, 2020	For the Three Months Ended March 31, 2019
Net loss	$(84,778)	$(16,799)
Less: Participation rights of the Forward Transactions	—	—
Undistributed losses	$(84,778)	$(16,799)
Weighted-average common shares outstanding-basic and diluted	81,205	80,446
Net loss attributable to common stock per share-basic and diluted	$ (1.04)	$ (0.21)

6. Inventories

Inventories consist primarily of telecommunications systems and parts and are recorded at the lower of average cost or market. We evaluate the need for write-downs associated with obsolete, slow-moving and nonsalable inventory by reviewing net realizable inventory values on a periodic basis.

Inventories as of March 31, 2020 and December 31, 2019 were as follows (*in thousands*):

	March 31, 2020	December 31, 2019
Work-in-process component parts	$ 23,585	$ 23,141
Finished goods	99,594	94,003
Total inventory	$123,179	$ 117,144

7. Composition of Certain Balance Sheet Accounts

Prepaid expenses and other current assets as of March 31, 2020 and December 31, 2019 were as follows (*in thousands*):

	March 31, 2020	December 31, 2019
Contract assets, net of allowances of $997 and $0, respectively *(1)*	$ 14,319	$ 12,364
Prepaid satellite services	7,970	11,299
Restricted cash	560	560
Other	13,613	12,082
Total prepaid expenses and other current assets	$ 36,462	$ 36,305

(1) Allowance for contract assets as of March 31, 2020 is due to the adoption of ASC 326. See Note 9, "Composition of Certain Reserves and Allowances," for additional information.

Property and equipment as of March 31, 2020 and December 31, 2019 were as follows (*in thousands*):

	March 31, 2020	December 31, 2019
Office equipment, furniture, fixtures and other	$ 56,482	$ 56,205
Leasehold improvements	44,403	44,389
Airborne equipment *(1)*	709,980	737,593
Network equipment	225,169	229,451
	1,036,034	1,067,638
Accumulated depreciation	(530,450)	(507,320)
Total property and equipment, net	$ 505,584	$ 560,318

(1) Decrease in Airborne equipment is due primarily to the impairment of airborne equipment associated with three of our airline agreements. See below for additional information.

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

Other non-current assets as of March 31, 2020 and December 31, 2019 were as follows (*in thousands*):

	March 31, 2020	December 31, 2019
Contract assets, net of allowances of $6,111 and $0, respectively *(1)*	$ 56,516	$ 51,829
Deferred STC costs	16,475	17,453
Restricted cash	4,601	7,099
Other *(2)*	8,637	13,291
Total other non-current assets	$ 86,229	$ 89,672

(1) Allowances for contract assets as of March 31, 2020 is due to the adoption of ASC 326. See Note 9, "Composition of Certain Reserves and Allowances," for additional information.

(2) Decrease due in part to the $3.0 million impairment of a cost-basis investment which is included in Other (income) expense within our unaudited condensed consolidated statements of operations for the three month period ended March 31, 2020.

We review our long-lived assets, including property and equipment, right-of-use assets, and other non-current assets, for potential impairment whenever events indicate that the carrying amount of such assets may not be recoverable. We perform this review by comparing the carrying value of the long-lived assets to the estimated future undiscounted cash flows expected to result from the use of the assets. We group certain long-lived assets by airline contract and by connectivity technology. If we determine an impairment exists, the amount of the impairment is computed as the difference between the asset group's carrying value and its estimated fair value, following which the assets are written down to their estimated fair value.

In light of the COVID-19 outbreak and its impact on air travel, including decreased flights, decreased gross passenger opportunity and our airline partners' temporary parking of a significant number of their aircraft, we conducted a review as of March 31, 2020 and determined that the carrying values for the asset groups related to three of our airline agreements for the CA business exceeded their estimated undiscounted cash flows, which triggered the need to estimate the fair value of these assets. Fair value reflects our best estimate of the discounted cash flows of the impaired assets. For the airborne assets and right-of-use assets associated with the three airline agreements (the "impaired assets"), we recorded an impairment charge of $46.4 million for the three month period ended March 31, 2020, reflecting the difference between the carrying value and the estimated fair value of the impaired assets.

We are continuously monitoring the COVID-19 pandemic and its impact. If the negative impact of the pandemic on the assets related to our airline agreements continues, including as a result of airline partners' decisions to temporarily park certain aircraft to reduce capacity, we could incur additional material impairment charges in future periods.

Accrued liabilities as of March 31, 2020 and December 31, 2019 were as follows (*in thousands*):

	March 31, 2020	December 31, 2019
Airline related accrued liabilities	$ 40,882	$ 43,592
Accrued interest	43,461	17,048
Employee compensation and benefits	15,136	29,954
Accrued satellite network costs	19,438	13,843
Warranty reserve	12,639	13,165
Operating leases	9,484	12,241
Airborne equipment and installation costs	4,293	11,466
Other	30,905	32,802
Total accrued liabilities	$176,238	$ 174,111

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

Other non-current liabilities as of March 31, 2020 and December 31, 2019 were as follows (*in thousands*):

	March 31, 2020	December 31, 2019
Deferred revenue	$ 29,433	$ 21,889
Asset retirement obligations	11,773	11,560
Deferred tax liabilities	2,384	2,340
Other	10,203	10,704
Total other non-current liabilities	$ 53,793	$ 46,493

8. Intangible Assets

Our intangible assets are comprised of both indefinite-lived and finite-lived intangible assets. Intangible assets with indefinite lives and goodwill are not amortized; rather, they are reviewed for impairment at least annually or whenever events or circumstances indicate the carrying value of the asset may not be recoverable. We perform our annual impairment tests of our indefinite-lived intangible assets and goodwill during the fourth quarter of each fiscal year. We also reevaluate the useful life of indefinite-lived intangible assets each reporting period to determine whether events and circumstances continue to support an indefinite useful life. The results of our annual indefinite-lived intangible assets and goodwill impairment assessments in the fourth quarter of 2019 indicated no impairment. As of March 31, 2020, as a result of COVID-19, we reviewed the carrying value of our indefinite-lived intangible assets and goodwill and concluded there were no impairments.

As of both March 31, 2020 and December 31, 2019, our goodwill balance, all of which related to our BA segment, was $0.6 million.

Our intangible assets, other than goodwill, as of March 31, 2020 and December 31, 2019 were as follows (*in thousands, except for weighted average remaining useful life*):

	Weighted Average Remaining Useful Life (in years)	As of March 31, 2020			As of December 31, 2019		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortized intangible assets:							
Software	2.5	$180,568	$ (139,943)	$40,625	$177,190	$ (135,154)	$42,036
Other intangible assets	7.8	3,000	(1,445)	1,555	3,000	(1,440)	1,560
Service customer relationships		8,081	(8,081)	—	8,081	(8,081)	—
OEM and dealer relationships		6,724	(6,724)	—	6,724	(6,724)	—
Total amortized intangible assets		198,373	(156,193)	42,180	194,995	(151,399)	43,596
Unamortized intangible assets:							
FCC Licenses		32,283	—	32,283	32,283	—	32,283
Total intangible assets		$230,656	$ (156,193)	$74,463	$227,278	$ (151,399)	$75,879

Amortization expense was $4.8 million and $5.3 million, respectively, for the three month periods ended March 31, 2020 and 2019.

Amortization expense for each of the next five years and thereafter is estimated to be as follows (*in thousands*):

Years ending December 31,	Amortization Expense
2020 (period from April 1 to December 31)	$ 13,092
2021	$ 14,451
2022	$ 9,670
2023	$ 2,808
2024	$ 547
Thereafter	$ 1,612

Actual future amortization expense could differ from the estimated amount as a result of future investments and other factors.

9. Composition of Certain Reserves and Allowances

Credit Losses — We regularly evaluate our accounts receivable and contract assets for expected credit losses. Our expected loss allowance methodology for accounts receivable is developed using historical collection experience, current and future economic and market conditions, and a review of the current status of each customer's trade accounts receivables. Due to the short-term nature of such receivables, the estimated amount of accounts receivable that may not be collected is based on the aging of the accounts receivable balances and the financial condition of customers. Additionally, specific allowance amounts are established to record the appropriate provision for customers that have a higher probability of default. Our monitoring activities include timely account reconciliation, dispute resolution, payment confirmation, consideration of each customer's financial condition and macroeconomic conditions. Balances are written off when determined to be uncollectible. We apply a similar methodology towards our current and non-current contract asset balances. However, due to the inherent additional risk associated with a long-term receivable, an additional provision is applied towards contract asset balances that will diminish over time as the contract nears its expiration date. For the three months ended March 31, 2020, we also considered the current and estimated future economic and market conditions resulting from the COVID-19 pandemic in the determination of our estimated credit losses.

Estimates are used to determine the expected loss allowances. Such allowances are based on management's assessment of anticipated payment, taking into account available historical and current information as well as management's assessment of potential future developments. We are continuously monitoring our assumptions used to determine our expected credit losses, including the impact of COVID-19, which could cause us to record additional material credit losses in future periods.

A summary of our allowances for credit losses were as follows (*in thousands*):

	Accounts receivable	Prepaid and other current assets	Other non-current assets
Balance at January 1, 2020	$ 686	$ —	$ —
Cumulative-effect adjustment of ASC 326 adoption	1,386	356	1,923
Current-period provision for expected credit losses *(1)*	1,935	641	4,188
Write-offs charged against the allowances	—	—	—
Other, including dispositions and foreign currency	(37)	—	—
Balance at March 31, 2020	$ 3,970	$ 997	$ 6,111

(1) The current-period provision for expected credit losses was due primarily to the impact of COVID-19. One international airline partner in particular accounted for approximately 70% of the provision recorded during the three month period ended March 31, 2020. Subsequent to March 31, 2020, such airline partner's financial condition continued to deteriorate and we expect to record additional credit losses during the three month period ending June 30, 2020.

Warranties — We provide warranties on parts and labor related to our products. Our warranty terms range from two to ten years. Warranty reserves are established for costs that are estimated to be incurred after the sale, delivery and installation of the products under warranty. The warranty reserves are determined based on known product failures, historical experience and other available evidence, and are included in accrued liabilities in our unaudited condensed consolidated balance sheets. Our warranty reserve balance was $12.6 million and $13.2 million, respectively, as of March 31, 2020 and December 31, 2019.

10. Long-Term Debt and Other Liabilities

Long-term debt as of March 31, 2020 and December 31, 2019 was as follows (*in thousands*):

	March 31, 2020	December 31, 2019
2024 Senior Secured Notes	$ 921,310	$ 921,137
2022 Convertible Notes	205,020	201,868
ABL Credit Facility	22,000	—
2020 Convertible Notes	—	2,498
Total debt	1,148,330	1,125,503
Less deferred financing costs	(23,617)	(24,255)
Total long-term debt	$1,124,713	$1,101,248

2024 Senior Secured Notes - On April 25, 2019 (the "Issue Date"), Gogo Intermediate Holdings LLC ("GIH") (a wholly owned subsidiary of Gogo Inc.) and Gogo Finance Co. Inc. (a wholly owned subsidiary of GIH) ("Gogo Finance" and, together with GIH, the "Issuers") issued $905 million aggregate principal amount of 9.875% senior secured notes due 2024 (the "Initial Notes") under an indenture (the "Base Indenture"), dated as of April 25, 2019, among the Issuers, us, as guarantor, certain subsidiaries of GIH, as guarantors (the "Initial 2024 Subsidiary Guarantors" and, together with us, the "Initial 2024 Guarantors"), and U.S. Bank National Association, as trustee (the "Trustee") and collateral agent (the "Collateral Agent"). On May 3, 2019, the Issuers, the Initial 2024 Guarantors and the Trustee entered into the first supplemental indenture (the "First Supplemental Indenture") to increase the amount of indebtedness that may be incurred under Credit Facilities (as defined in the 2024 Indenture) by GIH or its subsidiaries that are 2024 Guarantors (as defined below) by $20 million in aggregate principal amount. On March 6, 2020, the Issuers, the Initial 2024 Guarantors, Gogo Air International GmbH (an indirect subsidiary of GIH) ("Gogo International" and, together with the Initial 2024 Guarantors, the "2024 Guarantors") and the Trustee entered into a second supplemental indenture (together with the Base Indenture and the First Supplemental Indenture, the "2024 Indenture") to add Gogo International as a guarantor to the 2024 Indenture. On May 7, 2019, the Issuers issued an additional $20 million aggregate principal amount of 9.875% senior secured notes due 2024 (the "Additional Notes"). We refer to the Initial Notes and the Additional Notes collectively as the "2024 Senior Secured Notes". The Initial Notes were issued at a price equal to 99.512% of their face value, and the Additional Notes were issued at a price equal to 100.5% of their face value, resulting in aggregate gross proceeds of $920.7 million. Additionally, we received approximately $0.1 million for interest that accrued from April 25, 2019 through May 7, 2019 with respect to the Additional Notes that was included in our interest payment on November 1, 2019. The 2024 Senior Secured Notes are guaranteed on a senior secured basis by Gogo Inc. and all of GIH's existing and future restricted subsidiaries (other than Gogo Finance), subject to certain exceptions. The 2024 Senior Secured Notes and the related guarantees are secured by second-priority liens on the ABL Priority Collateral (as defined below) and by first-priority liens on the Cash Flow Priority Collateral (as defined below), including pledged equity interests of the Issuers and all of GIH's existing and future restricted subsidiaries guaranteeing the 2024 Senior Secured Notes, except for certain excluded assets and subject to permitted liens.

As of March 31, 2020 and December 31, 2019, the outstanding principal amount of the 2024 Senior Secured Notes was $925.0 million for both dates, the unaccreted debt discount was $3.7 million and $3.9 million, respectively, and the net carrying amount was $921.3 million and $921.1 million, respectively.

We used a portion of the net proceeds from the issuance of the 2024 Senior Secured Notes to fund the redemption of all the outstanding 2022 Senior Secured Notes (as defined below) and to repurchase $159 million aggregate principal amount of the 2020 Convertible Notes (as defined below).

The 2024 Senior Secured Notes will mature on May 1, 2024. The 2024 Senior Secured Notes bear interest at a rate of 9.875% per year, payable semiannually in arrears on May 1 and November 1 of each year, beginning November 1, 2019.

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

We paid approximately $22.0 million of origination fees and financing costs related to the issuance of the 2024 Senior Secured Notes, which have been accounted for as deferred financing costs. The deferred financing costs on our unaudited condensed consolidated balance sheet are being amortized over the contractual term of the 2024 Senior Secured Notes using the effective interest method. Total amortization expense was $0.9 million for the three month period ended March 31, 2020. Amortization expense is included in interest expense in the unaudited condensed consolidated statements of operations. As of March 31, 2020 and December 31, 2019, the balance of unamortized deferred financing costs related to the 2024 Senior Secured Notes was $18.9 million and $19.7 million, respectively, and was included as a reduction to long-term debt in our unaudited condensed consolidated balance sheet. See Note 11, "Interest Costs," for additional information.

The 2024 Senior Secured Notes are the senior secured indebtedness of the Issuers and are:

- effectively senior to (i) all of the Issuers' existing and future senior unsecured indebtedness to the extent of the value of the collateral securing the 2024 Senior Secured Notes and (ii) the Issuers' indebtedness secured on a junior priority basis by the same collateral securing the 2024 Senior Secured Notes to the extent of the value of such collateral, including the obligations under the ABL Credit Facility (as defined below) to the extent of the value of the Cash Flow Priority Collateral;
- effectively equal in right of payment with the Issuers' existing and future (i) unsecured indebtedness that is not subordinated in right of payment to the 2024 Senior Secured Notes and (ii) indebtedness secured on a junior priority basis by the same collateral securing the 2024 Senior Secured Notes, if any, in each case to the extent of any insufficiency in the collateral securing the 2024 Senior Secured Notes;
- structurally senior to all of our existing and future indebtedness, including our 2022 Convertible Notes (as defined below);
- senior in right of payment to any and all of the Issuers' future indebtedness that is subordinated in right of payment to the 2024 Senior Secured Notes;
- structurally subordinated to all of the indebtedness and other liabilities of any non-2024 Guarantors (other than the Issuers); and
- effectively subordinated to all of our existing and future indebtedness secured on a senior priority basis by the same collateral securing the 2024 Senior Secured Notes to the extent of the value of such collateral, including the obligations under the ABL Credit Facility to the extent of the value of ABL Priority Collateral.

Each guarantee is a senior secured obligation of such 2024 Guarantor and is:

- effectively senior in right of payment to all existing and future (i) senior unsecured indebtedness to the extent of the value of the collateral securing such guarantee owned by such 2024 Guarantor and (ii) indebtedness secured on a junior priority basis by the same collateral securing the guarantee owned by such 2024 Guarantor to the extent of the value of the collateral securing the guarantee, including the obligations under the ABL Credit Facility to the extent of the value of the Cash Flow Priority Collateral;
- effectively equal in right of payment with all existing and future unsubordinated indebtedness and indebtedness secured on a junior priority basis by the same collateral securing the guarantee owned by such 2024 Guarantor, if any, in each case to the extent of any insufficiency in the collateral securing such guarantee;
- effectively subordinated to the obligations under the ABL Credit Facility of each 2024 Guarantor to the extent of the value of the ABL Priority Collateral owned by such 2024 Guarantor;
- effectively senior in right of payment to all existing and future subordinated indebtedness, if any, of such 2024 Guarantor; and
- structurally subordinated to all indebtedness and other liabilities of any non-2024 Guarantor subsidiary of such 2024 Guarantor (excluding, in the case of our guarantee, the Issuers).

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

The security interests in certain collateral may be released without the consent of holders of the 2024 Senior Secured Notes if such collateral is disposed of in a transaction that complies with the 2024 Indenture and related security agreements, and if any grantor of such security interests is released from its obligations with respect to the 2024 Senior Secured Notes in accordance with the applicable provisions of the 2024 Indenture and related security agreements. Under certain circumstances, GIH and the 2024 Guarantors have the right to transfer certain intellectual property assets that on the Issue Date constitute collateral securing the 2024 Senior Secured Notes or the guarantees to a restricted subsidiary organized under the laws of Switzerland, resulting in the release of such collateral. In addition, the 2024 Indenture permits indebtedness incurred under the ABL Credit Facility to be secured on a first-priority basis by certain of the same collateral that secures the 2024 Senior Secured Notes.

The Issuers may redeem the 2024 Senior Secured Notes, in whole or in part, at any time prior to May 1, 2021, at a redemption price equal to 100% of the principal amount of the 2024 Senior Secured Notes redeemed plus the make-whole premium set forth in the 2024 Indenture as of, and accrued and unpaid interest, if any, to (but not including) the applicable redemption date.

On or after May 1, 2021, the 2024 Senior Secured Notes will be redeemable at the following redemption prices (expressed in percentages of principal amount), plus accrued and unpaid interest, if any, to (but not including) the redemption date (subject to the right of holders of record on the relevant regular record date on or prior to the redemption date to receive interest due on an interest payment date), if redeemed during the twelve-month period commencing on May 1 of the following years:

Year	Redemption Price
2021	104.938%
2022	102.469%
2023 and thereafter	100.000%

In addition, at any time prior to May 1, 2021, the Issuers may redeem up to 40% of the aggregate principal amount of the 2024 Senior Secured Notes with the proceeds of certain equity offerings at a redemption price of 109.875% of the principal amount redeemed, plus accrued and unpaid interest, if any, to (but not including) the date of redemption; provided, however, that 2024 Senior Secured Notes representing at least 50% of the principal amount of the 2024 Senior Secured Notes remain outstanding immediately after each such redemption.

In addition, if GIH receives cash proceeds in connection with the entry into or continuation of a strategic relationship, or equity from us in connection with the sale of stock to a complimentary business (in each case, a “strategic investment”) at any time prior to May 1, 2020, the Issuers may redeem up to $150 million of the aggregate principal amount of the 2024 Senior Secured Notes at 103% of the principal amount of the 2024 Senior Secured Notes to be redeemed, plus accrued and unpaid interest, if any, to (but not including) the redemption date with the proceeds from such strategic investment.

The 2024 Indenture contains covenants that, among other things, limit the ability of the Issuers and the 2024 Subsidiary Guarantors and, in certain circumstances, our ability, to: incur additional indebtedness; pay dividends, redeem stock or make other distributions; make investments; create restrictions on the ability of GIH’s restricted subsidiaries to pay dividends to the Issuers or make other intercompany transfers; create liens; transfer or sell assets; merge or consolidate; and enter into certain transactions with the Issuers’ affiliates. Most of these covenants will cease to apply if, and for as long as, the 2024 Senior Secured Notes have investment grade ratings from both Moody’s Investment Services, Inc. and Standard & Poor’s.

If we or the Issuers undergo specific types of change of control accompanied by a downgrade in the rating of the 2024 Senior Secured Notes prior to May 1, 2024, GIH is required to make an offer to repurchase for cash all of the 2024 Senior Secured Notes at a repurchase price equal to 101% of the principal amount thereof, plus accrued and unpaid interest, if any, to (but not including) the payment date.

The 2024 Indenture provides for events of default, which, if any of them occur, would permit or require the principal, premium, if any, and interest on all of the then outstanding 2024 Senior Secured Notes issued under the 2024 Indenture to be due and payable immediately. As of March 31, 2020, no event of default had occurred.

ABL Credit Facility – On August 26, 2019, Gogo Inc., GIH and Gogo Finance (together GIH and Gogo Finance are referred to as the “Borrowers”) entered into a credit agreement (the “ABL Credit Agreement”) among the Borrowers, the other loan parties party thereto, the lenders party thereto, JPMorgan Chase Bank, N.A., as administrative agent (the “Administrative Agent”), and Morgan Stanley Senior Funding, Inc., as syndication agent, which provides for an asset-based revolving credit facility (the “ABL Credit Facility”) of up to $30 million, subject to borrowing base availability, and includes letter of credit and swingline sub-facilities.

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

Borrowing availability under the ABL Credit Facility is determined by a monthly borrowing base collateral calculation that is based on specified percentages of the value of eligible accounts receivable (including eligible unbilled accounts receivable) and eligible credit card receivables, less certain reserves and subject to certain other adjustments as set forth in the ABL Credit Agreement. Availability is reduced by issuance of letters of credit as well as any borrowings. As of March 31, 2020 and December 31, 2019, $22.0 million and zero, was outstanding under the ABL Credit Facility, respectively.

The final maturity of the ABL Credit Facility is August 26, 2022, unless the aggregate outstanding principal amount of our 2022 Convertible Notes (as defined below) has not, on or prior to December 15, 2021, been repaid in full or refinanced with a new maturity date no earlier than February 26, 2023, in which case the final maturity date shall instead be December 16, 2021.

Loans outstanding under the ABL Credit Facility bear interest at a floating rate measured by reference to, at the Borrowers' option, either (i) an adjusted London inter-bank offered rate plus an applicable margin ranging from 1.50% to 2.00% per annum depending on a fixed charge coverage ratio, or (ii) an alternate base rate plus an applicable margin ranging from 0.50% to 1.00% per annum depending on a fixed charge coverage ratio. Unused commitments under the ABL Credit Facility are subject to a per annum fee ranging from 0.25% to 0.375% depending on the average quarterly usage of the revolving commitments.

The obligations under the ABL Credit Agreement are guaranteed by Gogo Inc. and all of its existing and future subsidiaries, subject to certain exceptions (collectively, the "ABL Guarantors"), and such obligations and the obligations of the ABL Guarantors are secured on a (i) senior basis by a perfected security interest in all present and after-acquired inventory, accounts receivable, deposit accounts, securities accounts, and any cash or other assets in such accounts and other related assets owned by each ABL Guarantor and the proceeds of the foregoing, subject to certain exceptions (the "ABL Priority Collateral") and (ii) junior basis by a perfected security interest in substantially all other tangible and intangible assets owned by each ABL Guarantor (the "Cash Flow Priority Collateral").

The ABL Credit Agreement contains customary representations and warranties and customary affirmative and negative covenants. The negative covenants include restrictions on, among other things: the incurrence of additional indebtedness; the incurrence of additional liens; dividends or other distributions on equity; the purchase, redemption or retirement of capital stock; the payment or redemption of certain indebtedness; loans, guarantees and other investments; entering into other agreements that create restrictions on the ability to pay dividends or make other distributions on equity, make or repay certain loans, create or incur certain liens or guarantee certain indebtedness; asset sales; sale-leaseback transactions; swap agreements; consolidations or mergers; amendment of certain material documents; certain regulatory matters; Canadian pension plans; and affiliate transactions. The negative covenants are subject to customary exceptions and also permit dividends and other distributions on equity, investments, permitted acquisitions and payments or redemptions of indebtedness upon satisfaction of the "payment conditions." The payment conditions are deemed satisfied upon Specified Availability (as defined in the ABL Credit Agreement) on the date of the designated action and Specified Availability for the prior 30-day period exceeding agreed-upon thresholds, the absence of the occurrence and continuance of any default and, in certain cases, pro forma compliance with a fixed charge coverage ratio of no less than 1.10 to 1.00.

The ABL Credit Agreement includes a minimum fixed charge coverage ratio test of no less than 1.00 to 1.00, which is tested only when Specified Availability is less than the greater of (A) $4.5 million and (B) 15.0% of the then effective commitments under the ABL Credit Facility, and continuing until the first day immediately succeeding the last day of the calendar month which includes the thirtieth (30th) consecutive day on which Specified Availability is in excess of such threshold so long as no default has occurred and is continuing and certain other conditions are met. As of March 31, 2020, Specified Availability had not fallen below the amount specified and therefore the minimum fixed charge coverage ratio test was not applicable. Full availability under the ABL Credit Facility may be limited by our ability to comply with the fixed charge coverage ratio in future periods.

The ABL Credit Agreement provides for events of default, which, if any of them occurs, would permit or require the principal, premium, if any, and interest on all of the then outstanding obligations under the ABL Credit Facility to be due and payable immediately and the commitments under the ABL Credit Facility to be terminated.

On August 26, 2019, the Borrowers and the ABL Guarantors entered into an ABL collateral agreement (the “ABL Collateral Agreement”), in favor of the Administrative Agent, whereby the Borrowers and the ABL Guarantors granted a security interest in substantially all tangible and intangible assets of each Borrower and each ABL Guarantor, to secure all obligations of the Borrowers and the ABL Guarantors under the ABL Credit Agreement, and U.S. Bank National Association, as cash flow collateral representative, and JPMorgan Chase Bank, N.A., as ABL agent, entered into a crossing lien intercreditor agreement (the “Intercreditor Agreement”) to govern the relative priority of liens on the collateral that secures the ABL Credit Agreement and the 2024 Senior Secured Notes and certain other rights, priorities and interests.

We paid approximately $0.9 million of origination fees and financing costs related to the issuance of the ABL Credit Facility, which have been accounted for as deferred financing costs. The deferred financing costs on our unaudited condensed consolidated balance sheet are being amortized over the contractual term of the ABL Credit Facility using the effective interest method. Total amortization expense was $0.1 million for the three month period ended March 31, 2020. Amortization expense is included in interest expense in the unaudited condensed consolidated statements of operations. As of March 31, 2020 and December 31, 2019, the balance of unamortized deferred financing costs related to the ABL Credit Facility was $0.7 million and $0.8 million, respectively, and is included as a reduction to long-term debt in our unaudited condensed consolidated balance sheet. See Note 11, “Interest Costs,” for additional information.

2022 Senior Secured Notes – On June 14, 2016, the Issuers issued $525 million aggregate principal amount of 12.500% senior secured notes due 2022 (the “Original 2022 Senior Secured Notes”) under an Indenture, dated as of June 14, 2016 (as amended and supplemented thereafter, the “Indenture”), among the Issuers, us, as guarantor, certain subsidiaries of GIH, as guarantors (the “2022 Subsidiary Guarantors” and, together with us, the “2022 Guarantors”), and U.S. Bank National Association, as Trustee and as Collateral Agent. On January 3, 2017, the Issuers issued $65 million aggregate principal amount of additional 12.500% senior secured notes due 2022 (the “January 2017 Additional Notes”). The January 2017 Additional Notes were issued at a price equal to 108% of their face value resulting in gross proceeds of $70.2 million. On September 25, 2017, the Issuers issued $100 million aggregate principal amount of additional 12.500% senior secured notes due 2022 (the “September 2017 Additional Notes”). We refer to the Original 2022 Senior Secured Notes, the January 2017 Additional Notes and the September 2017 Additional Notes collectively as the “2022 Senior Secured Notes.”

On April 15, 2019, the Issuers elected to call for redemption in full all $690 million aggregate principal amount outstanding of the 2022 Senior Secured Notes in accordance with the terms of the Indenture. The redemption was conditioned, among other things, upon the incurrence of indebtedness in connection with the issuance of the 2024 Senior Secured Notes or from one or more other sources, in an amount satisfactory to the Issuers which condition was satisfied by the issuance of the 2024 Senior Secured Notes. On April 25, 2019, the Issuers irrevocably deposited, or caused to be irrevocably deposited, with the Trustee funds solely for the benefit of the holders of the 2022 Senior Secured Notes, cash in an amount sufficient to pay principal, premium, if any, and accrued interest on the 2022 Senior Secured Notes to, but not including, the date of redemption and all other sums payable under the Indenture. The Trustee executed and delivered an acknowledgement of satisfaction, discharge and release, dated as of April 25, 2019, among other documents, with respect to the satisfaction and discharge of the 2022 Senior Secured Notes. On May 15, 2019, the 2022 Senior Secured Notes were fully redeemed in accordance with the terms of the Indenture, and the amount deposited with the Trustee on April 25, 2019 was paid to the holders of the 2022 Senior Secured Notes. The make-whole premium paid in connection with the redemption was $51.4 million and we wrote off the remaining unamortized deferred financing costs of $9.1 million and the remaining debt premium of $11.7 million relating to the 2022 Senior Secured Notes in connection with the redemption thereof, which together are included in the loss on extinguishment of debt in our consolidated statements of operations for the year ended December 31, 2019.

We paid approximately $15.9 million of aggregate origination fees and financing costs related to the issuance of the 2022 Senior Secured Notes, which were accounted for as deferred financing costs. Additionally, we paid approximately $1.4 million of consent fees in connection with the Supplemental Indenture, which partially offset the net carrying value of the 2022 Senior Secured Notes. Total amortization expense was $0.8 million for the three month period ended March 31, 2019. Amortization expense is included in interest expense in the unaudited condensed consolidated statements of operations. As noted above, the remaining unamortized deferred financing costs were written off as of May 15, 2019.

Convertible Notes

2022 Convertible Notes

On November 21, 2018, we issued $215.0 million aggregate principal amount of 6.00% Convertible Senior Notes due 2022 (the "2022 Convertible Notes") in private offerings to qualified institutional buyers, including pursuant to Rule 144A under the Securities Act, and in concurrent private placements. We granted an option to the initial purchasers to purchase up to an additional $32.3 million aggregate principal amount of 2022 Convertible Notes to cover over-allotments, of which $22.8 million was subsequently exercised during December 2018, resulting in a total issuance of $237.8 million aggregate principal amount of 2022 Convertible Notes. The 2022 Convertible Notes mature on May 15, 2022, unless earlier repurchased or converted into shares of our common stock under certain circumstances described below. Upon maturity, we have the option to settle our obligation through cash, shares of common stock, or a combination of cash and shares of common stock. We pay interest on the 2022 Convertible Notes semi-annually in arrears on May 15 and November 15 of each year, beginning on May 15, 2019.

The $237.8 million of proceeds received from the issuance of the 2022 Convertible Notes was initially allocated between long-term debt (the liability component) at $188.7 million and additional paid-in capital (the equity component) at $49.1 million, within the consolidated balance sheet. The fair value of the liability component was measured using rates determined for similar debt instruments without a conversion feature. The carrying amount of the equity component, representing the conversion option, was determined by deducting the fair value of the liability component from the aggregate face value of the 2022 Convertible Notes. If we or the note holders elect not to settle the debt through conversion, we must settle the 2022 Convertible Notes at face value. Therefore, the liability component will be accreted up to the face value of the 2022 Convertible Notes, which will result in additional non-cash interest expense being recognized in the consolidated statements of operations through the 2022 Convertible Notes maturity date (see Note 11, "Interest Costs," for additional information). The effective interest rate on the 2022 Convertible Notes, including accretion of the notes to par and debt issuance cost amortization, was approximately 13.6%. The equity component will not be remeasured as long as it continues to meet the conditions for equity classification.

As of March 31, 2020 and December 31, 2019, the outstanding principal on the 2022 Convertible Notes was $237.8 million on both dates, the unaccreted debt discount was $32.7 million and $35.9 million, respectively, and the net carrying amount of the liability component was $205.0 million and $201.9 million, respectively.

We incurred approximately $8.1 million of issuance costs related to the issuance of the 2022 Convertible Notes, of which $6.4 million and $1.7 million were recorded to deferred financing costs and additional paid-in capital, respectively, in proportion to the allocation of the proceeds of the 2022 Convertible Notes. The $6.4 million recorded as deferred financing costs on our consolidated balance sheet is being amortized over the term of the 2022 Convertible Notes using the effective interest method. Total amortization expense was $0.4 million for each of the three month periods ended March 31, 2020 and 2019. Amortization expense is included in interest expense in the consolidated statements of operations. As of March 31, 2020 and December 31, 2019, the balance of unamortized deferred financing costs related to the 2022 Convertible Notes was $4.1 million and $4.5 million, respectively, and is included as a reduction to long-term debt in our consolidated balance sheets. See Note 11, "Interest Costs," for additional information.

The 2022 Convertible Notes had an initial conversion rate of 166.6667 shares of common stock per $1,000 principal amount of 2022 Convertible Notes, which is equivalent to an initial conversion price of approximately $6.00 per share of our common stock. Upon conversion, we currently expect to deliver cash up to the principal amount of the 2022 Convertible Notes then outstanding. With respect to any conversion value in excess of the principal amount, we currently expect to deliver shares of our common stock. We may elect to deliver cash in lieu of all or a portion of such shares. The shares of common stock subject to conversion are excluded from diluted earnings per share calculations under the if-converted method as their impact is anti-dilutive.

Holders may convert the 2022 Convertible Notes, at their option, in multiples of $1,000 principal amount at any time prior to January 15, 2022, but only in the following circumstances:

- during any fiscal quarter beginning after the fiscal quarter ended December 31, 2018, if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during the last 30 consecutive trading days of the immediately preceding fiscal quarter is greater than or equal to 130% of the conversion price of the 2022 Convertible Notes on each applicable trading day;
- during the five-business day period following any five consecutive trading day period in which the trading price for the 2022 Convertible Notes is less than 98% of the product of the last reported sale price of our common stock and the conversion rate for the 2022 Convertible Notes on each such trading day; or
- upon the occurrence of specified corporate events.

None of the above events allowing for conversion prior to January 15, 2022 occurred during the three month period ended March 31, 2020 or the year ended December 31, 2019. Regardless of whether any of the foregoing circumstances occurs, a holder may convert its 2022 Convertible Notes, in multiples of $1,000 principal amount, at any time on or after January 15, 2022 until the second scheduled trading day immediately preceding May 15, 2022.

In addition, if we undergo a fundamental change (as defined in the indenture governing the 2022 Convertible Notes), holders may, subject to certain conditions, require us to repurchase their 2022 Convertible Notes for cash at a price equal to 100% of the principal amount of the 2022 Convertible Notes to be purchased, plus any accrued and unpaid interest. In addition, following a make-whole fundamental change, we will increase the conversion rate in certain circumstances for a holder who elects to convert its 2022 Convertible Notes in connection with such make-whole fundamental change.

2020 Convertible Notes

On March 3, 2015, we issued $340.0 million aggregate principal amount of 3.75% Convertible Senior Notes due 2020 (the “2020 Convertible Notes”) in a private offering to qualified institutional buyers, pursuant to Rule 144A under the Securities Act. We granted an option to the initial purchasers to purchase up to an additional $60.0 million aggregate principal amount of 2020 Convertible Notes to cover over-allotments, of which $21.9 million was subsequently exercised during March 2015, resulting in a total issuance of $361.9 million aggregate principal amount of 2020 Convertible Notes. The 2020 Convertible Notes that were not repurchased prior to maturity, as described below, matured on March 1, 2020. We paid interest on the 2020 Convertible Notes semi-annually in arrears on March 1 and September 1 of each year from September 1, 2015 through March 1, 2020. In November 2018, in connection with the issuance of the 2022 Convertible Notes, we repurchased $199.9 million outstanding principal amount of the 2020 Convertible Notes at par value. As a result of the repurchase, the carrying value of the 2020 Convertible Notes was adjusted by $17.9 million to face value and included in the loss on extinguishment of debt in our consolidated statements of operations for the year ended December 31, 2018.

On April 18, 2019, we commenced a cash tender offer (the “Tender Offer”) to purchase any and all of the outstanding 2020 Convertible Notes for an amount equal to $1,000 per $1,000 principal amount of 2020 Convertible Notes purchased, plus accrued and unpaid interest from the last interest payment date on the 2020 Convertible Notes to, but not including, the date of payment for the 2020 Convertible Notes accepted in the Tender Offer. The Tender Offer expired on May 15, 2019, resulting in the purchase of $159.0 million of outstanding 2020 Convertible Notes. As a result of the Tender Offer, the carrying value of the 2020 Convertible Notes was adjusted by $8.5 million to face value and unamortized deferred financing costs of $0.6 million were expensed. These two items are included in the loss on extinguishment of debt in our consolidated statements of operations for the year ended December 31, 2019. During September 2019, we purchased an additional $0.5 million of outstanding 2020 Convertible Notes. The remaining $2.5 million of outstanding 2020 Convertible Notes matured on March 1, 2020 and we repaid the remaining outstanding aggregate principle amount of the 2020 Convertible Notes, plus accrued and unpaid interest, in order to satisfy our obligations in full and retire the securities.

The $361.9 million of proceeds received from the issuance of the 2020 Convertible Notes was initially allocated between long-term debt (the liability component) at $261.9 million and additional paid-in capital (the equity component) at $100.0 million, within the consolidated balance sheet. The fair value of the liability component was measured using rates determined for similar debt instruments without a conversion feature. The carrying amount of the equity component, representing the conversion option, was determined by deducting the fair value of the liability component from the aggregate face value of the 2020 Convertible Notes. If we or the holders of 2020 Convertible Notes elected not to settle the debt through conversion, we were required to settle the 2020 Convertible Notes at face value. Therefore, the liability component was accreted up to the face value of the 2020 Convertible Notes, which resulted in additional non-cash interest expense being recognized in the consolidated statements of operations (see Note 11, “Interest Costs,” for additional information). The effective interest rate on the 2020 Convertible Notes, including accretion of the notes to par and debt issuance cost amortization, was approximately 11.5%.

As noted above, the 2020 Convertible Notes were no longer outstanding upon maturity on March 1, 2020. As of December 31, 2019, the outstanding principal on the 2020 Convertible Notes and the net carrying amount of the liability component was $2.5 million and the unamortized debt discount was zero.

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Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

We incurred approximately $10.4 million of issuance costs related to the issuance of the 2020 Convertible Notes, of which $7.5 million and $2.9 million were recorded to deferred financing costs and additional paid-in capital, respectively, in proportion to the allocation of the proceeds of the 2020 Convertible Notes. The $7.5 million recorded as deferred financing costs on our consolidated balance sheet was amortized over the term of the 2020 Convertible Notes using the effective interest method. As of December 31, 2019, the balance of unamortized deferred financing costs related to the 2020 Convertible Notes was zero. Total amortization expense of the deferred financing costs was $0.2 million for the three month period ended March 31, 2019 and is included in interest expense in the unaudited condensed consolidated statements of operations. See Note 11, "Interest Costs," for additional information.

The 2020 Convertible Notes had an initial conversion rate of 41.9274 common shares per $1,000 principal amount of 2020 Convertible Notes, which was equivalent to an initial conversion price of approximately $23.85 per share of our common stock. The shares of common stock subject to conversion were excluded from diluted earnings per share calculations under the if-converted method as their impact was anti-dilutive.

Forward Transactions

In connection with the issuance of the 2020 Convertible Notes, we paid approximately $140 million to enter into prepaid forward stock repurchase transactions (the "Forward Transactions") with certain financial institutions (the "Forward Counterparties"), pursuant to which we purchased approximately 7.2 million shares of common stock for settlement on or around the March 1, 2020 maturity date for the 2020 Convertible Notes, subject to the ability of each Forward Counterparty to elect to settle all or a portion of its Forward Transactions early.

On December 11, 2019, we entered into an amendment to one of the Forward Transactions (the "Amended and Restated Forward Transaction") to extend the expected settlement date with respect to approximately 2.1 million shares of common stock held by one of the Forward Counterparties, JPMorgan Chase Bank, National Association (the "2022 Forward Counterparty"), to correspond with the May 15, 2022 maturity date for the 2022 Convertible Notes. In the future, we may request that the 2022 Forward Counterparty modify the settlement terms of the Amended and Restated Forward Transaction to provide that, in lieu of the delivery of the applicable number of shares of our common stock to us to settle a portion of the Amended and Restated Forward Transaction in accordance with its terms, the 2022 Forward Counterparty would pay to us the net proceeds from the sale by the 2022 Forward Counterparty (or its affiliate) of a corresponding number of shares of our common stock in a registered offering (which may include block sales, sales on the NASDAQ Global Select Market, sales in the over-the-counter market, sales pursuant to negotiated transactions or otherwise, at market prices prevailing at the time of sale or at negotiated prices). Any such sales could potentially decrease (or reduce the size of any increase in) the market price of our common stock. The 2022 Forward Counterparty is not required to effect any such settlement in cash in lieu of delivery of shares of our common stock and, if we request that the 2022 Forward Counterparty effect any such settlement, it will be entered into in the discretion of the 2022 Forward Counterparty on such terms as may be mutually agreed upon at the time. As a result of the Forward Transactions, total shareholders' equity within our consolidated balance sheet was reduced by approximately $140 million. During March 2020, approximately 5.1 million shares of common stock were delivered to us in connection with the Forward Transactions (as defined and described in Note 10, "Long-Term Debt and Other Liabilities"). We accounted for these shares as Treasury Stock and reclassified $98.9 million from Additional Paid-In Capital to Treasury Stock, at cost, in our unaudited condensed consolidated balance sheet.

Restricted Cash - Our restricted cash balances were $5.2 million and $7.7 million, respectively, as of March 31, 2020 and December 31, 2019 and primarily consist of letters of credit. Certain of the letters of credit require us to maintain restricted cash accounts in a similar amount, and are issued for the benefit of the landlords at our current office locations in Chicago, IL, Bensenville, IL and Broomfield, CO.

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

11. Interest Costs

We capitalize a portion of our interest on funds borrowed during the active construction period of major capital projects. Capitalized interest is added to the cost of the underlying assets and amortized over the useful lives of the assets.

The following is a summary of our interest costs for the three month periods ended Mach 31, 2020 and 2019 *(in thousands)*:

	For the Three Months Ended March 31, 2020	For the Three Months Ended March 31, 2019
Interest costs charged to expense	$26,429	$ 26,531
Amortization of deferred financing costs	1,419	1,249
Accretion of debt discount	3,326	5,534
Amortization of debt premium	—	(760)
Interest expense	31,174	32,554
Interest costs capitalized to property and equipment	—	4
Interest costs capitalized to software	89	125
Total interest costs	$31,263	$ 32,683

12. Leases

Operating and Financing Leases — We determine whether a contract contains a lease at contract inception. For leases subsequent to adoption of ASC 842, lease liabilities are calculated using a discount rate based on our incremental borrowing rate at lease commencement. We have operating lease agreements for certain facilities and equipment as well as tower space and base stations. Certain tower space leases have renewal option terms that have been deemed to be reasonably certain to be exercised. These renewal options extend a lease up to 20 years. We recognize operating lease expense on a straight-line basis over the lease term. As of March 31, 2020, there are no significant leases which have not commenced.

The following is a summary of our lease expense included in the unaudited condensed consolidated statements of operations *(in thousands)*:

	For the Three Months Ended March 31, 2020	For the Three Months Ended March 31, 2019
Operating lease cost	$ 4,857	$ 4,918
Financing lease cost		
Amortization of leased assets	91	205
Interest on lease liabilities	26	11
Total lease cost	$ 4,974	$ 5,134

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

Other information regarding our leases is as follows *(in thousands, except lease terms and discount rates)*:

	For the Three Months Ended March 31, 2020	For the Three Months Ended March 31, 2019
Supplemental cash flow information		
Cash paid for amounts included in measurement of lease liabilities:		
Operating cash flows used in operating leases	$ 5,700	$ 6,117
Operating cash flows used in financing leases	26	11
Financing cash flows used in financing leases	247	125
Non-cash items:		
Operating leases obtained	7,274	279
Weighted average remaining lease term		
Operating leases	8 years	9 years
Financing leases	2 years	1 year
Weighted average discount rate		
Operating leases	9.4%	10.3%
Financing leases	8.3%	8.7%

Annual future minimum lease payments as of March 31, 2020 *(in thousands)*:

Years ending December 31,	Operating Leases	Financing Leases
2020 (period from April 1 to December 31)	$ 12,456	$ 529
2021	20,566	530
2022	18,994	451
2023	15,023	—
2024	11,451	—
Thereafter	56,550	—
Total future minimum lease payments	135,040	1,510
Less: Amount representing interest	(42,581)	(124)
Present value of net minimum lease payments	$ 92,459	$ 1,386
Reported as of March 31, 2020		
Accrued liabilities	$ 9,484	$ 543
Non-current operating lease liabilities	82,975	—
Other non-current liabilities	—	843
Total lease liabilities	$ 92,459	$ 1,386

Arrangements with Commercial Airlines — Under the turnkey model, we account for equipment transactions as operating leases of space for our equipment on the aircraft. We may be responsible for the costs of installing and/or deinstalling the equipment. Under the turnkey model, the equipment transactions involve the transfer of legal title but do not meet sales recognition for accounting purposes because the risks and rewards of ownership are not fully transferred due to our continuing involvement with the equipment, the length of the term of our agreements with the airlines, and restrictions in the agreements regarding the airlines' use of the equipment. Under this model, we refer to the airline as a "partner."

Under the turnkey model, the assets are recorded as airborne equipment on our unaudited condensed consolidated balance sheets, as noted in Note 7, "Composition of Certain Balance Sheet Accounts." Any upfront equipment payments are accounted for as lease incentives and recorded as deferred airborne lease incentives on our unaudited condensed consolidated balance sheets and are recognized as a reduction of the cost of service revenue on a straight-line basis over the term of the agreement with the airline. We recognized $7.1 million and $9.0 million, respectively, for the three month periods ended March 31, 2020 and 2019 as a reduction to our cost of service revenue in our unaudited condensed consolidated statements of operations from the amortization of deferred airborne lease incentives. As of March 31, 2020, deferred airborne lease incentives of $30.7 million and $145.2 million, respectively, are included in current and non-current liabilities in our unaudited condensed consolidated balance sheet. As of December 31, 2019, deferred airborne lease incentives of $26.6 million and $135.4 million, respectively, are included in current and non-current liabilities in our unaudited condensed consolidated balance sheet.

Under the turnkey model, the revenue share paid to our airline partners represents operating lease payments. They are deemed to be contingent rental payments, as the payments due to each airline are based on a percentage of our CA-NA and CA-ROW service revenue generated from that airline's passengers, which is unknown until realized. Therefore, we cannot estimate the lease payments due to an airline at the commencement of our contract with such airline. This rental expense is included in cost of service revenue and is partially offset by the amortization of the deferred airborne lease incentives discussed above. Such rental expenses totaled a net charge of $4.6 million and $3.7 million, respectively, for the three month periods ended March 31, 2020 and 2019.

13. Commitments and Contingencies

Contractual Commitments - We have agreements with vendors to provide us with transponder and teleport satellite services. These agreements vary in length and amount and as of March 31, 2020 commit us to purchase transponder and teleport satellite services totaling approximately $101.0 million in 2020 (April 1 through December 31), $129.9 million in 2021, $110.0 million in 2022, $90.8 million in 2023, $85.4 million in 2024 and $259.4 million thereafter.

We have agreements with various vendors under which we have remaining commitments to purchase satellite-based systems, certifications and development services. Such commitments will become payable as we receive the equipment or certifications, or as development services are provided.

Damages and Penalties - We have entered into a number of agreements with our airline partners that require us to provide a credit or pay penalties or liquidated damages to our airline partners on a per aircraft, per day or per hour basis if we are delayed in delivering our equipment, unable to install our equipment on aircraft by specified timelines or fail to comply with service level commitments. The maximum amount of future credits or payments we could be required to make under these agreements is uncertain because the amount of future credits or payments is based on certain variable inputs.

Indemnifications and Guarantees - In accordance with Delaware law, we indemnify our officers and directors for certain events or occurrences while the officer or director is, or was, serving at our request in such capacity. The maximum potential amount of future payments we could be required to make under this indemnification is uncertain and may be unlimited, depending upon circumstances. However, our Directors' and Officers' insurance does provide coverage for certain of these losses.

In the ordinary course of business we may occasionally enter into agreements pursuant to which we may be obligated to pay for the failure of the performance of others, such as the use of corporate credit cards issued to employees. Based on historical experience, we believe that the risk of sustaining any material loss related to such guarantees is remote.

We have entered into a number of agreements, including our agreements with commercial airlines, pursuant to which we indemnify the other party for losses and expenses suffered or incurred in connection with any patent, copyright, or trademark infringement or misappropriation claim asserted by a third party with respect to our equipment or services. The maximum potential amount of future payments we could be required to make under these indemnification agreements is uncertain and is typically not limited by the terms of the agreements.

Linksmart Litigation - On April 20, 2018, Linksmart Wireless Technology, LLC filed suit against us and eight of our airline partners in the U.S. District Court for the Central District of California alleging that our redirection server and login portal infringe a patent owned by the plaintiff. The suits seek an unspecified amount of damages. We are required under our contracts with these airlines to indemnify them for defense costs and any liabilities resulting from the suit. The Court has stayed the suits against our airline customers pending resolution of the suit against Gogo. Linksmart has also filed suit against other defendants asserting the same patent. Following the filing by one of those defendants of a petition to commence an *inter partes* review against the asserted patent in the U.S. Patent and Trademark Office, the Court stayed the litigation against such other defendant and Gogo, but such stay was lifted in July 2019 when the U.S. Patent and Trademark Office determined that the petitioner had not met the standard of proof required to commence the *inter partes* review. We believe that the plaintiff's claims are without merit and intend to defend them vigorously. The outcome of this litigation is inherently uncertain. No amounts have been accrued for any potential losses under this matter, as we cannot reasonably predict the outcome of the litigation or any potential losses.

Securities Litigation - On June 27, 2018, a purported stockholder of the Company filed a putative class action lawsuit in the United States District Court for the Northern District of Illinois, Eastern Division styled Pierrelouis v. Gogo Inc., naming the Company, its former Chief Executive Officer and Chief Financial Officer and its current Chief Financial Officer and President, Commercial Aviation as defendants purportedly on behalf of all purchasers of our securities from February 27, 2017 through May 4, 2018. The complaint asserts claims under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder, alleging misrepresentations or omissions by us purporting to relate to our 2Ku antenna's reliability and installation and remediation costs. The plaintiffs seek to recover from us and the individual defendants an unspecified amount of damages. In December 2018 the plaintiffs filed an amended complaint and in February 2019, we filed a motion to dismiss such amended complaint. In October 2019 the judge granted the motion to dismiss on two independent grounds, finding that plaintiffs failed to plausibly allege that defendants made materially false or misleading statements and that plaintiffs failed to plead with particularity that defendants acted with scienter. The amended complaint was dismissed without prejudice, and in December 2019, defendants filed a second amended complaint. In February 2020 we filed a motion to dismiss such second amended complaint and that motion is pending. We believe that the claims are without merit and intend to continue to defend them vigorously. In accordance with Delaware law, we will indemnify the individual named defendants for their defense costs and any damages they incur in connection with the suit. We have filed a claim with the issuer of our Directors' and Officers' insurance policy with respect to this suit. No amounts have been accrued for any potential losses under this matter, as we cannot reasonably predict the outcome of the litigation or any potential losses.

Derivative Litigation - On September 25, 2018 and September 26, 2018, two purported stockholders of the Company filed substantively identical derivative lawsuits in the United States District Court for the Northern District of Illinois, Eastern Division, styled Nanduri v. Gogo Inc. and Hutsenpiller v. Gogo Inc., respectively. Both lawsuits were purportedly brought derivatively on behalf of us and name us as a nominal defendant and name as defendants each member of the Company's Board of Directors, its former Chief Executive Officer and Chief Financial Officer and its current Chief Executive Officer, Chief Financial Officer and President, Commercial Aviation. The complaints assert claims under Section 14(a) of the Securities Exchange Act of 1934, breach of fiduciary duty, unjust enrichment, and waste of corporate assets, and allege misrepresentations or omissions by us purporting to relate to our 2Ku antenna's reliability and installation and remediation costs, as well as allegedly excessive bonuses, stock options, and other compensation paid to current Officers and Directors and excessive severance paid to former Officers. The two lawsuits were consolidated and are stayed until a final disposition of the motion to dismiss in the class action suit. We believe that the claims are without merit and intend to defend them vigorously if the litigation resumes. The plaintiffs seek to recover, on our behalf, an unspecified amount of damages from the individual defendants. We have filed a claim with the issuer of our Directors' and Officers' insurance policy with respect to these suits. No amounts have been accrued for any potential costs under this matter, as we cannot reasonably predict the outcome of the litigation or any potential costs.

14. Fair Value of Financial Assets and Liabilities

A three-tier fair value hierarchy has been established which prioritizes the inputs used in measuring fair value. These tiers include:

- *Level 1* - defined as observable inputs such as quoted prices in active markets;
- *Level 2* - defined as observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- *Level 3* - defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

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Long-Term Debt:

Our financial assets and liabilities that are disclosed but not measured at fair value include the 2024 Senior Secured Notes and the 2022 Convertible Notes, and, while outstanding, the 2020 Convertible Notes, which are reflected on the consolidated balance sheet at cost. The fair value measurements are classified as Level 2 within the fair value hierarchy since they are based on quoted market prices of our instruments in markets that are not active. We estimated the fair value of the 2024 Senior Secured Notes, the 2022 Convertible Notes, and, while outstanding, the 2020 Convertible Notes, by calculating the upfront cash payment a market participant would require to assume these obligations. The upfront cash payments used in the calculations of fair value on our March 31, 2020 unaudited condensed consolidated balance sheet, excluding any issuance costs, are the amount that a market participant would be willing to lend at March 31, 2020 to an entity with a credit rating similar to ours and that would allow such an entity to achieve sufficient cash inflows to cover the scheduled cash outflows under the 2024 Senior Secured Notes, the 2022 Convertible Notes and, while outstanding, the 2020 Convertible Notes. The calculated fair value of each of the 2022 Convertible Notes and, while outstanding, the 2020 Convertible Notes is correlated to our stock price and as a result, significant changes to our stock price could have a significant impact on their calculated fair values.

The fair value and carrying value of long-term debt as of March 31, 2020 and December 31, 2019 were as follows *(in thousands)*:

	March 31, 2020		December 31, 2019	
	Fair Value *(1)*	Carrying Value	Fair Value *(1)*	Carrying Value
2024 Senior Secured Notes	$ 731,000	$921,310(2)	$ 982,000	$921,137(2)
2022 Convertible Notes	177,000	205,020(3)	297,000	201,868(3)
2020 Convertible Notes	—	—	2,498	2,498

(1) Fair value amounts are rounded to the nearest million, except for the 2020 Convertible Notes, as of December 31, 2019.
(2) Carrying value of the 2024 Senior Secured Notes reflects the unaccreted debt discount of $3.7 million and $3.9 million, respectively, as of March 31, 2020 and December 31, 2019. See Note 10, “Long-Term Debt and Other Liabilities,” for further information.
(3) Carrying value of the 2022 Convertible Notes reflects the unaccreted debt discount of $32.7 million and $35.9 million, respectively, as of March 31, 2020 and December 31, 2019. See Note 10, “Long-Term Debt and Other Liabilities,” for further information.

We have held-to-maturity financial instruments where carrying value approximates fair value. There were no fair value adjustments to these financial instruments during the three month periods ended March 31, 2020 and 2019.

15. Income Tax

The effective income tax rates for the three month periods ended March 31, 2020 and 2019 were (0.2)% and (1.2)%, respectively. For the three month periods ended March 31, 2020 and 2019, our income tax expense was not significant primarily due to the full valuation allowance against our net deferred tax assets.

We are subject to income taxation in the United States, various states within the United States, Canada, Switzerland, Japan, Mexico, Brazil, Singapore, the United Kingdom, Hong Kong, Australia, China, India, France, Germany and the Netherlands. With few exceptions, as of March 31, 2020, we are no longer subject to U.S. federal, state, local or foreign examinations by tax authorities for years before 2016.

We record penalties and interest relating to uncertain tax positions in the income tax provision line item in the unaudited condensed consolidated statement of operations. No penalties or interest related to uncertain tax positions were recorded for the three month periods ended March 31, 2020 and 2019. As of March 31, 2020 and December 31, 2019, we did not have a liability recorded for interest or potential penalties.

We do not expect a change in the unrecognized tax benefits within the next 12 months.

16. Business Segments and Major Customers

We operate our business through three operating segments: Commercial Aviation North America, or “CA-NA,” Commercial Aviation Rest of World, or “CA-ROW,” and Business Aviation, or “BA.” See Note 1, “Basis of Presentation,” for further information regarding our segments.

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

The accounting policies of the operating segments are the same as those described in Note 2, "Summary of Significant Accounting Policies," in our 2019 10-K. Intercompany transactions between segments are excluded as they are not included in management's performance review of the segments. For the three month periods ended March 31, 2020 and 2019, our foreign revenue accounted for less than 15% of our consolidated revenue. We do not segregate assets between segments for internal reporting. Therefore, asset-related information has not been presented. Additionally, assets outside of the United States totaled less than 15% of our unaudited condensed consolidated assets as of March 31, 2020 and December 31, 2019, respectively. For our airborne assets, we consider only those assets installed in aircraft associated with international commercial airline partners to be owned outside of the United States.

Management evaluates performance and allocates resources to each segment based on reportable segment profit (loss), which is calculated internally as net income (loss) attributable to common stock before unallocated corporate costs, interest expense, interest income, income taxes, depreciation and amortization, and certain non-cash items (including stock-based compensation expense, amortization of deferred airborne lease incentives, amortization of STC costs, impairment of long-lived assets, impairment of cost-basis investment and proceeds from litigation settlement) and other income (expense). Reportable segment profit (loss) is a measure of performance reported to the chief operating decision maker for purposes of making decisions about allocating resources to the segments and evaluating segment performance. In addition, reportable segment profit (loss) is included herein in conformity with ASC 280-10, *Segment Reporting*. Management believes that reportable segment profit (loss) provides useful information for analyzing and evaluating the underlying operating results of each segment. However, reportable segment profit (loss) should not be considered in isolation or as a substitute for net income (loss) attributable to common stock or other measures of financial performance prepared in accordance with GAAP. Additionally, our computation of reportable segment profit (loss) may not be comparable to other similarly titled measures computed by other companies.

As noted in our 2019 10-K, during the fourth quarter of 2019, we revised the presentation of our reportable segments' operating results in order to exclude the impact of certain corporate costs from the calculation of total reportable segment profit (loss). As such, all amounts for the three month period ended March 31, 2019 have been recast to conform to the current year's presentation. Beginning in 2020, we adopted a new allocation methodology for the ATG network costs utilizing aircraft online, pricing and usage for each of CA-NA and BA. Under this new methodology, BA will continue to be allocated the majority of the ATG network costs.

Information regarding our reportable segments is as follows (*in thousands*):

	For the Three Months Ended March 31, 2020			
	CA-NA	**CA-ROW**	**BA**	**Total**
Service revenue	$73,828	$ 19,228	$57,726	$150,782
Equipment revenue	6,308	14,184	13,201	33,693
Total revenue	$80,136	$ 33,412	$70,927	$184,475
Reportable segment profit (loss)	$15,883	$ (17,371)	$35,854	$ 34,366

	For the Three Months Ended March 31, 2019			
	CA-NA	**CA-ROW**	**BA**	**Total**
Service revenue	$92,027	$ 19,772	$53,213	$165,012
Equipment revenue	4,042	13,159	17,336	34,537
Total revenue	$96,069	$ 32,931	$70,549	$199,549
Reportable segment profit (loss)	$30,662	$ (18,193)	$33,755	$ 46,224

Gogo Inc. and Subsidiaries
Notes to Unaudited Condensed Consolidated Financial Statements – (Continued)

A reconciliation of total reportable segment profit (loss) to the relevant consolidated amounts is as follows (*in thousands*):

	For the Three Months Ended March 31,	
	2020	2019
CA-NA segment profit	$ 15,883	$ 30,662
CA-ROW segment loss	(17,371)	(18,193)
BA segment profit	35,854	33,755
Total reportable segment profit	34,366	46,224
Unallocated corporate costs *(1)*	(8,636)	(8,333)
Interest income	606	1,149
Interest expense	(31,174)	(32,554)
Depreciation and amortization	(32,670)	(30,749)
Amortization of deferred airborne lease incentives	7,071	8,953
Amortization of STC costs	(807)	(320)
Stock-based compensation expense	(3,995)	(4,327)
Impairment of long-lived assets	(46,389)	—
Impairment of cost-basis investment	(3,000)	—
Proceeds from litigation settlement	—	3,215
Other income	7	150
Loss before income taxes	$(84,621)	$(16,592)

(1) Represents costs that are not directly attributable to the reportable segments, comprised primarily of the costs of corporate functions, including executive, legal, finance and human resources, but excluding stock-based compensation expense for those functions of $1.6 million and $1.5 million, respectively, for the three month periods ending March 31, 2020 and 2019.

Major Customers and Airline Partnerships — Revenue earned from Delta Air Lines and its passengers accounted for approximately 28% and 29% of consolidated revenue, respectively, for the three month periods ended March 31, 2020 and 2019. Delta Air Lines accounted for approximately 16% and 11% of consolidated accounts receivable, respectively, as of March 31, 2020 and December 31, 2019.

17. Employee Retirement and Postretirement Benefits

Stock-Based Compensation — As of March 31, 2020, we maintained three stock-based incentive compensation plans ("Stock Plans"), as well as an Employee Stock Purchase Plan ("ESPP"). See Note 12, "Stock-Based Compensation," in our 2019 10-K for further information regarding these plans. Most of our equity grants are awarded on an annual basis.

Effective March 17, 2020, the performance-vesting conditions for all outstanding options to purchase shares of common stock and restricted stock units ("RSUs") subject to both service and performance vesting requirements that were granted in 2017, 2018, and 2019 were eliminated. The performance modification resulted in the immediate issuance of 186,139 shares of common stock, corresponding to the portion of RSUs for which service-vesting dates had previously elapsed.

For the three month period ended March 31, 2020, options to purchase 1,121,402 shares of common stock were granted, no options to purchase shares of common stock were exercised, options to purchase 25,747 shares of common stock were forfeited, and options to purchase 1,906,849 shares of common stock expired.

For the three month period ended March 31, 2020, 2,953,496 RSUs were granted, 752,342 RSUs vested (of which 186,139 were RSUs that fully and immediately vested in connection with the performance modification) and 87,138 RSUs were forfeited.

For the three month period ended March 31, 2020, 8,227 restricted shares vested and no shares were cancelled.

These shares are deemed issued as of the date of grant, but not outstanding until they vest.

For the three month period ended March 31, 2020, 124,996 Deferred Stock Units were granted and 26,508 vested.

For the three month period ended March 31, 2020, 87,681 shares of common stock were issued under the ESPP.

On April 29, 2020, our stockholders approved a stock option exchange program that, when commenced, will provide eligible employees (which includes all current employees and executive officers and excludes all non-executive members of our board of directors) with the opportunity to exchange certain eligible options for a lesser number of replacement options, subject to certain terms and conditions.

The following is a summary of our stock-based compensation expense by operating expense line in the unaudited condensed consolidated statements of operations *(in thousands)*:

	For the Three Months Ended March 31,	
	2020	2019
Cost of service revenue	$ 477	$ 428
Cost of equipment revenue	73	71
Engineering, design and development	753	774
Sales and marketing	752	970
General and administrative	1,940	2,084
Total stock-based compensation expense	$ 3,995	$ 4,327

401(k) Plan — Under our 401(k) plan, all employees who are eligible to participate are entitled to make tax-deferred contributions, subject to Internal Revenue Service limitations. We match 100% of the employee’s first 4% of contributions made, subject to annual limitations. Our matching contributions were $1.2 million and $1.2 million, respectively, during the three month periods ended March 31, 2020 and 2019.

18. Research and Development Costs

Expenditures for research and development are charged to expense as incurred and totaled $15.7 million and $14.1 million, respectively, during the three month periods ended March 31, 2020 and 2019. Research and development costs are reported as a component of engineering, design and development expenses in our unaudited condensed consolidated statements of operations.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this report may constitute “forward-looking” statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, without limitation, statements regarding our industry, business strategy, plans, goals and expectations concerning our market position, international expansion, future technologies, future operations, margins, profitability, future efficiencies, capital expenditures, liquidity and capital resources and other financial and operating information. When used in this discussion, the words “anticipate,” “assume,” “believe,” “budget,” “continue,” “could,” “estimate,” “expect,” “forecast,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “will,” “future” and the negative of these or similar terms and phrases are intended to identify forward-looking statements in this Quarterly Report on Form 10-Q.

Forward-looking statements reflect our current expectations regarding future events, results or outcomes. These expectations may or may not be realized. Although we believe the expectations reflected in the forward-looking statements are reasonable, we can give you no assurance these expectations will prove to have been correct. Some of these expectations may be based upon assumptions, data or judgments that prove to be incorrect. Actual events, results and outcomes may differ materially from our expectations due to a variety of known and unknown risks, uncertainties and other factors. Although it is not possible to identify all of these risks and factors, they include, among others, the following:

- the duration for which and the extent to which the COVID-19 pandemic continues to impact demand for commercial and business aviation travel globally, including as a result of governmental restrictions on travel and business and social gatherings and overall economic conditions;
- the failure to successfully implement our cost reduction plan and other measures taken to mitigate the impact of COVID-19 on our business and financial condition, including efforts to renegotiate contractual terms with certain suppliers and customers;
- the loss of, or failure to realize the anticipated benefits from, agreements with our airline partners or customers on a timely basis or any failure to renew any existing agreements upon expiration or termination including the results of our ongoing discussions with Delta Air Lines with respect to its transition to free service, which may involve a decision to pursue supplier diversification for its domestic mainline fleet;
- the failure to maintain airline and passenger satisfaction with our equipment or our service;
- any inability to timely and efficiently deploy and operate our 2Ku service or implement our technology roadmap, including developing and deploying upgrades and installations of our ATG-4 and 2Ku technologies, Gogo 5G, any technology to which our ATG or satellite networks evolve and other new technologies, for any reason, including technological issues and related remediation efforts, changes in regulations or regulatory delays affecting us, or our suppliers, some of whom are single source, or the failure by our airline partners or customers to roll out equipment upgrades or new services or adopt new technologies in order to support increased demand and network capacity constraints, including as a result of airline partners shifting to a free-to-passenger business model;
- the timing of deinstallation of our equipment from aircraft, including deinstallations resulting from aircraft retirements and other deinstallations permitted by certain airline contract provisions;
- the loss of relationships with original equipment manufacturers or dealers;
- our ability to make our equipment factory linefit available on a timely basis;
- our ability to develop or purchase ATG and satellite network capacity sufficient to accommodate current and expected growth in passenger demand in North America and internationally as we expand;
- our reliance on third-party suppliers, some of whom are single source, for satellite capacity and other services and the equipment we use to provide services to commercial airlines and their passengers and business aviation customers;
- unfavorable economic conditions in the airline industry and/or the economy as a whole;
- governmental action restricting trade with China or other foreign countries;

- our ability to expand our international or domestic operations, including our ability to grow our business with current and potential future airline partners and customers and the effect of shifts in business models, including a shift toward airlines providing free service to passengers;
- an inability to compete effectively with other current or future providers of in-flight connectivity services and other products and services that we offer, including on the basis of price, service performance and linefit availability;
- our ability to successfully develop and monetize new products and services, including those that were recently released, are currently being offered on a limited or trial basis, or are in various stages of development;
- our ability to certify and install our equipment and deliver our products and services, including newly developed products and services, on schedules consistent with our contractual commitments to customers;
- the failure of our equipment or material defects or errors in our software resulting in recalls or substantial warranty claims;
- a revocation of, or reduction in, our right to use licensed spectrum, the availability of other air-to-ground spectrum to a competitor or the repurposing by a competitor of other spectrum for air-to-ground use;
- our use of open source software and licenses;
- the effects of service interruptions or delays, technology failures and equipment failures or malfunctions arising from defects or errors in our software or defects in or damage to our equipment;
- the limited operating history of our CA-ROW segment;
- contract changes and implementation issues resulting from decisions by airlines to transition from the turnkey model to the airline-directed model or vice versa;
- increases in our projected capital expenditures due to, among other things, unexpected costs incurred in connection with the roll-out of our technology roadmap or our international expansion;
- compliance with U.S. and foreign government regulations and standards, including those related to regulation of the Internet, including e-commerce or online video distribution changes, and the installation and operation of satellite equipment and our ability to obtain and maintain all necessary regulatory approvals to install and operate our equipment in the United States and foreign jurisdictions;
- our, or our technology suppliers', inability to effectively innovate;
- obsolescence of, and our ability to access, parts, products, equipment and support services compatible with our existing products and technologies;
- costs associated with defending existing or future intellectual property infringement, securities and derivative litigation and other litigation or claims and any negative outcome or effect of pending or future litigation;
- our ability to protect our intellectual property;
- breaches of the security of our information technology network, resulting in unauthorized access to our customers' credit card information or other personal information;
- our substantial indebtedness, including additional borrowings pursuant to the CARES Act, if any;
- limitations and restrictions in the agreements governing our current and future indebtedness and our ability to service our indebtedness;
- our ability to obtain additional financing for operations, or financing intended to refinance our existing indebtedness, on acceptable terms or at all, including any loans pursuant to the CARES Act;
- fluctuations in our operating results;

- our ability to attract and retain customers and to capitalize on revenue from our platform;
- the demand for and market acceptance of our products and services;
- changes or developments in the regulations that apply to us, our business and our industry, including changes or developments affecting the ability of passengers or airlines to use our in-flight connectivity services;
- a future act or threat of terrorism, cyber-security attack or other events that could result in adverse regulatory changes or developments as referenced above, or otherwise adversely affect our business and industry;
- our ability to attract and retain qualified employees, including key personnel, including in light of recent furloughs and salary reductions;
- the effectiveness of our marketing and advertising and our ability to maintain and enhance our brands;
- our ability to manage our growth in a cost-effective manner and integrate and manage acquisitions;
- compliance with anti-corruption laws and regulations in the jurisdictions in which we operate, including the Foreign Corrupt Practices Act and the (U.K.) Bribery Act 2010;
- restrictions on the ability of U.S. companies to do business in foreign countries, including, among others, restrictions imposed by the U.S. Office of Foreign Assets Control;
- difficulties in collecting accounts receivable;
- our ability to successfully implement improvements to systems, operations, strategy and procedures needed to support our growth and to effectively evaluate and pursue strategic opportunities; and
- other risks and factors listed under “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2019, as filed with the Securities and Exchange Commission (“SEC”) on March 13, 2020 (the “2019 10-K”) and in Item 1A of this report.

Any one of these factors or a combination of these factors could materially affect our financial condition or future results of operations and could influence whether any forward-looking statements contained in this report ultimately prove to be accurate. Our forward-looking statements are not guarantees of future performance, and you should not place undue reliance on them. All forward-looking statements speak only as of the date made and we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

In addition, while we do, from time to time, communicate with securities analysts, it is against our policy to disclose to them any material non-public information or other confidential information. Accordingly, stockholders should not assume that we agree with any statement or report issued by any analyst irrespective of the content of the statement or report. Thus, to the extent that reports issued by securities analysts contain any projections, forecasts, or opinions, such reports are not our responsibility.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis is intended to help the reader understand our business, financial condition, results of operations, liquidity and capital resources. You should read this discussion in conjunction with our unaudited condensed consolidated interim financial statements and the related notes contained elsewhere in this Quarterly Report on Form 10-Q. Unless the context otherwise indicates or requires, the terms "we," "our," "us," "Gogo," and the "Company," as used in this report, refer to Gogo Inc. and its directly and indirectly owned subsidiaries as a combined entity, except where otherwise stated or where it is clear that the terms refer only to Gogo Inc. exclusive of its subsidiaries.

The statements in this discussion regarding industry outlook, our expectations regarding our future performance, liquidity and capital resources and other non-historical statements in this discussion are forward-looking statements. These forward-looking statements are subject to numerous risks and uncertainties, including, but not limited to, the risks and uncertainties described under "Risk Factors" in the 2019 10-K and in Item 1A and "Special Note Regarding Forward-Looking Statements" in this report. Our actual results may differ materially from those contained in or implied by any forward-looking statements.

Our fiscal year ends December 31 and, unless otherwise noted, references to "years" or "fiscal" are for fiscal years ended December 31. See "—Results of Operations."

Company Overview

Gogo ("we," "us," "our") is the global leader in providing broadband connectivity solutions and wireless in-flight entertainment to the aviation industry. We operate through the following three segments: Commercial Aviation North America, or "CA-NA," Commercial Aviation Rest of World, or "CA-ROW," and Business Aviation, or "BA."

Services provided by our CA-NA and CA-ROW businesses include Passenger Connectivity, which allows passengers to connect to the Internet from their personal Wi-Fi-enabled devices; Passenger Entertainment, which offers passengers the opportunity to enjoy a broad selection of in-flight entertainment options on their personal Wi-Fi enabled devices; and Connected Aircraft Services ("CAS"), which offers airlines connectivity for various operations and currently include, among others, real-time credit card transaction processing, electronic flight bags and real-time weather information. Services are provided by CA-NA on commercial aircraft flying routes that generally begin and end within North America, which for this purpose includes the United States, Canada and Mexico. CA-ROW provides service on commercial aircraft operated by foreign-based commercial airlines and flights outside of North America for North American-based commercial airlines. The routes included in our CA-ROW segment are those that begin and/or end outside of North America (as defined above) on which our international service is provided. BA provides in-flight Internet connectivity and other voice and data communications products and services and sells equipment for in-flight telecommunications to the business aviation market. BA services include Gogo Biz, our in-flight broadband service, Gogo Vision, our in-flight entertainment service, and satellite-based voice and data services through our strategic alliances with satellite companies.

Impact of COVID-19 Pandemic

In December 2019, a novel strain of coronavirus ("COVID-19") was reported in Wuhan, China, and the World Health Organization (the "WHO") subsequently declared COVID-19 a "Public Health Emergency of International Concern." The COVID-19 pandemic has caused a significant decline in commercial and business air travel, which has materially and adversely affected our business. Approximately 60% of our revenue comes from our two commercial airline segments, CA-NA and CA-ROW. Passenger traffic declined significantly in April 2020 compared to March 2020, resulting in an expected significant reduction in service revenue in April 2020 as compared to the monthly service revenue in the first quarter of 2020. The approximate remaining 40% of our revenue comes from our business aviation segment, BA, which has also seen a sharp decrease in flight activity. Additionally, since many business aircraft are flying less frequently, there was an increase in requests for one-month account suspensions and a significant decrease in new plan activations in April 2020 compared to March 2020.

In response to the COVID-19 pandemic and resulting developments, we developed, and continue to refine on an ongoing basis, a range of projections based on estimated market conditions, and have implemented measures to protect our employees, ensure the business has adequate liquidity and maintain the value of our business segments, while at the same time continuing to make the interest payments on our outstanding debt. These measures include, but are not limited to, the following:

- *Employee and customer safety* – Our employees are our most important resource and we are focused on the safety of our people and our customers. Every country in which we operate has issued work from home orders and over 1,000 of our employees are working remotely, with limited personnel in place for certain location-specific activities.
- *Personnel actions* – We implemented several cost-cutting measures related to personnel, including implementing a hiring freeze, suspending 2020 merit salary increases and deferring the Chief Executive Officer's 2019 bonus payout.

  Additionally, we furloughed approximately 54% of our workforce and reduced compensation for most other employees, starting May 4, 2020. The furloughs impact approximately 600 employees across the entire company. The time and duration of the furloughs will vary based on workload in individual departments. Salary reductions begin at 30% for the Chief Executive Officer, then 20% for the executive leadership team and reducing downward by staff level from there. In addition, the compensation for the members of our Board of Directors has been reduced by 30%. Certain types of employees, such as hourly workers, have not had their compensation reduced.
- *Expense management* – We have identified responsive action plans / levers that we are implementing, or considering implementing as needed, to dramatically reduce costs in order to ensure our long-term viability, including the following:
  - Renegotiating terms with suppliers, including satellite capacity providers;
  - Deferring purchases of capital equipment;
  - Delaying aircraft equipment installations;
  - Reducing marketing, travel and other non-essential spend; and
  - Renegotiating terms with airline partners.
- *Financing* – In March 2020, we drew $22 million under the ABL Credit Facility.
- *Government assistance* – We applied for an $81 million grant and a $150 million loan under the recently enacted Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). If we receive such assistance, we will be subject to certain restrictions and will be required to modify the personnel actions discussed above to comply with the terms of the government assistance. Additionally, receipt of funds may require the consent of a majority of the holders of the 2024 Senior Secured Notes or the consent of the lenders under the ABL Credit Agreement to amend the terms governing such indebtedness.

We expect COVID-19 to continue to have a significant negative impact on our revenue and we are unable to predict how long that impact will continue. The extent of the impact of COVID-19 on our CA and BA businesses and our financial and operational performance will depend on future developments, including the duration, spread and severity of the outbreak, the duration and geographic scope of related travel advisories and restrictions and the extent of the impact of COVID-19 on overall demand for commercial and business aviation travel, all of which are highly uncertain and cannot be predicted. We are unable to predict how long the pandemic and its negative impact will persist, what additional measures may be introduced by governments or private parties or what effect any such additional measures may have on air travel, our business partners and our business. Not only is the duration of the pandemic and future combative measures unknown, the overall situation is extremely fluid, and it is impossible to predict the timing of future material changes in the situation and whether the Company's actions in response will be sufficient or successful.

Impairment assessments - We review our long-lived assets and indefinite-lived intangible assets for potential impairment whenever events indicate that the carrying amount of such assets may not be recoverable. We conducted a review as of March 31, 2020 in light of the COVID-19 outbreak and its impact on air travel, and recorded an impairment charge with respect to certain long-lived assets. We are continuously monitoring the COVID-19 pandemic and its impact. If the impact of the pandemic exceeds management's estimates, we could incur additional material impairment charges in future periods. See Note 7, "Composition of Certain Balance Sheet Accounts," for additional information on our long-lived assets and Note 8, "Intangible Assets," for additional information on our indefinite-lived assets.

Credit Losses — We regularly evaluate our accounts receivable and contract assets for expected credit losses and recorded credit losses for the three month period ended March 31, 2020. We are continuously monitoring our assumptions used to determine our expected credit losses, including the impact of the COVID-19 pandemic, which could cause us to record additional material credit losses in future periods. See Note 9, "Composition of Certain Reserves and Allowances," for additional information

Factors and Trends Affecting Our Results of Operations

We believe that our operating and business performance is driven by various factors that affect the commercial airline and business aviation industries, including trends affecting the travel industry and trends affecting the customer bases that we target, as well as factors that affect wireless Internet service providers and general macroeconomic factors. Key factors that may affect our future performance include:

- the extent to which the COVID-19 pandemic continues to impact demand for commercial and business air travel globally, including as a result of governmental restrictions on travel and social gatherings and overall economic conditions;
- the effectiveness of our cost reduction plan and other measures taken to mitigate the impact of COVID-19 on our business and financial stability, including efforts to renegotiate contractual terms with suppliers, and the impact such actions have on our operations and long-term success;
- costs associated with the implementation of, and our ability to implement on a timely basis our technology roadmap, upgrades and installation of our ATG-4 and 2Ku technologies, Gogo 5G, any technology to which our ATG or satellite networks evolve and other new technologies (including technological issues and related remediation efforts and failures or delays on the part of antenna and other equipment developers and providers, some of which are single source, or delays in obtaining STCs including as a result of any government shutdown), the potential licensing of additional spectrum, and the improvements to our network and operations as technology changes and we experience increased demand and network capacity constraints, including as a result of airline partners deciding to provide free service to passengers;
- costs associated with, and our ability to execute, our continued international expansion, including our ability to obtain and comply with foreign telecommunications, aviation and other licenses and approvals necessary for our international operations;
- our ability to obtain sufficient satellite capacity, including for heavily-trafficked areas, in the United States and internationally;
- costs of satellite capacity in the United States and internationally, to which we may have to commit well in advance, including our ability to renegotiate the terms of such agreements in light of the COVID-19 pandemic;
- the pace and extent of adoption of our service for use on domestic and international commercial aircraft by our current and new airline partners and customers;
- the number of aircraft in service in our markets, including consolidation of the airline industry or changes in fleet size or bankruptcies by one or more of our commercial airline partners or BA large-fleet customers;
- the extent of passengers' and aviation partners' adoption of our products and services, which is affected by, among other things, willingness to pay for the services that we provide, the quality and reliability of our products and services, changes in technology and competition from current competitors and new market entrants;
- our ability to enter into and maintain long-term connectivity arrangements with airline partners and customers, which depends on numerous factors including the real or perceived availability, quality and price of our services and product offerings as compared to those offered by our competitors;

- the impact of a change in business models and contract terms on the profitability of our connectivity agreements with airline partners, including as a result of changes in accounting standards;
- the results of our ongoing discussions with Delta Air Lines ("Delta") with respect to its transition to free service, which may involve seeking to pursue supplier diversification for Delta's domestic mainline fleet, and our ability to offset the impact of any deinstalled aircraft through increased demand and revenue;
- our ability to engage suppliers of equipment components and network services on a timely basis and on commercially reasonable terms;
- continued demand for connectivity and proliferation of Wi-Fi enabled devices, including smartphones, tablets and laptops;
- changes in domestic or foreign laws, regulations or policies that affect our business or the business of our customers and suppliers;
- changes in laws, regulations and interpretations affecting telecommunications services, including those affecting our ability to maintain our licenses for ATG spectrum in the United States, obtain sufficient rights to use additional ATG spectrum and/or other sources of broadband connectivity to deliver our services, expand our service offerings and manage our network; and
- changes in laws, regulations and interpretations affecting aviation, including, in particular, changes that impact the design of our equipment and our ability to obtain required certifications for our equipment.

Key Business Metrics

Our management regularly reviews financial and operating metrics, including the following key operating metrics for the CA-NA, CA-ROW and BA reportable segments, to evaluate the performance of our business and our success in executing our business plan, make decisions regarding resource allocation and corporate strategies, and evaluate forward-looking projections.

Commercial Aviation North America

	For the Three Months Ended March 31,	
	2020	2019
Aircraft online (at period end)	2,480	2,412
Satellite	925	718
ATG	1,555	1,694
Total aircraft equivalents (average during the period)	2,554	2,519
Net annualized average monthly service revenue per aircraft equivalent (annualized ARPA) (in thousands)	$ 99	$ 126

Commercial Aviation Rest of World

	For the Three Months Ended March 31,	
	2020	2019
Aircraft online (at period end)	833	641
Total aircraft equivalents (average during the period)	737	550
Net annualized ARPA (in thousands)	$ 97	$ 136

- *Aircraft online.* We define aircraft online as the total number of commercial aircraft on which our equipment is installed and service has been made commercially available as of the last day of each period presented. We assign aircraft to CA-NA or CA-ROW at the time of contract signing as follows: (i) all aircraft operated by North American airlines and under contract for ATG or ATG-4 service are assigned to CA-NA, (ii) all aircraft operated by North American airlines and under a contract for satellite service are assigned to CA-NA or CA-ROW based on whether the routes flown by such aircraft under the contract are anticipated to be predominantly within or outside of North America at the time the contract is signed, and (iii) all aircraft operated by non-North American airlines and under a contract are assigned to CA-ROW.

All aircraft online for the CA-ROW segment are equipped with our satellite equipment. We are aware that, beginning March 2020 and continuing through the date of this filing, our airline partners have parked a significant number of aircraft due to the impact of COVID-19 on the aviation industry. We do not know the specific number of such parked aircraft. The CA-NA and CA-ROW aircraft online disclosed above as of March 31, 2020 still include such aircraft, which is consistent with our historical practice of not removing temporarily parked aircraft from the online count as those have historically been immaterial and temporary. Should the duration of the aircraft being parked extend deeper into 2020, we may revisit this methodology for counting aircraft online.

- *Aircraft equivalents*. We define aircraft equivalents for a segment as the number of commercial aircraft online (as defined above) multiplied by the percentage of flights flown by such aircraft within the scope of that segment, rounded to the nearest whole aircraft and expressed as an average of the month-end figures for each month in the period. This methodology takes into account the fact that during a particular period certain aircraft may fly routes outside the scope of the segment to which they are assigned for purposes of the calculation of aircraft online.

- *Net annualized average monthly service revenue per aircraft equivalent* ("ARPA"). We define net annualized ARPA as the aggregate service revenue plus monthly service fees, some of which are reported as a reduction to cost of service revenue for that segment for the period, less revenue share expense and other transactional expenses which are included in cost of service revenue for that segment, divided by the number of months in the period, and further divided by the number of aircraft equivalents (as defined above) for that segment during the period, which is then annualized and rounded to the nearest thousand.

Business Aviation

	For the Three Months Ended March 31,	
	2020	**2019**
Aircraft online (at period end)		
Satellite	4,939	5,135
ATG	5,713	5,348
Average monthly service revenue per aircraft online		
Satellite	$ 223	$ 237
ATG	3,143	3,071
Units Sold		
Satellite	56	130
ATG	125	187
Average equipment revenue per unit sold (in thousands)		
Satellite	$ 60	$ 40
ATG	77	61

- *Satellite aircraft online*. We define satellite aircraft online as the total number of business aircraft for which we provide satellite services as of the last day of each period presented.

- *ATG aircraft online.* We define ATG aircraft online as the total number of business aircraft for which we provide ATG services as of the last day of each period presented.

- *Average monthly service revenue per satellite aircraft online*. We define average monthly service revenue per satellite aircraft online as the aggregate satellite service revenue for the period divided by the number of months in the period, divided by the number of satellite aircraft online during the period (expressed as an average of the month-end figures for each month in such period).

- *Average monthly service revenue per ATG aircraft online.* We define average monthly service revenue per ATG aircraft online as the aggregate ATG service revenue for the period divided by the number of months in the period, divided by the number of ATG aircraft online during the period (expressed as an average of the month-end figures for each month in such period).

- *Units sold*. We define units sold as the number of satellite or ATG units for which we recognized revenue during the period.
- *Average equipment revenue per satellite unit sold*. We define average equipment revenue per satellite unit sold as the aggregate equipment revenue earned from all satellite units sold during the period, divided by the number of satellite units sold.
- *Average equipment revenue per ATG unit sold.* We define average equipment revenue per ATG unit sold as the aggregate equipment revenue from all ATG units sold during the period, divided by the number of ATG units sold.

Key Components of Consolidated Statements of Operations

There have been no material changes to our key components of unaudited condensed consolidated statements of operations and segment profit (loss) as described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" ("MD&A") in our 2019 10-K.

Off-Balance Sheet Arrangements

We do not have any obligations that meet the definition of an off-balance sheet arrangement.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). The preparation of our unaudited condensed consolidated financial statements and related disclosures require us to make estimates, assumptions and judgments that affect the reported amount of assets, liabilities, revenue, costs and expenses, and related exposures. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. In some instances, we could reasonably use different accounting estimates, and in some instances results could differ significantly from our estimates. We evaluate our estimates and assumptions on an ongoing basis. To the extent that there are differences between our estimates and actual results, our future financial statement presentation, financial condition, results of operations and cash flows will be affected.

We believe that the assumptions and estimates associated with revenue recognition, long-lived assets, indefinite-lived assets and stock-based compensation have the greatest potential impact on our unaudited condensed consolidated financial statements. Therefore, we consider these to be our critical accounting policies and estimates.

Revenue Recognition:

We account for revenue in accordance with Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers* ("ASC 606"). Our CA-NA and CA-ROW airline-directed contracts contain multiple performance obligations, which primarily include the sale of equipment, installation services, connectivity services and entertainment services. For these contracts, we account for each distinct good or service as a separate performance obligation. We allocate the contract's transaction price to each performance obligation using the relative standalone selling price, which is based on the actual selling price for any good or service sold separately to a similar class of customer, if available. To the extent a good or service is not sold separately, we use our best estimate of the standalone selling price and maximize the use of observable inputs. The primary method we use to estimate the standalone selling price is the expected cost-plus margin approach.

The contractual consideration used for allocation purposes includes connectivity and entertainment services, which may be based on a fixed monthly fee per aircraft or a variable fee based on the volume of connectivity activity, or a combination of both. Examples of variable consideration within our contracts include megabyte overages and pay-per-use sessions.

We constrain our estimates to reduce the probability of a significant revenue reversal in future periods, allocate variable consideration to the identified performance obligations and recognize revenue in the period the services are provided. Our estimates are based on historical experience, anticipated future performance, market conditions and our best judgment at the time. For the three months ended March 31, 2020, our estimates included management's best assumptions for the impact of COVID-19, which includes decreased flights and gross passenger opportunity ("GPO").

A significant change in one or more of these estimates could affect our estimated contract value. For example, estimates of variable revenue within certain contracts require estimation of the number of sessions or megabytes that will be purchased over the contract term and the average revenue per connectivity session, which varies based on the connectivity options available to passengers on each airline. Estimated revenue under these contracts anticipates increases in take rates over time and assumes an average revenue per session consistent with our historical experience. Our estimated contract revenue may differ significantly from our initial estimates to the extent actual take rates and average revenue per session differ from our historical experience.

We regularly review and update our estimates, especially in light of COVID-19, and recognize adjustments under the cumulative catch-up method. Any adjustments under this method are recorded as a cumulative adjustment in the period identified and revenue for future periods is recognized using the new adjusted estimate.

See Note 4, “Revenue Recognition,” for additional information.

Long-Lived Assets:

Our long-lived assets (other than goodwill and indefinite-lived assets which are separately tested for impairment) are reviewed for potential impairment whenever events indicate that the carrying amount of such assets may not be recoverable. Within the Commercial Aviation segment, certain certification and installation programs under some of our turnkey airline contracts are still in progress. Accordingly, we evaluate whether an indication of impairment exists for turnkey airline contracts based on our projected future cash flows associated with such contracts. We group certain long-lived assets by airline contract and by connectivity technology.

When an indication of impairment exists, we review long-lived assets for impairment by comparing the carrying value of the long-lived assets with the estimated future undiscounted cash flows expected to result from the use of the assets. If the future undiscounted cash flows are less than the carrying value, we then calculate an impairment loss equal to the difference between the long-lived asset’s carrying value and its estimated fair value following which the long-lived assets are written down to estimated fair value and the adjusted balance becomes the new cost basis and is depreciated (amortized) over the remaining useful life of the assets. We also periodically reassess the useful lives of our long-lived assets due to advances and changes in our technologies.

Our impairment loss calculations contain uncertainties because they require management to make assumptions and to apply judgment to estimate future cash flows and long-lived asset fair values, including forecasting useful lives of the long-lived assets and selecting discount rates.

In light of the COVID-19 outbreak and its impact on air travel, including decreased flights, decreased gross passenger opportunity and our airline partners’ temporary parking of a significant number of their aircraft, we conducted a review as of March 31, 2020 and determined that the carrying value for the asset groups related to three of our airline agreements for the CA business exceeded their estimated undiscounted cash flows, which triggered the need to estimate the fair value of these assets. For the airborne assets and right-of-use assets associated with the three airline agreements (the “impaired assets”), we recorded an impairment charge of $46.4 million for the three month period ended March 31, 2020.

We are continuously monitoring the COVID-19 pandemic and its impact. If the negative impact of the pandemic on the assets related to our airline agreements continues, including as a result of airline partners’ decisions to temporarily park certain aircraft to reduce capacity, we could incur additional material impairment charges in future periods.

Indefinite-Lived Intangible Assets:

Our indefinite-lived intangible assets consist of our FCC spectrum licenses. Indefinite-lived intangible assets are not amortized but are reviewed for impairment at least annually or whenever events indicate that the carrying amount of such assets may not be recoverable. We perform our annual impairment test during the fourth quarter of each fiscal year. We assess qualitative factors to determine the likelihood of impairment. Our qualitative analysis includes, but is not limited to, assessing the changes in macroeconomic conditions, regulatory environment, industry and market conditions or events, such as COVID-19, financial performance versus budget and any other events or circumstances specific to the FCC licenses. We believed the impact of COVID-19 could indicate that the carrying value of our FCC spectrum licenses may not be recoverable and as such we reviewed the FCC spectrum licenses for impairment as of March 31, 2020. If it is more likely than not that the fair value of the FCC spectrum licenses is greater than the carrying value, no further testing is required. Otherwise, we apply the quantitative impairment test method. In determining which quantitative approach is most appropriate, we consider the cost approach, market approach and income approach. We determined that the income approach, utilizing the Greenfield method, is the most appropriate way to value our indefinite-lived assets.

For the Greenfield method we estimate the value of our FCC spectrum licenses by calculating the present value of the cash flows of a hypothetical new market participant whose only assets are such licenses to determine the enterprise value of the entire company. It includes all necessary costs and expenses to build the company's infrastructure during the start-up period, projected revenue, and cash flows once the infrastructure is completed. Since there is no corroborating data available in the marketplace that would demonstrate a market participant's experience in establishing an "air-to-ground" business, we utilize our historic results and future projections as the underlying basis for the application of the Greenfield method. We follow the traditional discounted cash flow method, calculating the present value of a new market participant's estimated debt free cash flows.

Our impairment calculations contain uncertainties, including the impact of COVID-19, because they require management to make assumptions and to apply judgment to estimate future projected cash flows and estimated growth rates and discount rates, as well as new market participant assumptions. Estimates of future projected cash flows used in connection with the discounted cash flow analysis were consistent with the plans and estimates that we used to manage the business, including the impact of COVID-19, although there was inherent uncertainty in these estimates. The discount rate used in the calculation was based on our weighted average cost of capital. Our assessment as of March 31, 2020 indicated no impairment.

We are continuously monitoring the COVID-19 pandemic and its impact. If the negative impact of the pandemic exceeds management's estimates, we could incur material impairment charges in future periods.

Credit Losses:

We regularly evaluate our accounts receivable and contract assets for expected credit losses and on January 1, 2020 adopted ASC 326.

Our expected loss methodology for accounts receivable is developed using historical collection experience, current and future economic and market conditions and a review of the current status of each customer's trade accounts receivables. Due to the short-term nature of such receivables, the estimated amount of accounts receivable that may not be collected is based on aging of the accounts receivable balances and the financial condition of customers. Additionally, specific allowance amounts are established to record the appropriate provision for customers that have a higher probability of default. Our monitoring activities include timely account reconciliation, dispute resolution, payment confirmation, consideration of each customer's financial condition and macroeconomic conditions.

We apply a similar methodology towards our current and non-current contract asset balances. However, due to the inherent additional risk associated with a long-term receivable, an additional provision is applied towards contract asset balances that will diminish over time as the contract nears its expiration date.

The estimates used to determine the allowances are based on management's assessment of anticipated payment, taking into account available historical and current information as well as management's assessment of potential future developments.

For the three months ended March 31, 2020, we also considered the current and estimated future economic and market conditions resulting from the COVID-19 pandemic in the determination of our estimated credit losses.

As such, we recorded a noncash cumulative effect adjustment to retained earnings of $3.7 million as a result of the adoption of ASC 326 for estimated credit losses. During the three month period ended March 31, 2020 we recorded an additional $6.8 million of additional estimated credit losses, which was primarily the result of COVID-19. One international airline partner in particular accounted for approximately 70% of our credit losses during the three month period ended March 31, 2020. Subsequent to March 31, 2020, such airline partner's financial condition continued to deteriorate and we expect to record additional credit losses during the three month period ending June 30, 2020.

We are continuously monitoring our assumptions used to determine our expected credit losses, including the impact of the COVID-19 pandemic, which could cause us to record additional material credit losses in future periods.

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Recent Accounting Pronouncements

See Note 3, "Recent Accounting Pronouncements," to our unaudited condensed consolidated financial statements for additional information.

Results of Operations

The following table sets forth, for the periods presented, certain data from our unaudited condensed consolidated statements of operations. The information contained in the table below should be read in conjunction with our unaudited condensed consolidated financial statements and related notes.

Unaudited Condensed Consolidated Statement of Operations Data
(in thousands)

	For the Three Months Ended March 31,	
	2020	**2019**
Revenue:		
Service revenue	$150,782	$165,012
Equipment revenue	33,693	34,537
Total revenue	184,475	199,549
Operating expenses:		
Cost of service revenue (exclusive of items shown below)	70,755	68,121
Cost of equipment revenue (exclusive of items shown below)	26,040	29,731
Engineering, design and development	22,863	24,728
Sales and marketing	9,652	12,318
General and administrative	27,166	22,454
Impairment of long-lived assets	46,389	—
Depreciation and amortization	32,670	30,749
Total operating expenses	235,535	188,101
Operating income (loss)	(51,060)	11,448
Other (income) expense:		
Interest income	(606)	(1,149)
Interest expense	31,174	32,554
Other (income) expense	2,993	(3,365)
Total other expense	33,561	28,040
Loss before income taxes	(84,621)	(16,592)
Income tax provision (benefit)	157	207
Net loss	$ (84,778)	$ (16,799)

Three Months Ended March 31, 2020 and 2019

Revenue:

Revenue by segment and percent change for the three month periods ended March 31, 2020 and 2019 were as follows *(in thousands, except for percent change)*:

	For the Three Months Ended March 31,		% Change 2020 over
	2020	2019	2019
Service Revenue:			
CA-NA	$ 73,828	$ 92,027	(19.8)%
BA	57,726	53,213	8.5%
CA-ROW	19,228	19,772	(2.8)%
Total Service Revenue	$150,782	$165,012	(8.6)%
Equipment Revenue:			
CA-NA	$ 6,308	$ 4,042	56.1%
BA	13,201	17,336	(23.9)%
CA-ROW	14,184	13,159	7.8%
Total Equipment Revenue	$ 33,693	$ 34,537	(2.4)%
Total Revenue:			
CA-NA	$ 80,136	$ 96,069	(16.6)%
BA	70,927	70,549	0.5%
CA-ROW	33,412	32,931	1.5%
Total Revenue	$184,475	$199,549	(7.6)%

Commercial Aviation North America:

CA-NA revenue decreased to $80.1 million for the three month period ended March 31, 2020, as compared with $96.1 million for the prior-year period, due to a decrease in service revenue offset in part by an increase in equipment revenue.

A summary of the components of CA-NA's service revenue for the three month periods ended March 31, 2020 and 2019 is as follows *(in thousands, except for percent change)*:

	For the Three Months Ended March 31,		% Change 2020 over
	2020	2019	2019
Connectivity revenue *(1)*	$68,869	$79,818	(13.7)%
Entertainment and CAS revenue	4,959	12,209	(59.4)%
Total service revenue	$73,828	$92,027	(19.8)%

(1) Includes non-session related revenue of $2.2 million and $1.4 million, respectively, for the three month periods ended March 31, 2020 and 2019.

CA-NA service revenue decreased to $73.8 million for the three month period ended March 31, 2020, as compared with $92.0 million for the prior-year period, primarily due to a decrease in Connectivity revenue and Entertainment and CAS revenue.

Connectivity revenue decreased to $68.9 million for the three month period ended March 31, 2020, as compared with $79.8 million for the prior-year period primarily due to the full impact of American Airlines switching to the airline-directed model, the deinstallation of Gogo equipment from certain American Airlines aircraft during 2018 and the first half of 2019 and the impact of COVID-19, which includes a decrease in flights and gross passenger opportunity ("GPO").

CA-NA Entertainment and CAS revenue decreased to $5.0 million for the three month period ended March 31, 2020 as compared with $12.2 million for the prior-year period primarily due to the recognition of product development-related revenue for one of our airline partners in the first quarter of 2019 and the impact of COVID-19.

Net annualized ARPA decreased to $99 thousand for the three month period ended March 31, 2020, as compared with $126 thousand for the prior-year period primarily due to the full impact of American Airlines' switch to the airline-directed model, product development-related revenue in the first quarter of 2019 and the impact of COVID-19, which includes a decrease in flights and GPO. The connectivity take rate, which is the number of sessions expressed as a percentage of passengers, decreased to 13.3% for the three month period ended March 31, 2020, as compared with 13.9% for the prior-year period primarily due to the impact of COVID-19.

Equipment revenue increased to $6.3 million for the three month period ended March 31, 2020, as compared with $4.0 million for the prior-year period, primarily due to more installations under the airline-directed model.

We anticipate that service revenue for CA-NA will decrease significantly during the three month period ending June 30, 2020 as compared with the three month period ended March 31, 2020 as a result of the impact of COVID-19, which includes a decrease in flights and GPO.

Additionally, we and some of our airline partners plan to delay the installation of our equipment as a result of COVID-19, and, as a result, we anticipate significant declines in our equipment revenue during the three month period ending June 30, 2020 as compared with the three month period ended March 31, 2020.

Business Aviation:

BA revenue increased to $70.9 million for the three month period ended March 31, 2020, as compared with $70.5 million for the prior-year period, due to an increase in service revenue offset in part by a decrease in equipment revenue.

BA service revenue increased to $57.7 million for the three month period ended March 31, 2020, as compared with $53.2 million for the prior-year period primarily due to additional customers subscribing to our Gogo Biz (ATG) service offset in part by a decrease in the number of satellite customers. The number of ATG aircraft online increased 6.8% to 5,713 as of March 31, 2020, as compared with 5,348 as of March 31, 2019.

BA equipment revenue decreased to $13.2 million for the three month period ended March 31, 2020, as compared with $17.3 million for the prior-year period due primarily to decrease in the number of ATG and satellite units sold.

In April 2020, COVID-19 began to impact our BA segment, which included a decrease in flights, suspension of subscriptions and fewer activations. We do not currently anticipate nearly as significant of an impact on our BA segment as our CA-NA or CA-ROW segments but anticipate service and equipment revenues to decline during the three month period ending June 30, 2020, as compared with the three month period ended March 31, 2020.

Commercial Aviation Rest of World:

CA-ROW revenue increased to $33.4 million for the three month period ended March 31, 2020, as compared with $32.9 million for the prior-year period, due to an increase in equipment revenue offset in part by a decrease in service revenue.

CA-ROW equipment revenue increased to $14.2 million for the three month period ended March 31, 2020, as compared with $13.2 million for the prior-year period due to an increase in spare parts sold under the airline-directed model, offset in part by fewer installations under the airline-directed model.

CA-ROW service revenue decreased to $19.2 million for the three month period ended March 31, 2020, as compared with $19.8 million for the prior-year period, primarily due to the impact of COVID-19, which includes a decrease in flights and GPO, partially offset by an increase in aircraft equivalents. Net annualized ARPA for the CA-ROW segment decreased to $97 thousand for the three month period ended March 31, 2020, as compared with $136 thousand for the prior-year period due to an increase in aircraft online from new airline partners and the impact of COVID-19, which includes a decrease in flights and GPO.

We anticipate that service revenue for CA-ROW will decrease significantly during the three month period ending June 30, 2020 as compared with the three month period ended March 31, 2020 as a result of the impact of COVID-19, which includes a decrease in flights and GPO.

Additionally, our airline partners have significantly delayed the installation of our equipment as a result of COVID-19, and, as a result, we anticipate significant declines in our equipment revenue during the three month period ending June 30, 2020 as compared with the three month period ended March 31, 2020.

Cost of Service Revenue:

Cost of service revenue by segment and percent change for the three month periods ended March 31, 2020 and 2019 were as follows *(in thousands, except for percent change)*:

	For the Three Months Ended March 31,		% Change
	2020	2019	2020 over 2019
CA-NA	$40,065	$36,425	10.0%
BA	11,007	13,052	(15.7)%
CA-ROW	19,683	18,644	5.6%
Total	$70,755	$68,121	3.9%

CA-NA cost of service revenue increased to $40.1 million for the three month period ended March 31, 2020, as compared with $36.4 million for the prior-year period due to increases in satellite service fees, less amortization of deferred airborne lease incentives and an increase in allocated ATG network costs, partially offset by a decrease in revenue share and operational costs.

BA cost of service revenue decreased to $11.0 million for the three month period ended March 31, 2020, as compared with $13.1 million for the prior-year period, primarily due to allocated ATG network costs.

CA-ROW cost of service revenue increased to $19.7 million for the three month period ended March 31, 2020, as compared with $18.6 million for the prior-year period primarily due to an increase in satellite and network fees and revenue share.

A significant portion of CA-NA and CA-ROW cost of service revenue are satellite service fees which are relatively fixed in nature. We are currently in discussions with certain of our satellite service providers to reduce our satellite service charges as a result of the lower utilization from decreased flights and GPO resulting from COVID-19.

We expect cost of service revenue for BA to increase over time, primarily due to increasing ATG network costs associated with Gogo 5G.

Cost of Equipment Revenue:

Cost of equipment revenue by segment and percent change for the three month periods ended March 31, 2020 and 2019 were as follows *(in thousands, except for percent change)*:

	For the Three Months Ended March 31,		% Change
	2020	2019	2020 over 2019
CA-NA	$ 5,682	$ 1,591	257.1%
BA	8,511	11,398	(25.3)%
CA-ROW	11,847	16,742	(29.2)%
Total	$26,040	$29,731	(12.4)%

Cost of equipment revenue decreased to $26.0 million for the three month period ended March 31, 2020, as compared with $29.7 million for the prior-year period.

The increase in CA-NA for the three month period ended March 31, 2020, as compared with the prior-year period was due to more installations under the airline-directed model during 2020 as compared with the prior-year period.

BA cost of equipment decreased for the three month period ended March 31, 2020 as compared with the prior-year period, due to a decrease in equipment revenue and changes in product mix.

The decrease in CA-ROW during the three month period was due to fewer installations under airline-directed model, offset in part by an increase in the sale of spare parts.

We expect that CA-NA and CA-ROW cost of equipment revenue will decrease significantly during the three month period ending June 30, 2020 as compared with the three month period ended March 31, 2020 due to the delays in airline equipment installations, as noted above. BA equipment revenue will vary with changes in equipment revenue.

Engineering, Design and Development Expenses:

Engineering, design and development ("EDD") expenses decreased to $22.9 million for the three month period ended March 31, 2020, as compared with $24.7 million for the prior-year period due to decreased STC and project-related spend in CA-NA and CA-ROW, offset in part by increased Gogo 5G network development costs at BA.

As noted in Note 2, "Impact of COVID-19 Pandemic," we implemented various expense management and personnel actions to manage our costs. We are actively working with our vendors and evaluating projects. The personnel actions, which include furloughs and salary reductions, began May 4, 2020.

Sales and Marketing Expenses:

Sales and marketing expenses decreased to $9.7 million for the three month period ended March 31, 2020, as compared with $12.3 million for the prior-year period primarily due to decreased personnel and advertising expenses in all three segments. Consolidated sales and marketing expenses as a percentage of total consolidated service revenue was 6.4% for the three month period ended March 31, 2020, as compared with 7.5% for the prior-year period.

As noted in Note 2, "Impact of COVID-19 Pandemic," we implemented various expense management and personnel actions to manage our costs. We are actively working with our vendors and evaluating projects. The personnel actions, which include furloughs and salary reductions, began May 4, 2020.

General and Administrative Expenses:

General and administrative expenses increased to $27.2 million for the three month period ended March 31, 2020, as compared with $22.5 million for the prior-year period, primarily due to allowances for credit losses of approximately $6.8 million, which was primarily driven by the impact of COVID-19 on one international airline partner in particular, offset in part by reductions in legal fees. Consolidated general and administrative expenses as a percentage of total consolidated service revenue was 18.0% for the three month period ended March 31, 2020, as compared with 13.6% for the prior-year period.

As noted above in Critical Accounting Policies and Estimates, subsequent to March 31, 2020, such airline partner's financial condition continued to deteriorate and we expect to record additional credit losses during the three month period ending June 30, 2020. We are continuously monitoring our assumptions used to determine our expected credit losses, including the impact of the COVID-19 pandemic, which could cause us to record additional material credit losses in future periods. As noted in Note 2, "Impact of COVID-19 Pandemic," we implemented various expense management and personnel actions to manage our costs. We are actively working with our vendors and evaluating projects. The personnel actions, which include furloughs and salary reductions, began May 4, 2020.

Segment Profit (Loss):

CA-NA's segment profit decreased to $15.9 million for the three month period ended March 31, 2020, as compared with $30.7 million for the prior-year period, primarily due to the changes as discussed above.

BA's segment profit increased to $35.9 million for the three month period ended March 31, 2020, as compared with $33.8 million for the prior-year period, primarily due to the changes as discussed above.

CA-ROW's segment loss decreased to $17.4 million for the three month period ended March 31, 2020, as compared with $18.2 million for the prior-year period, primarily due to the changes as discussed above.

Unallocated corporate costs increased to $10.3 million for the three month period ended March 31, 2020, as compared with $9.8 million for the prior-year period. Unallocated corporate costs are primarily included within general and administrative expenses.

Impairment of Long-Lived Assets:

We recorded an impairment charge of $46.4 million for the three month period ended March 31, 2020 for the impaired assets related to three of our airline agreements for the CA business, while we had no such charges in the prior year. See Note 7, "Composition of Certain Balance Sheet Accounts" for additional information.

Depreciation and Amortization:

Depreciation and amortization expense increased to $32.7 million for the three month period ended March 31, 2020, as compared with $30.7 million for the prior-year period due to additional aircraft under the turnkey model and increased amortization of capitalized software.

We expect that our depreciation and amortization expense will vary in the future depending upon the number of installations under the turnkey model.

Other (Income) Expense:

Other (income) expense and percent change for the three month periods ended March 31, 2020 and 2019 were as follows *(in thousands, except for percent change)*:

	For the Three Months Ended March 31,		% Change 2020 over
	2020	2019	2019
Interest income	$ (606)	$ (1,149)	(47.3)%
Interest expense	31,174	32,554	(4.2)%
Other expense	2,993	(3,365)	n/a
Total	$33,561	$28,040	19.7%

Total other expense increased to $33.6 million for the three month period ended March 31, 2020, as compared with $28.0 million for the prior-year period due primarily to the $3.0 million impairment of a cost-based investment in the current year while the prior year had no such activity. The three month period ended March 31, 2019 included $3.2 million in proceeds from a litigation settlement, while the current year had no such activity.

We expect our full-year 2020 interest expense to be down slightly as compared with 2019, primarily due to the reduction in interest expense related to the 2022 Senior Secured Notes, which were redeemed in full in May 2019, the partial repurchase of the 2020 Convertible Notes in April 2019 and the maturity of the remaining outstanding principal amount of 2020 Convertible Notes in March 2020. These decreases will be partially offset by higher average debt outstanding from the issuances of the 2024 Senior Secured Notes in April and May 2019, the drawdown of the ABL Credit Facility in March 2020 and the associated accretion expense and amortization of deferred financing costs. See Note 10, “Long-Term Debt and Other Liabilities,” in our unaudited condensed consolidated financial statements for additional information.

Income Taxes:

The effective income tax rates for the three month periods ended March 31, 2020 and 2019 were (0.2)% and (1.2)%, respectively. For the three month periods ended March 31, 2020 and 2019, our income tax expense was not significant primarily due to the full valuation allowance against our net deferred tax assets.

We expect our income tax provision to increase in future periods to the extent we become profitable.

Non-GAAP Measures

In our discussion below, we discuss certain non-GAAP financial measurements, including Adjusted EBITDA, Free Cash Flow and Unlevered Free Cash Flow as defined below. Management uses Adjusted EBITDA, Free Cash Flow and Unlevered Free Cash Flow for business planning purposes, including managing our business against internally projected results of operations and measuring our performance and liquidity. These supplemental performance measures also provide another basis for comparing period-to-period results by excluding potential differences caused by non-operational and unusual or non-recurring items. These supplemental performance measurements may vary from and may not be comparable to similarly titled measures used by other companies. Adjusted EBITDA, Free Cash Flow and Unlevered Free Cash Flow are not recognized measurements under accounting principles generally accepted in the United States, or GAAP; when analyzing our performance with Adjusted EBITDA or liquidity with Free Cash Flow or Unlevered Free Cash Flow, as applicable, investors should (i) evaluate each adjustment in our reconciliation to the corresponding GAAP measure, and the explanatory footnotes regarding those adjustments, (ii) use Adjusted EBITDA in addition to, and not as an alternative to, net loss attributable to common stock as a measure of operating results, and (iii) use Free Cash Flow or Unlevered Free Cash Flow in addition to, and not as an alternative to, consolidated net cash provided by (used in) operating activities when evaluating our liquidity.

Definition and Reconciliation of Non-GAAP Measures

EBITDA represents net loss attributable to common stock before interest expense, interest income, income taxes and depreciation and amortization expense.

Adjusted EBITDA represents EBITDA adjusted for (i) stock-based compensation expense, (ii) amortization of deferred airborne lease incentives, (iii) amortization of STC costs, (iv) impairment of long-lived assets, (v) impairment of cost-basis investment and (vi) proceeds from litigation settlement. Our management believes that the use of Adjusted EBITDA eliminates items that, management believes, have less bearing on our operating performance, thereby highlighting trends in our core business which may not otherwise be apparent. It also provides an assessment of controllable expenses, which are indicators management uses to determine whether current spending decisions need to be adjusted in order to meet financial goals and achieve optimal financial performance.

We believe that the exclusion of stock-based compensation expense from Adjusted EBITDA is appropriate given the significant variation in expense that can result from using the Black-Scholes model to determine the fair value of such compensation. The fair value of our stock options is determined using the Black-Scholes model and varies based on fluctuations in the assumptions used in this model, including inputs that are not necessarily directly related to the performance of our business, such as the expected volatility, the risk-free interest rate and the expected life of the options. Therefore, we believe that the exclusion of this cost provides a clearer view of the operating performance of our business. Further, stock option grants made at a certain price and point in time do not necessarily reflect how our business is performing at any particular time. While we believe that investors should have information about any dilutive effect of outstanding options and the cost of that compensation, we also believe that stockholders should have the ability to consider our performance using a non-GAAP financial measure that excludes these costs and that management uses to evaluate our business.

We believe that the exclusion of the amortization of deferred airborne lease incentives and amortization of STC costs from Adjusted EBITDA is useful as it allows an investor to view operating performance across time periods in a manner consistent with how management measures reportable segment profit and loss (see Note 16, "Business Segments and Major Customers," for a description of reportable segment profit (loss) in our unaudited condensed consolidated financial statements). Management evaluates reportable segment profit and loss in this manner, excluding the amortization of deferred airborne lease incentives and amortization of STC costs, because such presentation reflects operating decisions and activities from the current period, without regard to the prior period decisions or the business model applicable to various connectivity agreements.

We believe that the exclusion of the impairment of long-lived assets from Adjusted EBITDA is appropriate because of the non-recurring nature of the activity to our operating performance.

We believe that the exclusion of the impairment of cost-basis investment from Adjusted EBITDA is appropriate because of the non-operating and non-recurring nature of the activity.

We believe that the exclusion of litigation proceeds from Adjusted EBITDA is appropriate as this is non-recurring in nature and represents an infrequent financial benefit to our operating performance.

We also present Adjusted EBITDA as a supplemental performance measure because we believe that this measure provides investors, securities analysts and other users of our financial statements with important supplemental information with which to evaluate our performance and to enable them to assess our performance on the same basis as management.

Free Cash Flow represents net cash provided by (used in) operating activities, less purchases of property and equipment and the acquisition of intangible assets. We believe that Free Cash Flow provides meaningful information regarding the Company's liquidity.

Unlevered Free Cash Flow represents Free Cash Flow adjusted for cash interest payments and interest income. We believe that Unlevered Free Cash Flow provides an additional view of the Company's liquidity, excluding the impact of our capital structure.

Gogo Inc. and Subsidiaries
Reconciliation of GAAP to Non-GAAP Measures
(in thousands, except per share amounts)
(unaudited)

	For the Three Months Ended March 31,	
	2020	2019
Adjusted EBITDA:		
Net loss attributable to common stock (GAAP)	$(84,778)	$(16,799)
Interest expense	31,174	32,554
Interest income	(606)	(1,149)
Income tax provision	157	207
Depreciation and amortization	32,670	30,749
EBITDA	(21,383)	45,562
Stock-based compensation expense	3,995	4,327
Amortization of deferred airborne lease incentives	(7,071)	(8,953)
Amortization of STC costs	807	320
Impairment of long-lived assets	46,389	—
Impairment of cost-basis investment	3,000	—
Proceeds from litigation settlement	—	(3,215)
Adjusted EBITDA	$ 25,737	$ 38,041
Unlevered Free Cash Flow:		
Net cash provided by (used in) operating activities (GAAP) *(1)*	$ 38,027	$ (6,156)
Consolidated capital expenditures *(1)*	(15,310)	(27,711)
Free cash flow	22,717	(33,867)
Cash paid for interest *(1)*	66	46,163
Interest income *(2)*	(606)	(1,149)
Unlevered free cash flow	$ 22,177	$ 11,147

(1) See unaudited condensed consolidated statements of cash flows.
(2) See unaudited condensed consolidated statements of operations.

Material limitations of Non-GAAP measures

Although EBITDA, Adjusted EBITDA, Free Cash Flow and Unlevered Free Cash Flow are measurements frequently used by investors and securities analysts in their evaluations of companies, EBITDA, Adjusted EBITDA, Free Cash Flow and Unlevered Free Cash Flow each have limitations as an analytical tool, and you should not consider them in isolation or as a substitute for, or more meaningful than, amounts determined in accordance with GAAP.

Some of these limitations include:

- EBITDA and Adjusted EBITDA do not reflect interest income or expense;
- EBITDA and Adjusted EBITDA do not reflect cash requirements for our income taxes;
- EBITDA and Adjusted EBITDA do not reflect depreciation and amortization, which are significant and unavoidable operating costs given the level of capital expenditures needed to maintain our business;
- Adjusted EBITDA does not reflect non-cash components of employee compensation;
- Free Cash Flow and Unlevered Free Cash Flow do not represent the total increase or decrease in our cash balance for the period; and
- since other companies in our or related industries may calculate these measures differently from the way we do, their usefulness as comparative measures may be limited.

Liquidity and Capital Resources

The following table presents a summary of our cash flow activity for the periods set forth below *(in thousands)*:

	For the Three Months Ended March 31,	
	2020	2019
Net cash provided by (used in) operating activities	$ 38,027	$ (6,156)
Net cash provided by (used in) investing activities	(15,221)	11,707
Net cash provided by (used in) financing activities	18,858	(740)
Effect of foreign exchange rate changes on cash	51	(276)
Net increase in cash, cash equivalents and restricted cash	41,715	4,535
Cash, cash equivalents and restricted cash at the beginning of period	177,675	191,116
Cash, cash equivalents and restricted cash at the end of period	$219,390	$195,651
Supplemental information:		
Cash, cash equivalents and restricted cash at the end of period	$219,390	$195,651
Less: current restricted cash	560	1,535
Less: non-current restricted cash	4,601	5,426
Cash and cash equivalents at the end of the period	$214,229	$188,690

We have historically financed our growth and cash needs primarily through the issuance of common stock, non-convertible debt, senior convertible preferred stock, convertible debt, term facilities and cash from operating activities. We continually evaluate our ongoing capital needs in light of increasing demand for our services, capacity requirements, evolving technologies in our industry and related strategic, operational and technological opportunities. We actively consider opportunities to raise additional capital in the public and private markets utilizing one or more of the types of capital raising transactions through which we have historically financed our growth and cash needs, as well as other means of capital raising not previously used by us.

In April 2020, we applied for an $81 million grant and a $150 million loan under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). If granted, the grant and the loan would be required to be secured by collateral to be determined. Any receipt of funds under the CARES Act may also require the consent of a majority of the holders of the 2024 Senior Secured Notes and the consent of the lenders under the ABL Credit Agreement to amend the terms governing such indebtedness to, among other things, permit the incurrence of additional indebtedness or granting of liens, which we may not be able to obtain on a timely basis or on terms acceptable to us, if at all. To the extent that we were able to obtain a grant and/or loan under the CARES Act (if at all), we would be subject to certain restrictions, including, but not limited to, requirements to maintain certain levels of service and employment (which would require bringing back furloughed employees), limits on certain executive compensation and limits on the use of the funds granted. In addition, we would likely be obligated to issue warrants to the U.S. Department of the Treasury to purchase shares of our common stock.

Liquidity:

As disclosed elsewhere in this report, the extent of the impact of COVID-19 on the CA and BA businesses and our financial and operational performance will depend on future developments, including the duration, spread and severity of the outbreak, the duration and geographic scope of related travel advisories and restrictions and the extent of the impact of COVID-19 on overall demand for commercial and business aviation travel, all of which are highly uncertain and cannot be predicted. If our airline partners continue to experience significantly reduced demand for passenger traffic for an extended period, our liquidity and financial condition may be materially adversely affected. The extent to which the outbreak affects our liquidity and financial condition will depend in part on our ability to successfully implement various measures intended to reduce expenses and/or conserve cash, including:

- Personnel actions, including the implementation of a hiring freeze, suspending 2020 merit salary increases, deferring the CEO's bonus payout, a furlough of approximately 54% of our workforce and a reduction in compensation for most other employees;
- Expense management, including deferring purchases of capital equipment, delaying equipment installations, renegotiating agreements with suppliers, reducing other non-essential spend and renegotiating with our airline partners;

- In March 2020, we drew $22 million under the ABL Credit Facility; and
- Applying for assistance under the CARES Act.

See "Risk Factors — *Our business is highly dependent on the airline industry, which is itself affected by factors beyond the airlines' control, including the novel strain of coronavirus first identified in Wuhan, China. The airline industry is highly competitive and sensitive to changing economic conditions*."

Excluding the impact of our initial public offering, our prior credit facility, the 2022 Convertible Notes, the 2020 Convertible Notes, the 2024 Senior Secured Notes, the 2022 Senior Secured Notes and the ABL Credit Facility, to date we have not generated positive cash flows on a consolidated basis. However, based on our current plans, including the measures outlined in our response to COVID-19, we believe that our cash and cash equivalents and cash flows provided by operating activities will be sufficient to meet our operating obligations, including our capital expenditure requirements, for at least the next twelve months. As detailed in Note 10, "Long-Term Debt and Other Liabilities," in March 2020, in order to enhance our liquidity in response to the uncertainty in the global markets resulting from the COVID-19 pandemic, we drew $22.0 million from our previously undrawn revolving ABL Credit Facility. Our intent is to continue to access the capital markets to refinance our future debt obligations on an as-needed basis.

The 2024 Indenture and the ABL Credit Agreement contain covenants that limit the ability of GIH and its subsidiaries to incur additional indebtedness. Further, market conditions and/or our financial performance may limit our access to additional sources of equity or debt financing, or our ability to pursue potential strategic alternatives. As a result, we may be unable to finance growth of our business to the extent that our cash, cash equivalents and short-term investments and cash generated through operating activities prove insufficient or we are unable to raise additional financing through the issuance of additional equity, permitted incurrences of debt by us or by GIH and its subsidiaries, or the pursuit of potential strategic alternatives.

For additional information on the 2024 Senior Secured Notes, the ABL Credit Facility, the 2022 Senior Secured Notes, the 2022 Convertible Notes and the 2020 Convertible Notes, see Note 10, "Long-Term Debt and Other Liabilities," to our unaudited condensed consolidated financial statements.

Cash flows provided by (used in) Operating Activities:

The following table presents a summary of our cash flows from operating activities for the periods set forth below *(in thousands)*:

	For the Three Months Ended March 31,	
	2020	2019
Net loss	$(84,778)	$(16,799)
Non-cash charges and credits	98,706	42,468
Changes in operating assets and liabilities	24,099	(31,825)
Net cash provided by (used in) operating activities	$ 38,027	$ (6,156)

For the three month period ended March 31, 2020, cash provided by operating activities was $38.0 million as compared with net cash used in operating activities of $6.2 million in the prior-year period. The principal contributors to the year-over-year change in operating cash flows were:

- A $55.9 million increase in cash flows related to operating assets and liabilities resulting from:
  - An increase in cash flows due to the following:
    - Changes in accrued interest due to changes in the timing of payments as compared to the prior-year;
    - Changes in CA-NA's and BA's accounts payable due primarily to the timing of payments;
    - Changes in BA's accounts receivable due primarily to the timing of collections;
    - Changes in CA-ROW's and BA's accrued liabilities due primarily to the timing of payments; and
    - Changes in CA-NA's deferred airborne lease proceeds due to more installations under the turnkey model in the current year as compared with the prior year

- Offset in part by a decrease in cash flows due to the following:
    - Changes in CA-ROW's accounts receivable due to a larger reduction in accounts receivable balances in the first quarter of 2019 as compared with the first quarter of 2020;
    - Changes in CA-NA's and BA's inventories due to the timing of inventory purchases; and
    - Changes in CA-NA's deferred revenue due primarily to the timing of customer payments.
- An $11.7 million increase in net loss and non-cash charges and credits, primarily due to a decrease in CA-NA reportable segment profit offset in part by an increase in BA reportable segment profit and a decrease in CA-ROW reportable segment loss, as noted above under "—Results of Operations."

Cash flows provided by (used in) Investing Activities:

Cash used in investing activities is primarily for capital expenditures related to airborne equipment, cell site construction, software development, and data center upgrades. See "— Capital Expenditures" below. Additionally, cash used in investing activities includes net changes in our short-term investments of a cash inflow of $39.3 million for the three month period ended March 31, 2019, while no such activity occurred in the current year as we no longer hold any short-term investments.

Cash flows provided by (used in) Financing Activities:

Cash provided by financing activities for the three month period ended March 31, 2020 was $18.9 million primarily due to the $22.0 million of proceeds from the ABL Credit Facility offset in part by the repayment on maturity of the outstanding $2.5 million in aggregate principal amount of the 2020 Convertible Notes on March 1, 2020.

Cash used in financing activities for the three month period ended March 31, 2019 was $0.7 million primarily due to deferred financing costs associated with the issuances of the 2024 Senior Secured Notes, which occurred in April and May 2019, and financing lease payments.

Capital Expenditures

Our operations continue to require significant capital expenditures, primarily for technology development, equipment and capacity expansion. Capital expenditures for the CA-NA and CA-ROW segments include the purchase of airborne equipment for the turnkey model, which correlates directly to the roll out and/or upgrade of service to our airline partners' fleets. Capital spending is also associated with the expansion of our ATG and satellite network and data centers. We capitalize software development costs related to network technology solutions, the Gogo platform and new product/service offerings. We also capitalize costs related to the build out of our office locations.

Capital expenditures for the three month periods ended March 31, 2020 and 2019 were $15.3 million and $27.7 million, respectively. The decrease in capital expenditures was primarily due to a decrease in airborne equipment purchases as well as a decrease in capitalized software.

We expect that our airborne-related capital expenditures will vary in the future depending upon the number of installations under the turnkey model. Network-related capital expenditures and investments in capitalized software will increase over time as we build out Gogo 5G.

Other

Contractual Commitments: We have agreements with vendors to provide us with transponder and teleport satellite services that vary in length and amount. See Note 13, "Commitments and Contingencies," to our unaudited condensed consolidated financial statements for additional information.

We have agreements with various vendors under which we have remaining commitments to purchase satellite-based systems, certifications and development services. Such commitments will become payable as we receive the equipment or certifications, or as development services are provided.

Leases and Cell Site Contracts: We have lease agreements relating to certain facilities and equipment, which are considered operating leases. See Note 12, "Leases," to our unaudited condensed consolidated financial statements for additional information.

The revenue share paid to our airline partners represents operating lease payments and is deemed to be contingent rental payments, as the payments due to each airline are based on a percentage of our CA-NA and CA-ROW service revenue generated from that airline's passengers, which is unknown until realized. As such, we cannot estimate the lease payments due to an airline at the commencement of our contract with such airline. Rental expense related to the arrangements with commercial airlines included in cost of service revenue is primarily comprised of these revenue share payments offset by the amortization of the deferred airborne lease incentive discussed above. See Note 12, "Leases," to our unaudited condensed consolidated financial statements for additional information**.**

Indemnifications and Guarantees: In accordance with Delaware law, we indemnify our officers and directors for certain events or occurrences while the officer or director is, or was, serving at our request in such capacity. The maximum potential amount of future payments we could be required to make under this indemnification is uncertain and may be unlimited, depending upon circumstances. However, our Directors' and Officers' insurance does provide coverage for certain of these losses.

In the ordinary course of business we may occasionally enter into agreements pursuant to which we may be obligated to pay for the failure of performance of others, such as the use of corporate credit cards issued to employees. Based on historical experience, we believe that the risk of sustaining any material loss related to such guarantees is remote.

We have entered into a number of agreements, including our agreements with commercial airlines, pursuant to which we indemnify the other party for losses and expenses suffered or incurred in connection with any patent, copyright, or trademark infringement or misappropriation claim asserted by a third party with respect to our equipment or services. The maximum potential amount of future payments we could be required to make under these indemnification agreements is uncertain and is typically not limited by the terms of the agreements.

ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

Our exposure to market risk is currently confined to our cash and cash equivalents, short-term investments and our debt. We have not used derivative financial instruments for speculation or trading purposes. The primary objectives of our investment activities are to preserve our capital for the purpose of funding operations while at the same time maximizing the income we receive from our investments without significantly increasing risk. To achieve these objectives, our investment policy allows us to maintain a portfolio of cash equivalents and short-term investments through a variety of securities, including U.S. Treasury securities, U.S. government agency securities, and money market funds. Our cash and cash equivalents as of March 31, 2020 and December 31, 2019 primarily included amounts in bank deposit accounts and money market funds. We believe that a change in average interest rates would not affect our interest income and results of operations by a material amount.

The risk inherent in our market risk sensitive instruments and positions is the potential loss arising from interest rates as discussed below. The sensitivity analyses presented do not consider the effects that such adverse changes may have on the overall economic activity, nor do they consider additional actions we may take to mitigate our exposure to such changes. Actual results may differ.

Interest: Our earnings are affected by changes in interest rates due to the impact those changes have on interest income generated from our cash, cash equivalents and short-term investments. Our cash and cash equivalents as of March 31, 2020 and December 31, 2019 included amounts in bank deposit accounts and money market funds. We believe we have minimal interest rate risk as a 10% decrease in the average interest rate on our portfolio would have reduced interest income for the three month periods ended March 31, 2020 and 2019 by an immaterial amount.

Inflation: We do not believe that inflation has had a material effect on our results of operations. However, there can be no assurance that our business will not be affected by inflation in the future.

Seasonality: Our results of operations for any interim period are not necessarily indicative of those for any other interim period for the entire year because the demand for air travel, including business travel, is subject to significant seasonal fluctuations. We generally expect overall passenger opportunity to be greater in the second and third quarters compared to the rest of the year due to an increase in leisure travel offset in part by a decrease in business travel during the summer months and holidays. We expect seasonality of the air transportation business to continue, which may affect our results of operations in any one period.

ITEM 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

Management, with the participation of our Chief Executive Officer and the Chief Financial Officer, evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended) as of March 31, 2020. Based upon this evaluation, our Chief Executive Officer and the Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of March 31, 2020.

(b) Changes in Internal Control over Financial Reporting

There have been no changes to our internal control over financial reporting in connection with the evaluation required by Rules 13a-15(f) and 15d-15(f) under the Exchange Act during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. Legal Proceedings

Linksmart Litigation - On April 20, 2018, Linksmart Wireless Technology, LLC filed suit against us and eight of our airline partners in the U.S. District Court for the Central District of California alleging that our redirection server and login portal infringe a patent owned by the plaintiff. The suits seek an unspecified amount of damages. We are required under our contracts with these airlines to indemnify them for defense costs and any liabilities resulting from the suit. The Court has stayed the suits against our airline customers pending resolution of the suit against Gogo. Linksmart has also filed suit against other defendants asserting the same patent. Following the filing by one of those defendants of a petition to commence an *inter partes* review against the asserted patent in the U.S. Patent and Trademark Office, the Court stayed the litigation against such other defendant and Gogo, but such stay was lifted in July 2019 when the U.S. Patent and Trademark Office determined that the petitioner had not met the standard of proof required to commence the *inter partes* review. We believe that the plaintiff's claims are without merit and intend to defend them vigorously. The outcome of this litigation is inherently uncertain. No amounts have been accrued for any potential losses under this matter, as we cannot reasonably predict the outcome of the litigation or any potential losses.

Securities Litigation - On June 27, 2018, a purported stockholder of the Company filed a putative class action lawsuit in the United States District Court for the Northern District of Illinois, Eastern Division styled Pierrelouis v. Gogo Inc., naming the Company, its former Chief Executive Officer and Chief Financial Officer and its current Chief Financial Officer and President, Commercial Aviation as defendants purportedly on behalf of all purchasers of our securities from February 27, 2017 through May 4, 2018. The complaint asserts claims under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder, alleging misrepresentations or omissions by us purporting to relate to our 2Ku antenna's reliability and installation and remediation costs. The plaintiffs seek to recover from us and the individual defendants an unspecified amount of damages. In December 2018 the plaintiffs filed an amended complaint and in February 2019, we filed a motion to dismiss such amended complaint. In October 2019 the judge granted the motion to dismiss on two independent grounds, finding that plaintiffs failed to plausibly allege that defendants made materially false or misleading statements and that plaintiffs failed to plead with particularity that defendants acted with scienter. The amended complaint was dismissed without prejudice, and in December 2019, defendants filed a second amended complaint. In February 2020 we filed a motion to dismiss such second amended complaint and that motion is pending. We believe that the claims are without merit and intend to continue to defend them vigorously. In accordance with Delaware law, we will indemnify the individual named defendants for their defense costs and any damages they incur in connection with the suit. We have filed a claim with the issuer of our Directors' and Officers' insurance policy with respect to this suit. No amounts have been accrued for any potential losses under this matter, as we cannot reasonably predict the outcome of the litigation or any potential losses.

Derivative Litigation - On September 25, 2018 and September 26, 2018, two purported stockholders of the Company filed substantively identical derivative lawsuits in the United States District Court for the Northern District of Illinois, Eastern Division, styled Nanduri v. Gogo Inc. and Hutsenpiller v. Gogo Inc., respectively. Both lawsuits were purportedly brought derivatively on behalf of us and name us as a nominal defendant and name as defendants each member of the Company's Board of Directors, its former Chief Executive Officer and Chief Financial Officer and its current Chief Executive Officer, Chief Financial Officer and President, Commercial Aviation. The complaints assert claims under Section 14(a) of the Securities Exchange Act of 1934, breach of fiduciary duty, unjust enrichment, and waste of corporate assets, and allege misrepresentations or omissions by us purporting to relate to our 2Ku antenna's reliability and installation and remediation costs, as well as allegedly excessive bonuses, stock options, and other compensation paid to current Officers and Directors and excessive severance paid to former Officers. The two lawsuits were consolidated and are stayed until a final disposition of the motion to dismiss in the class action suit. We believe that the claims are without merit and intend to defend them vigorously if the litigation resumes. The plaintiffs seek to recover, on our behalf, an unspecified amount of damages from the individual defendants. We have filed a claim with the issuer of our Directors' and Officers' insurance policy with respect to these suits. No amounts have been accrued for any potential costs under this matter, as we cannot reasonably predict the outcome of the litigation or any potential costs.

From time to time we may become involved in other legal proceedings arising in the ordinary course of our business. We cannot predict with certainty the potential for or outcome of any future litigation. Regardless of the outcome of any particular litigation and the merits of any particular claim, litigation can have a material adverse impact on our company due to, among other reasons, any injunctive relief granted, which could inhibit our ability to operate our business, amounts paid as damages or in settlement of any such matter, diversion of management resources and defense costs.

ITEM 1A. Risk Factors

"Item 1A. Risk Factors" of our Form 10-K includes a discussion of our risk factors. The information presented below updates, and should be read in conjunction with, the risk factors and information disclosed in our Form 10-K. Except as set forth below, there have been no material changes to the risk factors previously disclosed in our 2019 10-K.

The COVID-19 pandemic, and the measures implemented to combat it, are having, and are likely to continue to have, a material adverse effect on our business. Moreover, the longer the pandemic persists, the more material the ultimate effects are likely to be. It is likely that there will be future negative effects that we cannot presently predict, including near term effects.

In December 2019, a novel strain of coronavirus ("COVID-19") was reported in Wuhan, China, and the World Health Organization (the "WHO") subsequently declared COVID-19 a "Public Health Emergency of International Concern." On March 13, 2020, the U.S. government declared a national emergency and on March 19, 2020, the U.S. Department of State issued a global Level 4 "do not travel" advisory advising U.S. citizens to avoid all international travel due to the global impact of COVID-19. The U.S. government has also implemented enhanced screenings, mandatory quarantine requirements and other travel restrictions in connection with the COVID-19 pandemic, including restrictions on travel from Asia, Europe, Mexico and Canada, and many foreign and U.S. state governments have instituted similar measures (including travel restrictions to and within the European Union) and declared states of emergency. At least 42 states, the District of Columbia and Puerto Rico have issued instructions for their residents to stay home or "shelter in place" and to avoid any non-essential travel for varied durations of time and may lift, have lifted or will be lifting or easing these instructions at varied times, often with certain restrictions still in place. In addition, depending on the results of any easing or lifting of instructions and other restrictions, federal, state or local governments or authorities may determine to reinstate, enhance or enforce the same or other instructions or restrictions in the future. Governments, non-governmental organizations and entities in the private sector have also issued and may continue to issue non-binding advisories or recommendations regarding air travel or other social distancing measures, including limitations on the number of persons that should be present at public gatherings.

The COVID-19 pandemic has caused a significant decline in international and domestic commercial and business aviation travel, which has materially and adversely affected our business. Passenger traffic on commercial airlines using Gogo's service declined significantly in April 2020 compared to March 2020. Our airline partners have significantly reduced capacity in response to the reduced demand, both by taking a significant number of aircraft out of service and by reducing the number of flights flown by aircraft that remain in service and we are unable to predict how long such capacity reductions will continue. Our BA business has also seen a sharp decrease in flight activity, which has resulted in an increase in requests for one-month account suspensions and a significant decrease in new plan activations in April 2020 as compared to March 2020.

We expect COVID-19 to continue to negatively impact our CA and BA businesses and we are unable to predict how long or with what degree of severity that impact will continue. The extent of the impact of COVID-19 on our financial and operational performance will depend on future developments, including the duration, spread and severity of the outbreak, the duration and geographic scope of related travel advisories and restrictions and the extent of the impact of COVID-19 on overall demand for commercial and business aviation travel, all of which are highly uncertain and cannot be predicted. If our airline partners continue to experience significantly reduced demand for passenger traffic, or continue to keep a significant number of aircraft out of service, for an extended period, our business, results of operations, liquidity and financial condition may be materially adversely affected.

In addition to directly impacting demand for air travel, COVID-19 and related restrictions may have a material and adverse impact on other aspects of our business, including:

- enhanced risk of delays or defaults in payments by airline partners and other third parties due to liquidity constraints that extend in some cases to bankruptcy;
- delays and difficulties in completing installations on certain aircraft;
- delays or shortages in our supply chain;
- our competitive position, including with respect to connectivity providers that do not operate exclusively in the aviation industry; and
- limitations on our ability to market and grow our business and to promote technological innovation.

At this time we are also not able to predict whether the COVID-19 pandemic will result in long-term changes to business practices and consumer behavior, with such changes including but not limited to a long-term reduction in travel as a result of increased usage of “virtual” and “teleconferencing” products, a general reluctance to travel by consumers and the impact on demand and capacity, which could result from government mandates on commercial aviation service including, for instance, any requirement for passengers to wear masks while traveling or any limitation on the number of seats that can be occupied on an aircraft to allow for social distancing. Each of these factors could have a material impact on our business. The full extent of the ongoing impact of COVID-19 on our longer-term operational and financial performance will depend on future developments, many of which are outside of our control.

The extent to which the outbreak affects our future earnings and liquidity will depend in part on our ability to implement various measures intended to reduce expenses and/or conserve cash, which themselves may have negative consequences with respect to our business and operations. In April 2020, we applied for an $81 million grant and a $150 million loan under the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”), but we can provide no assurance that we will receive the grant or loan in the amounts for which we applied, or at all. If we do accept relief under the CARES Act, we will be subject to certain restrictions, including, but not limited to, requirements to maintain employment levels through September 30, 2020, requirements to issue warrants for our common stock to the U.S. Treasury Department and certain limitations on executive compensation. The substance and duration of these restrictions may materially affect our operations, and we may not be successful in managing this impact. In addition, effective May 4, 2020, we furloughed approximately 54% of our workforce and implemented various reductions in compensation for other active employees, including salary reductions. Such actions could adversely affect employee morale, reduce overall productivity, lead to departures of key personnel or otherwise adversely impact normal operations. We may also be unsuccessful in amending contracts with certain suppliers and service providers, including satellite service providers. We are implementing and may consider other cost-saving measures, such as delaying aircraft equipment installations, deferring purchases of capital equipment, freezing new hires, reducing marketing and travel expenses and eliminating non-essential spend. There can be no assurances that any of the cost-saving measures described above, or any other actions, will successfully mitigate the impact of COVID-19 or the related decrease in demand for commercial air travel.

We are unable to predict how long these conditions will persist, what additional measures may be introduced by governments or private parties or what effect any such additional measures may have on air travel and our business. Furthermore, not only is the duration of the pandemic and future measures taken to combat it presently unknown, the overall situation is extremely fluid, and it is impossible to predict the timing of future material changes in the situation. It therefore is impossible to predict whether any such unknown future developments will occur in the near, medium or long term, and depending on the duration of the pandemic, such negative developments may occur over the entirety of the event.

Our business is highly dependent on the airline industry, which is itself affected by factors beyond the airlines’ control, including COVID-19. The airline industry is highly competitive and sensitive to changing economic conditions.

Our business is directly affected by the number of passengers flying on commercial aircraft, the financial condition of the airlines and other economic factors. If consumer demand for air travel declines, including due to environmental concerns or regulation, increased use of technology such as videoconferencing for business travelers, or the number of flights shrink due to, among other reasons, reductions in capacity by airlines, the number of passengers available to use the Gogo service will be reduced, which may have a material adverse effect on our business and results of operations. Unfavorable general economic conditions and other events that are beyond the airlines’ control, including higher unemployment rates, higher interest rates, reduced stock prices, reduced consumer and business spending, outbreaks of communicable diseases and terrorist attacks or threats could also have a material adverse effect on the airline industry. In particular, the COVID-19 outbreak has resulted in widespread and prolonged global travel restrictions, the taking of a significant number of aircraft out of service by our airline partners and the suspension of certain commercial flights by all of our airline partners, which has had, and is expected to continue to have, an adverse impact on our business. See “—*The COVID-19 pandemic, and the measures implemented to combat it, are having, and are likely to continue to have, a material adverse effect on our business. Moreover, the longer the pandemic persists, the more material the ultimate effects are likely to be. It is likely that there will be future negative effects that we cannot presently predict, including near term effects.*”

A general reduction or shift in discretionary spending could also result in decreased demand for leisure and business travel and lead to a reduction in airline flights offered and the number of passengers flying. Consolidation within the airline industry could also adversely affect our relationships with our existing airline partners or lead to Gogo-equipped aircraft being taken out of service.

Further, unfavorable economic conditions, including conditions associated with COVID-19, could also limit airlines' ability to counteract any increased fuel, labor or other costs through raised prices. Our airline partners operate in a highly competitive business market and, as a result, continue to face pressure on offerings and pricing. These unfavorable conditions and the competitiveness of the air travel industry could cause one or more of our airline partners to reduce expenditures on passenger services including deployment of the Gogo service, to be unable to pay the amounts due under our contracts with them in a timely manner or at all or to file for bankruptcy. If one or more of our airline partners were to file for bankruptcy, bankruptcy laws could give them rights to terminate and/or renegotiate their contracts with us, as well as reduce their total fleet size and capacity and/or their total number of flights. For example, due to market conditions caused by the COVID-19 pandemic, the financial condition of one of the Company's international airline partners already has deteriorated so significantly that it accounted for approximately 70% of the $6.8 million expected credit loss provision recorded during the three months ended March 31, 2020. Furthermore, we expect to record additional credit losses relating to such airline partner during the three month period ending June 30, 2020. Any of these aforementioned events or circumstances may have a material adverse effect on our business prospects, financial condition and results of operations.

We recorded an impairment charge on certain long-lived assets on March 31, 2020; we could incur additional losses in future periods due to impairment of long-lived assets and goodwill and other intangible assets as a result of the COVID-19 pandemic or other circumstances.

In accordance with applicable accounting standards, we are required to test our indefinite-lived intangible assets for impairment on an annual basis, or more frequently where there is an indication of impairment. In addition, we are required to test long-lived assets for impairment where there is any indication that an asset may be impaired. We believed that the impact of the COVID-19 pandemic on our business could be such an indication for both indefinite-lived and long-lived assets and tested such assets for impairment as of March 31, 2020.

Our review of our indefinite-lived intangible assets for impairment, including the impact of the COVID-19 pandemic, indicated that there were no impairments as of March 31, 2020.

Our review of our long-lived assets, including the impact of the COVID-19 pandemic, indicated that carrying values related to three of our airline agreements for the CA business exceeded their estimated undiscounted cash flows, which triggered the need to estimate the fair value of these assets. Fair value reflects our best estimate of the discounted cash flows of the impaired assets. For the airborne assets and right-of-use assets associated with the three airline agreements (the "impaired assets"), we recorded an impairment charge of $46.4 million for the three month period ended March 31, 2020, reflecting the difference between the carrying value and the estimated fair value of the impaired assets.

The risk of future additional material impairments has been significantly heightened as result of the effects of the COVID-19 pandemic on our business and we can provide no assurance that a material impairment loss of long-lived assets or goodwill and other intangible assets will not occur in a future period. Other circumstances that could require us to recognize impairments in the future include, among other factors, tight credit markets, government regulatory changes, decline in the fair values of certain tangible or intangible assets, unfavorable trends in historical or forecasted results of operations and cash flows and an uncertain economic environment, as well as other uncertainties. The value of our equipment could also be impacted in future periods by changes in supply and demand for our services. An impairment loss could have a material adverse effect on our financial condition and results of operations.

We may need additional financing to execute our business plan or new initiatives and we expect that we will need additional financing to refinance or repay our existing indebtedness at maturity; we may not be able to secure additional financing on acceptable terms, or at all.

As of March 31, 2020, our total cash and cash equivalents totaled $214.2 million. However, to date, excluding the impact of financing activities, we have not generated positive cash flows on a consolidated basis. As a result, we may require additional financing at some point in the future to fully execute our business plan, including our technology roadmap, international or domestic expansion plans or other changes. In addition, as a result of the effects of COVID-19, we may require additional financing to fund our continuing operations. Our success may depend on our ability to raise such additional financing on reasonable terms and on a timely basis. The amount and timing of our capital needs will depend in part on the resources required to develop our next generation ATG solution, the extent of deployment of 2Ku and our next generation ATG service, the rate of customer penetration, the adoption of our service by airline partners and other factors described in our annual, quarterly or current report filings with the Securities and Exchange Commission that may adversely affect our business. In addition, we may actively consider from time to time other significant technological, strategic and operational initiatives. In order to execute on any of these initiatives, we may require additional financing. Furthermore, we expect that we will require additional financing to refinance, or repay at maturity, our indebtedness, including $237.8 million of 2022 Convertible Notes (as defined below) that mature on May 15, 2022. Conditions in the economy and the financial markets may make it more difficult for us to obtain necessary additional capital or financing on acceptable terms, or at all. In addition, our ability to obtain additional financing for working capital, capital expenditures, acquisitions, debt service requirements or general corporate purposes is also limited by the indenture governing the 2024 Senior Secured Notes (as defined below), as amended, and the ABL Credit Agreement (as defined below). As of March 31, 2020, within our existing debt facilities, Gogo Intermediate Holdings LLC and its subsidiaries would have been able to incur approximately $17 million of additional indebtedness of capital leases and borrowing under the ABL Credit Agreement. Though the CARES Act, and other future legislation that may be passed by the U.S. government, may provide for additional potential sources of liquidity, we cannot be assured that we will receive such funding on acceptable terms, or at all. If we do receive funding from the U.S. government, we may be subject to additional restrictions or limitations, including limitations on the use of such funds. See "—*The COVID-19 pandemic, and the measures implemented to combat it, are having, and are likely to continue to have, a material adverse effect on our business. Moreover, the longer the pandemic persists, the more material the ultimate effects are likely to be. It is likely that there will be future negative effects that we cannot presently predict, including near term effects*." If we cannot secure sufficient additional financing, we may be forced to forego strategic opportunities or delay, scale back or eliminate additional service deployment, operations and investments or employ unplanned internal cost savings measures any of which could have a material adverse effect on our business prospects, financial condition and results of operations.

We and our subsidiaries have substantial debt and may incur substantial additional debt in the future, which could adversely affect our financial health, reduce our profitability, limit our ability to obtain financing in the future and pursue certain business opportunities and reduce the value of your investment.

As of March 31, 2020, we had total consolidated indebtedness of approximately $1,184.8 million, including $925.0 million outstanding of our 9.875% senior secured notes due 2024 (the "2024 Senior Secured Notes"), $237.8 million outstanding of our 6.00% convertible senior notes due 2022 (the "2022 Convertible Notes") and $22.0 million outstanding under our asset-based revolving credit facility (the "ABL Credit Facility") pursuant to the credit agreement, dated as of August 26, 2019 (the "ABL Credit Agreement"). Subject to certain limitations set forth in the indenture governing the 2024 Senior Secured Notes, as amended, and the ABL Credit Agreement, we and our subsidiaries may incur additional debt in the future, which could increase the risks described below and lead to other risks.

The amount of our debt or such other obligations could have important consequences for holders of our common stock, including, but not limited to:

- a substantial portion of our cash flow from operations must be dedicated to the payment of principal and interest on our indebtedness, thereby reducing the funds available to us for other purposes;
- our ability to obtain additional financing for working capital, capital expenditures, acquisitions, debt service requirements or general corporate purposes is limited, and our ability to satisfy our obligations with respect to our indebtedness may be impaired in the future;
- we may be at a competitive disadvantage compared to our competitors with less debt or with comparable debt at more favorable interest rates, or which are subject to fewer limitations or restrictions, and which, as a result, may be better positioned to withstand economic downturns;
- our ability to refinance indebtedness may be limited or the associated costs may increase;
- our ability to engage in acquisitions without raising additional equity or obtaining additional debt financing may be impaired in the future;

- it may be more difficult for us to satisfy our obligations to our creditors, resulting in possible defaults on and acceleration of such indebtedness;
- we may be more vulnerable to general adverse economic and industry conditions; and
- our flexibility to adjust to changing market conditions and our ability to withstand competitive pressures could be limited, or we may be prevented from making capital investments that are necessary or important to our operations in general, growth strategy and efforts to improve operating margins of our business units.

In addition, in April 2020, we applied for a $150 million loan under the CARES Act, which, if received, may subject us to certain restrictions, including, but not limited to, requirements to maintain employment levels through September 30, 2020, requirements to issue warrants for our common stock to the U.S. Treasury Department and certain limitations on executive compensation. The substance and duration of these restrictions may materially affect our operations, and we may not be successful in managing this impact.

We may have future capital needs and may not be able to obtain additional financing to fund our capital needs on acceptable terms, or at all.

We have from time to time evaluated, and we continue to evaluate, our potential capital needs in light of increasing demand for our services, limitations on bandwidth capacity and generally evolving technology in our industry. Additionally, in response to the travel restrictions, decreased demand for our services and other effects of COVID-19, we are currently evaluating our capital needs and liquidity position. In connection with our response to COVID-19, and due to other factors in the future, we may seek to utilize one or more types of capital raising in order to fund any initiative, including the issuance of new equity securities and new debt securities, including debt securities convertible into our common stock. We may also seek to issue such securities to service providers and vendors, in lieu of cash, in order to manage liquidity restraints. Since our IPO, we have obtained debt financing through our entry into our previous credit facility, issuances of convertible notes and issuances of senior secured notes. Excluding the impact of such financing activities, we have not generated positive cash flows on a consolidated basis, and our ability to do so will depend in large part on our ability to increase revenue and manage costs in each of our three business segments. In addition, our ability to generate positive cash flows from operating activities and the timing of certain capital and other necessary expenditures are subject to numerous variables, such as costs related to international expansion and execution of our current technology roadmap, including continuing development of our 2Ku and ATG systems, and other potential future technologies. The market conditions and the macroeconomic conditions that affect the markets in which we operate, our non-investment grade rating, our substantial indebtedness, the availability of assets as collateral for loans or other indebtedness and other factors, including the impact of COVID-19, could have a material adverse effect on our ability to secure financing on acceptable terms, if at all. We may be unable to secure additional financing on favorable terms or at all or our operating cash flow may be insufficient to satisfy our financial obligations under the indenture governing the 2024 Senior Secured Notes, the indenture governing the 2022 Convertible Notes, the ABL Credit Agreement and other indebtedness outstanding from time to time. Our liquidity has been, and may in the future be, negatively affected by the risk factors discussed in Item 1A. Risk Factors in the 2019 10-K, as updated by this Quarterly Report on Form 10-Q, including risks related to future results arising from the COVID-19 pandemic. If our liquidity is materially diminished, we may not be able to timely pay our debts and obligations as they become due, or otherwise comply with the covenants under the agreements and instruments governing our debt or with other material provisions of our contractual obligations.

Our ability to obtain additional financing for working capital, capital expenditures, acquisitions, debt service requirements or general corporate purposes is limited by the indenture governing the 2024 Senior Secured Notes and the ABL Credit Agreement, and additional covenants, restrictions, limitations and provisions could become binding on us as we continue to seek additional liquidity in response to the COVID-19 pandemic. As of March 31, 2020, within our existing debt facilities, the remaining permitted indebtedness for Gogo Intermediate Holdings LLC (a wholly owned subsidiary of Gogo Inc.) and its subsidiaries was approximately $17 million of capital leases and borrowings under the ABL Credit Agreement. In the future, if our subsidiaries are in compliance with certain incurrence ratios set forth in the indenture governing the 2024 Senior Secured Notes and in the ABL Credit Agreement, our subsidiaries may be able to incur additional indebtedness, which may increase the risks created by our current substantial indebtedness. Neither the indenture governing the 2024 Senior Secured Notes nor the ABL Credit Agreement prohibits Gogo Inc. from incurring additional indebtedness under any circumstances, but they do limit the amount of cash that our subsidiaries may dividend, transfer or otherwise distribute to us, including cash distributed to us to pay interest on the 2022 Convertible Notes or to pay interest on other indebtedness incurred by us, including indebtedness or preferred stock incurred to refinance, replace, renew or refund the 2022 Convertible Notes.

The terms of any additional financing, including any financing obtained through the CARES Act, may further limit our financial and operating flexibility. Our ability to satisfy our financial obligations will depend upon our future operating performance, the availability of credit generally, economic conditions and financial, business and other factors, many of which are beyond our control. Furthermore, if financing is not available when needed, or is not available on acceptable terms, we may be unable to take advantage of business opportunities or respond to competitive pressures, any of which may have a material adverse effect on our business, financial condition and results of operations. Even if we are able to obtain additional financing, we may be required to use the proceeds from any such financing to repay a portion of our outstanding debt.

If we raise additional funds through further issuances of equity, convertible debt securities or other securities convertible into equity, our existing stockholders could suffer significant dilution in their percentage ownership of our company. In addition, any new securities we issue could have rights, preferences and privileges senior to those of holders of our common stock, and we may grant holders of such securities rights with respect to the governance and operations of our business. If we are unable to obtain adequate financing or financing on terms satisfactory to us, if and when we require it, our ability to grow or support our business and to respond to business challenges could be significantly limited.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

a) Sales of Unregistered Securities

None.

b) Use of Proceeds from Public Offering of Common Stock

None.

ITEM 3. Defaults Upon Senior Securities

None.

ITEM 4. Mine Safety Disclosures

None.

ITEM 5. Other Information

None.

ITEM 6. Exhibits

Exhibit Number	Description of Exhibits
4.11	Second Supplemental Indenture, dated as of March 6, 2020, by and among Gogo Air International GmbH, Gogo Intermediate Holdings LLC, Gogo Finance Co. Inc., each of the other guarantors party thereto and U.S. Bank National Association, as trustee
10.1.43†	Amendment #6 to the Unified In-Flight Connectivity Hardware, Services and Maintenance Agreement, effective as of December 5, 2019, between Gogo LLC and American Airlines, Inc.
10.1.44†	Amendment #7 to the Unified In-Flight Connectivity Hardware, Services and Maintenance Agreement, effective as of December 27, 2019, between Gogo LLC and American Airlines, Inc.
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1 *	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2 *	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

* This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.

† Certain provisions of this exhibit have been omitted pursuant to Item 601 (b)(10)(iv) of Regulation S-K.

SIGNATURES

Pursuant to the requirements of the Securities and Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Gogo Inc.

Date: May 11, 2020

/s/ Oakleigh Thorne

Oakleigh Thorne
President and Chief Executive Officer
(Principal Executive Officer)

/s/ Barry Rowan

Barry Rowan
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

SECOND SUPPLEMENTAL INDENTURE

SECOND SUPPLEMENTAL INDENTURE (this "*Supplemental Indenture*"), dated as of March 6, 2020, among Gogo Air International GmbH, a Swiss *Gesellschaft mit beschränkter Haftung* having its seat in Zug (the "*Guaranteeing Subsidiary*"), a subsidiary of Gogo Inc. (or its permitted successor), a Delaware corporation, Gogo Intermediate Holdings LLC, a Delaware limited liability company, and Gogo Finance Co. Inc., a Delaware corporation (together, the "*Issuers*"), the other Guarantors (as defined in the Indenture referred to herein) and U.S. Bank National Association, as trustee under the Indenture referred to below (the "*Trustee*").

W I T N E S S E T H

WHEREAS, the Issuers have heretofore executed and delivered to the Trustee an indenture, dated as of April 25, 2019 (as amended or supplemented from time to time, the "*Indenture*") providing for the issuance of 9.875% Senior Secured Notes due 2024 (the "*notes*");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiary shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiary shall unconditionally guarantee all of the Issuers' Obligations under the notes and the Indenture on the terms and conditions set forth herein (the "*Guarantee*"); and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiary and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders of the notes as follows:

1. CAPITALIZED TERMS. Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. AGREEMENT TO GUARANTEE. The Guaranteeing Subsidiary hereby agrees to provide an unconditional Guarantee on the terms and subject to the conditions set forth in the Guarantee and in the Indenture including but not limited to Article 11 thereof.

3. LIMITATIONS TO GUARANTEE.

(a) Notwithstanding anything herein to the contrary, the payment obligations, liabilities and undertakings of the Guaranteeing Subsidiary under the Indenture or under the Notes Security Documents shall in no event (i) to the extent prohibited under Swiss law and practice then applicable at the time payment is due, exceed the amount of freely disposable reserves of the Guaranteeing Subsidiary as available for distribution to its shareholders at the time the relevant liability becomes due, including, without limitation, any statutory reserves which can be transferred into unrestricted, distributable reserves, in accordance with Swiss law or (ii) to the extent prohibited under Swiss law and practice then applicable at the time payment is due, constitute a repayment of capital (*Einlagerückgewähr*), a violation of the legally protected reserves (*gesetzlich geschützte Reserven*) or the payment of a (constructive) dividend (*Gewinnausschüttung*) by the Guaranteeing Subsidiary or (iii) otherwise be prohibited under Swiss law and practice then applicable at the time payment is due; provided that such limited amount shall at no time be less than such Guaranteeing Subsidiary's profits and any reserves available for distribution as dividends (being the balance sheet profits and any reserves available for this purpose, in each case in accordance with Article 798 of the Swiss Federal Code of Obligations) at the time or times payment under or pursuant to the Indenture is requested from the Guaranteeing Subsidiary, and further provided that such limitation (as may apply from time to time or not) shall not (generally or definitively) free the Guaranteeing Subsidiary from payment obligations hereunder in excess thereof, but merely postpone the payment date therefor until such times as payment is again permitted notwithstanding such limitation.

(b) Upon the Guaranteeing Subsidiary's obligations becoming due under the Indenture or under the relevant Notes Security Documents, the Guaranteeing Subsidiary, irrespective of the effects of such obligations under the law applicable to the Indenture or the relevant Notes Security Documents, shall be liable to promptly implement all such measures and/or to promptly obtain the fulfillment of all prerequisites allowing it to promptly make the requested payment(s) hereunder from time to time, including to (i) submit to its shareholders a proposal to (x) promptly pass a resolution for the distribution of dividends to its shareholders in accordance with the relevant provisions of the Swiss Code of Obligations being in force at that time and to (y) take all such other measures necessary to allow the respective payment to be made to the fullest extent of the amount available for distribution as set forth under paragraph (a) above, including, if applicable and to the extent required by Swiss corporate law, establishing an interim balance sheet of the Guaranteeing Subsidiary and obtaining a confirmation by the auditors of the Guaranteeing Subsidiary that they have examined this interim balance sheet and that the requested payment is in compliance with the applicable Swiss corporate law protecting share capital and legal reserves, and (ii) pay such dividend to its shareholders.

(c) As a consideration for its accession to the Indenture and the provision of the collateral, security rights and guarantees contemplated by the Indenture and the Notes Security Documents, the Guaranteeing Subsidiary shall receive an arm's length remuneration to be set on the basis of a transfer pricing assessment, which will be completed by a independent third-party expert and which will take into consideration all the facts and circumstances of the transaction contemplated herein, including the benefits of such transaction to the Guaranteeing Subsidiary.

(d) If so required under applicable law (including tax treaties), the Guaranteeing Subsidiary:

(i) shall use its best efforts to ensure that the payment to be performed under this Indenture or under the Notes Security Documents can be used without deduction of Swiss withholding tax, or with deduction of Swiss withholding tax at a reduced rate, by discharging the liability to such tax by notification pursuant to applicable law (including tax treaties) rather than payment of the tax; and

(ii) shall deduct the Swiss withholding tax at such rate (being 35% on the date hereof) as in force from time to time if the notification procedure pursuant to sub-paragraph (i) above does not apply; or shall deduct the Swiss withholding tax at the reduced rate resulting after discharge of part of such tax by notification if the notification procedure pursuant to sub-paragraph (i) applies for a part of the Swiss withholding tax only; and shall pay within the time allowed any such taxes deducted to the Swiss Federal Tax Administration.

(e) In the case of a deduction of Swiss withholding tax, the Guaranteeing Subsidiary shall use its best efforts to ensure that any person that is entitled to a full or partial refund of the Swiss withholding tax deducted from such payment under the Indenture or under the Notes Security Documents, will, as soon as possible after such deduction:

(i) request a refund of the Swiss withholding tax under applicable law (including tax treaties); and

(ii) pay to the Collateral Agent upon receipt any amount so refunded.

4. NO RECOURSE AGAINST OTHERS. No director, officer, employee, incorporator or stockholder of the Issuers or any Guarantor, as such, will have any liability for any obligations of the Issuers or the Guarantors under the notes, the Indenture, the Guarantees or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of notes by accepting a note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the notes. The waiver may not be effective to waive liabilities under the federal securities laws.

5. NEW YORK LAW TO GOVERN. THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

6. COUNTERPARTS. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

7. EFFECT OF HEADINGS. The Section headings herein are for convenience only and shall not affect the construction hereof.

8. THE TRUSTEE. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiary and the Issuers.

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: March 6, 2020

GOGO AIR INTERNATIONAL GMBH

By: /s/ Barry Rowan
Name: Barry Rowan
Title: Managing Director

ISSUERS

GOGO INTERMEDIATE HOLDINGS LLC

By: /s/ Barry Rowan
Name: Barry Rowan
Title: Executive Vice President, Chief Financial Officer and Treasurer

GOGO FINANCE CO. INC.

By: /s/ Barry Rowan
Name: Barry Rowan
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

GUARANTORS

GOGO INC.

By: /s/ Barry Rowan
Name: Barry Rowan
Title: Executive Vice President, Chief Financial Officer and Treasurer

AC BIDCO LLC

By: /s/ Barry Rowan
Name: Barry Rowan
Title: Executive Vice President, Chief Financial Officer, Treasurer and Assistant Secretary

GOGO LLC

By: /s/ Barry Rowan
Name: Barry Rowan
Title: Executive Vice President, Chief Financial Officer and Treasurer

GOGO BUSINESS AVIATION LLC

By: /s/ Barry Rowan
Name: Barry Rowan
Title: Executive Vice President, Chief Financial Officer and Treasurer

GOGO INTERNATIONAL HOLDINGS LLC

By: /s/ Barry Rowan
Name: Barry Rowan
Title: Executive Vice President, Chief Financial Officer and Treasurer

GOGO CONNECTIVITY LTD.

By: /s/ Barry Rowan
Name: Barry Rowan
Title: Executive Vice President and Chief Financial Officer

U.S. BANK NATIONAL ASSOCIATION, as Trustee

By: /s/ Linda Garcia
Authorized Signatory

AMENDMENT SIX (TO UNIFIED IN-FLIGHT CONNECTIVITY HARDWARE, SERVICES AND MAINTENANCE AGREEMENT)

THE USE OF THE FOLLOWING NOTATION IN THIS EXHIBIT INDICATES THAT THE CONFIDENTIAL PORTION HAS BEEN OMITTED PURSUANT TO ITEM 601(b)(10)(iv) WHEREBY CERTAIN IDENTIFIED INFORMATION HAS BEEN EXCLUDED BECAUSE IT IS BOTH NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE REGISTRANT IF PUBLICLY DISCLOSED: [***]

This Amendment Six (this “Amendment”) to the Unified In-Flight Connectivity Hardware, Services and Maintenance Agreement, dated as of February 1, 2017, as previously amended (as so amended, the “Original Agreement”), by and between American Airlines, Inc. (“American”) and Gogo LLC (“Gogo”) (collectively the “Parties” and individually a “Party”), is made and entered into this 5 day of December 2019.

WHEREAS, American and Gogo entered into Amendment Two to the Original Agreement on August 24, 2017 (“Amendment Two”) to extend the scope of the Original Agreement to include the installation of the 2Ku Solution and provision of certain Gogo Services on [***]; and

WHEREAS, American and Gogo desire to further extend the scope of the Original Agreement to include the installation of the 2Ku Solution and provision of certain Gogo Services on an [***], all in accordance with the terms detailed in this Amendment.

NOW, THEREFORE, in consideration of the foregoing premises and the covenants contained herein, American and Gogo agree as follows:

1 **Amendments**.

A. Exhibit A-1-A from Amendment Two of the Original Agreement is replaced in its entirety with a new Exhibit A-1-A as set forth in Appendix A, attached hereto.

B. Solely with regard to the [***] set forth in Table B of the new Exhibit A-1-A, and notwithstanding anything to the contrary in Section 1 of Exhibit D to the Original Agreement or Section 1 of Exhibit B from Amendment Two, the per Shipset price for 2Ku Shipsets for each of the [***] set forth in Table B of the new Exhibit A-1-A is $[***] (including all LRUs, WAPs, Wiring, Radome and Antenna(e) and NRE). There is no obligation for Gogo to buy back any Shipset associated with [***].

C. Gogo shall provide at no charge to American one (1) on-site support technician for the first (1st) install of the 2Ku Solution on the [***] in Table B. If additional support is requested, American shall pay the support fees set forth in Section 1.5.3 of Exhibit D of the Original Agreement.

D. Notwithstanding anything to the contrary in the Original Agreement, the Session Pricing for the [***] is and shall be as set forth in the April 22, 2019 Letter Agreement entered into by the Parties (the “Letter Agreement”).

E. Section 5 and Section 6 of Exhibit B from Amendment Two to the Original Agreement are hereby deleted in their entirety.

2 **Entire Agreement/Amendment**. This Amendment constitutes the full and complete understanding of the Parties with respect to the subject matter of this Amendment and supersedes all prior agreements and understandings between the Parties with respect to the subject matter. This Amendment may be modified only by written agreement signed by authorized representatives of both Parties.

3 **Effectiveness of Agreement**. Except as specifically amended by this Amendment, the Original Agreement remains in full force and effect. All capitalized terms used but not defined herein shall have the respective meanings applied to them in the Original Agreement.

GOGO:	**AMERICAN:**
GOGO LLC	**AMERICAN AIRLINES, INC.**
By: /s/ Ben Murphy	By: /s/ Jimmy James
Printed Name: Ben Murphy	Printed Name: Jimmy James
Title: VP Accounts	**Title:** MD, Tech Ops Procurement
Date: 12/16/2019	**Date:** 1/7/2020

Appendix A

[***]Table A*

[***]

* The Term for the aircraft identified above in Table A expires on January 1, 2022 pursuant to the terms of the Letter Agreement. The Initial Warranty Period for the aircraft in Table A expired on September 30, 2019. These aircraft are currently within the Extended Warranty Period as set forth in Section 9.2 of the Original Agreement.

Table B**

[***]

** The Term for the aircraft identified above in Table B expires January 1, 2022 pursuant to the terms of the Letter Agreement. The Initial Warranty Period for the Aircraft in Table B is for three (3) years from the installation date of 2Ku Equipment on each aircraft and subject to the Extended Warranty Period thereafter.

AMENDMENT No. 7
TO
UNIFIED IN-FLIGHT CONNECTIVITY HARDWARE, SERVICES
AND MAINTENANCE AGREEMENT

THE USE OF THE FOLLOWING NOTATION IN THIS EXHIBIT INDICATES THAT THE CONFIDENTIAL PORTION HAS BEEN OMITTED PURSUANT TO ITEM 601(b)(10)(iv) WHEREBY CERTAIN IDENTIFIED INFORMATION HAS BEEN EXCLUDED BECAUSE IT IS BOTH NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE REGISTRANT IF PUBLICLY DISCLOSED: [***]

This Amendment No. 7 to Unified In-Flight Connectivity Hardware, Services and Maintenance Agreement (this "**Amendment**"), is made effective on December 27, 2019 (the "**Amendment Effective Date**"), by and between **AMERICAN AIRLINES, INC.** ("**American**"), whose registered office is at 1 Skyview Dr., Fort Worth, TX 76155, and **GOGO LLC** ("**Gogo**"), whose registered office is at 111 N. Canal St., Suite 1500, Chicago, IL 60606 (collectively referred to as the "**Parties**" and each individually as a "**Party**").

WHEREAS, the Parties have entered into that certain Unified In-Flight Connectivity Hardware, Services and Maintenance Agreement effective February 1, 2017 (the "**Unified Agreement**") for in-flight connectivity hardware, services and maintenance with respect to certain aircraft operated by American;

WHEREAS, the Parties agree to amend the Unified Agreement in connection with Gogo's provision of services and development of software related to the SSOCP, as set forth in this Amendment; and

WHEREAS, the Parties intend that this Amendment be considered the "**Definitive Agreement**" contemplated by that certain Letter of Intent regarding the Development and Implementation of the American Airlines, Inc. In-Flight Connectivity Single Sign-On Common Portal dated August 31, 2017.

NOW, **THEREFORE**, in consideration of the mutual covenants contained in this Amendment, the Parties agree as follows:

1. **DEFINED TERMS.** Capitalized terms used but not otherwise defined in this Amendment shall have the meanings given to such terms in the Unified Agreement.

2. **DEFINITION OF SSOCP.** Section 1.247 of the Unified Agreement is hereby deleted in its entirety and replaced with the following:

    "1.247 "**SSOCP**" means Single Sign-On Common Portal (also known as American Airlines In-flight Portal or AAIP) as further described in **<u>Exhibits M</u>** and **<u>W</u>**."

3. **SSOCP SOW.** Section 1.248 of the Unified Agreement is hereby deleted in its entirety.

4. **ORDER OF PRECEDENCE.** Section 2.4 of the Unified Agreement is hereby deleted in its entirety and replaced with the following:

"2.4 **__Order of Precedence__**. Except as otherwise expressly set forth in an Exhibit, in the event and to the extent of any conflict or inconsistency between the main body of this Agreement and any of the Exhibits or Appendix 1, the main body shall control and prevail. In case of any conflict between any of the Exhibits and Appendix 1, the Exhibit(s) shall control and prevail. In the event that one or more line item(s) of Appendix 1 that should be included within the main body of this Agreement and/or any of the Exhibits is omitted, the appropriate provision(s) of the main body of this Agreement and/or the Exhibits shall be adjusted to incorporate such omission(s) as mutually agreed. In such case and prior to the adjustment to the provisions of the main body of this Agreement and/or the Exhibits, Appendix 1 will be used by the Parties to define the subject contractual requirement(s)."

5. **CHANGES.** The first paragraph of Section 3.3.6 of the Unified Agreement shall be deleted in its entirety and replaced with the following:

"3.3.6 **__Changes__**. Any changes to the functionality of, or Specifications relating to, the Portal or SSOCP (including any Software related to the Portal or SSOCP) shall be addressed in accordance with **__Exhibit X__**. Any other (i.e., other than those relating to the Portal) changes or deviations from the Specifications, including without limitation changes or deviations that impact delivery, price, weight, power, dimensions, cooling requirement or reliability or otherwise impact form, fit and function, must be approved by both Parties (if applicable, in accordance with the provisions of Section 4.1 or 4.2.2 of this Agreement)."

6. **RETAIL PROMOTIONAL OFFERINGS.** The phrase "with respect to the period prior to the Connectivity Services Transition Date" in the second sentence of Section 10.7 of the Unified Agreement is hereby deleted.

7. **EXECUTIVE ACCOUNTS.** Section 10.7.4 of the Unified Agreement is hereby deleted in its entirety and replaced with the following:

[***]

8. **NOTICE.** American's notice address set forth in Section 25.3 of the Unified Agreement is hereby deleted in its entirety and replaced with the following:

"If to American: ATTN: Managing Director, Aircraft Programs, Tech Ops
American Airlines, Inc.
1 Skyview Drive MD 520
Fort Worth, TX 76155"

9. **PORTAL CUSTOMIZATION.** The phrase ", inclusive of the description in Section 1.4 of **__Exhibit M__**" in Section 3.4 of Exhibit D to the Unified Agreement is hereby deleted.

10. **SSOCP PRICING.** Section 3.5 of Exhibit D to the Unified Agreement is hereby deleted in its entirety and replaced with the following:

"3.5 SSOCP

Full SSOCP description, including NRE, management, maintenance, and other associated terms and pricing is set forth in **__Exhibits M__** and **__W__**."

11. **SUBSCRIPTIONS.** The sentence immediately following the table in Section 3.6 of Exhibit D to the Unified Agreement is hereby deleted in its entirety and replaced with the following:

"**Exhibits M** and **W** set forth the terms and conditions related to validation of subscriptions under SSOCP."

12. **PORTAL PHASES.** The introductory paragraph in Exhibit I to the Unified Agreement is hereby deleted in its entirety and replaced with the following:

> "This **Exhibit I** describes the Portal guidelines and the Portal-related operational responsibilities of both American and Gogo. For the purpose of describing the Portal guidelines and responsibilities, this **Exhibit I** covers the first two (2) operational phases that will govern such responsibilities, which are, in the order of their expected chronological progression: [***]. Additional Portal-related requirements related to SSOCP are set forth in **Exhibit M**."

13. **WHITELISTED SITES.** The word "subscription" in the second sentence of Section 1.1 of Exhibit I to the Unified Agreement is hereby deleted and replaced with "session".

14. **PORTAL CHANGES.** The phrase "using the MCP process set forth in Section 3.3.6 of the Agreement" in the second sentence of Section 1.2 of Exhibit I to the Unified Agreement is hereby deleted and replaced with "using the change control procedures set forth in **Exhibit X**".

15. **SPLASH PAGE.** The phrase "senses the availability of Internet connectivity" in the first sentence of Section 1.5.12 of Exhibit I to the Unified Agreement is hereby deleted and replaced with "accesses the in-flight url".

16. **ADVERTISEMENTS.** The phrase "the following advertising models" in the first sentence of Section 3.2.1 of Exhibit I to the Unified Agreement is hereby deleted and replaced with "advertising models including but not limited to the following".

17. **PROMOTIONS/SPONSORSHIP.** Section 3.3. of Exhibit I to the Unified Agreement is hereby deleted in its entirety and replaced with the following:

> "3.3 **Promotions/Sponsorship**
>
> Promotions and Sponsorships are limited duration offers such as free or reduced rate Internet access. American may offer promotions based on time period, routes, specific audiences, flight segments, applications or other factors. Joint Sponsorships suggested by either Party will be considered by American and subject to regulatory requirements. Promotional price changes may be addressed via promotion codes, Portal changes or any other methods as the Parties agree. Gogo will provide American promotion codes as set forth in **Exhibit W**. American can then utilize such promotion codes/numbers for offering its promotions or discounts to its customers. American reserves all rights to change and/or modify the elements regarding promotions and Sponsorships."

18. **BRANDING, SPLASH PAGE AND PURCHASE PATH PAGES.** The following is hereby added as the final sentence of Section 3.4 of Exhibit I to the Unified Agreement:

> "During Phase 2, Sections 2.2.2, 2.2.3, 2.2.4, 2.4 and 2.5.4 shall apply at American's direction."

19. **EXHIBIT M.** Exhibit M to the Unified Agreement is hereby deleted in its entirety and replaced with the IFC exhibit for application functionality and associated services across the SSOCP attached as Exhibit M to this Amendment.

20. **EXHIBIT V.** Exhibit V to the Unified Agreement is hereby deleted in its entirety and replaced with the Proprietary Rights and Data Security Exhibit attached as Exhibit V to this Amendment.

21. **EXHIBIT W.** The SSOCP exhibit for the Development, Hosting and Maintenance of the SSOCP attached as Exhibit W to this Amendment is hereby attached to the Unified Agreement as Exhibit W thereto.

22. **EXHIBIT X.** The exhibit for Portal and SSOCP Change Control Procedures attached as Exhibit X to this Amendment is hereby attached to the Unified Agreement as Exhibit X thereto.

23. **CUSTOMER CARE SESSIONS.** It is the intent of the Parties that the customer care requirements provided in Attachment 1 to Exhibit M to this Amendment, Attachment 1 to Exhibit W to this Amendment, and the customer care process document, include the following principles relating to customer care refunds and promotion codes issued to customers due to poor Wi-Fi experiences (it being understood that the issuance of any such refund or promotion code will be determined based upon the applicable policies procedures that are to be agreed pursuant to the terms of Exhibits M and W):

    a. [***];

    b. [***]; and

    c. [***].

The Parties shall work in good faith to make any adjustments or revisions to this Amendment or the applicable portions of the Unified Agreement as may be necessary in order to carry out the intent of the foregoing.

24. **FULL FORCE AND EFFECT.** Except as amended herein, the Unified Agreement shall remain in full force and effect.

25. **EXECUTION.**

    a. This Amendment may be executed in two or more counterparts, each of which shall be an original, and all of which, taken together, shall constitute one and the same Amendment.

    b. American and Gogo each represent and warrant to the other that the person executing this Amendment on its behalf is its duly authorized representative.

[Signature page follows]

IN WITNESS WHEREOF, the Parties have executed and delivered this Amendment as of the Amendment Effective Date.

AMERICAN AIRLINES, INC.		**GOGO LLC**	
By:	/s/ Kevin Brickner	By:	/s/ Dave Bijur
Name:	Kevin Brickner	Name:	Dave Bijur
Title:	SVP – Tech Ops	Title:	SVP, Sales and Account Management

Signature Page to Amendment No. 7 to Unified Agreement

<u>Exhibit M</u>

Subscriptions and Single Sign-on Common Portal

1. Definitions

1.1 "**Application Programming Interface**" or "**API**" shall mean the interface by which applications and services receive data across different platforms.

1.2 "**Application Service Provider**" or "**ASP**" shall mean an enterprise that develops hosts and maintains application functionality and associated services. In the context of this Agreement, ASP is a party that has been contracted by American to centrally manage Promotion Codes and American branded Subscriptions.

1.3 "**IFC Provider**" means any of American's then-current in-flight connectivity providers.

1.4 "**Promotion Codes**" shall mean vouchers issued by American to its customers which discount the price of connectivity products.

1.5 "**Purchase Path**" shall mean a web page or series of web pages through which a customer can purchase connectivity products.

1.6 [***]

1.7 "**Subscription**" shall mean the product that enables customers to access in-flight connectivity products without the need to process a purchase transaction before each use. Payment for Subscription products is charged on a recurring basis to a customer's credit card stored by American (or American's designated third party).

1.8 "**Subscription Migration**" shall mean the process by which Gogo subscriptions are moved to the American branded Wi-Fi Subscription product.

2. General

2.1 [***].

2.2 [***].

2.3 The Parties understand that the business and technical requirements associated with the SSOCP are subject to change. This **<u>Exhibit M</u>** is a high level definition of the functionality to be delivered as part of the SSOCP. Accordingly, the Parties understand that the requirements documents and other references included herein are valid as of the Amendment Effective Date. Such requirements documents and other references shall be updated as necessary, in accordance with the version management and change management process.

3. Baseline Service Applications and Functionalities

3.1 Gogo's role in the SSOCP Phase 1 Program shall be to update the Portal and back end systems using the technical documents provided by American or the ASP and as set forth in Attachment 1 to this **Exhibit M**.

3.2 Gogo shall provide the following baseline services and functionalities related to [***]:

3.2.1 [***]

3.2.2 [***]

3.2.3 [***]

3.2.4 [***]

3.3 Gogo shall provide the following baseline services and functionalities related to [***]:

3.3.1 [***]

3.3.2 [***]

3.3.3 [***]

3.4 Gogo shall provide the following baseline services and functionalities related to Subscriptions:

3.4.1 [***]

3.4.1.1 [***]

3.4.1.2 [***]

3.4.1.3 [***]

3.5 Gogo shall provide support and functionality to configure new products at American's direction.

3.6 Gogo shall provide IFC Provider data feeds to American in accordance with the [***] Phase 1 IFC Provider data feed requirements.

3.7 Gogo shall provide IFC Provider reports to American in accordance with Attachment 1 to this **Exhibit M**.

3.8 Gogo shall modify customer care procedures as needed to address customer questions and issues in accordance with the customer care process document.

4. Portal Design

Gogo shall implement American's approved designs and customer messaging for the Portal as set forth in the Zeplin application and copy deck.

Attachment 1 to Exhibit M

1. **Advertising:** With respect to advertising, Gogo shall:

1.1 [***]

1.2 [***]

1.3 [***]

1.4 [***]

1.5 [***]

1.6 [***]

1.7 [***]

1.8 [***]

1.8.1 [***]

1.8.2 [***]

1.8.3 [***]

2. **Ground Portal Business Continuation and Resumption:** With respect to ground portal business continuation and resumption, Gogo shall:

2.1 Notify all impacted parties (e.g., American, ASP) [***] before all scheduled maintenance, which can be implemented in an alternating fashion, one data center at a time. Gogo will notify American as soon as a maintenance notification is made available by a third party in such events;

2.2 Work with all required parties to develop an escalation and notification process to address outages; and

2.3 Share plans for disaster recovery and business resumption with American upon request.

3. **Bypass Mode:** With respect to bypass mode, Gogo shall:

3.1 [***]

3.2 [***]

3.3 [***]

3.4 [***]

3.5 [***]

3.6 [***]

3.7 [***]

3.8 [***]

3.8.1 [***]

3.8.2 [***]

3.8.3 [***]

3.8.4 [***]

3.8.5 [***]

3.8.6 [***]

3.8.7 [***]

3.8.8 [***]

3.8.9 [***]

3.9 [***]

4. **Customer Care**: With respect to customer care, Gogo shall:

4.1 Provide customer care reports to include the following:

4.1.1 [***]

4.1.2 [***]

4.1.3 [***]

4.1.4 [***]

4.1.5 [***]

4.1.6 [***]

4.1.7 [***]

4.1.7.1 [***]

4.1.7.2 [***]

4.1.8 [***]

4.1.9 [***]

4.1.10 [***]

4.2 [***]

4.3 [***]

4.4 [***]

4.5 [***]

4.5.1 [***]

4.5.2 [***]

4.5.3 [***]

4.6 [***]

4.7 [***]

4.8 [***]

4.9 [***]

4.10 [***]

4.10.1 [***]

4.10.2 [***]

4.10.3 [***]

4.10.4 [***]

4.11 [***]

4.12 [***]

4.13 [***]

4.14 [***]

4.14.1 [***]

4.14.2 [***]

4.15 [***]

4.16 [***]

5. **Implementation**: With respect to implementation, Gogo shall:

5.1 [***]

5.2 [***]

5.3 [***]

5.4 [***]

5.5 [***]

5.6 [***]

5.7 [***]

6. **Operations**: With respect to operations, Gogo shall:

6.1 [***]

6.2 [***]

6.3 [***]

7. **Portal Pages**: With respect to Portal pages, Gogo shall:

7.1 [***]

7.2 [***]

7.3 [***]

7.4 [***]

7.5 [***]

7.6 [***]

7.7 [***]

7.8 [***]

7.9 [***]

7.10 [***]

7.11 [***]

7.12 [***]

7.13 [***]

7.14 [***]

7.15 [***]

7.16 [***]

7.17 [***]

7.18 [***]

7.19 [***]

7.20 [***]

7.21 [***]

7.22 [***]

7.23 [***]

7.24 [***]

7.25 [***]

7.26 [***]

7.27 [***]

7.28 [***]

7.29 [***]

7.29.1 [***]

7.29.2 [***]

7.30 [***]

7.31 [***]

7.31.1 [***]

7.31.2 [***]

7.32 [***]

7.32.1 [***]

7.32.2 [***]

7.32.3 [***]

7.33 [***]

7.34 [***]

7.35 [***]

7.36 [***]

7.37 [***]

7.38 [***]

7.39 [***]

7.39.1 [***]

7.39.2 [***]

Exhibit M Attachment 1-3

7.39.3 [***]

7.40 [***]

7.41 [***]

8. **Program Management**: With respect to program management, Gogo shall:

8.1 [***]

8.2 [***]

8.2.1 [***]

8.2.2 [***]

8.2.3 [***]

8.2.4 [***]

8.2.5 [***]

8.2.6 [***]

8.2.7 [***]

8.3 [***]

8.4 [***]

8.5 [***]

8.6 [***]

8.7 [***]

9. **Promotion Codes**: With respect to Promotion Codes, Gogo shall:

9.1 [***]

9.2 [***]

9.3 [***]

9.4 [***]

10. **Refunds**: With respect to refunds, Gogo shall:

10.1 [***]

10.2 [***]

10.2.1 [***]

10.2.2 [***]

10.2.3 [***]

10.3 [***]

10.4 [***]

10.5 [***]

10.6 [***]

11. **Roaming Support**: With respect to roaming support, Gogo shall:

11.1 [***]

11.2 [***]

11.3 [***]

11.4 [***]

12. **Single-Use Passes**: With respect to single-use passes, Gogo shall:

12.1 [***]

12.2 [***]

12.3 [***]

12.4 [***]

12.5 [***]

12.6 [***]

12.6.1 [***]

12.6.2 [***]

12.6.3 [***]

12.6.4 [***]

12.6.5 [***]

12.7 [***]

12.7.1 [***]

12.7.2 [***]

12.7.3 [***]

12.7.3.1 [***]

12.7.3.2 [***]

12.7.3.3 [***]

12.7.3.4 [***]

12.7.3.5 [***]

12.7.3.6 [***]

12.7.4 [***]

12.7.5 [***]

12.7.6 [***]

12.7.7 [***]

12.7.8 [***]

12.8 [***]

13. Sponsorships and Promotions: With respect to sponsorships and promotions, Gogo shall:

13.1 [***]

13.2 [***]

13.3 [***]

13.4 [***]

13.5 [***]

13.5.1 [***]

13.5.2 [***]

13.5.3 [***]

13.5.4 [***]

13.5.5 [***]

13.5.6 [***]

13.5.7 [***]

13.6 [***]

14. System Requirements: Gogo's system shall [***].

15. Testing: With respect to testing, Gogo shall:

15.1 [***]

15.2 [***]

15.3 [***]

15.4 [***]

15.5 [***]

15.5.1 [***]

15.5.2 [***]

15.5.3 [***]n;

15.6 [***]

15.7 [***]

Exhibit M Attachment 1-5

16. **Web Analytics**: With respect to sponsorships and promotions, Gogo shall:

16.1 [***]

16.1.1 [***]

16.1.2 [***]

16.1.3 [***]

16.2 [***]

16.2.1 [***]

16.2.2 [***]

16.2.3 [***]

16.2.4 [***]

16.2.5 [***]

16.2.6 [***]

16.2.7 [***]

16.2.8 [***]

16.2.9 [***]

16.2.10 [***]

16.2.11 [***]

16.3 [***]

16.4 [***]

16.4.1 [***]

16.4.2 [***]

16.4.3 [***]

16.4.4 [***]

16.4.5 [***]

16.5 [***]

16.5.1 [***]

16.5.2 [***]

16.5.3 [***]

16.5.4 [***]

16.5.5 [***]

16.5.6 [***]

16.5.7 [***]

16.6 [***]

16.6.1 [***]

16.6.2 [***]

16.7 [***]

16.7.1 [***]

16.7.2 [***]

16.7.3 [***]

16.7.4 [***]

16.7.5 [***]

16.7.6 [***]

16.7.7 [***]

16.7.8 [***]

16.7.9 [***]

16.7.10 [***]

16.7.11 [***]

16.8 [***]

16.9 [***]

16.9.1 [***]

16.9.2 [***]

16.9.3 [***]

16.9.4 [***]

16.9.5 [***]

16.9.6 [***]

16.9.7 [***]

16.10 [***]

Exhibit V:
Proprietary Rights and Data Security Exhibit

[***]

Attachment A
Data Security for American Data

[***]

Schedule 1 to Exhibit

[***]

Schedule 2 to Exhibit

[***]

Attachment B
Data Security for Gogo Data

[***]

<u>Exhibit W</u>

Development, Hosting and Maintenance of the SSOCP

This Exhibit W sets forth the responsibilities of Gogo and American with respect to the development, hosting and maintenance of the SSOCP (as defined below). Capitalized terms not defined herein shall have their meanings as set forth in the Unified Agreement.

This Exhibit W has the following structure:

1. Project Overview & Commercial Arrangement

2. Roles & Responsibilities

3. Project Administration

4. Change Management

5. Timeline, Testing & Implementation

6. Support, Maintenance & Service Level Agreements

7. Additional Terms

There are five attachments to this Exhibit W:

1. Specifications

2. Scope of Services

3. SSOCP Timeline/Milestones

4. Acceptance Process

5. Source Code Components

1. Project Overview & Commercial Arrangement

1.1 <u>Overview</u>. [***]

1.2 <u>Commercial Arrangements</u>.

1.2.1 *Performed Services.* Upon execution of this Exhibit W, Gogo may invoice and American shall pay [***].

1.2.2 *MVP Development*. The Parties agree that the MVP deliverables shall be produced by Gogo for [***]. Such deliverables must be free of Severity 1 and 2 defects as set forth in Section 6 of this Exhibit W. Such fee shall be invoiced following the demonstration and acceptance (in accordance with the acceptance criteria set forth in Attachment 4 herein) of the MVP following execution of this Exhibit W, unless entry into production service of the MVP has not occurred by January 21, 2020 and such delay is not a direct result of Gogo’s failure to perform in accordance with this Exhibit W following acceptance of the MVP, in which case such amount may be invoiced on January 21, 2020. However, if such delay is due to Gogo’s failure to perform in accordance with this Exhibit W, such fee will not be invoiced until Gogo cures such failure to American’s reasonable satisfaction.

1.2.3 *Change Requests*. The Parties agree that any Change Requests entered by the Parties following August 1, 2019 will be subject to the payment terms set forth in such Change Request.

1.2.4 *Post-MVP Development*. The Parties agree that Post-MVP deliverables shall be produced by Gogo for a fee of [***]. Such deliverables shall be free of Severity 1 and 2 defects as set forth in Section 6 of this Exhibit W.

1.2.5 *Annual Hosting, Operation and Maintenance*. The Parties agree that, for the duration of the Exhibit W Term, American shall pay Gogo [***][***].

1.2.6 *Payment Terms*. Payments by American under this Exhibit W shall be in accordance with Section 13.1 of the Unified Agreement.

1.2.7 *Initial SSOCP Exhibit Term*. The initial term of this Exhibit W shall commence on the Amendment Effective Date and continue until the third anniversary of the Amendment Effective Date (the "**Initial SSOCP Exhibit Term**"), unless this Exhibit W is terminated as provided herein or in the Unified Agreement or the term is extended as provided in Section 1.2.7 in which case the term shall end on the effective date of such termination or the date to which this Exhibit W is extended (collectively, the "**SSOCP Exhibit Term**").

1.2.8 *Extension*. This Exhibit W will automatically renew annually on the then-current terms and conditions of this Exhibit W (including no increase in the charges other than such increases as are expressly permitted by the terms of this Exhibit W) for up to two (2) successive one (1) year periods (each, a "**Renewal SSOCP Exhibit Term**") unless American provides written notice of nonrenewal no less than thirty (30) calendar days prior to the expiration of the Initial SSOCP Exhibit Term or a Renewal SSOCP Exhibit Term, as applicable.

1.3 Exhibit W Structure. This Exhibit W is hereby made a part of and incorporated into the Unified Agreement, which shall govern Gogo's provision of the SSOCP as part of the Gogo Services except as explicitly set forth herein. In the case of any conflict or inconsistency between the terms and conditions of this Exhibit W and those of the Unified Agreement, the terms and conditions of this Exhibit W shall prevail. The SSOCP and services provided under this Exhibit W shall be deemed to be "Software" and a component of the "Gogo Services" under the Unified Agreement, without regard to any requirements or conditions relating to the aircraft from which the SSOCP or such services may be accessed or to which the SSOCP or such services may relate, except to the extent the context requires otherwise. For the avoidance of doubt, the interaction and interoperability of the SSOCP and the IFC systems of IFC Providers is an essential purpose of the SSOCP and the Project, and it is the Parties' intent that such purpose be a fundamental consideration in the determination of the existence and resolution of any such conflict or inconsistency.

2. Roles & Responsibilities

2.1 Cooperation. American will use commercially reasonable efforts to cause cooperation from its IFC Providers, to the extent required in order for Gogo to accomplish the tasks outlined in Attachment 2 on the schedule outlined in Attachment 3. Gogo shall cooperate with American and the IFC Providers to accomplish the tasks outlined in Attachment 2 on the schedule outlined in Attachment 3. The Parties understand that any failure with respect to such cooperation may lead to program delays. Gogo shall have no liability associated with, and shall not be responsible for, program delays that directly result from such lack of cooperation; provided that Gogo (a) provides prompt notice to American with respect to any lack of cooperation that limits Gogo's ability to perform its obligations hereunder and (b) uses commercially reasonable efforts to continue to perform those obligations it is able to perform in the absence of such cooperation. If American or an IFC Provider fails to cooperate with Gogo, which precludes Gogo's ability to accomplish the tasks outlined in Attachment 2 in accordance with the schedule outlined in Attachment 3, the Parties shall cooperate in good faith to make modifications to the scope of work, schedule, and acceptance criteria. In the event that American engages an IFC Provider that was not an existing IFC Provider as of the Amendment Effective Date, Gogo shall cooperate with American as required to integrate such IFC Provider into the SSOCP functionality, and any changes required in connection with such integration shall be subject to the change control procedures set forth in Exhibit X.

2.2 Gogo Responsibilities.

2.2.1 Gogo shall develop design plans for, and execute the implementation of, the SSOCP in accordance with the specifications as identified in Attachment 1 hereto (which specifications shall be deemed to be "Specifications" under the Unified Agreement applicable to the SSOCP), the Scope of Services identified in Attachment 2 hereto, and the applicable timeline and milestones identified in Attachment 3 hereto. In the event of a conflict between the Specifications identified in Attachment 1 and the Scope of Services identified in Attachment 2, the Specifications identified in Attachment 1 shall control and prevail.

2.2.2 Gogo shall perform the services and responsibilities set forth in the Scope of Services identified in Attachment 2 hereto.

2.2.3 In connection with the SSOCP development efforts, Gogo will perform integration and testing of the SSOCP consistent with the mutually agreed timelines, including fully testing the SSOCP with each Party's and the other IFC Provider's relevant systems, products, and services, in each case in connection with the MVP rollout and assuming that each other IFC Provider provides such cooperation, support, and resources to Gogo as may be reasonably required to accomplish the foregoing tasks.

2.2.4 Gogo shall coordinate and execute an email campaign for customers with active subscriptions prior to the launch of SSOCP to assist with the migration to an American subscription product. The plans for the program, as well as the contents of all customer communications, shall be subject to American's prior approval. Assistance with migration campaigns for other IFC Providers is outside the scope of this Exhibit W.

3. Project Administration.

3.1 Consents, Subject Matter Experience. Each Party will (a) provide the other Party with access to subject matter resources and personnel having suitable knowledge and expertise to perform their respective project roles, (b) timely respond to the other Party's requests for information, approvals and decisions, and (c) shall obtain all necessary consents and licenses from third parties for information, materials, hardware, or software which is to be provided by such Party or on behalf of such Party. American will use commercially reasonable efforts to facilitate access to IFC Providers' subject matter resources and information as reasonably required by Gogo in connection with the Project. Gogo shall provide sufficient Project management staff to support its contractual obligations.

3.2 Meetings. Upon American's reasonable request, Gogo agrees to participate in those meetings with American and other IFC Providers of which Gogo is given reasonable advance notice, at no additional charge to American. Such meetings may be conducted face-to-face at American's headquarters or, at American's discretion, by teleconference. Gogo will attend such meetings with the appropriate personnel. Unless otherwise required by American, Project reviews will be held at least every week during the design, development and implementation of the SSOCP. Appropriate Gogo and American executives will meet to review the Project on a bi-weekly basis until entry into production service, and periodically thereafter at American's reasonable discretion.

3.3 Reports. The Parties will provide Project reports to one another on no less than a weekly basis to keep one another informed of the status of the Project. The Parties will mutually agree on the information to be included in, and the format of, the Project reports. As of the Amendment Effective Date, Gogo shall provide a weekly report on the status of the Project, and a bi-weekly executive summary of the general direction and overall status of the Project, in each case subject to agreement on the content and method of presentation therein. American and Provider will work together in good faith to define additional reports to be provided to one another as the SSOCP and relationship between the Parties evolves in connection with the Project.

4. Change Management

4.1 Discretionary Changes. At its discretion, American may request changes to the SSOCP. Such changes are governed by the change control procedures outlined in Exhibit X.

4.2 Mandatory Changes. In the event a change to the SSOCP or the Specifications identified in Attachment 1 is required in order to ensure conformance with any applicable law or regulation (a "**Mandatory Change**"), either Gogo or American will promptly advise the other Party of the same. Gogo will identify the consequences of failing to implement such a Mandatory Change. Upon receipt of American's approval of Gogo's proposal to execute the Mandatory Change, which shall not be unreasonably withheld, conditioned or delayed, and completion of any testing required, Gogo will promptly make the Mandatory Changes and complete all requisite work. Following approval by American of the Mandatory Change and all pre-production testing required, the applicable Specifications shall be construed as incorporating the Mandatory Change. The costs and expenses associated with such Mandatory Change shall be allocated equitably to each of Gogo's customers for which such Mandatory Change applies. Gogo shall be responsible for all costs and expenses (a) up to [***]for each Mandatory Change related to the Specifications, (b) for any Mandatory Change not related to the Specifications and (c) for any Mandatory Change that arises out of Gogo's negligence or other act or omission. For any Mandatory Change related to the Specifications that do not arise out of Gogo's negligence or other act or omission that Gogo estimates will cost (including fees and expenses) in excess of [***], Gogo shall be responsible for the [***]of costs and expenses and the Parties shall discuss in good faith an appropriate allocation of the remaining costs and expenses between the Parties. The resolution of such discussion will be subject to a Change Request. If the Parties are unable to reach agreement regarding implementation of the Mandatory Change, American may terminate this Exhibit W without liability to Gogo by providing Gogo with thirty (30) calendar days prior written notice.

5. Timeline

American and Gogo will participate in building the overall Project schedule, as found in Attachment 3, and will work together to adhere to the schedule. American will coordinate efforts and contributions among the IFC Providers. The Parties agree and understand that alterations to the Specifications, through Change Requests or other mechanisms, may lead to delays to the Project schedule.

6. Support, Maintenance & Service Level Agreements

6.1 Reporting. All service level agreements ("**SLA**") and service credits ("**SC**") will be measured and reconciled monthly. Gogo shall provide by the twenty-first (21st) day of every month a report containing all information required to evaluate Gogo's performance with respect to any SLA, including a reconciliation of all SLAs pertaining to the immediately-preceding month; provided that Gogo shall provide daily reporting with respect to SSOCP Availability.

6.2 Maintenance and Support. During the Exhibit W Term, Gogo shall perform maintenance to the SSOCP to ensure its continued function in accordance with the Specifications, including as necessary to correct bugs, errors and defects consistent with the relevant problem response Priority Level designations assigned below. For purposes of the table below, "**Resolution**" means that a defect is corrected or a Workaround is implemented. "**Workaround**" means a temporary solution to a defect that (a) is approved by American, (b) provides substantially similar functionality as would be experienced as if such defect were corrected, and (c) causes no material burden for American while such Workaround is in place. Upon implementation of a Resolution in the form of a Workaround in response to a Critical or Major defect, (i) any SC accruing in accordance with such defect's original severity level shall cease, (ii) the severity level for such defect shall be deemed to be downgraded to the next severity level (i.e., a Critical defect will be downgraded to Major or a Major defect will be downgraded to Minor), and (iii) Gogo shall correct such defect within the Resolution time set forth in the table below or be subject to the SC set forth in the table below, in each case pursuant to such defect's downgraded severity level.

Priority Level	Description	Resolution Time	SC per extra day of delay beyond Resolution Time
Critical (1)	SSOCP not available for proper operational use. These are: [***]	[***]	[***]
Major (2)	Business operations impacted. These are: [***]	[***]	[***]
Minor (3)	Minor problem that does not cause a disruption to SSOCP. These are: [***]	[***]	[***]

6.3 Technical Support Response. Gogo shall notify American upon identification of a defect and shall track all such defects in a log. Upon being notified of a Critical, Major or Minor problem, Gogo will troubleshoot American's issue for a reasonable period of time, in any event not less than thirty (30) minutes to determine root cause of any underlying issues. If the issue is the result of a Gogo defect, Gogo will provide engineering and technical support to American or a third party free of charge and correct such defect in accordance with the response times in the grid above. If the issue is a result of any other party's defect, Gogo will provide reasonable engineering and technical support to American or a third party on a prioritized basis, with American's prior approval, at a cost of [***] (it being understood that the Parties intend "prioritized basis" to mean that the American incidents to which the foregoing fee will apply will immediately be placed in the first position in Gogo's queue of engineering and technical support customer incidents, and that resources will be applied thereto on a preferential basis to incidents submitted by other Gogo customers). Gogo may provide such engineering and technical support without American's prior approval up to the number of hours equivalent to (a) [***] in fees for Critical incidents; (b) [***] in fees for Major incidents; or (c) [***]in fees for Minor incidents (collectively, the "**Priority Support Cap**"). In the event that the cost of such support is expected to exceed the Priority Support Cap, Gogo (i) shall provide to American as soon as reasonably practicable an estimate of the fees that will be required to resolve any such incident, (ii) shall not incur additional support hours absent American's approval, and (iii) shall not exceed such estimate without first obtaining an updated approval from American for such excess. Gogo's support will encompass network, infrastructure and application-level support for the full scope of MVP (excluding network components or other elements that are part of any other Party's IFEC technology).

6.4 Service Level Agreement.

6.4.1 *SSOCP Availability*. The SSOCP Availability metric represents the core functionality and components, including but not limited to network, infrastructure, applications, data storage, security and privacy standards supporting all functionality included in MVP and agreed upon Change Requests (excluding elements that are part of any connectivity (IFC) technology or in-cabin network). For purposes of calculating SSOCP Availability, Gogo shall measure two separate metrics and average the two (2) numbers without weighting either metric, as follows:

6.4.1.2 [***]

6.4.1.3 [***]

6.4.2 Gogo will make the Services available to American no less than [***] of the time in any given calendar month (the "**Availability Service Level**"). [***] "**SSOCP Availability**" for any given calendar month shall be calculated by subtracting downtime caused by Unscheduled Outages from the total number of minutes in such month. An "**Unscheduled Outage**" means any time other than downtime due to Excluded Causes during which the Services are unavailable with no mutually acceptable workaround, irrespective of the manner in which such outage is detected.

6.4.3 *Excluded Causes*. The following are excluded when calculating SSOCP Availability: (a) scheduled maintenance windows when Gogo conducts normal maintenance to the extent that Gogo provides American with at least forty-eight (48) hours' prior written notice, or (b) outages that would not have occurred but for the actions, inactions or omissions of American, its other IFC Providers, or either of their affiliates, subcontractors, agents, or employees (collectively, the "**Excluded Causes**").

6.4.4 *Service Level Reports.* Gogo shall provide to American a monthly report which shows the actual service levels delivered compared to the monthly service levels outlined in this Section 6.4. In the event American reasonably believes that there is a discrepancy in the report provided, American may reasonably audit raw service level performance data from Gogo up to the prior one hundred eighty (180) days from the date of such request. If requested by American, Gogo shall support either onsite or a virtual audit of raw service level performance data in addition to providing what is normally contained in the monthly report in order to support and validate the levels of service reported to American in the monthly report.

6.4.5 *SSOCP Availability Service Credits*. Gogo shall provide to American the SSOCP Availability Service Credits set forth in the following table.

SSOCP Availability	**SC**	**SC - Annual Cap**
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]

6.4.6 *API Response Time*. This metric is defined as the response time for the Gogo subscription purchase API. API response time is to measure only Gogo's portion of API processing and excludes AAdvantage and RiM API response times when reporting subscription purchase API response time. Gogo will provide the API response times set forth in the table below.

Response Time	**Compliance %**	**SC criteria**	**SC (Monthly)**	**SC - Annual Cap**
< 1 sec	[***]	[***]	[***]	[***]
< 3 sec	[***]	[***]	[***]	[***]

6.4.7 *Data Feeds*. Gogo will provide the data feeds by 12 p.m. central time each day regarding the prior day's transactions. In the event that a data feed is delivered after 12 p.m. central time, Gogo shall provide to American an SC of [***]for such late delivery and an additional SC of [***]for each subsequent [***]of delay until such data feed is delivered; provided that Gogo is permitted one (1) late data feed of up to [***]of delay per calendar month without owing such SC.

6.5 Service Credits. In the event Gogo fails to meet the monthly service levels for defect resolution, SSOCP Availability, API response time, or data feeds, Gogo will provide American with the SCs as set forth in Sections 6.2 and 6.4 up to an aggregate cap of [***]. American, in its sole discretion, may apply SCs against any payments owed to Gogo by American under any agreement between the Parties. If upon termination or expiration of this Exhibit W there are no payments owed to Gogo by American, then Gogo shall pay American the amount for all remaining SCs within [***]following such termination or expiration.

6.6 Termination. In addition to any other termination rights set forth in the Unified Agreement, American may terminate this Exhibit W upon written notice to Gogo if: (a) SSOCP Availability is less than [***]; (b) Gogo fails to meet any service level in [***]; or (c) Gogo fails to meet any service level in [***]. In the event that American terminates this Exhibit W in accordance with this Section 6.6: [***].

7. Additional Terms

7.1 Warranty. Gogo warrants that, during the Exhibit W Term, the SSOCP shall function in accordance with the Specifications in all material respects. In the event that the SSOCP does not function in accordance with the Specifications, Gogo shall correct any such non-conformance as soon as practical but in no event later than thirty (30) calendar days after Gogo is notified of or becomes aware of such non-conformance.

7.2 Intellectual Property.

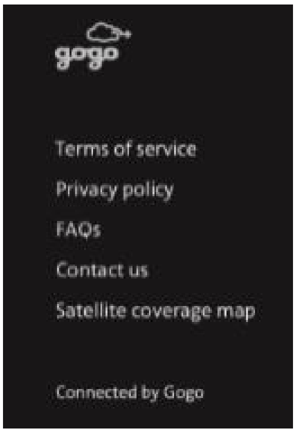
7.2.1 Except as otherwise set forth in this Section 7.2, all intellectual property developed by Gogo under this Exhibit W in connection with the development of the SSOCP (the "**SSOCP IP**") shall be owned by Gogo, it being understood that this shall not apply with respect to American Data or American Confidential Information (which, including all derivatives thereof, shall be owned exclusively by American).

7.2.2 Gogo covenants and agrees to take no action, directly or indirectly, to file or to cause to be filed any suit or institute or assist in instituting any proceeding in any court or tribunal, wherever located, against American or its affiliates, or any service provider solely to the extent of their provision of services to American or its affiliates, for any claims or causes of action relating to the infringement of any patents or similar exclusionary intellectual property or proprietary rights that Gogo has obtained in the SSOCP IP, which Gogo has, had, may have or hereafter might have, known or unknown, contingent or absolute, matured or unmatured, direct or indirect, past, present or future, now existing or which might arise or accrue hereafter.

7.2.3 [***] The foregoing exclusivity will not apply to [***], and Gogo may provide each such airline with functionality that is substantially similar to the functionality provided under this Unified Agreement. Gogo acknowledges that, if it breaches (or attempts or threatens to breach) this Section 7.2.3, American may be irreparably harmed. Gogo agrees that, in addition to any other remedy to which American may be entitled at law or in equity, American shall be entitled to seek an injunction or injunctions (without the posting of any bond) to prevent breaches or threatened breaches of this Section 7.2.3 and/or to compel specific performance of this Section 7.2.3. Gogo agrees that it will not raise, and does hereby expressly waive, any defense or claim that monetary damages would provide an adequate remedy for a breach or threatened breach of this Section 7.2.3.

7.2.4 [***] No such items shall be deemed to be Gogo Technology. All such items shall be provided by Gogo to American on a periodic basis, and upon any reasonable request by American.

Example 1



7.2.5 Once complete, Gogo will provide to American the source code for the API components set forth in Attachment 5. Such source code will be treated as Gogo's Confidential Information (subject to the license rights granted herein). Gogo shall be deemed to, and hereby does, grant American a worldwide, perpetual, irrevocable, non-exclusive, fully paid-up and royalty-free license to use such source code, in whole or in part, in connection with American's then-current and future internal business purposes.

7.2.6 For the avoidance of doubt, all Documentation, requirements documents, compliance matrices, and other similar materials relating to the SSOCP shall be (i) owned by American (other than any Gogo responses thereto, e.g., Gogo's responses to the Compliance Matrix), and (ii) nothing in this Exhibit W shall be deemed to prevent American's use of such materials in connection with the development of solutions similar to the SSOCP either internally or with the other third party service providers.

7.2.7 If Gogo becomes a debtor under any section or chapter of the United States Bankruptcy Code (the "**Bankruptcy Code**") and rejects the Unified Agreement pursuant to Section 365 of the Bankruptcy Code (a "**Bankruptcy Rejection**"), (a) any and all of the licensee and sublicensee rights of American arising under or otherwise set forth in this Exhibit W, shall be deemed fully retained by and vested in American as protected intellectual property rights under Section 365(n)(1)(B) of the Bankruptcy Code and further shall be deemed to exist immediately before the commencement of the bankruptcy case in which Gogo is the debtor; (b) American shall have all of the rights afforded to non-debtor licensees and sublicensees under Section 365(n) of the Bankruptcy Code; and (c) to the extent any rights of American, or the rights of its Affiliates or such of American's third-party regional carriers as American may designate from time to time in its sole discretion, under this Exhibit W that arise after the termination or expiration of this Exhibit W are determined by a bankruptcy court to not be "intellectual property rights" for purposes of Section 365(n), all of such rights shall remain vested in and fully retained by American after any Bankruptcy Rejection as though this Exhibit W were terminated or expired. American shall under no circumstances be required to terminate this Exhibit W after a Bankruptcy Rejection to enjoy or acquire any of its rights under this Exhibit W.

7.3 Safeguarding Data.

7.3.1 Gogo shall establish and maintain reasonable contractual and technical safeguards that are designed to protect confidential and/or propriety information of the other IFC Providers from unauthorized access, use and/or disclosure by Gogo and/or its subcontractors throughout Gogo's performance of the services under this Exhibit W. Gogo shall be responsible, and liable to American pursuant to Section 7.4, for any such unauthorized use and/or disclosure as a result of (a) any failure by Gogo (or its subcontractors) to implement, maintain and/or comply with such safeguards, and/or (b) Gogo's (or its subcontractors') gross negligence, recklessness or willful misconduct (collectively, "**Gogo Indemnifiable Misuse**").

7.3.2 American shall undertake, and cause the other IFC Providers, to implement the necessary contractual and technical safeguards designed to restrict and protect all confidential and/or proprietary information of Gogo (including, but not limited to, any systems, products and services and performance information) from unauthorized access, use and/or disclosure by the other IFC Providers and/or third parties, and shall be responsible and liable to Gogo pursuant to Section 7.4, for any such unauthorized access, use and/or disclosure as a result of (a) any failure by American or such IFC Provider (or their subcontractors) to implement, maintain and/or comply with such safeguards, and/or (b) American's or such other IFC Providers' (or their subcontractors') gross negligence, recklessness or willful misconduct (collectively, "**Gogo Information Misuse**").

7.4 Indemnification.

7.4.1 In addition to Gogo's indemnification obligations set forth in Section 21.1 of the Unified Agreement, Gogo hereby indemnifies and agrees to defend and hold harmless the American Indemnified Parties from and against any and all third party claims, allegations, demands, actions, liabilities, damages, losses, expenses, suits, proceedings, assessments, fines, penalties and/or judgements (including without limitation all attorney's fees, costs and expenses in connection therewith) (collectively "**Claims**") arising out of or resulting from (a) any claim that the use by American of any deliverables or services provided and received under, and used in accordance with, this Exhibit W infringes or misappropriates any patent, copyright, trade secret, trademark or other proprietary or intellectual property right or (b) the unauthorized use or disclosure of any confidential and/or proprietary information of any IFC Provider as a result of any Gogo Indemnifiable Misuse with respect to such information.

7.4.2 In addition to American's indemnification obligations set forth in Section 21.2 of the Unified Agreement, American shall indemnify Gogo for any Claims arising out of or resulting from any unauthorized use or disclosure of any confidential and/or proprietary information of Gogo as a result of any Gogo Information Misuse with respect to such information.

7.5 Termination.

7.5.1 In addition to any other termination rights set forth in the Unified Agreement, American may, in its sole discretion, for convenience and with or without cause, terminate this Exhibit W, in whole or in part, upon [***] calendar days' prior written notice to Gogo.

7.5.2 American's right to terminate the Unified Agreement as set forth in Sections 18.5 and 18.6 of the Unified Agreement may be exercised by American specifically in application to this Exhibit W, rather than to the Unified Agreement as a whole.

7.6 Domain Name.

7.6.1 Upon American's request following the termination or expiration of this Exhibit W, at no charge to American, Gogo shall transfer and assign to American all right, title, interest and goodwill in or associated with the URL [***] (the "**Domain Name**") together with any unregistered or registered trademarks, service marks, copyrights directly related to the Domain Name. Additionally, Gogo shall execute any instruments that American reasonably requests that are required to effectuate or otherwise perfect the Domain Name transfer.

7.6.2 Gogo represents and warrants that, as of the Amendment Effective Date Gogo (a) has registered the Domain Name with GoDaddy.com, LLC without committing fraud or misrepresentations and (b) has the authority to transfer the Domain Name unencumbered.

7.6.3 In connection with such transfer, Gogo shall cooperate with American and perform such actions as American may reasonably require in order to effectuate the transfer of the Domain Name registration in a timely manner. Specifically, Gogo agrees to prepare to transmit the necessary GoDaddy.com, LLC registration deletion template and/or to correspond with GoDaddy.com, LLC to authorize transfer of the Domain Name.

7.7 Order of Precedence. In the event of a conflict between the terms and conditions included in the body of this Exhibit W and the terms and conditions included in any of the attachments hereto, the order of precedence shall be: (a) Exhibit W; (b) the attachments to Exhibit W, with the exception of Attachment 2 to Exhibit W, and (c) Attachment 2 to Exhibit W.

Attachment 1 to Exhibit W
Specifications

1. Definitions

1.1 "**Application Programming Interface**" or "**API**" shall mean the interface by which applications and services receive data across different platforms.

1.2 "**IFC Portal**" shall mean the user interface hosted by Gogo or the applicable IFC Provider which is accessed by customers in flight, in order to access various entertainment and connectivity products provided by Gogo or the IFC Provider.

2. General

2.1 [***].

2.2 [***].

2.3 [***].

2.4 The Parties understand that the business and technical requirements associated with the SSOCP are subject to change. This Attachment 1 to Exhibit W is a high level definition of the functionality to be delivered as part of the SSOCP. Accordingly, the Parties understand that the requirements documents and other references included herein are valid as of the date of this Unified Agreement. Such requirements, documents and other references shall be updated as necessary, in accordance with version management and the change management process described in Section 4 of Exhibit W.

3. Baseline Service Applications and Functionalities

3.1 Gogo shall provide the baseline services and functionalities related to Promotion Codes as set forth below:

3.1.1 [***]

3.1.2 [***]

3.1.3 [***]

3.1.4 [***]

3.1.5 [***]

3.1.6 [***]

3.1.7 [***]

3.2 Gogo shall provide the baseline services and functionalities related to in-flight connectivity Subscriptions as set forth below:

3.2.1 [***]

3.2.2 [***]

3.2.2.1 [***]

3.2.2.2 [***]

3.2.2.3 [***]

3.2.3 [***]

3.2.4 [***]

3.3 Gogo shall provide the baseline services and functionalities related to on the ground Subscriptions as set forth below:

3.3.1 [***]

3.3.2 [***]

3.3.3 [***]

3.3.3.1 [***]

3.3.3.2 [***]

3.3.4 [***]

3.3.5 [***]

3.3.6 [***]

3.4 Gogo shall provide the baseline services and functionalities related to Subscription renewals as set forth below:

3.4.1 [***]

3.4.2 [***]

3.4.3 [***]

3.4.4 [***]

3.5 Gogo shall provide data feeds to American in accordance with the SSOCP data feed requirements document.

3.6 Gogo shall provide reports to American in accordance with Attachment 2 to Exhibit W, Scope of Service.

3.7 Gogo shall modify customer care procedures as needed to address customer questions and issues related to American branded Subscriptions in accordance with the customer care process document.

4. On-The-Ground Purchase Portal Design

Gogo shall implement American's approved designs and customer messaging for the on-the-ground purchase portal as set forth in the Zeplin application and copy deck.

Attachment 2 to Exhibit W
Scope of Services

1. **Business Continuation and Resumption:** With respect to business continuation and resumption, Gogo shall:

   1.1 Protect and ensure data integrity by maintaining secondary instances of the relevant materials in its vendor's hosted environment such that in the event of a business interruption, Gogo can make commercially reasonable efforts to return to service by use of such secondary instances into production, provided that the vendor is able to transition services to a hosted environment that is not experiencing an interruption. Gogo will back-up data on a daily basis and seek to restore data lost during any interruption;

   1.2 Provide a process for real-time monitoring and reporting of (near real-time) availability to American its service and data center locations twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year;

   1.3 Work with all required parties to develop an escalation and notification process to address outages;

   1.4 Create and maintain a business continuity plan, including plans for disaster recovery and business resumption. This plan shall be reviewed with American upon request, and shall include, at a minimum, (a) a scheduled test activation of the plan at least once a year on an ongoing basis, the results of which shall be shared at a summary level with American, (b) coverage for the SSOCP and all supporting services and applications hosted by Gogo or any providers sub-contracted by Gogo, and (c) that Gogo's solution as it relates to SSOCP will at all times be an active/active solution;

   1.5 In the event of a disaster or other interruption in the SSOCP services, implement the business continuity plan in accordance with its terms and requirements, including the RTO and data integrity requirements; and

   1.6 Notify all impacted parties (e.g., American, IFC Provider, payment facilitator) forty-eight (48) hours before all scheduled maintenance, which can be implemented in an alternating fashion, one (1) data center at a time.

2. **Customer Care:** With respect to customer care, Gogo shall:

   2.1 Develop and maintain a twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year customer care center to address customer complaints and refunds and/or questions using American's guidance to create a standard script. Gogo shall track all issues in real-time that affect availability and/or performance. Specifically, the customer care center shall:

      2.1.1 Provide assistance in English, a 1-800 phone number and a U.S. toll number based in North America managed by trained representatives, live chat, FAQs, and an email address;

      2.1.2 Include a customer focused centralized desk to expedite call in specialty help areas and to handle all other issues (e.g., access, software/functionality, account management, hardware/connection device, billing);

      2.1.3 Support creation of tickets from inbound emails from customers, American, or the IFC Provider;

      2.1.4 Target "best practices" including call center answer times of eighty percent (80%) of the calls answered in thirty (30) seconds or less and emails responded to within sixteen (16) hours or less; and

2.1.5 Provide customer with contact information to American's Customer Relations when an issue is determined to be owned by American;

2.2 Collect aircraft-specific details (when available) from the IFC Provider for subscription purchases including unique identifier (email), tail number (Gogo tail only), flight number (Gogo tail only), city pairing (Gogo tail only), IFC products/technology (e.g., ATG, ATG4, 2Ku, Ku, Ka) (Gogo tail only), and collect customer-specific details for subscription purchases including AAdvantage number, order number, and transaction date;

2.3 Provide read-only access to all ticketing systems utilized for tracking problems, issues, and occurrences that affect availability and performance on a twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year basis via online BIA application;

2.4 Provide to American the following reports:

2.4.1 Customer care reports that include resolution item (i.e., successful versus deferred), resolution time, compensation description (i.e., Promotion Code or refund), detailed summary of the complaint, detailed summary of Gogo's response, number of chats by in-air or on-ground, chat time, customer data (first name, last name and email address), and problem description;

2.4.2 A daily detailed report of actual customer complaints and a summary report at the end of the month; and

2.4.3 A categorization summary of live chat complaints on a monthly basis;

2.5 Enable customer care tickets to be tagged with final resolution even in cases where resolution is outside of the Gogo's control so that American and Gogo can generate reports; and

2.6 Provide a complete production ready copy of user information (e.g., instructions, customer care and rates) for insertion into the in-flight magazine and/or seat back card for use at American's discretion.

3. Escalation and Troubleshooting: With respect to escalation and troubleshooting, Gogo shall work with American to define an escalation process to address Gogo's troubleshooting, identification of the problem, repair of the problem, estimation of time before normal services can resume, identification of when normal services have resumed, post mortem investigation, root cause analysis, and lessons learned implementation plan for future mitigation.

4. Implementation Phase: With respect to the implementation phase, Gogo shall provide American with a list of open defects, prioritized by severity, seven (7) calendar days prior to the program software freeze date and provide American and the IFC Provider the ability to interface with Gogo's staging and production environments.

5. Operations: With respect to operations, Gogo shall:

5.1 Work with American to propose a deployment strategy;

5.2 Notify all potentially affected customer care entities of rollouts, deployments, outages and other maintenance activities;

5.3 Ensure American has the ability to change pricing for subscription products without requiring a software change;

5.4 Work with the IFC Provider to define a change management process to ensure no impact to the service; and

5.5 Provide a single point of contact to review and address operational issues on a regular basis.

6. **Program Management:** With respect to program management, Gogo shall:

6.1 Provide dedicated program management and other support as needed with appropriate skillsets to support all phases throughout the life of the program including, but not limited to, requirements, design, development, integration, testing, implementation, and ongoing operational support;

6.2 Provide a list of planned resources in support of development for this effort as well as roles/responsibilities no later than ITCM and forecast future needs and work proactively to ensure resources are in place when needed; and

6.3 Provide dedicated resource(s), including a dedicated program manager, during the design, development and testing phases to document, track, and manage design requirements and test plans.

7. **Promotion Codes:** With respect to Promotion Codes, Gogo shall:

7.1 Centrally manage all Promotion Codes, using a manual process and ensure that all Promotion Codes can be validated across all IFC Providers and are validated and tracked at the time of redemption;

7.2 Provide for the generation of Promotion Codes with the following varieties:

7.2.1 $ off up to one hundred percent (100%);

7.2.2 % off up to one hundred percent (100%);

7.2.3 effective date, and

7.2.4 expiration date;

7.3 Support Promotion Codes with the following attributes:

7.3.1 identification code;

7.3.2 lot number for grouping (e.g., generated batch, campaign);

7.3.3 effective date;

7.3.4 value (e.g., $ off up to one hundred percent (100%) or % off up to one hundred percent (100%)); and

7.3.5 expiration date;

7.4 Restrict the redemption of Promotion Codes by the following parameters:

7.4.1 number of allowed redemptions;

7.4.2 effective date; and

7.4.3 expiration date;

7.5 Define types of Promotion Codes with any string of sixteen (16) characters or less (e.g., 1-3402320925);

7.6 Provide Promotion Code reporting on the following parameters:

7.6.1 creation date;

7.6.2 expiration date;

7.6.3 when redeemed;

7.6.4 where redeemed (e.g., flight number, IFC Provider); and

7.6.5 lot number; and

7.7 Uniquely assign a name to a batch.

8. **Purchase Path Pages and Process:** With respect to purchase path pages and process, Gogo shall:

8.1 Follow the Graphical Requirements Document (GRD) or American's approved design in the sketch file for the design of the purchase path pages and provide and implement an account login page, a payment page, and a confirmation page and that the pages display all applicable terms. A pre-filled copy deck should be sent for review and feedback after the design is finalized, ensuring American has one (1) month to review and provide feedback;

8.2 Incorporate industry standard practices of responsive web design (i.e., generally supported resolutions, aspect ratios) including access to live chat for customer support (specific layout and which customer care group are to be determined during design);

8.3 Have the ability to process subscription sales and refund customers for subscriptions;

8.4 Ensure pages display two email form fields, disable the autocomplete feature and require that the user type in the email twice (excluding when an email is pulled from AAdvantage) to ensure the correct email is confirmed as per the sketch file;

8.5 Support one (1) set of AAdvantage login credentials, which is a unique ID (email, AAdvantage number, or username), last name and password;

8.6 Receive and display pricing and guarantee that pricing changes are reflected on the pages and appear within a configurable time (monthly) as defined by American the Unified Agreement;

8.7 Support desktop and mobile operating systems and Internet browsers and/or operating systems with greater than or equal to seven percent (7%) market penetration in the US market based on industry standards, including, but not limited to, Internet Explorer, Microsoft Edge, Apple Safari, Mozilla Firefox, Google Chrome, Android, Apple iOS, MacOS, and Windows;

8.8 Display and support purchases via major credit cards and debit cards (run as credit cards) including, but not limited, Visa, MasterCard, Discover, AMEX, Diners Club and JCB and ensure all transactions are in U.S. Dollars;

8.9 Email a receipt to the customer, using the aa.com domain name once the subscription purchase, refund, and cancellation transactions have been completed;

8.10 Receive information (e.g., origin, and destination) from the IFC Provider and submit service invoices separate from the IFC Provider's invoice through IATA InvoiceWorks (details to be determined by American);

8.11 Validate the following credit card elements (at a minimum) prior to sending to the payment facilitator for processing; (a) bin number (i.e., the first six (6) digits identifying MasterCard, Visa, etc.) and (b) expiration date;

8.12 Ensure compliance with credit card industry standards (e.g., Payment Card Industry Data Security Standard) and any of the above listed credit card company guidelines; and

8.13 Display standardized error messaging on the purchase path pages including display appropriate messaging when certain functionality is unavailable including, but not limited to, requesting the customer to try again later.

9. **Refunds:** With respect to refunds, Gogo shall:

9.1 [***]

9.2 [***]

9.3 [***]

9.4 [***]

10. **Reporting:** With respect to reporting, Gogo shall:

10.1 Maintain all reporting, which will feed into American's Data Warehouse system and continue to work with American to ensure all reporting is reconciled against these SLAs and contractual agreements before submitting invoices for payment;

10.2 Ensure reporting includes new subscriptions, existing subscriptions, executive accounts, tester accounts, and Promotion Codes and that the data can be dissected by aircraft and fleet type, IFC products/technology, tail number, origin, destination, product type, time and day of flight, and purchase location (e.g., in air, on ground);

10.3 Provide American with itemized daily usage, marketing and sales data for subscriptions, including the following:

10.3.1 usage (click-through rates and page views);

10.3.2 sales (processed payments);

10.3.3 for purchases in the air include cancellations, volume, subscription and payment type, aircraft and fleet type, date, flight number, origin, and destination; and

10.3.4 for purchases on the ground include volume, subscription and payment type, date, redemptions, unique and total users, refunds, chargebacks, and renewals;

10.4 Report immediately via email in cases of unavailability of customer support systems (e.g., live chat) and issues affecting customer experience; and

10.5 Report on declined transactions (i.e., the inability to complete the purchase with the detailed reason) on a monthly basis at an aggregate level and deliver to American subscription revenue reports no later than forty-five (45) calendar days after close of the month.

11. Subscriptions: With respect to subscriptions, Gogo shall:

11.1 Support American subscriptions as defined in the initial product/pass list and be flexible to support future products which are an extension of existing products on a case-by-case basis. Monthly and annual subscription durations, auto-renewing subscriptions, and various pricing subscriptions (e.g., $0 for executive and tester accounts) shall be supported;

11.2 Ensure the ability to manage different types of subscriptions, including regular subscriptions (fee based and require auto renewals), executive subscriptions (free of charge and do not require auto renewal), tester subscriptions (free of charge and do not require auto renewal), one device and two device subscriptions;

11.3 Transition all existing executive and working team member accounts to AAdvantage accounts with a zero (0) dollar cost and no session cost charge to American. Any new account requests will be supported using the same process currently used for new account set-up, which requires American to supply new user email addresses to Gogo. Usage of the accounts will follow guidelines set forth in Section 10.7.4 of the Unified Agreement;

11.4 Collect and store a customer's subscription information including but not limited to, CUPID (email address of a customer is not stored but is pulled and displayed from the customer's AAdvantage account using the CUPID ID), date subscription was purchased, and subscription auto-renewal date;

11.5 Ensure a customer has an AAdvantage account in order to purchase a subscription product and utilize a stored payment on a customer's AAdvantage profile for auto-renew, both domestic only and domestic and international subscriptions may be automatically renewed;

11.6 Provide customers with a self-serve cancel option and selectable reasons to cancel a subscription (including do not use enough, bought wrong product, and technical problems). Ensure cancellation will affect the following billing cycle and on but will not affect the current billing cycle *(it is understood that this item 11.6 shall be delivered by Gogo as part of the Post-MVP Deliverables, but that all fees relating thereto are included within the fees payable for the MVP Deliverables, and no additional fees shall be due)*;

11.7 Track subscriptions purchased by source (on the ground / in the air) and provide subscription reporting on purchase date and type grouping/summaries and provide a summary of unique subscriptions validated/purchased by flight, IFC Provider, details of purchases per month on the ground and in the air (broken down by hour, day, week), and summary of purchases per month on the ground and in the air;

11.8 Set the billing day of month for a subscription to the day of month the subscription was initially purchased;

11.9 Ensure subscriptions become active at the time of purchase and notify and work with the IFC Provider upon a customer's successful subscription purchase to ensure the customer has a seamless experience (e.g., no double login) with subscription usage/purchases;

11.10 Ensure Subscription Life Cycle management includes creation, maintenance and archiving;

11.11 Validate all data prior to sending a request for payment or refund to the payment facilitator; and

11.12 Validate that the credit card used for the purchase or from the last month's billing is still in the AAdvantage member's profile and notify the customer via email when subscription is cancelled due to the credit card not being in the AAdvantage member's profile. Provide appropriate messaging to the customer, if purchase/rebilling or refund is rejected by the payment facilitator.

12. System Requirements: With respect to system requirements, Gogo shall:

12.1 Ensure its system integrates with American's system to provide accounting/reconciliation reports with transaction level granularity *(it is understood that this item 12.1 will be subject to a CR and shall be delivered by Gogo as part of the Post-MVP Deliverables after the requirements have been finalized)*;

12.2 Utilize UTC as a single synchronized source of time and ensure the API includes the data elements needed by the ASP to perform the subscription and/or promotion validation including, flight number, origin and destination;

12.3 Gogo's system shall interface with American's system using the documentation supporting the four (4) APIs as defined by American and interface with the IFC Provider's system using the API documents as defined by the ASP to support the functionality for subscription validation, promo code validation, and financial transactions requests;

12.4 Gogo's system shall interface with the payment processor system using API documentation as defined by the payment processor;

12.5 The ASP shall provide an email notification to American regarding the ASP's system downtime and recovery status; and

12.6 The implementation methods, architecture and development will allow the Portal to continuously comply with all applicable governmental laws for website accessibility, including Website Content Accessibility Guidelines 2.0 and Section 508 of the Rehabilitation Act, as amended, including the use of applicable tools to scan each webpage for errors and warnings that indicate a component within a webpage is not complaint with industry standard for such accessibility.

13. Testing: With respect to testing, Gogo shall:

13.1 Follow an Agile methodology, with iteration frequency and solution demo dates and provide a staging environment where content changes can be verified before pushing an update to the production environment;

13.2 Implement onsite testing capabilities for American to test all Gogo delivered software before being released and ensure software is not released unless American passes the Customer Acceptance Test ("**CAT**"); and

13.3 Implement remote testing capabilities, on a twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year basis upon receiving a schedule request from American, for American and the IFC Provider to test all ASP delivered software before being released for test, stage and production.

14. **Transmitted Data:** With respect to transmitted data, Gogo shall retain American owned data for a minimum of three (3) years.

15. **Web Analytics:** With respect to web analytics, Gogo shall:

15.1 Report shall report web analytics on key traffic and performance metrics such as browser, platform (PED, OS), application, and purchase path pages;

15.2 Retain usage data for at least thirty-seven (37) months; and

15.3 Ensure web analytics is provided for ground-based purchase path page including page visits, page views, and click-throughs and provide web analytics reports to American by the tenth (10^{th}) business day of the following month. Reports shall be exportable in PDF and CSV.

Attachment 3 to Exhibit W
SSOCP Timeline / Milestones

Gogo shall deliver the SSOCP MVP program in accordance with the following target milestones:

Milestone		Target completion date
1	Development and unit testing complete	[***]
2	Integration complete (ViaSat, Panasonic)	[***]
3	Full end-to-end testing (Gogo)	[***]
4	American Customer Acceptance Testing	[***]
5	Subscription Migration launch	[***]
6	SSOCP launch	[***]
7	Data feeds Wave 1	[***]
8	Data feeds Wave 2	[***]

The above milestones are based on the following assumptions:

- ViaSat and Panasonic support is provided in a timely manner such that integration completes on plan; and
- American conducts customer acceptance testing as scheduled.

The following Deliverables will be provided by Gogo per the indicated milestone:

Graphics Design Interface	Milestone
Portal Design	[***]
Ground Based Subscription Purchase	[***]
SSOCP Functionality	
AAdvantage Integration: American API for AAdvantage validation and credit cards retrieval	[***]
Subscription Purchase: API, Payment Processing Functionality, Connection with RiM	[***]
Subscription Validation: API, Validation Rules and Logic	[***]
Promo code Validation: API, Validation Rules and Logic	[***]
Subscription Management: Auto renewal process, customer messaging, etc.	[***]
Database	
Subscriptions	[***]
Promo codes	[***]
Subscription Migration	
Deliverables	[***]
Data feeds Wave 1	
Subscription Purchase data feed	[***]
Subscription Refunds data feed	[***]
Subscription Cancellations data feed	[***]
Data feeds Wave 2	
Single Pass Return data feed	[***]
Session Events data feed	[***]

Flight Performance data feed	[***]
Settlement Events data feed	[***]
Single Pass Purchase data feed	[***]
Flight Info data feed	[***]
Reports	
SLA Reporting	[***]
Web Analytics	[***]
Other in Compliance Matrix (see attached)	[***]
Documentation	
Requirements Documents	
Process Documentation	

Attachment 4 to Exhibit W
Acceptance Process

American will conduct acceptance testing in accordance with the milestones set forth in Attachment 3 to this Exhibit W in order to determine whether the Deliverables meet the Acceptance Criteria. For purposes of this Attachment 4, "**Acceptance Criteria**" shall mean that, with respect to each Deliverable, such Deliverable does not contain (a) any Critical or Major defects, or (b) multiple Minor defects that, taken together, constitute a material deviation from the Specifications.

Within five (5) business days of completion of acceptance testing with respect to each Deliverable, American's Tech Ops team will notify Gogo in writing (it being understood that an email to a Gogo-designated representative shall suffice) either with a "Non-Acceptance Notice" or an "Acceptance Notice" for such Deliverable. If American has not provided either of the foregoing notices within the applicable time period, then the Deliverables will be deemed accepted.

If American delivers a Non-Acceptance Notice to Gogo in accordance with the foregoing paragraph, Gogo shall have two (2) business days to submit an action plan to American to correct the concern, which plan shall include the time period required to complete the activities in such plan. American shall respond to Gogo's action plan within two (2) business days to approve or modify the action plan. Gogo shall commence such approved or modified action plan within two (2) business days or as otherwise mutually agreed by the Parties, and shall perform in substantial conformance to such plan. Upon completion of any such plan, Gogo shall resubmit such Deliverable to American, and the previous paragraph shall then apply to such Deliverable as a new submission, provided that no new action plan shall be required unless the applicable non-conformance is unrelated to the existing plan, and instead Gogo will update the prior plan with any needed changes (including but not limited to an updated timeline). Notwithstanding the above, at any point in the acceptance process American may, in its discretion, accept any Deliverable notwithstanding the presence of any open defect(s).

Upon any acceptance, all unresolved defects, if any, shall be immediately subject to the SLAs set forth in Section 6 of Exhibit W. To the extent that American knows of a defect, American shall provide Gogo with specific notice thereof.

In the event that Gogo is unable to correct the concern following two (2) cycles of the above remediation effort and American does not accept the SSOCP Deliverables, American (a) may terminate this Exhibit W and Gogo shall not proceed with the launch of subscription migration and (b) shall be entitled to a refund of any fees associated with any such rejected Deliverable.

Attachment 5 to Exhibit W
Source Code Components

[***]

Exhibit X
Portal and SSOCP Change Control Procedures

1. Introduction

This Exhibit X describes the change control procedures to be followed by the Parties when either Party wishes to make a change to the functionality of, or Specifications relating to, the Portal or SSOCP (including any Software related to the Portal or SSOCP).

2. Change Control

2.1 American may, at any time, request that Gogo provide an estimate of the cost to implement a change (which may be in the form of a general range, if requested) to the functionality of, or Specifications relating to, the Portal or SSOCP (including any Software related to the Portal or SSOCP). Gogo shall provide such estimate as soon as reasonably practicable.

2.2 American may, at any time by written order, request changes to the functionality of, or Specifications relating to, the Portal or SSOCP (including any Software related to the Portal or SSOCP) (a "**Change Request**" or "**CR**"). For each Change Request, Gogo shall prepare and submit to American within fourteen (14) calendar days (or as otherwise agreed) of such Change Request, with American's reasonable cooperation and provision of any information reasonably requested by Gogo, a written report (a "**Change Proposal**"). At a minimum, each Change Proposal shall contain:

2.2.1 the estimated costs associated with implementing the Change Request;

2.2.2 the preliminary estimated work duration and estimated completion date, which shall be subject to American's submission of additional Change Request(s) of higher priority;

2.2.3 any anticipated impact on existing Service Levels;

2.2.4 any anticipated impact on other systems; and

2.2.5 an initial analysis of the potential risks, including legal or regulatory compliance issues, if any, to American or Gogo if the change is not implemented.

2.3 Once submitted by Gogo, American shall review the Change Proposal and as soon as reasonably practicable do one of the following no later than fourteen (14) calendar days (or as otherwise agreed) after the Change Proposal is submitted by Gogo:

2.3.1 American may accept the Change Proposal, in which case the Change Proposal shall be signed by the authorized representatives and the change implemented;

2.3.2 American may accept the Change Proposal, with modification agreed by Gogo or after consolidation of other changes agreed by Gogo that may merit combination to the best interests of American. If such modifications occur Gogo will be asked to revise the costs and schedule estimates prior to implementing the change; or

2.3.3 American may notify Gogo that it does not wish to proceed with the change, in which case no further action shall be taken in respect of the Change Proposal.

Exhibit 31.1

Gogo Inc.

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a) OF THE EXCHANGE ACT, AS AMENDED,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Oakleigh Thorne, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Gogo Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 11, 2020

/s/ Oakleigh Thorne
Oakleigh Thorne
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Gogo Inc.

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a) OF THE EXCHANGE ACT, AS AMENDED,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Barry Rowan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Gogo Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 11, 2020

/s/ Barry Rowan

Barry Rowan
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

Gogo Inc.

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

I, Oakleigh Thorne, President and Chief Executive Officer of Gogo Inc. (the “Company”), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) the Quarterly Report on Form 10-Q of the Company for the quarter ended March 31, 2020 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 11, 2020

/s/ Oakleigh Thorne
Oakleigh Thorne
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

Gogo Inc.

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

I, Barry Rowan, Executive Vice President and Chief Financial Officer of Gogo Inc. (the "Company"), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) the Quarterly Report on Form 10-Q of the Company for the quarter ended March 31, 2020 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 11, 2020

/s/ Barry Rowan

Barry Rowan
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)