

and \$10.5 million of revenues realized from the legacy business of GP during the year ended December 31, 2019. Continued growth in sales of our fiber-optic sensing products, including our ODISI products directed toward the expanding use of composite materials and the need for improved means of testing their structural integrity, and our communications test instruments also contributed to this increase.

Our Technology Development segment revenues increased \$5.1 million to \$26.0 million for the year ended December 31, 2019 compared to \$21.0 million for the year ended December 31, 2018. Revenues within this segment increased due to additional contract awards, including higher value Phase 2 SBIR contracts. The increase continues a growth trend experienced over the past two years largely driven by successes in Phase 2 SBIR awards. The increase was realized primarily in our intelligent systems, advanced materials, optical systems and terahertz research groups. As Phase 2 SBIR contracts generally have a performance period of a year or more, we currently expect Technology Development segment revenues to remain at a similar level for the near term.

Cost of Revenues

	Years ended December 31,		\$ Difference	% Difference
	2019	2018		
Products and licensing costs	\$ 16,684,172	\$ 8,078,870	\$ 8,605,302	106.5%
Technology development costs	18,649,161	15,400,475	3,248,686	21.1%
Total costs of revenues	\$ 35,333,333	\$ 23,479,345	\$ 11,853,988	50.5%

Our Products and Licensing segment costs increased \$8.6 million to \$16.7 million for the year ended December 31, 2019 compared to \$8.1 million for the year ended December 31, 2018. This increase primarily resulted from \$3.9 million of cost of revenues from the legacy business of MOI and \$4.4 million of cost of revenues from the legacy business of GP during the year ended December 31, 2019, as well as an increase in sales volume.

Our Technology Development segment costs increased \$3.2 million, to \$18.6 million for the year ended December 31, 2019 compared to \$15.4 million for the year ended December 31, 2018. The overall increase in Technology Development segment costs was driven by increases in direct labor and subcontractor costs consistent with the rate of growth in Technology Development segment revenues.

Operating Expense

	Years ended December 31,		\$ Difference	% Difference
	2019	2018		
Selling, general and administrative expense	\$ 24,371,349	\$ 14,794,205	\$ 9,577,144	64.7%
Research, development and engineering expense	7,496,012	3,766,160	3,729,852	99.0%
Total operating expense	\$ 31,867,361	\$ 18,560,365	\$ 13,306,996	71.7%

Selling, general and administrative expense increased \$9.6 million to \$24.4 million for the year ended December 31, 2019 compared to \$14.8 million for the year ended December 31, 2018. Selling, general and administrative expense increased primarily due to \$4.4 million of expenses associated with the legacy business of MOI and \$2.0 million of expenses associated with the legacy business of GP, in addition to \$1.0 million in transaction costs associated with the acquisition of GP, a \$0.9 million increase in share-based compensation as a result of new awards, and a \$1.1 million increase in expenses related to sales and marketing as a result of increased revenue.

Research, development and engineering expenses increased \$3.7 million to \$7.5 million for the year ended December 31, 2019 compared to \$3.8 million for the year ended December 31, 2018 primarily due to \$1.1 million of research, development and engineering expense associated with the legacy business of MOI and \$2.7 million of research, development and engineering expense associated with the legacy business of GP during the year ended December 31, 2019.

Interest Expense, Net