UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

	F	ORM 10-Q		
×	QUARTERLY REPORT PURSUANT TO SECT 1934	ΓΙΟΝ 13 OR 15(d) OF	THE SECURITIES EXCHANGE A	СТ ОБ
	For the quarterly	period ended September 30	, 2022	
		OR		
	TRANSITION REPORT PURSUANT TO SECT 1934	ΓΙΟΝ 13 OR 15(d) OF	THE SECURITIES EXCHANGE A	CT OF
	For the transition	period from to		
	Commissio	n File Number: 001-38263		
		GINEERING		
	Delaware (State or other jurisdiction of incorporation or organization)		38-2591828 (I.R.S. Employer Identification No.)	
	1820 East Big Beaver Road, Troy, Michigan (Address of principal executive offices)		48083 (Zip Code)	
		(248) 614-2400 lephone number, including area code)		
Securi	ties registered pursuant to Section 12(b) of the Act:			
	Title of each class Class A Common Stock \$0.0001 par value per share	Trading Symbol ALTR	Name of each exchange on which register The NASDAQ Global Select Market	
during	te by check mark whether the registrant (1) has filed all reports the preceding 12 months (or for such shorter period that the ements for the past 90 days. Yes \boxtimes No \square			
Regula	te by check mark whether the registrant has submitted electro ation S-T (§232.405 of this chapter) during the preceding 12 m \mid No \square			
emerg	te by check mark whether the registrant is a large accelerated ing growth company. See the definitions of "large accelerating" in Rule 12b-2 of the Exchange Act.			
	accelerated filer ⊠ ccelerated filer □		Accelerated filer Smaller reporting company Emerging growth company	
	emerging growth company, indicate by check mark if the regist ised financial accounting standards provided pursuant to section			h any new
Indica	te by check mark whether the registrant is a shell company (as	defined in Rule 12b-2 of the	Exchange Act). Yes □ No 🗵	
On Oc	te the number of shares outstanding of each of the issuer's class stober 21, 2022, there were 52,397,844 shares of the registrant's on stock outstanding.			.'s Class B

ALTAIR ENGINEERING INC. AND SUBSIDIARIES FORM 10-Q

FOR THE QUARTER ENDED SEPTEMBER 30, 2022 INDEX

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PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

ALTAIR ENGINEERING INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS

		September 30, 2022		December 31, 2021		
(In thousands)	J)	U naudited)				
ASSETS						
CURRENT ASSETS:	Φ.	211.052	Φ.	410 740		
Cash and cash equivalents	\$	311,853	\$	413,743		
Accounts receivable, net		119,921		137,561		
Income tax receivable		10,465		9,388		
Prepaid expenses and other current assets		23,492		27,529		
Total current assets		465,731		588,221		
Property and equipment, net		38,938		40,478		
Operating lease right of use assets		32,627		28,494		
Goodwill		455,211		370,178		
Other intangible assets, net		86,080		99,057		
Deferred tax assets		7,605		8,495		
Other long-term assets		38,736		28,352		
TOTAL ASSETS	\$	1,124,928	\$	1,163,275		
LIABILITIES, MEZZANINE EQUITY AND STOCKHOLDERS' EQUITY						
CURRENT LIABILITIES:						
Accounts payable	\$	6,235	\$	6,647		
Accrued compensation and benefits		37,036		42,307		
Current portion of operating lease liabilities		9,996		9,933		
Other accrued expenses and current liabilities		50,686		122,226		
Deferred revenue		94,523		93,160		
Convertible senior notes, net		´ —		199,705		
Total current liabilities		198,476	_	473,978		
Operating lease liabilities, net of current portion		23,466		19,550		
Deferred revenue, non-current		22,017		12,872		
Convertible senior notes, net		305,158		´ —		
Other long-term liabilities		40,282		42,894		
TOTAL LIABILITIES		589,399		549,294		
Commitments and contingencies		,		,		
MEZZANINE EQUITY		_		784		
STOCKHOLDERS' EQUITY:				, , .		
Preferred stock (\$0.0001 par value), authorized 45,000 shares, none issued and outstanding		_		_		
Common stock (\$0.0001 par value)						
Class A common stock, authorized 513,797 shares, issued and outstanding 52,377						
and 51,524 shares as of September 30, 2022, and December 31, 2021, respectively		5		5		
Class B common stock, authorized 41,203 shares, issued and outstanding 27,745						
shares as of September 30, 2022, and December 31, 2021		3		3		
Additional paid-in capital		715,736		724,226		
Accumulated deficit		(133,642)		(102,087)		
Accumulated other comprehensive loss		(46,573)		(8,950)		
TOTAL STOCKHOLDERS' EQUITY		535,529		613,197		
TOTAL LIABILITIES, MEZZANINE EQUITY AND STOCKHOLDERS' EQUITY	\$	1,124,928	\$	1,163,275		

ALTAIR ENGINEERING INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

	Three Months Ended September 30,					Nine Months Ended September 30,			
(in thousands, except per share data)		2022		2021		2022		2021	
Revenue									
License	\$	67,245	\$	67,603	\$	256,102	\$	230,630	
Maintenance and other services		36,520		34,686		105,453		100,758	
Total software		103,765		102,289		361,555	-	331,388	
Software related services		6,706		7,650		23,143		23,229	
Total software and related services		110,471		109,939		384,698		354,617	
Client engineering services		7,355		10,060		22,414		31,005	
Other		1,525		1,308		4,676		5,760	
Total revenue		119,351		121,307		411,788		391,382	
Cost of revenue			-				-		
License		2,579		4,694		11,386		13,706	
Maintenance and other services		13,025		11,770		38,628		35,368	
Total software		15,604		16,464		50,014		49,074	
Software related services		5,240		5,707		16,739		17,560	
Total software and related services		20,844		22,171		66,753		66,634	
Client engineering services		5,835		7,982		18,390		25,163	
Other		1,230		1,348		3,892		5,072	
Total cost of revenue		27,909	-	31,501		89,035		96,869	
Gross profit		91,442		89,806		322,753		294,513	
Operating expenses:		,		,		,		,	
Research and development		48,781		35,839		138,352		112,872	
Sales and marketing		39,244		30,589		114,042		94,568	
General and administrative		24,677		22,196		72,613		67,983	
Amortization of intangible assets		6,571		4,432		18,682		13,924	
Other operating income, net		(2,835)		(1,324)		(9,383)		(2,526)	
Total operating expenses		116,438	-	91,732	-	334,306		286,821	
Operating (loss) income		(24,996)	•	(1,926)		(11,553)		7,692	
Interest expense		1,566		3,037		2,851		8,998	
Other expense, net		2,107		124		26,082		1,667	
Loss before income taxes		(28,669)		(5,087)		(40,486)		(2,973)	
Income tax expense		4,579		3,022		15,008		4,424	
Net loss	\$	(33,248)	\$	(8,109)	\$	(55,494)	\$	(7,397)	
Loss per share:			_						
Net loss per share attributable to common stockholders, basic	\$	(0.42)	\$	(0.11)	\$	(0.70)	\$	(0.10)	
Net loss per share attributable to common	Ψ	(0.12)	Ψ	(0.11)	Ψ	(0.70)	Ψ	(0.10)	
stockholders, diluted	\$	(0.42)	\$	(0.11)	\$	(0.70)	\$	(0.10)	
Weighted average shares outstanding:									
Weighted average number of shares used in computing net loss per share, basic		79,207		75,750		79,205		75,226	
Weighted average number of shares used in computing net loss per share, diluted		79,207		75,750		79,205		75,226	

ALTAIR ENGINEERING INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS (Unaudited)

	Three Months Ended September 30,					led		
(in thousands)	2022		2021		2022		2021	
Net loss	\$	(33,248)	\$	(8,109)	\$	(55,494)	\$	(7,397)
Other comprehensive (loss) income, net of tax:								
Foreign currency translation (net of tax effect of \$0 for								
all periods)		(17,817)		(4,350)		(37,929)		(5,685)
Retirement related benefit plans (net of tax effect of \$0, \$0, \$7								
and \$0, respectively)		24		117		306		344
Total other comprehensive loss		(17,793)		(4,233)		(37,623)		(5,341)
Comprehensive loss	\$	(51,041)	\$	(12,342)	\$	(93,117)	\$	(12,738)

ALTAIR ENGINEERING INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (Unaudited)

								Accumulate d			
	- Cla		Commo		D		Additional	Accumulat		Total stockholde	
(in thousands)	Shares	iss A An	nount	Shares	ass B An	nount	paid-in capital	ed deficit	ive loss	rs' equity	
Balance as of December 31, 2021	51,524	\$	5	27,745	\$	3	724,22 \$ 6	(102,08 \$ 7)	\$ (8,950)	613,19 \$ 7	
Cumulative effect of an accounting change	_		_			_	(50,00	23,939		(26,070)	
Net income	_		_	_		_		11,528	_	11,528	
Issuance of common stock for employee stock purchase program	77		_	_		_	4,187	_	_	4,187	
Exercise of stock options	86			_		_	238	_	_	238	
Vesting of restricted stock	324			_		_	_	_	_		
Stock-based compensation	_		_	_		_	19,403	_	_	19,403	
Foreign currency translation, net of tax	_		_	_		_	_	_	(4,163)	(4,163)	
Retirement related benefit plans, net of tax	_		_	_		_	_	_	105	105	
Balance as of March 31, 2022	52,011		5	27,745		3	698,04 5	(66,620)	(13,008)	618,42	
Net loss	· —		_	· —		_	_	(33,774)		(33,774)	
Settlement of convertible senior notes	_		_	_		_	(29,75 6)	_	_	(29,756)	
Repurchase and retirement of common stock	(85)		_	_		_	(4,387)	_	_	(4,387)	
Reclassification of mezzanine equity to permanent equity	_		_	_		_	784	_	_	784	
Exercise of stock options	222		_	_		_	1,452	_	_	1,452	
Vesting of restricted stock	43		_	_		_	´—	_	_	<i></i>	
Stock-based compensation	_		_	_		_	21,200	_	_	21,200	
Foreign currency translation, net of tax	_		_	_		_	´ —	_	(15,949)	(15,949)	
Retirement related benefit plans, net of tax	_		_	_		_	_	_	177	177	
Balance as of June 30, 2022							687,33	(100,39		558,17	
,	52,191		5	27,745		3	8	4)	(28,780)	2	
Net loss	_		_	_		_	_	(33,248)	_	(33,248)	
Issuance of common stock for employee stock purchase program	108		_	_		_	4,536	_	_	4,536	
Exercise of stock options	56		_	_		_	1,152	_	_	1,152	
Vesting of restricted stock	22		_	_		_	_	_	_	_	
Stock-based compensation	_		_	_		_	22,710	_	_	22,710	
Foreign currency translation, net of tax	_		_	_		_	_	_	(17,817)	(17,817)	
Retirement related benefit plans, net of tax	_		_	_		_	_	_	24	24	
Balance as of September 30, 2022	52,377	\$	5	27,745	\$	3	715,73 \$ 6	(133,64 \$ 2)	\$ (46,573)	535,52 \$ 9	

ALTAIR ENGINEERING INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (Unaudited)

					Additiona		Accumulate d		
	-	Com	mon stock		l		other	Total	
	Cl	ass A	Cla	ss B	paid-in	Accumulat ed	comprehens ive	stockholde rs'	
(in thousands)	Shares	Amount	Shares	Shares Amount		deficit	loss	equity	
Balance as of December 31, 2020					474,66			378,58	
	44,216	\$	30,111	\$ 3	\$ 9	\$ (93,293)	\$ (2,797)	\$ 6	
Net income		_				14,360	_	14,360	
Exercise of stock options	490	_		_	271	_	_	271	
Vesting of restricted stock	278	_							
Conversion from Class B to Class A common stock	510	_	(510)	_	_	_	_	_	
Stock-based compensation	_	_	- —	_	9,644	_	_	9,644	
Foreign currency translation, net of tax	_	-		_	_	_	(3,975)	(3,975)	
Retirement related benefit plans, net of tax	_	_	_	_		_	143	143	
Balance as of March 31, 2021					484,58			399,02	
	45,494	4	29,601	3	4	(78,933)	(6,629)	9	
Net loss	_	_		_		(13,648)	_	(13,648)	
Exercise of stock options	334	_	- —	_	614	_	_	614	
Vesting of restricted stock	54	_	- —	_		_	_		
Conversion from Class B to Class A common									
stock	510	_	- (510)	_	_	_	_	_	
Stock-based compensation	_	_			10,626			10,626	
Foreign currency translation, net of tax	_	_	- –	_	_	_	2,640	2,640	
Retirement related benefit plans, net of tax							84	84	
Balance as of June 30, 2021					495,82			399,34	
	46,392	4	1 29,091	3	4	(92,581)	(3,905)	5	
Net loss		_				(8,109)	_	(8,109)	
Issuance of common stock in private placement,					199,87			199,87	
net of issuance costs	2,936		_		199,07			199,87	
Issuance of common stock for acquisitions	53			_	3,280	_	_	3,280	
Exercise of stock options	264		_	<u> </u>	1,174	_	_	1,174	
Vesting of restricted stock	28			_	1,174	_	_	1,174	
Conversion from Class B to Class A common	20								
stock	885	_	- (885)	_	_	_	_	_	
Stock-based compensation	_	_	_ `	_	10,933	_	_	10,933	
Foreign currency translation, net of tax	_	_		_	_	_	(4,350)	(4,350)	
Retirement related benefit plans, net of tax		_				_	117	117	
Balance as of September 30, 2021					711,08	(100,69	<u> </u>	602,26	
,	50,558	\$	\$ 28,206	\$ 3	\$ 2	\$ 0	\$ (8,138)	\$ 2	

ALTAIR ENGINEERING INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

	Nine Months Ended September 30,						
(In thousands)		2022		2021			
OPERATING ACTIVITIES:							
Net loss	\$	(55,494)	\$	(7,397)			
Adjustments to reconcile net loss to net cash provided by operating activities:							
Depreciation and amortization		24,092		19,355			
Provision for credit loss		183		330			
Amortization of debt discount and issuance costs		1,330		8,513			
Stock-based compensation expense		62,524		31,229			
Deferred income taxes		4		(510)			
Gain on mark-to-market adjustment of contingent consideration		(7,482)		_			
Expense on repurchase of convertible senior notes		16,621		_			
Other, net		153		40			
Changes in assets and liabilities:							
Accounts receivable		13,859		26,770			
Prepaid expenses and other current assets		1,906		(7,612)			
Other long-term assets		3,134		(5,018)			
Accounts payable		(270)		(2,432)			
Accrued compensation and benefits		(3,639)		481			
Other accrued expenses and current liabilities		(48,698)		483			
Deferred revenue		18,311		(8,638)			
Net cash provided by operating activities	·	26,534		55,594			
INVESTING ACTIVITIES:							
Payments for acquisition of businesses, net of cash acquired		(134,130)		(5,472)			
Capital expenditures		(6,721)		(6,811)			
Other investing activities, net		(10,322)		(628)			
Net cash used in investing activities		(151,173)		(12,911)			
FINANCING ACTIVITIES:							
Proceeds from issuance of convertible senior notes,							
net of discounts and commissions		224,265		_			
Repurchase of convertible senior notes		(192,422)		_			
Proceeds from employee stock purchase plan contributions		6,549		2,110			
Repurchase and retirement of common stock		(4,387)		_			
Proceeds from the exercise of common stock options		2,840		2,059			
Payments of debt issuance costs		(1,523)		_			
Proceeds from private placement of common stock		_		200,000			
Payments on revolving commitment		_		(30,000)			
Other financing activities		(170)		(434)			
Net cash provided by financing activities		35,152		173,735			
Effect of exchange rate changes on cash, cash equivalents and restricted cash		(12,142)		(1,951)			
Net (decrease) increase in cash, cash equivalents and restricted cash		(101,629)		214,467			
Cash, cash equivalents and restricted cash at beginning of year		414,012		241,547			
	<u> </u>	312,383	\$	456,014			
Cash, cash equivalents and restricted cash at end of period	φ	312,303	φ	430,014			
Supplemental disclosure of cash flow:							
Interest paid	\$	296	\$	344			
Income taxes paid	\$	6,818	\$	8,077			
Supplemental disclosure of non-cash investing and financing activities:							
Property and equipment in accounts payable, other current liabilities and other liabilities	\$	707	\$	480			

ALTAIR ENGINEERING INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. Organization and description of business

Altair Engineering Inc. ("Altair" or the "Company") is incorporated in the state of Delaware. The Company is a global leader in computational science and artificial intelligence ("AI") that provides software and cloud solutions in simulation, high-performance computing ("HPC"), data analytics, and AI. Altair enables organizations across all industries to compete more effectively and drive smarter decisions in an increasingly connected world - all while creating a greener, more sustainable future. The Company is headquartered in Troy, Michigan.

Basis of presentation

The accompanying unaudited consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles ("GAAP") and applicable rules and regulations of the Securities and Exchange Commission ("SEC") regarding interim financial information. Accordingly, the accompanying statements do not include all the information and notes required by GAAP for complete financial statements. The accompanying unaudited consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements (and notes thereto) for the year ended December 31, 2021, included in the most recent Annual Report on Form 10-K filed with the SEC.

Use of estimates

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and reported amounts of revenue and expenses during the reporting periods. On an ongoing basis, management evaluates its significant estimates including the stand alone selling price, or SSP, for each distinct performance obligation included in customer contracts with multiple performance obligations, valuation of acquired intangible assets in business combinations, the incremental borrowing rate used in the valuation of lease liabilities, the determination of the period of benefit for capitalized costs to obtain a contract, fair value of convertible senior notes, provision for credit loss, tax valuation allowances, liabilities for uncertain tax provisions, impairment of goodwill and intangible assets, retirement obligations, useful lives of intangible assets, revenue for fixed price contracts, and stock-based compensation. Actual results could differ from those estimates.

Significant accounting policies

There have been no material changes to our significant accounting policies as of and for the nine months ended September 30, 2022, as compared to the significant accounting policies described in our Annual Report on Form 10-K for the year ended December 31, 2021.

2. Recent accounting guidance

Accounting standards adopted

Debt – In August 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2020-06, Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40). This ASU simplifies the accounting for convertible instruments by eliminating certain separation models. Under ASU 2020-06, a convertible debt instrument will generally be reported as a single liability at its amortized cost with no separate accounting for embedded conversion features. The update also requires the if-converted method to be used for convertible instruments and the effect of potential share settlement be included in the diluted earnings per share calculation when an instrument may be settled in cash or shares. The Company adopted ASU 2020-06 effective as of January 1, 2022, using the modified retrospective approach. Adoption of the new standard resulted in a decrease to accumulated deficit of \$23.9 million, a decrease to additional paid-in capital of \$50.0 million, and an increase to convertible senior notes, net of \$26.1 million. Interest expense recognized in the current and future periods will be reduced as a result of accounting for the convertible debt instrument as a single liability measured at its amortized cost.

Accounting standards not yet adopted

Reference Rate Reform – In March 2020, the FASB issued ASU 2020-04. Reference Rate Reform (Topic 848) - Facilitation of the Effects of Reference Rate Reform on Financial Reporting. This ASU provides optional expedients and exceptions for applying U.S. GAAP to contract modifications and hedging relationships, subject to meeting certain criteria, that reference LIBOR or another rate that is expected to be discontinued. The amendments in the guidance are optional and effective for all entities as of March 12, 2020 through December 31, 2022. The Company is currently evaluating the impact of this new guidance on its consolidated financial statements and related disclosures and does not expect this guidance to have a material effect on its consolidated financial statements.

Government Assistance – In November 2021, the FASB issued ASU 2021-10, Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance. This ASU requires certain disclosures about transactions with a government that are accounted for by applying a grant or contribution accounting model by analogy. The amendment requires disclosure of information about the nature of the transactions and the related accounting policy used to account for the transactions, information regarding the line items within the consolidated financial statements that are affected by the transactions, and significant terms and conditions of the transactions. ASU 2021-10 is effective for annual periods beginning after December 15, 2021, with early application permitted. The Company is currently evaluating the effect the adoption of this new guidance will have on its consolidated financial statement disclosures.

3. Revenue from contracts with customers

Disaggregation of revenue

The Company disaggregates its software revenue by type of performance obligation and timing of revenue recognition as follows (in thousands):

	Three Months Ended September 30,			Nine Months Septembe				
		2022	2021		2022		2021	
Term licenses and other (1)	\$	58,441	\$	55,907	\$	224,971	\$	198,465
Perpetual licenses		8,804		11,696		31,131		32,165
Maintenance		34,271		31,296		100,643		91,539
Professional software services (1)		2,249		3,390		4,810		9,219
Software related services		6,706		7,650		23,143		23,229
Client engineering services		7,355		10,060		22,414		31,005
Other		1,525		1,308		4,676		5,760
Total revenue	\$	119,351	\$	121,307	\$	411,788	\$	391,382

⁽¹⁾ Term licenses and other includes hardware revenue of \$0.7 million and \$3.1 million, respectively, for the three and nine months ended September 30, 2022, and was reported in License revenue. Professional software services includes hardware revenue of \$2.3 million and \$5.3 million, respectively, for the three and nine months ended September 30, 2021, and was reported in Maintenance and other services revenue.

The Company derived approximately 13.7% and 11.8% of its total revenue through indirect sales channels for the nine months ended September 30, 2022 and 2021, respectively.

Costs to obtain a contract

As of September 30, 2022, and December 31, 2021, respectively, capitalized costs to obtain a contract were \$3.5 million and \$4.5 million recorded in Prepaid and other current assets and \$0.1 million and \$0.4 million recorded in Other long-term assets in the Company's consolidated balance sheets. Sales commissions were \$2.1 million and \$6.3 million, respectively, for the three and nine months ended September 30, 2022, and \$2.4 million and \$5.9 million, respectively, for the three and nine months ended September 30, 2021. Sales commissions were included in Sales and marketing expense in the Company's consolidated statement of operations.

Contract assets

As of September 30, 2022, and December 31, 2021, respectively, contract assets were \$9.1 million and \$3.8 million included in Accounts receivable, and \$3.0 million and \$2.3 million included in Prepaid expenses and other current assets in the Company's consolidated balance sheets.

Deferred revenue

Approximately \$77.8 million of revenue recognized during the nine months ended September 30, 2022, was included in deferred revenue at the beginning of the year.

Revenue allocated to remaining performance obligations represents contracted revenue that has not yet been recognized, which includes deferred revenue and amounts that will be invoiced and recognized as revenue in future periods. Contracted revenue not yet recognized was \$127.0 million and \$121.1 million as of September 30, 2022 and 2021, respectively. Of the amount recorded as of September 30, 2022, the Company expects to recognize approximately 79% over the next 12 months and the remainder thereafter.

4. Supplementary Information

Cash, cash equivalents and restricted cash

The Company considers all highly liquid investments with original or remaining maturities of 90 days or less at the date of purchase to be cash equivalents. Cash and cash equivalents are recorded at cost, which approximates fair value. Restricted cash is included in other long-term assets on the consolidated balance sheets. The following table provides a reconciliation of cash, cash equivalents and restricted cash reported in the consolidated balance sheets that sum to the total of the amounts reported in the consolidated statement of cash flows (in thousands):

	Sept	ember 30, 2022	Decer	nber 31, 2021
Cash and cash equivalents	\$	311,853	\$	413,743
Restricted cash included in other long-term assets		530		269
Total cash, cash equivalents, and restricted cash	\$	312,383	\$	414,012

Restricted cash represents amounts required for a contractual agreement with an insurer for the payment of potential health insurance claims, and term deposits for bank guarantees.

Property and equipment, net

Property and equipment consisted of the following (in thousands):

	Sept	ember 30, 2022	D	ecember 31, 2021
Land	\$	9,564	\$	9,888
Building and improvements		17,719		18,358
Computer equipment and software		47,185		45,027
Furniture, equipment and other		11,104		12,947
Leasehold improvements		8,502		9,829
Right-of-use assets under finance leases		2,413		2,532
Total property and equipment		96,487		98,581
Less: accumulated depreciation and amortization		57,549		58,103
Property and equipment, net	\$	38,938	\$	40,478

Depreciation expense, including amortization of right-of-use assets under finance leases, was \$1.7 million and \$5.4 million for the three and nine months ended September 30, 2022, respectively, and \$1.7 million and \$5.4 million for the three and nine months ended September 30, 2021, respectively.

Other liabilities

The following table provides the details of other accrued expenses and current liabilities (in thousands):

	mber 30, 2022	December 31, 2021		
Obligations for acquisition of businesses	\$ 15,141	\$	87,636	
Income taxes payable	10,207		5,887	
Accrued professional fees	5,762		3,516	
Accrued VAT	4,455		6,047	
Accrued royalties	2,216		2,537	
Employee stock purchase plan obligations	1,960		4,222	
Non-income tax liabilities	1,571		1,653	
Defined contribution plan liabilities	1,499		1,513	
Accrued interest	1,253		48	
Billings in excess of cost	808		1,459	
Other current liabilities	5,814		7,708	
Total	\$ 50,686	\$	122,226	

The following table provides details of other long-term liabilities (in thousands):

	Se	eptember 30, 2022	De	cember 31, 2021
Pension and other post retirement liabilities	\$	14,472	\$	15,086
Deferred tax liabilities		14,439		15,389
Other long-term liabilities		11,371		12,419
Total	\$	40,282	\$	42,894

Stock repurchase program

In February 2022, the Company's Board of Directors approved a stock repurchase program to repurchase up to \$50.0 million of the Company's Class A Common Stock. Purchases under the stock repurchase program may be made from time to time in the open market at prevailing prices, or through privately negotiated transactions. The Company is not obligated to repurchase any dollar amount or number of shares, and the stock repurchase program may be suspended or terminated at any time. All shares repurchased under the stock repurchase program are retired.

During the nine months ended September 30, 2022, under the Company's stock repurchase program, the Company repurchased 85,119 shares at an average price of \$51.52 per share for a total cost of \$4.4 million. The Company did not make any purchases under its stock repurchase program during the three months ended September 30, 2022. As of September 30, 2022, \$45.6 million of shares of Class A Common Stock remained available for repurchase under the program.

Mezzanine equity

In 2017, the Company issued 200,000 shares of Class A Common Stock to a third-party as partial consideration for the purchase of developed technology. These shares had a put right that could be exercised by the holder five years from date of purchase at \$12.50 per share that required the shares to be recorded at issuance date fair value and classified as mezzanine equity in the consolidated balance sheet.

During the year ended December 31, 2020, the third-party holder sold 133,336 shares on the open market and as a result, the issuance date fair value of those shares was reclassified into permanent equity from mezzanine equity. As of September 30, 2022, the put right has lapsed and the issuance date fair value of the remaining 66,664 shares were reclassified into permanent equity from mezzanine equity.

Restructuring expense

In 2021, the Company initiated a restructuring plan to realign resources with the Company's business outlook and cost structure. The restructuring plan resulted in charges for employee termination benefits of \$(0.1) million and \$5.0 million for the three and nine months ended September 30, 2021, respectively. There were no restructuring costs for the three and nine months ended September 30, 2022. The restructuring costs were attributable primarily to the Software reportable segment. The restructuring plan was completed, and all amounts were paid in 2021.

Other expense, net

Other expense, net consists of the following (in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
		2022		2021		2022		2021
Expense on repurchase of convertible senior notes	\$		\$		\$	16,621	\$	_
Foreign exchange loss		3,815		226		11,469		1,942
Other income, net		(1,708)		(102)		(2,008)		(275)
Other expense, net	\$	2,107	\$	124	\$	26,082	\$	1,667

5. Acquisitions

2022 Acquisitions

RapidMiner

In September 2022, the Company entered into an Agreement and Plan of Merger (the "Merger Agreement") with RapidMiner, Inc., a Delaware corporation ("RapidMiner"), and a wholly-owned subsidiary of the Company ("Merger Sub").

RapidMiner's low-code platform is used to develop production-scale data pipelines and ML models, putting advanced data analytics into the hands of those who know the domain problems best. It provides powerful, drag-and-drop building blocks to transform and augment data, and its flexible delivery models provide users and enterprises with the scale they need, from a user's desktop to on-premises servers to secure, multi-tenant cloud. The acquisition of RapidMiner strengthens the Company's end-to-end data analytics portfolio.

Pursuant to the Merger Agreement, the Company acquired 100% of the outstanding capital stock of RapidMiner and completed the acquisition of RapidMiner through the merger of the Merger Sub with and into RapidMiner, with RapidMiner surviving as a wholly-owned subsidiary of the Company.

The preliminary aggregate merger consideration payable pursuant to the Merger Agreement was approximately \$100.0 million in cash, subject to adjustments for the repayment of debt, the payment of RapidMiner's transaction expenses and customary working capital arrangements. Pursuant to an escrow agreement entered into at closing, the Company deposited \$8.0 million in cash (the "Escrow Cash") into an escrow account, which will be available to indemnify the Company for certain losses it may incur as a result of a breach of any representation, warranty or covenant of RapidMiner contained in the Merger Agreement. The Company will also be able to recover from the Escrow Cash certain severance payments that may be made to those employees of RapidMiner that the Company elects not to retain after the closing. The Company financed the acquisition with cash on hand.

The acquisition of RapidMiner will be accounted for as a business combination under the acquisition method of accounting. As of the acquisition date, the book value of tangible assets acquired and liabilities assumed were reported in the Company's consolidated balance sheet. The remaining purchase price of \$91.0 million has been recorded in goodwill pending fair value allocation. All goodwill is recorded in the Software segment.

The primary areas that remain preliminary relate to the fair value of intangible assets acquired, certain tangible assets and liabilities acquired, income taxes and residual goodwill. The Company expects to finalize the valuation as soon as practicable, but not later than one year from the acquisition date.

Concept Engineering

In June 2022, the Company entered into a stock purchase agreement and simultaneously acquired 100% of the outstanding capital stock of Concept Engineering, a leading provider of electronic system visualization software that accelerates the development, manufacture, and service of complex electrical and electronic systems, for preliminary aggregate consideration of \$25.7 million. See Note 9 for further information on post-combination stock-based compensation expense related to this acquisition. Concept Engineering's software will be integrated into Altair's Electronic System Design suite and will be available via Altair Units.

The acquisition of Concept Engineering will be accounted for as a business combination under the acquisition method of accounting. As of the acquisition date, the book value of assets acquired and liabilities assumed were reported in the Company's consolidated balance sheet. The remaining purchase price of \$22.0 million has been recorded in goodwill pending fair value allocation. All goodwill is recorded in the Software segment.

The primary areas that remain preliminary relate to the fair value of intangible assets acquired, certain tangible assets and liabilities acquired, income taxes and residual goodwill. The Company expects to finalize the valuation as soon as practicable, but not later than one year from the acquisition date.

Other business acquisitions

During the nine months ended September 30, 2022, the Company completed three other business acquisitions that were accounted for as business combinations under the acquisition method. The preliminary transaction consideration of \$18.0 million was allocated to assets acquired and liabilities assumed at their estimated fair values. The allocation included \$11.5 million to developed technology, \$2.9 million to customer relationships, \$(0.9) million to net liabilities acquired and \$4.5 million to goodwill. All goodwill is recorded in the Software segment and is not deductible for tax purposes. The Company expects to finalize the valuations as soon as practicable, but not later than one year from the acquisition dates. These acquisitions were not material to the Company's consolidated financial statements.

The operating results of each acquisition have been included in the consolidated financial statements since the respective dates of acquisition. The Company's transaction costs related to its 2022 acquisitions were not material.

2021 Acquisitions

World Programming

In December 2021, the Company acquired all of the outstanding capital stock of two related privately held companies, World Programming Limited and December 2015 Software Limited (together "World Programming"), from the stockholders named therein, for preliminary aggregate consideration of \$73.0 million. The preliminary consideration consisted of cash in the amount of \$50.0 million, subject to a customary working capital adjustment, and contingent consideration of \$23.0 million, including \$19.5 million of the Company's Class A Common Stock (the "Contingent Stock Consideration") and a measurement period adjustment of \$3.5 million recognized in 2022. The dates on which the Contingent Stock Consideration is issuable and the number of shares issuable on such dates depend primarily on certain aspects of legal proceedings in which World Programming and SAS Institute, Inc. are engaged. For further information on the legal proceedings see Note 13.

The Company is required to mark-to-market the Contingent Stock Consideration liability based on the trading price of the Company's Class A Common Stock. For the three and nine months ended September 30, 2022, the Company recognized a gain of \$2.2 million and \$7.5 million, respectively, on the mark-to-market adjustment of contingent consideration which is included in Other operating income, net in the consolidated statements of operations.

In addition, per the stock purchase agreement, \$29.5 million of Class A Common Stock will be issued subject to the continuing employment of certain key employees and are not reflected in aggregate consideration but will be recognized as stock-based compensation over the service period of three years.

As of September 30, 2022, Other accrued expenses and current liabilities included \$0.2 million of contingent consideration due to employees.

The acquisition has been accounted for as a business combination under the acquisition method of accounting, which results in acquired assets and assumed liabilities being measured at their estimated fair value as of the acquisition date. The following table summarizes the preliminary purchase consideration transferred to acquire World Programming and the amounts of identified assets acquired and liabilities assumed at the acquisition date (in thousands):

Fair value of consideration transferred	\$	73,043
Recognized amounts of identifiable assets acquired and liabilities assumed:		
Cash		1,895
Accounts receivable		5,656
Other assets		6,085
Property and equipment		2,209
Trade names (4-year life)		300
Developed technology (5-year life)		33,000
Customer relationships (7-year life)		7,000
SAS legal liability		(66,596)
Accounts payable and other liabilities		(3,401)
Deferred revenue		(2,737)
Deferred tax liabilities and other tax reserves		(11,406)
Total net identifiable assets acquired and liabilities assumed	-	(27,995)
Goodwill (1)	\$	101,038

⁽¹⁾ Goodwill is primarily attributable to market synergies expected to arise after the acquisition and is not deductible for tax purposes. All goodwill is recorded in the Software segment.

The preliminary estimated fair values of assets acquired and liabilities assumed, and identifiable intangible assets may be subject to change as additional information is received. The valuation was complex due to the significant estimation uncertainty in certain assumptions used to determine the fair value of intangible assets acquired and contingent consideration. The Company continues to collect information with regard to its estimates and assumptions, including the fair value of intangible assets acquired, certain tangible assets and liabilities acquired, contingent consideration, income taxes and residual goodwill. The Company expects to finalize the valuation as soon as practicable, but not later than one year from the acquisition date.

Other

The allocation of fair value of purchase consideration for the Company's other 2021 acquisition was finalized as of September 30, 2022. There were no changes to the preliminary fair value of assets acquired and liabilities assumed, as previously reported.

6. Goodwill and other intangible assets

Goodwill

The changes in the carrying amount of goodwill, which is attributable to the Software reportable segment, were as follows (in thousands):

Balance as of December 31, 2021	\$ 370,178
Acquisitions	117,540
Effects of foreign currency translation and other	(32,507)
Balance as of September 30, 2022	\$ 455,211

Other intangible assets

A summary of other intangible assets is shown below (in thousands):

	September 30, 2022								
	Weighted average amortization period	Gross carrying amount				carrying mount			
Definite-lived intangible assets:									
Developed technology	4-6 years	\$ 115,135	\$	60,621	\$	54,514			
Customer relationships	7-10 years	46,815		25,818		20,997			
Other intangibles	4-10 years	621		225		396			
Total definite-lived intangible assets		162,571		86,664		75,907			
Indefinite-lived intangible assets:									
Trade names		10,173				10,173			
Total other intangible assets		\$ 172,744		86,664	\$	86,080			
			-		-				
		Decembe	er 31, 202	1					
	Weighted average amortization period	December Gross carrying amount	Acc	1 cumulated ortization		t carrying			
Definite-lived intangible assets:		Gross carrying	Acc	cumulated					
Definite-lived intangible assets: Developed technology		Gross carrying	Acc	cumulated					
<i>y</i>	amortization period	Gross carrying amount	Acc am	cumulated ortization	a	mount			
Developed technology	amortization period 4-6 years	Gross carrying amount \$ 110,891	Acc am	cumulated cortization 49,672	a	61,219			
Developed technology Customer relationships	4-6 years 7-10 years	Gross carrying amount \$ 110,891	Acc am	49,672 21,859	a	61,219 26,418			
Developed technology Customer relationships Other intangibles	4-6 years 7-10 years	### Gross carrying amount \$ 110,891	Acc am	49,672 21,859 127	a	61,219 26,418 520			
Developed technology Customer relationships Other intangibles Total definite-lived intangible assets	4-6 years 7-10 years	### Gross carrying amount \$ 110,891	Acc am	49,672 21,859 127	a	61,219 26,418 520			

Amortization expense related to intangible assets was \$6.6 million and \$18.7 million for the three and nine months ended September 30, 2022, respectively, and \$4.4 million and \$13.9 million for the three and nine months ended September 30, 2021, respectively.

7. Debt

Convertible senior notes

2027 Notes

In June 2022, the Company issued \$230.0 million aggregate principal amount of 1.750% convertible senior notes due in 2027 (the "2027 Notes"), which includes the initial purchaser's exercise in full of its option to purchase an additional \$30.0 million principal amount of the 2027 Notes, in a private offering. The net proceeds from the issuance of the 2027 Notes was \$224.3 million after deducting discounts, commissions and estimated issuance costs.

The Company entered into an Indenture relating to the issuance of the 2027 Notes dated June 14, 2022 (the "Indenture"), by and between the Company and U.S. Bank Trust Company, National Association, as trustee. The Indenture includes customary covenants and sets forth certain events of default after which the 2027 Notes may be declared immediately due and payable and sets forth certain types of bankruptcy or insolvency events of default involving the Company after which the 2027 Notes become automatically due and payable. The 2027 Notes are senior unsecured obligations of the Company.

The 2027 Notes mature on June 15, 2027, unless earlier repurchased, redeemed or converted. The Company may redeem for cash all or, subject to certain limitations, any portion of the 2027 Notes, at its option, on or after June 20, 2025 if the last reported sale price of Altair's Class A Common Stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period, at a redemption price equal to 100% of the principal amount of the notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. The 2027 Notes bear interest at a rate of 1.750% per year, payable semiannually in arrears on June 15 and December 15 of each year, beginning on December 15, 2022.

The 2027 Notes have an initial conversion rate of 13.9505 shares of the Company's Class A common stock per \$1,000 principal amount of 2027 Notes, which is equivalent to an initial conversion price of approximately \$71.68 per share of Class A common stock. The conversion rate will be subject to adjustment upon the occurrence of certain events specified in the Indenture but will not be adjusted for any accrued and unpaid interest. In addition, upon the occurrence of a make whole fundamental change or a redemption period (each as defined in the Indenture), the Company will, in certain circumstances, increase the conversion rate by a specified number of additional shares for a holder who elects to convert its 2027 Notes in connection with such make whole fundamental change or during the relevant redemption period.

Holders of the 2027 Notes may convert all or any portion of their 2027 Notes at any time prior to the close of business on the business day immediately preceding December 15, 2026, in integral multiples of \$1,000 principal amount, only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending on September 30, 2022, if the last reported sale price of the Class A Common Stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
- during the five business day period after any five consecutive trading day period (the "measurement period") in which the trading price (as defined in the Indenture) per \$1,000 principal amount of the 2027 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Class A Common Stock and the conversion rate on each such trading day;
- if the Company calls the 2027 Notes for redemption (which the Company may not do prior to June 20, 2025), at any time prior to the close of business on the scheduled trading day immediately preceding the redemption date but only with respect to the 2027 Notes called (or deemed called) for redemption; or
- upon the occurrence of specified corporate events.

On or after December 15, 2026 until the close of business on the business day immediately preceding the maturity date, holders may convert their 2027 Notes at any time, regardless of the foregoing circumstances. Upon conversion, the Company will pay or deliver, as the case may be, cash, shares of Class A Common Stock or a combination of cash and shares of the Class A Common Stock, at the Company's election, in the manner and subject to the terms and conditions provided in the Indenture.

During the period ended September 30, 2022, the conditions allowing holders of the 2027 Notes to convert were not met. Therefore, the 2027 Notes were classified as long-term debt on the consolidated balance sheet as of September 30, 2022.

2024 Notes

In June 2019, the Company issued \$230.0 million aggregate principal amount of 0.25% convertible senior notes due in 2024 (the "2024 Notes" and together with the 2027 Notes, the "Convertible Notes"), which includes the underwriters' exercise in full of their option to purchase an additional \$30.0 million principal amount of the 2024 Notes, in a public offering. The net proceeds from the issuance of the 2024 Notes were \$221.9 million after deducting the underwriting discounts and commissions and estimated issuance costs. The 2024 Notes bear interest at a rate of 0.25% per year, payable semi-annually in arrears on June 1 and December 1 of each year, commencing December 1, 2019. The 2024 Notes mature on June 1, 2024, unless, earlier repurchased or redeemed by the Company or converted pursuant to their terms. The 2024 Notes have an initial conversion rate of 21.5049 shares of the Company's Class A common stock per \$1,000 principal amount of 2024 Notes, which is equivalent to an initial conversion price of approximately \$46.50 per share of its Class A common stock. Refer to the Company's consolidated financial statements for the year ended December 31, 2021, for details of the issuance of the 2024 Notes.

Prior to January 1, 2022, the Company separated the 2024 Notes into liability and equity components. On issuance, the carrying amount of the equity component was recorded as a debt discount and subsequently amortized to interest expense. Effective January 1, 2022, the Company adopted ASU 2020-06 using the modified retrospective approach. As a result, the 2024 Notes are accounted for as a single liability measured at amortized cost, as no other embedded features require bifurcation and recognition as derivatives. Adoption of the new standard resulted in a decrease to Accumulated deficit of \$23.9 million, a decrease to Additional paid-in capital of \$50.0 million, and an increase to Convertible senior notes, net of \$26.1 million.

During the three months ended June 30, 2022, using proceeds from the issuance of the 2027 Notes, the Company entered into separate privately negotiated transactions with certain holders of the 2024 notes to repurchase and retire \$148.2 million aggregate principal amount of the 2024 notes for an aggregate amount of \$192.4 million of cash including accrued and unpaid interest. The Company recognized expense of \$16.6 million, representing the fair value of the consideration paid to certain holders of the 2024 Notes in excess of the value to which they were entitled to receive on the respective settlement dates. The amount is included in Other expense, net in the Company's consolidated statement of operations.

As of September 30, 2022, \$81.8 million principal amount of the 2024 Notes remained outstanding. The Company may settle the 2024 Notes in cash, shares of Class A Common Stock or a combination of cash and shares of the Class A Common Stock, at the Company's election.

During the period ended September 30, 2022, the conditions allowing holders of the 2024 Notes to convert were not met. Therefore, the 2024 Notes were classified as long-term debt on the consolidated balance sheet as of September 30, 2022. As of December 31, 2021, the conditions allowing the holders of the 2024 Notes to convert were met. Therefore, the 2024 Notes were classified as current on the consolidated balance sheet as of December 31, 2021.

The Convertible Notes consisted of the following (in thousands):

	September 30, 2022					21		
	2027 Notes		2024 Notes		2027 Notes		2	024 Notes
Principal	\$	230,000	\$	81,754	\$	_	\$	230,000
Less: unamortized debt discount (1)		_		_		_		27,022
Less: unamortized debt issuance costs		5,542		1,054		_		3,273
Net carrying amount	\$	224,458	\$	80,700	\$		\$	199,705

(1) The Company adopted ASU 2020-06 on January 1, 2022, which resulted in the convertible notes to be accounted for as a single liability.

The interest expense recognized related to the Convertible Notes was as follows (in thousands):

	Three Months Ended September 30,				 Nine Mon Septen	
		2022		2021	2022	2021
Contractual interest expense	\$	1,057	\$	143	\$ 1,395	\$ 431
Amortization of debt issuance costs and discount (1)		481		2,871	1,299	8,496
Total	\$	1,538	\$	3,014	\$ 2,694	\$ 8,927

(1) The 2021 amount includes the amortization of the debt discount prior to the adoption of ASU 2020-06 of January 1, 2022.

As of September 30, 2022, the if converted values of the 2027 Notes and the 2024 Notes did not exceed the principal amounts.

Credit agreement

Revolving credit facility

The Company has a \$150.0 million credit facility with a maturity date of December 15, 2025 ("2019 Amended Credit Agreement"). The 2019 Amended Credit Agreement provides for an accordion feature that allows the Company to expand the size of the revolving line of credit by an additional \$50.0 million, subject to certain conditions, by obtaining additional commitments from the existing lenders or by causing a person acceptable to the administrative agent to become a lender (in each case subject to the terms and conditions set forth in the 2019 Amended Credit Agreement). In June 2022, the Company amended the 2019 Amended Credit Agreement to, among other things, permit the issuance of the 2027 Notes and extend the maturity date of the credit facility to December 2025.

As of September 30, 2022, there were no outstanding borrowings under the 2019 Amended Credit Agreement, there was \$150.0 million available for future borrowing, and the Company was in compliance with all the financial covenants. The 2019 Amended Credit Agreement is available for general corporate purposes, including working capital, capital expenditures, and permitted acquisitions.

For additional information about the 2019 Amended Credit Agreement, refer to the Company's consolidated financial statements for the year ended December 31, 2021, included in our Annual Report on Form 10-K for the year ended December 31, 2021.

8. Fair value measurements

The accounting guidance for fair value, among other things, defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the reporting date. The framework for measuring fair value consists of a three-level valuation hierarchy that prioritizes the inputs to valuation techniques used to measure fair value based upon whether such inputs are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect market assumptions made by the reporting entity. The three-level hierarchy for the inputs to valuation techniques is briefly summarized as follows:

- Level 1 Quoted prices in active markets for identical assets and liabilities at the measurement date;
- Level 2 Observable inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3 Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

An asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

The carrying value of cash and cash equivalents, accounts receivable, net and accounts payable approximate fair value due to their short maturities. Interest on the Company's line of credit is at a variable rate, and as such the debt obligation outstanding approximates fair value.

The carrying value of the Company's Convertible Notes are at face value less unamortized debt discount and issuance costs. The estimated fair values of the Convertible Notes, which the Company has classified as Level 2 financial instruments, were determined based on quoted bid prices of the Convertible Notes on the last trading day of each reporting period. As of September 30, 2022, the estimated fair value of the 2027 Notes and 2024 Notes was \$206.1 million and \$90.1 million, respectively, and is presented for required disclosure purposes only. For further information on the Convertible Notes, see Note 7 – Debt

9. Stock-based compensation

2017 stock-based compensation plan

In 2017, the Company's board of directors adopted the 2017 Equity Incentive Plan ("2017 Plan"), which was approved by the Company's stockholders. The 2017 Plan provides for the grant of incentive stock options to the Company's employees and any parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, stock appreciation rights, restricted stock, restricted stock units, performance units, performance shares, other cashbased awards and other stock-based awards to the Company's employees, directors and consultants and the Company's parent, subsidiary, and affiliate corporations' employees and consultants. The 2017 Plan has 16,999,318 authorized shares of the Company's Class A common stock reserved for issuance.

The following table summarizes the restricted stock units, or RSUs, awarded under the 2017 Plan for the period:

	Number of RSUs
Outstanding as of December 31, 2021	1,281,411
Granted	463,840
Vested	(388,944)
Forfeited	(28,170)
Outstanding as of September 30, 2022	1,328,137

The weighted average grant date fair value of the RSUs was \$56.97 and the RSUs generally vest in four equal annual installments. Total compensation cost related to nonvested awards not yet recognized as of September 30, 2022, totaled \$58.7 million, and is expected to be recognized over a weighted average period of 2.4 years.

The following table summarizes the stock option activity under the 2017 Plan for the period:

	Number of options	eighted average ercise price per share	Weighted average remaining contractual term (years)	i	Aggregate intrinsic value (in millions)
Outstanding as of December 31, 2021	4,875,562	\$ 51.02	8.8		
Granted	922,940	\$ 56.04			
Exercised	(57,984)	\$ 41.03			
Forfeited	(69,039)	\$ 53.97			
Outstanding as of September 30, 2022	5,671,479	\$ 51.97	8.2	\$	9.3
Exercisable as of September 30, 2022	1,014,281	\$ 40.59	7.6	\$	4.6

The total intrinsic value of the 2017 Plan stock options exercised during the nine months ended September 30, 2022, was \$0.9 million.

2021 Employee Stock Purchase Plan

The Company has an Employee Stock Purchase Plan ("ESPP") which allows eligible employees to purchase shares of common stock through payroll deductions and is intended to qualify under Section 423 of the Internal Revenue Code. As of September 30, 2022, the Company had 3,014,960 shares of its common stock available for future issuances under the ESPP.

The purchase price for each share of common stock purchased under the ESPP will be 85% of the lower of (a) the fair market value per share on the first day of the applicable offering period or (b) the fair market value per share on the applicable purchase date.

The Company issued 185,040 shares of common stock under the ESPP during the nine months ended September 30, 2022. As of September 30, 2022, \$2.0 million has been withheld on behalf of employees for a future purchase under the ESPP due to the timing of payroll deductions and is reported in current liabilities. The Company recognized \$0.7 million and \$2.0 million of stock-based compensation expense related to the ESPP for the three and nine months ended September 30, 2022, respectively.

Other

In connection with the acquisition of World Programming in December 2021, per the stock purchase agreement, \$29.5 million of the Company's Class A Common Stock will be issued to existing employees, subject to continuing employment and certain other contingencies. The shares will be issued on the one-, two- and three-year anniversaries of the certain legal matters being resolved, subject to potential reduction in certain circumstances. The accounting treatment for these shares in the context of the business combination is to recognize the expense as a post-combination expense, not as transaction consideration.

The estimated post combination expense recognized by the Company as a result of the World Programming business combination was \$29.5 million which is recognized on an accelerated method over the employment period. As of September 30, 2022, the weighted average remaining service period is 2.21 years. Once the vesting conditions of the service period are met, the Company will issue shares for each award. Stock-based compensation expense includes \$4.5 million and \$13.5 million for the three and nine months ended September 30, 2022, respectively.

In connection with the acquisition of Powersim Inc. in March 2022, per the stock purchase agreement, \$4.3 million of the Company's Class A Common Stock will be issued to existing employees, subject to continuing employment and certain other contingencies. The shares will be issued on the one- and two-year anniversaries of certain matters being resolved, subject to potential reduction in certain circumstances. The accounting treatment for these shares in the context of the business combination is to recognize the expense as a post-combination expense, not as transaction consideration. The post combination expense is recognized on an accelerated method over the employment period. As of September 30, 2022, the weighted average remaining service period is 1.4 years. Stock-based compensation expense includes \$0.8 million and \$1.9 million for the three and nine months ended September 30, 2022, respectively.

In connection with the acquisition of Concept Engineering in June 2022, per the stock purchase agreement, \$6.0 million of the Company's Class A Common Stock will be issued to existing employees, subject to continuing employment and certain other contingencies. The shares will be issued on the one- and two-year anniversaries of certain matters being resolved, subject to potential reduction in certain circumstances. The accounting treatment for these shares in the context of the business combination is to recognize the expense as a post-combination expense, not as transaction consideration. The post combination expense is recognized on an accelerated method over the employment period. As of September 30, 2022, the weighted average remaining service period is 1.7 years. Stock-based compensation expense includes \$1.2 million and \$1.4 million for the three and nine months ended September 30, 2022, respectively.

Stock-based compensation expense

The stock-based compensation expense was recorded as follows (in thousands):

	 Three Months Ended September 30,				Nine Mon Septen	ths End		
			2021 2022		2022		2021	
Cost of revenue – software	\$ 2,332	\$	1,411	\$	6,265	\$	3,791	
Research and development	10,243		3,894		26,580		11,223	
Sales and marketing	7,806		3,673		22,505		10,800	
General and administrative	2,329		1,955		7,174		5,415	
Total stock-based compensation expense	\$ 22,710	\$	10,933	\$	62,524	\$	31,229	

10. Net loss per share

The Company adopted ASU 2020-06 on January 1, 2022, using the modified retrospective method, applicable to its convertible senior notes outstanding as of adoption. The Company has not changed any previously disclosed amounts or provided additional disclosures for comparative periods. ASU 2020-06 requires the if-converted method to be applied for all convertible instruments when calculating diluted earnings per share. Under the if-converted method, shares related to convertible senior notes, to the extent dilutive, are assumed to be converted into common stock at the beginning of the period.

Basic net income per share attributable to common stockholders is computed using the weighted average number of shares of common stock outstanding for the period, excluding dilutive securities, stock options, RSUs, and ESPP shares. Diluted net income per share attributable to common stockholders is based upon the weighted average number of shares of common stock outstanding for the period and potentially dilutive common shares, including the effect of dilutive securities, stock options, RSUs and ESPP shares under the treasury stock method. The following table sets forth the computation of the numerators and denominators used in the basic and diluted net loss per share amounts (in thousands, except per share data):

	Three Months Ended September 30,					nded 30,		
		2022		2021		2022		2021
Numerator:								
Net loss	\$	(33,248)	\$	(8,109)	\$	(55,494)	\$	(7,397)
Interest expense related to Convertible Notes, net of tax		1,057		_		1,395		_
Numerator for diluted loss per share	\$	(32,191)	\$	(8,109)	\$	(54,099)	\$	(7,397)
Denominator:								
Denominator for basic loss per share— weighted average shares		79,207		75,750		79,205		75,226
Effect of dilutive securities, stock options, RSUs and ESPP shares		_		_		_		_
Denominator for dilutive loss per share		79,207		75,750		79,205		75,226
Net loss per share attributable to common stockholders, basic	\$	(0.42)	\$	(0.11)	\$	(0.70)	\$	(0.10)
Net loss per share attributable to common stockholders, diluted	\$	(0.42)	\$	(0.11)	\$	(0.70)	\$	(0.10)

Anti-dilutive shares excluded from the computation of diluted net loss per share were as follows (in thousands):

	Three Mont Septemb		Nine Month Septemb	
	2022	2021	2022	2021
Stock options and ESPP shares	3,926	3,634	2,549	3,699
Convertible shares	4,967	1,680	4,954	1,420
Total shares excluded from calculation	8,893	5,314	7,503	5,119

11. Income taxes

The Company's income tax expense and effective tax rate for the three and nine months ended September 30, 2022 and 2021, were as follows (in thousands, except percentages):

	Three Mo Septer	nths E mber 3			Nine Mor Septer		
	2022		2021		2022		2021
Income tax expense	\$ 4,579	\$	3,022	\$	15,008	\$	4,424
Effective tax rate	(16%	6)	(59%	6)	(37 %	6)	(149%)

The tax rate is affected by the Company being a U.S. resident taxpayer, the tax rates in the U.S. and other jurisdictions in which the Company operates, the relative amount of income earned by jurisdiction and the relative amount of losses or income for which no benefit or expense is recognized due to a valuation allowance. The Company's effective tax rate for the nine months ended September 30, 2022 and 2021, also includes net discrete expense of \$4.3 million and net discrete benefit of \$1.2 million, respectively, primarily related to changes in tax laws, withholding taxes on royalties, changes in reserves, changes in accruals for unremitted earnings and other adjustments.

12. Accumulated other comprehensive loss

The components of accumulated other comprehensive loss were as follows (in thousands):

	Foreign currency translation	Retirement related benefit plans	Total
Balance as of December 31, 2021	\$ (6,400)	\$ (2,550)	\$ (8,950)
Other comprehensive loss before reclassification	(37,929)	216	(37,713)
Amounts reclassified from accumulated other comprehensive loss	_	83	83
Tax effects	_	7	7
Other comprehensive (loss) income	(37,929)	306	(37,623)
Balance as of September 30, 2022	\$ (44,329)	\$ (2,244)	\$ (46,573)

13. Commitments and contingencies

World Programming

The Company acquired World Programming Limited and a related company (collectively, "World Programming") in December 2021. In 2010, SAS Institute, Inc. ("SAS") filed an action against World Programing in the United States District Court for the Eastern District of North Carolina (the "NC Court") alleging copyright infringement, breach of contract, fraudulent inducement to contract, and violations of the North Carolina Unfair and Deceptive Trade Practices Act (UDTPA). SAS was unsuccessful on its copyright claims but prevailed on its breach of contract, fraudulent inducement, and UDTPA claims and was awarded damages of \$79.1 million in 2016 (the "NC Judgment"). The NC Court subsequently enjoined World Programming from licensing its WPS Analytics software to new customers for use in the United States until the NC Judgment was satisfied. At the time that the Company acquired World Programming, World Programming had partially paid the NC Judgment.

In relation to the NC Court order that enjoined World Programming from licensing its WPS Analytics Software to new customers for use in the United States, SAS filed a related matter in California, which resulted in the California court issuing an order that required certain then existing customers of World Programming to direct payment (of their licensing fees for WPS Analytics software) to SAS until the NC Judgment was satisfied.

On January 3, 2022, the Company paid the outstanding balance of \$65.9 million on the NC Judgment. Despite payment in full, SAS asserted that the Company had not satisfied the NC Judgment. The NC Court held a hearing to address this issue on March 3, 2022 (the "March Hearing"). At the March Hearing, the NC Court confirmed that the Company's January 3, 2022 payment fully satisfied the NC Judgment, and lifted the injunction that had enjoined World Programming from licensing its WPS Analytics software to new customers for use in the United States. On March 7, 2022, SAS agreed that the California court order was no longer necessary and together with World Programming, filed a joint notice of satisfaction of the NC Judgment with the

California court, thereby allowing customers of World Programming to resume payment of their licensing fees to World Programming directly.

In 2018, SAS filed litigation in the United States District Court for the Eastern District of Texas (the "Texas Court") asserting that World Programming infringed SAS copyrights and patents. SAS voluntarily dismissed with prejudice its patent claims, and the Texas Court entered judgment in favor of World Programming on the copyright claims. SAS appealed the Texas Court judgment to the United States Court of Appeals for the Federal Circuit (the "Court of Appeals"). Oral arguments were held before the Court of Appeal on January 13, 2022. A decision from the Court of Appeals is pending.

Other legal proceedings

From time to time, the Company may be subject to legal proceedings and claims in the ordinary course of business. The Company has received, and may in the future continue to receive, claims from third parties asserting, among other things, infringement of their intellectual property rights. Future litigation may be necessary to defend the Company, its partners, and its customers by determining the scope, enforceability, and validity of third-party proprietary rights, or to establish and enforce the Company's proprietary rights.

Effects of proceedings

The results of any current or future litigation cannot be predicted with certainty and regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources and other factors.

14. Segment information

The Company defines its operating segments as components of its business where separate financial information is available and used by the chief operating decision maker ("CODM") in deciding how to allocate resources to its segments and in assessing performance. The Company's CODM is its Chief Executive Officer.

The Company has identified two reportable segments for financial reporting purposes: Software and Client Engineering Services. The primary measure of segment operating performance is Adjusted EBITDA, which is defined as net income (loss) adjusted for income tax expense (benefit), interest expense, interest income and other, depreciation and amortization, stock-based compensation expense, restructuring charges, asset impairment charges and other special items as determined by management. Adjusted EBITDA includes an allocation of corporate headquarters costs.

The following tables are in thousands:

Three months ended September 30, 2022		Software		CES	All other			Total
Revenue	\$	110,471	\$	7,355	\$	1,525	\$	119,351
Adjusted EBITDA	\$	6,368	\$	856	\$	(395)	\$	6,829
Three months ended September 30, 2021		Software		CES		All other		Total
Revenue	\$	109,939	\$	10,060	\$	1,308	\$	121,307
Adjusted EBITDA	\$	14,103	\$	1,408	\$	(679)	\$	14,832
Nine months ended September 30, 2022		Software		CES		All other		Total
Nine months ended September 30, 2022 Revenue	\$	Software 384,698	\$	CES 22,414	\$	All other 4,676	\$	Total 411,788
	\$ \$		\$ \$		\$ \$		\$ \$	
Revenue	-	384,698	-	22,414	-	4,676	-	411,788
Revenue Adjusted EBITDA	-	384,698 69,083	-	22,414 2,060	-	4,676 (1,284)	-	411,788 69,859

		Three Mon Septem				Nine Mont Septem		
	2022			2021		2022		2021
Reconciliation of Adjusted EBITDA to U.S. GAAP	· ·							
loss before income taxes:								
Adjusted EBITDA	\$	6,829	\$	14,832	\$	69,859	\$	61,288
Stock-based compensation expense		(22,710)		(10,933)		(62,524)		(31,229)
Interest expense		(1,566)		(3,037)		(2,851)		(8,998)
Depreciation and amortization		(8,273)		(6,175)		(24,092)		(19,355)
Restructuring expense		_		124		_		(4,954)
Special adjustments, interest income and other (1)		(2,949)		102		(20,878)		275
Loss before income taxes	\$	(28,669)	\$	(5,087)	\$	(40,486)	\$	(2,973)

⁽¹⁾ The three months ended September 30, 2022, includes \$6.8 million currency losses on acquisition-related intercompany loans and a \$2.2 million gain from the mark-to-market adjustment of contingent consideration associated with the World Programming acquisition. The nine months ended September 30, 2022, includes \$16.6 million expense on repurchase of convertible senior notes, \$13.7 million currency losses on acquisition-related intercompany loans and a \$7.5 million gain from the mark-to-market adjustment of contingent consideration associated with the World Programming acquisition.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this quarterly report and with our audited consolidated financial statements (and notes thereto) for the year ended December 31, 2021, included in our Annual Report on Form 10-K filed with the SEC. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. All statements in this quarterly report regarding the future impact of COVID-19 are forward-looking in nature and thus subject to the safe harbor provisions described below.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This quarterly report on Form 10-Q contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 under Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, assumptions, estimates, intentions, and future performance, and involve known and unknown risks, uncertainties, and other factors, which may be beyond our control, and which may cause our actual results, performance, or achievements to be materially different from future results, performance, or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward-looking statements. You can identify these forward-looking statements through our use of words such as "may," "can," "anticipate," "assume," "should," "indicate," "would," "believe," "contemplate," "expect," "seek," "estimate," "continue," "plan," "point to," "project," "predict," "could," "intend," "target," "potential," and other similar words and expressions of the future.

There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statement made by us. These factors include, but are not limited to:

- our ability and the time it takes to acquire new customers;
- reduced spending on product design and development activities by our customers;
- our ability to successfully renew our outstanding software licenses;
- our ability to maintain or protect our intellectual property;
- our ability to retain key executive members;
- our ability to internally develop new software products, inventions and intellectual property;
- our ability to successfully integrate and realize the benefits of our past or future strategic acquisitions or investments;
- demand for our software by customers other than simulation engineering specialists and in additional industry verticals;
- acceptance of our enhanced business model by customers and investors;
- our susceptibility to factors affecting the automotive, aerospace and financial services industries where we derive a substantial portion of our revenues;
- the accuracy of our estimates regarding expenses and capital requirements;
- our susceptibility to foreign currency risks that arise because of our substantial international operations;
- the significant quarterly fluctuations of our results; and
- the uncertain effect of COVID-19 or other future pandemics or events on our business, operating results, and financial condition, including disruption to our customers, our employees, the global economy, and financial markets.

The foregoing does not represent an exhaustive list of matters that may be covered by the forward-looking statements contained herein or risk factors that we are faced with that may cause our actual results to differ from those anticipated in our forward-looking statements. For additional risks which could adversely impact our business and financial performance please see "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2021, which was filed with the SEC on February 28, 2022, and other information appearing elsewhere in our Annual Report on Form 10-K, this report on Form 10-Q and our other filings with the SEC.

All forward-looking statements are expressly qualified in their entirety by this cautionary notice. You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this report or the date of the document incorporated by reference into this report. We have no obligation, and expressly disclaim any obligation, to update, revise or correct any of the forward-looking statements, whether as a result of new information, future events or otherwise. We have expressed our expectations, beliefs, and projections in good faith, and we believe they have a reasonable basis. However, we cannot assure you that our expectations, beliefs, or projections will result or be achieved or accomplished.

Overview

We are a global leader in computational science and artificial intelligence ("AI") that provides software and cloud solutions in simulation, high-performance computing ("HPC"), data analytics, and AI. We enable organizations across all industries to compete more effectively and drive smarter decisions in an increasingly connected world - all while creating a greener, more sustainable future.

Acquisitions

In September 2022, we acquired RapidMiner, a leader in advanced data analytics and machine learning software. RapidMiner will be integrated with existing tools, such as Altair Knowledge Studio, Altair SmartWorks, and Altair SLC, to provide a comprehensive, code-optional, multi-language, SaaSready, cloud-scale platform for enterprise data analytics and data science.

In June 2022, we acquired Concept Engineering, a leading provider of electronic system visualization software that accelerates the development, manufacture, and service of complex electrical and electronic systems. Concept Engineering's software will be integrated into Altair's Electronic System Design suite and will be available via Altair Units.

In June 2022, we acquired Gen3D, a startup out of the University of Bath, U.K. Gen3D is a pioneer implementing the implicit geometry method for describing highly complex geometries such as lattice structures in additive manufacturing. The technology will be integrated into Altair Inspire, an intuitive and powerful family of software products that enables simulation-driven design throughout the entire product lifecycle, from concept to reality.

In March 2022, we acquired Powersim, a market-leading provider of simulation and design tools for power electronics, including power supplies, motor drives, control systems, and microgrids. This acquisition expands Altair's electronic system design technology into the domain of power electronics. Powersim's software will be integrated into Altair's Electronic System Design suite and will be available via Altair Units.

In February 2022, we acquired Cassini, a next-generation cloud native technology for Industry 4.0. With this acquisition, we deepen our expertise and strengthen our ability to offer digital thread solutions via the Altair One cloud platform.

Convertible Senior Notes

2027 Notes

In June 2022, we issued \$230.0 million aggregate principal amount of 1.750% convertible senior notes due in 2027 (the "2027 Notes"), which includes the initial purchaser's exercise in full of its option to purchase an additional \$30.0 million principal amount of the 2027 Notes, in a private offering. The net proceeds from the issuance of the 2027 Notes was approximately \$224.3 million after deducting discounts, commissions and estimated issuance costs.

We entered into an Indenture relating to the issuance of the 2027 Notes dated June 14, 2022 (the "Indenture"), by and between the Company and U.S. Bank Trust Company, National Association, as trustee. The Indenture includes customary covenants and sets forth certain events of default after which the 2027 Notes may be declared immediately due and payable and sets forth certain types of bankruptcy or insolvency events of default involving the Company after which the 2027 Notes become automatically due and payable. The 2027 Notes are senior unsecured obligations of the Company.

The 2027 Notes mature on June 15, 2027, unless earlier repurchased, redeemed or converted. We may redeem for cash all or, subject to certain limitations, any portion of the 2027 Notes, at our option, on or after June 20, 2025 if the last reported sale price of our Class A Common Stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period, at a redemption price equal to 100% of the principal amount of the notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. The 2027 Notes bear interest at a rate of 1.750% per year, payable semiannually in arrears on June 15 and December 15 of each year, beginning on December 15, 2022

The 2027 Notes have an initial conversion rate of 13.9505 shares of our Class A common stock per \$1,000 principal amount of 2027 Notes, which is equivalent to an initial conversion price of approximately \$71.68 per share of Class A common stock. The conversion rate will be subject to adjustment upon the occurrence of certain events specified in the Indenture but will not be adjusted for any accrued and unpaid interest. In addition, upon the occurrence of a make whole fundamental change or a redemption period (each as defined in the Indenture), we will, in certain circumstances, increase the conversion rate by a specified number of additional shares for a holder who elects to convert its 2027 Notes in connection with such make whole fundamental change or during the relevant redemption period.

Holders of the 2027 Notes may convert all or any portion of their 2027 Notes at any time prior to the close of business on the business day immediately preceding December 15, 2026, in integral multiples of \$1,000 principal amount, only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending on September 30, 2022, if the last reported sale price of the Class A Common Stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
- during the five business day period after any five consecutive trading day period (the "measurement period") in which the trading price (as defined in the Indenture) per \$1,000 principal amount of the 2027 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Class A Common Stock and the conversion rate on each such trading day;
- if we call the 2027 Notes for redemption (which the Company may not do prior to June 20, 2025), at any time prior to the close of business on the scheduled trading day immediately preceding the redemption date but only with respect to the 2027 Notes called (or deemed called) for redemption; or
- upon the occurrence of specified corporate events.

On or after December 15, 2026 until the close of business on the business day immediately preceding the maturity date, holders may convert their 2027 Notes at any time, regardless of the foregoing circumstances. Upon conversion, we will pay or deliver, as the case may be, cash, shares of Class A Common Stock or a combination of cash and shares of Class A Common Stock, at our election, in the manner and subject to the terms and conditions provided in the Indenture.

2024 Notes

In June 2022, using proceeds from the issuance of the 2027 Notes, we retired approximately \$148.2 million principal amount of our convertible senior notes which mature in 2024 (the "2024 Notes" and together with the 2027 Notes, the "Convertible Notes"), by paying cash of approximately \$192.4 million including accrued and unpaid interest.

Credit Agreement

In June 2022, we amended our \$150.0 million credit facility to, among other things, permit the issuance of the 2027 Notes and extend the maturity date of the credit facility to December 15, 2025.

Impact of COVID-19

In March 2020, The World Health Organization declared the outbreak of COVID-19 a pandemic and a public health emergency of international concern. The global spread of COVID-19, including new and emerging variants, has created significant volatility and uncertainty since March 2020 and may continue into the future.

We are unable to accurately predict the full impact that COVID-19 will have due to numerous uncertainties, including the full scope of the disease, the duration of the outbreak, the number and intensity of subsequent waves of infections, actions that may be taken by governmental authorities, the impact to the businesses of our customers and partners, the development of treatments and vaccines, and other factors identified in Part I, Item 1A – Risk Factors included in our Annual Report on Form 10-K for the year ended December 31, 2021. We will continue to evaluate the nature and extent of the impact to our business, consolidated results of operations, and financial condition.

Factors Affecting our Performance

We believe that our future success will depend on many factors, including those described below. While these areas present significant opportunity, they also present risks that we must manage to achieve successful results. If we are unable to address these challenges, our business, operating results and prospects could be harmed. Please see "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2021.

Seasonality and quarterly results

Our billings have historically been highest in the first and fourth quarters of any calendar year and may vary in future quarters. The timing of recording billings and the corresponding effect on our cash flows may vary due to the seasonality of the purchasing and payment patterns of our customers. In addition, the timing of the recognition of revenue, the amount and timing of operating expenses, including employee compensation, sales and marketing activities, and capital expenditures, may vary from quarter-to-quarter which may cause our reported results to fluctuate significantly. In addition, we may choose to grow our business for the long-term rather than to optimize for profitability or cash flows for a particular shorter-term period. This seasonality or the occurrence of any of the factors above may cause our results of operations to vary and our financial statements may not fully reflect the underlying performance of our business.

Integration of recent acquisitions

We believe that our recent acquisitions result in certain benefits, including expanding our portfolio of software and products and enabling us to better serve our customers' requests for data analytics and simulation technology. However, to realize some of these anticipated benefits, the acquired businesses must be successfully integrated. The success of these acquisitions will depend in part on our ability to realize these anticipated benefits. We may fail to realize the anticipated benefits of these acquisitions for a variety of reasons.

Foreign currency fluctuations

Because of our substantial international operations, we are exposed to foreign currency risks that arise from our normal business operations, including in connection with our transactions that are denominated in foreign currencies, including the Euro, British Pound Sterling, Indian Rupee, Japanese Yen, and Chinese Yuan. To identify changes in our underlying business without regard to the impact of currency fluctuations, we evaluate certain of our operating results both on an as reported basis, as well as on a constant currency basis. For the remainder of our current fiscal year, we anticipate that our revenues and profit may be adversely impacted by changes in foreign currency rates.

Business Segments

We have identified two reportable segments: Software and Client Engineering Services:

- Software —Our Software segment includes software and software related services. The software component of this segment includes our portfolio of software products including our solvers and optimization technology products, high-performance computing software applications and hardware products, modeling and visualization tools, data analytics and analysis products, IoT platform and analytics tools, as well as support and the complementary software products we offer through our Altair Partner Alliance, or APA. The APA includes technologies ranging from computational fluid dynamics and fatigue, to manufacturing process simulation and cost estimation. The software related services component of this segment includes consulting, and training focused on product design and development expertise and analysis from the component level up to complete product engineering at any stage of the lifecycle.
- Client Engineering Services —Our client engineering services, or CES, segment provides client engineering services to support our customers with long-term, ongoing expertise. We operate our CES business by hiring engineers and data scientists for placement at a customer site for specific customer-directed assignments. We employ and pay them only for the duration of the placement.

Our other businesses which do not meet the criteria to be separate reportable segments are combined and reported as "Other" which represents innovative services and products, including toggled, our LED lighting business. toggled is focused on developing and selling next-generation solid state lighting technology along with communication and control protocols based on our intellectual property for the direct replacement of fluorescent light tubes with LED lamps. Other businesses combined within Other include potential services and product concepts that are still in development stages.

For additional information about our reportable segments and other businesses, see Note 14 in the Notes to consolidated financial statements in Item 1, Part I of this Quarterly Report on Form 10-Q.

Results of operations

Comparison of the three and nine months ended September 30, 2022 and 2021

The following table sets forth the results of operations and the period-over-period percentage change in certain financial data for the three and nine months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		Increase / (decrease)	Nine Mont Septem	Increase / (decrease)		
(in thousands)	 2022		2021	%	2022	2021	<u></u> %
Revenue:							
Software	\$ 103,765	\$	102,289	1 % \$	361,555	\$ 331,388	9%
Software related services	 6,706		7,650	(12%)_	23,143	23,229	(0%)
Total software and related services	110,471		109,939	0%	384,698	354,617	8%
Client engineering services	7,355		10,060	(27%)	22,414	31,005	(28%)
Other	 1,525		1,308	17%	4,676	5,760	(19%)
Total revenue	119,351		121,307	(2%)	411,788	391,382	5 %
Cost of revenue:							
Software	15,604		16,464	(5%)	50,014	49,074	2 %
Software related services	5,240		5,707	(8%)	16,739	17,560	(5%)
Total software and related services	20,844		22,171	(6%)	66,753	66,634	0%
Client engineering services	5,835		7,982	(27%)	18,390	25,163	(27%)
Other	 1,230		1,348	(9%)_	3,892	5,072	(23%)
Total cost of revenue	 27,909		31,501	(11 %)	89,035	96,869	(8%)
Gross profit	91,442		89,806	2 %	322,753	294,513	10%
Operating expenses:							
Research and development	48,781		35,839	36%	138,352	112,872	23 %
Sales and marketing	39,244		30,589	28%	114,042	94,568	21%
General and administrative	24,677		22,196	11 %	72,613	67,983	7 %
Amortization of intangible assets	6,571		4,432	48 %	18,682	13,924	34%
Other operating income, net	 (2,835)		(1,324)	114%	(9,383)	(2,526)	271 %
Total operating expenses	116,438		91,732	27 %	334,306	286,821	17%
Operating (loss) income	(24,996)		(1,926)	1,198%	(11,553)	7,692	NM
Interest expense	1,566		3,037	(48%)	2,851	8,998	(68%)
Other expense, net	 2,107		124	NM	26,082	1,667	NM
Loss before income taxes	(28,669)		(5,087)	464 %	(40,486)	(2,973)	1,262 %
Income tax expense	4,579		3,022	52 %	15,008	4,424	239 %
Net loss	\$ (33,248)	\$	(8,109)	NM \$	(55,494)	\$ (7,397)	NM
Other financial information:	 						
Billings ⁽¹⁾	\$ 122,939	\$	117,156	5%\$	419,698	\$ 380,731	10%
Adjusted EBITDA ⁽²⁾	\$ 6,829	\$	14,832	(54%)\$	69,859	\$ 61,288	14%
Net cash provided by operating activities				\$	26,534	\$ 55,594	(52%)
Free cash flow ⁽³⁾				\$	19,813	\$ 48,783	(59%)

NM Not meaningful.

⁽¹⁾ Billings consists of our total revenue plus the change in our deferred revenue, excluding deferred revenue from acquisitions. For more information about Billings and our other non-GAAP financial measures and reconciliations of our non-GAAP financial measures to the most directly comparable financial measures calculated and presented in accordance with GAAP, see "Non-GAAP financial measures" contained herein.

⁽²⁾ We define Adjusted EBITDA as net income (loss) adjusted for income tax expense (benefit), interest expense, interest income and other, depreciation and amortization, stock-based compensation expense, restructuring charges, asset impairment charges and other special items as determined by management. For more information about Adjusted EBITDA and our other non-GAAP financial measures and reconciliations of our non-GAAP financial measures to the most directly comparable financial measure calculated and presented in accordance with GAAP, see "Non-GAAP financial measures" contained herein.

⁽³⁾ We define Free Cash Flow as net cash provided by operating activities less capital expenditures. For a reconciliation of Free Cash Flow, see "Non-GAAP financial measures" contained herein.

Three months ended September 30, 2022 and 2021

Revenue

Software

	Three Mon Septem			Period-to-period change				
(in thousands)	 2022		2021		\$	%		
Software revenue	\$ 103,765	\$	102,289	\$	1,476		1 %	
As a percent of software segment revenue	94 %	ó	93 %	Ď				
As a percent of consolidated revenue	87 %	ó	84 %	Ó				

Software revenue increased 1% or for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021, or 10% in constant currency. The increase was driven by growth across all three geographic regions, and supported by increases in new and expansion business, as well as retention in our renewal base.

Software related services

	Three Mon Septem				Period-to-perio	d change	
(in thousands)	2022		2021		\$	%	
Software related services revenue	\$ 6,706	\$	7,650	\$	(944)		(12%)
As a percent of software segment revenue	6%	ó	7%	o			
As a percent of consolidated revenue	6%	o	6%	o			

Software related services revenue decreased \$0.9 million for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. The decrease was a result of fewer projects in the current quarter.

Client engineering services

	Three Mon Septem				Period-to-period change			
(in thousands)	 2022		2021		\$	%		
Client engineering services revenue	\$ 7,355	\$	10,060	\$	(2,705)	(27%)		
As a percent of consolidated revenue	6%	ó	8%	ó				

CES revenue decreased 27% for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. This decrease was the result of fluctuations in customer demand for these services and reduced CES staff working hours. In addition, we had difficulty filling some CES positions due to a challenging labor market in the U.S.

Other

	Three Mon Septem				Period-to-period change		
(in thousands)	 2022		2021		\$	%	
Other revenue	\$ 1,525	\$	1,308	\$	217	17%	
As a percent of consolidated revenue	1 %)	1 %	6			

Other revenue remained consistent for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021.

Cost of revenue

Software

	Three Mon Septem				Period-to-period change			
(in thousands)	 2022		2021		\$	%		
Cost of software revenue	\$ 15,604	\$	16,464	\$	(860)		(5%)	
As a percent of software revenue	15%	ó	16%	ó				
As a percent of consolidated revenue	13 %	0	14%	0				

Cost of software revenue decreased \$0.9 million, or 5%, for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. Hardware costs and third-party royalty costs decreased \$1.5 million and \$0.4 million, respectively. These decreases were partially offset by a \$0.9 million increase in stock-based compensation expense.

Software related services

	Three Months Ended September 30,						Period-to-period change					
(in thousands)		2022		2021		\$	%	<u>-</u>				
Cost of software related services revenue	\$	5,240	\$	5,707	\$	(467)		(8%)				
As a percent of software related services revenue		78 %)	75 %	o							
As a percent of consolidated revenue		4 %)	5 %	o							

Cost of software related services revenue decreased 8% for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. The decrease is primarily a result of a reduction in employee-related expense in the current year.

Client engineering services

		Septem			Period-to-pe	eriod change	
(in thousands)	2	022	2021		\$	%	
Cost of client engineering services revenue	\$	5,835	\$ 7,982	\$	(2,147)	(2)	7%)
As a percent of client engineering services revenue		79 %	79 %)			
As a percent of consolidated revenue		5 %	7 %)			

Thusa Months Ended

Cost of CES revenue decreased 27% for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021, consistent with the change in CES revenue. We have managed CES headcount and compensation to match our customers' demand for our staffing resources, and therefore our costs have moved accordingly.

Other

(in thousands)	Three Mon Septem				Period-to-perio	od change	
	 2022		2021		\$	%	
Cost of other revenue	\$ 1,230	\$	1,348	\$	(118)		(9%)
As a percent of other revenue	81 %	ó	103 %	6			
As a percent of consolidated revenue	1 %	Ó	1 %	6			

Cost of other revenue decreased 9% for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021.

Gross profit

	Three Mon					
(in thousands)	September 30,					eriod change
	2022		2021		\$	%
Gross profit	\$ 91,442	\$	89,806	\$	1,636	2 %
As a percent of consolidated revenue	77 %)	74 %	6		

Gross profit increased by \$1.6 million, or 2%, for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. This increase in gross profit was primarily attributable to the decrease in cost of revenue.

Operating expenses

Operating expenses, as discussed below, support all the products and services that we provide to our customers and, as a result, they are reported and discussed in the aggregate.

Research and development

	Three Months Ended							
	 September 30,					period change		
(in thousands)	 2022		2021		\$	%		
Research and development	\$ 48,781	\$	35,839	\$	12,942	36%		
As a percent of consolidated revenue	41 %	ó	30%	, 0				

Research and development expenses increased by \$12.9 million, or 36%, for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. Stock-based compensation expense increased \$6.3 million and employee compensation and related expense increased \$5.8 million, primarily a result of increased headcount and annual merit increases in the current year period.

Sales and marketing

		i nree Mon					
		September 30,					eriod change
(in thousands)		2022		2021		\$	%
Sales and marketing	\$	39,244	\$	30,589	\$	8,655	28 %
As a percent of consolidated revenue		33 %	ò	25 %	ó		

Sales and marketing expenses increased by \$8.7 million, or 28%, for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. Stock-based compensation expense increased \$4.1 million, employee compensation and related expense increased \$1.7 million, advertising and trade show related expenses increased \$1.3 million, cloud hosting and software maintenance expense increased \$0.6 million, and travel costs increased \$0.5 million for the three months ended September 30, 2022.

General and administrative

		Three Mon Septem				Period-to-period change			
(in thousands)		2022	ber bo	2021		\$	%		
General and administrative	\$	24,677	\$	22,196	\$	2,481	11 %		
As a percent of consolidated revenue		21 %)	18 %	,)				

General and administrative expenses increased by \$2.5 million, or 11%, for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. Professional fees increased \$1.9 million and stock-based compensation expense and travel costs both increased \$0.4 million in the current period.

Amortization of intangible assets

	Three Mon					
(in thousands)	September 30,					riod change
	 2022		2021		\$	%
Amortization of intangible assets	\$ 6,571	\$	4,432	\$	2,139	48 %
As a percent of consolidated revenue	6%	<u></u>	40	6		

Amortization of intangible assets increased by \$2.1 million, or 48%, for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. Amortization of intangible assets in the current year period increased primarily as a result of recent acquisitions, partially offset by a reduction in amortization because of fully amortized intangibles.

Other operating income, net

	Three Months I September		Period-to-period change			
(in thousands)	 2022	2021	\$	%		
Other operating income, net	\$ (2,835) \$	(1,324)	\$ 1,511	114 %		
As a percent of consolidated revenue	(2%)	(1%	5)			

Other operating income, net increased \$1.5 million for the three months ended September 30, 2022 as compared to the three months ended September 30, 2021, primarily due to a \$2.2 million gain recognized on the mark-to-market adjustment of contingent consideration associated with the World Programming acquisition. This gain was partially offset by a \$0.7 million decrease in grant income.

Interest expense

	Three Mon						
	Septem		Period-to-period change				
(in thousands)	 2022		2021		\$	%	
Interest expense	\$ 1,566	\$	3,037	\$	(1,471)	(48%)	
As a percent of consolidated revenue	1 %	0	3 %	ó			

Interest expense decreased \$1.5 million for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021, primarily due to the adoption of ASU 2020-06 on January 1, 2022. As a result of this adoption, we account for the 2024 Notes as a single liability, which eliminates the amortization of the debt discount. Prior to January 1, 2022, the carrying amount of the equity component was recorded as a debt discount and amortized to interest expense. Interest expense related to the amortization of debt issuance costs was \$0.5 million for the three months ended September 30, 2022, while interest expense related to the amortization of debt discount and issuance costs was \$2.9 million for the three months ended September 30, 2021. Interest costs on the 2027 Notes issued in the second quarter were \$1.0 million for the three months ended September 30, 2022.

Other expense, net

	Three Mor Septen		Period-to-period change			
(in thousands)	 2022		2021		\$	%
Other expense, net	\$ 2,107	\$	124	\$	1,983	NM
As a percent of consolidated revenue	2 %	, 0	0%	6		

Other expense, net increased by \$2.0 million for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. The increase in expense was primarily a result of \$3.6 million increase in losses from foreign currency fluctuations in the United States dollar relative to other functional currencies during the three months ended September 30, 2022, partially offset by a \$1.6 million increase in interest income in the current year.

Income tax expense

	Three Mor Septen	nths End nber 30,		Period-to-period change			
(in thousands)	 2022		2021		\$	%	
Income tax expense	\$ 4,579	\$	3,022	\$	1,557		52 %

The effective tax rate was -16% and -59% for the three months ended September 30, 2022 and 2021, respectively. The tax rate is affected by our status as a U.S. resident taxpayer, the tax rates in the U.S. and other jurisdictions in which we operate, the relative amount of income earned by jurisdiction and the relative amount of losses or income for which no benefit or expense is recognized due to a valuation allowance. Our effective tax rate for the three months ended September 30, 2022 and 2021, also includes net discrete expense of \$0.9 million and \$1.2 million, respectively, primarily related to changes in tax laws, withholding taxes on royalties, changes in reserves, changes in accruals for unremitted earnings and other adjustments.

Net loss

	Three Months Ended September 30,						Period-to-period change					
(in thousands)		2022		2021		\$	%					
Net loss	\$	(33,248)	\$	(8,109)	\$	(25,139)		NM				

Net loss increased by \$25.1 million for the three months ended September 30, 2022, as compared to the three months ended September 30, 2021. The increase in net loss was primarily attributable to an increase in operating expenses, largely stock-based compensation expense, and the strong USD comparative in the current year period, as described above.

Nine months ended September 30, 2022 and 2021

Revenue

Software

		Nine Mon Septen			Period-to-period change			
(in thousands)		2022		2021		\$	%	
Software revenue	\$	361,555	\$	331,388	\$	30,167		9%
As a percent of software segment revenue		94%	ó	93%	6			
As a percent of consolidated revenue		88%	ó	85%	6			

The 9% increase in our software revenue for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021, or 15% in constant currency. The increase was driven by growth in software license revenue across all three geographic regions, and supported by increases in new and expansion business, as well as retention in our renewal base.

Software related services

	Nine Months Ended September 30,					Period-to-period change			
(in thousands)	2022			2021		\$	%		
Software related services revenue	\$	23,143	\$	23,229	\$	(86)		(0%)	
As a percent of software segment revenue		6%)	7 %	o				
As a percent of consolidated revenue		6%)	6%	o				

Software related services revenue remained consistent for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021.

Client engineering services

	Nine Months Ended September 30,				Period-to-period change			
(in thousands)	 2022		2021		\$	%		
Client engineering services revenue	\$ 22,414	\$	31,005	\$	(8,591)	(28 %)		
As a percent of consolidated revenue	5%	,)	8%	ó				

CES revenue decreased 28% for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. This decrease was the result of fluctuations in customer demand for these services and reduced CES staff working hours. In addition, we had difficulty filling some CES positions due to a challenging labor market in the U.S.

Other

	Nine Mon Septem				Period-to-period change			
(in thousands)	 2022		2021		\$	%		
Other revenue	\$ 4,676	\$	5,760	\$	(1,084)		(19%)	
As a percent of consolidated revenue	1 %)	1 %	Ó				

The 19% decrease in other revenue for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021, was due to reduced unit sales in the second quarter by toggled, our LED lighting business.

Cost of revenue

Software

	Nine Mont Septem				Period-to-pe	riod change	
(in thousands)	 2022		2021		\$	%	
Cost of software revenue	\$ 50,014	\$	49,074	\$	940	2 %)
As a percent of software revenue	14 %)	15%	6			
As a percent of consolidated revenue	12 %)	13 %	6			

Cost of software revenue increased \$0.9 million, or 2%, for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. Stock-based compensation expense increased \$2.5 million and employee compensation and related expense increased \$2.1 million, primarily due to increased headcount in the current year. These increases were partially offset by decreases in hardware costs, restructuring costs and third-party consulting fees of \$1.8 million, \$0.9 million and \$0.4 million, respectively. The restructuring costs were non-recurring in the current period.

Software related services

		Nine Mon Septen	iths End aber 30			Period-to-perio	d change	
(in thousands)		2022		2021		\$	%	
Cost of software related services revenue	\$	16,739	\$	17,560	\$	(821)		(5%)
As a percent of software related services revenue		72 %	ó	76%	6			
As a percent of consolidated revenue		4 %	0	4 %	6			

Cost of software related services revenue decreased \$0.8 million, or 5%, for nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021, primarily due to a decrease in employee-related expense.

Client engineering services

	Nine Mon Septen				Period-to-peri	od change
(in thousands)	 2022		2021		\$	%
Cost of client engineering services revenue	\$ 18,390	\$	25,163	\$	(6,773)	(27%)
As a percent of client engineering services revenue	82 %)	81 %	ó		
As a percent of consolidated revenue	4%))	6%	ó		

Cost of CES revenue decreased 27% for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021, consistent with the change in CES revenue. We have managed CES headcount and compensation to match our customers' demand for our staffing resources, and therefore our costs have moved accordingly.

	Nine Mon						
	 Septem	ıber 30 <u>,</u>			riod change		
(in thousands)	 2022		2021		\$	%	
Cost of other revenue	\$ 3,892	\$	5,072	\$	(1,180)		(23%)
As a percent of other revenue	83 %	,)	88%	ó			
As a percent of consolidated revenue	1 %	,)	1 %	ó			

Cost of other revenue decreased 23% for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021, consistent with the decrease in other revenue.

Gross profit

(in thousands)	Nine Mon Septem				Period-to-period change		
	 2022		2021		\$	%	_
Gross profit	\$ 322,753	\$	294,513	\$	28,240	1	0%
As a percent of consolidated revenue	78 %	, D	75%	ó			

Gross profit increased by \$28.2 million, or 10%, for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. This increase in gross profit was primarily attributable to the increase in software revenue and decrease in cost of revenue.

Operating expenses

Operating expenses, as discussed below, support all the products and services that we provide to our customers and, as a result, they are reported and discussed in the aggregate.

Research and development

	Nine Mon					
	Septem		Period-to-pe	riod change		
(in thousands)	2022		2021		\$	%
Research and development	\$ 138,352	\$	112,872	\$	25,480	23 %
As a percent of consolidated revenue	34 %	Ó	29%	6		

Research and development expenses increased by \$25.5 million, or 23%, for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. Stock-based compensation expense increased \$15.4 million, employee compensation and related expense increased \$11.2 million, primarily due to increased headcount. Cloud hosting and facilities expense increased \$0.8 million and \$0.6 million, respectively, in the current year. These increases were partially offset by decreases in restructuring costs and consulting expense of \$1.7 million each. The restructuring costs were non-recurring in the current period.

Sales and marketing

(in thousands)	Nine Mon Septem				Period-to-period change		
	 2022		2021	-	\$	%	
Sales and marketing	\$ 114,042	\$	94,568	\$	19,474	21 %	
As a percent of consolidated revenue	28%	, O	24%	ó			

Sales and marketing expenses increased by \$19.5 million, or 21%, for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. Stock-based compensation expense increased \$1.7 million, employee compensation and related expense increased \$3.6 million, primarily due to increased headcount, advertising and trade show related expenses increased \$3.0 million, cloud hosting and software maintenance expense increased \$1.4 million, and travel costs increased \$1.1 million for the nine months ended September 30, 2022. These increases were partially offset by a decrease in restructuring costs of \$1.8 million which were non-recurring in the current period.

General and administrative

	Nine Months Ended								
(in thousands)	 September 30,								
	 2022		2021		\$	%	_		
General and administrative	\$ 72,613	\$	67,983	\$	4,630	7	%		
As a percent of consolidated revenue	18%)	17%	6					

General and administrative expenses increased by \$4.6 million, or 7%, for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. Professional fees increased \$2.9 million, stock-based compensation expense increased \$1.8 million, travel costs increased \$1.1 million, and cloud hosting and software maintenance expense increased \$0.7 million for the nine months ended September 30, 2022. These increases were partially offset by decreases in employee compensation and related expense, facilities costs, and restructuring costs of \$0.6 million, \$0.5 million and \$0.5 million, respectively.

Amortization of intangible assets

(in thousands)	Septem				Period-to-period change		
	2022	2021		\$		%	
Amortization of intangible assets	\$ 18,682	\$	13,924	\$	4,758	34 %	
As a percent of consolidated revenue	5%)	4%	6			

Amortization of intangible assets increased by \$4.8 million, or 34%, for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. Amortization of intangible assets in the current year period increased primarily as a result of recent acquisitions, partially offset by a reduction in amortization because of fully amortized intangibles.

Other operating income, net

	September 30		Period-to-period change		
(in thousands)	 2022	2021	\$	%	
Other operating income, net	\$ (9,383) \$	(2,526)	6,857	271 %	
As a percent of consolidated revenue	(2%)	(1%)			

Nine Months Ended

Other operating income, net increased \$6.9 million for the nine months ended September 30, 2022 as compared to the nine months ended September 30, 2021, primarily due to a \$7.5 million gain recognized on the mark-to-market adjustment of contingent consideration associated with the World Programming acquisition. This gain was partially offset by a \$0.9 million decrease in grant income for the nine months ended September 30, 2022.

Interest expense

(in thousands)	Nine Mon Septen	ths End iber 30,			Period-to-period change			
	 2022		2021		\$	%		
Interest expense	\$ 2,851	\$	8,998	\$	(6,147)		(68%)	
As a percent of consolidated revenue	1 %	ó	2 %	ó				

Interest expense decreased \$6.1 million for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021, primarily due to the adoption of ASU 2020-06 on January 1, 2022. As a result of this adoption, we account for the 2024 Notes as a single liability, which eliminates the amortization of the debt discount. Prior to January 1, 2022, the carrying amount of the equity component was recorded as a debt discount and amortized to interest expense. Interest expense related to the amortization of debt issuance costs was \$1.3 million for the nine months ended September 30, 2022, while interest expense related to the amortization of debt discount and issuance costs was \$8.5 million for the nine months ended September 30, 2021. Interest costs on the 2027 Notes were \$1.2 million for the nine months ended September 30, 2022.

Other expense, net

	Nine Mon Septem		Period-to-period change			
(in thousands)	2022		2021		\$	%
Other expense, net	\$ 26,082	\$	1,667	\$	24,415	NM
As a percent of consolidated revenue	6%	ó	0%	6		

Other expense, net increased by \$24.4 million for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. We recognized expense of \$16.6 million on the repurchase of a portion of our 2024 Notes, and an increase of \$9.5 million in net foreign currency losses during the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. These losses were partially offset by a \$1.7 million increase in interest income in the current year.

Income tax expense

	September 30, Period-to-period cha							
(in thousands)	202		2021		\$		%	
Income tax expense	\$	15,008	\$	4,424	\$	10,584	239 %	

Nine Months Ended

The effective tax rate was -37% and -149% for the nine months ended September 30, 2022 and 2021 respectively. The tax rate is affected by our status as a U.S. resident taxpayer, the tax rates in the U.S. and other jurisdictions in which we operate, the relative amount of income earned by jurisdiction and the relative amount of losses or income for which no benefit or expense is recognized due to a valuation allowance. Our effective tax rate for the nine months ended September 30, 2022 and 2021, also includes net discrete expense of \$4.3 million and net discrete benefit of \$1.2 million, respectively, primarily related to changes in tax laws, withholding taxes on royalties, changes in reserves, changes in accruals for unremitted earnings and other adjustments.

Net loss

	September 30, Period-to-period change						eriod change
(in thousands)		2022		2021		\$	%
Net loss	\$	(55,494)	\$	(7,397)	\$	(48,097)	NM

Net loss increased by \$48.1 million for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021. The increase in net loss was largely attributable to expense recognized on the repurchase of a portion of our 2024 Notes, increased stock-based compensation expense and increased foreign currency losses in the current year period, partially offset by an increase in revenue and a gain on the mark-to-market adjustment of contingent consideration, as described above.

Non-GAAP financial measures

We monitor the following key non-GAAP (United States generally accepted accounting principles) financial and operating metrics to help us evaluate our business, measure our performance, identify trends affecting our business, formulate business plans and make strategic decisions. In analyzing and planning for our business, we supplement our use of GAAP financial measures with non-GAAP financial measures, including Billings as a liquidity measure, Adjusted EBITDA as a performance measure and Free Cash Flow as a liquidity measure.

	Three Months Ended September 30,				Nine Mor Septer		
(in thousands)	 2022 2021		2022		2021		
Other financial data:							
Billings	\$ 122,939	\$	117,156	\$	419,698	\$	380,731
Adjusted EBITDA	\$ 6,829	\$	14,832	\$	69,859	\$	61,288
Free Cash Flow				\$	19,813	\$	48,783

Billings. Billings consists of our total revenue plus the change in our deferred revenue, excluding deferred revenue from acquisitions during the period. Given that we generally bill our customers at the time of sale, but typically recognize a portion of the related revenue ratably over time, management believes that Billings is a meaningful way to measure and monitor our ability to provide our business with the working capital generated by upfront payments from our customers.

Adjusted EBITDA. We define Adjusted EBITDA as net income (loss) adjusted for income tax expense (benefit), interest expense, interest income and other, depreciation and amortization, stock-based compensation expense, restructuring charges, asset impairment charges and other special items as determined by management. Our management team believes that Adjusted EBITDA is a meaningful measure of performance as it is commonly utilized by management and the investment community to analyze operating performance in our industry.

Free Cash Flow. Free Cash Flow is a non-GAAP measure that we calculate as cash flow provided by operating activities less capital expenditures. Management believes that Free Cash Flow is useful in analyzing our ability to service and repay debt, when applicable, and return value directly to stockholders.

These non-GAAP financial measures reflect an additional way of viewing aspects of our business that, when viewed with our GAAP results and the accompanying reconciliations to corresponding GAAP financial measures included in the tables below, may provide a more complete understanding of factors and trends affecting our business. These non-GAAP financial measures should not be relied upon to the exclusion of GAAP financial measures and are by definition an incomplete understanding of the Company and must be considered in conjunction with GAAP measures.

We believe that the non-GAAP measures disclosed herein are only useful as an additional tool to help management and investors make informed decisions about our financial and operating performance and liquidity. By definition, non-GAAP measures do not give a full understanding of the Company. To be truly valuable, they must be used in conjunction with the comparable GAAP measures. In addition, non-GAAP financial measures are not standardized. It may not be possible to compare these financial measures with other companies' non-GAAP financial measures having the same or similar names. We strongly encourage investors to review our consolidated financial statements and the notes thereto in their entirety and not to rely on any single financial measure.

Reconciliation of non-GAAP financial measures

The following tables provides reconciliations of revenue to Billings, net income (loss) to Adjusted EBITDA, and net cash provided by operating activities to Free Cash Flow:

Billings

	Three Months Ended September 30,				Nine Months Ende September 30,		
(in thousands)	2022		2021		2022		2021
Revenue	\$ 119,351	\$	121,307	\$	411,788	\$	391,382
Ending deferred revenue	116,540		84,428		116,540		84,428
Beginning deferred revenue	(112,926)		(88,579)		(106,032)		(95,079)
Deferred revenue acquired	(26)				(2,598)		_
Billings	\$ 122,939	\$	117,156	\$	419,698	\$	380,731

Adjusted EBITDA

	Three Months Ended September 30,			Nine Months Ended September 30,			
(in thousands)	 2022		2021		2022		2021
Net loss	\$ (33,248)	\$	(8,109)	\$	(55,494)	\$	(7,397)
Income tax expense	4,579		3,022		15,008		4,424
Stock-based compensation expense	22,710		10,933		62,524		31,229
Interest expense	1,566		3,037		2,851		8,998
Depreciation and amortization	8,273		6,175		24,092		19,355
Restructuring expense	_		(124)		_		4,954
Special adjustments, interest income and other (1)	2,949		(102)		20,878		(275)
Adjusted EBITDA	\$ 6,829	\$	14,832	\$	69,859	\$	61,288

⁽¹⁾ The three months ended September 30, 2022, includes \$6.8 million currency losses on acquisition-related intercompany loans and a \$2.2 million gain from the mark-to-market adjustment of contingent consideration associated with the World Programming acquisition. The nine months ended September 30, 2022, includes \$16.6 million expense on repurchase of convertible senior notes, \$13.7 million currency losses on acquisition-related intercompany loans and a \$7.5 million gain from the mark-to-market adjustment of contingent consideration associated with the World Programming acquisition.

Free Cash Flow

	Nine l	Nine Months Ended September 30,				
(in thousands)	2022		2021			
Net cash provided by operating activities (1)	\$	26,534	\$	55,594		
Capital expenditures		(6,721)		(6,811)		
Free cash flow (1)	\$	19,813	\$	48,783		

⁽¹⁾ The nine months ended September 30, 2022, includes \$65.9 million payment for legal judgement acquired in December 2021.

Recurring software license rate

A key factor to our success is our recurring software license rate which we measure through Billings, primarily derived from annual renewals of our existing subscription customer agreements. Recurring revenue streams allow us to create more consistent, predictable cash flows and drive greater long-term customer value. We believe the recurring software license rate is a key factor to our success and we monitor this measure to ensure our go-to-market strategy is driving long-term success of our business.

We calculate our recurring software license rate for a particular period by dividing (i) the sum of software term-based license Billings, software license maintenance Billings, and 20% of software perpetual license Billings which we believe approximates maintenance as an element of the arrangement by (ii) the total software license Billings including all term-based subscriptions, maintenance, and perpetual license billings from all customers for that period. For the nine months ended September 30, 2022 and 2021, our recurring software license rate was 93% and 91%, respectively. The recurring software license rate may vary from period to period.

Liquidity and capital resources

As of September 30, 2022, our principal sources of liquidity were \$311.9 million in cash and cash equivalents and \$150.0 million availability on our credit facility. We have outstanding debt in the form of our Convertible Notes with a \$311.8 million principal amount as of September 30, 2022.

During the period ended September 30, 2022, the conditions allowing holders of the Convertible Notes to convert were not met. Therefore, the Convertible Notes were classified as long-term debt on the consolidated balance sheet as of September 30, 2022. We have the ability to settle the Convertible Notes in cash, shares of our common stock, or a combination of cash and shares of our common stock at our own election.

During the period ended September 30, 2022, under our stock repurchase program, we repurchased 85,119 shares of our Class A Common Stock at an average price of \$51.52 per share for a total cost of approximately \$4.4 million. We did not make any purchases under our stock repurchase program during the three months ended September 30, 2022. As of September 30, 2022, approximately \$45.6 million of shares remained available for repurchase under the program.

We continue to evaluate possible acquisitions and other strategic transactions designed to expand our business. As a result, our expected uses of cash could change, our cash position could be reduced, or we may incur additional debt obligations to the extent we complete additional acquisitions.

Our existing cash and cash equivalents may fluctuate during fiscal 2022, due to changes in our planned cash expenditures, including changes in incremental costs such as direct costs and integration costs related to acquisitions. Cash from operations could also be affected by various risks and uncertainties, including, but not limited to, the effects of COVID-19 and global unrest. It is possible that certain customers may unilaterally decide to extend payments on accounts receivable, however our customer base is comprised primarily of larger organizations with typically strong liquidity and capital resources.

We believe that our existing cash balances, together with funds generated from operations and amounts available under our credit facility, will be sufficient to finance our operations and meet our foreseeable cash requirements for the next twelve months. We also believe that our financial resources, along with managing discretionary expenses, will allow us to manage the impact of COVID-19 on our business operations for the foreseeable future and withstand global unrest, which could include reductions in revenue and delays in payments from customers and partners. We will continue to evaluate our financial position as developments evolve relating to COVID-19 and global unrest.

Revolving credit facility

We have a \$150.0 million credit facility with a maturity date of December 15, 2025 ("2019 Amended Credit Agreement"). The 2019 Amended Credit Agreement allows us to request that the aggregate commitments under the 2019 Amended Credit Agreement be increased by up to \$50.0 million for a total of \$200.0 million, subject to certain conditions. In June 2022, we amended our 2019 Amended Credit Agreement to, among other things, permit the issuance of the 2027 Notes and extend the maturity date of the credit facility to December 2025.

As of September 30, 2022, there were no outstanding borrowings under the 2019 Amended Credit Agreement and there was \$150.0 million available for future borrowing. The 2019 Amended Credit Agreement is available for general corporate purposes, including working capital, capital expenditures and permitted acquisitions. As of September 30, 2022, we were in compliance with the financial covenants.

For additional information about the 2019 Amended Credit Agreement, refer to our consolidated financial statements for the year ended December 31, 2021, included in our Annual Report on Form 10-K filed with the SEC on February 28, 2022.

Cash flows

As of September 30, 2022, we had cash and cash equivalents of \$311.9 million available for working capital purposes, acquisitions, and capital expenditures; \$228.8 million of this amount was held in the United States and \$77.7 million was held in the APAC and EMEA regions with the remainder held in Canada, Mexico, and South America.

Other than statutory limitations, there are no significant restrictions on the ability of our subsidiaries to pay dividends or make other distributions to Altair. Based on our current liquidity needs and repatriation strategies, we expect that we can manage our global liquidity needs without material adverse tax implications.

The following table summarizes our cash flows for the periods indicated:

	Nine Months Ended September 30,			
(in thousands)	2022 2021			2021
Net cash provided by operating activities	\$	26,534	\$	55,594
Net cash used in investing activities		(151,173)		(12,911)
Net cash provided by financing activities		35,152		173,735
Effect of exchange rate changes on cash, cash equivalents and restricted cash		(12,142)		(1,951)
Net (decrease) increase in cash, cash equivalents and restricted cash	\$	(101,629)	\$	214,467

Net cash provided by operating activities

Net cash provided by operating activities for the nine months ended September 30, 2022, was \$26.5 million, which reflects a decrease of \$29.1 million compared to the nine months ended September 30, 2021. This decrease was the result of a \$65.9 million payment in January on an existing legal judgment against World Programming, and partially offset by changes to our working capital position for the nine months ended September 30, 2022, as compared to the nine months ended September 30, 2021.

Net cash used in investing activities

Net cash used in investing activities for the nine months ended September 30, 2022, was \$151.2 million, which reflects an increase of \$138.3 million compared to the nine months ended September 30, 2021. For the nine months ended September 30, 2002, we paid \$96.5 million for the acquisition of RapidMiner, and an additional \$42.2 million related to other business acquisitions and investments.

Net cash provided by financing activities

Net cash provided by financing activities for the nine months ended September 30, 2022, was \$35.2 million, which reflects a decrease of \$138.6 million compared to the nine months ended September 30, 2021. For the nine months ended September 30, 2022, we received aggregate proceeds of \$224.3 million from the issuance of our 2027 Notes, net of certain discounts and commissions, partially offset by \$192.4 million proceeds used for the repurchase of a portion of our 2024 Notes. For the nine months ended September 30, 2021, we issued 2.9 million shares of our Class A common stock in a private placement for aggregate net proceeds of \$200.0 million and made a payment on our revolving credit facility of \$30.0 million.

Effect of exchange rate changes on cash, cash equivalents and restricted cash

There were adverse effects of exchange rate changes on cash, cash equivalents and restricted cash of \$12.1 million and \$2.0 million, respectively, for the nine months ended September 30, 2022, and September 30, 2021.

Commitments

As of September 30, 2022, our principal commitments consist of our \$81.8 million and \$230.0 million convertible notes due in 2024 and 2027, respectively.

As of December 31, 2021, there was a balance payable on an existing legal judgment against World Programming. We paid this judgment in January 2022, for \$65.9 million.

There were no other material changes in our commitments as disclosed in our Annual Report on Form 10-K for the year ended December 31, 2021.

Recently issued accounting pronouncements

Effective January 1, 2022, we adopted Accounting Standards Update, or ASU, 2020-06 using the modified retrospective approach. As a result, our 2024 Notes are accounted for as a single liability measured at amortized cost, as no other embedded features require bifurcation and recognition as derivatives. Adoption of the new standard resulted in a decrease to Accumulated deficit of \$23.9 million, a decrease to Additional paid-in capital of \$50.0 million, and an increase to Convertible senior notes, net of \$26.1 million.

See Note 2 in the Notes to consolidated financial statements in Item 1, Part I of this Quarterly Report on Form 10-Q for a full description of the recent accounting pronouncements and our expectation of their impact, if any, on our results of operations and financial condition.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to certain global market risks, including foreign currency exchange risk and interest rate risk associated with our revolving credit facility.

Foreign Currency Risk

As a result of our substantial international operations, we are exposed to foreign currency risks that arise from our normal business operations, including in connection with our transactions that are denominated in foreign currencies. In addition, we translate sales and financial results denominated in foreign currencies into United States dollars for purposes of our consolidated financial statements. As a result, appreciation of the United States dollar against these foreign currencies generally will have a negative impact on our reported revenue and operating income while depreciation of the United States dollar against these foreign currencies will generally have a positive effect on reported revenue and operating income.

As of September 30, 2022, we do not have any foreign currency hedging contracts. Based on our current international operations, we do not plan on engaging in hedging activities in the near future.

Market Risk and Market Interest Risk

In June 2022, we issued \$230.0 million aggregate principal amount of 1.750% convertible senior notes due in 2027. In June 2019, we issued \$230.0 million aggregate principal amount of 0.250% convertible senior notes due 2024 of which \$148.2 million aggregate principal amount had been repurchased as of September 30, 2022. The 2027 Notes and 2024 Notes have fixed annual interest rates at 1.750% and 0.250%, respectively, and, therefore, we do not have economic interest rate exposure on our Convertible Notes. However, the value of the Convertible Notes is exposed to interest rate risk. Generally, the fair market value of our fixed interest rate Convertible Notes will increase as interest rates fall and decrease as interest rates rise. In addition, the fair values of the Convertible Notes are affected by our stock price. The fair value of the Convertible Notes will generally increase as our Class A common stock price increases in value and will generally decrease as our Class A common stock price declines in value. We carry the Convertible Notes at face value less unamortized issuance costs on our balance sheet, and we present the fair value for required disclosure purposes only.

As of September 30, 2022, we had cash, cash equivalents and restricted cash of \$312.4 million, consisting primarily of bank deposits and money market funds. As of September 30, 2022, we had no outstanding borrowings under our 2019 Amended Credit Agreement. Such interest-bearing instruments carry a degree of interest rate risk; however, historical fluctuations of interest expense have not been significant.

Interest rate risk relates to the gain/increase or loss/decrease we could incur on our debt balances and interest expense associated with changes in interest rates. Changes in interest rates would impact the amount of interest income we realize on our invested cash balances. It is our policy not to enter into derivative instruments for speculative purposes, and therefore, we hold no derivative instruments for trading purposes.

Item 4. Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rule 13a-15(e) or 15d-15(e) of the Exchange Act) that are designed to ensure that information required to be disclosed in periodic reports filed with the SEC under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures as defined in Rule 13(a)-15(e) under the Exchange Act as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of September 30, 2022.

Changes in Internal Control Over Financial Reporting

During the third quarter of 2022, we implemented a new enterprise resource planning ("ERP") system. This implementation resulted in changes to our reporting processes and our internal control over financial reporting, by automating certain manual procedures and standardizing business processes and reporting across the organization. We will continue to monitor our internal control over financial reporting under the new system, including evaluating the operating effectiveness of related key controls.

There have been no other changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended September 30, 2022, 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

World Programming

We acquired World Programming Limited and a related company (collectively, "World Programming") in December 2021. In 2010, SAS Institute, Inc. ("SAS") filed an action against World Programing in the United States District Court for the Eastern District of North Carolina (the "NC Court") alleging copyright infringement, breach of contract, fraudulent inducement to contract, and violations of the North Carolina Unfair and Deceptive Trade Practices Act (UDTPA). SAS was unsuccessful on its copyright claims but prevailed on its breach of contract, fraudulent inducement, and UDTPA claims and was awarded damages of \$79.1 million in 2016 (the "NC Judgment"). The NC Court subsequently enjoined World Programming from licensing its WPS Analytics software to new customers for use in the United States until the NC Judgment was satisfied. At the time that we acquired World Programming, World Programming had partially paid the NC Judgment.

In relation to the NC Court order that enjoined World Programming from licensing its WPS Analytics Software to new customers for use in the United States, SAS filed a related matter in California, which resulted in the California court issuing an order that required certain then existing customers of World Programming to direct payment (of their licensing fees for WPS Analytics software) to SAS until the NC Judgment was satisfied.

On January 3, 2022, we paid the outstanding balance of \$65.9 million on the NC Judgment. Despite payment in full, SAS asserted that we had not satisfied the NC Judgment. The NC Court held a hearing to address this issue on March 3, 2022 (the "March Hearing"). At the March Hearing, the NC Court confirmed that our January 3, 2022 payment fully satisfied the NC Judgment, and lifted the injunction that had enjoined World Programming from licensing its WPS Analytics software to new customers for use in the United States. On March 7, 2022, SAS agreed that the California court order was no longer necessary and together with World Programming, filed a joint notice of satisfaction of the NC Judgment with the California court, thereby allowing customers of World Programming to resume payment of their licensing fees to World Programming directly.

In 2018, SAS filed litigation in the United States District Court for the Eastern District of Texas (the "Texas Court") asserting that World Programming infringed SAS copyrights and patents. SAS voluntarily dismissed with prejudice its patent claims, and the Texas Court entered judgment in favor of World Programming on the copyright claims. SAS appealed the Texas Court judgment to the United States Court of Appeals for the Federal Circuit (the "Court of Appeals"). Oral arguments were held before the Court of Appeals in January 13, 2022. A decision from the Court of Appeals is pending.

Other legal proceedings

From time to time, we may be subject to other legal proceedings and claims in the ordinary course of business. We have received, and may in the future continue to receive, claims from third parties asserting, among other things, infringement of their intellectual property rights. Future litigation may be necessary to defend ourselves, our partners and our customers by determining the scope, enforceability and validity of third-party proprietary rights, or to establish and enforce our proprietary rights. The results of any current or future litigation cannot be predicted with certainty and regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 1A. Risk Factors

The risk factors set forth below supplement the risk factors previously disclosed in Part 1, Item 1A. "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2021. The following risk factors should be read in conjunction with the risk factors regarding the 2024 Notes set forth in our Annual Report on 10-K for the year ended December 31, 2021.

The 2027 Notes will be effectively subordinated to our secured debt (including borrowings under our revolving credit facility) and any liabilities of our subsidiaries.

The 2027 Notes will rank senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the 2027 Notes; equal in right of payment to any of our liabilities that are not so subordinated, such as our existing 2024 Notes; effectively junior in right of payment to any of our secured indebtedness (including all amounts outstanding under our revolving credit facility) to the extent of the value of the assets securing such indebtedness; and structurally junior to all indebtedness and other liabilities (including trade payables) of our subsidiaries. In the event of our bankruptcy, liquidation, reorganization or other winding up, our assets that secure debt ranking senior or equal in right of payment to the 2027 Notes (including all amounts outstanding under our revolving credit facility) will be available to pay obligations on the 2027 Notes only after the secured debt has been repaid in full from these assets, and the assets of our subsidiaries will be available to pay obligations on the 2027 Notes only after all indebtedness and other liabilities (including trade payables) of our subsidiaries have been repaid in full. There may not be sufficient assets remaining to pay amounts due on any or all of the 2027 Notes then outstanding. The indenture governing the 2027 Notes will not prohibit us from incurring additional senior debt or secured debt, nor will it prohibit any of our subsidiaries from incurring indebtedness or additional liabilities.

The 2027 Notes are our obligations only and a substantial portion of our operations are conducted through, and a substantial portion of our consolidated assets are held by, our subsidiaries.

The 2027 Notes are our obligations exclusively and are not guaranteed by any of our operating subsidiaries. A substantial portion of our operations is conducted through, and a substantial portion of our consolidated assets is held by, our subsidiaries. Accordingly, our ability to service our debt, including the 2027 Notes, depends in part on the results of operations of our subsidiaries and upon the ability of such subsidiaries to provide us with cash, whether in the form of dividends, loans or otherwise, to pay amounts due on our obligations, including the 2027 Notes. Our subsidiaries are separate and distinct legal entities and have no obligation, contingent or otherwise, to make payments on the 2027 Notes or to make any funds available for that purpose. In addition, dividends, loans or other distributions to us from such subsidiaries may be subject to contractual and other restrictions and are subject to other business considerations.

Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness, including the amounts payable under our revolving credit facility, the 2027 Notes and the 2024 Notes, or to make cash payments in connection with any conversion of 2027 Notes or the 2024 Notes, depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional debt financing or equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations. In addition, the credit agreement governing our revolving credit facility contains, and any of our future debt agreements may contain, restrictive covenants that may prohibit us from adopting any of these alternatives. Our failure to comply with these covenants could result in an event of default which, if not cured or waived, could result in the acceleration of our debt.

We may still incur substantially more debt or take other actions which would intensify the risks discussed above.

We and our subsidiaries may be able to incur substantial additional debt in the future, subject to the restrictions contained in our then-existing debt instruments, some of which may be secured debt, and other agreements. We are not restricted under the terms of the indenture governing the 2027 Notes, or the indenture governing the 2024 Notes, from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of the indenture governing the 2027 Notes or the indenture governing the 2024 Notes that could have the effect of diminishing our ability to make payments on the 2027 Notes when due. Our existing revolving credit facility restricts our ability to incur additional indebtedness, including secured indebtedness, but if those restrictions are waived, or the facility matures or is repaid, we may not be subject to such restrictions under the terms of any subsequently incurred indebtedness.

We may not have the ability to raise the funds necessary to settle for cash conversions of the 2027 Notes or to repurchase for cash the 2027 Notes upon a fundamental change, and our current debt contains, and our future debt may contain, limitations on our ability to pay cash upon conversion or repurchase of the 2027 Notes.

Holders of the 2027 Notes will have the right to require us to repurchase their 2027 Notes upon the occurrence of a fundamental change at a fundamental change repurchase price equal to 100% of the principal amount of the 2027 Notes to be repurchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date. In addition, upon conversion of the 2027 Notes, unless we elect to deliver solely shares of our Class A common stock to settle such conversion (other than paying cash in lieu of delivering any fractional share), we will be required to make cash payments in respect of the 2027 Notes being converted. However, we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of 2027 Notes surrendered therefore or 2027 Notes being converted.

In addition, our ability to repurchase the 2027 Notes or to pay cash upon conversions of the 2027 Notes may be limited by law, by regulatory authority or by agreements governing our indebtedness including our existing revolving credit facility. Our 2024 Notes contain substantially identical conversion and repurchase features. Our failure to repurchase the 2027 Notes or the 2024 Notes at a time when the repurchase is required by the indenture governing the 2027 Notes or the indenture governing the 2024 Notes or to pay any cash payable on future conversions of the 2024 Notes or the 2027 Notes as required by the indentures governing the 2024 Notes or the 2027 Notes would constitute a default under the applicable indenture. A default under the indenture governing the 2027 Notes or the indenture governing the 2024 Notes or the occurrence of a fundamental change itself would likely also lead to a default under our revolving credit facility, and may lead to a default under agreements governing our future indebtedness. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the 2027 Notes or make cash payments upon conversions thereof.

Our revolving credit facility limits our ability to pay any cash amount upon the conversion or repurchase of the 2027 Notes.

Our existing revolving credit facility prohibits us from making any cash payments on the conversion or repurchase of the 2027 Notes if a default under such credit facility exists or would be created thereby. In addition, our ability to make cash payments on the conversion or repurchase of the 2027 Notes will be limited to the extent we do not satisfy certain financial covenant tests after giving effect to such payments. Any new credit facility that we may enter into may have similar restrictions. Our failure to make cash payments upon the conversion or repurchase of the 2027 Notes as required under the terms of the 2027 Notes would permit holders of the 2027 Notes to accelerate our obligations under the 2027 Notes.

The conditional conversion feature of the 2027 Notes, if triggered, may adversely affect our financial condition and operating results.

In the event the conditional conversion feature of the 2027 Notes is triggered, holders of 2027 Notes will be entitled to convert the 2027 Notes at any time during specified periods at their option. If one or more holders elect to convert their 2027 Notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our Class A common stock (other than paying cash in lieu of delivering any fractional share), we would be required to settle a portion or all of our conversion obligation through the payment of cash, which could adversely affect our liquidity.

Our 2024 Notes contain substantially identical conversion features. Neither the 2024 Notes nor the 2027 Notes are convertible under this feature during the quarter ending September 30, 2022. Whether the 2024 Notes or the 2027 Notes will be convertible following this fiscal quarter will depend on the satisfaction of this condition or another conversion condition in the future. As of September 30, 2022, our 2024 Notes and 2027 Notes are classified as long-term liabilities. In addition, even if holders do not elect to convert their 2027 Notes or the 2024 Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the 2027 Notes or the 2024 Notes, as applicable, as a current rather than a long-term liability, which would result in a material reduction of our net working capital.

Provisions in the indenture for the 2027 Notes may deter or prevent a business combination that may be favorable to you.

If a fundamental change occurs prior to the maturity date, holders of the 2027 Notes will have the right, at their option, to require us to repurchase all or a portion of their 2027 Notes. In addition, if a make-whole fundamental change occurs prior to the maturity date, we will in some cases be required to increase the conversion rate for a holder that elects to convert its 2027 Notes in connection with such make-whole fundamental change. Furthermore, the indenture for the 2027 Notes will prohibit us from engaging in certain mergers or acquisitions unless, among other things, the surviving entity assumes our obligations under the 2027 Notes. These and other provisions in the indenture for the 2027 Notes could deter or prevent a third party from acquiring us even when the acquisition may be favorable to you. Comparable provisions exist in the indenture for the 2024 Notes.

Conversion of the 2027 Notes will dilute the ownership interest of existing stockholders, including holders who had previously converted their 2027 Notes, and may otherwise depress the price of our Class A common stock.

The conversion of some or all of the 2027 Notes will dilute the ownership interests of existing stockholders to the extent we deliver shares of our Class A common stock upon conversion of any of the 2027 Notes. The 2027 Notes may from time to time in the future be convertible at the option of their holders prior to their scheduled terms under certain circumstances. Any sales in the public market of the Class A common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the 2027 Notes may encourage short selling by market participants because the conversion of the 2027 Notes could be used to satisfy short positions, and the anticipated conversion of the 2027 Notes into shares of our common stock could depress the price of our common stock.

Implementation of our new ERP system could disrupt business operations.

We implemented a new ERP system in the third quarter of 2022. The implementation has required and may continue to require significant investments of time, money and resources and may result in the diversion of senior management's attention from our ongoing operations. Furthermore, the implementation has resulted, and may continue to result, in changes to many of our existing operational, financial and administrative business processes, including, but not limited to, our budgeting, purchasing, licensing, accounting and reporting processes. The new ERP system has required and may continue to require both the implementation of new internal controls and changes to existing internal control frameworks and procedures. If technical problems or other significant issues arise in connection with the implementation or operation of the new ERP system, it could have a material negative impact on our operations, business, financial results and financial condition.

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

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

No.	Description
2.1	Agreement and Plan of Merger, dated as of September 13, 2022, by and among the Company, RapidMiner, Inc., Rambler Merger Sub Inc., and the stockholder representative named therein (incorporated by reference into Exhibit 2.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 13, 2022).
10.1	Employment Separation and General Release Agreement, dated as of September 30, 2022, by and between Brett Chouinard and the Company (incorporated by reference into Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 30, 2022).
31.1*	Certification of the Chief Executive Officer of Altair Engineering Inc. pursuant to Rule 13a-14(a)/Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended
31.2*	<u>Certification of the Chief Financial Officer of Altair Engineering Inc. pursuant to Rule 13a-14(a)/Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended</u>
32.1**	Certification of the Chief Executive Officer and Chief Financial Officer of Altair Engineering Inc. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibits 101).

^{*} Filed herewith.

^{**} The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the registrant specifically incorporates it by reference.

SIGNATURES

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

ALTAIR ENGINEERING INC.

Date: November 4, 2022 By: /s/ James Scapa

James R. Scapa

Chief Executive Officer (Principal Executive Officer)

Date: November 4, 2022

By: /s/ Matthew Brown

Matthew Brown

Chief Financial Officer (Principal Financial Officer)

Date: November 4, 2022

By: /s/ Brian Gayle

Brian Gayle

Senior Vice President, Chief Accounting Officer (Principal Accounting

Officer)

CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

- I, James R. Scapa, certify that:
- 1. I have reviewed this quarterly report on Form 10-Q of Altair Engineering 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 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.

/s/ James Scapa
James R. Scapa
Chief Executive Officer
(Principal Executive Officer)

November 4, 2022

CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

- I, Matthew Brown, certify that:
- 1. I have reviewed this quarterly report on Form 10-Q of Altair Engineering 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 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.

/s/ Matthew Brown
Matthew Brown
Chief Financial Officer
(Principal Financial Officer)

November 4, 2022

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

In connection with the Quarterly Report of Altair Engineering Inc. (the "Company"), on Form 10-Q for the period ended September 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned officers of the Company certify to their knowledge and in their respective capacities, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ James Scapa
James R. Scapa
Chief Executive Officer
(Principal Executive Officer)
//M/M P
/s/ Matthew Brown
Matthew Brown
Chief Financial Officer
(Principal Financial Officer)

November 4, 2022